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COMMONWEALTH BUREAU OF CENSUS AND STATISTICS,  
CANBERRA.

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OFFICIAL

# YEAR BOOK

OF THE

# COMMONWEALTH OF AUSTRALIA

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No. 40.—1954.

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Prepared under Instructions from  
The Right Honorable the Treasurer,

BY

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ACTING COMMONWEALTH STATISTICIAN.



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## PREFACE.

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By the Constitution of the Commonwealth of Australia, the Parliament of the Commonwealth is empowered, subject to the Constitution, "to make laws for the peace, order, and good government of the Commonwealth, with respect to . . . . . Census and statistics." In the exercise of the power so conferred, a "Census and Statistics Act" was passed in 1905, and in the year following the "Commonwealth Bureau of Census and Statistics" was created. The first Official Year Book was published early in 1908. The publication here presented is the fortieth Official Year Book issued under the authority of the Commonwealth Government.

The Synopsis on pp. ix to xxviii immediately following shows the general arrangement of the work. The special index (preceding the General Index) provided at the end of the volume, together with certain references given in the various chapters, will assist in tracing in previous issues special articles and other more or less important miscellaneous matter which, owing to limitations of space, have been omitted or abbreviated in the present volume. Where, in the General Index, more than one reference to a subject is given, the chief reference (or references) has been specially indicated wherever possible.

Every endeavour has been made to meet the demand occasioned by the current economic and financial conditions for new information, or information expressed in new terms, concerning many branches of statistics, while a Diary of Principal Economic Events of the years 1950 to 1953 is inserted after the last chapter.

It is not proposed to refer here to the whole of the new matter or to the new treatment of existing matter incorporated in the present volume, but attention may be drawn to the following:—

- Chapter II. Physiography.—Brief description of the main physical characteristics of the Australian continent (pp. 10-12).
- Chapter III. General Government.—Commonwealth Parliamentary Allowances (pp. 52-3).
- Chapter V. Transport and Communication.—Commonwealth Navigation and Shipping Legislation (pp. 110-2); Motor Vehicles—*Résumé* of fees, arrangements for registration of motor vehicles and issue of drivers' and riders' licences in each State (pp. 135-8).
- Chapter VII. The Territories of Australia.—Papua and New Guinea—Information extended, particularly with regard to finance and agriculture (pp. 243-7).
- Chapter VIII. Labour, Wages and Prices.—Industrial Disputes—New classification of causes used and stoppages analysed by cause and by method of settlement in two separate groups "Coalmining and Stevedoring" and "Other Industries" (pp. 316-9).
- Chapter IX. Population.—Number of assisted migrants who arrived in Australia under the various schemes introduced since 1946 (p. 371).
- Chapter XI. Education.—The chapter has been extensively revised on the basis of a special article contributed by the Commonwealth Office of Education on developments in Australian education since the subject was last treated in Official Year Book No. 22—1929.
- Chapter XIII. Public Health and Related Institutions.—Pensioner Medical Service (p. 531). Free Milk for School Children Scheme (p. 532).
- Chapter XIV. Welfare Services.—United Kingdom—Australia reciprocal agreement on social services (p. 553).
- Chapter XVI. Private Finance.—Outline of the provisions of the Commonwealth Bank Act 1953 and the Banking Act 1953 (pp. 615-6).
- Chapter XVII. Public Finance.—Cost of Commonwealth Departments (p. 686-90).
- Chapter XVIII. Mineral Industry.—Revised basis of recording mineral production (p. 747 et seq.).

Chapter XIX. Pastoral Production.—Consumption of raw wool and consumption of locally-processed wool in Australia and exports of wool from Australia on both greasy and clean bases (pp. 822-4); Stocks of raw wool (p. 825).

Chapter XXVII. Defence.—Revised information on casualties to members of each of the Australian Fighting Services during the 1939-45 War (pp. 1114-8).

Statistical Summary.—Considerably extended by inclusion of additional statistical series.

Appendix.—Summary of Standard Hours and Basic Wage Inquiry 1952-53 by Commonwealth Court of Conciliation and Arbitration (pp. 1239-40); Korean Campaign—Casualties, Prisoner-of-War Exchange Agreement, and Operational Awards granted (pp. 1266-7).

The Statistical Summary and the Chronological Table have been transferred from their former position at the beginning of the volume to the end, following the Diary of Principal Economic Events.

The material in the Year Book has been carefully checked throughout, but I shall be grateful to those who will be kind enough to point out defects or make suggestions.

Printing difficulties are still being experienced and have delayed the publication of this volume. In order to offset to some extent this delay, the contents of this issue have already been published in separate Parts as the successive chapters or groups of chapters were printed. Particulars of these Parts, numbering eleven in all, are shown in the Price List of Printed Publications at the end of this volume. In a publication of this size, a considerable time must necessarily elapse between the handling, by both author and printer, of the earlier and later parts of the work. The result, in a statistical publication, is an unevenness in the periods to which the statistics relate. To overcome this difficulty at least partially, much more use is now made of the Appendix to the Year Book. So far as space permits, later particulars, where available, of many statistical series appearing in preceding chapters have been inserted in the Appendix. The insertions have been restricted to figures mainly, as the inclusion of current textual matter is not generally practicable.

The Appendix to this issue contains information for various periods up to 1953-54, that is, one, and in some instances two, years in advance of that contained in the body of the book.

It is not inappropriate to mention here that for the most recent statistics the reader should refer to other publications issued by this Bureau, notably the *Monthly Review of Business Statistics* and the *Quarterly Summary of Australian Statistics*. There are also numerous mimeographed statements issued from time to time on a wide range of subjects. Particulars of these are shown in Chapter XXX.—Statistical Organization and Sources of Information.

Commencing with issue No. 38 a change in the title of the Year Book was made, the year now shown being the year of issue.

My thanks are tendered to the State Statisticians, who have collected and compiled the data on which a great part of the information given in the Official Year Book is based. Thanks are also tendered to the responsible officers of the various Commonwealth and State Departments, and to others who have kindly, and often at considerable trouble, supplied information.

I also desire to express my keen appreciation of the valuable work performed by Mr. S. H. Begley, Editor of Publications, Mr. J. M. Jones, B.A., former Assistant Editor, and Mr. R. C. Gilligan, B.Com., and Mr. G. I. Neville, B.Com., Assistant Editors, and the other officers of the Publications Division, and of the services rendered by the officers in charge of the several Branches of the Commonwealth Bureau of Census and Statistics upon whom has devolved the duty of revising the chapters relative to their respective Branches.

S. R. CARVER,  
Acting Commonwealth Statistician.

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I

# OFFICIAL YEAR BOOK

OF THE

## COMMONWEALTH OF AUSTRALIA.

### CHAPTER I.

## DISCOVERY, COLONIZATION AND FEDERATION OF AUSTRALIA.

### § 1. Early Knowledge and Discovery of Australia.

1. **Introduction.**—The following paragraphs contain only a bare outline of the more important facts relating to the early history of Australian discovery. Previous issues of the Year Book contain a summary of these facts in greater detail, but for a more complete account of this subject, together with bibliographical references thereto, the reader should consult Official Year Book No. 1 (pp. 45-51), bearing in mind the knowledge that the account must be modified somewhat in view of later investigations.

2. **Terra Australis.**—It would appear that there was an early Chaldean tradition as to the existence of an Austral land to the south of India, and rumours to that effect found their way in the course of time to Europe. References to this *Terra Australis* are found in the works of Ælianus (A.D. 205-234), Manilius (probably a contemporary of Augustus or Tiberius Caesar), and Ptolemy (A.D. 107-161). Evidence which might warrant the supposition of knowledge of such a land appeared in maps and manuscripts of the Middle Ages and the fourteenth and fifteenth centuries, but there is no evidence definitely connecting this so-called *Terra Australis* with Australia.

Reference by Marco Polo (1254-1324) to a land called Locac, and several indications on maps and globes in the fifteenth and sixteenth centuries have been supposed to relate to Australia, but little weight can now be attached to these suppositions. Cornelius Wytfliet's map of 1597, however, indicates roughly the eastern and western coasts of Australia, as well as the Gulf of Carpentaria, although the oft-quoted passage in his *Descriptionis Ptolemaicæ Augmentum* describing the *Australis Terra* has been considered to have had its origin in the voyages through the Straits of Magellan and the discovery of Tierra del Fuego rather than that of Australia.

3. **Discovery of Australia.**—(i) *The Spaniards.* Disregarding the statement that the Arabs had come to Australia long before the Portuguese, Spaniards or the Dutch, for which there is no evidence, and apart from the possibility that the Portuguese may have discovered part of the Australian coast before 1542, the coastal exploration of Australia began with the Spaniards and the Dutch.

In 1606 the Spaniard Quiros, on reaching the island that has retained the name of Espiritu Santo (the largest island of the New Hebrides group), thought he had discovered the great land of the south, and therefore named the group *La Australia del Espiritu Santo*. After leaving the New Hebrides, Quiros sailed eastward, but Torres, his second-in-command, took a westerly course, and passed through the strait that now bears his name. In all probability he sighted the Australian continent, but no mention of it is made in his records. This voyage marks the close of Spanish activity in the work of discovery in the South Seas.

(ii) *The Dutch.* The Dutch discovered Australia when the Dutch East India Company sent the *Duyfken* from Bantam to explore the islands of New Guinea. During March, 1606 the *Duyfken* coasted along the southern shores of New Guinea, and followed the west coast of Cape York peninsula as far as Cape Keer-Weer (Turn Again).

During the following thirty years there were nine visits of Dutch navigators to Australian waters; by 1636, through their efforts, the coast of Australia from Cape York westward around to the Great Australian Bight had been discovered.

In 1642 Abel Janszoon Tasman set out from Batavia to ascertain the extent of the great southern continent. He named Van Diemen's Land, imagining it to be part of Australia proper, and sailing north-easterly discovered New Zealand and returned to Batavia. In his second voyage in 1644 Tasman visited the northern coast of Australia, sailing round the Gulf of Carpentaria and along the north-west coast as far down as the tropic of Capricorn. This voyage of Tasman's may be said to have ended the period of Dutch discoveries, although there were subsequent visits by the Dutch to Australia (de Vlamingh in 1696 and Van Delft in 1705).

4. *Discoveries by the English.*—In the meantime the English had made their first appearance on the Australian coast in 1688, when the north-westerly shores were visited by William Dampier, as supercargo of the *Cygnets*, a trading vessel whose crew had turned buccaners. In 1699 he again visited Australia, in command of H.M.S. *Roebuck*, and on his return to England published an account in which a description is given of trees, flowers, birds and reptiles observed, and of encounters with natives.

At the end of the seventeenth century it was a question whether Tasmania and New Zealand were parts of Australia, or whether they were separated from it, but themselves formed part of a great Antarctic Continent. Lieutenant James Cook's first voyage, though primarily undertaken for the purpose of observing the transit of Venus from Otaheite, had also for its objective to ascertain whether the unexplored part of the southern hemisphere was only an immense mass of water or contained another continent. In command of H.M.S. *Endeavour*, a barque of 370 tons burden, carrying about 85 persons, and accompanied by Sir Joseph Banks, Dr. Solander the naturalist, Green the astronomer, draughtsmen and servants, Cook, after observing the transit of Venus at Otaheite, turned towards New Zealand, sighting that land on 7th October, 1769 in the neighbourhood of Poverty Bay. Circumnavigating the North and South Islands, he proved that New Zealand was connected neither with the supposed Antarctic Continent nor with Australia, and took formal possession thereof in the name of the British Crown. On 20th April, 1770, at 6 a.m., Cook sighted the Australian mainland at a place he called Point Hicks, naming it after his first-lieutenant, who first saw it. Coasting northwards, Botany Bay was discovered on 29th April, 1770. The *Endeavour* dropped anchor and Cook landed on the same day. Cook sailed along the coast in a northerly direction for nearly 1,300 miles until 11th June, 1770, when the *Endeavour* was seriously damaged by striking a coral reef in the vicinity of Trinity Bay. Repairs occupied nearly two months, and the *Endeavour* then again set her course to the north, sailing through Torres Strait and anchoring in the Downs on 13th July, 1771. In 1772 Cook was put in command of the ships *Resolution* and *Adventure*, with a view to ascertaining whether a great southern continent existed. Having satisfied himself that, even if it did, it lay so far to the south as to be useless for trade and settlement, he returned to England in 1774. Cook's last voyage was undertaken in 1776, and he met his death on 14th February, 1779, by which date practically the whole coast of Australia had been explored. The only remaining discovery of importance was the existence of a channel between Tasmania and Australia. This was made by Flinders and Bass in 1798.

## § 2. The Annexation of Australia.

1. **Annexation of Eastern Part of Australia, 1770.**—Although representatives of the nations mentioned in the previous section landed or claimed to have landed on the shores of Australia on various occasions during the sixteenth and seventeenth centuries, it was not until 23rd August, 1770 that the history of Australia was brought into definite political connexion with Western civilization. It was on that date that Captain Cook took possession “of the whole eastern coast, from latitude 38° to this place, latitude 10½° S., in right of His Majesty King George the Third.” Cook, however, proclaimed British sovereignty over only what are now the eastern parts of New South Wales and Queensland, and formal possession, on behalf of the British Crown, of the whole of the eastern part of the Australian continent and Tasmania was not taken until 26th January, 1788. It was on this last date that Captain Phillip’s commission, first issued to him on 12th October, 1786, and amplified on 2nd April, 1787, was read to the people whom he had brought with him in the “First Fleet.”

A full historical account of the period referred to may be found in the *Historical Records of New South Wales* Vol. 1., parts 1 and 2.

2. **Original Extent of New South Wales.**—The Commission appointed Phillip “Captain-General and Governor-in-Chief in and over our territory called New South Wales, extending from the Northern Cape or extremity of the coast called Cape York, in the latitude of ten degrees thirty-seven minutes south, to the southern extremity of the said territory of New South Wales or South Cape, in the latitude of forty-three degrees thirty-nine minutes south, and of all the country inland westward as far as the one hundred and thirty-fifth degree of east longitude reckoning from the meridian of Greenwich, including all the islands adjacent in the Pacific Ocean within the latitudes aforesaid of ten degrees thirty-seven minutes south and forty-three degrees thirty-nine minutes south.”

Although in November, 1769 Captain Cook had taken possession of the North Island of New Zealand, and in January, 1770 also of the South Island, it is a matter of doubt whether, at the time when Captain Phillip’s commission was drawn up, New Zealand was considered as one of the “islands adjacent in the Pacific Ocean.” The facts that under the Supreme Court Act (Imperial) of 1823 British residents in New Zealand were brought under the jurisdiction of the Court at Sydney, while in 1839 there was a proposal on the part of the British Government to appoint a consul in New Zealand, would leave this an open question, as nothing more than extra-territorial jurisdiction may have been intended. Various hoistings of flags notwithstanding, New Zealand does not appear to have unequivocally become British territory until 1840. In that year, on 29th January, Captain Hobson arrived at the Bay of Islands. On the following day he read the commission, which extended the boundaries of the Colony of New South Wales so as to embrace and comprehend the islands of New Zealand. On 5th February the Treaty of Waitangi, made with the native chiefs, was signed. Finally, on 21st May, British sovereignty over the islands of New Zealand was explicitly proclaimed.

3. **Extension of New South Wales Westward, 1825.**—On 17th February, 1824 Earl Bathurst advised Sir Thomas Brisbane that he had recommended to His Majesty the dispatch of a ship of war to the north-west coast of New Holland for the purpose of taking possession of the coast between the western coast of Bathurst Island and the eastern side of Coburg Peninsula. Captain James J. Gordon Bremer of H.M.S. *Tamar*, who was selected for the purpose, took possession on 20th September, 1824 of the coast from the 135th to the 129th degree of east longitude. On 16th July, 1825 the whole territory between those boundaries was described in Darling’s commission as being within the boundaries of New South Wales, thus increasing its area by 518,134 square miles, and making it, including New Zealand and excluding Tasmania, 2,076,308 square miles, or also excluding New Zealand, 1,972,446 square miles.

4. **Annexation of Western Australia, 1827.**—An expedition under Major Lockyer, sent by Lieutenant-General Sir Ralph Darling, then Governor of New South Wales, to found a settlement at King George III. Sound, sailed from Sydney on 9th November, 1826, landed at the Sound on 26th December following, and on 21st January, 1827 hoisted the British flag. Captain Stirling, in command of H.M.S. *Success*, arrived at Sydney a few weeks after the departure of the expedition to King George's Sound. He obtained the Governor's permission to visit Swan River with a view to seizing a position on the western coast and reporting upon its suitability as a place of settlement. Captain Stirling left Sydney on 17th January, 1827, and on his return in the following April submitted a glowing report on what he described as a "rich and romantic country," urging its occupation for the purpose of settlement. He left for England in July, 1827, continuing his advocacy—notwithstanding much discouragement—with unabated enthusiasm. He was at last successful, the result being mainly due to the formation of an association of prospective settlers having capital at their disposal. He was appointed Lieutenant-Governor and with a party of settlers arrived at Garden Island, near the Swan River, in the ship *Parmelia* in June, 1829. On the 2nd of the preceding month Captain Fremantle, in command of H.M.S. *Challenge*, arrived and hoisted the British flag on the south head of Swan River, again asserting possession of "all that part of New Holland, which is not included within the territory of New South Wales." Thus, before the middle of 1829, the whole territory now known as the Commonwealth of Australia had been constituted a dependency of the United Kingdom.

### § 3. The Creation of the Several Colonies.

1. **New South Wales.**—In Governor Phillip's commission of 1786 the mainland of Australia was divided by the 135th meridian of east longitude into two parts. The earliest colonists believed that the present State of Tasmania was actually joined to the mainland, and it was not till 1798 that the contrary was known. In that year, by sailing through Bass Strait, Flinders and Bass proved that it was an island. The territory of New South Wales, as originally constituted, and of New Zealand, which may be included although Cook's annexation was not properly given effect to until 1840, consisted of 1,584,389 square miles. A further area of 518,134 square miles was added in 1825, when the western boundary was extended to the 129th meridian. The territory was subsequently reduced by the separation of various areas to form the other colonies, and at the time of the establishment of the Commonwealth the area of New South Wales was 310,372 square miles.

2. **Tasmania.**—In 1825 Van Diemen's Land, as Tasmania was then called, was politically separated from New South Wales, being constituted a separate colony on 14th June of that year. The area of the colony was 26,215 square miles.

3. **Western Australia.**—The territory westward of the 129th meridian comprising 975,920 square miles was constituted a colony under the name of Western Australia in June, 1829. It was always distinct and independent of New South Wales, though until 1831 the settlement on King George's Sound remained under the latter jurisdiction.

4. **South Australia.**—On 15th August, 1834 the Act 4 and 5 William IV., cap. 95, was passed, creating South Australia a "province," and towards the end of the year 1836 settlement took place. The first Governor, Captain Hindmarsh, R.N., arrived at Holdfast Bay on 28th December, 1836, and on the same day the new colony was officially proclaimed. The new colony embraced 309,850 square miles of territory, lying south of the 26th parallel of south latitude, and between the 141st and 132nd meridians of east longitude. On 10th December, 1861, by the authority of the Imperial Act 24 and 25 Vic., cap. 44, the western boundary of South Australia was extended to coincide with the eastern boundary of Western Australia, namely, the 129th meridian. The area of the extension was approximately 70,220 square miles. Nearly two years later, on 6th July, 1863, the Northern Territory comprising 523,620 square miles was, by letters patent, brought under the jurisdiction of South Australia, which therefore controlled an area of 903,690 square miles.

5. **New Zealand.**—New Zealand, nominally annexed by Captain Cook and formally declared by proclamation in 1840 as a dependency of New South Wales, was, by letters patent of 16th November of that year, constituted a separate colony under the powers of the Act 3 and 4 Vic., cap. 62, of 7th August, 1840. Proclamation of the separation was made on 3rd May, 1841. The area of the colony was 103,862 square miles.

6. **Victoria.**—In 1851 what was known as the "Port Phillip District" of New South Wales was constituted the colony of Victoria, "bounded on the north and north-west by a straight line drawn from Cape Howe to the nearest source of the River Murray and thence by the course of that river to the eastern boundary of the colony of South Australia." The area of the new colony was 87,884 square miles, and its separate existence took effect from 1st July, 1851, upon the issuing of the writs for the first election of elective members of the Legislative Council.

7. **Queensland.**—The northern squatting districts of Moreton, Darling Downs, Burnett, Wide Bay, Maranoa, Leichhardt and Port Curtis, together with the reputed county of Stanley, were granted an independent administration and formed into a distinct colony under the name of Queensland by letters patent dated 6th June, 1859, although separation from New South Wales was not consummated until 10th December of the same year, upon the assumption of office of the first Governor. The territory comprised in the new colony was so much of the colony of New South Wales as lies northwards of a line commencing on the sea-coast at Point Danger in latitude about 28° 8' south, running westward along the Macpherson and Dividing Ranges and the Dumaresq River to the MacIntyre River, thence downward to the 29th parallel of south latitude, and following that parallel westerly to the 141st meridian of east longitude, which is the eastern boundary of South Australia, together with all the adjacent islands, their members, and appurtenances in the Pacific Ocean. The area of the colony thus constituted was 554,300 square miles. By letters patent dated 13th March, 1861, forwarded by the Colonial Secretary to the Governor of Queensland on 12th April, 1862, the area of Queensland was increased by the annexation of "so much of the colony of New South Wales as lies to the northward of the 26th parallel of south latitude, and between the 141st and 138th meridians of east longitude, together with all and every the adjacent islands, their members, and appurtenances, in the Gulf of Carpentaria." With this addition the area of Queensland became 670,500 square miles.

#### § 4. Establishment of the Commonwealth of Australia.

1. **General.**—On 1st January, 1901 the colonies mentioned, with the exception of New Zealand, were federated under the name of the "Commonwealth of Australia," the designation of "Colonies"—except in the case of the Northern Territory, to which the designation "Territory" is applied—being at the same time changed into that of "States." The total area of the Commonwealth of Australia is 2,974,581 square miles. The dates of creation and the areas of its component parts, as determined on the final adjustment of their boundaries, are shown below :—

#### THE COMMONWEALTH OF AUSTRALIA : AREA, ETC., OF COMPONENT PARTS.

State.	Year of Formation into Separate Colony.	Present Area in Square Miles.	State.	Year of Formation into Separate Colony.	Present Area in Square Miles.
New South Wales(a)	1786	310,372	Tasmania	1825	26,215
Victoria	1851	87,884	Northern Territory	1863	523,620
Queensland	1859	670,500			
South Australia	1834	380,070	Area of the Commonwealth		2,974,581
Western Australia	1829	975,920			

(a) Includes the Australian Capital Territory embracing an area of 911 square miles, and 28 square miles at Jervis Bay. See par. 3 below.

2. **Transfer of the Northern Territory to the Commonwealth.**—On 7th December, 1907 the Commonwealth and the State of South Australia entered into an agreement for the surrender to and acceptance by the Commonwealth of the Northern Territory, subject to approval by the Parliaments of the Commonwealth and the State. This approval was given by the South Australian Parliament under the Northern Territory Surrender Act 1907 (assented to on 14th May, 1908), and by the Commonwealth Parliament under the Northern Territory Acceptance Act 1910 (assented to on 16th November, 1910). The Territory was formally transferred to the Commonwealth on 1st January, 1911, and became the Northern Territory of Australia.

3. **Transfer of the Australian Capital Territory to the Commonwealth.**—On 18th October, 1909 the Commonwealth and the State of New South Wales entered into an agreement for the surrender to and acceptance by the Commonwealth of an area of 911 square miles as the seat of Government of the Commonwealth. In December, 1909 Acts were passed by the Commonwealth and New South Wales Parliaments approving the agreement, and on 5th December, 1910 a proclamation was issued vesting the Territory in the Commonwealth on and from 1st January, 1911. By the Jervis Bay Territory Acceptance Act 1915, an area of 28 square miles at Jervis Bay, surrendered by New South Wales according to an agreement made in 1913, was accepted by the Commonwealth, and was transferred as from 4th September, 1915.

4. **Transfer of British New Guinea or Papua.**—Under the administration of the Commonwealth, but not included in it, is British New Guinea or Papua, finally annexed by the British Government in 1884. This Territory was for a number of years administered by the Queensland Government, but was transferred to the Commonwealth by proclamation on 1st September, 1906, under the authority of the Papua Act (Commonwealth) of 16th November, 1905. The area of Papua is about 90,540 square miles.

5. **Transfer of Norfolk Island.**—Although administered for many years by the Government of New South Wales, this Island was a separate Crown Colony until 1st July, 1914, when it was transferred to the Commonwealth under the authority of the Norfolk Island Act 1913. The Island is situated in latitude  $29^{\circ} 3' 30''$  S. longitude  $167^{\circ} 57' 5''$  E., and comprises an area of 8,528 acres.

6. **Territory of New Guinea.**—In 1919 it was agreed by the Principal Allied and Associated Powers that a mandate should be conferred on Australia for the government of the former German territories and islands situated in latitude between the Equator and  $8^{\circ}$  S., and in longitude between  $141^{\circ}$  E. and  $159^{\circ} 25'$  E. The mandate was issued by the League of Nations on 17th December, 1920. The Governor-General of the Commonwealth was authorized to accept the mandate by the New Guinea Act 1920, which also declared the area to be a Territory under the authority of the Commonwealth by the name of the Territory of New Guinea. The Territory comprises about 93,000 square miles, and the administration under the mandate dated from 9th May, 1921. New Guinea is now administered under Trusteeship Agreement with the United Nations, approved 13th December, 1946.

7. **Nauru.**—In 1919 the Governments of the United Kingdom, Australia and New Zealand entered into an agreement to make provision for the exercise of the mandate conferred on the British Empire for the administration of the island of Nauru, and for the mining of the phosphate deposits thereon. The island is situated in latitude  $0^{\circ} 32'$  south of the Equator and longitude  $166^{\circ} 55'$  east of Greenwich, and comprises about 5,263 acres. The agreement provided that the administration of the island should be vested in an administrator, the first appointment to be made by the Commonwealth Government, and thereafter in such manner as the three Governments decided. The agreement was approved by the Commonwealth Parliament in the Nauru Island Agreement Act 1919, and a supplementary agreement of 30th May, 1923, giving the Government immediately responsible for the administration greater powers of control over the Administrator, was approved in 1932. The administration under the mandate has operated from 17th December, 1920, and so far the administrators have been appointed by the Commonwealth Government. As with the Territory of New Guinea, Nauru is now administered under Trusteeship Agreement with the United Nations.



8. **Territory of Ashmore and Cartier Islands.**—By Imperial Order in Council, dated 23rd July, 1931, Ashmore Islands, known as Middle, East and West Islands, and Cartier Island, situated in the Indian Ocean off the north-west coast of Australia, were placed under the authority of the Commonwealth. The islands were accepted by the Commonwealth in the Ashmore and Cartier Islands Acceptance Act 1933 under the name of the Territory of Ashmore and Cartier Islands and were transferred on 10th May, 1934. The Act authorized the Governor of Western Australia to make ordinances having the force of law in and in relation to the Territory. An amendment to the 1933 Act in July, 1938 annexed the islands to the Northern Territory, whose laws, ordinances and regulations, wherever applicable, thereupon applied.

9. **Australian Antarctic Territory.**—An Imperial Order in Council of 7th February, 1933 placed under Australian authority "all the islands and territories other than Adélie Land which are situated south of the 60th degree of South Latitude and lying between the 160th degree of East Longitude and the 45th degree of East Longitude."

The Order came into force with a proclamation issued by the Governor-General on 24th August, 1936, after the Commonwealth Parliament had passed the Australian Antarctic Territory Acceptance Act on 13th June, 1933. The boundaries of Adélie Land were definitely fixed by a decree of 1st April, 1938 as latitude 60° S., longitude 136° E. and longitude 142° E.

10. **Macquarie Island and Heard and McDonald Islands.**—Macquarie Island, about 1,000 miles south-east of Hobart, has been a dependency of Tasmania since the nineteenth century.

Heard and McDonald Islands, about 2,500 miles south-west of Fremantle were transferred from United Kingdom to Australian control as from 26th December, 1947. The laws of the Australian Capital Territory were declared to be in force in the Territory of Heard and McDonald Islands by the Heard and McDonald Islands Act 1953.

## § 5. The Exploration of Australia.

A fairly complete, though brief, account of the exploration of Australia was given in Official Year Book No. 2 (pp. 20-39), and a summary of the more important facts relating to the subject was embodied in this Chapter in succeeding issues up to and including No. 22.

## § 6. The Constitutions of the States and of the Commonwealth.

1. **General.**—Information regarding the development of the Constitutions of the various Colonies (now States), together with a brief history of the Federal movement in Australia, was embodied in this Chapter in issues of the Official Year Book up to No. 22.

2. **Commonwealth Constitution Act.**—The Commonwealth of Australia Constitution Act, 63 and 64 Vict., Chapter 12, namely: "An Act to constitute the Commonwealth of Australia," as amended by the Constitution Alteration (Senate Elections) 1906, the Constitution Alteration (State Debts) 1909, the Constitution Alteration (State Debts) 1928, and the Constitution Alteration (Social Services) 1946 has been included *in extenso* in previous issues, but is omitted from this issue.

There have been no changes in the Constitution since the previous publication thereof in the Year Book.

## CHAPTER II.

### PHYSIOGRAPHY.

#### § 1. General Description of Australia.

1. **Geographical Position.**—(i) *General.* The Australian Commonwealth, which includes the island continent of Australia proper and the island of Tasmania, is situated in the Southern Hemisphere, and comprises in all an area of about 2,974,581 square miles, the mainland alone containing about 2,948,366 square miles. Bounded on the west and east by the Indian and Pacific Oceans respectively, it lies between longitudes 113° 9' E. and 153° 39' E., while its northern and southern limits are the parallels of latitude 10° 41' S. and 39° 8' S., or, including Tasmania, 43° 39' S. On its north are the Timor and Arafura Seas and Torres Strait—on its south the Southern Ocean and Bass Strait. The extreme points are “Steep Point” on the west, “Cape Byron” on the east, “Cape York” on the north, “Wilson’s Promontory” on the south, or, if Tasmania be included, “South-East Cape.”

(ii) *Tropical and Temperate Regions.* Of the total area of Australia nearly 40 per cent. lies within the tropics. Assuming, as is usual, that the latitude of the Tropic of Capricorn is 23° 30' S., the areas within the tropical and temperate zones are approximately as follows:—

**AUSTRALIA : AREAS OF TROPICAL AND TEMPERATE REGIONS.**  
(Sq. miles.)

Area.	N.S.W. (a)	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	N. Terr.	Total.
Within Tropical Zone ..			359,000		364,000		426,320	1,149,320
,, Temperate Zone ..	310,372	87,884	311,500	380,070	611,920	26,215	97,300	1,825,261
Total Area ..	310,372	87,884	670,500	380,070	975,920	26,215	523,620	2,974,581

(a) Includes Australian Capital Territory.

Fifty-four per cent. of Queensland lies within the tropical zone and 46 per cent. in the temperate zone; of Western Australia, 37 per cent. is tropical and 63 per cent. temperate; of Northern Territory 81 per cent. is tropical and 19 per cent. temperate. All of the remaining States lie within the temperate zone. The tropical part of Australia thus comprises about 39 per cent. of the whole of the continent, and about 53 per cent. of the three territories which have areas within the tropical zone.

2. **Area of Australia compared with Areas of other Countries.**—The area of Australia is almost as great as that of the United States of America, four-fifths of that of Canada, nearly three-fourths of the whole area of Europe, and about 25 times as large as Great Britain and Ireland. The areas of Australia and of certain other countries are shown in the following table.

## AREA OF AUSTRALIA AND OF OTHER COUNTRIES, circa 1950.

('000 sq. miles.)

Country.	Area.	Country.	Area.
<b>Continental Divisions—</b>		<b>Africa—continued.</b>	
Europe (a) .. .. .	1,913	Angola .. .. .	481
Asia (a) .. .. .	10,371	Union of South Africa .. .. .	472
U.S.S.R. (Europe and Asia)	8,599	Ethiopia .. .. .	409
Africa .. .. .	11,638	Egypt .. .. .	386
North and Central America		Tanganyika Territory .. .. .	363
and West Indies .. .. .	9,373	Nigeria and Protectorate .. .. .	339
South America .. .. .	6,859	South-West Africa .. .. .	318
Oceania .. .. .	3,304	Mozambique .. .. .	298
Total, excluding Arctic		Northern Rhodesia .. .. .	290
and Antarctic Conts.	52,057	Bechuanaland Protectorate .. .. .	275
		Madagascar .. .. .	229
<b>Europe(a)—</b>		Kenya Colony and Protec-	
France .. .. .	213	torate .. .. .	225
Spain (incl. possessions) .. .. .	194	Other .. .. .	1,412
Sweden .. .. .	173	Total .. .. .	11,638
Germany .. .. .	136		
Finland .. .. .	130	<b>North and Central America—</b>	
Norway .. .. .	125	Canada .. .. .	3,843
Poland .. .. .	120	United States of America .. .. .	3,022
Italy .. .. .	116	Greenland .. .. .	840
Yugoslavia .. .. .	99	Mexico .. .. .	760
United Kingdom .. .. .	94	Alaska .. .. .	586
Rumania .. .. .	92	Honduras .. .. .	59
Other .. .. .	421	Nicaragua .. .. .	57
Total .. .. .	1,913	Other .. .. .	206
<b>Asia(a)—</b>		Total .. .. .	9,373
China and Dependencies .. .. .	3,759		
India .. .. .	1,221	<b>South America—</b>	
Iran .. .. .	629	Brazil .. .. .	3,288
Mongolian Peoples' Republic	626	Argentine Republic .. .. .	1,084
Saudi Arabia .. .. .	597	Peru .. .. .	482
Indonesia .. .. .	576	Colombia (excl. of Panama)	440
Pakistan .. .. .	366	Bolivia .. .. .	413
Turkey .. .. .	296	Venezuela .. .. .	352
French Indo-China .. .. .	272	Chile .. .. .	286
Burma .. .. .	262	Paraguay .. .. .	157
Afghanistan .. .. .	251	Ecuador .. .. .	106
Thailand .. .. .	198	Other .. .. .	251
Other .. .. .	1,318	Total .. .. .	6,859
Total .. .. .	10,371		
<b>U.S.S.R. .. .. .</b>	<b>8,599</b>	<b>Oceania—</b>	
<b>Africa—</b>		Commonwealth of Australia	2,975
French West Africa .. .. .	1,775	New Zealand .. .. .	103
French Equatorial Africa .. .. .	969	New Guinea .. .. .	93
Anglo-Egyptian Sudan .. .. .	967	Papua .. .. .	91
Belgian Congo .. .. .	905	Other .. .. .	42
Algeria .. .. .	846	Total .. .. .	3,304
Libya .. .. .	679		

(a) Excludes U.S.S.R., shown below.

The areas shown in the table are obtained from the *Demographic Yearbook*, 1951, published by the United Nations and the countries have been arranged in accordance with the continental groups used therein.

3. Areas of States and Territories, Coastal Configurations and Standard Times.—As already stated, Australia consists of six States and the Northern, and Australian Capital, Territories. Particulars of areas, coast-line and standard times are shown in the following table:—

**AUSTRALIA : AREAS OF STATES AND TERRITORIES, COAST-LINE AND STANDARD TIMES.**

State or Territory.	Area.	Proportion of Total Area.	Coast-line.	Area per Mile of Coast-line.	Standard Times.	
					Meridian Selected.	Ahead of G.M.T.
	Sq. miles.	%	Miles.	Sq. miles.		Hours.
New South Wales ..	399,433	10.40	(a) 700	(a) 443	150° E.	10
Victoria ..	87,884	2.96	680	129	150° E.	10
Queensland ..	670,500	22.54	3,000	223	150° E.	10
South Australia ..	380,070	12.78	1,540	247	142°30' E.	9½
Western Australia ..	975,920	32.81	4,350	224	120° E.	8
Northern Territory ..	523,620	17.60	1,040	503	142°30' E.	9½
Australian Capital Territory ..	939	0.03	..	..	150° E.	10
Continent ..	2,948,366	99.12	11,310	261	..	..
Tasmania ..	26,215	0.88	900	29	150° E.	10
Total ..	2,974,581	100.00	12,210	244	..	..

(a) Includes Australian Capital Territory.

There are no striking features in the configuration of the coast; the most remarkable indentations are the Gulf of Carpentaria on the north and the Great Australian Bight on the south. The Cape York Peninsula on the extreme north is the only other remarkable feature in the outline. In Official Year Book No. 1 an enumeration is given of the features of the coast-line of Australia (*see pp. 60-68*).

Prior to 1895 the official time adopted in the several colonies was for most purposes the mean solar time of the capital city of each. In 1894 and 1895, after several conferences had been held, legislation was enacted by each of the colonies whereby the mean solar times of the meridians of east longitude 120° (Western Australia), 135° (South Australia and Northern Territory) and 150° (Queensland, New South Wales, Victoria and Tasmania) were adopted. In 1898, however, the South Australian legislature amended its earlier provision and adopted the mean solar time of the meridian 142° 30' E. longitude as the standard time for that colony. For further information on this subject *see Official Year Book No. 39, page 65*.

4. Geographical Features of Australia.—(i) *General*. The following description is only a broad summarization of the main physical characteristics of the Australian continent. For greater detail of particular geographical elements earlier issues of the Year Book should be consulted. The list of special articles, etc., at the back of this volume indicates the nature of the information available and its position in the various issues.

(ii) *Orography of Australia.* (a) *General Description of the Surface.* Owing to the absence of any very high mountain chains, and to the great depression in the centre of Australia, the average elevation of the Australian continent over the level of the surrounding oceans is less than that of any of the other continents. Three-quarters of the land-mass lies between the 600 and 1,500 feet contours in the form of a huge plateau.

A section through the continent from east to west, at the point of its greatest breadth, shows first a narrow belt of coastal plain. This plain, extending north and south along the whole eastern coast, is well watered by rivers. Of variable width, seldom more than sixty or seventy miles, and occasionally only a few miles, its average may, nevertheless, be taken as about forty to fifty miles. From this, the Great Dividing Range, extending from the north of Queensland to the south of New South Wales, and thence sweeping westward through Victoria, rises often abruptly, and frequently presents bold escarpments on its eastern face. The descent on its western slopes is gradual, until, in the country to the north of Spencer's Gulf, the plain is not above sea-level, and occasionally is even below it. Then there is another almost imperceptible rise until the mountain ranges of Western Australia are reached, and beyond these another coastal plain.

The great central plain or plateau is the most distinctive feature of the Australian continent and its climatic peculiarities are doubtless to be largely ascribed thereto.

(b) *Mountain Systems.* The main mountain feature of Australia is the Great Dividing Range, which runs along the whole eastern coast of the continent and can be traced over the islands of Torres Strait to New Guinea, while in the south one branch sweeps westwards towards the boundary of Victoria and South Australia, and the other—the main branch—finds its termination in Tasmania.

This mountain system is at no place more than 250 miles from the eastern coastline and it approaches to less than 30 miles. On the whole, it is much closer to the coast in both New South Wales and Victoria than it is in Queensland, the corresponding average distances being about 70, 65 and 130 miles respectively.

The mountains of Australia are of relatively small altitude. Thus in Queensland the Great Dividing Range reaches a height above sea-level of less than 5,500 feet, the highest peak being Mount Bartle Frere. In New South Wales Mount Kosciusko is only about 7,300 feet, and Mount Bogong in Victoria about 6,500 feet high. This fact, viz., that there are no high mountains in Australia, is also an important element in considering the climate of Australia.

There is no connexion between the mountains of the eastern and other States of Australia. In South Australia and Western Australia heights of three and four thousand feet are attained. In Tasmania the greatest height is only a little more than 5,000 feet.

It may be of interest to observe that at one time Tasmania was doubtless connected with the mainland. As the Great Dividing Range can in the north be traced from Cape York across Torres Straits to New Guinea, so can its main axis be similarly followed across the shallow waters of Bass Straits and its islands from Wilson's Promontory to Tasmania, which may be said to be completely occupied by ramifications of the chain. The central part of the island is occupied by an elevated plateau, somewhat triangular in shape, and presenting bold fronts to the east, west and north. This does not extend in any direction more than about 60 miles. The plateau rests upon a more extensive tableland, the contour of which closely follows the coastline, and occasionally broadens out into low-lying tracts not much above sea-level. The extreme south of the island is rugged in character.

(iii) *Hydrology of Australia.* (a) *Rainfall.* On the whole, Australia is a country with a limited rainfall. This is immediately evident on studying its river systems, its lakes, and its artesian areas. Its one large river system is that of the Murray and Darling Rivers, of which the former stream is the larger and more important. Many of the rivers of the interior run only after heavy rains. Depending almost entirely on rainfall, a consequence of the absence of high mountains, they drain large areas with

widely varying relation as between rainfall and flow. Thus it has been estimated that not more than 10 per cent. of the rainfall on the "catchment-area" of the Darling River above Bourke (New South Wales) discharged itself past that town. The rate of fall is often very slight.

(b) *Rivers.* The rivers of Australia may be divided into two great classes, those of the coastal plains, with moderate rates of fall and those of the central plains, with very slight fall. Of the former not many are navigable for any distance from their mouths, and bars make many of them difficult of access or inaccessible from the sea.

The two longest rivers of the northern part of the eastern coast are the Burdekin, discharging into Upstart Bay, with a catchment area of 53,500 square miles, and the Fitzroy, which reaches the sea at Keppel Bay and drains about 55,600 square miles.

The Hunter is the largest coastal river of New South Wales, draining about 11,000 square miles before it empties itself at Newcastle. The Murray River, with its great tributary the Darling, drains a considerable part of Queensland, the major part of New South Wales and a large part of Victoria. It debouches into the arm of the sea known as Lake Alexandrina, on the eastern side of the South Australian coast. The total length of the Murray is about 1,600 miles, 400 being in South Australia and 1,200 constituting the boundary between New South Wales and Victoria. The total length of the Darling-Murray from the source of the Darling to the mouth of the Murray is about 2,300 miles. In good seasons the river is navigable for a considerable proportion of its length.

The rivers of the north-west coast of Australia (Western Australia) are of considerable size, e.g., the Murchison, Gascoyne, Ashburton, Fortesque, De Grey, Fitzroy, Drysdale and Ord. So also are those in the Northern Territory, e.g., Victoria and Daly. The former of these, estimated to drain 90,000 square miles, is said to be navigable for 50 miles.

The rivers on the Queensland side of the Gulf of Carpentaria, such as the Gregory, Leichhardt, Cloncurry, Gilbert and Mitchell, are also of considerable size.

Owing to the small amount of fall of many of the interior rivers, they may flood hundreds of miles of country in wet seasons, while in dry seasons they form a mere succession of waterholes or are entirely dry. It is this fact that explains the apparently conflicting reports of the early explorers, one regarding the interior as an inland sea, and another as a desert.

The rivers of Tasmania have short and rapid courses, as the configuration of the territory would indicate.

(c) *Lakes.* The "lakes" of Australia may be divided into three classes, viz.: (a) true permanent lakes; (b) lakes which, being very shallow, become mere morasses in dry seasons or even dry up and finally present a cracked surface of salt and dry mud, and (c) lakes which are really inlets of the ocean, opening out into a lake-like expanse.

The second class (b) is the only one which seems to demand special mention. These are a characteristic of the great central plain of Australia. Some of them, such as Lake Torrens, Gairdner, Eyre and Frome, are of considerable extent.

(d) *Artesian Areas.* A considerable tract of the plain country of New South Wales and Queensland carries a water-bearing stratum, usually at a great depth. A large number of artesian bores have been put down, from which there is a considerable flow. These are of great value and render large areas available which otherwise would be difficult to occupy even for pastoral purposes.

For further information on this subject, see Chapter XXVI.—Water Conservation and Irrigation.

5. *Fauna, Flora, Geology and Seismology of Australia.*—Special articles dealing with these features have appeared in previous issues of the Official Year Book, but limits of space naturally preclude their repetition in each volume. The nature and location of these articles can be readily ascertained from the special index following the index of maps and graphs at the end of this issue.

## § 2. Climate and Meteorology of Australia.\*

1. **Introductory.**—Previous issues of the Official Year Book, notably No. 3, pp.79 and 80, and No. 4, pp. 84 and 87, contained outlines of the history of Australian meteorology and the creation and organization of the Commonwealth Bureau of Meteorology. Official Year Book No. 38, pp. 30-32, contained paragraphs devoted to (i) Organization of the Meteorological Service; (ii) Meteorological Publications; (iii) Equipment; and (iv) Meteorological Divisions.

By reason of its insular geographical position and the absence of striking physical features, whether in marine gulfs or in important mountains, Australia is, on the whole, less subject to extremes of weather than are regions of similar area in other parts of the globe, and latitude for latitude Australia is, on the whole, more temperate.

The average elevation of the surface of the land is low, probably close to 900 feet above the sea. The altitudes range up to a little more than 7,300 feet, hence its climate embraces a great many features, from the characteristically tropical to what is essentially alpine, a fact indicated in some measure by the name Australian Alps given to the southern portion of the Great Dividing Range.

On the coast, the rainfall is often abundant and the atmosphere moist, but in some portions of the interior is very limited, and the atmosphere dry. The distribution of forest, therefore, with its climatic influence, is very uneven. In the interior, in places, there are fine belts of trees, but there are large areas also which are treeless, and here the air is hot and parching in summer. Again, on the coast, even so far south as latitude 35°, the vegetation is tropical in its luxuriance, and to some extent also in character. Climatologically, therefore, Australia may be said to present a great variety of features.

2. **Temperature.**—(i) *Effective Temperature.* When a meteorologist speaks of temperature he means the temperature of the air indicated by a thermometer sheltered from precipitation, from direct rays of the sun and from radiation of heat from the ground and neighbouring objects, yet freely exposed to the circulation of the air. In other words, he means temperature measured under conditions standardized as near as possible in a Stevenson Screen, which is the standard housing for meteorological thermometers.

This shade temperature as measured by a "dry bulb" thermometer shows only the actual temperature experienced by dry inorganic substances, not the *sensible* temperatures felt by organic bodies. In the case of human beings, sensible temperature is affected by the rate of conduction of heat to or from the body by moving air and also by the rate of cooling due to evaporation from the skin and respiratory passages. The wind and humidity therefore determine the sensible temperature.

The humidity (relative humidity) is determined from the readings of the dry and wet bulb thermometers. Of late years, however, with increasing interest in human comfort in tropical climates, another term, *effective* temperature, has come into use. It may be defined as "the temperature of a still, saturated atmosphere which would on the average produce the same feeling of warmth or cold as the atmosphere in question".†

Later investigations have established "comfort zones"‡ bounded by limits of effective temperature within which people will feel comfortable. American research workers have determined the following figures§:—

### COMFORT ZONES : EFFECTIVE TEMPERATURES.

Season.	No subjects feel comfortable below—	Fifty per cent. of subjects feel comfortable between—	No subjects feel comfortable above—
Winter .. .. .	60° F.	63° and 71° F.	74° F.
Summer .. .. .	64° F.	66° and 75° F.	79° F.

\* Prepared from data supplied by the Director, Commonwealth Meteorological Bureau.

† Houghton, F. C., Teague, W. W. and Miller, W. E. (1926) Amer. Soc. Heat. Vent. Engrs.

‡ Yaglou, C. P. (1926) J. Industr. Hyg. § Yaglou, C. P. (1927) Ibid.

Isotherms of effective temperature (not corrected for altitude) have been determined for Australia.\* A map showing effective temperature for Australia for January (9 a.m.) will be found on page 33.

It will be seen that the 80° F. isotherm is confined to a very narrow tract of country on the north-west coast of Western Australia. The 75° F. isotherm extends broadly from Onslow on the north-west coast of Western Australia to Daly Waters to Camooweal to Moreton in Cape York Peninsula following in a general way the coastline of Northern Australia but from 100 to 300 miles inland.

Queensland investigators† in recent years have divided some towns of Queensland into three classes on the basis of deviation from comfort :—

Class 1 (Sub-tropics).—Quite suitable for Caucasian habitation—Rockhampton, Bundaberg, Brisbane, Longreach, Charleville.

Class 2 (Marginal tropics).—Suitable for Caucasian habitation, but requires adaptation in summer—Mackay, Townsville.

Class 3 (Tropics).—(a) Permissible for Caucasian habitation but requires selection and marked adaptation—Cardwell, Cairns, Cloncurry. (b) Not suitable for continuous Caucasian habitation—Cape York, Burketown.

These results of recent years bear out investigations made previously in Australia‡ in which the atmospheric vapour pressure was used as a measure of comfort, its value for this purpose being that it has equal effect in both indoor and outdoor climates. The limits of comfort range from .2 to .5 inch of vapour pressure. After drawing isopleths for effective temperature (not corrected for altitude), mean vapour pressure reduced to a logarithmic scale, and mean wet bulb, it is found that there is close agreement in defining zones of relative discomfort.

(ii) *Seasons*. The Australian seasons are :—Summer, December to February ; autumn, March to May ; winter, June to August ; spring, September to November. In most parts of Australia, January is the hottest month, but in Tasmania and southern Victoria, February is the hottest ; in the tropical north, probably because the cooling “ monsoon ” rains occur in late summer, December is the hottest month, and at Darwin, November.

On a rainfall basis, in the tropical north the year is divisible into “ wet ” and “ dry ” seasons, but on the basis of temperatures and physical comfort the “ dry ” season can be further sub-divided into two parts—“ cool dry ” and “ warm dusty ”.§

(a) “ *Cool dry* ” Season. From May to August. The average maximum temperature ranges from 80° to 85° F., the relative humidity is low and in inland areas cold nights are experienced when the temperature drops to 40° F. The skies generally are cloudless, but in about one year in three during June or July one to two inches of rain fall.

(b) “ *Warm dusty* ” Season. From the end of August temperatures rise and reach a maximum in October or the beginning of November. Temperatures of over 120° F. have been recorded.

(c) “ *Wet* ” Season. After the first of the heavy storms, the maximum temperatures fall but still remain high with high relative humidity. At Wyndham during January, 1944 the minimum temperature did not drop below 75° F. for fourteen consecutive days. A maximum of over 100° F. was recorded on each rainless day.

In Central as in Northern Australia during the hottest months, the average temperatures range from 80° to 85° F., whereas in Southern Australia they vary from 65° to 70°.

Throughout Australia the coldest month is July, when only a very narrow strip of the northern sea-board has an average temperature as high as 75°. Over the southern half of the continent, July temperatures range from 55° to 45° at elevations below 1,500

\* Hounam, C. E. *Effective Temp. Data*, C.W.B. unpublished. † Lee, D. H. K. *Trans. Roy. Soc. Trop. Med. and Hyg.* (1940) Vol. XXXII. ‡ Barkley, H. *Zones of Relative Physical Comfort in Australia*, *Met. Bull.* 20, 1934. § Maze, W. H. *Austn. Geog.* June, 1945. *Settlement in E. Kimberleys*.



feet and fall as low as 35° on the Australian Alps. Here the temperature seldom, if ever, reaches 100° even in the hottest of seasons. Hotham Heights (6,100 feet above Mean Sea Level) recorded the highest maximum of 82.0° on 19th January, 1935. In winter, readings slightly below zero are occasionally recorded on the extreme heights.

Tasmania as a whole enjoys a moderate and equable range of temperature throughout the year, although occasionally hot winds may cause the temperature to rise to 100° in the eastern part of the State.

(iii) *Comparisons with other Countries.* In respect of Australian temperatures generally, it may be pointed out that the mean annual isotherm for 70° F. extends in South America and South Africa as far south as latitude 33°, while in Australia it reaches only as far south as latitude 30°, thus showing that, on the whole, Australia has, latitude for latitude, a more temperate climate than other places in the Southern Hemisphere.

The comparison is even more favourable when the Northern Hemisphere is included, for in the United States of America the 70° isotherm extends in several of the western States as far north as latitude 41°. In Europe, the same isotherm reaches almost to the southern shores of Spain, passing afterwards, however, along the northern shores of Africa till it reaches the Red Sea, when it bends northward along the eastern shore of the Mediterranean till it reaches Syria. In Asia, nearly the whole of the land area south of latitude 40° N. has a higher mean annual temperature than 70°.

The extreme range of temperature is less than 100° over practically the whole of Australia, that figure being only slightly exceeded at a very few places; it is mostly 70° to 90° over inland areas, and somewhat less on the coast. In parts of Asia and North America, the extreme range exceeds 130° and 150° in some localities.

Along the northern shores of Australia the temperatures are very equable. At Darwin, for example, the difference in the means for the hottest and coldest month is only 8.4°, and the extreme readings for the year, or the highest maximum on record and the lowest minimum, show a difference of under 50°.

The highest temperature recorded in Australia was 127.5° F. at Cloncurry on 16th January, 1889. The world's highest (136° F.) was recorded at Azizia (Tripoli) on 13th August, 1922. The lowest temperature ever recorded in Australia was -8° F. at Charlotte Pass on 14th June, 1945, and again on 22nd July, 1947, as contrasted with the world's lowest recorded temperature of -90° F. at Verkhojansk (Siberia) on 5th and 7th February, 1892.

A comparison of the mean temperatures and the range from the extreme maximum to the extreme minimum temperatures (in whole degrees) of the capital cities of Australia with those of the main cities of some other countries is shown in tabular form in Official Year Book No. 38, p. 42.

(iv) *Hottest and Coldest Parts.* A comparison of the temperatures recorded at coast and inland stations shows that, in Australia, as in other continents, the range increases, within certain limits, with increasing distance from the coast. This is clearly illustrated by the map of extreme temperature range (page 33).

In the interior of Australia, and during exceptionally dry summers, the temperature occasionally reaches or exceeds 120° in the shade. The hottest area of the continent is situated in the northern part of Western Australia about the Marble Bar and Nullagine gold-fields, where the maximum shade temperature during the summer sometimes exceeds 100° continuously for days and weeks. The longest recorded period was 160 days from 31st October, 1923 to 7th April, 1924.

The area affected and the period of duration of the longest heat waves in Australia are shown in the map and diagram on page 34.

(v) *Tabulated Data for Selected Climatological Stations in Australia.* The following tables show normal mean temperature, extreme temperature and normal rainfall for each month for selected climatological stations in each State. For similar data for other selected stations in the Commonwealth, see Official Year Book No. 39, pp. 41-48. Pages 42-48 of this issue contain this information in respect of Canberra and the six State capitals.

**TABULATED DATA FOR SELECTED CLIMATOLOGICAL STATIONS: NEW SOUTH WALES.**

Particulars.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
<b>LISMORE.</b>													
Normal Mean Temperature—													
Maximum °F.	86.5	84.7	82.0	78.8	72.5	68.6	68.0	71.2	75.8	80.5	83.2	85.7	78.1
Minimum ..	65.4	65.0	62.2	56.5	50.5	45.6	43.6	44.6	49.5	55.9	60.3	63.7	55.2
Extreme Temperature—													
Maximum .. °F.	113.0	107.5	102.0	96.0	87.3	88.0	85.0	94.6	95.0	102.4	109.0	113.0	113.0
Minimum ..	48.0	41.0	40.0	31.0	32.0	28.0	29.0	23.0	34.0	35.0	41.5	42.0	23.0
Normal Rainfall ins.	6.25	5.66	7.04	5.77	5.19	3.47	3.39	2.06	2.15	2.70	3.98	4.45	52.11
<b>TAREE.</b>													
Normal Mean Temperature—													
Maximum °F.	83.9	83.0	80.5	75.7	69.9	65.7	64.5	67.0	72.0	76.5	80.3	82.6	75.1
Minimum ..	62.0	62.1	59.5	54.7	49.2	44.5	42.7	43.7	47.0	51.9	56.4	60.7	52.9
Extreme Temperature—													
Maximum .. °F.	114.0	110.0	108.0	95.0	84.0	82.0	83.0	93.0	94.0	104.0	109.0	111.0	114.0
Minimum ..	38.0	40.0	44.0	31.0	30.0	29.0	25.0	29.0	31.0	33.0	40.0	39.0	25.0
Normal Rainfall ins.	5.05	4.70	4.88	6.00	4.28	3.52	3.90	2.00	3.34	2.81	3.03	3.97	47.48
<b>INVERELL.</b>													
Normal Mean Temperature—													
Maximum °F.	87.4	86.7	82.7	75.6	68.1	61.6	59.9	63.1	69.4	76.1	81.9	85.4	74.8
Minimum ..	58.4	56.9	53.1	45.4	37.9	34.1	32.3	32.8	37.6	44.6	51.7	56.3	45.1
Extreme Temperature—													
Maximum .. °F.	107.0	102.0	100.0	91.0	85.0	78.0	77.0	85.0	89.0	98.0	102.2	105.5	107.0
Minimum ..	35.0	39.0	33.0	25.0	21.0	15.0	14.0	16.5	21.0	21.7	31.7	38.0	14.0
Normal Rainfall ins.	3.66	2.46	2.10	1.71	1.66	2.33	2.22	1.57	1.79	2.39	3.08	3.80	28.77
<b>TAMWORTH.</b>													
Normal Mean Temperature—													
Maximum °F.	91.0	89.5	84.6	76.9	69.1	62.0	60.4	64.2	71.6	78.5	85.1	88.5	76.8
Minimum ..	63.4	62.9	58.2	50.4	43.2	38.6	36.8	37.8	42.3	49.7	56.2	60.9	50.0
Extreme Temperature—													
Maximum .. °F.	113.0	107.0	103.0	94.0	87.0	84.0	78.0	86.9	93.0	99.0	107.0	110.0	113.0
Minimum ..	41.0	45.0	36.3	30.0	22.0	20.0	22.0	22.0	25.0	26.0	36.0	36.0	20.0
Normal Rainfall ins.	3.04	2.14	2.00	1.44	1.09	2.13	1.92	1.52	1.73	1.96	2.46	2.98	24.41
<b>COONABARABRAN.</b>													
Normal Mean Temperature—													
Maximum °F.	88.3	87.3	82.6	73.8	65.9	59.2	57.7	61.3	68.0	75.4	81.7	85.5	73.9
Minimum ..	58.9	58.3	53.4	45.1	38.0	34.3	33.3	34.2	38.5	45.1	51.7	56.7	45.6
Extreme Temperature—													
Maximum .. °F.	111.9	108.6	102.9	96.1	86.3	78.0	75.3	85.0	91.0	98.9	105.8	108.5	111.9
Minimum ..	39.5	41.0	32.0	26.0	21.0	17.0	17.0	19.0	24.0	23.0	33.0	37.0	17.0
Normal Rainfall ins.	2.42	2.30	2.25	1.73	1.59	2.46	2.58	1.57	1.67	1.75	2.16	2.55	25.03

TABULATED DATA FOR SELECTED CLIMATOLOGICAL STATIONS :  
NEW SOUTH WALES—*continued.*

Particulars.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
<b>MUDGEE.</b>													
Normal Mean Temperature—													
Maximum °F.	88.5	87.8	82.6	73.9	66.0	59.1	57.6	60.6	67.9	75.2	81.6	85.9	73.9
Minimum ..	59.4	59.0	54.7	46.8	39.7	35.9	34.5	35.5	39.4	45.2	51.1	56.6	46.5
Extreme Temperature—													
Maximum .. °F.	113.2	105.0	104.0	94.0	84.0	81.0	75.0	83.6	89.0	103.0	108.0	106.0	113.2
Minimum ..	38.0	39.0	33.0	28.0	20.0	15.0	17.0	21.0	22.0	22.0	30.0	33.0	15.0
Normal Rainfall ins.	2.15	1.76	2.01	1.73	1.59	2.24	2.18	1.82	1.69	1.87	2.51	2.47	24.02

<b>FORBES.</b>													
Normal Mean Temperature—													
Maximum °F.	91.9	91.3	85.3	74.9	67.1	59.3	58.2	62.0	68.7	76.4	84.2	89.0	75.7
Minimum ..	63.9	63.7	58.4	50.4	43.7	39.7	38.3	39.9	44.1	49.7	56.0	61.3	50.8
Extreme Temperature—													
Maximum .. °F.	114.0	111.0	105.8	98.0	87.5	75.0	73.8	80.0	94.0	103.0	109.2	110.0	114.0
Minimum ..	42.2	42.0	38.0	31.7	28.0	22.0	23.0	24.0	27.2	30.0	35.0	41.0	22.0
Normal Rainfall ins.	1.61	1.38	1.53	1.49	1.33	2.03	1.75	1.67	1.45	1.47	1.43	2.12	19.26

<b>WAGGA WAGGA.</b>													
Normal Mean Temperature—													
Maximum °F.	89.8	89.7	83.8	73.6	65.5	58.0	57.1	60.6	66.9	74.1	81.4	87.4	74.0
Minimum ..	61.5	61.8	57.1	48.8	42.1	38.9	37.8	39.4	42.9	47.7	53.4	58.8	49.2
Extreme Temperature—													
Maximum .. °F.	117.0	110.9	105.9	94.3	83.9	74.9	76.0	78.0	95.9	103.9	107.0	113.9	117.0
Minimum ..	44.5	42.0	37.0	32.0	25.0	23.5	23.5	23.0	26.0	31.0	37.3	41.0	23.0
Normal Rainfall ins.	1.37	1.66	1.66	1.70	1.67	2.45	1.95	2.17	1.70	1.93	1.51	1.65	21.42

<b>GOULBURN.</b>													
Normal Mean Temperature—													
Maximum °F.	81.5	81.2	76.1	67.1	59.9	53.3	52.4	55.8	62.3	69.5	75.0	79.5	67.8
Minimum ..	56.2	56.4	53.0	46.1	40.7	37.0	35.8	36.6	40.4	45.2	50.1	54.4	46.0
Extreme Temperature—													
Maximum .. °F.	107.5	102.0	100.0	90.0	78.7	71.0	70.0	80.0	84.5	97.5	102.0	107.5	107.5
Minimum ..	40.0	36.5	32.0	24.8	23.0	18.0	18.4	21.0	24.0	29.0	31.0	33.0	18.0
Normal Rainfall ins.	2.18	1.74	2.25	2.02	1.83	1.95	2.01	1.87	1.90	2.09	1.97	2.46	24.27

<b>MORUYA HEADS.</b>													
Normal Mean Temperature—													
Maximum °F.	73.5	74.5	72.9	69.5	65.2	61.3	60.0	61.7	64.7	67.3	69.2	71.8	67.6
Minimum ..	61.1	62.1	59.8	55.1	49.7	45.5	43.7	44.4	47.9	52.2	55.6	59.1	53.0
Extreme Temperature—													
Maximum .. °F.	111.0	107.0	104.0	90.0	84.6	75.4	78.0	80.8	94.2	99.0	98.0	101.5	111.0
Minimum ..	47.0	45.3	42.6	37.8	37.2	33.0	31.5	33.8	33.0	38.0	40.5	38.7	31.5
Normal Rainfall ins.	4.47	3.13	4.00	3.40	3.68	2.65	2.64	1.57	2.22	2.24	2.61	3.10	35.71

TABULATED DATA FOR SELECTED CLIMATOLOGICAL STATIONS : VICTORIA.

<b>OUYEN.</b>													
Normal Mean Temperature—													
Maximum °F.	89.3	86.1	82.2	73.1	65.7	59.4	58.8	62.7	68.8	74.1	79.9	86.8	73.9
Minimum ..	58.6	58.4	54.1	47.8	44.4	40.7	39.8	40.6	43.3	47.3	52.6	55.9	48.6
Extreme Temperature—													
Maximum .. °F.	116.0	112.0	108.5	98.0	86.0	73.2	71.0	81.5	91.0	99.0	105.6	109.0	116.0
Minimum ..	42.0	42.8	39.0	34.0	30.0	25.6	26.2	27.5	30.0	32.0	39.0	42.0	25.6
Normal Rainfall ins.	0.63	1.13	0.66	0.80	1.21	1.31	1.17	1.22	1.33	1.16	0.78	1.03	12.43

TABULATED DATA FOR SELECTED CLIMATOLOGICAL STATIONS: VICTORIA—*continued.*

Particulars.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
ECHUCA.													
Normal Mean Temperature—													
Maximum °F.	86.2	86.8	80.7	71.1	63.6	56.7	56.0	59.0	54.7	71.7	78.5	84.1	71.6
Minimum ..	58.9	60.1	55.9	49.3	44.5	41.3	40.2	41.2	44.3	48.6	52.7	56.9	49.5
Extreme Temperature—													
Maximum .. °F.	115.0	113.0	107.5	95.0	83.0	72.5	72.0	78.6	93.0	100.0	106.0	112.0	115.0
Minimum ..	40.0	42.0	37.3	31.0	28.0	25.0	23.0	24.0	28.0	27.0	30.0	35.0	23.0
Normal Rainfall ins.	0.84	1.30	1.04	1.37	1.54	1.81	1.72	1.65	1.58	1.66	1.05	1.17	16.73

## MARYBOROUGH.

Normal Mean Temperature—													
Maximum °F.	83.7	84.0	77.9	68.6	61.2	54.6	54.0	56.9	62.2	69.0	75.8	80.4	69.0
Minimum ..	54.8	55.5	51.9	46.6	42.7	39.7	38.2	39.1	41.6	44.8	49.0	52.5	46.4
Extreme Temperature—													
Maximum .. °F.	113.0	114.0	105.5	93.0	81.0	68.8	69.0	79.0	90.0	99.0	105.0	111.0	114.0
Minimum ..	38.0	36.0	36.0	30.0	28.0	25.5	26.1	24.0	26.0	30.0	30.0	38.0	24.0
Normal Rainfall ins.	1.00	1.48	1.10	1.35	1.79	2.22	2.26	2.11	2.17	1.60	1.40	1.60	20.08

## HAMILTON.

Normal Mean Temperature—													
Maximum °F.	77.3	78.7	74.2	66.3	60.1	55.1	54.1	56.2	59.9	64.8	69.1	74.0	65.8
Minimum ..	50.7	52.4	49.9	46.3	43.2	40.2	39.3	40.4	42.3	44.0	46.3	49.2	45.4
Extreme Temperature—													
Maximum .. °F.	110.3	108.5	106.8	90.2	81.2	68.0	65.3	72.9	86.5	97.0	103.0	111.0	111.0
Minimum ..	32.5	34.3	29.2	28.3	26.0	24.0	23.0	24.5	25.4	25.9	28.9	31.0	23.0
Normal Rainfall ins.	1.10	1.45	1.43	2.14	2.64	2.65	2.77	3.06	3.00	2.48	1.99	1.94	26.65

## WARRNAMBOOL.

Normal Mean Temperature—													
Maximum °F.	69.9	70.9	69.1	64.6	60.5	56.3	55.6	56.9	59.4	62.6	64.8	67.9	63.2
Minimum ..	54.7	56.0	54.2	51.0	47.8	44.8	43.6	44.4	46.2	48.1	50.2	53.0	49.5
Extreme Temperature—													
Maximum .. °F.	115.0	111.0	107.0	91.0	86.0	69.0	70.0	75.0	87.0	98.4	103.0	110.0	115.0
Minimum ..	40.0	38.2	38.0	34.0	30.0	29.4	29.0	31.0	32.6	34.0	36.8	37.7	29.0
Normal Rainfall ins.	1.07	1.47	1.51	1.99	2.76	2.80	2.98	2.86	2.61	2.21	1.93	1.60	25.79

## LEONGATHA.

Normal Mean Temperature—													
Maximum °F.	76.4	77.1	73.9	66.4	61.5	56.4	55.4	57.5	61.3	65.1	69.4	73.7	66.2
Minimum ..	52.9	54.2	52.2	48.4	45.0	41.7	40.8	41.7	43.7	46.1	48.4	51.1	47.2
Extreme Temperature—													
Maximum .. °F.	111.0	114.0	107.0	90.0	83.0	72.0	73.0	74.5	86.0	93.0	98.0	104.0	114.0
Minimum ..	36.0	36.5	33.0	32.0	30.0	27.0	26.0	26.0	27.5	31.0	34.0	34.0	26.0
Normal Rainfall ins.	2.15	2.28	2.88	3.26	3.64	3.57	3.44	4.01	3.76	3.89	3.31	3.08	39.27

## TABULATED DATA FOR SELECTED CLIMATOLOGICAL STATIONS: QUEENSLAND.

## COOKTOWN.

Normal Mean Temperature—													
Maximum °F.	88.7	88.3	86.5	84.7	81.9	79.6	78.7	80.0	82.3	85.2	87.5	89.1	84.4
Minimum ..	75.4	75.1	74.6	73.2	70.4	67.9	66.0	67.1	69.8	72.8	74.7	75.5	71.9
Extreme Temperature—													
Maximum .. °F.	104.0	101.5	100.8	95.2	93.8	92.0	86.8	88.4	96.2	96.0	104.0	105.0	105.0
Minimum ..	67.0	62.7	65.5	60.2	53.0	48.5	47.0	50.6	52.0	56.8	61.0	61.0	47.0
Normal Rainfall ins.	14.35	13.72	16.07	8.02	2.58	2.09	1.01	0.90	0.53	0.97	1.56	6.07	67.87

## BOWEN.

Normal Mean Temperature—													
Maximum °F.	88.6	87.8	86.6	84.1	80.1	76.3	75.0	77.2	80.8	84.0	86.6	88.5	83.0
Minimum ..	75.2	74.7	73.3	69.3	63.2	59.5	56.9	58.4	63.0	68.1	71.9	74.2	67.3
Extreme Temperature—													
Maximum .. °F.	108.0	103.0	98.0	95.0	92.2	89.6	85.1	89.0	95.0	95.0	99.4	101.2	108.0
Minimum ..	62.3	60.0	58.0	46.5	40.0	33.5	33.0	33.6	39.0	45.0	52.0	57.0	33.0
Normal Rainfall ins.	9.23	8.80	5.02	2.39	0.96	1.69	0.76	0.78	0.50	0.86	1.17	4.21	36.37

TABULATED DATA FOR SELECTED CLIMATOLOGICAL STATIONS:  
QUEENSLAND—continued.

Particulars.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
<b>RICHMOND.</b>													
Normal Mean Temperature—													
Maximum .. °F.	98.9	96.2	94.9	91.4	84.4	79.2	78.5	83.5	90.3	96.6	99.4	100.7	91.2
Minimum .. °F.	73.4	71.9	69.0	62.1	54.9	50.3	47.2	50.2	57.1	64.4	69.6	72.3	61.9
Extreme Temperature—													
Maximum .. °F.	114.2	111.2	108.2	105.0	98.0	93.0	95.0	98.0	104.0	110.0	113.9	114.0	114.2
Minimum .. °F.	60.0	54.5	52.5	38.5	36.0	29.7	27.5	31.2	37.0	42.8	50.8	52.5	27.5
Normal Rainfall .. ins.	4.20	4.66	1.91	0.85	0.62	0.72	0.40	0.10	0.15	0.64	1.47	2.59	18.31
<b>ST. LAWRENCE.</b>													
Normal Mean Temperature—													
Maximum .. °F.	88.4	87.8	86.7	84.1	79.4	74.8	73.8	76.0	79.3	82.9	85.7	88.2	82.3
Minimum .. °F.	72.1	71.7	69.2	64.0	57.9	54.1	51.2	52.5	57.9	63.3	67.6	70.8	62.7
Extreme Temperature—													
Maximum .. °F.	102.0	104.0	101.8	95.8	90.5	86.0	86.1	90.0	97.0	100.4	104.0	103.8	104.0
Minimum .. °F.	61.0	59.0	58.0	41.4	41.0	34.5	33.0	35.2	41.0	45.0	50.0	59.0	33.0
Normal Rainfall .. ins.	8.52	6.71	3.76	2.26	1.33	2.42	1.37	0.60	0.85	1.86	2.57	4.98	37.23
<b>EMERALD.</b>													
Normal Mean Temperature—													
Maximum .. °F.	95.1	93.1	90.5	85.8	79.2	73.5	72.9	77.1	83.2	89.8	93.5	95.3	85.8
Minimum .. °F.	70.7	70.1	66.8	59.3	51.9	47.5	44.3	45.5	53.3	60.5	66.0	69.0	58.7
Extreme Temperature—													
Maximum .. °F.	113.9	109.0	109.2	100.5	92.3	89.0	91.1	100.8	102.1	106.0	111.2	115.1	115.1
Minimum .. °F.	46.0	56.8	46.4	36.0	29.8	25.0	22.0	25.6	28.0	37.0	35.2	50.0	22.0
Normal Rainfall .. ins.	3.82	2.92	2.63	1.18	0.79	1.83	1.22	0.72	0.98	1.35	2.50	3.32	23.26
<b>BUNDABERG.</b>													
Normal Mean Temperature—													
Maximum .. °F.	86.1	85.8	84.3	81.2	76.4	72.3	71.6	73.5	77.1	80.3	83.3	85.5	79.8
Minimum .. °F.	69.7	69.5	67.2	62.2	55.8	51.9	49.2	50.1	55.1	60.8	65.2	68.6	60.4
Extreme Temperature—													
Maximum .. °F.	102.1	99.8	99.7	94.8	89.0	85.5	83.8	87.3	97.7	97.0	99.9	104.4	104.4
Minimum .. °F.	59.0	54.6	49.5	44.0	38.0	33.9	30.7	33.0	37.0	42.5	46.2	51.0	30.7
Normal Rainfall .. ins.	8.51	6.40	4.78	3.54	2.17	2.83	1.52	1.06	1.02	2.26	2.87	5.41	42.37
<b>GYMPIE.</b>													
Normal Mean Temperature—													
Maximum .. °F.	88.6	87.0	85.0	82.0	76.9	72.1	71.5	74.1	78.9	83.6	86.7	88.5	81.2
Minimum .. °F.	66.8	66.7	64.0	57.8	50.3	46.3	43.0	44.1	49.8	56.4	61.2	64.9	55.9
Extreme Temperature—													
Maximum .. °F.	112.0	106.8	108.0	102.0	90.0	85.8	86.8	91.6	101.8	101.0	105.1	108.5	112.0
Minimum .. °F.	49.0	46.0	43.0	35.5	29.8	25.7	23.0	25.6	31.8	36.2	39.0	47.0	23.0
Normal Rainfall .. ins.	6.45	6.05	5.33	3.04	2.10	2.78	1.91	1.24	2.01	2.52	3.61	5.65	43.29
<b>MILES.</b>													
Normal Mean Temperature—													
Maximum .. °F.	92.1	90.9	87.6	81.7	74.5	67.7	66.9	71.0	77.8	84.5	89.3	91.7	81.3
Minimum .. °F.	66.7	66.0	62.1	53.8	45.1	40.9	38.4	40.4	47.4	55.4	61.6	65.1	53.6
Extreme Temperature—													
Maximum .. °F.	114.0	108.7	107.0	97.0	90.0	88.0	86.2	91.0	98.0	104.0	109.0	111.0	114.0
Minimum .. °F.	50.0	45.5	39.8	28.2	26.5	18.0	20.5	22.2	27.0	32.0	39.0	44.8	18.0
Normal Rainfall .. ins.	3.73	2.15	2.52	1.39	1.14	1.69	1.40	0.83	1.08	1.97	2.85	3.41	23.90
<b>ROMA.</b>													
Normal Mean Temperature—													
Maximum .. °F.	94.4	92.9	88.9	82.3	74.5	68.3	67.4	71.6	78.8	85.8	91.0	93.7	82.5
Minimum .. °F.	68.3	67.2	63.3	54.1	46.0	40.9	39.3	41.6	47.8	55.9	62.6	66.0	54.4
Extreme Temperature—													
Maximum .. °F.	116.2	109.0	103.2	102.0	91.8	88.2	90.0	94.2	100.0	109.0	109.0	112.0	116.2
Minimum .. °F.	50.0	48.0	37.3	33.0	28.2	21.5	21.4	22.8	26.0	33.8	41.0	47.0	21.4
Normal Rainfall .. ins.	2.62	2.63	2.06	1.17	1.70	1.44	1.40	0.72	0.98	1.53	2.12	2.66	20.43

TABULATED DATA FOR SELECTED CLIMATOLOGICAL STATIONS:  
QUEENSLAND—continued.

Particulars.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
<b>GOONDIWINDI.</b>													
Normal Mean Temperature—													
Maximum	93.9	92.3	88.0	80.8	72.6	65.9	64.7	68.9	76.0	83.3	89.0	92.0	80.6
Minimum	67.8	66.6	62.9	54.9	47.7	42.8	41.4	42.7	48.6	56.1	62.1	65.7	54.9
Extreme Temperature—													
Maximum	113.4	112.1	108.4	100.8	93.2	88.2	85.0	93.8	98.1	104.7	111.0	113.3	113.4
Minimum	49.2	48.4	42.6	35.2	27.2	25.8	23.2	26.0	28.1	34.0	40.0	46.0	23.2
Normal Rainfall	ins.	2.73	2.16	2.00	1.13	1.55	1.79	1.59	1.03	1.31	1.45	2.50	3.28

TABULATED DATA FOR SELECTED CLIMATOLOGICAL STATIONS: SOUTH AUSTRALIA.

<b>CEDUNA.</b>													
Normal Mean Temperature—													
Maximum	81.5	79.1	79.9	73.5	67.9	64.1	62.6	65.5	69.7	72.9	76.1	80.2	72.7
Minimum	58.8	59.3	56.4	51.0	46.9	43.5	43.8	44.2	47.0	50.0	53.8	57.7	51.0
Extreme Temperature—													
Maximum	117.0	111.0	110.0	100.0	89.3	80.0	83.0	86.0	101.0	104.0	107.0	109.0	117.0
Minimum	45.0	42.0	42.0	38.0	30.0	27.0	29.0	30.0	31.0	33.3	39.0	41.0	27.0
Normal Rainfall	ins.	0.25	0.75	0.60	0.64	1.23	1.50	1.38	1.38	0.84	0.82	0.67	0.44

<b>PORT LINCOLN.</b>													
Normal Mean Temperature—													
Maximum	77.4	77.7	74.8	70.3	65.8	61.3	60.2	61.6	64.6	68.2	71.8	75.2	69.1
Minimum	58.5	59.4	57.5	54.1	50.9	48.1	46.4	46.4	47.7	50.1	53.4	56.6	52.4
Extreme Temperature—													
Maximum	114.0	108.0	106.0	100.0	90.0	79.0	77.0	84.2	92.0	102.0	106.6	111.0	114.0
Minimum	46.3	44.8	43.0	41.0	32.0	32.0	32.0	33.4	36.0	34.0	40.0	42.6	32.0
Normal Rainfall	ins.	0.41	0.67	0.73	1.16	2.02	2.77	2.92	2.61	1.93	1.26	0.92	0.84

<b>PORT AUGUSTA.</b>													
Normal Mean Temperature—													
Maximum	89.5	89.5	85.2	77.4	70.3	63.6	62.8	66.5	72.4	78.3	83.8	87.7	77.3
Minimum	65.3	66.0	62.1	55.7	50.0	45.9	43.9	45.8	49.5	54.8	59.7	63.5	55.2
Extreme Temperature—													
Maximum	119.4	117.0	110.9	100.0	91.2	80.8	80.4	90.0	98.0	106.3	109.8	114.6	119.4
Minimum	50.3	49.1	48.0	41.3	33.0	31.8	31.0	32.0	36.0	39.6	43.0	46.3	31.0
Normal Rainfall	ins.	0.61	0.70	0.63	0.56	0.89	1.01	0.78	1.01	0.82	0.88	0.71	0.68

<b>BERRI.</b>													
Normal Mean Temperature—													
Maximum	87.7	86.3	82.3	72.5	66.3	60.4	59.9	63.4	69.5	74.5	80.7	85.8	74.1
Minimum	59.1	58.9	56.0	50.0	46.0	42.7	41.5	42.6	45.7	49.8	54.0	57.6	50.3
Extreme Temperature—													
Maximum	117.0	113.3	108.8	98.2	87.7	88.8	79.8	84.6	97.5	102.0	105.0	110.9	117.0
Minimum	41.5	44.0	39.1	30.0	32.6	27.0	28.1	30.5	32.3	35.5	39.7	41.8	27.0
Normal Rainfall	ins.	0.71	0.70	0.35	0.59	1.00	0.99	1.14	1.03	0.89	0.60	0.60	9.83

<b>ROBE.</b>													
Normal Mean Temperature—													
Maximum	71.9	72.3	69.4	65.2	61.0	57.2	56.0	57.1	59.7	63.1	66.8	70.1	64.2
Minimum	56.3	56.6	54.8	52.7	50.3	47.7	46.6	47.2	48.7	50.5	52.7	54.8	51.6
Extreme Temperature—													
Maximum	101.8	102.3	96.4	89.0	77.3	66.5	64.0	71.0	77.6	88.0	97.3	99.1	102.3
Minimum	41.9	43.0	41.0	37.0	35.6	33.0	32.0	32.3	34.1	36.0	39.0	40.0	32.0
Normal Rainfall	ins.	0.74	0.96	0.83	1.63	2.98	4.01	3.83	3.14	2.34	1.67	1.07	1.29

## TABULATED DATA FOR SELECTED CLIMATOLOGICAL STATIONS : WESTERN AUSTRALIA.

Particulars.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
Normal Mean Temperature—													
Maximum .. °F.	97.6	97.0	95.6	92.3	85.7	80.6	80.1	85.9	92.7	98.3	100.5	99.5	92.2
Minimum .. °F.	75.4	74.2	71.2	63.0	56.0	50.5	47.6	52.1	59.0	69.5	74.2	75.5	64.0
Extreme Temperature—													
Maximum .. °F.	111.8	110.8	107.5	103.8	99.0	95.0	93.2	100.0	104.3	109.0	110.6	111.6	111.8
Minimum .. °F.	60.0	54.0	51.8	45.0	36.4	32.4	30.0	32.8	37.4	48.0	53.0	53.8	30.0
Normal Rainfall ins.	5.37	4.16	2.77	0.54	0.24	0.18	0.24	0.07	0.15	0.49	1.36	3.15	18.72

## HALL'S CREEK.

Normal Mean Temperature—													
Maximum .. °F.	91.3	91.8	93.1	93.3	88.0	82.5	81.8	85.0	88.8	90.5	92.7	93.2	89.3
Minimum .. °F.	79.2	79.1	77.7	71.6	64.8	59.5	57.0	60.0	65.1	72.1	76.7	79.4	70.2
Extreme Temperature—													
Maximum .. °F.	111.5	108.2	105.0	107.0	101.0	96.9	94.0	100.5	103.5	108.6	111.0	112.0	112.0
Minimum .. °F.	68.0	59.0	55.0	54.0	45.1	43.6	40.2	43.0	52.0	52.8	61.8	63.0	40.2
Normal Rainfall ins.	7.35	5.38	4.12	0.93	0.65	0.70	0.15	0.15	0.03	0.02	0.27	3.12	22.87

## BROOME.

Normal Mean Temperature—													
Maximum .. °F.	93.0	92.3	86.4	79.1	69.3	63.4	61.3	64.0	70.2	76.1	85.0	90.5	77.5
Minimum .. °F.	61.6	61.4	58.8	52.2	46.5	43.6	41.5	41.9	43.8	47.8	54.5	58.8	51.0
Extreme Temperature—													
Maximum .. °F.	115.0	116.0	112.0	102.6	96.0	80.4	76.0	82.6	93.1	103.0	109.5	112.0	116.0
Minimum .. °F.	45.0	43.0	40.7	34.0	28.0	26.5	26.0	27.6	30.0	32.5	39.0	42.0	26.0
Normal Rainfall ins.	0.47	0.52	1.06	0.79	1.60	2.17	2.33	1.84	1.03	1.00	0.46	0.62	13.89

## KELLEBERRIN.

Normal Mean Temperature—													
Maximum .. °F.	91.6	90.9	85.5	78.6	69.3	63.5	61.8	63.7	68.7	73.6	82.5	88.6	76.5
Minimum .. °F.	61.0	61.4	58.4	51.8	46.5	43.5	41.6	41.7	43.6	46.7	53.5	58.5	50.7
Extreme Temperature—													
Maximum .. °F.	115.2	115.6	108.5	101.8	91.4	82.0	76.2	82.3	93.0	101.0	110.2	114.5	115.6
Minimum .. °F.	43.8	42.0	41.1	33.0	29.7	28.0	25.5	29.4	30.0	30.5	36.4	41.0	25.5
Normal Rainfall ins.	0.50	0.62	0.88	0.85	2.41	3.20	3.56	2.63	1.39	1.12	0.47	0.40	17.98

## YORK.

## KATANNING.

Normal Mean Temperature—													
Maximum .. °F.	86.0	85.1	79.3	73.2	64.7	59.7	57.9	59.5	64.1	68.8	77.6	82.8	71.6
Minimum .. °F.	56.3	56.5	54.7	50.4	46.5	43.6	41.9	42.0	43.7	45.7	50.2	53.8	48.8
Extreme Temperature—													
Maximum .. °F.	110.9	112.3	107.0	96.2	88.4	75.3	71.0	88.0	87.0	100.0	106.0	107.6	112.3
Minimum .. °F.	41.0	37.9	35.0	33.0	30.0	28.3	25.0	28.1	29.8	31.0	35.0	37.6	25.0
Normal Rainfall ins.	0.57	0.56	1.09	1.35	2.57	3.01	3.17	2.51	1.75	1.46	0.69	0.70	19.43

TABULATED DATA FOR SELECTED CLIMATOLOGICAL STATIONS : TASMANIA.

Particulars.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
<b>STANLEY.</b>													
Normal Mean Temperature—													
Maximum °F.	68.0	69.1	66.1	61.7	57.7	54.4	53.4	54.4	56.7	59.5	62.5	65.7	60.8
Minimum ..	53.7	55.4	53.1	50.4	47.8	44.9	43.6	44.2	45.5	47.1	49.3	51.8	48.9
Extreme Temperature—													
Maximum .. °F.	93.0	85.0	83.0	76.0	66.8	64.0	61.0	64.0	67.5	77.0	79.0	89.0	93.0
Minimum ..	39.2	39.0	35.0	36.5	30.5	31.0	31.0	28.0	28.0	34.0	36.2	37.0	28.0
Normal Rainfall ins.	1.66	1.84	1.80	2.90	3.49	4.07	4.28	4.16	3.57	3.52	2.58	2.55	36.42

<b>ST. HELENS.</b>													
Normal Mean Temperature—													
Maximum °F.	71.9	72.3	69.5	64.5	60.4	56.1	55.7	57.4	60.2	63.6	67.0	69.8	64.0
Minimum ..	51.2	52.5	49.7	45.1	41.3	37.8	37.3	38.0	40.9	43.9	46.6	50.0	44.5
Extreme Temperature—													
Maximum .. °F.	102.0	98.9	103.0	83.1	82.0	68.0	65.0	70.0	78.1	90.1	92.1	99.8	103.0
Minimum ..	35.0	32.0	30.5	29.0	25.2	25.0	20.0	25.2	26.8	27.2	27.0	32.0	20.0
Normal Rainfall ins.	1.98	2.65	3.20	2.92	2.38	3.66	3.00	2.50	2.44	2.87	2.15	2.51	32.26

<b>OATLANDS.</b>													
Normal Mean Temperature—													
Maximum °F.	70.6	71.2	66.6	60.4	54.8	50.0	49.2	51.9	56.1	60.5	65.5	68.6	60.5
Minimum ..	46.4	46.9	44.2	40.8	37.3	35.2	34.1	35.4	37.5	39.7	42.2	44.9	40.4
Extreme Temperature—													
Maximum .. °F.	104.0	100.4	100.0	85.0	78.0	78.0	73.0	70.0	78.0	86.5	97.0	97.8	104.0
Minimum ..	26.0	25.0	24.0	20.0	17.0	15.0	20.0	17.0	20.0	22.0	20.0	28.0	15.0
Normal Rainfall ins.	1.41	1.67	1.83	2.07	1.80	2.12	1.89	1.85	1.67	2.31	2.01	2.40	23.03

<b>BUSHY PARK.</b>													
Normal Mean Temperature—													
Maximum °F.	74.1	74.0	71.3	63.4	58.0	52.1	52.2	55.8	60.7	64.2	68.7	72.8	63.9
Minimum ..	50.0	49.8	47.4	43.7	39.7	36.3	35.4	36.6	39.3	42.7	46.2	49.1	43.0
Extreme Temperature—													
Maximum .. °F.	101.0	97.8	98.0	86.0	76.0	67.0	66.0	70.0	80.0	87.0	97.0	101.5	101.5
Minimum ..	33.0	35.0	30.5	26.0	22.0	19.0	21.5	21.0	27.0	28.0	32.5	32.5	19.0
Normal Rainfall ins.	1.59	1.47	1.50	1.92	1.68	2.00	1.88	1.82	1.97	2.38	1.91	2.17	22.29

TABULATED DATA FOR SELECTED CLIMATOLOGICAL STATIONS : NORTHERN TERRITORY.

**KATHERINE.**

Normal Mean Temperature—													
Maximum °F.	94.9	93.1	94.3	92.9	91.2	85.8	86.9	89.9	95.6	100.0	100.2	97.1	93.5
Minimum ..	74.4	73.9	72.3	66.0	61.2	55.1	55.1	57.9	66.5	73.8	76.0	75.9	67.3
Extreme Temperature—													
Maximum .. °F.	103.0	105.0	105.0	107.0	106.0	100.0	97.0	99.0	105.5	107.0	111.0	108.0	111.0
Minimum ..	65.0	56.0	53.0	51.0	46.0	40.0	38.7	41.3	47.0	52.3	61.0	63.0	38.7
Normal Rainfall ins.	9.14	7.07	5.89	0.78	0.27	0.12	0.03	0.01	0.16	1.15	3.02	7.81	35.45



TABULATED DATA FOR SELECTED CLIMATOLOGICAL STATIONS:  
NORTHERN TERRITORY—*continued.*

Particulars.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
TENNANT CREEK.													
Normal Mean Temperature—													
Maximum °F.	98.5	96.8	94.5	88.8	81.7	76.0	75.4	81.3	88.6	95.1	98.3	99.8	89.6
Minimum „	75.9	74.5	72.1	66.1	59.0	53.3	51.1	54.2	60.7	67.9	72.7	75.5	65.2
Extreme Temperature—													
Maximum .. °F.	115.0	110.7	107.0	104.0	100.0	91.2	92.0	96.0	102.0	108.0	111.6	112.8	115.0
Minimum .. „	60.3	52.0	53.8	50.0	41.2	37.0	36.4	37.0	42.3	51.0	56.4	58.0	36.4
Normal Rainfall ins.	4.04	3.54	2.08	0.35	0.21	0.35	0.25	0.06	0.11	0.40	1.07	1.39	13.85

(vi) *Frosts.*\* The Observer's Handbook of the Meteorological Office, London, gives the following definition:—"Injury to the tissues of growing plants is not caused until the temperature has fallen considerably below the freezing point of water (32° F.) and a 'ground frost' is regarded as having occurred when the thermometer on the grass has fallen to 30.4° F. or below".

In Australia this definition is adopted for stations equipped with terrestrial minimum thermometers. However, these are few in number, so although many rainfall observers record "hoar frost" when seen, for statistical purposes a screen temperature of 36° F. is taken as indicating light frosts at ground level. For heavy frosts a screen temperature of 32° F. is taken.

In America a "killing" frost is defined as a frost "that is generally destructive of vegetation". A "black frost" is the phenomenon arising out of a combination of low temperature and low humidity causing rupturing of plant cells by expansion, when freezing takes place, of the water which they contain, though frost crystals are not formed on the ground.

The parts of Australia most subject to low temperature are the eastern highlands from about Omeo in Victoria northward to Cambooya and Bybera in Queensland. Most stations in this region experience more than ten nights per month with readings of 32° F. or under for three to five months of the year. In Tasmania, districts on the Central Plateau are subject to such conditions for three to six months of the year. Minimum temperatures of 32° F. are comparatively infrequent in Western Australia except in parts of the south and south-west. In South Australia the Yongala district is much more subject to such temperatures than other parts of the State. Much of the south-east of Queensland has a higher frequency of such readings than South Australia. Generally speaking, the frequency is controlled mainly by altitude, latitude and, to a lesser degree, by proximity to the sea.

Frosts may occur within a few miles of the coastline over the whole continent, except in the Northern Territory and a considerable area of Northern Queensland. Regions subject to frost in all months of the year comprise portions of the tablelands of New South Wales, the Eastern Highlands and parts of the Central Divide and Western district in Victoria, practically the whole of Tasmania and a small area in the south-west of Western Australia.

A map showing the average annual number of frost-free days (i.e. days on which the temperature does not fall below 36° F.) appears on page 35.

Over most of the interior of the continent and on the Highlands in Queensland as far north as the Atherton Plateau frosts appear in April and end in September, but they are infrequent in these months. Minimum temperatures of 32° F. are experienced in most of the sub-tropical interior in June and July.

3. *Humidity.*—After temperature, humidity is the most important element of climate, particularly as regards its effects on human comfort, rainfall supply and conservation and related problems.

\* Foley, J. C. Frost in the Australian Region (Bull. 32, 1945).

In this publication the humidity of the air has been expressed by the relative humidity, which is the quotient of the vapour pressure divided by the saturation vapour pressure and multiplied by one hundred. The mean 9 a.m. relative humidity, as well as its highest and lowest recorded mean values at 9 a.m., are shown in the tables of climatological data for the capital cities (par. 13). The mean monthly vapour pressure has also been added to these tables.

The annual curve of vapour pressure derived from the normal monthly values for this element is comparable with the maximum and minimum temperature curves, but the relative humidities consisting as they do of the extremes for each month do not show the normal annual fluctuation which would be approximately midway between the extremes.

The order of stations in descending values of 9 a.m. vapour pressure is Darwin, Brisbane, Sydney, Perth, Melbourne, Adelaide, Canberra, Hobart and Alice Springs, while the relative humidity diminishes in the order, Sydney, Canberra, Melbourne, Darwin, Hobart, Brisbane, Perth, Adelaide and Alice Springs.

Further reference to humidity will be found in the section on effective temperature (page 13).

4. **Evaporation.**—(i) *General.* The rate and quantity of evaporation in any territory is influenced by the prevailing temperature, and by atmospheric humidity, pressure and wind movement. In Australia the question is, perhaps, of more than ordinary importance, since in its drier regions water has often to be conserved in "tanks" and dams. The magnitude of the economic loss by evaporation will be appreciated from the map reproduced herein (see page 36) which shows that the yearly amount varies from about 20 inches over Western Tasmania to more than 100 inches over the central and north-western parts of Australia. Over an area of 70 per cent. of the continent, comprising most inland districts and extending to the coast in the North-West and Eucla divisions of Western Australia, during no month of the year does the rainfall exceed the evaporation. The central and north-western portions of the continent, comprising 46 per cent. of the total land mass, experience evaporation more than twice as great as their rainfall; it is noteworthy that the vegetation over most of this region is characterized by acacia, semi-desert, shrub steppe and porcupine grass. Since the loss by evaporation depends largely on the exposed area, tanks and dams so designed that the surface shall be a minimum are advantageous. Further, the more they are protected from the direct rays of the sun and from winds by means of suitable tree planting, the less will be the loss by evaporation. These matters are naturally of more than ordinary concern in the drier districts of Australia.

(ii) *Comments on Map of Average Annual Evaporation.* The map of average annual evaporation in Australia (see page 36) has been compiled on the basis of records obtained from a number of evaporimeters supplemented by estimates derived from records of saturation deficit by applying the Waite Institute factor of 263.\* Some modification of the latter values was found to be necessary in comparison with recordings of evaporimeters.

The standard evaporation tank used in Australia is cylindrical in form and is 36 inches in diameter and 36 inches deep. It is surrounded by a 6-inch water jacket and the whole is sunk into the ground so that the water surface is approximately at ground level.

Saturation deficit is obtained from readings of dry and wet bulb thermometers exposed in a standard Stevenson thermometer shelter. Saturation deficit is the difference between the vapour pressure indicated by the dry and wet bulb readings, and the saturation vapour pressure corresponding to the dry bulb temperature.

The Waite formula,  $e = 263 \text{ s.d.}$ , is not an exact relationship, but it takes account of one of the major factors in evaporation, i.e., the difference between saturation vapour pressures at the mean dew point and at the mean air temperature. Errors in the formula are found to be fairly consistent in considerable areas of Australia and corrections have

\* Prescott, J. A. "Atmospheric Saturation Deficit in Australia" (Trans. Royal Society, S.A., Vol. LV., 1931).

been applied accordingly. No evaporation records are available north of latitude 20°, and corrections have been extrapolated for these areas. The evaporation stations on which estimates for the tropics have been based are Alice Springs (N.T.) and Winton (Q'land), and to a lesser degree Blackall (Q'land) and Marble Bar (W.A.).

The map thus presents an estimate of evaporation for which allowance should be made for a certain margin of error (perhaps 10 per cent. or so) on the conservative side. In the absence of definite information, such a map should serve a useful purpose as a basis for many climatic studies.

For graphs and tables of mean monthly evaporation and rainfall at certain selected stations see Official Year Book No. 37, pp. 34-35.

5. *Rainfall.*—(i) *General.* The rainfall of any region is determined mainly by the direction and route of the prevailing winds, by the varying temperatures of the earth's surface over which they blow, and by its geographical features.

Australia lies within the zones of the south-east trades and "prevailing" westerly winds. The southern limit of the south-east trade strikes the eastern shores at about 30° south latitude, and, with very few exceptions, the heaviest rains of the Australian continent are precipitated along the Pacific slopes to the north of that latitude, the varying quantities being more or less regulated by the differences in elevation of the shores and of the chain of mountains from the New South Wales northern border to Thursday Island, upon which the rain-laden winds blow. The converse effect is exemplified on the north-west coast of Western Australia, where the prevailing winds, blowing from the interior of the continent instead of from the ocean, result in the lightest coastal rain in Australia.

The westerly winds, which skirt the southern shores, are responsible for the reliable, generally light to moderate rains enjoyed by the south-western portion of Western Australia, the agricultural areas of South Australia, a great part of Victoria, and the whole of Tasmania.

(ii) *Distribution of Rainfall.* The average annual rainfall map of Australia (page 37) shows that the heaviest yearly falls occur on the north coast of Queensland (up to more than 160 inches) and in Western Tasmania (up to 140 inches), while from 50 to over 60 inches are received on parts of the eastern seaboard from Jervis Bay (New South Wales) to the northern part of Cape York Peninsula, also around Darwin (Northern Territory), on the West Kimberley coast, near Cape Leeuwin (Western Australia), about the Australian Alps in eastern Victoria and New South Wales, and on the north-eastern highlands in Tasmania. A great part of the interior of the continent, stretching from the far west of New South Wales and the south-west of Queensland to the vicinity of Shark Bay in Western Australia, has a very low average rainfall of less than 10 inches a year. Between these two regions of heavy and very low rainfall are the extensive areas which experience useful to good rains, and in the southern and eastern parts of which are found the best country and most of the population and primary production.

(iii) *Factors Determining Occurrence, Intensity and Seasonal Distribution of Rainfall.* Reference has already been made to the frequent rains occurring in the north-eastern coastal districts of Queensland with the prevailing south-east trade winds and to similar rains in the west of Tasmania with the prevailing westerly winds. Other rains in Australia are associated mainly with tropical and southern depressions.

The former chiefly affect the northern, eastern, and to some extent the central parts of the continent and operate in an irregular manner during the warmer half of the year, but principally from December to March. They vary considerably in activity and scope from year to year, occasionally developing into severe storms off the east and north-west coasts. Tropical rainstorms sometimes cover an extensive area, half of the continent on occasions receiving moderate to very heavy falls during a period of a few days. Rain is also experienced, with some regularity, with thunderstorms in tropical areas, especially

near the coast. All these tropical rains, however, favour mostly the northern and eastern parts of the area referred to; the other parts further inland receive lighter, less frequent and less reliable rainfall. With the exception of districts near the east coast, where some rain falls in all seasons, the tropical parts of the continent receive useful rains only on rare occasions from May to September.

The southern depressions are most active in the winter—June to August—and early spring months. The rains associated with them are fairly reliable and frequent over southern Australia and Tasmania, and provide during that period the principal factor in the successful growing of wheat. These depressions also operate with varying activity during the remainder of the year, but the accompanying rains are usually lighter. The southern rains favour chiefly the south-west of Western Australia, the agricultural districts of South Australia, Victoria, Tasmania, and the southern parts of New South Wales. They sometimes extend into the drier regions of the interior, but only infrequently and irregularly.

The map showing mean monthly distribution of rainfall over Australia (page 38) gives in graphic form information on the amount and occurrence of rain.

(iv) *Wettest and Driest Regions.* The wettest known part of Australia is on the north-east coast of Queensland, between Port Douglas and Cardwell, where Deeral on the north coast-line has an average annual rainfall of 172.26 inches and Tully on the Tully River 179.26 inches. In addition, three stations situated on, or adjacent to, the Johnstone and Russell Rivers have an average annual rainfall of between 144 and 169 inches. The maximum and minimum annual amounts there are:—Deeral, 287.18 in 1945 and 94.65 inches in 1951, or a range of 192.53 inches; Tully, 310.92 in 1950 and 104.98 inches in 1943, or a range of 205.94 inches; Goondi, 241.53 in 1894 and 67.88 inches in 1915, or a range of 173.65 inches; Innisfail, 232.06 in 1950 and 69.87 inches in 1902, or a range of 162.19 inches; Harvey Creek, 254.77 in 1921 and 80.47 inches in 1902, or a range of 174.30 inches.

On five occasions more than 200 inches have been recorded at Goondi, the last of these being in 1950, when 204.97 inches were registered. The records at this station cover a period of 65 years.

In twenty-five years of record Tully has exceeded 200 inches on ten occasions, whilst in a record of 28 complete years Harvey Creek has four times exceeded this figure.

In Tasmania the wettest part is in the West Coast region, the average annual rainfall at Lake Margaret being 145.53 inches, with a maximum of 177.30 inches in 1948.

The driest known part of the continent is in an area of approximately 180,000 square miles surrounding Lake Eyre in South Australia, where the annual average is between 4 and 6 inches and where the fall rarely exceeds 10 inches for 12 months.

Records at stations have at times been interrupted, but of the 23 stations in this region which have an annual average of less than 5 inches, six have complete records extending from 30 to 55 years. Of these Mulka has the lowest average of 4.05 inches (34 years), followed by Troudaninna with an average of 4.15 inches in 42 years. Troudaninna in the period 1893 to 1936 had only one year in which the total exceeded 9 inches (11.07 inches in 1894). There have been protracted periods when the average has even been less than 3 inches. From 1895 to 1903 Troudaninna received the following annual totals:—2.78, 0.99, 5.71, 3.04, 3.18, 2.83, 1.80, 1.11, 4.87, an average of 2.91 inches. From 1918 to 1929 the average was only 2.65 inches, and in this period from December, 1924 to November, 1929 the average was only 1.70 inches.

Mulka since 1918 has only once exceeded 10 inches for the annual total (11.72 inches in 1920), and in 34 years on 16 occasions the annual total has been less than 3 inches. In one particular period from October, 1926 to September, 1930, the average was only 1.26 inches (505 points in 48 months). However, at Kanowana, an even lower four-year average of 1.12 inches was recorded between 1896 and 1899 with yearly totals of 43, 225, 87 and 94 points. An even smaller total than 43 points was recorded at Mungeranie in 1889 when only 39 points was recorded on 5 days.

The average number of rain days per month in this region is only 1-2 and the annual number ranges between 10 and 20. Oodnadatta (standard 30 years' average rainfall equal to 4.44 inches) has an average of 20 days of rain per year, while Cordillo Downs in the extreme north-east corner of the State of South Australia receives 5.16 inches on 12 days per year, averaging about one day of rain each month in the thirty years' period 1911-1940.

No part of the earth, so far as is known, is absolutely rainless, and although at Arica, in northern Chili, the rainfall over a period of 15 years was nil, a further two years in which there were three measurable showers made the "average" for 17 years 0.02 inches.

(v) *Quantities and Distribution of Rainfall.* The general distribution is best seen from the rainfall map (page 37) which shows the areas subject to average annual rainfalls lying between certain limits. The proportions of the total area of each State and of Australia as a whole enjoying varying quantities of rainfall determined from the latest available information are shown in the following table:—

## AVERAGE ANNUAL RAINFALL DISTRIBUTION.

(Per Cent.)

Average Annual Rainfall.	N.S.W. (a)	Victoria.	Queens- land.	South Australia.	Western Australia.	Tas- mania. (b)	Northern Territory.	Total.
Under 10 inches	19.7	Nil	13.0	82.8	58.0	Nil	24.7	37.6
10—15 "	23.5	22.4	14.4	9.4	22.4	Nil	32.4	19.9
15—20 "	17.5	15.2	19.7	4.5	6.8	0.7	9.7	10.9
20—25 "	14.2	17.9	18.8	2.2	3.7	11.0	6.6	9.1
25—30 "	9.1	18.0	11.6	0.8	3.7	11.4	9.3	7.3
30—40 "	9.9	16.1	11.1	0.3	3.3	20.4	4.7	6.6
Over 40 "	6.1	10.4	11.4	Nil	2.1	56.5	12.6	8.6
Total ..	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Includes Australian Capital Territory.  
available.

(b) Over an area of 2,777 square miles no records are

Referring first to the capital cities, the records of which are given in the next table, it will be seen that Sydney, with an average rainfall of 44.80 inches, occupies the chief place; Brisbane, Perth, Melbourne, Hobart, Canberra and Adelaide follow in that order, Adelaide with 21.09 inches being the driest. The extreme range from the wettest to the driest year is greatest at Brisbane (72.09 inches) and least at Adelaide (19.46 inches).

In order to show how the rainfall is distributed throughout the year in various parts of the continent, average figures for the various climatological districts have been selected. (See map on p. 38). The figures for Northern Rivers (District 14), show that nearly the whole of the rainfall occurs there in the summer months, while little or none falls in the middle of the year. The figures for the Central Coast, south-west of Western Australia (District 9), are the reverse, for while the summer months are dry, the winter months are very wet. In the districts containing Melbourne and Hobart the rain is fairly well distributed throughout the twelve months, with a maximum in October for both districts. In Queensland, the heaviest rains fall in the summer months, but good averages are also maintained during the other seasons in eastern parts.

On the coast of New South Wales, the first half of the year is the wettest, with heaviest falls in the autumn; the averages during the last six months are fair, and moderately uniform. Generally it may be said that approximately one-third of the area of the continent, principally in the eastern and northern parts, enjoys an annual average rainfall of from 20 to 50 inches or more, the remaining two-thirds averaging from 5 to 20 inches.

(vi) *Tables of Rainfall.* The table of rainfall for a fairly long period of years for each of the Australian capitals affords information as to the variability of the fall in successive years, and the list of the more remarkable falls furnishes information as to what may be expected on particular occasions.

### RAINFALL : AUSTRALIAN CAPITAL CITIES.

Year.	CANBERRA.(a)		PERTH.		ADELAIDE.		BRISBANE.		SYDNEY.		MELBOURNE.		HOBART.(b)	
	Amount.	No. of Days.	Amount.	No. of Days.	Amount.	No. of Days.	Amount.	No. of Days.	Amount.	No. of Days.	Amount.	No. of Days.	Amount.	No. of Days.
	in.		in.		in.		in.		in.		in.		in.	
1920 ..	..	..	40.35	124	26.70	119	39.72	122	43.42	159	28.27	162	18.00	182
21 ..	..	..	41.09	135	22.64	100	54.31	167	43.34	140	29.76	154	18.04	159
22 ..	..	..	31.86	135	23.20	117	35.82	109	39.35	136	25.02	151	28.27	189
23 ..	..	..	44.47	134	29.79	139	23.27	93	37.01	123	22.64	158	32.93	198
24 ..	..	..	33.79	119	23.44	143	41.08	114	37.01	136	36.48	171	28.76	197
25 ..	..	..	31.41	126	21.91	118	53.10	139	50.35	145	17.57	144	22.67	170
26 ..	..	..	49.22	167	22.20	116	30.82	111	37.07	127	20.51	149	25.79	187
27 ..	..	..	36.59	133	16.92	101	62.08	130	48.56	138	17.98	135	20.13	185
28 ..	18.59	90	44.88	140	19.43	107	52.64	145	40.07	130	24.09	151	30.23	205
29 ..	23.12	70	36.77	132	17.51	119	39.78	118	57.90	129	28.81	168	26.55	194
30 ..	17.33	82	39.80	129	18.65	116	41.22	144	44.47	141	25.41	145	19.38	152
31 ..	24.02	103	39.18	118	22.26	145	66.72	136	49.22	153	28.63	164	27.17	179
32 ..	20.18	118	39.40	121	25.04	141	24.79	97	37.47	146	31.08	179	30.29	155
33 ..	20.78	96	32.47	116	22.12	130	49.71	118	42.71	153	22.28	130	23.18	182
34 ..	35.58	131	40.61	120	20.24	125	54.26	117	64.91	183	33.53	157	23.77	194
35 ..	23.78	95	32.28	129	23.45	140	34.64	111	30.97	131	29.98	183	32.22	166
36 ..	26.24	108	30.64	118	19.34	121	21.77	101	30.22	130	24.30	187	19.60	178
37 ..	20.46	82	35.28	120	23.01	128	34.79	113	52.00	157	21.45	144	20.65	160
38 ..	19.26	79	29.64	111	19.26	119	43.49	110	39.17	132	17.63	131	31.32	169
39 ..	27.63	116	45.70	123	23.29	139	41.43	122	33.67	127	33.11	166	27.23	188
40 ..	17.38	64	20.00	98	16.16	116	42.37	93	39.34	125	19.83	126	17.17	135
41 ..	19.55	91	34.74	122	22.56	126	31.50	105	26.74	129	31.78	157	23.40	145
42 ..	25.76	104	39.24	140	25.44	133	44.01	125	48.29	121	20.79	148	19.42	163
43 ..	24.59	123	31.46	117	17.84	135	50.68	126	50.74	136	18.80	150	20.84	149
44 ..	12.05	75	27.39	123	17.13	114	27.85	100	31.04	115	21.32	143	26.23	151
45 ..	22.35	100	22.67	137	17.85	105	48.16	130	46.47	136	19.22	152	16.92	157
46 ..	22.31	94	41.47	122	22.59	135	38.66	83	36.05	111	29.80	177	39.45	193
47 ..	27.95	135	43.42	137	21.89	146	60.30	146	41.45	137	30.47	163	38.61	181
48 ..	32.11	101	34.75	126	21.40	122	41.54	106	38.83	131	20.98	155	23.42	178
49 ..	27.71	100	27.15	126	18.23	119	47.18	121	66.26	149	31.41	163	22.85	157
50 ..	43.35	132	32.27	122	16.06	91	63.93	152	86.33	183	26.18	147	19.25	131
51 ..	22.00	103	34.14	127	25.44	135	33.89	87	53.15	143	29.85	155	24.57	163
Average	23.92	100	34.90	122	21.07	124	44.82	125	46.93	151	25.66	142	24.52	168
No. of	24	24	76	76	113	113	100	92	93	93	96	96	69	69
Standard														
30														
years'														
Normal			35.99	128	21.09	122	40.09	117	44.80	143	25.89	156	25.03	180

(a) Commonwealth Forestry Bureau; records in issues prior to No. 36 were for the station at Acton which closed down in 1939.

(b) Records taken from present site commenced 1883.

6. Remarkable Falls of Rain.—The following are the most notable falls of rain which have occurred within a period of twenty-four hours in the various States and Territories. For other very heavy falls at various localities reference may be made to Official Year Book No. 14, pp. 60-64, No. 22, pp. 46-48 and No. 29, pp. 43, 44 and 51:—

## HEAVY RAINFALLS : NEW SOUTH WALES, UP TO 1951, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		in.			in.
Dorrigo ..	24 June, 1950	25.04	Viaduct Creek ..	15 Mar., 1936	20.00
Cordeaux River..	14 Feb., 1898	22.58	Buladelah ..	16 Apr., 1927	19.80
Morpeth ..	9 Mar., 1893	21.52	Madden's Creek..	13 Jan., 1911	18.68
Broger's Creek ..	13 Jan., 1911	20.83	Condong ..	27 Mar., 1887	18.66
South Head (Sydney Harbour)..	16 Oct., 1844	20.41	Candelo ..	27 Feb., 1919	18.58
" "	29 Apr., 1841	20.12	Mt. Kembla ..	13 Jan., 1911	18.25
" "	5 May, 1925	20.10	Bega ..	27 Feb., 1919	17.88
Broger's Creek ..	14 Feb., 1898	20.05	Kembla Heights..	13 Jan., 1911	17.46
Towamba ..	5 Mar., 1893	20.00	Foxground ..	11 Sep., 1950	17.04
			Nimbin ..	6 Feb., 1939	16.26

## HEAVY RAINFALLS : QUEENSLAND, UP TO 1951, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		in.			in.
Crohamhurst	2 Feb., 1893	35.71	Flat Top Island..	21 Jan., 1918	25.18
Port Douglas ..	1 Apr., 1911	31.53	Landsborough ..	2 Feb., 1893	25.15
Yarrabah ..	2 Apr., 1911	30.65	Babinda (Cairns)	2 Mar., 1935	24.14
Kuranda ..	2 Apr., 1911	28.80	Goondi ..	30 Jan., 1913	24.10
Sarina ..	26 Feb., 1913	27.75	Banyan (Cardwell)	12 Feb., 1927	24.00
Harvey Creek ..	3 Jan., 1911	27.75	Carruchan ..	24 Jan., 1934	24.00
Plane Ck. (Mackay)	26 Feb., 1913	27.73	Tully Mill ..	12 Feb., 1927	23.86
Deeral ..	2 Mar., 1935	27.60	Macnade Mill ..	6 Feb., 1901	23.33
Springbrook ..	24 Jan., 1947	27.07	Woodlands (Yepp'n)	3 Jan., 1893	23.07
Buderim Mountain	11 Jan., 1898	26.20			

## HEAVY RAINFALLS : WESTERN AUSTRALIA, UP TO 1951, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		in.			in.
Whim Creek ..	3 Apr., 1898	29.41	Balla Balla ..	21 Mar., 1899	14.40
Thangoo ..	17-19 Feb., '96	24.18	Winderrrie ..	17 Jan., 1923	14.23
Fortesque ..	3 May, 1890	23.36	Pilbara ..	2 Apr., 1898	14.04
Roebuck Plains..	{ 6 Jan., 1917	22.36	Broome ..	6 Jan., 1917	14.00
	{ 5 Jan., 1917	14.01	Carlton Hill ..	7 Feb., 1942	12.75
Widjip..	1 Apr., 1934	19.54	Towrana ..	1 Mar., 1943	12.16
Derby ..	7 Jan., 1917	16.47	Marble Bar ..	2 Mar., 1941	12.00
Boodarie ..	21 Mar., 1899	14.53	Jimba Jimba ..	1 Mar., 1943	11.54

## HEAVY RAINFALLS : NORTHERN TERRITORY, UP TO 1951, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		in.			in.
Brock's Creek ..	24 Dec., 1915	14.33	Cape Don ..	13 Jan., 1935	13.58
Groote Eylandt..	9 Apr., 1931	14.29	Bathurst Island		
Borrooloola ..	14 Mar., 1899	14.00	Mission ..	7 Apr., 1925	11.85
Timber Creek ..	5 Feb., 1942	13.65	Darwin ..	7 Jan., 1897	11.67

## HEAVY RAINFALLS : SOUTH AUSTRALIA, UP TO 1951, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		in.			in.
Ardrossan ..	18 Feb., 1946	8.10	Wilmington ..	1 Mar., 1921	7.12
Carpa ..	18 Feb., 1946	7.83	Port Victoria ..	18 Feb., 1946	7.08
Wynbring ..	28 Feb., 1921	7.70	Mannum ..	25 Jan., 1941	6.84
Edithburg ..	18 Feb., 1946	7.46	Cape Willoughby	18 Feb., 1946	6.80
Hesso ..	18 Feb., 1946	7.36	Wirrabarra ..	7 Mar., 1910	6.80
Maitland ..	18 Feb., 1946	7.21	Torrens Vale ..	25 Jan., 1941	6.77

## HEAVY RAINFALLS : VICTORIA, UP TO 1951, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		in.			in.
Balook ..	18 Feb., 1951	10.81	Blackwood "Green-hill"	26 Jan., 1941	8.98
Hazel Park ..	1 Dec., 1934	10.50	Tambo Crossing ..	13 July, 1925	8.89
Kalorama ..	1 Dec., 1934	10.05	Corinella ..	28 June, 1948	8.75
Cann River ..	16 Mar., 1938	9.94	Erica ..	1 Dec., 1934	8.66
Tonghi Creek ..	27 Feb., 1919	9.90	Mt. Buffalo ..	6 June, 1917	8.53
Cann River ..	27 Feb., 1919	9.56	Korumburra ..	1 Dec., 1934	8.51
Olinda ..	1 Dec., 1934	9.10			

## HEAVY RAINFALLS : TASMANIA, UP TO 1951, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		in.			in.
Lottah ..	8-10 Mar., '11	18.10	Riana ..	5 Apr., 1929	11.08
Gould's Country	8-10 Mar., '11	15.33	The Springs ..	30-31 Jan., '16	10.75
Mathinna ..	5 Apr., 1929	13.25	Triabunna ..	5 June, 1923	10.20
Cullenswood ..	5 Apr., 1929	11.12			

## HEAVY RAINFALLS : AUSTRALIAN CAPITAL TERRITORY, UP TO 1951, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		in.			in.
Cotter Junction ..	27 May, 1925	7.13	Uriarra (Woodside)	27 May, 1925	6.57
Canberra (Acton)	27 May, 1925	6.84	Land's End ..	27 May, 1925	6.35

7. **Snowfall.**—Light snow has been known to fall occasionally as far north as latitude 31° S., and from the western to the eastern shores of the continent. During exceptional seasons, it has fallen simultaneously over two-thirds of New South Wales, and has extended at times along the whole of the Great Dividing Range, from its southern extremity in Victoria as far north as Toowoomba in Queensland. During the winter, for several months, snow covers the ground to a great extent on the Australian Alps, where also the temperature falls below zero Fahrenheit during the night. In the ravines around Mt. Kosciusko and similar localities the snow never entirely disappears after a severe winter.

8. **Hail.**—Hail falls most frequently along the southern shores of the continent in the winter, and over eastern Australia during the summer months. The size of the hailstones generally increases with distance from the coast. A summer rarely passes without some station experiencing a fall of stones exceeding in size an ordinary hen-egg, and many riddled sheets of light-gauge galvanized iron bear evidence of the weight and penetrating power of the stones.



The hailstones occur most frequently when the barometric readings indicate a flat and unstable condition of pressure. Tornadoes or tornadic tendencies are almost invariably accompanied by hail, and on the east coast the clouds from which the stones fall are frequently of a remarkable sepia-coloured tint.

9. **Barometric Pressures.**—The mean annual barometric pressure (corrected to sea level and standard gravity) in Australia varies from 29.80 inches on the north coast to 29.92 inches over the central and 30.03 inches in the southern parts of the continent. In January, the mean pressure ranges from 29.70 inches in the northern and central areas to 29.95 inches in the southern. The July mean pressure ranges from 29.90 inches at Darwin to 30.12 inches at Alice Springs. Barometer readings corrected to mean sea level and standard gravity have, under anticyclonic conditions, ranged as high as 30.935 inches (at Hobart on 13th July, 1846) and have fallen as low as 27.55 inches. This lowest record was registered at Mackay during a tropical hurricane on 21st January, 1918. An almost equally abnormal reading of 27.88 inches was recorded at Innisfail during a similar storm on 10th March, 1918. For graphs of Mean Barometric Pressure at Capital Cities see Official Year Book No. 37, p. 35.

10. **Wind.**—(i) *Trade Winds.* The two distinctive wind currents in Australia are, as previously stated, the south-east trade and the "prevailing" westerly winds. As the belt of the earth's atmosphere in which they blow apparently follows the sun's ecliptic path north and south of the equator, so the area of the continent affected by these winds varies at different seasons of the year. During the summer months the anticyclonic belt travels in high latitudes, thereby bringing the south-east trade winds as far south as 30° south latitude. The "prevailing" westerly winds retreat a considerable distance to the south of Australia, and are less in evidence in the hot months. When the sun passes to the north of the equator, the south-east trade winds follow it, and only operate to the north of the tropics for the greater part of the winter. The westerly winds come into lower latitudes during the same period of the year. They sweep across the southern areas of the continent from Cape Leeuwin to Cape Howe, and during some seasons are remarkably persistent and strong, and occasionally penetrate to almost tropical latitudes.

(ii) *North-west Monsoon.* As the belt of south-east trade winds retreats southward during the summer, it is replaced in the north and north-west of Australia first by a sequence of light variable winds and then by the north-west monsoon. In Australia, the north-west monsoon has not the persistence nor regularity of the Indian south-west monsoon but is sufficiently characteristic for the summer in the north of Australia to be called the "North-west Season". In central and eastern Queensland, the north-west monsoon in the summer has comparatively little effect and the trade winds, albeit weakened, are still dominant winds. With the migration of the sun northward in the autumn, the north-west monsoon is itself replaced first by light variable winds and then by the trade winds.

Further particulars of Australian wind conditions and meteorology will be found in Official Year Book No. 38, pp. 58–61.

(iii) *Cyclones and Storms.* The "elements" in Australia are ordinarily peaceful, and while destructive cyclones have visited various parts, more especially coastal areas, such visitations are rare, and may be properly described as erratic.

During the winter months, the southern shores of the continent are subject to deep depressions of the southern low-pressure belt. They are felt most severely over the south-western parts of Western Australia, to the south-east of South Australia, in Bass Strait, including the coast-line of Victoria, and on the west coast of Tasmania.

Apparently the more violent wind pressures from these disturbances are experienced in their northern half, or in that part of them which has a north-westerly to a south-westerly circulation.

The north-east coast of Queensland is occasionally visited by hurricanes from the north-east tropics. During the first four months of the year, these hurricanes appear to have their origin in the neighbourhood of the South Pacific Islands, their path being a parabolic curve first to the south-west and finally towards the south-east.

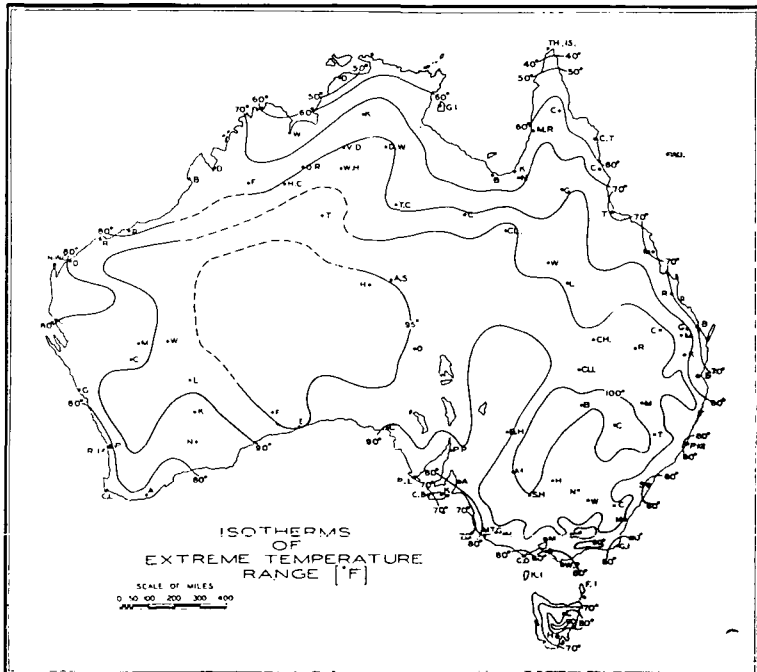
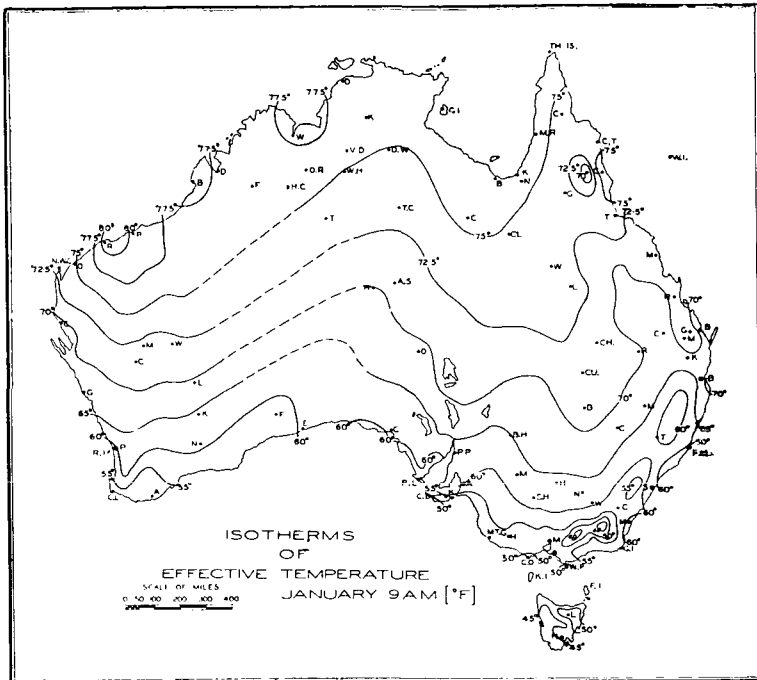
Very severe cyclones, locally known as "willy willies," are peculiar to the north-west coast of Western Australia from the months of November to April, inclusive. They usually originate over the ocean to the north or north-west of Australia, and travel in a south-westerly direction with continually increasing force, displaying their greatest energy near Cossack and Onslow, between latitudes  $20^{\circ}$  and  $22^{\circ}$  South. The winds in these storms, like those from the north-east tropics, are very violent and destructive. The greatest velocities are usually to be found in the south-eastern quadrant of the cyclones, with north-east to east winds. After leaving the north-west coast, these storms either travel southwards, following the coast-line, or cross the continent to the Great Australian Bight. When they take the latter course, their track is marked by torrential rains, as much as 29.41 inches, for example, being recorded in 24 hours at Whim Creek from one such occurrence. Falls of 10 inches and over have frequently been recorded in the northern interior of Western Australia from similar storms.

Some further notes on severe cyclones and on "southerly bursters", a characteristic feature of the eastern part of Australia, appear in previous issues of the Official Year Book (*see* No. 6, pp. 84-86), and a special article dealing with "Australian Hurricanes and Related Storms" appears in Official Year Book No. 16, pp. 80-84.

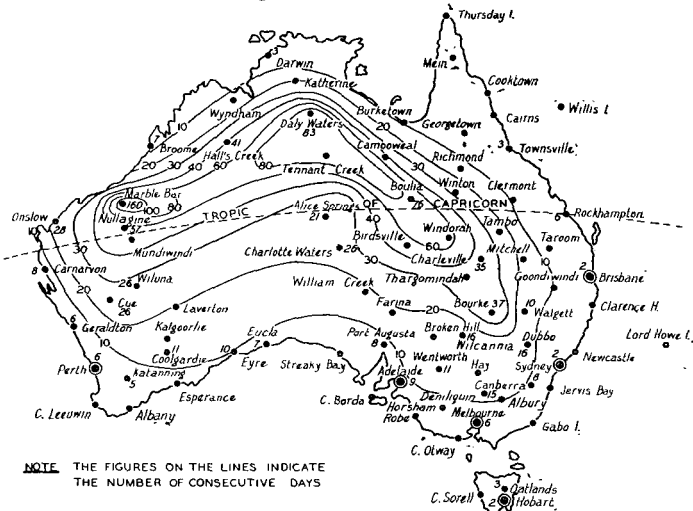
Depressions vary considerably in their isobaric forms, intensity and other characteristics. Some bring rain in variable quantities, some heat and others mainly wind. A common type in southern Australia is the "Λ" shaped trough with an abrupt "backing" of the wind or "line squall" as it passes. The cold front is most frequently found through the centre of the "trough" because it is along this line, and extending into the upper levels of the atmosphere that the demarcation of different air masses is so well defined. The best rains occur in inland Australia when extensive masses of warm moist tropical air move into the interior and are forced to rise by convergence of flow or by impact with a cold air stream.

The speed of low pressure systems is very variable, but in general in southern latitudes the movement is of the order of 500 to 700 miles per day.

11. Influences affecting Australian Climate.—(i) *General*. Australian history does not cover a sufficient period, nor is the country sufficiently occupied, to ascertain whether or not the advance of settlement has materially affected the climate as a whole. Local changes have, however, taken place, a fact which suggests that settlement and the treatment of the land have a distinct effect on local conditions. For example, low-lying lands on the north coast of New South Wales, which originally were seldom

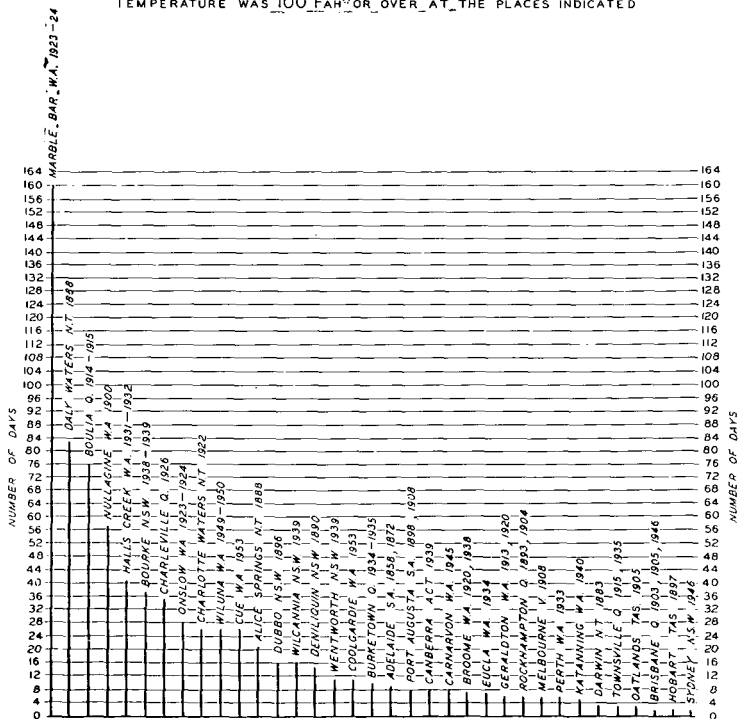


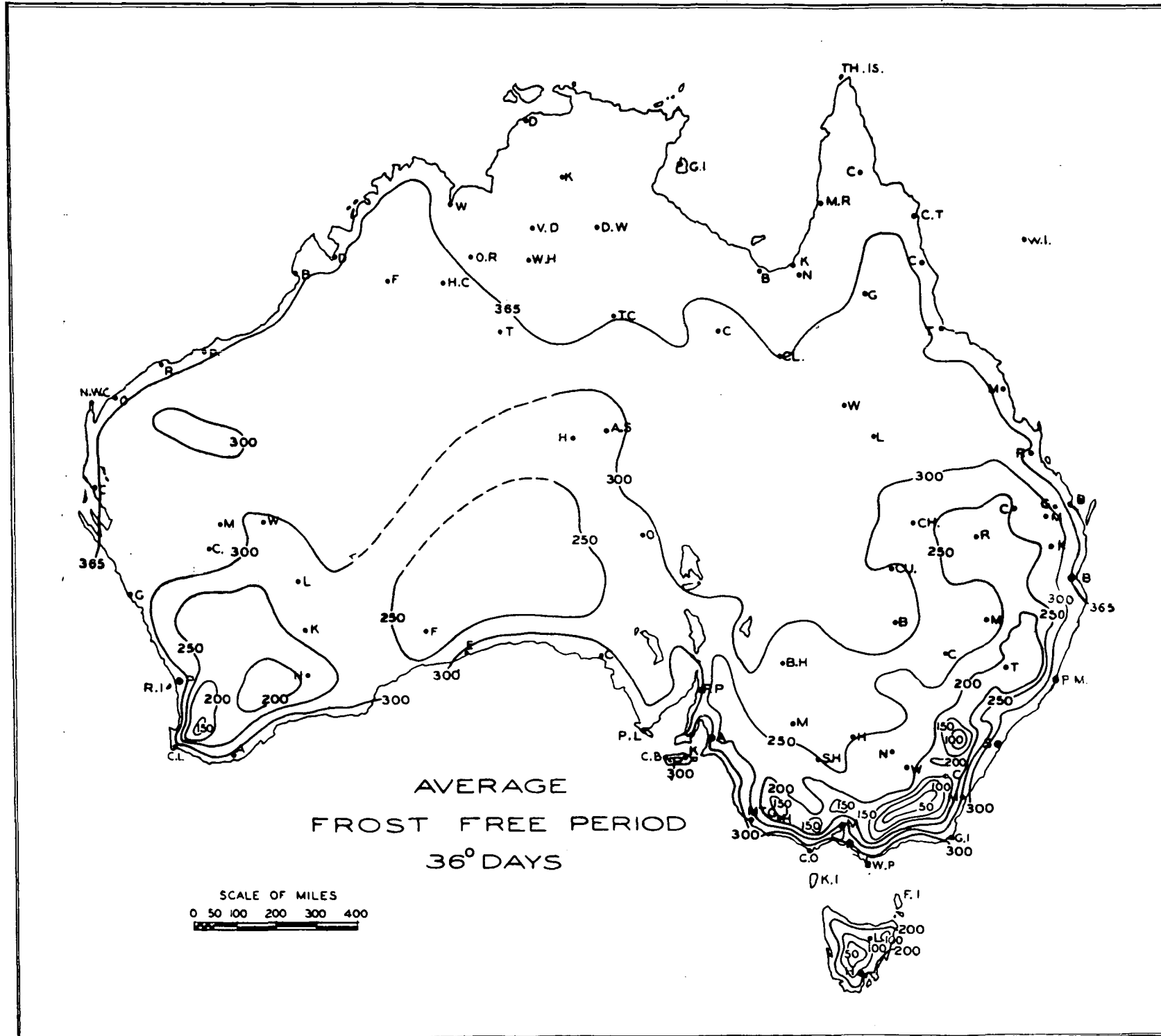
AREA AFFECTED AND PERIOD OF DURATION OF THE LONGEST HEAT WAVES WHEN THE MAXIMUM TEMPERATURE FOR CONSECUTIVE 24 HOURS REACHED OR EXCEEDED 100°F.

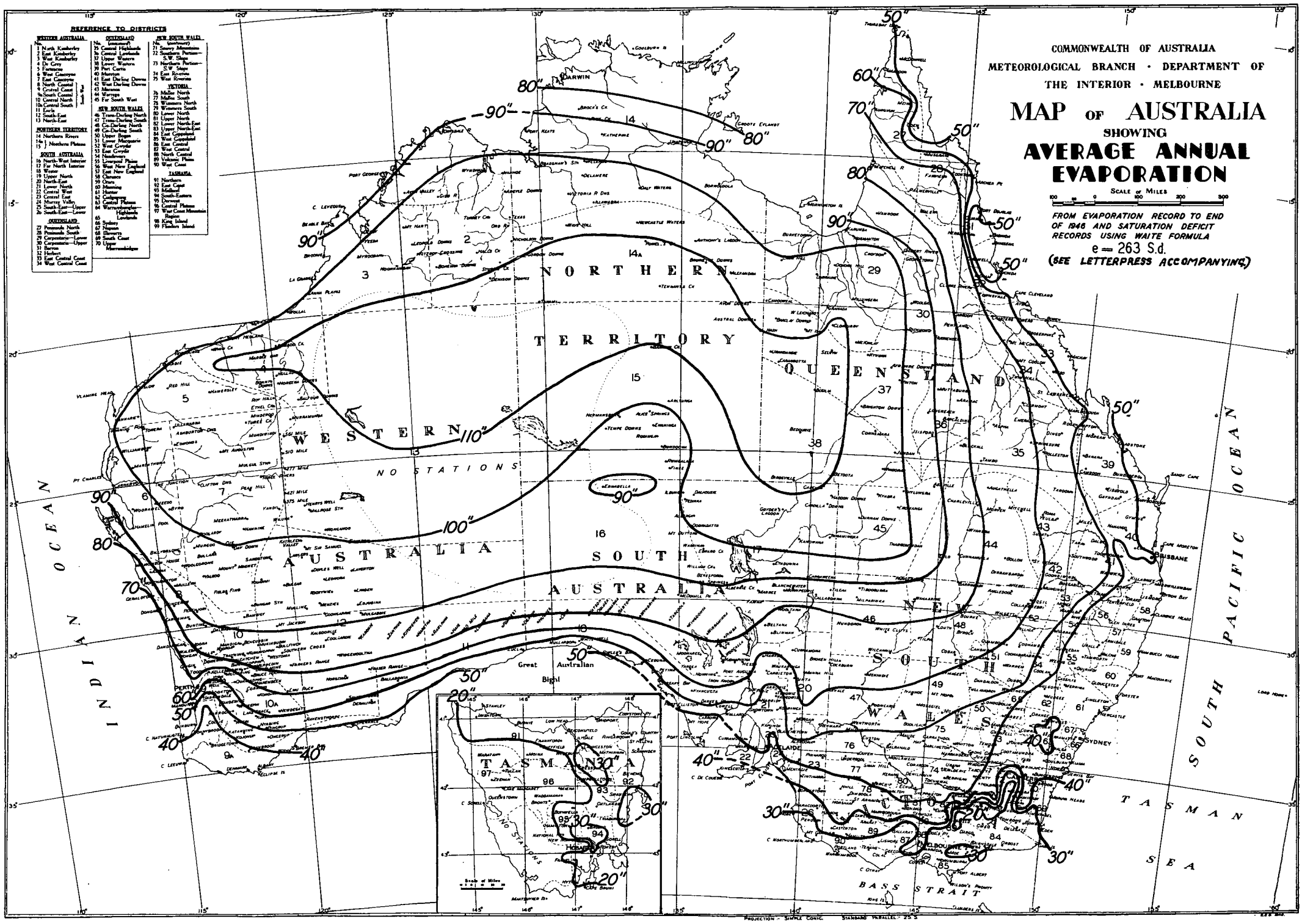


NOTE THE FIGURES ON THE LINES INDICATE THE NUMBER OF CONSECUTIVE DAYS

GREATEST NUMBER OF CONSECUTIVE DAYS ON WHICH THE SHADE TEMPERATURE WAS 100°F OR OVER AT THE PLACES INDICATED







**REFERENCE TO DISTRICTS**

WESTERN AUSTRALIA	SOUTHERLAND	NEW SOUTH WALES
1 North Kimberley	10 Central Highlands	10 Snowy Mountains
2 East Kimberley	11 Central Lowlands	11 Southern Plateau
3 West Kimberley	12 Upper Waters	12 S.W. Slopes
4 Inland	13 Lower Waters	13 N. Coast
5 Port Curtis	14 Port Phillip	14 N. Slopes
6 West Coast	15 East Gippsland	15 East Coast
7 East Coast	16 East Gippsland	16 East Coast
8 North Coast	17 East Gippsland	17 East Coast
9 Central Coast	18 East Gippsland	18 East Coast
10 South Coast	19 East Gippsland	19 East Coast
11 Central North	20 East Gippsland	20 East Coast
12 Central South	21 East Gippsland	21 East Coast
13 East	22 East Gippsland	22 East Coast
14 North-West	23 East Gippsland	23 East Coast
15 North-East	24 East Gippsland	24 East Coast
16 North-West	25 East Gippsland	25 East Coast
17 North-East	26 East Gippsland	26 East Coast
18 North-West	27 East Gippsland	27 East Coast
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88 North-West	97 East Gippsland	97 East Coast
89 North-East	98 East Gippsland	98 East Coast
90 North-West	99 East Gippsland	99 East Coast

COMMONWEALTH OF AUSTRALIA  
 METEOROLOGICAL BRANCH · DEPARTMENT OF  
 THE INTERIOR · MELBOURNE

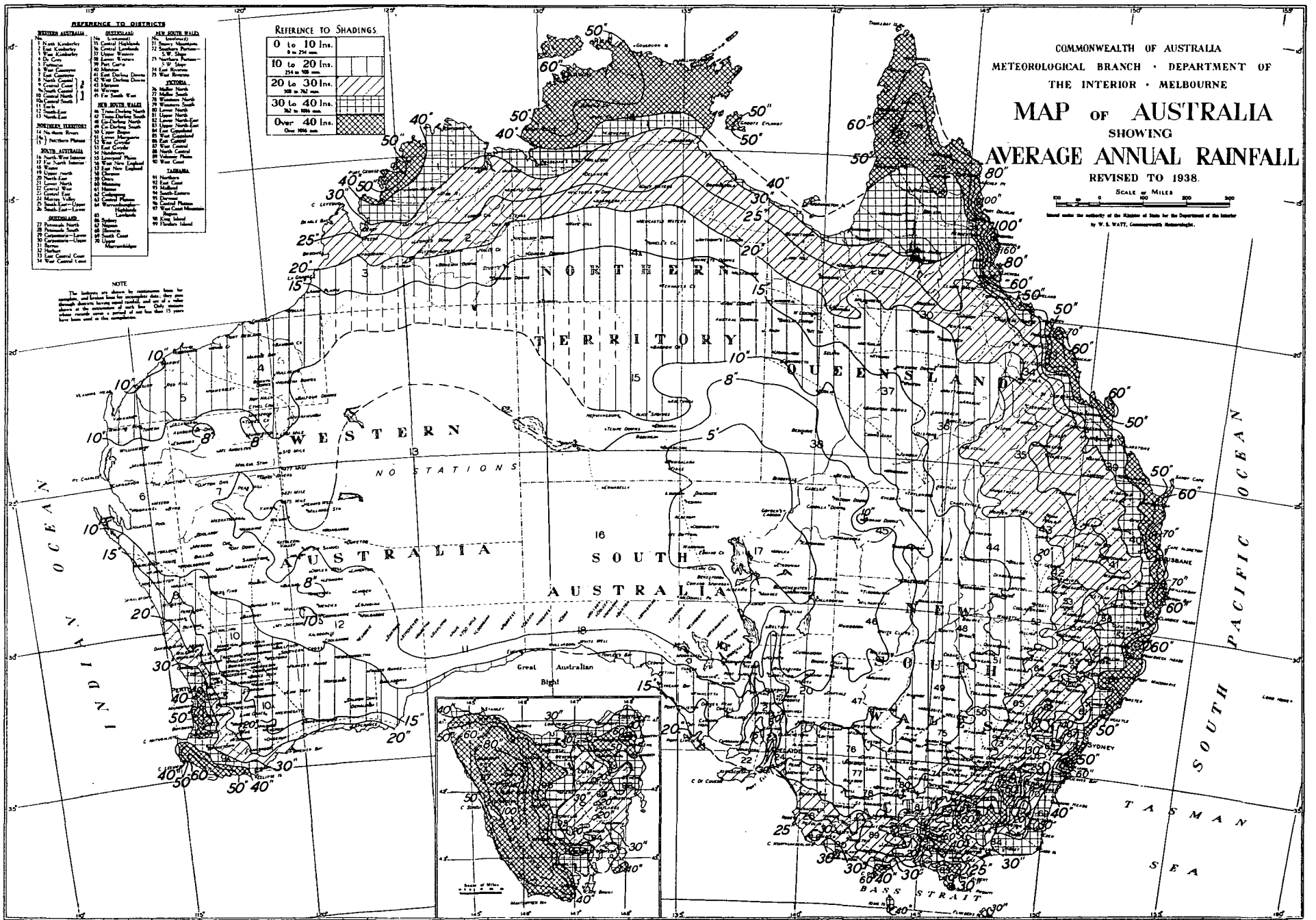
# MAP OF AUSTRALIA

SHOWING  
**AVERAGE ANNUAL  
 EVAPORATION**

SCALE OF MILES  
 0 100 200 300

FROM EVAPORATION RECORD TO END  
 OF 1946 AND SATURATION DEFICIT  
 RECORDS USING WAITE FORMULA  
 $e = 263 S.d.$   
 (SEE LETTERPRESS ACCOMPANYING)

PROJECTION - SIMPLE CONIC STANDARD PARALLEL - 25° S



**REFERENCE TO DISTRICTS**

WESTERN AUSTRALIA	QUEENSLAND	NEW SOUTH WALES
1. Perth	1. Brisbane	1. Sydney
2. Geraldton	2. Ipswich	2. Newcastle
3. Mandurah	3. Toowoomba	3. Maitland
4. Albany	4. Rockhampton	4. Parramatta
5. Perth	5. Mackay	5. Liverpool
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**REFERENCE TO SHADINGS**

0 to 10 Ins.	White
10 to 20 Ins.	Horizontal lines
20 to 30 Ins.	Diagonal lines
30 to 40 Ins.	Cross-hatch
Over 40 Ins.	Dotted

COMMONWEALTH OF AUSTRALIA  
 METEOROLOGICAL BRANCH · DEPARTMENT OF  
 THE INTERIOR · MELBOURNE

## MAP OF AUSTRALIA

SHOWING  
**AVERAGE ANNUAL RAINFALL**  
 REVISED TO 1938.

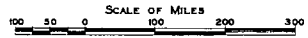
SCALE OF MILES  
 0 100 200 300

Printed under the authority of the Minister of State for the Department of the Interior  
 by W. S. WATTS, Government Printer.

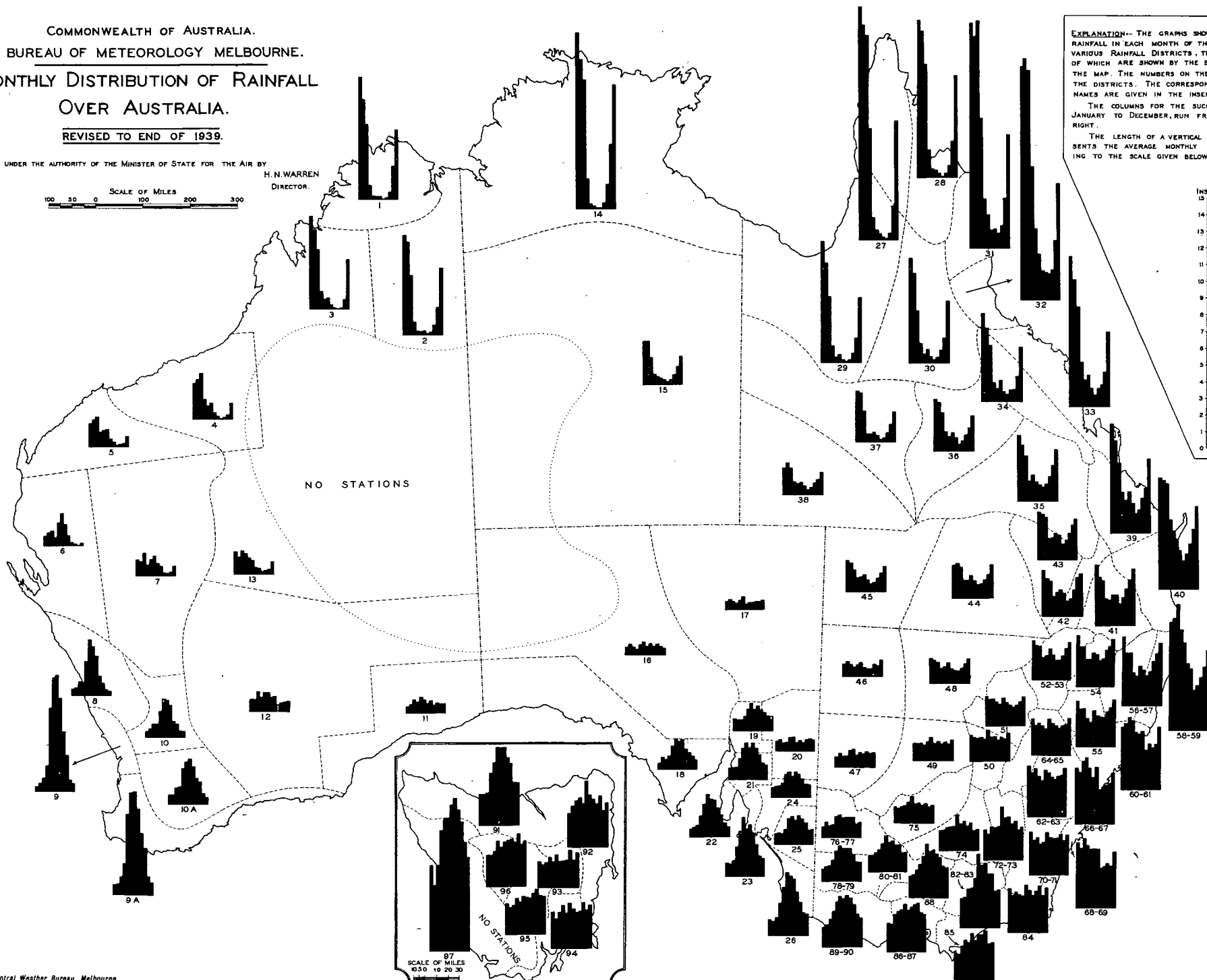
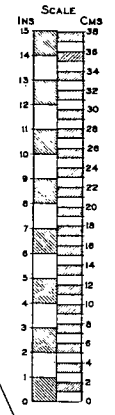
**NOTE**  
 The rainfall is based on the observations of the Meteorological Department of Australia, and is the average for the period 1901-30. It is not intended to represent the actual rainfall for any particular year, and is not to be used for the purpose of determining the amount of water available for irrigation or other purposes.

COMMONWEALTH OF AUSTRALIA.  
 BUREAU OF METEOROLOGY MELBOURNE.  
**MONTHLY DISTRIBUTION OF RAINFALL  
 OVER AUSTRALIA.**  
 REVISED TO END OF 1939.

ISSUED UNDER THE AUTHORITY OF THE MINISTER OF STATE FOR THE AIR BY  
 H. N. WARREN  
 DIRECTOR.



**EXPLANATION**-- THE GRAPHS SHOW THE AVERAGE RAINFALL IN EACH MONTH OF THE YEAR IN THE VARIOUS RAINFALL DISTRICTS, THE BOUNDARIES OF WHICH ARE SHOWN BY THE BROKEN LINES ON THE MAP. THE NUMBERS ON THE MAP REFER TO THE DISTRICTS. THE CORRESPONDING DISTRICT NAMES ARE GIVEN IN THE INSERT ON PAGE 37.  
 THE COLUMNS FOR THE SUCCESSIVE MONTHS, JANUARY TO DECEMBER, RUN FROM LEFT TO RIGHT.  
 THE LENGTH OF A VERTICAL COLUMN REPRESENTS THE AVERAGE MONTHLY RAINFALL ACCORDING TO THE SCALE GIVEN BELOW.





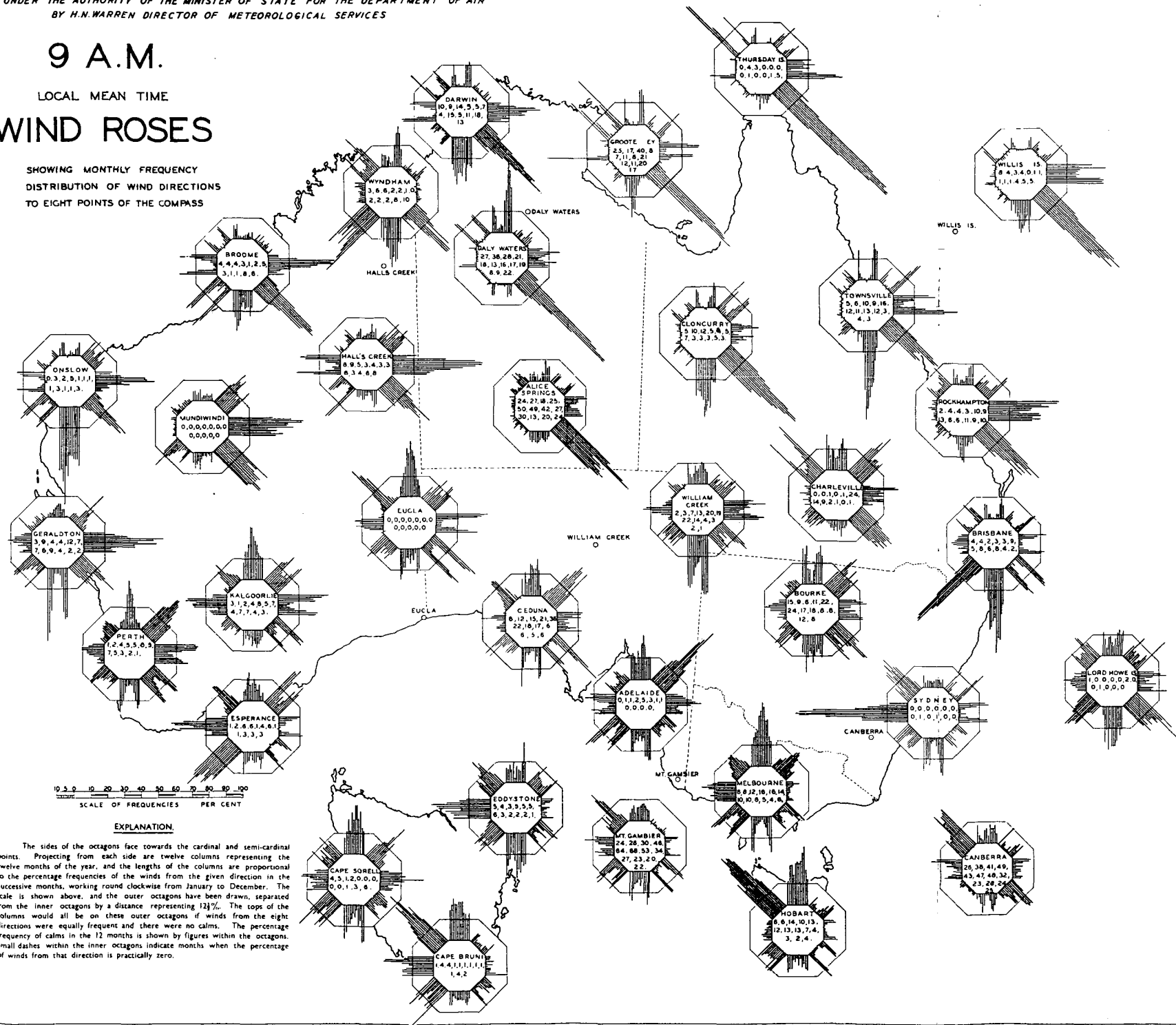
ISSUED UNDER THE AUTHORITY OF THE MINISTER OF STATE FOR THE DEPARTMENT OF AIR  
BY H.N. WARREN DIRECTOR OF METEOROLOGICAL SERVICES

9 A.M.

LOCAL MEAN TIME

## WIND ROSES

SHOWING MONTHLY FREQUENCY  
DISTRIBUTION OF WIND DIRECTIONS  
TO EIGHT POINTS OF THE COMPASS



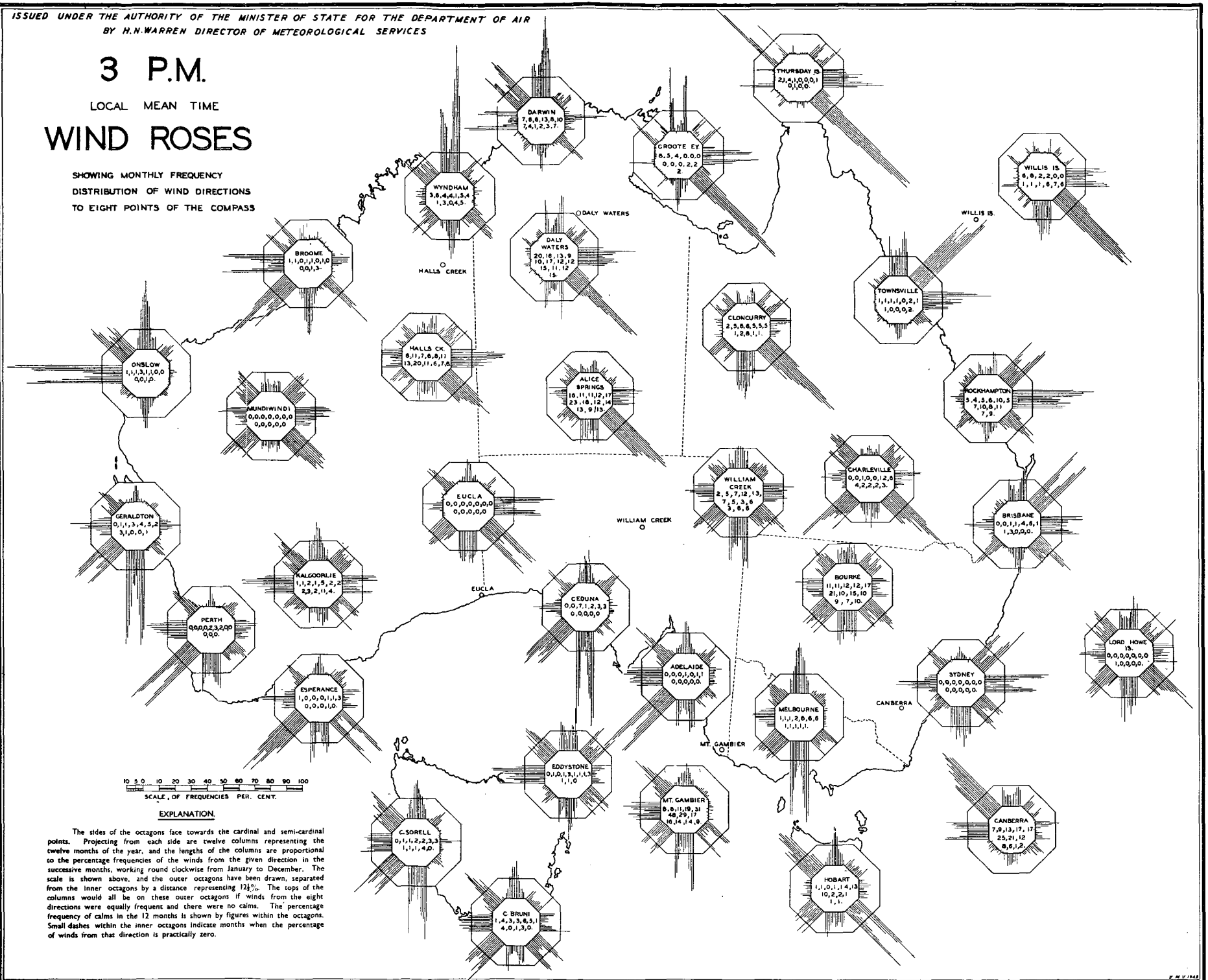
ISSUED UNDER THE AUTHORITY OF THE MINISTER OF STATE FOR THE DEPARTMENT OF AIR  
BY H.N. WARREN DIRECTOR OF METEOROLOGICAL SERVICES

3 P.M.

LOCAL MEAN TIME

# WIND ROSES

SHOWING MONTHLY FREQUENCY  
DISTRIBUTION OF WIND DIRECTIONS  
TO EIGHT POINTS OF THE COMPASS



subject to frosts, have, with the denudation of the surrounding hills from forests, experienced annual visitations, the probable explanation being that through the absence of trees the cold air of the highlands now flows unchecked and untempered down the sides of the hills to the valleys and lower lands.

(ii) *Influence of Forest on Climate.* As already indicated, forests doubtless exercise a great influence on local climate, and hence, to the extent that forestal undertakings will allow, the weather can be controlled by human agency. The direct action of forests is an equalizing one; thus, especially in equatorial regions, and during the warmest portion of the year, they considerably reduce the mean temperature of the air. They also reduce the diurnal extremes of shade temperatures by altering the extent of radiating surface by evaporation, and by checking the movement of air, and while decreasing evaporation from the ground, they increase the relative humidity. Vegetation greatly diminishes the rate of flow-off of rain and the washing away of surface soil, and when a region is protected by trees a steadier water supply is ensured, and the rainfall is better conserved. In regions of snowfall, the supply of water to rivers is similarly regulated, and without this and the sheltering influence of ravines and "gullies," watercourses supplied mainly by melting snow would be subject to alternative periods of flooding and dryness. This is borne out in the case of the inland rivers, the River Murray, for example, which has never been known to become dry, deriving its steadiness of flow mainly through the causes indicated.

(iii) *Direct Influence of Forests on Rainfall.* Whether forests have a direct influence on rainfall is a debatable question, some authorities alleging that precipitation is undoubtedly induced by forests, while others take the opposite view.

Sufficient evidence exists, however, to prove that, even if the rainfall has not increased, the beneficial climatic effect of forest lands more than warrants their protection and extension. Rapid rate of evaporation, induced by both hot and cold winds, injures crops and makes life uncomfortable on the plains, and, while it may be doubted that the forest aids in increasing precipitation, it must be admitted that it does check winds and the rapid evaporation due to them. Trees as wind-breaks have been successfully planted in central parts of the United States of America, and there is no reason why similar experiments should not be successful in many parts of the treeless interior of Australia. The belts should be planted at right angles to the direction of the prevailing parching winds, and if not more than half a mile apart will afford shelter to the enclosed areas.

12. *Rainfall and Temperatures, Various Cities.*—The Official Year Book No. 34, p. 28, shows rainfall and temperature for various important cities throughout the world, and for the Australian capitals.

13. *Climatological Tables.*—The averages and extremes for a number of climatological elements, which have been determined from long series of observations at the Australian capitals up to and including the year 1951, are given on pp. 42-48.

NOTE.—The following points apply throughout :—

- (i) Where records are available, mean or average values have been calculated on a standard period of 30 years from 1911 to 1940.
- (ii) Extreme values have been extracted from all available years of actual record, but the number of years quoted does not include intervening periods when observations were temporarily discontinued.

CLIMATOLOGICAL DATA : CANBERRA, AUSTRALIAN CAPITAL TERRITORY.  
 LAT. 35° 18' S., LONG. 149° 06' E. HEIGHT ABOVE M.S.L. 1,906 FT.  
 BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Mm. Sea level and Stan. Grav. from 9 a.m. and 3 p.m. readings.	Wind.				Prevailing Direction.	Mean Amount of Evaporation (Inches).	No. of Days of Lightning.	Mean Amount of Clouds, 9 a.m., 3 p.m., 9 p.m.(a)	No. of Clear Days.
		(Height of Anemometer 20 feet.)								
		Average Miles per Hour.	Highest Mean Speed in One Day (miles per hour).	Highest Gust Speed (miles per hour).						
No. of years of observations.	21	22	23	(b)	24	24	23	15	21	22
January ..	29.841	5.0	14.9 23/33	—	NW	NW	8.64	1.3	4.7	7.6
February ..	29.898	4.3	15.3 24/33	—	E	NW	6.75	2.6	4.9	6.5
March ..	30.010	4.0	18.2 28/42	—	E	NW	5.40	0.2	5.0	7.0
April ..	30.067	3.8	18.6 8/45	—	NW	NW	3.37	0.3	5.3	4.7
May ..	30.149	3.1	12.6 3/30	—	NW	NW	2.02	0.1	5.5	5.7
June ..	30.139	3.7	16.1 2/30	—	NW	NW	1.31	0.1	6.1	4.1
July ..	30.126	3.6	23.4 7/31	—	NW	NW	1.32	0.0	5.7	5.1
August ..	30.070	4.3	15.7 25/36	—	NW	NW	1.85	0.1	5.3	5.5
September ..	30.047	4.6	17.4 28/34	—	NW	NW	2.98	0.4	5.3	6.2
October ..	29.960	4.5	12.4 27/40	—	NW	NW	4.60	1.0	5.3	5.5
November ..	29.894	4.9	17.2 28/42	—	NW	NW	6.02	1.2	5.5	4.5
December ..	29.837	4.9	16.1 11/38	—	NW	NW	7.88	0.9	5.0	5.9
Year { Totals ..	30.000	4.2	—	—	NW	NW	52.14	8.2	—	68.2
Year { Averages ..	—	—	—	—	—	—	—	—	—	—
Year { Extremes ..	—	—	23.4 7/31	—	—	—	—	—	—	—

(a) Scale 0-10. (b) No record.

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (°Fahr.).			Extreme Shade Temperature (°Fahr.).		Extreme Range.	Extreme Temperature (°Fahr.).		Mean Daily Hours of Sunshine.
	Mean Max.	Mean Min.	Mean	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
	24	24	24	24	24		(a)	24	
No. of years over which observation extends.	24	24	24	24	24	24	—	—	22
January ..	82.4	56.0	60.2	107.4 11/39	39.4 18/49	68.0	—	30.1 10/50	8.2
February ..	81.1	56.0	68.6	99.8 13/33	35.0 (b)	64.8	—	26.5 23/43	7.6
March ..	76.1	52.5	64.3	99.1 6/38	34.8 31/49	64.3	—	26.4 26/35	7.2
April ..	66.4	45.1	55.7	89.7 6/38	29.0 29/34	60.7	—	19.0 18/44	6.7
May ..	59.5	38.8	49.2	72.6 1/36	22.5 9/29	50.1	—	15.6 (c)	5.2
June ..	52.6	35.6	44.1	62.0 9/51	18.1 20/35	43.9	—	8.9 25/44	4.2
July ..	51.8	33.9	42.8	63.5 16/34	20.0 (d)	43.5	—	10.8 9/37	4.7
August ..	55.1	35.4	45.2	70.5 28/34	21.0 3/29	49.5	—	10.1 6/44	5.8
September ..	61.4	39.0	50.2	81.5 16/34	25.2 6/46	56.3	—	13.0 6/45	7.1
October ..	67.3	44.1	55.7	90.0 13/46	29.0 21/28	61.0	—	18.2 2/45	7.7
November ..	73.4	49.2	61.3	101.4 19/44	32.2 11/36	69.2	—	25.6 6/40	8.0
December ..	79.7	53.5	66.6	103.5 27/38	36.0 24/28	67.5	—	30.2 (e)	8.3
Year { Averages ..	67.2	44.9	56.1	—	—	—	—	—	6.7
Year { Extremes ..	—	—	—	107.4 11/39	18.1 20/35	89.3	—	8.9 25/6/44	—

(a) No record. (b) 22/31 and 23/31. (c) 13/37 and 15/46. (d) 19/29, 9/37 and 27/43. (e) 2/39 and 20/48.

HUMIDITY, RAINFALL AND FOG.

Month.	Vapour Pressure (inches)	Rel. Hum. (%) at 9 a.m.			Rainfall (inches).				Fog. Mean No. of Days of Fog.	
		Mean.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days of Rain.	Greatest Monthly.	Least Monthly.		Greatest in One Day.
No. of years over which observation extends.	23	23	23	23	24	24	24	24	20	
January ..	0.374	52	69	39	2.13	7	6.69 1941	0.02 1932	2.47 19/50	0.0
February ..	0.399	58	71	49	2.20	7	6.03 1948	0.03 1933	3.24 17/28	0.1
March ..	0.385	65	79	48	2.28	7	12.69 1950	0.01 1946	2.46 19/50	0.5
April ..	0.319	70	81	54	2.10	8	3.75 1935	0.07 1942	2.52 9/43	1.1
May ..	0.257	79	87	67	1.81	7	6.13 1948	0.06 1935	3.88 3/48	4.5
June ..	0.218	83	90	73	1.67	7	6.09 1931	0.18 1944	1.65 24/31	5.9
July ..	0.204	80	87	73	1.65	10	4.09 1933	0.27 1940	2.02 13/33	4.8
August ..	0.213	75	88	60	1.95	11	4.71 1939	0.36 (a)	1.07 12/29	1.8
September ..	0.242	65	74	51	1.62	9	3.03 1937	0.13 1946	1.75 3/47	1.2
October ..	0.279	60	72	46	2.55	10	4.59 1934	0.13 1940	2.31 25/34	0.3
November ..	0.310	54	67	38	2.11	8	4.45 1950	0.28 1936	2.45 9/50	0.1
December ..	0.343	51	70	37	1.85	8	8.86 1947	0.16 1938	2.29 28/29	0.0
Year { Totals ..	—	—	—	—	23.92	100	—	—	—	20.3
Year { Averages ..	0.285	66	—	—	—	—	—	—	—	—
Year { Extremes ..	—	—	90	—	—	—	12.69 3/50	0.01 2/33/3/40	3.88 3/5/48	—

(a) 1944 and 1949.

CLIMATOLOGICAL DATA : PERTH, WESTERN AUSTRALIA.

LAT. 31° 57' S., LONG. 115° 51' E. HEIGHT ABOVE M.S.L. 210 FT.  
 BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Mm. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind. (Height of Anemometer 71 feet.)				Prevailing Direction.	Mean Amount of Evaporation (inches).	No. of Days of Lightning.	Mean Amount of Clouds, 9 a.m., 3 p.m., 9 p.m. (c).	No. of Clear Days.	
		Average Miles per Hour.	Highest Mean Speed in One Day (miles per hour).	Highest Gust Speed (miles per hour).	9 a.m.						
					3 p.m.						30(b)
No. of years of observations.	30(b)	30(b)	53	39	30(b)	30(b)	30(b)	30(b)	30(b)		
January	29.897	13.8	33.2 27/98	49	E	SSW	10.37	2	2.9		
February	29.922	13.5	27.1 6/08	50	E NE	SSW	8.63	2	3.1		
March	29.976	12.8	27.1 6/13	66	E NE	SSW	7.52	2	3.5		
April	30.071	10.7	39.8 25/00	61	E NE	SSW	4.63	2	4.5		
May	30.062	10.6	34.4 29/32	73	N	WSW	2.80	2	5.4		
June	30.068	10.6	38.1 17/27	80	N	NW	1.82	2	5.5		
July	30.082	11.2	42.3 20/26	73	N NE	N	1.76	2	5.5		
August	30.084	11.8	40.3 15/03	77	N	WNW	2.37	1	5.6		
September	30.073	11.8	36.0 11/05	75	E NE	SSW	3.44	1	4.6		
October	30.033	12.6	33.7 6/16	63	SE	SW	5.38	1	4.8		
November	29.989	13.4	32.4 18/97	63	E	SW	7.65	2	3.9		
December	29.923	13.9	32.3 6/22	64	E	SSW	9.69	2	3.2		
Year { Totals	—	—	—	—	—	—	66.05	23	—		
Year { Averages	30.015	12.2	—	—	E	SSW	—	—	—		
Year { Extremes	—	—	42.3 20/7/26	80	—	—	—	—	108		

(a) Scale 0-10. (b) Standard 30 years' normal (1911-1940).

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (°Fahr.).			Extreme Shade Temperature (°Fahr.).		Extreme Range.	Extreme Temperature (°Fahr.).		Mean Daily Hours of Sunshine.
	Mean Max.	Mean Min.	Mean	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
No. of years over which observation extends.	30(a)	30(a)	30(a)	55	55	55	53	53	30(a)
January	84.6	63.3	73.9	110.2 12/34	48.6 20/25	61.6	177.3 22/14	39.5 20/25	10.4
February	85.1	63.5	74.3	112.2 8/33	47.7 1/02	64.5	173.7 4/34	39.8 1/13	9.5
March	81.3	61.5	71.4	106.4 14/22	45.8 8/03	60.6	167.0 19/18	36.7 8/03	8.8
April	76.3	57.4	66.8	99.7 9/10	39.3 20/14	60.4	157.0 8/16	31.0 20/14	7.5
May	69.0	52.8	60.9	90.4 2/07	34.3 11/14	56.1	146.0 4/25	25.3 11/14	5.7
June	64.4	49.8	57.1	81.7 2/14	35.0 30/20	46.7	155.5 9/14	26.3 11/37	4.8
July	62.8	48.0	55.4	76.4 21/21	34.2 7/16	42.2	133.2 13/15	25.1 30/20	3.4
August	63.8	48.4	56.1	82.0 21/40	35.3 31/03	46.7	145.1 29/21	26.7 24/35	6.0
September	66.8	50.4	58.6	90.9 30/18	38.5 15/47	52.4	153.6 29/16	29.2 21/16	7.2
October	69.7	52.6	61.1	95.3 30/22	40.0 16/31	55.3	157.5 31/30	29.8 16/31	8.1
November	76.7	57.3	67.0	104.6 24/13	42.0 1/04	62.6	167.0 30/23	35.5 (b)	9.6
December	81.2	60.9	71.0	107.9 20/04	48.0 2/10	59.9	168.8 11/27	39.0 12/20	10.4
Year { Averages	73.5	55.5	61.5	—	—	—	—	—	7.8
Year { Extremes	—	—	—	112.2 8/2/33	34.2 7/7/16	78.0	177.3 22/1/14	25.1 30/7/20	—

(a) Standard 30 years' normal (1911-1940). (b) 6/10 and 14/12.

HUMIDITY, RAINFALL AND FOG.

Month.	Vapour Pressure (inches).	Rel. Hum. (%) at 9 a.m.				Rainfall (inches).				Fog.	
		Mean 9 a.m.	Mean.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days of Rain.	Greatest Monthly.	Least Monthly.		Greatest in One Day.
No. of years over which observation extends.	30(a)	30(a)	30(a)	30(a)	30(a)	30(a)	76	76	76	30(a)	
January	0.438	51	61	41	0.33	3	2.17 1879	Nil	(b)	1.74 27/79	
February	0.434	51	65	43	0.50	3	2.98 1915	Nil	(b)	1.63 26/15	
March	0.432	57	66	46	0.90	5	5.71 1934	Nil	(b)	3.03 9/34	
April	0.397	61	73	51	1.75	8	5.85 1926	Nil	1920	2.62 30/04	
May	0.365	70	81	61	5.14	15	12.13 1879	0.98	1903	3.60 17/42	
June	0.337	75	83	68	7.55	17	18.75 1945	2.16	1877	3.90 10/20	
July	0.322	76	84	69	7.08	19	12.28 1926	2.42	1876	3.00 4/81	
August	0.316	71	81	62	5.78	19	12.53 1945	0.46	1902	2.91 14/45	
September	0.341	66	75	58	3.37	15	7.54 1923	0.34	1916	1.82 4/31	
October	0.345	60	75	52	2.30	12	7.87 1890	0.15	1946	1.73 3/33	
November	0.374	52	63	41	0.75	7	2.78 1916	Nil	1891	1.40 15/48	
December	0.409	51	63	44	0.54	5	3.05 1888	Nil	(c)	1.72 1/88	
Year { Totals	—	—	—	—	35.99	128	—	—	—	—	
Year { Averages	0.370	62	—	—	—	—	—	—	—	—	
Year { Extremes	—	—	84	41	—	—	18.75 6/1945	Nil	Various months	3.90 10/6/20	

(a) Standard 30 years' normal (1911-1940).

(b) Various years.

(c) 1886 and 1924.

CLIMATOLOGICAL DATA : ABELAIDE, SOUTH AUSTRALIA.  
 LAT. 34° 56' S., LONG. 138° 35' E. HEIGHT ABOVE M.S.L. 140 FT.  
 BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Min. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind. (Height of Anemometer 75 feet.)			Prevailing Direction.		Mean Amount of Evaporation (inches).	No. of Days of Lightning.	Mean Amount of Clouds, 9 a.m. to 3 p.m. (g.p.m.(g))	No. of Clear Days.	
		Average Miles per Hour.	Highest Mean Speed in One Day (miles per hour).	Highest Gust Speed (miles per hour).							
					9 a.m.	3 p.m.					
No. of years of observations.	30(b)	74	35	30(b)	30(b)	30(b)	30(b)	30(b)	30(b)		
January	29.917	9.9	31.6	19/99	72	SW	SW	9.27	2.3	3.6	12.9
February	29.953	8.8	28.8	22/96	64	NE	SW	7.56	2.0	3.7	11.2
March	30.037	8.3	26.2	9/12	63	S	SW	6.39	1.8	4.0	10.6
April	30.119	8.0	32.2	10/66	81	NE	SW	3.78	1.5	5.2	7.2
May	30.131	8.1	31.7	9/80	63	NE	NW	2.27	1.3	5.8	4.9
June	30.119	8.3	31.3	12/78	67	NE	N	1.37	1.3	6.1	4.1
July	30.111	8.5	28.1	25/82	60	NE	NW	1.34	1.5	6.0	4.3
August	30.084	9.2	32.2	31/97	57	NE	SW	1.99	2.0	5.5	5.6
September	30.050	9.2	30.0	2/87	69	NNE	SW	3.05	2.0	5.3	5.8
October	30.007	9.8	32.0	28/98	73	NNE	SW	5.03	2.8	5.3	5.7
November	29.990	9.9	32.2	7/48	79	SW	SW	6.89	3.3	4.9	7.2
December	29.922	9.9	28.1	12/91	75	SW	SW	8.74	2.2	4.2	9.5
Year { Totals	30.037	9.0	—	—	—	NE	SW	57.68	24.0	—	89.0
Year { Averages	—	—	—	—	—	—	—	—	—	—	—
Year { Extremes	—	—	32.2 (c)	—	81	—	—	—	—	5.0	—

(a) Scale 0-10. (b) Standard 30 years' normal (1911-1940). (c) 10/4/1896, 31/8/1897 and 7/11/1948.

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (°Fahr.).			Extreme Shade Temperature (°Fahr.).		Extreme Range.	Extreme Temperature (°Fahr.).		Mean Daily Hours of Sunshine.				
	Mean Max.	Mean Min.	Mean	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.					
No. of years over which observation extends.	30(a)	30(a)	30(a)	95	95	95	54(b)	91	30(a)				
January	84.8	61.0	72.9	117.7	12/39	45.1	21/84	72.6	180.0	18/82	36.5	14/79	10.0
February	85.7	61.8	73.7	113.6	12/99	45.5	23/83	68.1	170.5	10/00	35.8	23/26	9.3
March	81.3	59.1	70.2	110.5	9/34	43.9	21/33	66.6	174.0	17/83	32.1	21/33	7.9
April	73.0	54.4	63.7	98.6	5/38	39.6	15/59	59.0	155.0	1/83	30.2	16/17	6.0
May	66.8	50.8	58.8	89.5	4/21	36.9	20/95	52.0	148.2	12/79	25.6	19/28	4.8
June	61.0	46.6	53.8	76.0	23/65	32.5	(c)	43.5	138.8	18/79	21.0	24/44	4.2
July	59.9	45.4	52.7	74.0	11/06	32.0	24/08	42.0	134.5	26/00	22.1	30/29	4.3
August	62.3	46.2	54.3	85.0	31/11	32.3	17/59	50.0	140.0	31/92	22.8	11/29	5.4
September	66.8	48.3	57.5	91.3	29/44	32.7	4/58	58.6	160.5	23/82	25.0	25/27	6.3
October	72.5	51.7	62.1	102.9	21/22	36.0	—/57	66.9	162.0	30/21	27.8	(d)	7.3
November	78.1	55.4	66.7	113.5	21/65	40.8	2/09	72.7	166.9	20/78	31.5	2/09	8.6
December	82.6	58.9	70.7	114.6	29/31	43.0	(e)	71.6	175.7	7/99	32.5	4/84	9.5
Year { Averages	72.9	53.3	63.1	117.7	—	32.0	—	—	180.0	—	21.0	—	—
Year { Extremes	—	—	—	12/1/39	—	24/7/08	—	85.7	18/1/82	—	24/6/44	—	—

(a) Standard 30 years' normal (1911-1940). (b) Records incomplete, 1931-34. Discontinued, 1934. (c) 27/1876 and 24/1944. (d) 4/1931 and 2/1918. (e) 16/1861 and 4/1906.

HUMIDITY, RAINFALL, AND FOG.

Month.	Vapour Pressure (inches).	Rel. Hum. (%) at 9 a.m.			Rainfall (inches).					Fog. Mean No. of Days of Fog.			
		Mean.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days of Rain.	Greatest Monthly.						
								Least Monthly.	Greatest In One Day.				
No. of years over which observation extends.	30(a)	30(a)	84	84	30(a)	30(a)	113	113	113	30(a)			
January	0.327	39	59	29	0.76	5	4.00	1850	Nil (b)	2.30	2/89	0.0	
February	0.352	41	56	30	1.10	5	6.09	1925	Nil (b)	5.57	7/25	0.0	
March	0.332	44	58	29	0.87	5	4.60	1878	Nil (b)	3.50	5/78	0.0	
April	0.329	35	72	37	1.45	10	6.78	1853	Nil	1945	3.15	5/60	0.0
May	0.313	34	76	49	2.49	13	7.75	1875	0.10	1934	2.75	1/53	0.6
June	0.294	25	84	67	2.93	15	8.58	1916	0.42	1886	2.11	1/20	1.1
July	0.282	25	87	66	2.49	16	5.38	1865	0.37	1899	1.75	10/65	1.4
August	0.282	68	78	54	2.58	16	6.24	1852	0.33	1944	2.23	19/51	0.4
September	0.289	59	72	44	2.39	13	5.83	1923	0.27	1951	1.59	20/33	0.2
October	0.287	48	67	29	1.54	10	4.38	1948	0.17	1914	2.24	16/08	0.0
November	0.292	41	57	31	1.22	8	4.10	1934	0.04	1885	2.08	7/34	0.0
December	0.322	40	50	31	1.27	6	3.98	1861	Nil	1904	2.42	23/13	0.0
Year { Totals	—	—	—	—	21.09	122	—	—	—	—	—	—	—
Year { Averages	0.304	52	—	29	—	—	8.58	6/1916	Nil	(c)	5.57	7/2/25	—
Year { Extremes	—	—	87	29	—	—	—	—	—	—	—	—	—

(a) Standard 30 years' normal (1911-1940). (b) Various years. (c) December to April, various years.

CLIMATOLOGICAL DATA : BRISBANE, QUEENSLAND.

LAT. 27° 28' S., LONG. 153° 2' E. HEIGHT ABOVE M.S.L. 134 FT.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Mm. Sea Level and Standard Gravity from 9 readings, and 3 point readings.	Wind. (Height of Anemometer 105 feet.)				Prevailing Direction.	Mean Amount of Evaporation (inches).	No. of Days of Lightning.	Mean Amount of Clouds, 9 a.m. to 3 p.m., 9 p.m. (σ)	No. of Clear Days.	
		Average Miles per Hour.	Highest Mean Speed in One Day (miles per hour).	Highest Gust Speed (miles per hour).	Direction.						
					9 a.m.						3 p.m.
No. of years of observations.	30(b)	30(b)	37	37	30(b)	30(b)	30(b)	30(b)	30(b)		
January	29.865	6.8	19.7 23/47	58	SE	NE	6.74	9.8	5.7	3.5	
February	29.912	7.0	21.0 5/31	67	SE	NE	5.49	6.5	5.6	2.4	
March	29.975	6.5	20.3 1/29	50	S	E	5.05	5.9	5.1	5.4	
April	30.035	5.9	16.7 3/25	57	S	E	4.05	5.0	4.3	7.6	
May	30.083	5.8	17.9 17/26	49	SW	SE	3.09	4.1	4.3	8.3	
June	30.091	5.7	19.0 14/28	58	SW	W & SW	2.45	2.9	4.4	9.2	
July	30.090	5.6	15.0 2/23	52	SW	W & SW	2.69	2.8	3.8	12.4	
August	30.105	5.8	14.8 4/35	56	SW	NE	3.51	3.8	3.1	13.1	
September	30.067	5.9	16.1 1/48	57	SW	NE	4.51	5.8	3.3	13.0	
October	30.019	6.3	15.7 1/41	62	S	NE	5.81	7.1	4.2	8.5	
November	29.958	6.7	15.5 10/28	62	SE & N	NE	6.32	9.5	4.9	5.9	
December	29.890	7.0	19.5 15/26	79	SE	NE	7.02	10.6	5.3	3.8	
Year { Totals	—	—	—	—	—	—	56.73	73.8	—	93.3	
Year { Averages	30.007	6.3	—	—	SW	NE	—	—	4.5	—	
Year { Extremes	—	—	21.0 5/2/31	79	—	—	—	—	—	—	

(a) Scale 0-10. (b) Standard 30 years' normal (1911-1940).

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (°Fahr.).			Extreme Shade Temperature (°Fahr.).		Extreme Range.	Extreme Temperature (°Fahr.).		Mean Daily Hours of Sunshine.
	Mean Max.	Mean Min.	Mean 30(a)	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
No. of years over which observation extends.	30(a)	30(a)	30(a)	65	65	65	50(b)	65	30(a)
January	85.5	69.1	77.3	109.8 26/40	58.8 4/93	51.0	169.0 2/37	49.9 4/93	7.6
February	84.6	68.7	76.6	105.7 21/25	58.5 23/31	47.2	165.2 6/10	49.1 22/31	7.4
March	82.3	66.2	74.3	99.4 5/19	52.4 29/13	47.0	162.5 6/39	45.4 29/13	7.0
April	79.1	61.5	70.3	95.2 (c)	44.4 25/25	50.8	153.8 11/16	36.7 24/25	7.1
May	73.7	55.0	64.7	90.3 21/23	40.6 30/51	49.7	147.0 1/10	29.8 8/97	6.6
June	69.4	51.5	60.5	88.9 19/18	36.3 29/08	52.6	136.0 3/18	25.4 23/88	6.3
July	68.6	49.4	59.0	84.3 23/40	36.1 (d)	48.2	146.1 20/15	23.9 11/90	6.8
August	71.1	50.0	60.6	91.0 14/40	37.4 6/87	53.6	141.9 20/17	27.1 9/99	7.9
September	75.5	54.8	65.1	100.9 22/43	40.7 1/96	60.2	155.5 26/93	30.4 1/89	8.2
October	79.2	60.3	69.8	101.4 18/93	43.3 3/99	58.1	157.4 31/18	34.9 8/89	8.4
November	82.3	64.0	73.4	106.1 18/13	48.5 2/05	57.6	162.3 7/89	38.8 1/05	8.2
December	84.5	67.5	76.0	105.9 26/93	56.4 13/12	49.5	165.9 28/42	49.1 4/02	8.2
Year { Averages	78.0	59.9	69.0	—	—	—	—	—	7.5
Year { Extremes	—	—	—	109.8 26/1/40	36.1 (d)	73.7	169.0 2/1/37	23.9 12/7/90	—

(a) Standard 30 years' normal (1911-1940).

(b) From 1887 to March, 1947, excluding 1927 to 1936.

(c) 9/1896 and 5/1903.

(d) 12/7/1894 and 2/7/1896.

HUMIDITY, RAINFALL AND FOG.

Month.	Vapour Pressure (inches)	Rel. Hum. (%) at 9 a.m.				Rainfall (inches).				Fog. Mean No. of Days of Fog.
		Mean 9 a.m.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days of Rain.	Greatest Monthly.	Least Monthly.	Greatest in One Day.	
No. of years over which observation extends.	30(a)	30(a)	65	65	30(a)	30(a)	100	100(b)	100	30(a)
January	0.636	66	79	53	5.72	12	27.72 1895	0.32 1919	18.31 21/87	0.6
February	0.644	69	82	55	5.47	12	40.39 1893	0.58 1849	10.61 6/31	0.9
March	0.606	72	85	56	4.97	14	34.04 1870	Nil 1849	11.18 14/08	1.6
April	0.512	71	80	56	3.68	11	15.28 1867	0.04 1944	5.46 5/33	4.0
May	0.420	71	85	59	2.35	9	13.85 1876	Nil 1846	5.62 9/79	5.4
June	0.357	73	84	54	2.75	8	14.03 1873	Nil 1847	6.41 15/48	4.5
July	0.331	71	88	53	1.88	8	8.60 1950	Nil 1841	3.54 (c)	4.9
August	0.338	67	80	53	1.07	7	14.67 1879	Nil (d)	4.89 12/87	5.9
September	0.396	62	76	47	1.69	7	5.43 1886	0.10 1907	2.46 2/94	2.8
October	0.459	59	72	48	2.27	8	11.41 1949	0.03 1948	5.34 25/49	1.6
November	0.533	61	72	45	4.00	10	12.40 1917	Nil 1842	4.46 16/86	0.7
December	0.589	62	70	51	4.24	11	17.36 1942	0.35 1865	6.60 28/71	0.4
Year { Totals	—	—	—	—	140.09	117	—	—	—	33.3
Year { Averages	0.485	67	—	—	—	—	—	—	—	—
Year { Extremes	—	85	45	—	—	—	40.39 2/1893	Nil (e)	16.31 21/1/87	—

(a) Standard 30 years' normal (1911-1940).

(b) Records incomplete for various years between 1846 and 1859.

(c) 15/1876 and 16/1889.

(d) 1862, 1869, 1880.

(e) Various months in various years.

CLIMATOLOGICAL DATA : SYDNEY, NEW SOUTH WALES.  
 LAT. 33° 52' S., LONG. 151° 12' E. HEIGHT ABOVE M.S.L. 138 FT.  
 BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS AND CLEAR DAYS.

Month.	Bar, corrected to 34° F. Mm. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind. (Height of Anemometer 58 feet.)				Mean Amount of Evaporation (turnes).	No. of Days of Lightning.	Mean Amount of Clouds, 9 a.m. to 3 p.m., 9 a.m.(g)	No. of Clear Days.	
		Average Miles per Hour.	Highest Mean Speed in One Day (miles per hour).	Highest Gust Speed (miles per hour).	Prevailing Direction.					
					9 a.m.					3 p.m.
No. of years of observations.	30(b)	26(c)	38(d)	32(e)	26(e)	26(e)	30(f)	30(b)	30(b)	
January	29.875	8.9	24.9 2/22	74	S	ENE	5.71	4.8	5.7	4.8
February	29.942	8.1	20.1 14/18	61	NE	ENE	4.68	3.3	5.5	5.4
March	30.009	7.5	20.7 10/44	58	W	ENE	4.05	2.8	5.3	5.8
April	30.063	7.0	23.4 19/27	72	W	NE	2.91	2.4	5.0	7.0
May	30.098	6.8	19.6 2/26	63	W	S	2.17	1.6	4.9	7.4
June	30.078	7.1	24.5 17/14	70	W	W	1.61	1.5	4.8	8.3
July	30.070	7.2	26.6 6/31	68	W	W	1.69	1.1	4.5	10.1
August	30.060	7.4	24.6 9/51	68	W	NE	2.30	2.1	3.9	11.1
September	30.018	8.0	22.3 19/17	70	W	NE	3.00	3.0	4.2	10.0
October	29.976	8.2	21.1 18/44	95	W	ENE	4.17	3.9	4.9	7.4
November	29.935	8.5	22.6 14/30	71	W & E	ENE	4.97	4.5	5.5	5.7
December	29.881	8.9	24.9 10/20	75	S	ENE	5.64	5.4	5.8	4.8
Year { Totals ..	—	—	—	—	—	—	42.90	—	—	87.8
Year { Averages	30.000	7.8	—	—	W	NE	—	36.4	—	—
Year { Extremes	—	—	26.6 6/7/21	95	—	—	—	—	5.0	—

(a) Scale 0-10. (b) Standard 30 years' normal (1911-1940). (c) 1915-1940. (d) 1914-1951.  
 (e) 1917-1951. (f) 1921-1950.

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (°Fahr.).			Extreme Shade Temperature (°Fahr.).		Extreme Range.	Extreme Temperature (°Fahr.).		Mean Daily Hours of Sunshine.
	Mean Max.	Mean Min.	Mean	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
No. of years over which observation extends.	30(a)	30(a)	30(a)	93	93	93	84	93	30(b)
January	78.6	65.1	71.3	113.6 14/39	51.1 18/49	62.5	164.3 26/15	43.7 6/25	7.5
February	78.7	65.5	72.1	107.8 8/26	49.3 28/63	58.5	168.3 14/39	42.8 22/33	7.0
March	76.6	62.9	69.8	102.6 3/69	48.8 14/86	53.8	158.3 10/26	39.9 17/13	6.4
April	72.0	57.7	64.9	91.4 1/36	44.6 27/64	46.8	144.1 10/77	33.3 24/09	6.1
May	67.0	52.4	59.7	86.0 1/19	40.2 22/59	45.8	129.7 1/96	29.3 25/12	5.7
June	62.8	48.1	55.5	80.4 11/31	35.7 22/32	44.7	125.5 2/23	28.0 22/32	5.3
July	61.8	46.4	54.1	78.3 22/26	35.9 12/90	42.4	124.7 19/77	24.0 4/93	6.1
August	64.3	47.6	56.0	82.8 12/46	36.8 3/72	46.0	149.0 30/78	26.1 1/09	7.0
September	68.3	51.4	59.9	92.3 27/19	40.8 2/45	51.5	142.2 12/78	30.1 4/07	7.3
October	71.7	55.9	63.8	99.4 4/42	42.2 6/27	57.2	152.2 20/33	32.7 9/05	7.5
November	74.5	59.8	67.1	104.5 6/46	45.8 1/05	61.3	158.5 28/99	36.0 6/06	7.5
December	76.9	63.2	70.1	107.5 31/04	48.4 3/24	59.1	164.5 27/89	41.4 3/24	7.5
Year { Averages	71.1	56.3	63.7	—	—	—	—	—	6.8
Year { Extremes	—	—	—	113.6 14/1/39	35.7 22/6/31	77.9	168.3 14/2/39	24.0 4/7/93	—

(a) Standard 30 years' normal (1911-1940). (b) 1921-1950 (different exposure prior to 1921).

HUMIDITY, RAINFALL AND FOG.

Month.	Vapour Pressure (inches)	Rel. Hum. (%) at 9 a.m.				Rainfall (inches).				Fog. Mean No. of Days of Fog.
		Mean 9 a.m.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days of Rain.	Greatest Monthly.	Least Monthly.	Greatest in One Day.	
No. of years over which observation extends.	30(a)	30(a)	76	76	30(a)	30(a)	93	93	93	30(b)
January	0.537	65	78	58	3.86	13	15.26 1911	0.25 1932	7.08 13/11	0.4
February	0.560	68	81	60	3.15	12	18.56 1873	0.12 1939	8.90 25/73	0.8
March	0.527	71	85	62	4.44	13	20.52 1942	0.42 1876	11.05 28/42	1.8
April	0.441	73	87	63	5.65	14	24.49 1861	0.06 1868	7.52 29/60	2.8
May	0.362	75	90	63	4.98	12	23.03 1919	0.18 1860	8.36 28/89	3.7
June	0.303	76	89	65	3.68	11	25.30 1950	0.19 1904	5.17 16/84	3.3
July	0.282	74	88	63	4.89	12	13.23 1950	0.10 1946	7.80 7/31	2.9
August	0.288	68	84	54	2.41	10	14.89 1899	0.04 1885	5.33 2/60	2.3
September	0.325	62	79	49	2.77	11	14.05 1879	0.08 1882	5.69 10/79	1.0
October	0.378	60	77	46	2.80	11	11.13 1916	0.21 1867	6.37 13/02	0.6
November	0.433	60	79	42	2.54	11	9.88 1865	0.07 1915	4.23 19/00	0.6
December	0.501	63	77	51	3.63	13	15.82 1920	0.23 1913	4.75 13/10	0.4
Year { Totals	—	—	—	—	44.80	143	—	—	—	20.6
Year { Averages	0.393	68	—	—	—	—	—	—	—	—
Year { Extremes	—	—	90	42	—	—	25.30 6/1950	0.04 8/1885	11.05 28/3/42	—

(a) Standard 30 years' normal (1911-1940). (b) 1921-1950.



CLIMATOLOGICAL DATA : MELBOURNE, VICTORIA.

LAT. 37° 49' S., LONG. 144° 58' E. HEIGHT ABOVE M.S.L. 114 FT.  
 BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. M. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind. (Height of Anemometer 93 feet.)				Prevailing Direction.		Mean Amount of Evaporation (inches).	No. of Days of Lightning.	Mean Amount of Clouds, 9 a.m., 3 p.m., 9 p.m.(a).	No. of Clear Days.
		Average Miles per Hour.	Highest Mean Speed in One Day (miles per hour).	Highest Gust Speed (miles per hour).							
					9 a.m.	3 p.m.					
No. of years of observations.	30(b)	12(c)	39	42	30(b)	30(b)	30(b)	30(b)	30(b)	30(b)	
January ..	29.897	8.8	21.1 27/41	66	S & SW	S	6.55	1.8	4.9	6.8	
February ..	29.950	8.4	19.0 13/47	74	N & S	S	5.10	2.3	4.8	6.4	
March ..	30.025	7.8	17.2 19/50	66	N	S	4.26	1.8	5.3	5.5	
April ..	30.092	7.4	19.9 16/43	67	N	S	2.53	1.2	5.9	4.6	
May ..	30.113	7.4	20.0 4/44	72	N	N	1.57	0.5	6.1	3.4	
June ..	30.097	7.2	22.8 16/47	60	N	N	1.18	0.4	6.5	2.7	
July ..	30.079	8.7	20.9 9/44	68	N	N	1.16	0.3	6.3	2.9	
August ..	30.048	8.2	21.3 20/42	64	N	N	1.54	0.9	6.0	3.1	
September ..	30.001	8.4	18.3 6/48	69	N & W	N & S	2.47	1.3	5.9	3.3	
October ..	29.968	8.4	18.0 27/50	69	N	S	3.54	1.8	6.1	3.3	
November ..	29.951	8.6	19.4 4/50	65	S & SW	S	4.62	2.3	6.0	3.6	
December ..	29.896	8.7	18.9 1/34	61	S & SW	S	5.85	1.9	5.6	4.5	
Year { Totals ..	—	—	—	—	—	—	40.31	16.5	—	—	
Year { Averages ..	30.010	8.1	—	—	N	S	—	—	5.8	—	
Year { Extremes ..	—	—	22.8 16/6/47	74	—	—	—	—	—	50.6	

(a) Scale 0-10.

(b) Standard 30 years' normal (1911-1940).

(c) Early records not comparable.

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (°Fahr.).			Extreme Shade Temperature (°Fahr.).		Extreme Range.	Extreme Temperature (°Fahr.).		Mean Daily Hours of Sunshine.
	Mean	Mean	Mean	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
No. of years over which observation extends.	30(a)	30(a)	30(a)	96	96	96	86(b)	92	35(c)
January ..	77.7	56.9	67.3	114.1 13/39	42.0 28/85	72.1	178.5 14/62	30.2 28/85	7.8
February ..	78.6	58.0	68.3	109.5 7/01	40.2 24/24	69.3	167.5 15/70	30.9 6/91	7.4
March ..	74.9	55.2	65.1	107.0 11/40	37.1 17/84	60.9	164.5 1/68	28.9 (d)	6.5
April ..	67.9	50.8	59.3	94.8 5/38	34.8 24/88	60.0	152.0 8/61	25.0 23/97	5.0
May ..	62.0	46.9	54.5	83.7 7/05	29.9 29/16	53.8	142.6 2/59	21.1 26/16	4.1
June ..	56.8	43.8	50.3	72.2 1/07	28.0 11/66	44.2	129.0 11/61	19.9 30/29	3.4
July ..	56.2	42.6	49.4	69.3 22/26	27.0 21/69	42.3	125.8 2/60	20.5 12/03	3.7
August ..	58.7	43.7	51.2	77.0 20/85	28.3 11/63	48.7	137.4 29/69	21.3 14/02	4.6
September ..	63.3	46.0	54.7	88.6 28/28	31.0 3/40	57.6	142.1 20/67	22.8 8/18	5.5
October ..	67.9	48.7	58.3	98.4 24/14	32.1 3/71	66.3	154.3 28/68	24.8 22/18	5.8
November ..	71.3	51.8	61.5	105.7 27/94	36.5 2/96	69.2	159.6 29/65	24.6 2/96	6.2
December ..	75.4	55.3	65.3	110.7 15/76	40.0 4/70	70.7	170.3 20/69	33.2 1/04	7.0
Year { Averages ..	67.6	50.0	58.8	—	27.0	87.1	178.5 14/1/62	19.9 30/6/20	—
Year { Extremes ..	—	—	—	114.1 13/1/39	27.0 21/7/60	—	—	—	5.6

(a) Standard 30 years' normal (1911-1940).

(b) Records discontinued, 1946.

(c) 1916-1950.

(d) 17/1834 and 20/1897.

HUMIDITY, RAINFALL AND FOG.

Month.	Vapour Pressure (inches).	Rel. Hum. (%) at 9 a.m.			Rainfall (inches).				Fog. Mean No. of Days of Fog.	
		Mean 9 a.m.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days of Rain.	Greatest Monthly.	Least Monthly.		Greatest in One Day.
No. of years over which observation extends.	30(u)	30(a)	44	44	30(a)	30(u)	96	96	96	30(a)
January ..	0.382	58	65	50	1.88	9	6.66 1941	0.01 1932	2.97 9/97	0.1
February ..	0.417	62	70	48	2.00	8	7.72 1939	0.03 1870	3.44 26/46	0.3
March ..	0.385	64	76	50	2.22	9	7.50 1911	0.14 1934	3.55 5/19	1.1
April ..	0.351	72	82	66	2.30	13	6.71 1901	Nil 1923	2.28 22/01	2.3
May ..	0.311	79	86	70	1.94	14	5.60 1942	0.14 1934	1.85 7/91	6.8
June ..	0.276	83	92	75	2.06	16	4.51 1859	0.73 1877	1.74 21/04	6.5
July ..	0.264	82	86	75	1.93	17	7.02 1891	0.57 1902	2.71 12/91	6.5
August ..	0.271	76	82	65	2.02	17	4.35 1939	0.48 1903	1.94 26/24	3.7
September ..	0.288	68	76	60	2.20	15	7.93 1916	0.52 1907	2.62 12/80	1.3
October ..	0.307	62	67	52	2.63	14	7.61 1869	0.29 1914	3.00 17/69	0.3
November ..	0.336	60	69	52	2.33	13	6.71 1916	0.25 1895	2.57 16/76	0.3
December ..	0.373	59	69	48	2.38	11	7.18 1863	0.11 1904	3.20 1/34	0.2
Year { Totals ..	—	—	—	—	25.89	156	—	—	—	—
Year { Averages ..	0.323	69	—	—	—	—	7.93 9/1916	Nil 4/1923	3.55 5/3/10	—
Year { Extremes ..	—	—	92	48	—	—	—	—	—	—

(a) Standard 30 years' normal (1911-1940).

CLIMATOLOGICAL DATA : HOBART, TASMANIA.

LAT. 42° 53' S., LONG. 147° 30' E. HEIGHT ABOVE M.S.L. 177 FT.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS AND CLEAR DAYS.

Month.	Bar. corrected to 32° F., Mm. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind. (Height of Anemometer 40 feet.)				Prevailing Direction.		Mean Amount of Evaporation (inches).	No. of Days of Lightning.	Mean Amount of Clouds, 9 a.m., 3 p.m., 9 p.m.(d).	No. of Clear Days.
		Average Miles per Hour.	Highest Mean Speed in One Day (miles per hour).	Highest Gust Speed (miles per hour).							
					9 a.m.	3 p.m.					
No. of years of observations.	30(b)	30(b)	61	61	30(b)	30(b)	30(b)	30(b)	30(b)	30(b)	
January	29.819	8.0	20.8	30/16	76	NNW	SSE	4.84	0.9	6.4	1.9
February	29.913	7.2	25.2	4/27	65	NNW	SSE	3.71	1.0	6.2	2.3
March	29.961	6.8	21.4	13/38	68	NW	SSE	3.10	1.2	6.1	2.4
April	29.997	6.7	22.2	27/26	74	NW	W	1.98	0.7	6.5	1.7
May	30.009	6.3	20.2	20/36	79	NNW	NW	1.37	0.4	6.1	2.4
June	29.986	6.2	23.7	27/20	71	NW	NW	0.91	0.4	6.2	2.4
July	29.958	6.5	20.8	19/35	78	NNW	NNW	0.94	0.3	6.1	2.0
August	29.906	6.8	25.5	19/26	87	NNW	NW	1.28	0.4	6.1	2.1
September	29.860	7.9	21.5	26/15	84	NNW	NW	1.97	0.7	6.3	1.5
October	29.833	8.2	19.2	8/12	74	NNW	SW	3.05	0.6	6.6	1.0
November	29.831	7.9	21.2	18/15	73	NNW	S	3.77	0.7	6.4	1.3
December	29.816	7.6	23.4	1/34	70	NNW	SSE	4.37	0.5	6.8	1.1
Year { Totals ..	—	—	—	—	—	—	—	31.29	7.8	—	—
Year { Averages	29.907	7.2	—	—	—	NNW	W	—	—	6.3	—
Year { Extremes	—	—	25.5	19/8/26	87	—	—	—	—	—	—

(a) Scale 0-10. (b) Standard 30 years' normal (1911-1940).

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (*Fahr.).			Extreme Shade Temperature (*Fahr.).		Extreme Range.	Extreme Temperature (*Fahr.).		Mean Daily Hours of Sunshine.				
	Mean Max.	Mean Min.	Mean.	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.					
										No. of years over which observation extends.	30(a)	30(a)	30(a)
January	69.8	52.4	61.0	105.0	1/00	40.1	(d)	64.9	160.0	(e)	30.6	19/97	7.7
February	70.6	53.7	62.2	104.4	12/99	39.0	20/87	65.4	165.0	24/98	28.3	—/87	7.1
March	67.5	51.3	59.4	99.1	13/40	35.2	31/26	63.9	150.9	26/44	27.5	30/02	6.4
April	62.2	48.0	55.1	87.1	1/41	33.3	24/88	53.8	142.0	18/93	25.0	—/86	5.0
May	57.8	44.6	51.2	77.8	5/21	29.2	20/02	48.6	128.0	(f)	20.0	19/02	4.4
June	52.8	41.2	47.0	69.2	1/07	29.2	28/44	40.0	122.0	12/94	21.0	6/87	4.0
July	52.7	40.6	46.6	66.1	14/34	27.7	11/95	38.4	121.0	12/93	18.7	16/86	4.4
August	55.4	41.7	48.7	71.6	28/14	28.9	9/51	42.7	129.0	—/87	20.1	7/09	5.1
September	59.0	43.7	51.4	81.7	23/26	31.0	16/97	50.7	138.0	23/93	18.3	16/26	5.9
October	62.5	46.7	54.3	92.0	24/14	32.0	12/89	60.0	156.0	9/93	23.8	(g)	6.1
November	65.0	48.2	56.6	98.3	26/37	35.0	16/41	63.3	154.0	19/92	26.0	1/08	7.2
December	67.9	51.3	59.6	105.2	30/97	38.0	3/06	67.2	161.5	10/39	27.2	—/86	7.3
Year { Averages	61.9	46.9	54.4	—	—	—	—	—	—	—	—	—	—
Year { Extremes	—	—	—	105.2	—	27.7	—	77.5	165.0	—	18.3	—	—

(a) Standard 30 years' normal (1911-1940). (b) Records 1855-1882 not comparable. (c) Period 1934-1938 not comparable; records discontinued, 1946. (d) 9/37 and 11/37. (e) 5/86 and 13/05. (f) —/89 and —/93. (g) 1/86 and —/99.

HUMIDITY, RAINFALL AND FOG.

Month.	Vapour Pressure (inches)	Rel. Hum. (%) at 9 a.m.				Rainfall (inches).				Fog. Mean No. of Days of Fog.			
		Mean.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days of Rain.	Greatest Monthly.	Least Monthly.	Greatest in One Day.				
											No. of years over which observation extends.	30(a)	31
January	0.309	57	72	46	1.82	13	5.91	1893	0.17	1915	2.96	30/16	0.0
February	0.342	61	77	48	1.68	10	4.96	1925	0.11	1944	2.18	5/38	0.0
March	0.323	65	77	52	2.13	13	10.05	1946	0.29	1943	3.47	17/46	0.3
April	0.290	60	84	58	2.31	14	8.50	1935	0.07	1904	5.02	20/09	0.2
May	0.263	78	89	65	1.71	14	6.37	1905	0.14	1913	1.75	2/93	0.9
June	0.233	78	91	68	2.25	16	8.15	1889	0.28	1886	4.11	13/89	0.7
July	0.227	78	94	72	2.14	17	6.02	1922	0.17	1950	2.51	18/22	0.9
August	0.232	72	92	60	1.82	18	6.32	1946	0.30	1892	2.28	14/90	0.4
September	0.240	64	85	58	1.90	17	4.47	1928	0.38	1951	1.57	24/85	0.1
October	0.258	60	73	51	2.52	18	7.60	1947	0.39	1914	2.58	4/06	0.0
November	0.274	57	72	50	2.23	16	7.39	1885	0.33	1921	3.70	30/85	0.0
December	0.306	58	67	45	2.52	14	7.72	1916	0.17	1931	3.33	5/41	0.0
Year { Totals	—	—	—	—	—	—	—	—	—	—	—	—	—
Year { Averages	0.271	66	—	—	25.03	180	—	—	—	—	—	—	3.5
Year { Extremes	—	—	94	45	—	—	—	—	—	—	—	—	—

(a) Standard 30 years' normal (1911-1940). (b) Records prior to 1883 not comparable.

## CHAPTER III.

### GENERAL GOVERNMENT.

#### § 1. Scheme of Parliamentary Government.

1. **General.**—The legislative power of the Commonwealth is vested in the Parliament of the Commonwealth, which consists of the Sovereign, the Senate, and the House of Representatives. The Sovereign is represented throughout the Commonwealth by the Governor-General who, subject to the Constitution of the Commonwealth, has such powers and functions as the Sovereign is pleased to assign to him. In each State there is a State Governor, who is the representative of the Sovereign for the State, and who exercises such powers within the State as are conferred upon him by the Letters Patent which constitute his office, and by the instructions which inform him in detail of the manner in which his duties are to be fulfilled. The Legislature in each State was bi-cameral till 1922, in which year the Queensland Parliament became uni-cameral. In the bi-cameral States it consists of (a) a Legislative Council and (b) a Legislative Assembly, or House of Assembly. In Queensland the Legislative Assembly constitutes the legislature. In the Commonwealth Parliament the Upper House is known as the Senate, and in the State Parliaments as the Legislative Council. The Lower House in the bi-cameral Parliaments is known as follows:—in the Commonwealth Parliament as the House of Representatives, in the State Parliaments of New South Wales, Victoria and Western Australia as the Legislative Assembly, and in the State Parliaments of South Australia and Tasmania as the House of Assembly. The legislative powers of these Parliaments are delimited by the Commonwealth and the State Constitutions. The Assembly (Queensland as pointed out is uni-cameral) which is the larger House, is always elective, the franchise extending to adult British subjects with certain residential qualifications. The Council in each of the States other than New South Wales is elected by the people of that State, the constituencies being differently arranged and in general, some property or special qualification for the electorate being required. In Victoria, however, under the Legislative Council Reform Act passed in October, 1950, adult suffrage was adopted for Legislative Council elections. In the case of New South Wales, the Council is elected by the members of each House of Parliament at a simultaneous sitting. In the Federal Parliament the qualifications for the franchise are identical for both Houses.

2. **The Sovereign.**—(i) *Death of King George VI. and Proclamation of Queen Elizabeth II.* On 7th February, 1952 the Prime Minister announced that the Governor-General had directed the notification, for general information, of the intelligence of the death of His Majesty King George the Sixth on 6th February, 1952.

On 7th February, 1952 the Governor-General and members of the Federal Executive Council proclaimed Princess Elizabeth Queen Elizabeth the Second, Queen of this Realm and of all her other Realms and Territories, Head of the Commonwealth, Defender of the Faith, Supreme Liege Lady in and over the Commonwealth of Australia.

(ii) *Royal Style and Titles Act 1953.* The Statute of Westminster, 1931 stated that it would be in accord with the established constitutional position of members of the British Commonwealth of Nations that any alteration in the law regarding the Royal Style and Titles should thereafter require the assent of the Parliaments of the Dominions in addition to that of the Parliament of the United Kingdom.

At the conference of Prime Ministers and other representatives of the British Commonwealth in London in December, 1952 it was agreed that the Royal Style and Titles then in use were not in accord with current relationships within the British Commonwealth and that there was need of a new form which would, in particular, "reflect the special position of the Sovereign as Head of the Commonwealth".

It was therefore decided that each member of the British Commonwealth should use a form of the Royal Style and Titles suited for its own circumstances, while retaining as a common element the description "Queen of Her other Realms and Territories and Head of the Commonwealth"; and that consultation between all countries of the Commonwealth should take place on any future proposal to change the form of the Royal Style and Titles used in any country.

To give effect to these decisions in Australia the Royal Style and Titles Bill was introduced in the House of Representatives on 28th February, 1953, and enacted on 3rd April, 1953. The Act gives Parliament's assent to the adoption by the Queen, for use in relation to the Commonwealth of Australia and its Territories, of the following Royal Style and Titles:—"Elizabeth the Second, by the Grace of God of the United Kingdom, Australia and Her other Realms and Territories Queen, Head of the Commonwealth, Defender of the Faith." The Act also approves the adoption by the Queen of a Royal Style and Titles for use in relation to other countries of the British Commonwealth, in accordance with the principles formulated at the London conference.

**3. Powers and Functions of the Governor-General and of the State Governors.**—A detailed statement of the powers and functions of the Governor-General and of the State Governors appears in preceding issues of the Official Year Book (*see* No. 18, pp. 78–80). For the names of the Governors-General since the inception of the Commonwealth and of the present State Governors, *see* § 3. following.

**4. The Cabinet and Executive Government.**—(i) *General.* Both in the Commonwealth and in the States, executive government is based on the system which was evolved in Britain in the 18th century, and which is generally known as "Cabinet" or "responsible" government. Its essence is that the head of the State (Her Majesty the Queen, and her representative, the Governor-General or Governor) should perform Governmental acts on the advice of her Ministers; that she should choose her principal Ministers of State from members of Parliament belonging to the party, or coalition of parties, commanding a majority in the popular House; that the Ministry so chosen should be collectively responsible to that House for the government of the country; and that the Ministry should resign if it ceases to command a majority there.

The Cabinet system operates by means, chiefly, of constitutional conventions, customs or understandings, and of institutions that do not form part of the legal structure of the government at all. The constitutions of the Commonwealth and the States make fuller legal provision for the Cabinet system than the British Constitution does—for example, by requiring that Ministers shall be, or within a prescribed period become, members of the Legislature. In general, however, the legal structure of the executive government remains the same as it was before the establishment of the Cabinet system.

Formally, the executive power is vested in the Commonwealth in the Governor-General, and in the States in the Governor. In each case he is advised by an Executive Council, which, however, meets only for certain formal purposes, as explained below. The whole policy of a Ministry is, in practice, determined by the Ministers of State, meeting, without the Governor-General or Governor, under the chairmanship of the Prime Minister or Premier. This group of Ministers is known as the Cabinet.

(ii) *The Cabinet.* This body does not form part of the legal mechanism of government. Its meetings are private and deliberative. The actual Ministers of the day alone are present, no records of the meetings are made public, and the decisions taken have, in themselves, no legal effect. In Australia, all Ministers are members of the Cabinet. As Ministers are the leaders of the party or parties commanding a

majority in the popular House, the Cabinet substantially controls, in ordinary circumstances, not only the general legislative programme of Parliament, but the whole course of Parliamentary proceedings. In effect, though not in form, the Cabinet, by reason of the fact that all Ministers are members of the Executive Council, is also the dominant element in the executive government of the country. Even in summoning, proroguing or dissolving Parliament, the Governor-General or Governor is usually guided by the advice tendered him by the Cabinet, through the Prime Minister or Premier, though legally the discretion is vested in the Governor-General or Governor himself.

(iii) *The Executive Council.* This body is presided over by the Governor-General or Governor, the members thereof holding office during his pleasure. All Ministers of State are *ex officio* members of the Executive Council. In the Commonwealth, and also in the States of Victoria and Tasmania, Ministers remain members of the Executive Council on leaving office, but are not summoned to attend its meetings; for it is an essential feature of the Cabinet system that attendance should be limited to the Ministers of the day. The meetings of the Executive Council are formal and official in character, and a record of proceedings is kept by the Secretary or Clerk. At Executive Council meetings, the decisions of the Cabinet are (where necessary) given legal form; appointments made; resignations accepted; proclamations issued, and regulations and the like approved.

(iv) *The Appointment of Ministers.* Legally, Ministers hold office during the pleasure of the Governor-General or Governor. In practice, however, the discretion of the Queen's representative in the choice of Ministers is limited by the conventions on which the Cabinet system rests. Australian practice follows, broadly, that of the United Kingdom. When a Ministry resigns, the Crown's custom is to send for the leader of the party which commands, or is likely to be able to command, a majority in the popular House, and to commission him, as Prime Minister or Premier, to "form a Ministry"—that is, to nominate other persons to be appointed as Ministers of State and to serve as his colleagues in the Cabinet.

The customary procedure in connexion with the resignation or acceptance of office by a Ministry is described fully in previous issues of the *Official Year Book* (see No. 6, p. 942). It may be added, however, that subsequent legislation has, in most of the States, obviated the necessity of responsible Ministers vacating their seats in Parliament on appointment to office.

(v) *Ministers in Upper and Lower Houses.* The following table shows the number of Ministers with seats in the Upper or Lower Houses of each Parliament in December, 1952:—

AUSTRALIAN PARLIAMENTS : MINISTERS IN UPPER OR LOWER HOUSES, DECEMBER, 1952.

Ministers with Seats in—	C'wealth.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
The Upper House ..	5	1	4	(a)	2	2	..	14
The Lower House ..	15	14	10	11	4	8	9	71
Total ..	20	15	14	11	6	10	9	85

(a) Abolished in 1922.

For the names of the occupants of ministerial office in each of the Parliaments of Australia in December, 1952, see § 3. of this chapter. Subsequent changes of importance in Ministries will be found in the Appendix to this volume.

(vi) *Numbers and Salaries of Commonwealth Ministers.* Under sections 65 and 66, respectively, of the Constitution of the Commonwealth, the number of Ministers of State was not to exceed seven, and the annual sum payable for their salaries was not to exceed £12,000, each provision to operate, however, "until the Parliament otherwise provides."

Subsequently, number and salaries were increased to 8—£13,650 (1915) and to 9—£15,300 (1917). During the period of financial emergency in the early thirties the ministerial salary appropriation was reduced as low as £10,710 a year, and was not restored to its former level until 1938. During the period of restoration of salary the number of Ministers was increased to 10 (1935). Later increases were as follows:—to 11—£18,600 (1938); 19—£21,250 (1941)—these increases were war-time provisions, extended into peacetime in 1946; £27,650 (1947—number unaltered); 20—£29,000 (1951); £41,000 (1952—number unaltered). In 1938 an additional ministerial allowance of £1,500 a year was granted to the Prime Minister; this was increased to £3,500 a year (exempt from income tax) in 1952 and at the same time an additional ministerial allowance of £1,000 a year (exempt from income tax) was granted to each other Minister.

All amounts payable in the foregoing paragraphs are in addition to amounts payable as Parliamentary allowances (*see* pars. 5 and 6 below).

5. **Number and Salary of Members of the Legislatures, Australian Parliaments, October, 1952.**—The following table shows the number and annual salary of members in each of the legislative chambers in October, 1952:—

**AUSTRALIAN PARLIAMENTS: MEMBERS AND ANNUAL SALARIES,  
OCTOBER, 1952.**

Members in—	C'wealth.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
NUMBER OF MEMBERS.								
Upper House ..	60	60	34	(d)	20	30	19	223
Lower House ..	123	94	65	75	39	50	30	476
Total ..	183	154	99	75	59	80	49	690
ANNUAL SALARY. (£.)								
Upper House ..	(a) 1,750	(b) 500	(c) 1,050	(d)	(e) 1,150— 1,225	(f) 1,000	(g) 800— 1,050	..
Lower House ..	(a) 1,750	b, 1,875	(c) 1,050	1,375	(e) 1,150— 1,225	(f) 1,000	(g) 850— 1,050	..

(a) Plus expense allowances exempt from income tax—Senators, £550; Members of House of Representatives, £400—£900, varying with electoral divisions. *See also* par. 6 following. (b) Increased from £300 (Upper House) and £1,375 (Lower House) as from January, 1952. (c) Subject to automatic adjustment in accordance with variations in the cost of living. Plus £100 for urban and country electorates (i.e., excluding Metropolitan Electoral Districts and Provinces). (d) Abolished in 1922. (e) According to distance of electorate from Adelaide. Increased from £900—£975 from 1st July, 1951. (f) Subject to adjustment in accordance with variations of the State basic wage. Plus £50 where any part of electorate is more than 50 miles from Perth. (g) According to area of electorate and distance from the capital. Plus a cost of living adjustment.

Parliamentary salaries affected by cost of living adjustments (i.e., in the States of Victoria, Western Australia and Tasmania) have thereby been brought roughly into line with those of Queensland and South Australia.

6. **Commonwealth Parliamentary Allowances.**—(i) *General Allowance.* Section 48 of the Commonwealth Constitution granted to each Senator and member of the House of Representatives an allowance of £400 a year until Parliament should decide to alter it. The first alteration was made in 1907, when the allowance was increased to £600 for all except the holders of Parliamentary office (i.e., Ministers, and the Presiding Officer and Chairman of Committees of each House), whose allowances in addition to the emoluments of office remained at £400 a year. In 1920 the general allowance was increased to £1,000 a year and the allowance to holders of office to £800 a year. Under financial emergency legislation Parliamentary salaries and allowances were reduced generally, the lowest

level reached for the general allowance being £750 in 1932. Subsequently there was a gradual restoration to former levels, the allowance reaching £1,000 a year again in 1938, when the provision for the reduced allowance for holders of Parliamentary office was removed. In 1947 the general allowance was increased to £1,500 and in 1952 to £1,750 a year.

(ii) *Additional Allowances.* (a) *Holders of Parliamentary Office.* Amounts received by the holders of Parliamentary office in respect of the duties they perform are additional to the allowances to each Senator and member of the House of Representatives as described above. Appropriations for ministerial salaries are referred to in par. 4 (vi) above, but the amounts received because of their duties of office by the President of the Senate, the Speaker of the House of Representatives and the Chairman of Committees in each House are not included in these appropriations.

In 1901-2 the Presiding Officer of each House received £1,100 a year and the Chairmen of Committees each £500 a year. Before the depression years these amounts had been increased to £1,300 and £700 respectively, but, in common with other Parliamentary salaries and allowances, they were reduced during this period, and in 1933-34 were as low as £900 and £500 a year. Following the gradual restoration to previous levels, they remained unchanged until 1947-48, when they were increased to £1,600 and £900 respectively. In 1952 the allowance to the President of the Senate and to the Speaker of the House of Representatives was increased to £1,750 a year each.

(b) *Other Additional Allowances.* In 1920 the Leaders of the Opposition in the Senate and in the House of Representatives were granted additional allowances of £200 a year and £400 a year respectively. These were increased to £300 and £600 in 1947 and to £750 and £1,750 in 1952. In 1947, also, the Leader in the House of Representatives (other than the Leader—and in 1952 the Deputy Leader—of the Opposition) of a recognized political party with not less than ten members in that House and of which none is a Minister received an additional allowance of £400 a year. This was increased to £500 in 1952.

Further additional annual allowances, all of which were granted in 1952, are as follows:—

Deputy Leader of the Opposition in the House of Representatives, £750 ;  
Government Whip in the House of Representatives, £325 ; Other Whips, £275.

Additional allowances (exempt from income tax) for expenses of discharging duties.—Payable to each Senator—£550 ; payable to each Member of the House of Representatives—£400—£900, varying with electoral divisions.

Additional allowances (exempt from income tax) for expenses of discharging duties of Office.—President of the Senate, Speaker of the House of Representatives, Leader of the Opposition in the Senate, and Deputy Leader of the Opposition in the House of Representatives—£250 ; Leader of the Opposition in the House of Representatives—£1,000.

7. *Enactments of the Parliament.*—In the Commonwealth all laws are enacted in the name of the Sovereign, the Senate, and the House of Representatives. The subjects with respect to which the Commonwealth Parliament is empowered to make laws are enumerated in the Constitution. In the States, laws are enacted in the name of the Sovereign by and with the consent of the Legislative Council (except in Queensland) and Legislative Assembly or House of Assembly. The Governor-General or the State Governor acts on behalf of, and in the name of, the Sovereign, in assenting to Bills passed by the Legislatures, but he may reserve them for the special consideration of the Sovereign. In the States the Councils and Assemblies are empowered generally, subject to the Commonwealth Constitution, to make laws in and for their respective States, in all cases whatsoever. Subject to certain limitations, they may alter, repeal, or vary their Constitutions. Where a law of a State is inconsistent with a law of the Commonwealth the latter prevails, and the former is, to the extent of the inconsistency, invalid.

## § 2. Parliaments and Elections.

1. **Commonwealth.**—(i) *Qualifications for Membership and for Franchise—Commonwealth Parliament.* Qualifications necessary for membership of either House of the Commonwealth Parliament are possessed by any British subject, twenty-one years of age or over, who has resided in the Commonwealth for at least three years and who is, or is qualified to become, an elector of the Commonwealth. Qualifications for Commonwealth franchise are possessed by any British subject, not under twenty-one years of age and not disentitled on racial or other ground, who has lived in Australia for six months continuously. Residence in a sub-division for a period of one month prior to enrolment is necessary to enable a qualified person to enrol. Enrolment and voting are compulsory. A British subject member of the Defence Force of the Commonwealth on active service is entitled to vote at Commonwealth elections whether enrolled or not, and, if he is serving or has served outside Australia, irrespective of age.

Disqualification of persons otherwise eligible as members of either Commonwealth House is mainly on the grounds of membership of the other House, allegiance to a foreign power, being attainted of treason, being convicted and under sentence for any offence punishable by imprisonment for one year or longer, being an undischarged bankrupt or insolvent, holding office of profit under the Crown with certain exceptions, or having pecuniary interest in any agreement with the public service of the Commonwealth except as a member of an incorporated company of more than 25 persons. Excluded from the franchise are persons of unsound mind, attainted of treason, convicted and under sentence for any offence punishable by imprisonment for one year or longer, or of certain non-European races. In the main, these or similar grounds for disqualification apply also to State Parliament membership and franchise.

(ii) *Commonwealth Parliaments and Elections.* From the establishment of the Commonwealth until 1949 the Senate consisted of 36 members, six being returned by each of the original federating States. The Constitution empowers Parliament to increase or decrease the size of the Parliament and, as the population of the Commonwealth had more than doubled since its inception, the Parliament enacted legislation in 1948 enlarging both Houses of Parliament and providing a representation ratio nearer to the proportion which existed at Federation. Thus the Representation Act 1948 provides that there shall be ten Senators from each State instead of six, increasing the total to 60 Senators. To effect this transition in the Senate, seven Senators were elected from each State at the elections of 1949, four taking office immediately the Senate sat after the election, the remaining three commencing their term on the usual date—1st July, 1950. Members of this Chamber are normally elected for the term of six years, but half the members retire at the end of every third year, although they are eligible for re-election. Accordingly, at each future periodical election of Senators, five Senators will normally be elected in each State, making 30 to be elected at each such election.

In accordance with the Constitution, the total number of members of the House of Representatives must be as nearly as practicable double that of the Senate. Correspondingly, in terms of the Constitution and the Representation Act 1905–38, from the date of the 1949 elections the number of members in the House of Representatives was increased from 74 to 121 (excluding the members for the internal Territories). As the States are represented in the House of Representatives on a population basis, the numbers were increased as follows:—New South Wales—from 28 to 47; Victoria—20 to 33; Queensland—10 to 18; South Australia—6 to 10; Western Australia—5 to 8; Tasmania—5, no increase; total—74 to 121. The increase in the number of members of Parliament necessitated a redistribution of seats and a redetermination of electoral boundaries. This was carried out by the Distribution Commissioners in each State on a quota basis, but taking into account community or diversity of interest, means of communication, physical features, existing boundaries of divisions and sub-divisions, and State electoral boundaries.

Since the general elections of 1922 the Northern Territory has been represented by one member in the House of Representatives. The Australian Capital Territory Representation Act 1948 gave similar representation to the Australian Capital Territory



as from the elections of 1949. The members for the Territories may join in the debates but are not entitled to vote, except on a motion for the disallowance of any ordinance of the Territory or on any amendment to such motion. The Commonwealth Parliament, however, when providing for a Legislative Council for the Northern Territory in 1947, relinquished the power to disallow ordinances for that Territory.

The Constitution provides for a minimum of five members for each original State. Members of the House of Representatives are elected for the duration of the Parliament, which is limited to three years. In elections for Senators, the whole State constitutes the electorate. For the purposes of elections for the House of Representatives, the State is divided into single electorates corresponding in number with the number of members to which the State is entitled. Further information regarding the Senate and the House of Representatives is given in earlier issues of the Official Year Book.

There have been nineteen complete Parliaments since the inauguration of Federation. Until 1927 the Parliament met at Melbourne; it now meets at Canberra, the first meeting at Parliament House, Canberra, being opened by the late King George VI., then Duke of York, on 9th May, 1927.

The fifth Parliament, which was opened on 9th July, 1913, was dissolved on 30th July, 1914 in somewhat unusual circumstances, when, for the first time in the history of the Commonwealth, a deadlock occurred between the Senate and the House of Representatives, and, in accordance with Section 57 of the Constitution which provides for such an eventuality, both Houses were dissolved by the Governor-General. The nineteenth Parliament was similarly dissolved. It opened on 22nd February, 1950, but on 19th March, 1951, in its first session, a double dissolution was proclaimed for the second time since the inception of the Commonwealth.

Particulars of the ensuing elections for Australia as a whole are given below. For State details see Official Year Book No. 39, page 71.

COMMONWEALTH ELECTION, 28th APRIL, 1951.

House.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Senate	2,438,621	2,524,054	4,962,675	2,352,640	2,411,275	4,763,915	96.47	95.53	95.99
House of Representatives (a)	2,391,984	2,475,729	4,867,713	2,306,543	2,364,872	4,671,415	96.43	95.52	95.97

(a) Contested electorates only.

There were 339,678 informal votes (7 per cent.) cast for the Senate election and 88,671 (2 per cent.) for the House of Representatives election.

The twentieth Parliament opened on 12th June, 1951.

The system of voting for the House of Representatives is preferential, and for the Senate, since the passing of the Commonwealth Electoral Act 1948, proportional representation. Previously it also had been preferential. The Commonwealth Electoral Act 1948, introduced with the Representation Act 1948 to enlarge the Commonwealth Parliament (see page 54), changed the system of scrutiny and counting of votes in Senate elections from preferential to that of proportional representation. For a description of the system, see Official Year Book No. 38, pp. 82-3.

For particulars of electors enrolled and of electors who voted at the various Commonwealth elections, see earlier Year Books, and for particulars of the 1953 Senate election see Appendix to this volume.

(iii) *Commonwealth Referenda.* (a) *General.* According to Section 128 of the Constitution, any proposed law for the alteration of the Constitution must, in addition to being passed by an absolute majority of each House of Parliament, be submitted to a referendum of the electors in each State, and must further be approved by a majority of the States and of the electors who voted, before it can be presented for Royal Assent. So far 23 proposals have been submitted to referenda and the consent of the electors has been received in four cases only, the first in relation to the election of Senators in 1906, the second and third in respect of State Debts—one in 1910 and the other in 1928—and the fourth in respect of Social Services in 1946. Details of the various referenda and the voting thereon were given in previous issues of the Official Year Book (see No. 18, p. 87, No. 31, p. 67, No. 35, p. 60, No. 36, p. 61, No. 37, pp. 64-5 and No. 38, p. 84).

(b) *Constitution Alteration (Powers to deal with Communists and Communism) Referendum, 22nd September, 1951.* Details of the voting in this referendum, which resulted in an overall majority and majorities in three States against the proposed amendment, were as follows:—

**CONSTITUTION ALTERATION (POWERS TO DEAL WITH COMMUNISTS AND COMMUNISM) REFERENDUM, 22nd SEPTEMBER, 1951.**

State.	Votes Recorded in Favour of Proposed Law.		Votes Recorded Against Proposed Law.		Number of Informal Ballot-papers.	Total.
	Number.	Percentage.	Number.	Percentage.		
New South Wales ..	865,838	47.2	969,868	52.8	25,441	1,861,147
Victoria ..	636,819	48.7	670,513	51.3	18,692	1,326,024
Queensland ..	373,156	55.8	290,019	44.2	6,741	675,916
South Australia ..	198,971	47.3	221,763	52.7	6,519	427,253
Western Australia ..	164,989	55.1	134,497	44.9	6,167	305,653
Tasmania ..	78,154	50.3	77,349	49.7	3,093	158,596
Total ..	2,317,927	49.4	2,370,009	50.6	66,653	4,754,589

2. *State Elections.*—(i) *Latest in each State.* (a) *Upper Houses.* The following table shows particulars of the voting at the most recent elections for the Upper Houses or Legislative Councils in the States of Victoria, South Australia and Western Australia. In New South Wales the electorate for the Legislative Council comprises the members of both Houses, in Queensland there has been no Legislative Council since 1922, and in Tasmania three members of the Council are elected annually (but four in each sixth year) and the Council cannot be dissolved as a whole.

**STATE UPPER HOUSE ELECTIONS.**

State.	Year of Latest Election.	Electors Enrolled—Whole State.			Contested Electorates.					
					Electors who Voted.			Percentage of Electors who Voted.		
		Males.	Fe-males.	Total.	Males.	Fe-males.	Total.	Males.	Fe-males.	Total.
Victoria (a) ..	1952	676,195	719,455	1,395,650	485,417	508,773	994,190	92.91	91.42	92.14
South Australia ..	1950	(b)	(b)	161,917	(b)	(b)	52,954	(b)	(b)	78.76
Western Australia	1950	60,156	25,013	85,169	22,237	7,458	29,695	50.30	44.08	48.57

(a) First election on the basis of adult suffrage.

(b) Not available.

Particulars of voting at the latest contested election for the Legislative Council in Tasmania in 1951 are as follows:—Number of electors on the roll, 5,851; number of votes recorded, 4,147; percentage of enrolled voters who voted, 70.87.

(b) *Lower Houses.* The following table shows particulars of the voting at the most recent election for the Lower House in each State.

STATE LOWER HOUSE ELECTIONS.

State.	Year of Latest Election.	Electors Enrolled— Whole State.			Contested Electorates.					
					Electors who Voted.			Percentage of Electors who Voted.		
		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
N.S. Wales	1950	939,150	980,329	1,919,479	811,027	829,286	1,640,313	93.71	91.60	92.63
Victoria ..	1950	656,800	706,051	1,362,851	596,357	625,377	1,221,734	95.28	93.58	94.40
Q'land ..	1950	a 365,301	a 353,381	718,685	323,088	313,662	636,750	92.35	92.68	92.51
S. Australia	1950	(b)	(b)	437,832	(b)	(b)	290,306	(b)	(b)	93.15
W. Aust. ...	1950	155,804	154,487	310,291	113,439	115,857	229,296	91.00	91.07	91.03
Tasmania	1950	80,228	81,422	161,650	76,517	76,268	152,785	95.37	93.67	94.51

(a) Approximate. (b) Not available.

For particulars of Lower House elections in 1952 and 1953 see Appendix to this volume, which also shows the dates of dissolutions and openings of Parliament which have occurred since those recorded in the following paragraphs.

(ii) *Elections in Earlier Years.* Official Year Book No. 38 and earlier issues contain particulars of the voting at elections for both Upper and Lower State Houses in years prior to those shown above, and some general information is given in the following paragraphs.

3. *The Parliament of New South Wales.*—The Parliament of New South Wales consists of two Chambers, the Legislative Assembly and the Legislative Council. By legislation assented to in July, 1949, the Assembly was enlarged from 90 to 94 members, elected in single-seat electoral districts, who hold their seats during the existence of the Parliament to which they are elected. The duration of Parliament is limited to three years and by legislation enacted in 1950 cannot be extended beyond that period except with the approval of electors by referendum. Until 1934 the Council was a nominee Chamber, consisting of a variable number of members appointed for life without remuneration, but as from 23rd April, 1934 it was reconstituted and became a House of 60 members to serve without remuneration for a term of twelve years, with one-quarter of the members retiring every third year. As from 1st September, 1948, however, members of the Council have been paid an allowance, now £500 a year. The electorate comprises members of both Chambers, who vote as a single electoral body at simultaneous sittings of both Chambers.

Any person who is an elector entitled to vote at a Legislative Assembly election, or a person entitled to become such elector, and who has been for at least three years resident in Australia, and who is a natural-born or naturalized subject of the Queen, is capable of being elected to the Legislative Council. For the Council franchise an elector must be, for the time being, a Member of the Legislative Council or a Member of the Legislative Assembly. Every person qualified to vote at a Legislative Assembly election for any electoral district in New South Wales is qualified to be elected as a Member for that or any other district. Every person not under twenty-one years of age, who is a natural-born or naturalized subject of the Queen, and who has lived in Australia for at least six months continuously, and in New South Wales for at least three months, and in any subdivision for at least one month immediately preceding the date of claim for enrolment, is entitled to enrolment as an elector for the Legislative Assembly. Persons are disqualified either as members or voters for reasons generally the same as those outlined on page 54.

Since the introduction of responsible government in New South Wales there have been 35 complete Parliaments, the first of which opened on 22nd May, 1856, and was dissolved on 19th December, 1857, while the thirty-fifth was dissolved on 22nd May, 1950. The thirty-sixth Parliament opened on 12th July, 1950.

The elections of 1920, 1922 and 1925 were contested on the principle of proportional representation, but a reversion to the system of single seats and preferential voting was made at the later appeals to the people. The principle of one elector one vote was adopted in 1894, and that of compulsory enrolment in 1921. Compulsory voting was introduced at the 1930 election. The franchise was extended to women (Women's Franchise Act) in 1902, and was exercised by them for the first time in 1904.

4. **The Parliament of Victoria.**—Both of the Victorian legislative Chambers are elective bodies, but there is a considerable difference in the number of members of each House, and there was also, until the Legislative Council Reform Act 1950, in the qualifications necessary for members and electors. The number of members in the Upper House is 34, and in the Lower House, 65. In the Legislative Council the tenure of the seat is for six years, except that one-half of the members who are elected for provinces at any general election for the Council are entitled to hold their seats for a period of only three years, one member for each of the seventeen provinces retiring every third year. Members of the Legislative Assembly are elected for the duration of Parliament, which is limited to three years.

Prior to the passing of the Act just referred to, which operated from November, 1951, there were property qualifications required for membership of, and franchise for, the Legislative Council. As alternatives to the property qualifications for the Council franchise, certain professional and academic qualifications were also allowed. As amended, however, the qualifications for membership of the Council are possessed by any adult natural-born subject of the Queen, or by any adult alien naturalized for five years and resident in Victoria for two years. Entitlement for enrolment as an elector is extended to every adult natural-born or naturalized subject who has resided in Australia for at least six months continuously and in Victoria for at least three months and in any subdivision for at least one month immediately preceding the date of claim for enrolment. These qualifications for membership and electors apply also in respect of the Legislative Assembly. Reasons for disqualification follow the general pattern for Australia (*see page 54*).

Since the introduction of responsible government in Victoria there have been 37 complete Parliaments, the first of which opened on 21st November, 1856, and closed on 9th August, 1859, while the thirty-seventh was dissolved on 13th April 1950. The thirty-eighth Parliament was opened on 20th June, 1950.

Single voting is observed in elections held for either House, plurality of voting having been abolished for the Legislative Assembly in 1899 and for the Legislative Council in 1937. A preferential system of voting (*see Official Year Book No. 6, p. 1182*) was adopted for the first time in Victoria at the election held in November, 1911. Compulsory voting was first observed at the 1927 elections for the Legislative Assembly, and at the 1937 elections for the Legislative Council. The franchise was extended to women by the Adult Suffrage Act 1908, while voting at elections was made compulsory for the Legislative Assembly in 1926 and for the Legislative Council in 1935.

5. **The Parliament of Queensland.**—As stated previously, the Legislative Council in Queensland was abolished in 1922, the date of Royal Assent to the Act being 23rd March, 1922. The Legislative Assembly is composed of 75 members, each elected for a period of three years and each representing an electoral district.

Any person qualified to be enrolled for any electoral district is qualified for election to the Legislative Assembly. Any person of the age of twenty-one years, who is a natural-born or naturalized British subject with continuous residence within Australia for six months, in Queensland for three months, and in an electoral district for one month prior to making a claim for enrolment, is qualified to enrol as an elector. The classes of persons not qualified to be elected are similar to those for other Australian Parliaments (*see page 54*).

Under the Electoral Districts Act of 1949 the number of members and the number of electorates were increased from 62 to 75, and the increase became effective from the beginning of the thirty-second Parliament, elected in 1950. The Act divided the State into four zones, and a commission of three appointed by the Governor-in-Council completely distributed the prescribed zones into the number of electoral districts, taking into account community or diversity of interest, means of communication, physical features, boundaries of Petty Sessions Districts and of areas of Local Authorities.

Since the establishment of responsible government in Queensland there have been 31 complete Parliaments, the last of which was dissolved on 27th March, 1950. Opinions differ regarding the opening date of the first Queensland Parliament. According to the Votes and Proceedings of the Legislative Assembly, the House met for the first time on 22nd May, 1860, when the members were sworn and the Speaker elected. The Governor, however, was unable to be present on that date, but he duly attended on 29th May, 1860, and delivered the Opening Address. The thirty-second Parliament was opened on 1st August, 1950.

At the elections held in May, 1915, the principle of compulsory voting was introduced for the first time in Australia. The election of 1907 was the first State election in Queensland at which women voted, the right being conferred under the Elections Acts Amendment Act 1905. In 1942 the system of preferential voting was abolished and that of election of the candidate obtaining the highest number of votes in the electorate now operates.

6. **The Parliament of South Australia.**—In this State there is a Legislative Council composed of twenty members and a House of Assembly with 39 members, both Chambers being elective. For the Legislative Council the State is divided into five districts each returning four members, two of whom retire alternately, the term of office being six years. Thirty-nine districts return one member each to the House of Assembly; prior to 1938 there were 46 members representing nineteen districts. The duration of the House of Assembly is three years.

Any person who is at least thirty years of age, is a British subject or legally made a denizen of the State and who has resided in the State for at least three years is qualified for membership in the Legislative Council. Qualifications for the Council franchise are that a person is at least twenty-one years of age, a British subject, an inhabitant of the State with residence for at least six months prior to the registration of the electoral claim, and that he or she has had certain war service, or possesses property qualifications relating to ownership, leaseholding, or inhabitant occupancy. Any person qualified and entitled to be registered as an elector for the House of Assembly is qualified and entitled for election as a member of that House. Qualifications for enrolment as an elector for the House of Assembly are that a person is at least twenty-one years of age, is a British subject, and has lived continuously in Australia for at least six months, in the State for three months and in an Assembly subdivision for one month immediately preceding the date of claim for enrolment. Provisions in the Constitution for disqualification from membership or from the franchise in respect of either House follow the usual pattern for Australia (see page 54).

Since the inauguration of responsible government in South Australia there have been 32 complete Parliaments, the first of which was opened on 22nd April, 1857. The thirty-second Parliament was opened on 26th June, 1947, and expired on 28th February, 1950. The thirty-third Parliament was opened on 28th June, 1950. The duration of the twenty-eighth Parliament was extended from three to five years by the provisions of the Constitution (Quinquennial Parliament) Act 1933, but this Act was repealed by the Constitution Act Amendment Act (No. 2) 1939, and the three-year term was reverted to.

South Australia was the first of the States to grant women's suffrage (under the Constitution Amendment Act 1894), the franchise being exercised by women for the first time at the Legislative Assembly election on 25th April, 1896. Compulsory voting for the House of Assembly, provided for by the Electoral Act Amendment Act 1942, was first observed at the 1944 election. A system of preferential voting is in operation.

7. **The Parliament of Western Australia.**—In this State both Chambers are elective. For the Legislative Council there are 30 members, each of the ten provinces returning three members, one of whom retires biennially. At each biennial election the member elected holds office for a term of six years, and automatically retires at the end of that period. The Legislative Assembly is composed of 50 members, one member being returned by each electoral district. Members of the Legislative Assembly are elected for three years.

Since the establishment of responsible government in Western Australia there have been nineteen complete Parliaments, the first of which was opened on 30th December, 1890. The nineteenth Parliament was opened on 31st July, 1947, and expired on 31st January, 1950. The twentieth Parliament was opened on 27th July, 1950. The preferential system of voting in use in Western Australia is described in Official Year Book No. 6, p. 1184.

Qualifications required for membership of the Legislative Council are the age of 30 years, residence in Western Australia for two years, being a natural-born British subject or naturalized for five years prior to election and resident in the State for that period, and freedom from legal incapacity. Qualifications required for Council franchise are the age of twenty-one years, residence in Western Australia for six months, being a natural-born British subject or naturalized for twelve months, freedom from legal incapacity, and certain property qualifications relating to freehold, leasehold, or householder occupancy. Qualifications required for membership of the Legislative Assembly are the age of twenty-one years, residence in Western Australia for twelve months, being a natural-born British subject or naturalized for five years and resident in the State for two years prior to election, and freedom from legal incapacity. Qualifications required for the franchise are the age of twenty-one years, residence in Western Australia for six months and in an electoral district continuously for three months, and being a natural-born or naturalized British subject. Persons may be disqualified as members or voters for reasons similar to those for other Australian Parliaments (*see* page 54).

Women's suffrage was granted by the Electoral Act of 1899. The first woman member to be elected to an Australian Parliament was returned at the 1921 election in this State. Voting for the Legislative Assembly was made compulsory in December, 1936, the first elections for which the provision was in force being those held on 18th March, 1939.

8. **The Parliament of Tasmania.**—In Tasmania there are two legislative Chambers—the Legislative Council and the House of Assembly, both bodies being elective. In accordance with the Constitution Act 1946, the Council now consists of nineteen members, elected for six years and returned from nineteen divisions. Three members retire annually (except in the 1953 elections and in each sixth successive year thereafter, when four retire) and the Council cannot be dissolved as a whole. Prior to the 1946 Act there were eighteen members elected from fifteen divisions, of which Hobart returned three members and Launceston two. There are five House of Assembly divisions, corresponding to the Commonwealth electoral divisions, each returning six members elected under a system of proportional representation which first came into force at the 1909 elections (*see* Official Year Book No. 6, p. 1185). The life of the Assembly was extended from three to five years by the Constitution Act 1936.

Persons qualified for election to the Legislative Council must be 25 years of age and qualified to vote as Council electors, have been resident in Tasmania for a period of five years at any one time or at least two years immediately preceding the election, and be natural-born subjects of the Queen or naturalized for at least five years. Electors for the Council must be twenty-one years of age, natural-born or naturalized subjects and resident in Tasmania for a period of twelve months, with certain freehold or occupancy, property qualifications or with certain academic, professional, defence force, or war service qualifications. For the House of Assembly members must be twenty-one years of age, have been resident in Tasmania for a period of five years at any one time or for a period of two years immediately preceding the election, and be natural-born subjects

of the Queen or naturalized for a period of five years. Electors must be twenty-one years of age, natural-born or naturalized subjects and resident in Tasmania for a period of six months continuously. Reasons for disqualification of members or voters are similar to those for other Australian Parliaments (see page 54).

The first Tasmanian Parliament opened on 2nd December, 1856, and closed on 8th May, 1861. There have been 29 complete Parliaments since the inauguration of responsible government. The thirtieth Parliament was opened on 7th June, 1950.

The suffrage was granted to women under the Constitution Amendment Act 1903 and compulsory voting for both Houses came into force on the passing of the Electoral Act in 1928. The system of voting is proportional representation by single transferable vote.

9. Superannuation Funds of the Parliaments of the Commonwealth and of the Australian States.—(i) *General*. In Official Year Book No. 38 there is a conspectus of Superannuation Funds of the Parliaments of the Commonwealth and of the five States (New South Wales, Victoria, Queensland, South Australia and Western Australia) in which such schemes operate (see pp. 91-9). This conspectus summarized the main features of each fund as at 30th June, 1949. Although the schemes are still essentially as described in the conspectus, there have subsequently been several amending Acts providing for extensions or increases in benefits, increased contributions, etc., in some of the schemes. The Commonwealth Retiring Allowances Act 1952 provided *inter alia* for additional benefit of £1,200 a year, subject to certain conditions, to a retired Prime Minister, and in case of his death, additional benefit of £750 a year to his widow.

(ii) *Finances*. For particulars of the financial operations of these schemes see Chapter XVI.—Private Finance of this volume.

### § 3. Administration and Legislation.

1. *The Commonwealth Parliaments*.—The first Parliament of the Commonwealth was convened by proclamation dated 29th April, 1901, by His Excellency the Marquis of Linlithgow, then Earl of Hopetoun, Governor-General. It was opened on 9th May, 1901, by H.R.H. the Duke of Cornwall and York, who had been sent to Australia for that purpose by His Majesty the King. The Rt. Hon. Sir Edmund Barton, G.C.M.G., K.C., was Prime Minister.

The following table shows the number and duration of Parliaments since Federation :—

#### COMMONWEALTH PARLIAMENTS.

Number of Parliament.	Date of Opening.	Date of Dissolution.
First .. .. .	9th May, 1901 .. .. .	23rd November, 1903
Second .. .. .	2nd March, 1904 .. .. .	5th November, 1906
Third .. .. .	20th February, 1907 .. .. .	19th February, 1910
Fourth .. .. .	1st July, 1910 .. .. .	23rd April, 1913
Fifth .. .. .	9th July, 1913 .. .. .	30th July, 1914(a)
Sixth .. .. .	8th October, 1914 .. .. .	26th March, 1917
Seventh .. .. .	14th June, 1917 .. .. .	3rd November, 1919
Eighth .. .. .	26th February, 1920 .. .. .	6th November, 1922
Ninth .. .. .	28th February, 1923 .. .. .	3rd October, 1925
Tenth .. .. .	13th January, 1926 .. .. .	9th October, 1928
Eleventh .. .. .	9th February, 1929 .. .. .	16th September, 1929
Twelfth .. .. .	20th November, 1929 .. .. .	27th November, 1931
Thirteenth .. .. .	17th February, 1932 .. .. .	7th August, 1934
Fourteenth .. .. .	23rd October, 1934 .. .. .	21st September, 1937
Fifteenth .. .. .	30th November, 1937 .. .. .	27th August, 1940
Sixteenth .. .. .	20th November, 1940 .. .. .	7th July, 1943
Seventeenth .. .. .	23rd September, 1943 .. .. .	16th August, 1946
Eighteenth .. .. .	6th November, 1946 .. .. .	31st October, 1949
Nineteenth .. .. .	22nd February, 1950 .. .. .	19th March, 1951(a)
Twentieth .. .. .	12th June, 1951 .. .. .	.. .. .

(a) A dissolution of both the Senate and the House of Representatives granted by the Governor-General, acting on the advice of the Ministry, and under Section 57 of the Constitution.

2. **Governors-General and Commonwealth Ministries.**—(i) *Governors-General.* The following statement shows the names of the Governors-General since the inception of the Commonwealth :—

GOVERNORS-GENERAL.

- Rt. Hon. JOHN ADRIAN LOUIS, EARL OF HOPETOUN (afterwards MARQUIS OF LINLITHGOW), K.T., G.C.M.G., G.C.V.O. From 1st January, 1901 to 9th January, 1903.
- Rt. Hon. HALLAM, BARON TENNYSON, G.C.M.G. From 17th July, 1902 to 9th January, 1903 (Acting).
- Rt. Hon. HALLAM, BARON TENNYSON, G.C.M.G. From 9th January, 1903 to 21st January, 1904.
- Rt. Hon. HENRY STAFFORD, BARON NORTHCOTE, G.C.M.G., G.C.I.E., C.B. From 21st January, 1904 to 9th September, 1908.
- Rt. Hon. WILLIAM HUMBLE, EARL OF DUDLEY, G.C.B., G.C.M.G., G.C.V.O. From 9th September, 1908 to 31st July, 1911.
- Rt. Hon. THOMAS, BARON DENMAN, G.C.M.G., K.C.V.O. From 31st July, 1911 to 18th May, 1914.
- Rt. Hon. SIR RONALD CRAUFORD MUNRO FERGUSON (afterwards VISCOUNT NOVAR OF RAITH), G.C.M.G. From 18th May, 1914 to 6th October, 1920.
- Rt. Hon. HENRY WILLIAM, BARON FORSTER OF LEPE, G.C.M.G. From 6th October, 1920 to 8th October, 1925.
- Rt. Hon. JOHN LAWRENCE, BARON STONEHAVEN, G.C.M.G., D.S.O. From 8th October, 1925 to 22nd January, 1931.
- Lieut.-Colonel the Rt. Hon. ARTHUR HERBERT TENNYSON, BARON SOMERS, K.C.M.G., D.S.O., M.C. From 3rd October, 1930 to 22nd January, 1931 (Acting).
- Rt. Hon. SIR ISAAC ALFRED ISAACS, G.C.B., G.C.M.G. From 22nd January, 1931 to 23rd January, 1936.
- General the Rt. Hon. ALEXANDER GORE ARKWRIGHT, BARON GOWRIE, V.C., G.C.M.G., C.B., D.S.O., K.G.St.J. From 23rd January, 1936 to 30th January, 1945.
- Major-General Sir WINSTON JOSEPH DUGAN, G.C.M.G., C.B., D.S.O. From 5th September, 1944 to 30th January, 1945 (Acting).
- His Royal Highness PRINCE HENRY WILLIAM FREDERICK ALBERT, DUKE OF GLOUCESTER, EARL OF ULSTER AND BARON CULLODEN, K.G., K.T., K.P., P.C., G.C.B., G.C.M.G., G.C.V.O., General in the Army, Air Chief Marshal in the Royal Air Force, One of His Majesty's Personal Aides-de-Camp. From 30th January, 1945 to 11th March, 1947.
- Major-General SIR WINSTON JOSEPH DUGAN, G.C.M.G., C.B., D.S.O. From 18th January, 1947 to 11th March, 1947 (Acting).
- Rt. Hon. SIR WILLIAM JOHN MCKELL, G.C.M.G. From 11th March, 1947 to 8th May, 1953.
- Field-Marshal SIR WILLIAM JOSEPH SLIM, G.C.B., G.C.M.G., G.B.E., D.S.O., M.C., K.St.J. From 8th May, 1953.

(ii) *Commonwealth Ministries.* (a) *Names and Tenure of Office, 1901 to 1951.* The following list shows the name of each Commonwealth Ministry to hold office since 1st January, 1901, and the limits of its term of office.

COMMONWEALTH MINISTRIES.

- (i) BARTON MINISTRY, 1st January, 1901 to 24th September, 1903.
- (ii) DEAKIN MINISTRY, 24th September, 1903 to 27th April, 1904.
- (iii) WATSON MINISTRY, 27th April, 1904 to 17th August, 1904.
- (iv) REID-MCLEAN MINISTRY, 18th August, 1904 to 5th July, 1905.
- (v) DEAKIN MINISTRY, 5th July, 1905 to 13th November, 1908.
- (vi) FISHER MINISTRY, 13th November, 1908 to 1st June, 1909.
- (vii) DEAKIN MINISTRY, 2nd June, 1909 to 29th April, 1910.
- (viii) FISHER MINISTRY, 29th April, 1910 to 24th June, 1913.
- (ix) COOK MINISTRY, 24th June, 1913 to 17th September, 1914.
- (x) FISHER MINISTRY, 17th September, 1914 to 27th October, 1915.
- (xi) HUGHES MINISTRY, 27th October, 1915 to 14th November, 1916.
- (xii) HUGHES MINISTRY, 14th November, 1916 to 17th February, 1917.
- (xiii) HUGHES MINISTRY, 17th February, 1917 to 10th January, 1918.
- (xiv) HUGHES MINISTRY, 10th January, 1918 to 9th February, 1923.
- (xv) BRUCE-PAGE MINISTRY, 9th February, 1923 to 22nd October, 1929.
- (xvi) SCULLIN MINISTRY, 22nd October, 1929 to 6th January, 1932.
- (xvii) LYONS MINISTRY, 6th January, 1932 to 7th November, 1938.
- (xviii) LYONS MINISTRY, 7th November, 1938 to 7th April, 1939.
- (xix) PAGE MINISTRY, 7th April, 1939 to 26th April, 1939.
- (xx) MENZIES MINISTRY, 26th April, 1939 to 14th March, 1940.
- (xxi) MENZIES MINISTRY, 14th March, 1940 to 28th October, 1940.
- (xxii) MENZIES MINISTRY, 28th October, 1940 to 29th August, 1941.
- (xxiii) FADDEN MINISTRY, 29th August, 1941 to 7th October, 1941.
- (xxiv) CURTIN MINISTRY, 7th October, 1941 to 21st September, 1943.
- (xxv) CURTIN MINISTRY, 21st September, 1943 to 6th July, 1945.
- (xxvi) FORDE MINISTRY, 6th July, 1945 to 13th July, 1945.



COMMONWEALTH MINISTRIES—*continued.*

- (xxvii) CHIFLEY MINISTRY, 13th July, 1945 to 1st November, 1946.  
 (xxviii) CHIFLEY MINISTRY, 1st November, 1946 to 19th December, 1949.  
 (xxix) MENZIES MINISTRY, 19th December, 1949 to 11th May, 1951.  
 (xxx) MENZIES MINISTRY, 11th May, 1951.

(b) *Names of Successive Holders of Office, 9th February, 1923 to 31st December, 1952.*  
 In earlier issues of the Official Year Book (see No. 21, 1928 and previous issues) there appeared the names of each Ministry up to the Bruce-Page Ministry (9th February, 1923 to 22nd October, 1929), together with the names of the successive holders of portfolios therein, and issue No. 39 contains a list, commencing with the Bruce-Page Ministry, which covers the period between the date on which it assumed power, 9th February, 1923, and 31st July, 1951, showing the names of all persons who have held office in each Ministry during that period.

This issue shows only particulars of the latest Menzies Ministry, but includes any changes therein during its term of office up to December, 1952. For any subsequent changes see Appendix to this volume.

## MENZIES MINISTRY—from 11th May, 1951 (as at 31st December, 1952).

(The State from which each Minister was elected to Parliament is added in parenthesis).

<i>Departments.</i>	<i>Ministers.</i>
Prime Minister . . . . .	Rt. Hon. ROBERT GORDON MENZIES, C.H., Q.C. (Vic.).
Treasurer . . . . .	Rt. Hon. SIR ARTHUR WILLIAM FADDEN, K.C.M.G.* (Qld.).
Vice-President of the Executive Council and Minister for Defence Production	Rt. Hon. ERIC JOHN HARRISON† (N.S.W.).
Minister for Labour and National Service and Minister for Immigration	Hon. HAROLD EDWARD HOLT (Vic.).
Minister for Commerce and Agriculture	Hon. JOHN McEWEN (Vic.).
Minister for External Affairs . . . . .	Rt. Hon. RICHARD GARDINER CASEY, C.H., D.S.O., M.C. (Vic.).
Minister for Defence . . . . .	Hon. PHILIP ALBERT MARTIN MCBRIDE.‡ (S.A.).
Minister for the Navy and Minister for Air	Hon. PHILIP ALBERT MARTIN MCBRIDE (to 17.7.51)‡ (S.A.). Hon. WILLIAM McMAHON (from 17.7.51) (N.S.W.)
Minister for Health . . . . .	Rt. Hon. SIR EARLE CHRISTMAS GRAFTON PAGE, G.C.M.G., C.H. (N.S.W.).
Minister for Trade and Customs . . . . .	Senator the Hon. NEIL O'SULLIVAN (Qld.).
Minister for Shipping and Transport	Senator the Hon. GEORGE McLEAY (S.A.).
Postmaster-General and Minister for Civil Aviation	Hon. HUBERT LAWRENCE ANTHONY (N.S.W.).
Minister for the Army . . . . .	Hon. JOSIAH FRANCIS (Qld.).
Attorney-General . . . . .	Senator the Hon. JOHN ARMSTRONG SPICER, Q.C. (Vic.).
Minister for National Development	Senator the Hon. WILLIAM HENRY SPOONER, M.M. (N.S.W.).
Minister for Repatriation . . . . .	Senator the Hon. WALTER JACKSON COOPER, M.B.E. (Qld.).
Minister for Supply . . . . .	Hon. HOWARD BEALE, Q.C. (N.S.W.).
Minister for the Interior and Minister for Works(a)	Hon. WILFRED SELWYN KENT HUGHES, M.V.O., O.B.E., M.C., E.D. (Vic.).
Minister for Social Services . . . . .	Hon. ATHOL GORDON TOWNLEY (Tas.).
Minister for Territories . . . . .	Hon. PAUL MEERNA CAEDWALLA HASLUCK (W.A.).

\* K.C.M.G., June, 1951. † P.C., June, 1952. ‡ K.C.M.G., January, 1953.

(a) Name changed from Department of Works and Housing, 4th June, 1952.

(iii) *Commonwealth Ministers of State.* In Official Year Book No. 38 a statement was included showing the names of the Ministers of State who had administered the several Departments during the period 1st April, 1925 to 31st December, 1949 (pp. 74-79). This was in continuation of a similar statement covering the period from the inauguration of Commonwealth Government to 1925 which appeared in Official Year Book No. 18.

3. **Governors and State Ministers.**—The names of the Governors and members of the Ministries in each State in December, 1952, are shown in the following statement. (Changes since December, 1952 are shown in the Appendix to this volume.)

#### NEW SOUTH WALES.

*Governor*—LIEUT.-GENERAL SIR JOHN NORTHCOTT, K.C.M.G., C.B., M.V.O.  
*Ministry (from 2nd April, 1952).*

<i>Premier, Colonial Treasurer and Minister for Local Government—</i> THE HON. J. J. CAHILL.	<i>Minister for Agriculture—</i> THE HON. E. H. GRAHAM.
<i>Deputy Premier and Minister for Education—</i> THE HON. R. J. HEFFRON.	<i>Minister without Portfolio—</i> THE HON. G. WEIR.
<i>Minister for Housing, Minister for Co-operative Societies and Assistant Treasurer—</i> THE HON. CLIVE R. EVATT, Q.C.	<i>Minister for Labour and Industry and Minister for Social Welfare—</i> THE HON. F. J. FINNAN.
<i>Attorney-General—</i> THE HON. C. E. MARTIN, Q.C.	<i>Minister for Transport—</i> THE HON. W. F. SHEAHAN.
<i>Minister of Justice and Vice-President of the Executive Council—</i> THE HON. R. R. DOWNING, M.L.C.	<i>Secretary for Mines and Minister for Immigration—</i> THE HON. J. G. ARTHUR.
<i>Chief Secretary—</i> THE HON. C. A. KELLY.	<i>Secretary for Lands—</i> THE HON. F. H. HAWKINS.
<i>Minister for Health—</i> THE HON. M. O'SULLIVAN.	<i>Secretary for Public Works and Assistant Minister for Local Government—</i> THE HON. J. B. RENSHAW.
	<i>Minister for Conservation—</i> THE HON. A. G. ENTICKNAP.

#### VICTORIA.

*Governor*—GENERAL SIR REGINALD ALEXANDER DALLAS BROOKS, K.C.B., K.C.M.G., C.M.G., D.S.O., K.St.J.

*Ministry (from 17th December, 1952).*

<i>Premier and Treasurer—</i> THE HON. J. CAIN.	<i>Minister of Labour and Minister of Mines—</i> THE HON. A. McD. FRASER, M.L.C.
<i>Chief Secretary—</i> THE HON. L. W. GALVIN.	<i>Minister for Education—</i> THE HON. A. E. SHEPHERD.
<i>Minister of Transport and a Vice-President of the Board of Land and Works—</i> THE HON. P. L. COLEMAN, M.L.C.	<i>Commissioner of Crown Lands and Survey, Minister of Soldier Settlement, Minister for Conservation and President of the Board of Land and Works—</i> THE HON. R. W. HOLT.
<i>Attorney-General, Minister-in-charge of Prices and Minister-in-charge of Immigration—</i> THE HON. W. SLATER, M.L.C.	<i>Commissioner of Public Works and a Vice-President of the Board of Land and Works—</i> THE HON. S. MERRIFIELD.
<i>Minister of Health—</i> THE HON. W. P. BARRY.	<i>Minister-in-charge of Electrical Undertakings and Minister of Forests—</i> THE HON. J. W. GALBALLY, M.L.C.
<i>Minister of Agriculture, Minister of State Development and Decentralization, Minister of Water Supply and a Vice-President of the Board of Land and Works—</i> THE HON. C. P. STONEHAM.	<i>Ministers without Portfolio—</i> THE HON. J. H. SMITH. THE HON. F. R. SCULLY.
<i>Minister-in-charge of Housing and Minister-in-charge of Materials—</i> THE HON. T. HAYES.	

GOVERNORS AND STATE MINISTERS—*continued.*

QUEENSLAND.

Governor—LIEUT.-GENERAL SIR JOHN DUDLEY LAVARACK, K.B.E., C.B., C.M.G., D.S.O.

*Ministry (from 17th January, 1952).*

<i>Premier and Chief Secretary; and Vice-President of the Executive Council—</i> THE HON. V. C. GAIR.	<i>Secretary for Public Instruction—</i> THE HON. G. H. DEVRIES.
<i>Minister for Transport—</i> THE HON. J. E. DUGGAN.	<i>Secretary for Health and Home Affairs—</i> THE HON. W. M. MOORE.
<i>Secretary for Public Lands and Irrigation—</i> THE HON. T. A. FOLEY.	<i>Secretary for Public Works and Housing—</i> THE HON. P. J. R. HILTON.
<i>Secretary for Agriculture and Stock—</i> THE HON. H. H. COLLINS.	<i>Treasurer—</i> THE HON. E. J. WALSH.
<i>Secretary for Labour and Industry—</i> THE HON. A. JONES.	<i>Secretary for Mines and Immigration—</i> THE HON. E. J. RIORDAN.
<i>Attorney-General—</i> THE HON. W. POWER.	

SOUTH AUSTRALIA.

Lieut.-Governor—THE HON. SIR JOHN MELLIS NAPIER, K.C.M.G., Chief Justice.

*Ministry (from 15th May, 1944).*

<i>Premier, Treasurer, Minister of Immigration and Minister of Industry and Employment—</i> THE HON. T. PLAYFORD.	<i>Minister of Lands, Minister of Repatriation, and Minister of Irrigation—</i> THE HON. C. S. HINCKS.
<i>Chief Secretary, Minister of Health, and Minister of Mines—</i> THE HON. A. L. McEWIN, M.L.C.	<i>Minister of Works, Minister of Railways, Minister of Marine, and Minister of Local Government—</i> THE HON. M. McINTOSH.
<i>Attorney-General and Minister of Education—</i> THE HON. R. J. RUDALL, M.L.C.	<i>Minister of Agriculture and Minister of Forests—</i> THE HON. SIR GEORGE F. JENKINS, K.B.E.

WESTERN AUSTRALIA.

Governor—LIEUT.-GENERAL SIR CHARLES GAIRDNER, K.C.M.G., C.B., C.B.E.

*Ministry (from 1st April, 1947).*

<i>Premier, Treasurer and Minister for the North-West—</i> THE HON. SIR DUNCAN R. McLARTY, K.B.E., M.M.	<i>Chief Secretary and Minister for Local Government and Native Affairs—</i> THE HON. V. DONEY.
<i>Minister for Education, Child Welfare and Industrial Development—</i> THE HON. A. F. WATTS, C.M.G.	<i>Minister for Health and Supply and Shipping—</i> THE HON. DAME ANNIE F. G. CARDELL-OLIVER, D.B.E.
<i>Minister for Works and Water Supply—</i> THE HON. D. BRAND.	<i>Minister for Transport, Railways and Mines—</i> THE HON. C. H. SIMPSON, M.L.C.
<i>Minister for Lands, Labour and Immigration—</i> THE HON. L. THORN.	<i>Minister for Housing and Forests—</i> THE HON. G. P. WILD, M.B.E.
<i>Attorney-General and Minister for Police and Fisheries—</i> THE HON. A. V. R. ABBOTT.	<i>Minister for Agriculture—</i> THE HON. SIR CHARLES G. LATHAM M.L.C.

GOVERNORS AND STATE MINISTERS—*continued.*

## TASMANIA.

*Governor*—THE RT. HON. SIR RONALD HIBBERT CROSS, BT.

*Ministry (from 25th February, 1948).*

<i>Premier, Minister for Education and Minister administering Hydro-electric Commission Act—</i>	<i>Chief Secretary—</i>
THE HON. R. COSGROVE.	THE HON. A. J. WHITE.
<i>Attorney-General—</i>	<i>Honorary Ministers—</i>
THE HON. R. F. FAGAN.	THE HON. C. H. HAND
<i>Treasurer and Minister for Transport—</i>	(Minister for Forests and Minister controlling the Tourist and Immi- gration Department).
THE HON. J. L. MADDEN.	THE HON. C. A. BRAMICH
<i>Minister for Agriculture—</i>	(Minister for Housing).
THE HON. J. J. DWYER, V.C.	THE HON. R. J. D. TURNBULL
<i>Minister for Lands and Works and Minister for Mines—</i>	(Minister for Health).
THE HON. E. E. REECE.	

4. *The Course of Legislation.*—The actual legislation by the Commonwealth Parliament up to the end of 1950 is indicated in alphabetical order in Vol. XLVIII. "The Acts of the Parliament of the Commonwealth of Australia passed during the year 1950, in portion of the First Sesson of the Nineteenth Parliament of the Commonwealth, with Tables and Index."

A "Chronological Table of Acts passed from 1901 to 1950, showing how they are affected by subsequent legislation or lapse of time" is also given, and, further, "A Table of Commonwealth Legislation passed from 1901 to 1950 in relation to the several provisions of the Constitution", is furnished. Reference should be made to these for complete information.

5. *Legislation during 1951.*—The following paragraphs present a selection from the legislative enactments of the Commonwealth and State Parliaments during the year 1951. The acts included have been selected as the more important new measures and amending measures enacted during the year. The selection is somewhat arbitrary, however, because of the task of determining, in view of the limitations on space that might reasonably be allotted, the relative importance of the 495 acts passed during the period. Certain principles regulating the choice of acts have nevertheless been generally observed. Ordinary appropriation and loan acts are excluded, as are also acts relating to less important changes in existing forms of taxation, in superannuation and pension schemes, and in workers' compensation. Acts providing for minor amendments to existing statutes and continuance acts are similarly excluded.

The total enactments of the Commonwealth and State Parliaments for a number of years at fairly even intervals since 1901 show a steady increase during this century. About 270 acts were passed in 1901, 320 in 1914, 410 in 1927, 430 in 1939, and 495 in 1951. The acts of the Commonwealth Parliament during these years numbered 17, 36, 38, 87 and 82 respectively.

*Commonwealth.—Coal Industry.* An amending Act; the principal amendments invest the Coal Industry Tribunal with power to determine industrial disputes.

*Commonwealth Bank.* Repeals the Banking Act 1947 and re-establishes the Commonwealth Bank Board.

*Conciliation and Arbitration.* Effects extensive amendments to the Conciliation and Arbitration Act; confers on the Commonwealth Court of Conciliation and Arbitration power to punish contempts and to order secret ballots in elections of officers of registered organizations.

*Cotton Bounty.* Provides for the payment of bounty on the production of seed cotton. If the average price of seed cotton is less than 9½d. per lb. the bounty payable is the difference between this price and 9½d.

*Defence Preparations.* Empowers the Governor-General to make regulations for the purposes of defence preparations including the maintenance and sustenance of the people of Australia in time of war.

*Hospital Benefits.* Repeals the Hospital Benefits Act 1945-1948 and confers power on the Commonwealth to enter into agreements with the States for the provision of hospital benefits.

*Income Tax and Social Services Contribution Assessment.* Extensively amends the Income Tax and Social Services Contribution Assessment Act 1939-1950. The principal amendments relate to the taxation of private companies, the income derived from mining operations and the averaging system of income as applied to taxpayers who are primary producers.

*National Debt Sinking Fund (Special Payment).* Empowers the Treasurer to pay into the National Debt Sinking Fund out of the Consolidated Revenue Fund sums not exceeding £114,500,000. This amount is the estimated budget surplus for the year 1951-1952.

*National Service.* Provides for national service in the Defence Force of persons between the ages of 18 and 26. Service is to be rendered with the Citizen Naval Forces, the Citizen Military Forces or the Citizen Air Force.

*Public Accounts Committee.* Provides for the appointment in Parliament of a Joint Committee of Public Accounts of ten members to examine and report upon the accounts of receipts and expenditure of the Commonwealth.

*Re-establishment and Employment.* Inserts provisions in the Re-establishment and Employment Act which extend the benefits under that Act to members of the Defence Force serving in Korea and Malaya.

*States Grants (Special Financial Assistance).* Acts granting and applying sums for special financial assistance to the States.

*Wheat Bounty.* Provides for the payment of a bounty on the production of wheat delivered to the Australian Wheat Board for the two years commencing on 1st December, 1951.

*Wool Sales Deduction Legislation Repeal.* Repeals the Wool Sales Deduction (Administration) Act 1950, the Wool Sales Deduction Act (No. 1) 1950 and the Wool Sales Deduction Act (No. 2) 1950 which provided for the payment to the Commonwealth of a proportion of the value of wool sold by producers of that commodity.

*New South Wales.—Blowering Dam.* Authorizes the construction of a dam across the Tumut River at Blowering.

*Great Northern Railway Deviation (Singleton to Nundah).* Authorizes the construction of a railway deviation from Singleton to Nundah.

*Industrial Arbitration (Amendment).* Provides *inter alia* for the insertion in any State award or industrial agreement of provisions entitling employees to up to three months long service leave on full pay. Also provides, in certain cases, for secret ballots in trade union elections.

*Landlord and Tenant (Amendment).* Authorizes an increase in the determination of "fair rent" to the extent of increased outgoings for rates and insurance premiums, and the annual cost of repairs, maintenance and renewals.

*Local Government (Amendment).* Sets out a revised town and country planning scheme for the County of Cumberland (Sydney and surrounding areas), confers additional powers on Cumberland County Council and prescribes a new procedure for the acquisition of land by councils.

*Sydney Harbour Transport.* Constitutes the Sydney Harbour Transport Board to purchase certain existing ferry services on Sydney Harbour from a private company and to continue and extend these services.

*Thirlemere to Burragorang Railway.* Authorizes the construction of a railway from Thirlemere to Burragorang.

*Wheat Industry Stabilization.* Incorporates proposals submitted by the Commonwealth to amend the agreement. Authorizes a differential price for wheat sold for stock feed.

*Workers' Compensation (Amendment).* Brings additional classes of employees under its provisions and provides for increases in the amounts of compensation payable.

*Victoria.—Benefit Associations.* Provides for the registration and control of associations established to provide to contributors and their families hospital, medical or funeral benefits, in cases where such associations are not within the operation of the Friendly Societies Acts, the Trade Unions Act 1928, the Commonwealth Life Insurance Act 1945–1950 or Conciliation and Arbitration Act 1904–1950.

*Health (Radiological Examinations).* Gives to the Chief Health Officer power to require persons to submit to radiological examination for pulmonary tuberculosis.

*Land (Development Leases).* Permits the granting to the Australian Mutual Provident Society of development leases covering a large area in the Mallee-Wimmera district, to be developed and subdivided by the Society, for allocation to settlers. The area comprises about 571,000 acres.

*Land Tax.* Prescribes the rate of Land Tax for 1952, double the rate previously in force.

*Latrobe Valley Drainage.* Establishes the Latrobe Valley Drainage Board to supervise the treatment and disposal of industrial and domestic waste in the Latrobe Valley and to prevent pollution of the Latrobe River.

*Police Regulation (Furlough).* Provides for long service leave on full pay for members of the police force.

*Railways (Furlough).* Provides for long service leave on full pay for employees of the Victorian Railways Commissioners, Railway Construction Branch of the Board of Land and Works, and the State Coal Mine.

*Soldier Settlement.* Increases the amount of loan money that may be made available for Soldier Settlement.

*Transport.* Establishes a Ministry of Transport to provide for better co-ordination of transport in Victoria.

*Wheat Industry Stabilization (Amendment).* Incorporates proposals submitted by Commonwealth Government for uniform legislation to amend the agreement.

*Queensland.—Coal Mining Industry Long Service Leave.* Constitutes a Coal Mining Industry Long Service Leave Trust Fund and provides for payment therefrom to employers in the Coal Mining Industry of amounts paid by them to employees in respect of long service leave accrued under certain awards.

*Co-ordination of Rural Advances and Agricultural Bank Acts Amendment.* Increases maximum general advance to farmers and others from £5,000 to £7,500. Liberalizes the basis of valuation for the purpose of advances.

*Inspection of Machinery.* Sets out a code of law relating to the inspection of machinery which is potentially dangerous.

*Land Acts Amendment.* Provides for the re-assessment of land rentals every seven years instead of every fifteen years.

*Law Reform (Abolition of the Rule of Common Employment).* Abolishes the ancient common law rule of Common Employment.

*Slaughtering.* Consolidates and amends existing legislation in an endeavour to modernize the laws with respect to the regulation of the slaughtering of stock for human consumption.

*Soil Conservation.* Establishes an advisory committee to deal with the problem of soil erosion of rural lands; provides for the conduct of experiments and demonstrations pertaining to soil conservation and erosion mitigation.

*Survey Co-ordination.* Provides for the establishment of a Central Plan Office in the Survey Office, Lands Department, for the recording of plans and surveys made by governmental and public authorities, the avoidance of duplication of surveys, and the establishment and maintenance of permanent marks for the co-ordination of surveys.

*Weights and Measures.* Amends the principal Act to provide for new trading methods<sup>s</sup> such as petrol bowzers, petrol wagons and bulk milk wagons, and the packing before sale of many articles such as bottled milk and fruit juices.

*Wheat Industry Stabilization.* Incorporates proposals submitted by the Commonwealth for uniform legislation to amend the agreement. Provides for differential prices for wheat sold for stock feed.

*Workers' Compensation.* Defines a "worker" as a person earning up to £1,250 per annum. Extends eligibility for compensation to those who are injured while in attendance at, or going to or from, "pick-up places" and employment exchanges.

**South Australia.**—*Building Materials Act Amendment.* Extends operation of the Act and enlarges circumstances under which dwelling houses may be erected without permit.

*Health Act Amendment.* Provides for examination of individuals suspected of being infected with tuberculosis, for compulsory mass X-ray examinations, and for compulsory detention and treatment in an institution, of sufferers from tuberculosis. Also provides for regulations dealing with the production and use of dangerous substances.

*Landlord and Tenant (Control of Rents) Act Amendment.* Provides for rents to be fixed at the general level prevailing in 1939 plus 22½ per cent., together with an allowance for increased costs of maintenance and repairs, rates, taxes, insurance and other costs. The Act also deals with control of evictions, "protected persons" and other matters.

*Local Government Act Amendment.* *Inter alia*, enables councils rating under annual values to adopt waterworks assessment, and grants a general increase in rating powers.

*Public Service Act Amendment.* Provides for temporary employment of persons over the age of retirement and amends the procedure for hearing appeals against appointments.

*Road Traffic Act Amendment.* Deals with rules of the road and safety, such as the use of dipping devices for lights, penalties for driving under the influence of intoxicating liquors, compulsory insurance, right of way of vehicles in cross-overs or double roads, traffic lanes, unsafe vehicles, &c.

**Western Australia.**—*Collie-Cardiff Railway.* Authorizes the construction of a railway from Collie to Cardiff.

*Hospital Benefits Agreement.* Amends the Hospital Benefits Agreement Act 1945 to enable a new agreement to be made with the Commonwealth.

*Law Reform (Common Employment).* Abolishes the Common Law doctrine of Common Employment.

*Library Board of Western Australia.* Sets up the Library Board of Western Australia to supervise the provision of free libraries and the allocation of money made available to assist free library services.

*Muja-Centaur Coal Mine Railway.* Authorizes construction of a railway from Muja to the Centaur Coal Mine.

*Rents and Tenancies Emergency Provisions.* Provides *inter alia* for increases in maximum rents and recovery of possession of premises under specified conditions.

*War Service Land Settlement Agreement.* Ratifies the agreement made with the Commonwealth in accordance with the Commonwealth Re-establishment and Employment Act 1945.

**Tasmania.**—*Highways.* Amends the law relating to the creation of, and the taking over of land for, highways.

*Mineral Resources.* Provides for the investigation and exploration of the mineral resources of the State.

*Municipal Employees Long-Service Leave.* Provides for long-service leave amounting to 90 days after 15 years, or 180 days after 25 years, continuous service, to be granted to employees of municipal councils.

*Noxious Insects.* Makes provision for the eradication, and for prevention of the introduction and spread, of noxious insects.

*Physiotherapists' Registration.* Provides for the constitution of a Physiotherapists' Registration Board and the registration of physiotherapists.

*Plumbers' Registration.* Provides for the constitution of a Plumbers' Registration Board and the registration of plumbers.

*Road Construction (Transfer of Functions).* Transfers certain functions with respect to the construction and maintenance of roads, control of certain plant and incidental matters from the Transport Commission to the Minister for Lands and Works.

*Sexual Offences.* Provides for the protection of women and children against sexual offences and for the treatment of sexual offenders.

*Towns.* Amends the Towns Act 1934 and Public Health Act 1935, to improve provision for the construction of streets in towns.

*Wages Boards.* Empowers Wages Boards to determine the cases in which, and the conditions under which, long service leave of absence on full pay shall be granted to employees engaged in the trade in respect of which the board is established.

*West Derwent Water.* Provides for the augmentation of the water supply for the City of Hobart and the Municipalities of Glenorchy, Kingborough and New Norfolk.

*Wheat Industry Stabilization.* Amends the principal Act to incorporate proposals submitted by the Commonwealth for uniform legislation to amend the agreement. Provides for differential prices for wheat sold for stock feed.

#### § 4. Commonwealth Government Departments.

Official Year Book No. 37 contains, on pp. 76–86, a list of the Commonwealth Government Departments as at 31st March, 1947, showing details of the matters dealt with by each Department, and the Acts administered by the Minister of each Department, and Year Book No. 39 contains, on pp. 100–1, a description of major changes in Departmental structure since that date.

#### § 5. Cost of Parliamentary Government.

The tables in this section are intended to represent the expenditure incurred in the operation of the Parliamentary system in Australia, comprising the Governor-General and Governors, the Ministries, the Upper and Lower Houses of Parliament, and electoral activities; they do not attempt to cover the expenditure on Commonwealth and State administration generally.

Comparison between individual items should be made with caution because of differences in accounting and presentation.

The following statement shows this expenditure for the Commonwealth and for each State, as well as the cost per head of population, for the year ended 30th June, 1951. In order to avoid incorrect conclusions as to the cost of the Governor-General's or Governor's establishment, it may be pointed out that a very large part of the expenditure (with the exception of the item "Governor's salary") under the head of Governor-General or Governor represents official services entirely outside the Governor's personal interest, and carried out at the request of the Government.



COST OF PARLIAMENTARY GOVERNMENT, 1950-51.

(£.)

Particulars.	C'wth.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
<b>1. Governor-General or Governor(a)—</b>								
Governor's salary .. ..	10,000	5,000	6,000	3,704	5,000	4,000	4,104	37,808
Other salaries .. ..	4,801	14,269	4,177	6,337	3,267	1,731	3,809	38,391
Other expenses, including maintenance of house and grounds .. ..	641,015	11,788	53,008	15,061	5,265	6,436	10,844	143,417
<b>Total .. ..</b>	<b>55,816</b>	<b>31,057</b>	<b>63,185</b>	<b>25,102</b>	<b>13,532</b>	<b>12,167</b>	<b>18,757</b>	<b>219,616</b>
<b>2. Ministry—</b>								
Salaries of Ministers .. ..	29,150	37,825	25,476	27,567	10,750	11,970	15,450	158,188
Travelling expenses .. ..	6,412	(e)	(c)	(c)	(c)	10,977	2,737	20,126
Other .. ..	235	1,654	(c)	(c)	(c)	149	6,791	8,229
<b>Total .. ..</b>	<b>35,797</b>	<b>39,479</b>	<b>25,476</b>	<b>27,567</b>	<b>10,750</b>	<b>23,096</b>	<b>24,978</b>	<b>187,143</b>
<b>5. Parliament—</b>								
<b>A. Upper House :</b>								
President and Chairman of Committees .. ..								
.. ..	2,500	2,700	(d)3,264	..	1,350	2,858	(e) 925	13,597
Allowance to members .. ..	89,978	16,665	29,569	..	15,925	31,508	17,550	201,195
Railway passes(f) .. ..	10,500	13,685	(g)	..	1,445	4,783	1,396	31,809
Other travelling expenses .. ..	(h)3,246	..	..	..	..	..	..	3,246
Postage for members .. ..	5,370	(g)	759	..	93	592	..	6,814
<b>B. Lower House :</b>								
Speaker and Chairman of Committees .. ..								
.. ..	2,500	3,742	(i)3,898	3,527	2,450	2,842	650	19,609
Allowance to members .. ..	184,425	113,465	65,354	76,388	30,911	54,519	20,872	545,934
Railway passes(f) .. ..	22,230	24,406	(j)9,000	13,046	2,817	7,623	2,204	81,326
Other travelling expenses .. ..	(h)5,992	1,094	..	5,476	..	..	..	12,562
Postage for members .. ..	10,649	(j)3,925	2,538	3,109	550	952	..	21,723
<b>C. Both Houses :</b>								
Government contribution to Members' Superannuation Fund .. ..								
.. ..	11,164	301	1,397	7,298	6,190	..	..	26,310
Printing—								
<i>Hansard</i> .. ..	34,588	8,601	9,416	7,976	4,830	6,485	..	71,896
Other .. ..	24,681	13,104	6,339	4,289	12,203	3,195	7,548	71,359
Reporting Staff—								
Salaries .. ..	28,675	14,688	11,050	5,246	11,966	12,050	..	83,675
Contingencies .. ..	1,078	200	259	..	532	719	..	2,788
Library—								
Salaries .. ..	22,120	7,942	4,913	3,633	2,189	100	..	40,897
Contingencies .. ..	10,712	2,568	1,100	1,752	980	320	..	17,432
Salaries of other officers .. ..	176,147	61,738	24,913	12,628	17,032	19,210	10,956	322,624
Other .. ..	£ 94,780	2,111	2,700	6,687	9,529	4,562	734	121,103
<b>D. Miscellaneous :</b>								
Fuel, light, heat, power, and water .. ..								
.. ..	1,775	1,657	2,609	1,317	3,460	147	..	10,743
Posts, telegraphs, telephones .. ..	15,743	5,755	..	2,317	1,446	502	..	5,433
Furniture, stores, and stationery .. ..	33,574	5,495	..	1,452	12,015	860	..	1,303
Other .. ..	118,329	7,881	1,229	7,158	3,041	1,391	2,180	206,178
<b>Total .. ..</b>	<b>975,725</b>	<b>311,723</b>	<b>185,740</b>	<b>163,299</b>	<b>140,954</b>	<b>155,218</b>	<b>66,318</b>	<b>1,998,977</b>
<b>4. Electoral—</b>								
Salaries .. ..	244,500	5,388	2,265	7,310	9,530	10,859	(m)	279,852
Cost of elections, contingencies, etc. .. ..	310,060	38,211	26,418	19,291	6,588	9,695	4,206	414,460
<b>Total .. ..</b>	<b>554,560</b>	<b>43,599</b>	<b>28,683</b>	<b>26,601</b>	<b>16,118</b>	<b>20,554</b>	<b>4,206</b>	<b>694,321</b>
<b>5. Royal Commissions, Select Committees, etc. .. ..</b>								
.. ..	3,100	4,956	333	4,372	404	1,898	2,949	18,012
<b>GRAND TOTAL .. ..</b>	<b>1,624,998</b>	<b>430,814</b>	<b>303,417</b>	<b>246,941</b>	<b>181,758</b>	<b>212,933</b>	<b>117,208</b>	<b>3,118,069</b>
<i>Cost per head of population</i> .. ..	3s. 11d.	2s. 8d.	2s. 8d.	4s. 2d.	5s. 1d.	7s. 5d.	8s. 2d.	7s. 6d.

(a) Includes Executive Council except in Western Australia, where duties are performed by Chief Secretary's Department. (b) Includes interest and sinking funds on loans, £4,873. (c) Not available separately. (d) Includes unofficial Leader. (e) Includes Government Leader. (f) Actual amounts paid to the respective Railway Departments, except in New South Wales and Western Australia, where the amounts shown represent the value of railway passes as supplied by the Railway Departments. (g) Included with Lower House. (h) While in Canberra. See also (k). (i) Includes Leader of the Opposition and Leader of the Third Party. (j) Both Houses. (k) Conveyance of members of Parliament and others not elsewhere included. (l) Includes interest and sinking fund, Parliament House, Canberra, £39,595, maintenance of Ministers' and members' rooms, £43,756, and additions, new works, buildings, etc., £75,594. (m) Duties performed by Chief Secretary's Department.

Figures for total cost and cost per head during each of the years 1946-47 to 1950-51 in comparison with 1938-39 are shown in the next table.

### COST OF PARLIAMENTARY GOVERNMENT.

Year.	C'wealth.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
TOTAL.								
(£.)								
1938-39	516,455	232,709	114,497	106,942	97,383	113,793	49,270	1,231,049
1946-47	800,542	346,970	145,532	171,460	114,360	143,957	77,970	1,800,791
1947-48	905,476	335,006	192,063	158,258	123,412	173,073	71,956	1,959,244
1948-49	903,853	367,383	266,559	201,873	145,698	181,227	113,643	2,180,236
1949-50	1,418,532	427,955	361,387	248,174	174,240	213,611	112,615	2,956,514
1950-51	1,624,998	430,814	303,417	246,941	181,758	212,933	117,208	3,118,069

### PER HEAD OF POPULATION.

(s. d.)

1938-39	1 6	1 8	1 3	2 1	3 3	4 10	4 2	3 7
1946-47	2 2	2 4	1 5	3 2	3 7	5 9	6 2	4 9
1947-48	2 4	2 3	1 10	2 10	3 9	6 10	5 6	5 2
1948-49	2 4	2 5	2 6	3 7	4 5	6 11	8 6	5 7
1949-50	3 6	2 8	3 4	4 3	5 1	7 10	8 1	7 4
1950-51	3 11	2 8	2 8	4 2	5 1	7 5	8 2	7 6

### § 6. Government Employees.

Information concerning the number of employees of Australian Government Authorities may be found in Chapter VIII.—Labour, Wages and Prices.

## CHAPTER IV.

### LAND TENURE AND SETTLEMENT.

#### § 1. Introduction.

For descriptions of the land tenure systems of the several States and the internal territories see Official Year Book No. 4 (pp. 235-333) and subsequent issues, in particular No. 22 (pp. 133-195). Conspectuses of land legislation in force and of the systems of land tenures in the several States have appeared in issues up to and including No. 38, but only a brief summary is given below.

The land legislation in force in the several States may be classified broadly under five major types of land enactments, i.e., Crown Lands Acts, Closer Settlement Acts, Mining Acts, Returned Service Personnel Settlement Acts, and Advances to Settlers Acts, but within the groupings there is, of course, a wide variety of individual acts. In the two internal Territories the legislation relating to lands is embodied in various ordinances.

In each of the States there is a Lands Department under the direction of a Minister who is charged generally with the administration of the Acts relating to the alienation, occupation and management of Crown Lands. In the Northern Territory the Administrator, under the control of the Minister for Territories, is charged with the general administration of the Lands Ordinance and of Crown lands in the Northern Territory. In the Australian Capital Territory the administration of the Leases Ordinances is in the hands of the Department of the Interior.

In each of the States there is also a Mines Department which is empowered under the several Acts relating to mining to grant leases and licences of Crown lands for mining and allied purposes. In the Northern Territory there are several ordinances relative to mining.

As with land legislation, land tenures may be classified under broad headings; these indicate the nature of the tenure and comprise:—Free Grants and Reservations, Unconditional Purchases of Freehold, Conditional Purchases of Freehold, Leases and Licences under Land Acts, Closer Settlement, Leases and Licences under Mining Acts, and Settlement of Returned Service Personnel. For details of the various particular forms of land tenure within these seven groups in each State see Official Year Book No. 38, pp. 114-116 and earlier issues. Descriptions of the systems operating in the two internal Territories may be found on pp. 329-30 and 338 of Official Year Book No. 39.

The following sections contain figures showing the extent of the different tenures in the several States and Territories, together with some general descriptive matter.

#### § 2. Free Grants and Reservations.

1. *New South Wales.*—(i) *Free Grants.* Crown lands may, by notification in the *Gazette*, be dedicated for public purposes and be granted therefor in fee simple. Such lands may be placed under the care and management of trustees, not less than three or more than seven in number, appointed by the Minister.

(ii) *Reservations.* Temporary reservations of Crown lands from sale or lease may be made by the Minister.

(iii) *Areas Granted and Reserved.* During 1950-51, 1,376 acres were permanently reserved or dedicated for miscellaneous recreation reserves and similar purposes in 76 localities. The areas reserved at 30th June, 1951, were as follows:—For travelling stock, 5,333,926 acres; pending classification and survey, 4,183,957 acres; forest reserves, 2,295,835 acres; water and camping reserves, 817,698 acres; mining reserves, 1,211,314 acres; for recreation and parks, 425,452 acres; other reserves, 5,385,739 acres; total 19,653,921 acres.

2. **Victoria.**—(i) *Free Grants.* The Governor may grant, convey or otherwise dispose of Crown lands for public purposes.

(ii) *Reservations.* The Governor may temporarily or permanently reserve from sale, lease or licence any Crown lands required for public purposes.

(iii) *Areas Granted and Reserved.* During 1951 no areas were granted without purchase. The areas both temporarily and permanently reserved at the end of 1951 were as follows:—For roads, 1,794,218 acres; water reserves, 318,545 acres; agricultural colleges, etc., 8,434 acres; forest and timber reserves, 5,347,321 acres; reserves in the mallee, 410,000 acres; other reserves, 550,937 acres; total, 8,429,455 acres.

3. **Queensland.**—(i) *Free Grants.* The Governor may grant in trust any Crown land which is or may be required for public purposes. Under the Irrigation Act, land to be used for the purpose of any undertaking under that Act may be vested in fee simple in the Irrigation Commission.

(ii) *Reservations.* The Governor may reserve from sale or lease, either temporarily or permanently, any Crown land which is or may be required for public purposes. Reserved lands may be placed under the control of trustees who are empowered to lease them with the approval of the Minister for not more than 21 years.

Under the State Forests and National Parks Acts, the Governor may permanently reserve any Crown lands and declare them to be a State Forest or a National Park.

(iii) *Areas Granted and Reserved.* During 1951 the areas granted in fee simple without payment were nil, the area set apart as reserves 274,729 acres, and reserves cancelled 125,723 acres. The areas reserved, including roads, at the end of 1951 were as follows:—Timber reserves, 3,111,011 acres; for State forests and national parks, 5,082,613 acres; aboriginal reserves, 7,805,715 acres; for streets, surveyed roads and stock routes, 3,593,387 acres; general reserves, 5,649,935 acres; total, 25,242,661 acres.

4. **South Australia.**—(i) *Free Grants.* The Governor may dedicate Crown lands for any public purpose and grant the fee simple of such lands, with the exception of foreshores and land for quays, wharves or landing-places, which are inalienable in fee simple from the Crown.

(ii) *Reservations.* The Governor may reserve Crown lands for the use and benefit of aborigines, military defence, forest reserves, railway stations, park lands or any other purpose that he may think fit.

(iii) *Areas Granted and Reserved.* During 1950–51, free grants were issued for an area of 56 acres, and reserves comprising 8,282 acres were proclaimed. At 30th June, 1951 the total area of surveyed roads, railways and other reserves was 21,248,665 acres, including 18,272,000 acres set apart as aboriginal reserves.

5. **Western Australia.**—(i) *Free Grants.* The Governor may dispose of, in such manner as for the public interest may seem best, any lands vested in the Crown for public purposes, and may grant the fee simple of any reserve to secure the use thereof for the purpose for which such reserve was made.

(ii) *Reservations.* The Governor may reserve any lands vested in the Crown for public purposes. Areas not immediately required may be leased by the Governor for periods up to 10 years. Reserves may be placed under the control of a local authority or trustees, with power to lease them for a period not exceeding 21 years, or may be leased for 99 years. Temporary reserves may also be proclaimed.

(iii) *Areas Granted or Reserved.* During the year ended 30th June, 1951 approximately 189,611 acres were reserved for various purposes. At 30th June, 1951 the total area reserved was 51,998,428 acres, comprising State forests, 3,426,450 acres, timber reserves 1,799,658 acres and other reserves 46,772,320 acres.

6. **Tasmania.**—(i) *Free Grants.* No mention is made in the Crown Lands Act respecting free grants of land, and it is expressly stated that no lands may be disposed of as sites for religious purposes except by way of sale under the Act. Under the Returned Soldiers' Settlement Act 1916, returned soldiers who applied prior to 31st March, 1922 were eligible to receive free grants of Crown land not exceeding £100 each in value, but these grants were conditional on the land being adequately improved.

(ii) *Reservations.* The Governor in Council may except from sale or lease, and reserve to Her Majesty any Crown land for public purposes, and vest for such term as he thinks fit any land so reserved in any person or corporate body. Any breach or non-fulfilment of the conditions upon which such land is reserved renders it liable to forfeiture. A school allotment, not exceeding 5 acres in area, may also be reserved.

(iii) *Areas Granted or Reserved.* The total area reserved at 30th June, 1951 was 4,042,810 acres, excluding 21,775 acres of land occupied by Commonwealth and State Departments.

7. *Northern Territory.*—(i) *Reservations.* The Governor-General may resume for public purposes any Crown lands not subject to any right of, or contract for, purchase, and may reserve, for the purpose for which they are resumed, the whole or any portion of the lands so resumed.

(ii) *Areas Reserved.* The total area of reserves at 30th June, 1951 was 71,325 square miles.

8. *Summary.*—The following table shows the total areas reserved in each State, and the grand totals, for the years 1947 to 1951 :—

**AREAS RESERVED.**  
(’000 Acres.)

Year.	N.S.W. (a)	Victoria. (b)	Q’ld. (b)	S. Aust. (a)	W. Aust. (a)	Tas. (b)	Nor. Terr. (a)	Total.
1947 ..	18,022	8,179	23,017	20,263	50,429	2,938	44,374	167,122
1948 ..	18,023	8,179	23,51 <sup>f</sup>	20,273	50,410	3,969	45,452	169,822
1949 ..	18,285	8,300	23,617	20,274	50,428	(c)4,016	45,453	170,373
1950 ..	18,585	8,224	25,045	21,240	51,809	(a)4,016	45,455	174,374
1951 ..	19,654	8,429	25,243	21,249	51,998	(a)4,043	45,648	176,264

(a) At 30th June.

(b) At 31st December.

(c) At 30th June, 1950.

### § 3. Unconditional Purchases of Freehold.

1. *New South Wales.*—(i) *Auction Purchases.* Crown lands, not exceeding in the aggregate 200,000 acres in any one year, may be sold by public auction in areas not exceeding half-an-acre for town lands, 20 acres for suburban lands, and 640 acres for country lands, at the minimum upset price of £8, £2 10s., and 15s. per acre respectively. At least 10 per cent. of the purchase-money must be paid at the time of sale, and the balance within three months, or the Minister may allow the payment of such balance to be deferred for a period not exceeding ten years, 4 per cent. interest being charged. Town blocks in irrigation areas may also be sold by auction.

(ii) *After-Auction Purchases.* In certain cases, land offered at auction and not sold may be purchased at the upset price. A deposit in accordance with the terms and conditions under which the land was previously offered must be lodged, and, if the application be approved by the Minister, the balance of purchase money is payable as required by the specified terms and conditions.

(iii) *Special Purchases.* Under certain circumstances, land may be sold in fee simple, the purchaser paying the cost of survey and of reports thereon, in addition to the purchase-money. The minimum upset price per acre is the same as in the case of land sold by auction. Areas not exceeding 5 acres in extent may be sold to recognized religious bodies and public authorities at prices determined by the local Land Board.

(iv) *Improvement Purchases.* The owner of improvements in land in authorized occupation by residence under any Mining or Western Lands Act of land within a gold-field or mineral field may purchase such land without competition at a price determined by the local Land Board, but at not less than £8 per acre for town lands or £2 10s. per acre for other lands. The area must not exceed  $\frac{1}{2}$  acre within a town or village, or 2 acres elsewhere, and no person may purchase more than one such area within 3 miles of a similar prior purchase by him.

(v) *Areas Sold.* During the year ended 30th June, 1951 the total area sold was 334 acres of which 23 acres were sold by auction and 26 acres as after-auction purchases, while 21 acres were sold as improvement purchases and 26 acres as special purchases. The amount realized for the sale of the whole area was £17,559.

2. **Victoria.**—(i) *General.* Lands, not exceeding 100,000 acres in any one year, specially classed for sale by auction, may be sold by auction in fee simple at an upset price not less than £1 per acre. The purchaser must pay the survey fee at the time of the sale, together with a deposit of  $12\frac{1}{2}$  per cent. of the whole price; the residue is payable in equal half-yearly instalments with interest. Any unsold land in a city, town or borough area, areas specially classed for sale, isolated pieces of land not exceeding 150 acres in area, and sites for churches or charitable purposes, if not more than 3 acres in extent, may be sold by auction on the same terms. Swamp or reclaimed lands may also be sold by auction, subject to the condition that the owner keeps open all drains, etc., thereon.

(ii) *Areas Sold at Auction and by Special Sales.* During 1951 a total of 2,244 acres was disposed of under this tenure, 1,591 acres being country lands and 653 acres town and suburban lands.

3. **Queensland.**—(i) *General.* From 1917 to 1929 the law precluded land being made available for any class of selection which gave the selector the right to acquire the freehold title. Amending legislation giving power to make land available under freehold tenures was passed in 1929, but this provision was repealed by the Act of 1932.

(ii) *Areas Sold, etc.* During 1947 unconditional selections made freehold totalled 125 acres. No unconditional selections have since (to 1951) been made freehold.

4. **South Australia.**—(i) *Sales by Auction.* The following lands may be sold by auction for cash :—(a) special blocks; (b) Crown lands which have been offered for lease and not taken up within two years; (c) town lands; and (d) suburban lands which the Governor excepts from the operations of the Land Board. A purchaser must pay 20 per cent. of the purchase money in cash, and the balance within one month or within such extended time as the Commissioner of Crown Lands may allow. Town lands may be sold subject to the condition that they cannot be transferred or mortgaged within six years without the consent of the Commissioner. If the Commissioner of Crown Lands so determines, town lands may also be offered at auction on terms that the buyer may at his option purchase the lands for cash or on agreement for sale and purchase.

(ii) *Areas Sold, etc.* During the year ended 30th June, 1951 the area of town lands and special blocks sold by auction was 35 acres. In addition, 133,343 acres were sold at fixed prices, and purchases of 87,007 acres on credit were completed, making a total of 220,385 acres.

5. **Western Australia.**—(i) *Sales by Auction.* Town, suburban and village lands must be sold by auction after being surveyed into lots and notified in the *Gazette*. Ten per cent. of the purchase-money must be paid in cash together with the value of any improvements, and the balance in four equal quarterly instalments. Suburban land must be fenced within two years, and no Crown grant may be issued until the land is fenced.

(ii) *Areas Sold.* During the years ended 30th June, 1951 the area of town and suburban allotments sold by auction was 1,391 acres in 680 allotments.

6. **Tasmania.**—(i) *Sales by Auction.* Town lands may be sold by auction.

(ii) *After-auction Sales.* Town lands, not within 5 miles of any city, which, after having been offered at auction, have not been sold, may be sold at the upset price by private contract.

(iii) *Sales of Land in Mining Towns.* Any person being the holder of a residence licence or business licence who shall be in lawful occupation of any residence area or business area, and who shall be the owner of buildings and permanent improvements upon such land of a value equal to or greater than the upset price of such area, shall be entitled to purchase such area at the upset price at any time prior to the day on which such area is to be offered for sale as advertised. The upset price for such area shall not

be less than £10, excluding the value of improvements, cost of survey, and of grant deed. The area which may be so purchased may, with the consent of the Commissioner, exceed one-quarter of an acre, but shall not in any case exceed one-half of an acre.

#### § 4. Conditional Purchases of Freehold.

1. **General.**—The various methods of obtaining Crown lands by conditional purchase in the several States are given in some detail in preceding issues of the Official Year Book (*see* No. 22, pp. 141–9).

2. **New South Wales.**—At 30th June, 1951 the total number of incomplete conditional purchases in existence was 38,524, covering an area of 12,405,284 acres. During 1950–51 47 applications were received for conditional purchases; 34 were confirmed with an area of 1,979 acres; deeds were issued during the year for 389,370 acres; at the end of the year deeds had been issued for 33,343,406 acres. These figures exclude conversions from other tenures—671 comprising 164,487 acres.

3. **Victoria.**—Excluding selections in the Mallee country, the total area purchased conditionally in 1951 was 9,027 acres, all with residence. The number of selectors was 53. There were no selections in the Mallee in 1951.

In addition, final payments were made during 1951 on conditional purchases comprising 21 acres of Mallee lands.

4. **Queensland.**—The following selections were made freehold during 1951:—Agricultural farms 125,434 acres, prickly pear selections 181,743 acres, and prickly pear development selections 6,294 acres.

5. **South Australia.**—During 1950–51, 15,075 acres were allotted under agreements to purchase, comprising Eyre Peninsula railway lands 2,081 acres, closer settlement lands 6,463 acres, soldiers' acquired lands 643 acres, surplus lands 1,142 acres, and other Crown lands 4,746 acres.

6. **Western Australia.**—During the year ended 30th June, 1951 the number of holdings conditionally alienated was 1,142, the total area involved being 1,358,083 acres, comprising conditional purchases by deferred payments with residence 1,342,240 acres and free homestead farms 15,843 acres. Under the heading “deferred payments with residence” are included conditional purchases of grazing lands.

In addition, Crown grants were issued during 1950–51 for the following selections, the prescribed conditions having been complied with:—Free homestead farms 16,623 acres and conditional purchases 222,987 acres.

7. **Tasmania.**—During 1950–51 Crown grants were issued for 24,594 acres. The total area sold conditionally was 4,214 acres, comprising selections for purchase 4,030 acres, and town and suburban allotments 174 acres. The numbers of applications received and confirmed were 47 and 122 respectively.

#### § 5. Leases and Licences under Land Acts.

1. **General.**—Information regarding the methods of obtaining leases and licences of Crown lands in the several States and Territories is given in preceding issues of the Official Year Book (*see* No. 22, pp. 149–63).

2. **New South Wales.**—The following table shows the areas held under various descriptions of leases and licences under the control of the Department of Lands, the Water Conservation and Irrigation Commission and the Western Lands Commission at the end of 1950–51.

**AREAS OCCUPIED UNDER LEASE OR LICENCE AT 30th JUNE, 1951 : NEW SOUTH WALES.(a)**  
(**'000 Acres.**)

Particulars.	Area.	Particulars.	Area.
<i>Crown Lands or Closer Settlement Acts.</i>		<i>Crown Lands or Closer Settlement Acts (cont.)</i>	
Occupation licences .. ..	729	Group purchase leases .. ..	223
Conditional leases .. ..	11,495	Irrigation areas .. ..	186
Conditional purchase leases .. ..	151	Other leases .. ..	30
Settlement leases .. ..	2,754	<i>Western Lands Act.</i>	
Improvement leases .. ..	52	Conditional leases .. ..	94
Annual leases .. ..	460	Perpetual leases .. ..	58,517
Scrub and Snow leases .. ..	608	Other long-term leases .. ..	17,931
Special leases .. ..	1,032	Permissive occupancies .. ..	301
Permissive occupancies .. ..	2,130	Leases being issued—occupation licences .. ..	145
Prickly pear leases .. ..	148	Preferential occupation licences .. ..	223
Crown leases .. ..	7,193		
Homestead farms .. ..	4,849		
Homestead selections and grants .. ..	1,651		
Closer settlement leases .. ..	1,932		
Settlement purchase leases .. ..	1,032		
Suburban holdings .. ..	52	Total .. ..	113,918

(a) Excludes mining leases and permits; forest leases and occupation permits; and leases outside irrigation areas, controlled by the Water Conservation and Irrigation Commission—94,016 acres.

3. **Victoria.**—The area of Crown lands occupied under leases and licences in the year 1951 was as follows:—Grazing licences—other than Mallee, 5,514,425 acres, Mallee, 3,053,046 acres; auriferous lands licences, 15,888 acres; perpetual leases—other than Mallee, 17,819 acres, Mallee, 61,043 acres; swamp lands leases, 4,020 acres; agricultural college lands, 42,524 acres; total, 8,708,765 acres.

4. **Queensland.**—The total area occupied under lease or licence, excluding mining leases, at the end of 1951 was as follows:—Pastoral leases, 243,540,400 acres; occupation licences, 17,881,520 acres; grazing selections and settlement farm leases, 87,197,446 acres; special purpose leases—Crown land, 577,849 acres, reserves, 1,218,002 acres; perpetual lease (including prickly pear) selections, 6,531,982 acres; auction perpetual leases, 514,171 acres; forest grazing leases (reserves), 1,682,620 acres; total, 359,143,990 acres.

5. **South Australia.**—The total area, including repurchased lands held under lease or licence except mining lease and licence, at 30th June, 1951, was 137,514,310 acres, of which pastoral leases, 115,382,699 acres, constituted the major proportion.

6. **Western Australia.**—At 30th June, 1951 the total area held under lease or licence issued by the Lands Department amounted to 199,302,847 acres, of which 196,821,454 acres were under pastoral lease.

7. **Tasmania.**—Crown lands leased at 30th June, 1951 for other than mining purposes amounted to 2,638,536 acres, of which 2,008,324 acres were leased for pastoral purposes.

8. **Northern Territory.**—At 30th June, 1951 the total area under lease, etc., was 171,841,055 acres, of which pastoral leases accounted for 129,266,284 acres and other leases, licences and mission stations 42,574,771 acres.

9. **Australian Capital Territory.**—The number of leases granted under the City Area Leases Ordinance 1936—1951 to 30th June, 1951 (excluding leases surrendered and determined) was 918. The total area held under grazing, etc., lease and licence (including Jervis Bay area) amounted to 330,582 acres.



Seventeen leases have been granted under the Church Lands and Special Purposes Ordinances for church and scholastic purposes. In addition, a lease in perpetuity has been granted under the Church of England Land Ordinance 1926 for church purposes.

10. **Summary.**—The following table shows particulars of the land held in each State under lease or licence for purposes other than mining and forestry, the total leased or licensed land in the Territories, and the grand totals, for the years 1947 to 1951 :—

**AREAS OCCUPIED UNDER LEASE OR LICENCE OTHER THAN MINING AND FORESTRY.**  
(’000 Acres.)

Year.	N.S.W. (a)	Vic. (b)	Q’land. (b)	S. Aust. (a)	W. Aust. (a)	Tas. (b)	N.T. (a) (c)	A.C.T. (b)(c)(d)	Total.
1947	111,865	8,676	353,968	135,771	210,679	2,716	154,201	304	978,180
1948	112,943	8,997	354,518	136,809	214,570	2,685	157,596	305	988,423
1949	114,025	8,891	356,269	137,432	220,283	(e)2,799	158,437	304	998,440
1950	114,125	8,708	358,940	137,419	222,489	(a)2,799	162,561	331	1,007,372
1951	113,918	8,709	359,144	137,514	199,303	(a)2,639	171,841	331	993,399

(a) At 30th June. (b) At 31st December. (c) Leases and licences for all purposes.  
(d) Includes Jervis Bay area. (e) At 30th June, 1950.

**§ 6. Leases and Licences under Mining Acts.**

1. **General.**—Information regarding the various forms of leases and licences under Mining Acts in the several States and the Northern Territory is given in preceding issues of the Official Year Book (see No. 22, pp. 170-7). The following paragraphs contain particulars of operations during the year 1950-51 or 1951, and of areas occupied at the end of the year, under the various forms of lease, licence, etc. issued for mining purposes.

2. **New South Wales.**—During the year ended 30th June, 1951, 1,944,539 acres were taken up under Mining Acts, authorities to prospect comprising 1,920,811 acres and mining for minerals other than gold, 22,696 acres thereof. At the end of the year total areas occupied were as follows :—Gold-mining, 4,765 acres ; mining for other minerals, 173,657 acres ; authorities to prospect, 178,210 acres ; other purposes, 8,359 acres ; total, 364,991 acres.

3. **Victoria.**—During 1951 there were 155 leases and licences granted under Mining Acts, including 48 for gold-mining. Areas occupied at the end of 1951 were as follows :—Gold-mining, 21,267 acres ; petroleum prospecting, 1,056,752 acres ; coal, 12,109 acres ; other purposes, 6,367 acres ; total, 1,096,495 acres.

4. **Queensland.**—During 1951 there were 3,575 miners’ rights issued and two business licences. Areas taken up during the year totalled 175,163 acres, of which petroleum prospecting comprised 128,000 acres and mining for minerals other than gold, 40,183 acres. Total areas occupied at the end of 1951 were as follows :—Gold-mining, 3,356 acres ; mining for other minerals, 61,437 acres ; miners’ homestead leases, 422,837 acres ; petroleum prospecting, 794,240 acres ; coal prospecting, 3,870 acres ; total, 1,285,740 acres. In addition, an area estimated at 25,000 acres was held under miners’ rights and dredging claims. The area of land held under lease only was 487,630 acres.

5. **South Australia.**—Areas taken up under Mining Acts during 1950-51 totalled 4,520 acres, including claims, 3,014 acres, and mineral and miscellaneous leases, 1,506 acres. Total areas occupied at the end of 1950-51 were as follows :—Gold-mining, 647 acres ; other mineral and miscellaneous leases, 73,620 acres ; claims, 11,158 acres ; oil licences, 36,576,000 acres ; other purposes, 7,955 acres ; total, 36,669,380 acres.

6. **Western Australia.**—Areas taken up during 1951 under Mining Acts totalled 30,759 acres, including gold-mining, 9,902 acres and mining for other minerals, 19,636 acres. Total areas occupied at the end of 1951 were as follows :—Gold-mining, 33,068 acres ; mining for other minerals, 69,490 acres ; other purposes, 34,965 acres ; total, 137,523 acres.

7. **Tasmania.**—During 1951 the number of leases issued covered 3,023 acres, including licences to search for coal or oil, 1,200 acres; coal-mining, 719 acres; and tin-mining, 368 acres. Total areas occupied at the end of 1951 were as follows :—Gold-mining, 598 acres; coal-mining, 6,962 acres; mining for other minerals, 19,424 acres; licences to search for coal or oil, 1,200 acres; other purposes, 4,560 acres; total, 32,744 acres.

8. **Northern Territory.**—At 30th June, 1951 the number and acreage of holdings under mining leases and tenements were as follows :—Gold-mining leases, 268—4,141 acres; other mineral leases, 228—5,381 acres; gold and other mineral claims, 5—171 acres; gold and other mineral prospecting areas, 52—846 acres; business and residence areas, 192—56 acres; other purposes, 64—263 acres; total, 809—10,858 acres.

9. **Summary.**—The following table shows the total areas occupied under Mining Acts in each State at the end of the years 1947 to 1951 :—

#### AREAS OCCUPIED UNDER MINING ACTS.

(Acres.)

Year.	N.S.W. (a)	Victoria.	Q'land. (b)	S. Aust. (a) (b)	W. Aust. (c)	Tasmania. (b)	Total. (d)
1947 ..	241,257	563,652	991,698	36,049,318	126,032	25,700	37,997,657
1948 ..	1,334,002	989,641	944,969	36,077,751	130,073	22,681	39,499,117
1949 ..	5,674,449	1,173,573	942,326	36,068,450	137,362	28,101	44,024,261
1950 ..	455,778	1,095,637	1,267,012	36,672,566	145,847	30,462	39,667,302
1951 ..	364,991	1,096,495	1,285,740	36,669,380	137,523	32,744	39,586,873

(a) Year ended 30th June. (b) Excludes lands held under miners' rights and dredging claims.  
(c) Excludes holdings under miners' rights and mineral oil licences. (d) Excludes Northern Territory.

### § 7. Closer Settlement.

1. **General.**—Particulars regarding the methods of acquisition and disposal of land for closer settlement in the several States are given in preceding issues of the Official Year Book (see No. 22, pp. 163-9) and considerable detail of the results of the operations of the several schemes has appeared in subsequent issues. In more recent years, however, the amalgamation, in some States, of closer settlement records with those of other authorities has made it impossible to obtain up-to-date figures for those States and for Australia as a whole, although aggregations of State totals as at the latest dates available have been published as rough approximations intended to convey some idea of the extent of the schemes throughout Australia. Particulars in this issue are restricted to a summary only of the position in each State at the latest date available.

2. **New South Wales.**—Since the inception of closer settlement in 1905 to 30th June, 1951, 2,257 estates totalling 6,182,652 acres have been purchased by the Crown at a cost of £25,536,339 for purposes of closer settlement of civilians and returned service personnel. Particulars of the total areas acquired to 30th June, 1951, are as follows :—Estates purchased, 2,257; farms allotted, 10,733; area, 6,182,652 acres; purchase price, £25,536,339.

Closer settlement is now being effected entirely under perpetual leasehold tenure (closer settlement leases).

3. **Victoria.**—The Closer Settlement Commission was abolished as from 31st December, 1938, and land settlement was placed under the control of the Department of Lands and Survey. On 31st March, 1939 all Closer Settlement and Discharged Soldiers' accounts were amalgamated, the settlers' accounts adjusted and the new debt made payable over an extended period. Particulars of the operations under the provisions of the Closer Settlement Acts to 30th June, 1938, the latest date for which separate details are available, show that 1,402,568 acres were acquired at a cost, including the value of Crown lands taken over, of £10,244,023, and that 8,722 allotments were

made, farm allotments comprising 1,162,676 acres, workmen's homes allotments 790 acres, agricultural labourers' allotments 3,484 acres and town allotments 86,599 acres. The figures for area and cost of land acquired for closer settlement purposes include, in addition to 133,128 acres purchased for £1,246,722 and transferred subsequently to discharged soldiers, a total area of 512,757 acres costing £4,125,822 which was purchased originally for the settlement of discharged soldiers.

4. **Queensland.**—Separate records relating to the closer settlement of re-purchased land are no longer kept by the Land Administration Board, and the operations under this heading are now included with "Leases and Licences under Land Acts." The total area acquired to 31st December, 1934 was 970,778 acres, costing £2,292,881. At the same date the area allotted amounted to 915,690 acres distributed over 3,048 selections, consisting of 2,155 agricultural farms, 257 unconditional selections, 544 perpetual lease selections, 9 prickly pear selections, 6 perpetual lease prickly pear selections and 77 settlement farm leases. An area of 13,038 acres was sold by auction.

5. **South Australia.**—The total area re-purchased for closer settlement at 30th June, 1951 was 944,625 acres, at a cost of £2,854,424. Included in these figures are 51,872 acres purchased for £185,285, and afterwards set apart for returned service personnel, 3,214 acres reserved for forest and waterworks purposes, the purchase-money being £16,185, and also 26,563 acres of swamp and other lands, which were purchased for £111,580, in connexion with reclamation of swamp-lands on the River Murray. Of the total area, 817,108 acres have been allotted to 2,771 persons.

6. **Western Australia.**—The total area acquired for closer settlement up to 30th June, 1951 was 2,122,165 acres, costing £4,237,001. Of this area, 20,972 acres have been set aside for roads, reserves, etc., leaving a balance of 2,101,193 acres available for selection. Particulars of operations under the Act for the year ended 30th June, 1951, are as follows:—Area selected during the year, 179,624 acres; number of farms, etc., allotted to date, 2,157; total area occupied to date, 1,568,420 acres; balance available for selection, 532,773 acres.

7. **Tasmania.**—Up to 30th June, 1951, 38 areas had been opened up for closer settlement, the total purchase-money paid by the Government being £371,486 and the total area acquired amounting to 104,294 acres, including 12,149 acres of Crown lands. The number of farms occupied at 30th June, 1951 was 140.

## § 8. Settlement of Returned Soldiers and Sailors: 1914-18 War.

1. **General.**—Information regarding the methods adopted in each State following the commencement of the 1914-18 War for providing land for the settlement of returned soldiers and sailors, together with the conditions under which such land could be acquired, is given in earlier issues of the Official Year Book (see No. 13, pp. 1016-23, and No. 18, pp. 187-9). Later modifications were made with a view to simplifying procedure and liberalizing the conditions under which holdings may be acquired.

Information on soldier settlement in this section suffers from the same defect, i.e. amalgamation of records, as does that on closer settlement in the foregoing section. Consequently, particulars of the position of soldier settlement in each State at the latest available dates only are given in the following paragraphs, and no aggregations for Australia are shown.

2. **New South Wales.**—At 30th June, 1951 farms had been allotted to 9,943 returned soldiers of the 1914-18 War. These farms included 4,009 provided from 1,710,272 acres of land acquired at a cost of £8,113,956. Five thousand eight hundred and eight soldiers have either transferred or abandoned their farms, leaving 4,135 in occupation of 5,128,119 acres. Of this area 3,973,094 acres were Crown lands, including 2,025,115 acres in Western Division taken up under the Western Lands Act, 997,226 acres acquired lands and 57,799 acres within Irrigation Areas. These totals exclude 703 discharged soldiers who purchased privately-owned land with their own capital and were granted advances for the purchase of stock and plant or for effecting improvements.

3. **Victoria.**—At 30th June, 1938 the area acquired or set apart for soldier settlement in respect of the 1914-18 War was 2,482,286 acres, consisting of 1,763,241 acres of private land purchased at a cost of £13,361,266, plus 133,128 acres costing £1,246,722 taken from Closer Settlement, and 585,917 acres of Crown lands valued at £447,622. Subsequently 512,757 acres valued at £4,125,822 were transferred to Closer Settlement. Up to 30th June, 1938 the number of settlers to whom farms, etc., had been allotted was 12,126, and the number of farms, etc., allotted was 9,784 (including 955 farms originally purchased for closer settlement purposes) containing 2,365,518 acres. In addition, 802 share farmers and holders of leasing agreements and private land had received assistance. The number of farms, etc., occupied at 30th June, 1938 was 8,426 (including 1,001 originally purchased for closer settlement) containing 1,734,379 acres. Later particulars cannot be given, as separate details are not available.

4. **Queensland.**—At 30th June, 1929 the area acquired or set apart for soldier settlement (1914-18 War) was 577,633 acres, of which 41,101 acres comprised private land, purchased at a cost of £270,480. The number of farms occupied was 1,148, containing 440,992 acres. Some of these selections were acquired under the ordinary provisions of the Land Act, and do not include areas specially set apart for soldiers.

As special records are not now kept respecting the areas held by discharged soldier settlers, later information cannot be given.

5. **South Australia.**—At 30th June, 1951 the area of land acquired or set apart for soldier settlement (1914-18 War) was 1,336,612 acres, of which 1,202,653 acres comprised private land purchased at a cost of £3,863,572. These figures exclude mortgages discharged, £494,770, on 360,493 acres, representing 300 farms, etc., and 314 settlers. The number of soldiers to whom assistance had been granted under the Discharged Soldiers' Settlement Acts up to 30th June, 1951 was 4,165, and the area of farms, etc. (including mortgages discharged) on which assistance had been granted was 2,746,744 acres. At 30th June, 1951 farms, etc., occupied numbered 1,057 containing 539,156 acres.

6. **Western Australia.**—At 30th June, 1947 the area of private land acquired for soldier settlement (1914-18 War) was 345,110 acres purchased at a cost of £605,076. To that date, assistance had been given to 5,213 returned soldiers, and the number of farms, etc., occupied was 1,145. No further land has been purchased for returned soldiers of the 1914-18 War.

Owing to the amalgamation of records in the Rural and Industries Bank, information regarding assistance to returned soldiers is no longer available, but at 30th June, 1944 the area of land acquired or set apart for soldier settlement was 14,287,643 acres.

7. **Tasmania.**—At 30th June, 1951 the area acquired or set apart for soldier settlement (1914-18 War) was 367,430 acres, of which 280,300 acres comprised private land purchased at a cost of £2,113,157. Up to 30th June, 1951 the number of settlers to whom farms, etc., had been allotted was 2,392, and the number of farms, etc., allotted was 2,215 containing 347,993 acres. The number of farms, etc., occupied at 30th June, 1951 was 639 containing 122,736 acres.

8. **Losses on Soldier Settlements.**—For information regarding the financing arrangements for soldier settlement after the 1914-18 War, and the losses which occurred in connexion with it, see earlier issues of the Official Year Book, in particular, No. 28, pp. 131-2.

## § 9. Settlement of Returned Service Personnel : 1939-45 War.

1. **War Service Land Settlement Scheme.**—(i) *General.* The War Service Land Settlement Agreements Act 1945 authorized the execution by or on behalf of the Commonwealth of agreements between the Commonwealth and the States for proposals to settle discharged members of the Forces and other eligible persons on land in the States. The proposals were subsequently ratified by the States, and the agreements were signed in November, 1945.

For more detailed information about the agreements and the methods of operation and administration of the scheme see Official Year Book No. 37, pp. 113-8, and issue No. 39 contains a brief general description of the scheme.

(ii) *Summary of Operations to 30th June, 1952.* The tables hereunder show the operations of the War Service Land Settlement Scheme in each State up to 30th June, 1952.

**WAR SERVICE LAND SETTLEMENT (1939-45 WAR): SUMMARY TO  
30th JUNE, 1952.**

State.	Land Submitted by States.		Land Approved by Commonwealth.				Land under Consideration.	Land Rejected or Withdrawn.
			As Suitable for Soldier Settlement.		Acquired by States.			
	Sub-missions.	Area.	Pro- perties.	Area.	Pro- perties.	Area.	Area.	Area.
	No.	Acres.	No.	Acres.	No.	Acres.	Acres.	Acres.
New South Wales—								
Subdivision	103	1,549,523	91	1,309,419	60	848,807	18,356	221,748
Irrigation Lands	24	254,363	23	220,626	15	169,526	2,089	31,648
Western Division	146	4,678,600	137	3,963,014	121	3,604,884	..	715,886
Promotion Scheme	504	1,206,008	391	1,054,094	316	923,086	1,912	150,002
Irrigation Lands	72	109,367	67	98,174	60	93,217	..	11,193
<b>Total, New South Wales</b>	<b>849</b>	<b>7,797,861</b>	<b>709</b>	<b>6,645,327</b>	<b>572</b>	<b>5,639,520</b>	<b>22,357</b>	<b>1,130,177</b>
Victoria—								
Irrigation Lands	18	175,844	18	130,844	17	88,934	..	45,000
Other ..	201	817,700	193	772,460	(a) 176	724,886	27,834	17,406
<b>Total, Victoria ..</b>	<b>219</b>	<b>993,544</b>	<b>211</b>	<b>903,304</b>	<b>193</b>	<b>813,820</b>	<b>27,834</b>	<b>62,406</b>
Queensland ..	179	527,609	142	451,978	(b) 117	360,983	4,048	71,583
South Australia ..	176	650,949	146	514,955	(a) 140	503,299	9,846	126,148
Western Australia	741	2,205,199	534	1,543,768	518	1,215,786	136,638	524,793
Tasmania ..	91	490,498	61	293,924	42	112,123	9,897	186,677
<b>Total, Australia</b>	<b>2,255</b>	<b>12,665,660</b>	<b>1,803</b>	<b>10,353,256</b>	<b>1,582</b>	<b>8,645,531</b>	<b>210,620</b>	<b>2,101,764</b>

State.	Land Approved by Commonwealth for Subdivision.			Single Properties Approved by Commonwealth.		Land Allotted to Settlers.	
	Pro- perties.	Area.	Hold- ings.	Area.	Pro- perties.	Area.	Hold- ings.
	No.	Acres.	No.	Acres.	No.	Acres.	No.
New South Wales—							
Subdivision	76	1,059,308	864	..	..	792,017	682
Irrigation Lands	21	194,760	284	..	..	150,787	210
Western Division	..	..	..	3,963,014	137	3,509,804	118
Promotion Scheme	166	815,378	561	225,765	222	941,735	697
Irrigation Lands	31	83,963	152	14,211	36	82,868	149
<b>Total, New South Wales</b>	<b>294</b>	<b>2,153,400</b>	<b>1,861</b>	<b>4,202,990</b>	<b>395</b>	<b>5,477,211</b>	<b>1,856</b>
Victoria—							
Irrigation Lands	18	99,500	1,000	2,336	5	69,569	623
Other ..	176	704,727	1,239	6,952	10	705,678	1,199
<b>Total, Victoria</b>	<b>194</b>	<b>804,227</b>	<b>2,239</b>	<b>9,288</b>	<b>15</b>	<b>775,247</b>	<b>1,822</b>
Queensland ..	85	395,743	571	15,143	43	229,668	427
South Australia ..	74	252,744	580	21,544	37	186,322	475
Western Australia	137	675,517	372	467,166	364	1,011,224	630
Tasmania ..	21	102,829	187	20,025	30	75,885	98
<b>Total, Australia</b>	<b>805</b>	<b>4,384,469</b>	<b>5,810</b>	<b>4,736,156</b>	<b>884</b>	<b>7,755,557</b>	<b>5,317</b>

(a) Excludes portions of two properties.

(b) Excludes portion of one property.

(iii) *Expenditure.* The following table shows a dissection of the Commonwealth expenditure on War Service Land Settlement to 30th June, 1952 :—

**WAR SERVICE LAND SETTLEMENT (1939-45 WAR) : COMMONWEALTH EXPENDITURE TO 30th JUNE, 1952.**

( £. )

Advances to States.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	Total.
For acquisition of land ..	..	..	..	1,723,727	3,314,789	916,750	5,955,266
For development and improvement of land ..	..	..	..	5,170,874	4,712,666	2,097,401	11,980,941
Commonwealth contributions to excess cost over valuation ..	..	..	41,057	..	110,250	14,879	166,186
To provide credit facilities to settlers ..	..	..	..	978,683	3,804,021	511,207	5,293,911
For remission of settlers' rent and interest ..	178,236	50,806	18,786	40,213	128,631	1,279	417,951
For payment of living allowances to settlers ..	520,358	345,000	111,000	73,532	191,339	36,506	1,277,735
For operation and maintenance of irrigation projects ..	..	..	..	116,114	7,026	..	123,140
Loss on advances ..	..	14	884	..	959	..	1,857
<b>Total .. ..</b>	<b>698,594</b>	<b>395,820</b>	<b>171,727</b>	<b>8,103,143</b>	<b>12,269,681</b>	<b>3,578,022</b>	<b>25,216,987</b>

Repayments of expenditure to 30th June, 1952 on the acquisition, development and improvement of land amounted to £1,602,763, on the provision of credit facilities to settlers to £1,971,699, and on the payment of living allowances to settlers to £3,000, so that the total expenditure was reduced by £3,577,462 to £21,639,525. In addition, miscellaneous receipts in South Australia, Western Australia and Tasmania to 30th June, 1952 amounted to £413,620.

2. *Loans and Allowances (Agricultural Occupations) Scheme.*—(i) *General.* Full details of the measures taken to provide for the re-establishment of ex-servicemen in rural occupations are contained in Official Year Book No. 37, pp. 117-8.

(ii) *Loans (Agricultural Occupations).* The following table shows particulars for each State and certain Territories to 30th June, 1952 :—

**LOANS (AGRICULTURAL OCCUPATIONS) : SUMMARY TO 30th JUNE, 1952.**

State.	Applications.			Loans Approved.		Advanced by Commonwealth Treasury to Lending Authorities.	Advanced by Lending Authorities to Applicants. (b)	
	Re-ceived.	Ap-proved.	Refused, With-drawn or Not Yet Approved.	Gross Amount.	Net Approvals.(a)			
					Applica-tions.			Amount.
				£	£	£	£	
New South Wales	7,714	6,271	1,443	4,921,639	5,478	4,249,251	2,660,000	4,191,343
Victoria ..	4,810	3,350	1,460	2,175,881	3,089	2,017,220	1,040,000	1,797,842
Queensland ..	2,364	1,966	398	1,091,260	1,604	887,634	610,000	862,867
South Australia	2,052	1,236	816	946,066	1,174	905,452	465,000	769,230
Western Australia	3,149	2,249	900	2,095,253	2,113	1,976,897	1,110,000	1,807,603
Tasmania ..	1,120	746	374	460,940	716	442,079	300,400	390,911
Northern Territory	34	15	19	11,945	12	10,148	10,748	10,748
New Guinea ..	16	6	2	5,772	5	5,272	3,997	3,997
Norfolk Island ..	3	1	0	1,000	..	..	..	..
<b>Total .. ..</b>	<b>21,262</b>	<b>15,840</b>	<b>5,422</b>	<b>11,709,756</b>	<b>14,191</b>	<b>10,493,953</b>	<b>6,200,145</b>	<b>9,834,541</b>

(a) After deduction of loans declined after approval—£1,215,803.

(b) Includes advances from principal repaid by borrowers.

These loans are made to eligible ex-servicemen for the purchase of land, effecting improvements on land, the acquisition of tools of trade, live-stock, plant or equipment, the establishment of a co-operative business with other persons, reduction or discharge of a mortgage, bill of sale, etc.

(iii) *Allowances (Agricultural Occupations).* The following table shows details for each State and New Guinea to 30th June, 1952:—

**ALLOWANCES (AGRICULTURAL OCCUPATIONS) : SUMMARY TO 30th JUNE, 1952.**

State.	Applications.			Advanced by Commonwealth Treasury to Bank.	Allowances Paid.
	Received.	Approved.	Rejected, Withdrawn or Not Yet Approved.		
				£	£
New South Wales ..	4,056	3,609	447	582,000	575,574
Victoria ..	3,062	2,309	753	296,000	295,334
Queensland ..	3,028	2,507	521	476,000	474,675
South Australia(a) ..	2,227	1,733	494	317,000	315,445
Western Australia ..	2,993	2,587	406	471,500	471,421
Tasmania ..	623	513	110	112,000	111,458
New Guinea ..	3	2	1	551	551
Total ..	15,992	13,260	2,732	2,255,051	2,244,458

(a) Includes allowances paid to four ex-servicemen in Northern Territory.

These allowances are payable only in respect of the period during which the income derived from the occupation by the ex-serviceman concerned is considered inadequate.

3. **War Service Land Settlement Division—Total Expenditure.**—The following table shows details, by States and Territories, of the total expenditure of the War Service Land Settlement Division for the years 1945-46 to 1951-52, and the aggregate to 30th June, 1952. The aggregate, £35,780,683, includes—War Service land settlement, £25,216,987; agricultural loans, £6,200,145; agricultural allowances, £2,255,051; administrative expenses, £725,487; rural training, £1,383,013.

**COMMONWEALTH WAR SERVICE LAND SETTLEMENT DIVISION : EXPENDITURE.**  
(£.)

Period.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	N. Ter.	N. G'nea.	Total.
1945-46	120,500	153,804	60,000	263,299	610,042	331,769	..	..	1,539,414
1946-47	1,289,426	536,230	261,780	1,285,495	1,337,384	140,506	2,000	..	4,852,821
1947-48	1,191,480	618,637	324,000	887,712	1,769,701	294,936	..	..	5,086,466
1948-49	870,890	388,323	269,158	1,169,650	2,156,805	366,240	..	..	5,221,066
1949-50	629,094	302,966	301,453	1,691,974	2,617,441	641,083	4,453	4,158	6,192,622
1950-51	287,491	145,773	109,691	1,743,583	2,844,116	830,343	4,295	389	5,965,681
1951-52	197,084	177,450	81,396	2,075,184	2,880,716	1,510,783	..	..	6,922,613
Total to 30th June, 1952 ..	4,585,965	2,323,183	1,407,478	9,116,897	14,216,205	4,115,660	10,748	4,547	35,780,683

After deducting repayments of expenditure to 30th June, 1952 which amounted to £3,577,462 and miscellaneous receipts (£1,972,521), the net expenditure to 30th June 1952 was £30,230,700.

**§ 10. Advances to Settlers.**

1. **General.**—A detailed statement regarding the terms and conditions governing advances to settlers in the several States and the Northern Territory appears in preceding issues of the Official Year Book (*see* No. 22, pp. 179-186).

The summaries of loans and advances in the following paragraphs are compiled from returns supplied by the various State government lending agencies in the several States. They include the transactions in lands acquired under closer and soldier settlement schemes, but exclude the balances owing on former Crown lands sold on the conditional purchase, etc., system.

The amounts outstanding do not represent the actual differences between the total advances and settlers' repayments, for considerable remissions of indebtedness have been made in all States as a result of reappraisements of land values and the writing down of debts. In general, they include both principal and interest outstanding.

A summary for Western Australia is not included, as practically the only Governmental funds being made available are Commonwealth (see § 9 above).

In New South Wales and Victoria expenditure on the acquisition, development and improvement of land for war service land settlement is provided for by the States, and particulars thereof are included in the respective summaries. In Queensland no money is paid for the value of the land acquired, most land being occupied on lease from the Government, but advances in respect of improvements are included. In the other States, this expenditure is provided for by the Commonwealth and particulars are included in § 9 above.

Loans (Agricultural Occupations) under the Commonwealth Re-establishment and Employment Act 1945 and certain advances for the purchase of wire-netting and for other purposes made from finance provided by the Commonwealth are included in the summaries following.

2. New South Wales.—The following table shows particulars respecting advances, etc., under State Authorities to 30th June, 1951 :—

#### ADVANCES TO SETTLERS, ETC. : NEW SOUTH WALES.

Advances, etc.	Advances, etc., made during 1950-51.	Total Advances, etc., at 30th June, 1951.	Balance outstanding at 30th June, 1951.	
			Number of Accounts.	Amount.
	£	£		£
Department of Lands—				
Closer Land Settlement .. .. .		15,113,154	5,966	(a) 2,966,481
Soldier Settlers, 1914-18 War .. .. .		(b) 3,196,005	570	201,413
1939-45 War .. .. .	2,024,110	5,635,203	1,563	2,684,497
Soldier Land Settlement—Acquisition, development and improvement of land, War Service Land Settlement Agreement Act .. .. .	2,556,785	12,542,597	1,631	(c) 10,511,567
Wire Netting .. .. .		1,494,653	574	48,145
Prickly Pear .. .. .	7,884	199,942	163	3,806
Rural Bank—				
General Bank Department—				
Commonwealth Re-establishment and Employment Act 1945 .. .. .	413,563	4,069,403	3,827	2,397,753
Other .. .. .	3,850,286	59,472,167	10,801	17,111,645
Government Agency Department—				
Rural Industries .. .. .	64,682	7,775,732	591	245,026
Unemployment Relief and Dairy Promotion .. .. .	25,686	1,562,316	581	145,425
Rural Reconstruction(d) .. .. .	186,398	11,795,217	1,234	2,222,251
Shallow Boring .. .. .	28,979	1,022,535	229	76,874
Farm Water Supplies .. .. .	24,988	71,244	115	56,565
Soil Conservation .. .. .	540	905	3	842
Irrigation Areas .. .. .	199,627	(e) 19,568	412	1,464,518
Government Guarantee Agency .. .. .	2,077	219,568	10	4,927
Closer Settlement Agency .. .. .	1,088	167,914	65	80,665
<b>Total .. .. .</b>	<b>9,386,693</b>	<b>124,338,555</b>	<b>28,335</b>	<b>40,222,400</b>

(a) Excludes an amount of £4,586,235 to 30th June, 1951, capitalized on conversion into leasehold under the Closer Settlement Amendment (Conversion) Act 1943. (b) In addition, the sum of £1,926,662 to 30th June, 1951 has been expended on developmental works on soldiers' settlements.

(c) Includes capital value of Closer Settlement Leases, £9,114,790, and unpaid balance and interest on structural improvements, £1,394,151. (d) Includes Debt Adjustment, Drought Relief, and Marginal Wheat Areas Scheme Advances (Commonwealth and State Moneys), amount outstanding £1,683,810.

(e) Not available. (f) Incomplete.



3. **Victoria.**—The following table shows particulars respecting advances, etc., under State Authorities to 30th June, 1951:—

**ADVANCES TO SETTLERS, ETC. : VICTORIA.**

Advances, etc.	Advances, etc., made during 1950-51.	Total Advances, etc., at 30th June, 1951.	Balance outstanding at 30th June, 1951.	
			Number of Persons.	Amount.
	£	£		£
State Savings Bank, Credit Foncier—				
Civilians .. .. .	48,435	11,598,406	1,252	1,022,581
Discharged Soldiers .. .. .	16	847,885	81	49,938
Treasurer—				
Cool Stores, Canneries, etc. .. .. .	30,000	1,109,783	(a) 6	281,586
Department of Lands and Survey—				
Closer Settlement Settlers and Soldier Settlers		b 46,904,855	3,780	4,212,084
Cultivators of Land .. .. .	1,249	2,462,949	406	72,792
Wire Netting .. .. .	52,952	671,518	482	77,562
Soldier Settlement Commission—				
Purchase of land .. .. .	1,830,049	8,436,269		} 10,989,305
Development and Improvement of Holdings	2,101,914	5,773,058		
Advances for sales of land not required for Soldier Settlement(c)	137,764	515,377	4	21,853
Advances for Settlers' Lease Liability, Soldier Settlement Act 1946(d)	2,070,698	2,070,698	322	2,070,698
Advances to assist in acquiring and developing single unit farms	1,736,861	7,411,594	1,847	6,528,983
Advances for improvements, stock, implements, etc.	235,137	570,895	508	321,025
Advances for shares in Co-operative Companies, Soldier Settlement Act 1946	32,144	32,144	175	32,134
Commonwealth Re-establishment and Employment Act 1945 Advances .. .. .	253,290	1,763,032	1,680	900,315
<b>Total .. .. .</b>	<b>8,530,509</b>	<b>90,168,463</b>	<b>10,543</b>	<b>26,580,856</b>

(a) Companies and Co-operative Societies. (b) Represents consolidated debts of settlers (Section 30, Act 4091). (c) Sale price of land not required for settlement; balance outstanding represents instalments not yet due where terms were given to purchasers. (d) Excludes an amount of £674,068 representing excess acquisition, development and improvement cost which has been written off and is at present borne wholly by the State.

4. **Queensland.**—The following table shows particulars of advances to 30th June, 1951. The figures exclude transactions in land:—

**ADVANCES TO SETTLERS : QUEENSLAND.**

Advances.	Advances, etc., made during 1950-51.	Total Advances, etc., at 30th June, 1951.	Balance outstanding at 30th June, 1951.	
			Number of Accounts.	Amount.
	£	£		£
Co-ordination of Rural Advances and Agricultural Bank Acts .. .. .	1,192,362	14,800,726	2,951	3,851,708
Discharged Soldiers' Settlement (a) .. .. .	123	2,470,289	352	77,492
Water Facilities .. .. .		58,079	20	853
Wire Netting, etc. .. .. .		1,019,403	713	77,534
Seed Wheat and Barley .. .. .	137	(b) 136,599	(c)	12,351
Drought Relief .. .. .		699,369	53	96,564
War Service Land Settlement .. .. .	519,986	1,255,874	329	1,173,463
Income (Unemployment Relief and State Development) Tax Acts (d) .. .. .	1	1,184,561	(e) 590	114,229
Irrigation .. .. .		54,914	19	7,234
Farmers' Assistance (Debt Adjustment Acts) .. .. .	20,205	1,033,272	154	301,851
Commonwealth Re-establishment and Employment Act 1945 .. .. .	160,130	842,890	922	502,446
<b>Total .. .. .</b>	<b>1,892,944</b>	<b>23,555,976</b>	<b>(e) 6,103</b>	<b>6,215,725</b>

(a) Includes advances to group settlers through the Lands Department, as well as advances through the Agricultural Bank. (b) Includes accrued interest. (c) Not available. (d) Largely for relief to cotton and tobacco growers and for rural development (ringbarking, clearing, fencing, etc.). (e) Incomplete.

5. South Australia.—The following table shows particulars respecting advances under State Authorities to 30th June, 1951 :—

ADVANCES TO SETTLERS : SOUTH AUSTRALIA.

Advances.	Advances made during 1950-51.	Total Advances at 30th June, 1951.	Balance outstanding at 30th June, 1951.	
			Number of Persons.	Amount.
	£	£		£
Department of Lands—				
Advances to Soldier Settlers .. .. .	179,561	4,853,158	569	1,540,247
Advances to Blockholders .. .. .	..	41,451	..	..
Advances for Sheds and Tanks .. .. .	..	75,693	40	7,315
Advances under Closer Settlement Acts .. .. .	60,558	2,665,361	767	998,347
Advances under Agricultural Graduates Settlement Act .. .. .	..	62,258	20	31,951
Settlement of Returned Service Personnel, 1939-45 War .. .. .	230,070	460,266	338	431,694
Primary Producers Assistance Department—				
Advances in Drought-affected Areas .. .. .	..	2,146,768	70	30,308
Advances under Farmers Relief Acts .. .. .	..	4,435,509	70	17,848
Irrigation Branch—				
Advances to Civilians .. .. .	229	291,178	114	32,579
Advances to Soldier Settlers .. .. .	947	1,046,215	488	513,537
State Bank of South Australia (Credit Foncier Department) .. .. .	371,667	6,607,247	950	995,460
Advances to Primary Producers .. .. .	4,233	1,197,473	156	268,373
Advances to Settlers for Improvements(a) .. .. .	1,547	939,086	178	27,600
Advances under Vermin and Fencing Acts .. .. .	1,045	1,378,799	811	106,240
Advances under Loans to Producers Act .. .. .	17,985	522,082	44	285,084
Commonwealth Re-establishment and Employment Act 1945 .. .. .	109,645	730,597	621	440,877
<b>Total</b> .. .. .	<b>977,487</b>	<b>27,453,141</b>	<b>5,236</b>	<b>5,727,460</b>

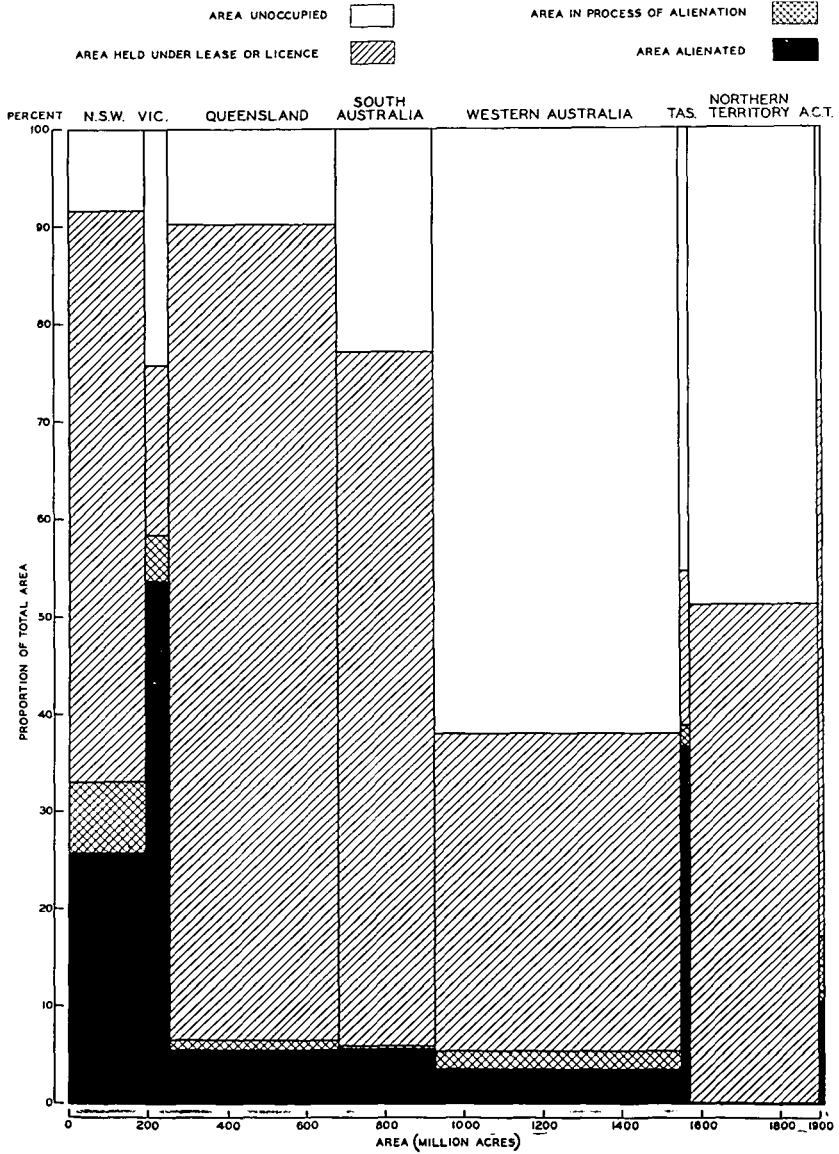
(a) Reductions in figures due to adjustment of cancelled and re-allotted holdings.

6. Western Australia.—The operations prior to 1945 covered in this section related to moneys made available through, or by, the old Agricultural Bank and other Government Departments for the purpose of agricultural development. On 1st October, 1945, however, the Agricultural Bank was reconstituted as the Rural and Industries Bank of Western Australia, and was given authority to operate similarly to the associated banks. Certain securities in the books of the old bank were taken over by the general banking division of the new bank, and the clients concerned then operated with privileges and obligations similar to those provided by other banking institutions. The majority of the remaining securities, also, were eventually transferred.

At present, very limited funds are being made available by the State Government for advances for agricultural development, the bulk of the moneys for this purpose being provided by the Commonwealth Government under the War Service Land Settlement and Commonwealth Re-establishment and Employment Acts. Particulars of this expenditure are shown in § 9 above.

7. Tasmania.—The following table shows particulars of advances under State Authorities to 30th June, 1951. Although not regarded as outstanding advances by the Department of Agriculture the figures in connexion with closer and soldier land settlement have been included in the table for comparative purposes; the areas so purchased have been leased on 99-year terms having an option of purchase which the leaseholder may exercise at any time.

# LAND TENURE: AUSTRALIA, 1951



ADVANCES TO SETTLERS, ETC. : TASMANIA.

Advances, etc.	Advances made during 1950-51.	Total Advances at 30th June, 1951.	Balance outstanding at 30th June, 1951.	
			Number of Persons.	Amount.
<b>Agricultural Bank—</b>	£	£		£
State Advances Act and Rural Credits ..	247,626	2,581,608	151	(a) 469,200
Orchardists' Relief, 1926 ..	..	46,832	2	85
Unemployed (Assistance to Primary Producers) Relief Act 1930-1931 ..	..	114,302	12	493
Bush Fire Relief 1934 ..	..	14,855	4	60
Flood Sufferers' Relief Act 1929 ..	..	35,523	1	478
Crop Losses, 1934-35 ..	..	10,086	6	374
Assistance to Fruitgrowers Act 1941 ..	..	34,556	4	351
Flood Sufferers' Relief Act, 1942 ..	..	3,764	..	..
Flood Sufferers' Relief Act, 1944 ..	..	1,902	5	874
Commonwealth Re-establishment and Employment Act 1945 ..	68,176	381,763	404	291,279
Primary Producers' Relief Act 1947 ..	..	297,846	312	267,942
<b>Minister for Agriculture—</b>				
<b>Soldier Settlers—</b>				
Advances ..	7,888	946,748	39	(b) 27,189
Purchase of Estates, etc.(c) ..	3,802	(d)2,547,149	(d) 639	586,457
<b>Closer Settlers—</b>				
Advances ..	315	94,756	2	1,964
Purchase of Estates, etc.(c) ..	853	(d) 520,509	(d) 140	149,726
<b>Total</b> ..	<b>328,660</b>	<b>7,632,199</b>	<b>2,521</b>	<b>1,796,322</b>

(a) Excludes £11,161 forfeited properties. (b) Excludes £202,406 advances capitalized, £79,114 advances written off to bad debts, and £40,789 written off to revaluation. (c) Not regarded as outstanding advances by the Department. (d) Number of leaseholders, including those to whom advances have been made.

8. Northern Territory.—During the financial year 1950-51 one advance totalling £600 was made. The total amount advanced to 30th June, 1951, was approximately £27,570. At 30th June, 1951 the balance outstanding from 7 settlers, including interest, was £1,214.

9. Summary of Advances.—The following table is a summary for each State (except Western Australia) and the Northern Territory to the 30th June, 1951. The particulars, so far as they are available, represent the total sums advanced to settlers, including amounts spent by the various Governments in the purchase and improvement of estates disposed of by closer and soldier land settlement, while the amounts outstanding reveal the present indebtedness of settlers to the Governments, including arrears of principal and interest but excluding amounts written off debts and adjustments for land revaluations. Particulars of Loans (Agricultural Occupations) under the Commonwealth Re-establishment and Employment Act 1945 and of certain advances for wire-netting and other purposes provided from Commonwealth funds are included.

ADVANCES TO SETTLERS, ETC. : SUMMARY.

State.	Advances, etc., made during 1950-51.	Total Advances, etc., at 30th June, 1951.	Balance outstanding at 30th June, 1951.	
			Number of Persons.	Amount.
	£	£		£
New South Wales(a) ..	9,386,693	(b)124,338,555	(c) 28,335	40,222,400
Victoria(a) ..	8,530,509	90,168,463	10,543	26,580,856
Queensland ..	1,892,944	23,555,976	(b)(c) 6,703	6,215,725
South Australia ..	977,487	27,453,141	5,236	5,727,460
Tasmania ..	328,660	7,632,199	2,521	1,796,322
Northern Territory ..	600	27,570	7	1,214

(a) Includes expenditure on acquisition, development and improvement of land for war service land settlement (see p. 86). (b) Incomplete. (c) Number of accounts.

### § 11. Alienation and Occupation of Crown Lands.

1. **General.**—The figures shown in the previous parts of this chapter show separately the areas alienated, in process of alienation, or occupied under various tenures. The following tables set out the position in regard to the tenure of land in each State, in the Northern Territory, and in the Australian Capital Territory during the latest year for which information is available—1951 in all cases. A summary for each State and Territory and for Australia as a whole is also supplied. Particulars for each year from 1940 to 1950 appear in *Primary Industries Bulletin* No. 45, Part 1.—Rural Industries, page 7. The area occupied includes roads, permanent reserves, forests, etc. In some cases, lands which are permanently reserved from alienation are occupied under leases and licences, and have been included therein. Lands occupied under leases or licences for pastoral purposes are frequently held on short tenures only, and could thus be made available for settlement practically whenever required.

2. **New South Wales.**—The total area of New South Wales is 198,037,120 acres, of which 25.8 per cent. had been alienated at 30th June, 1951; 7.3 per cent. was in process of alienation; 58.8 per cent. was held under leases and licences; and the remaining 8.1 per cent. was unoccupied, or held by the Crown.

The following table shows particulars as at 30th June, 1951 :—

#### ALIENATION AND OCCUPATION OF CROWN LANDS : NEW SOUTH WALES. 30th JUNE, 1951.

(Acres.)

Particulars.	Area.	Particulars.	Area.
<b>1. Alienated.</b>		<b>3. Held under Leases and Licences.</b>	
Granted and sold prior to 1862 .. ..	7,146,579	Homestead selections and grants ..	1,650,685
Sold by auction and other sales, 1862 to date .. ..	15,387,108	Alienable leases, long-term and perpetual .. ..	26,604,162
Conditionally sold, 1862 to date .. ..	33,343,406	Long-term leases with limited right of alienation .. ..	1,380,305
Granted under Volunteer Land Regulations, 1867 to date .. ..	172,198	Other long-term leases .. ..	79,651,629
Granted for public and religious purposes .. ..	265,880	Short-term leases and temporary tenures .. ..	4,742,551
		Forest leases .. ..	2,135,290
	56,315,171	Mining and auriferous leases (a) (b) .. ..	192,613
Less lands resumed or reverted to Crown .. ..	5,188,982	<b>Total</b> .. ..	<b>116,357,235</b>
<b>Total</b> .. ..	<b>51,126,189</b>		
<b>2. In Process of Alienation.</b>		<b>4. Unoccupied</b> —Particulars of Lord Howe Island not being available, the area, 3,220 acres, is included under unoccupied (Approximate) .. ..	
Conditional purchases .. ..	12,405,284		16,123,796
Closer settlement purchases .. ..	1,651,793		
Soldiers' group purchases .. ..	167,298		
Other forms of sale .. ..	205,525		
<b>Total</b> .. ..	<b>14,429,900</b>	<b>5. Total Area of State</b> .. ..	<b>198,037,120</b>

(a) At 31st December, 1950.

(b) Excludes lands held by virtue of miners' rights and business licences; also lease areas applied for, and in occupation, under the Mining Act 1906, but not yet confirmed.

3. **Victoria.**—The total area of Victoria is 56,245,760 acres, of which 53.7 per cent. had been alienated up to the end of 1951; 4.8 per cent. was in process of alienation under deferred payments and closer settlement schemes; 17.4 per cent. was occupied under leases and licences; and 24.1 per cent. was unoccupied or held by the Crown.

The following table shows the distribution :—

ALIENATION AND OCCUPATION OF CROWN LANDS : VICTORIA,  
31st DECEMBER, 1951.

(Acres.)

Particulars.	Area.	Particulars.	Area.
1. <i>Alienated</i> .. .. .	30,179,235	3. <i>Leases and Licences held—</i> Under Lands Department—	
		Perpetual Leases .. .. .	78,862
		Agricultural College Leases .. .. .	42,524
		Other Leases and Licences .. .. .	19,908
		Temporary (Yearly) Grazing Licences .. .. .	8,567,461
		Under Mines Department(a) .. .. .	1,096,495
		Total .. .. .	9,805,250
2. <i>In Process of Alienation—</i> Exclusive of Mallee and Closer Settlement Lands .. .. .	375,470	4. <i>Occupied by the Crown or Un-</i> <i>occupied</i> .. .. .	13,565,416
Mallee Lands (exclusive of Closer Settlement Lands) .. .. .	1,788,672		
Closer Settlement Lands .. .. .	531,684	5. <i>Total Area of State</i> .. .. .	56,245,760
Village Settlement .. .. .	33		
Total .. .. .	2,695,859		

(a) Includes State Coal Mine area, 7,575 acres and State Electricity Commission area, 2,800 acres.

4. *Queensland.*—The total area of this State is 429,120,000 acres, of which, on 31st December, 1951, 5.6 per cent. was alienated; 0.9 per cent. was in process of alienation; and 83.8 per cent. was occupied under leases and licences. The remainder, 9.7 per cent., was either unoccupied or held as reserves or for roads.

The distribution is shown in the following table :—

ALIENATION AND OCCUPATION OF CROWN LANDS : QUEENSLAND,  
31st DECEMBER, 1951.

(Acres.)

Particulars.	Area.	Particulars.	Area.
1. <i>Alienated—</i>		3. <i>Occupied under Leases and</i> <i>Licences—</i>	
By Purchase .. .. .	23,706,878	Pastoral Leases .. .. .	243,540,400
Without Payment .. .. .	92,116	Occupation Licences .. .. .	17,881,520
		Grazing Selections and Settle- ment Farm Leases .. .. .	87,197,446
		Leases—Special Purposes .. .. .	(a) 1,795,851
		Mining Leases .. .. .	499,833
		Perpetual Leases—Selections and Perpetual Lease Prickly Pear Selections .. .. .	6,531,982
		Auction Perpetual Leases, etc. Forest Grazing Leases (of Reserves) .. .. .	(b) 514,171
		Total .. .. .	359,643,823
Total .. .. .	23,798,994	4. <i>Reserves (net, not leased), Surveyed</i> <i>Roads and Surveyed Stock</i> <i>Routes</i> .. .. .	22,342,039
2. <i>In Process of Alienation</i> .. .. .	3,951,220	5. <i>Unoccupied</i> .. .. .	19,383,924
		6. <i>Total Area of State</i> .. .. .	429,120,000

(a) Special leases of Crown Land, 577,849 acres; special leases of reserves, 1,218,002 acres.  
(b) Includes 481,157 acres over which perpetual country leases were granted to Queensland-British Food Corporation.

5. **South Australia.**—The area of South Australia is 243,244,800 acres and at 30th June, 1951, 5.7 per cent. was alienated, 0.2 per cent. in process of alienation; 71.4 per cent. occupied under leases and licences; and 22.7 per cent. occupied by the Crown or unoccupied.

The following table shows the distribution :—

**ALIENATION AND OCCUPATION OF CROWN LANDS : SOUTH AUSTRALIA,  
30th JUNE, 1951.  
(Acres.)**

Particulars.	Area.	Particulars.	Area.
1. <i>Alienated</i> —		3. <i>Held under Lease and Licence</i> —	
Sold .. .. .	13,774,929	Perpetual Leases, including Ir-	
Granted for Public Purposes .. .	135,419	rigation Leases .. .. .	18,632,080
		Pastoral Leases .. .. .	115,382,699
		Other Leases and Licences .. .	2,868,328
		Mining Leases and Licences .. .	36,669,380
Total .. .. .	13,910,348	Total .. .. .	173,553,087
		4. <i>Area Unoccupied (a)</i> .. .. .	55,276,041
2. <i>In Process of Alienation</i> .. .. .	505,324	5. <i>Total Area of State</i> .. .. .	243,244,800

(a) Includes surveyed roads, railways and other reserves, salt water lakes, lagoons, and fresh water lakes.

6. **Western Australia.**—The total area of Western Australia is 624,588,800 acres, of which, at 31st December, 1951, 3.6 per cent. was alienated; 1.9 per cent. was in process of alienation; and 32.8 per cent. was occupied under leases and licences issued either by the Lands, Mines or Forests Departments. The balance of 61.7 per cent. was unoccupied.

The following table shows the distribution :—

**ALIENATION AND OCCUPATION OF CROWN LANDS : WESTERN AUSTRALIA,  
31st DECEMBER, 1951.  
(Acres.)**

Particulars.	Area.	Particulars.	Area.
1. <i>Alienated</i> .. .. .	22,281,745	3. <i>Leases and Licences in Force</i> —	
		(i) Issued by Lands Department—	
		Pastoral Leases .. .. .	197,735,997
		Special Leases .. .. .	2,234,516
		Leases of Reserves .. .. .	564,860
		Residential Lots .. .. .	4,714
		Perpetual Leases .. .. .	797,876
		(ii) Issued by Mines Department—	
		Gold-mining Leases .. .. .	25,939
		Mineral Leases .. .. .	43,586
		Miners' Homestead Leases .. .. .	28,488
		(iii) Issued by Forests Department—	
		Timber Permits .. .. .	3,456,691
		Total .. .. .	204,892,667
		4. <i>Area Unoccupied</i> .. .. .	385,344,301
Total .. .. .	12,070,087	5. <i>Total Area of State</i> .. .. .	624,588,800

7. **Tasmania.**—The total area of Tasmania is 16,778,000 acres, of which, at 30th June, 1951, 36.8 per cent. had been alienated; 2.1 per cent. was in process of alienation; 15.9 per cent. was occupied under leases and licences for either pastoral, agricultural, timber, or mining purposes, or for closer or soldier settlement; while the remainder (45.2 per cent.) was unoccupied or reserved by the Crown.

The following table shows the distribution :—

**ALIENATION AND OCCUPATION OF CROWN LANDS : TASMANIA.  
30th JUNE, 1951.**

(Acres.)

Particulars.	Area.	Particulars.	Area.
1. <i>Alienated</i> .. .. .	6,167,907	3. <i>Leases and Licences</i> —continued.	
		(i) Issued by Lands Department—continued.	
		Soldier Settlement ..	115,597
		Short-term Leases ..	13,924
2. <i>In Process of Alienation</i> ..	359,248	(ii) Issued by Mines Department ..	30,462
		<b>Total</b> .. .. .	<b>2,668,998</b>
3. <i>Leases and Licences</i> —		4. <i>Area Occupied by the Crown or Un-</i>	
(i) Issued by Lands Department—		<i>occupied</i> (a) .. .. .	<b>7,581,847</b>
Islands .. .. .	157,698		
Ordinary Leased Land ..	1,850,626	5. <i>Total Area of State</i> .. .. .	<b>16,778,000</b>
Land Leased for Timber ..	466,736		
Closer Settlement .. .. .	33,955		

(a) Includes reservations for roads and various other public purposes, 4,042,810 acres, lands occupied by Commonwealth or State Departments, 21,775 acres and land acquired for Soldier and Closer Settlement but not leased, 163,482 acres.

8. **Northern Territory.**—The area of the Northern Territory is 335,116,800 acres, of which, at 30th June, 1951, only 0.1 per cent. was alienated; 51.3 per cent. was held under leases and licences; 13.6 per cent. was reserved for aboriginal, defence and public requirements; and the remaining 35.0 per cent. was unoccupied and unreserved.

The following shows the mode of occupancy of areas at 30th June, 1951 :—Alienated, 455,322 acres; leased—pastoral leases, 129,266,284 acres, other leases, licences and mission stations, 42,574,771 acres, total leased, 171,841,055 acres; reserved for aboriginal, defence and public requirements, 45,647,537 acres; unoccupied and unreserved, 117,172,886 acres: total, 335,116,800 acres.

9. **Australian Capital Territory.**—Alienated land of the Territory (excluding the Jervis Bay area) at the end of 1951 comprised 10.9 per cent. of the total area; land in process of alienation 7.0 per cent.; land held under lease and licence 54.5 per cent.; land otherwise occupied, including city tenures, 11.4 per cent.; and unoccupied 16.2 per cent.

The following are the particulars of land areas in the Australian Capital Territory at the end of 1951 :—Alienated, 63,635 acres; in process of alienation, 41,053 acres; leased—grazing, agricultural, etc., leases, 310,620 acres, grazing licences, 7,174 acres, total leased, 317,794 acres; otherwise occupied, 66,190 acres; unoccupied, 94,128 acres; total, 582,800 acres. Including the Jervis Bay area of 18,000 acres—12,788 acres leased and 5,212 acres otherwise occupied—the grand total for the whole Territory is 600,800 acres.



10. Summary.—The following table provides a summary for each State and Territory, and for Australia as a whole, of the alienation and occupation of Crown lands in 1951 :—

ALIENATION AND OCCUPATION OF CROWN LANDS, 1951.

State or Territory.	Private Lands.				Crown Lands.				Total Area. '000 Acres.
	Alienated.		In Process of Alienation.		Leased or Licensed.		Other.		
	'000 Acres.	Per Cent.	'000 Acres.	Per Cent.	'000 Acres.	Per Cent.	'000 Acres.	Per Cent.	
N.S.W.(a) ..	51,126	25.82	14,430	7.29	116,357	58.75	16,124	8.14	108,037
Victoria(b) ..	30,179	53.66	2,696	4.79	9,805	17.43	13,566	24.12	56,246
Queensland(b)	23,799	5.55	3,951	0.92	359,644	83.81	41,726	9.72	429,120
S. Aust.(a) ..	13,911	5.72	505	0.21	173,553	71.35	55,276	22.72	243,245
W. Aust.(b) ..	22,282	3.57	12,070	1.93	204,892	32.80	385,344	61.70	624,588
Tasmania(a) ..	6,168	36.76	359	2.14	2,669	15.91	7,582	45.19	16,778
Nor. Terr.(a) ..	455	0.13	..	..	171,841	51.28	162,821	48.59	335,117
A.C.T.(b) ..	64	10.59	41	6.83	331	55.03	165	27.55	601
Australia ..	147,984	7.77	34,052	1.79	1,039,092	54.58	682,604	35.86	1,903,732

(a) At 30th June.

(b) At 31st December.

The diagram on page 89 shows in graphical form the areas alienated from the State, those in process of alienation under the various systems of deferred payments, the areas held under leases or licences and the areas left unoccupied.

## CHAPTER V. TRANSPORT AND COMMUNICATION.

### A. SHIPPING.

#### § 1. System of Record.

In the system of recording statistics of oversea shipping, Australia is considered as a unit, and, therefore, only one entry and one clearance is counted for each voyage, without regard to the number of States visited (*see also* Section 5 following, paragraph 1).

On the arrival at, or departure from, a port in Australia, whether from or for an oversea country or from another port in Australia, the master or agent must "enter" the vessel with the Customs authorities at the port, and supply certain prescribed information in regard to the ship, passengers and cargo. At the end of each month the information so obtained is forwarded to this Bureau. This arrangement has been in operation since 1st July, 1924.

The volume of the vessel, as distinct from the cargo it carries, is recorded in net tons, i.e., the gross tonnage or internal cubic capacity less certain deductions on account of crew spaces, engine room, water ballast and other spaces not used for passengers or cargo. It is thus a rough measure of the capacity of the vessel for cargo or passengers. The unit of measurement is the *ton register* of 100 cubic feet.

Cargo is recorded in *tons weight* or in *tons measurement* (40 cubic feet).

From 1st July, 1914 the Trade and Shipping of Australia have been recorded for the fiscal years ending 30th June.

Particulars of vessels exclusively engaged in transporting troops and war materials during the 1939-45 War years are excluded from the following tables of "oversea" and "interstate" shipping movement which, therefore, relate only to vessels engaged in normal trade (i.e., carrying part or full cargo for civil purposes), and are strictly comparable with pre-war and post-war figures.

#### § 2. Oversea Shipping.

1. **Total Movement.**—The following table shows the number of entrances and clearances combined of oversea vessels at Australian ports, and the aggregate net tonnage, during each of the years 1921-22 to 1950-51:—

#### OVERSEA SHIPPING : ENTRANCES AND CLEARANCES (COMBINED) OF VESSELS DIRECT, AUSTRALIA.

Year.	Vessels.	Net Tons.	Year.	Vessels.	Net Tons.	Year.	Vessels.	Net Tons.
		'000.			'000.			'000.
1921-22	3,111	9,081	1931-32	3,057	11,396	1941-42	2,554	10,768
1922-23	2,935	9,241	1932-33	3,114	11,842	1942-43	2,025	8,113
1923-24	3,122	9,923	1933-34	2,774	10,764	1943-44	2,380	9,687
1924-25	3,449	11,201	1934-35	3,139	11,889	1944-45	2,147	9,133
1925-26	3,156	10,669	1935-36	3,260	12,545	1945-46	2,371	10,693
1926-27	3,261	11,164	1936-37	3,297	12,612	1946-47	2,489	10,406
1927-28	3,167	10,925	1937-38	3,809	14,221	1947-48	2,949	11,928
1928-29	3,175	11,097	1938-39	3,814	13,546	1948-49	3,486	15,013
1929-30	3,061	10,944	1939-40	3,362	13,076	1949-50	3,907	17,378
1930-31	3,107	11,250	1940-41	2,669	11,268	1950-51	3,903	17,307

The average tonnage per vessel has risen from 2,919 tons per vessel in 1921-22 to 4,449 tons in 1949-50 and 4,434 tons in 1950-51.

Particulars of the total oversea movement of shipping for each year from 1822 to 1920-21 will be found in Official Year Book No. 15, p. 507.

2. **Total Oversea Shipping, States.**—The following table shows, for each State, the number of entrances and clearances of vessels direct from and to oversea countries, and the aggregate net tonnage, during the year 1950-51 :—

**OVERSEA SHIPPING : ENTRANCES AND CLEARANCES OF VESSELS DIRECT,  
STATES, 1950-51.**

State or Territory.	Entrances.		Clearances.	
	Number.	Net Tons.	Number.	Net Tons.
		'000.		'000.
New South Wales .. .. .	498	2,087	481	1,983
Victoria .. .. .	426	1,945	347	1,599
Queensland .. .. .	253	840	354	1,217
South Australia .. .. .	160	694	163	692
Western Australia .. .. .	532	2,880	610	3,039
Tasmania .. .. .	30	127	29	159
Northern Territory .. .. .	12	27	8	18
<b>Australia .. .. .</b>	<b>1,911</b>	<b>8,600</b>	<b>1,992</b>	<b>8,707</b>

3. **Shipping Communication with various Countries.**—Records of the number and tonnage of vessels arriving from and departing to particular countries, as they are invariably made, may be misleading for the reason that the tonnage of a vessel can be recorded against one country only, notwithstanding that the same vessel on the same voyage may carry cargo or passengers to or from Australia from or to several countries. For instance, a mail steamer on a voyage from the United Kingdom to Australia, through the Suez Canal, may call at Marseilles, Genoa, Port Said, Aden and Colombo, yet can be credited only to the United Kingdom, the country where the voyage commenced, to the exclusion of all of the others from the records. Also a number of vessels touch at New Zealand ports on their voyages to and from the United States of America and Canada, but their tonnages are not included in the records of Australian shipping trade with New Zealand. Similarly, the record of shipping engaged in trade between Australia and the United Kingdom via South African ports does not show tonnage to and from South Africa, the whole of it being included in the figures for United Kingdom. In view of this defect, statistics relating to the direction of the shipping to and from Australia are restricted to the following tables in which countries situated on the main trade

routes are grouped together. This grouping into larger geographical divisions to some extent avoids the limitations referred to, except, as already pointed out, in the case of Africa and New Zealand.

**OVERSEA SHIPPING : COUNTRY GROUPS FROM WHICH ENTERED OR TO WHICH CLEARED, AUSTRALIA.**

Countries.	With Cargo or in Ballast.	1938-39.	1946-47.	1947-48.	1948-49.	1949-50.	1950-51.
NET TONNAGE ENTERED ('000).							
United Kingdom and European Countries ..	Cargo	1,878	943	1,130	2,060	3,252	3,393
	Ballast	121	2	6	45	77	10
New Zealand(a) ..	Cargo	767	302	303	442	565	484
	Ballast	242	224	223	128	197	204
Asiatic Countries and Pacific Islands ..	Cargo	2,206	1,984	2,288	2,778	3,250	3,402
	Ballast	256	426	933	928	429	179
Africa(a) ..	Cargo	44	370	273	236	277	308
	Ballast	123	47	88	133	33	4
North and Central America ..	Cargo	1,059	861	823	693	602	582
	Ballast	..	1	3	10	8	3
South America ..	Cargo	10	26	11	21	26	31
	Ballast	5	..	2	2	..	..
Total ..	Cargo	5,964	4,486	4,828	6,230	7,972	8,200
	Ballast	747	700	1,255	1,246	744	400
Total Cargo and Ballast	..	6,711	5,186	6,083	7,476	8,716	8,600

NET TONNAGE CLEARED ('000).							
United Kingdom and European Countries ..	Cargo	2,778	1,643	1,996	2,785	2,767	2,900
	Ballast	13	17	..	54	78	57
New Zealand(a) ..	Cargo	901	575	565	722	806	675
	Ballast	37	75	11	52	36	40
Asiatic Countries and Pacific Islands ..	Cargo	1,687	1,387	1,601	1,786	2,032	1,848
	Ballast	743	839	980	1,499	2,205	2,296
Africa(a) ..	Cargo	172	142	172	138	190	342
	Ballast	6	4	3	25	47	28
North and Central America ..	Cargo	440	409	373	392	391	375
	Ballast	46	108	144	79	83	117
South America ..	Cargo	12	9	..	5	23	29
	Ballast	..	12	..	..	4	..
Total ..	Cargo	5,990	4,165	4,707	5,828	6,209	6,169
	Ballast	845	1,055	1,138	1,709	2,453	2,538
Total Cargo and Ballast	..	6,835	5,220	5,845	7,537	8,662	8,707

(a) See explanation above.

4. Nationality of Oversea Shipping.—Owing to war conditions, the proportion of shipping of British nationality progressively declined from 72.82 per cent. of the total tonnage entered in 1938-39 to 43.40 per cent. in 1943-44. On the other hand, the proportion of United States of America shipping visiting Australia during the same period advanced from 2.61 per cent. in 1938-39 to 33.07 per cent. in 1943-44. Thereafter the trend was reversed, and in 1950-51 the proportion of British shipping entered was 70.83 per cent. and of American 2.34 per cent.

Particulars of the nationality of overseas shipping which entered Australia during the five years ended 30th June, 1951 and the year 1938-39 are given in the following table:—

**OVERSEA SHIPPING : ENTRANCES ACCORDING TO NATIONALITY OF VESSELS, AUSTRALIA.**

(<sup>'000</sup> Net Tons.)

Nationality.	1938-39.	1946-47.	1947-48.	1948-49.	1949-50.	1950-51.
<b>BRITISH—</b>						
Australian .. ..	331	153	86	218	250	214
Canadian .. ..	20	47	48	69	41	26
New Zealand .. ..	563	109	104	147	243	167
United Kingdom .. ..	3,744	3,537	3,988	4,956	5,344	5,452
Other British .. ..	229	107	202	123	183	232
In Cargo .. ..	4,379	3,420	3,588	4,592	5,559	5,781
In Ballast .. ..	508	533	840	921	502	310
Total British .. ..	4,887	3,953	4,428	5,513	6,061	6,091
Proportion of total %	72.82	76.22	72.79	73.74	69.54	70.83
<b>FOREIGN—</b>						
American (U.S.) .. ..	175	437	571	356	466	201
Danish .. ..	55	17	50	99	143	154
Dutch .. ..	291	225	244	269	286	326
French .. ..	108	63	76	80	129	115
German .. ..	141	..	..	..	..	..
Italian .. ..	68	15	9	162	161	192
Japanese .. ..	330	..	..	..	..	..
Norwegian .. ..	325	218	206	489	690	665
Swedish .. ..	124	119	..	151	147	196
Other Foreign .. ..	207	139	499	357	633	660
In Cargo .. ..	1,585	1,066	1,240	1,638	2,413	2,419
In Ballast .. ..	239	167	415	325	242	90
Total Foreign .. ..	1,824	1,233	1,655	1,963	2,655	2,509
Proportion of total %	27.18	23.78	27.21	26.26	30.46	29.17
<b>ALL NATIONALITIES—</b>						
In Cargo .. ..	5,964	4,486	4,828	6,230	7,972	8,200
Proportion of total %	88.87	86.50	79.37	83.33	91.46	95.35
In Ballast .. ..	747	700	1,255	1,246	744	400
Proportion of total %	11.13	13.50	20.63	16.67	8.54	4.65
Total, All Nationalities	6,711	5,186	6,083	7,476	8,716	8,600

The Australian tonnage which entered Australia from overseas during the year 1950-51 represented 2.49 per cent. of the total tonnage entered and was confined mainly to the New Zealand and Pacific Island trade.

The proportion of overseas shipping tonnage which entered Australia in cargo ranged, in the years shown, between about 80 per cent. and 95 per cent., the lowest percentage being 79.37 in 1947-48 and the highest 95.35 in 1950-51. The proportion of shipping which cleared in cargo, however, declined from 87.64 per cent. in 1938-39 to 70.85 per cent. in 1950-51, the trend over the period being generally downward.

### § 3. Shipping at Principal Ports.

1. Total Shipping, Australia.—The following table shows the total volume of shipping—oversea, interstate and coastwise—which entered the principal ports of Australia during the years 1947-48 to 1950-51 compared with 1938-39. Warships are excluded from the table.

#### TOTAL SHIPPING : ENTRANCES AT PRINCIPAL PORTS, AUSTRALIA.

Port of Entry.	1938-39.		1947-48.		1948-49.		1949-50.		1950-51.	
	Num-ber.	Net Tons ('000).	Num-ber.	Net Tons ('000).	Num-ber.	Net Tons ('000).	Num-ber.	Net Tons ('000).	Num-ber.	Net Tons ('000).
<i>New South Wales—</i>										
Sydney ..	7,384	11,650	3,750	6,225	4,142	7,590	3,927	8,149	4,038	8,222
Newcastle ..	4,273	5,099	2,320	3,430	2,367	3,411	2,119	3,190	2,179	2,958
Port Kembla ..	850	1,225	351	928	335	757	403	971	538	1,582
<i>Victoria—</i>										
Melbourne ..	3,384	8,537	2,012	5,599	2,203	7,034	2,328	8,268	2,304	8,406
Geelong ..	486	850	184	605	144	522	318	810	342	1,036
<i>Queensland—</i>										
Brisbane ..	1,472	4,916	560	1,820	712	2,695	783	2,840	837	3,055
Bowen ..	188	336	70	147	83	189	67	139	67	172
Cairns ..	725	790	239	350	245	430	238	446	235	473
Gladstone ..	135	326	47	144	67	194	60	180	79	235
Mackay ..	219	546	49	117	69	195	70	197	63	180
Rockhampton ..	232	596	47	111	49	98	58	117	54	136
Thursday Island	158	303	85	12	66	13	74	15	74	18
Townsville ..	641	1,473	216	494	213	657	237	696	285	837
<i>South Australia—</i>										
Adelaide ..	2,988	5,524	2,595	3,319	2,939	4,129	2,686	4,843	2,735	4,872
Port Lincoln ..	438	493	440	537	428	561	353	449	292	405
Port Pirie ..	619	815	301	730	286	742	268	642	261	644
Wallaroo ..	281	220	224	193	224	238	239	210	300	229
Whyalla ..	680	1,037	476	1,137	332	837	373	1,033	408	1,144
<i>Western Australia—</i>										
Fremantle ..	846	4,012	738	3,284	946	4,592	1,010	5,207	1,044	5,400
Albany ..	125	511	49	200	37	136	35	114	59	247
Bunbury ..	107	240	62	184	68	194	56	175	62	174
Carnarvon ..	115	183	78	99	79	98	99	135	97	122
Geraldton ..	132	291	94	239	97	248	94	246	99	256
<i>Tasmania—</i>										
Hobart ..	616	1,153	293	540	303	565	279	646	318	684
Burnie ..	577	781	163	227	163	257	196	268	190	240
Devonport ..	492	476	183	223	175	215	217	211	202	211
Launceston ..	460	502	290	292	308	273	324	282	330	313
<i>Northern Territory—</i>										
Darwin ..	176	184	33	55	28	49	42	65	33	58

2. **Total Shipping—Australia, New Zealand and United Kingdom.**—The following table shows the total shipping tonnage which entered the principal ports of Australia during 1950–51. and of New Zealand and the United Kingdom during 1951.

**TOTAL SHIPPING : ENTRANCES AT PORTS, AUSTRALIA, NEW ZEALAND AND THE UNITED KINGDOM.**

Port.	Net Tonnage Entered ('000).	Port.	Net Tonnage Entered ('000).
<b>AUSTRALIA—</b>		<b>ENGLAND AND WALES—</b>	
Melbourne (Vic.) .. ..	8,406	London .. ..	28,315
Sydney (N.S.W.) .. ..	8,222	Liverpool (inc. Birkenhead)	15,986
Fremantle (W.A.) .. ..	5,400	Southampton .. ..	14,328
Adelaide (S.A.) .. ..	4,872	Tyne Ports .. ..	7,632
Brisbane (Qld.) .. ..	3,055	Hull .. ..	5,494
Newcastle (N.S.W.) .. ..	2,958	Swansea .. ..	5,037
Port Kembla (N.S.W.) .. ..	1,582	Bristol .. ..	4,659
Whyalla (S.A.) .. ..	1,144	Dover .. ..	4,068
Geelong (Vic.) .. ..	1,036	Cardiff .. ..	4,036
Townsville (Qld.) .. ..	837	Manchester (inc. Runcorn)	3,717
Hobart (Tas.) .. ..	684	Harwich .. ..	3,103
Port Pirie (S.A.) .. ..	644	Middlesbrough .. ..	3,103
Cairns (Qld.) .. ..	473		
Port Lincoln (S.A.) .. ..	405		
Launceston (Tas.) .. ..	313		
Geraldton (W.A.) .. ..	256		
Albany (W.A.) .. ..	247	<b>SCOTLAND—</b>	
Burnie (Tas.) .. ..	240	Glasgow .. ..	6,061
Gladstone (Qld.) .. ..	235		
Wallaroo (S.A.) .. ..	229		
Devonport (Tas.) .. ..	211		
<b>NEW ZEALAND—</b>		<b>NORTHERN IRELAND—</b>	
Wellington .. ..	3,077	Belfast .. ..	6,000
Auckland .. ..	2,000		
Lyttleton .. ..	1,824		
Dunedin .. ..	762		
Napier .. ..	350		
New Plymouth .. ..	347		
Bluff .. ..	266		

**§ 4. Vessels Built and Registered.**

1. **Vessels Built.**—The following table shows the number and tonnage of vessels built in Australia during each of the calendar years 1938 and 1947 to 1951, so far as such information can be ascertained from the Shipping Registers of the various States. The Merchant Shipping Act, under which vessels are registered in Australia, does not, however, make it compulsory to register vessels under 15 tons burden if engaged in river or coastal trade. Larger vessels are also exempt from registration if not engaged in trade. Yachts and small trading vessels may be, and frequently are, registered at the request of the owners.

## VESSELS BUILT AND REGISTERED IN AUSTRALIA.

Year.	Steam.		Motor.(a)		Sailing.		Total.					
	Tonnage.		Tonnage.		Tonnage.		Tonnage.					
	No.	Gross.	Net.	No.	Gross.	Net.	No.	Gross.	Net.			
1938 .. ..	..	..	..	11	721	394	..	..	..	11	721	394
1947 .. ..	5	16,100	8,391	25	1,426	912	8	296	296	38	17,822	9,599
1948 .. ..	3	14,583	8,604	9	1,376	741	..	..	..	12	15,959	9,345
1949 .. ..	2	9,673	5,427	9	726	383	..	..	..	11	10,399	5,810
1950 .. ..	2	8,005	4,141	9	1,213	648	..	..	..	11	9,218	4,789
1951 .. ..	2	13,515	7,522	9	5,435	2,842	..	..	..	11	18,950	10,365

(a) Includes vessels with auxiliary motors.

2. Vessels Registered.—The following table shows the number and net tonnage of steam, sailing and other vessels on the register of each State on the 31st December, 1951 :—

## VESSELS ON THE STATE REGISTERS, 31st DECEMBER, 1951.

State or Territory.	Steam and Motor.		Sailing.				Barges, Hulks, Dredges, etc., not Self-propelled.		Total.	
			Propelled by Sailing only.		Fitted with Auxiliary Power.					
	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.
New South Wales	422	68,900	129	5,102	73	1,051	33	8,164	657	83,217
Victoria ..	186	167,347	47	570	47	1,519	42	17,063	322	186,499
Queensland ..	83	26,658	63	1,172	60	835	12	1,536	218	30,201
South Australia	85	32,461	15	307	36	1,872	38	5,833	174	40,473
Western Australia	68	6,460	211	3,169	50	1,298	4	351	333	11,278
Tasmania ..	39	5,076	44	1,458	74	1,983	1	382	158	8,899
Northern Territory	..	..	16	154	9	177	..	..	25	331
Australia ..	883	306,902	525	11,932	349	8,735	130	33,329	1,887	360,898

3. World Shipping Tonnage.—Issues of the Official Year Book prior to No. 39 contained tables, compiled from *Lloyd's Register of Shipping*, showing the number and gross tonnage of steam, motor and sailing vessels owned by the various maritime countries of the world. The tables are not repeated in this issue, but the following information is derived from the same source. At 1st July, 1951, the total steamers, motorships and sailing vessels of 100 gross tons and upwards throughout the world amounted to 32,112 with a gross tonnage of 87,961,000. Of these totals, steamers numbered 18,873 for 63,809,000 gross tons, motorships, 12,353 for 23,436,000 gross tons and sailing vessels and barges 886 for 716,000 gross tons. In addition, there were 2,271 oil tankers of 1,000 gross tons and upwards with a gross tonnage of 18,210,000. Australian steamers, motorships and sailing vessels, 357 for 557,000 gross tons, constituted 1.11 per cent. and 0.63 per cent. respectively of the total numbers and tonnage. There were no Australian oil tankers of 1,000 gross tons and upwards registered.



### § 5. Interstate Shipping.

1. **System of Record.**—*Interstate Shipping* comprises two elements: (a) Vessels engaged solely in interstate trade; and (b) Vessels trading between Australia and oversea countries and in the course of their voyage proceeding from one State to another. (It should be mentioned that these vessels, except under special circumstances, do not engage in interstate carrying.) No complexity enters into the record of those in category (a), but with regard to the method of recording the movements of the oversea vessels (b) some explanation is necessary. Each State desires that its shipping statistics (which are prepared in this Bureau) should show in full its shipping communication with oversea countries, but at the same time it is necessary to avoid any duplication in the statistics for Australia as a whole. In order to meet these dual requirements, a vessel arriving in any State from an oversea country—say United Kingdom—*via* another State, is recorded in the second State as from United Kingdom *via States*, thus distinguishing the movement from a direct oversea entry. Continuing the voyage, the vessel is again recorded for the statistics of the third State as from United Kingdom *via* other States. On an inward voyage the *clearance* from the first State to the second State is a *clearance* interstate, and is included with interstate tonnage in conformity with the pre-federation practice of the States, and to preserve the continuity of State statistics. Thus, movements of ships which are, from the standpoint of Australia as a whole, purely coastal movement, must for the individual States be recorded as “Oversea *via* other States” or “Interstate” according to the direction of the movement. The significance of the record of these movements will be more clearly seen from the following tabular presentation of the inward and outward voyages to and from Australia of a mail steamer which, it is presumed, reaches Fremantle (Western Australia) and then proceeds to the terminal port of the voyage—Sydney (New South Wales)—*via* South Australia and Victoria. From the terminal port the vessel will commence the outward voyage, and retrace its inward track.

#### ITINERARY OF AN OVERSEA VESSEL ON AUSTRALIAN COAST.

Particulars.	Recorded as—	
	For the State and for Australia.	For the States.
<b>Inward Voyage—</b>		
Enters Fremantle from United Kingdom	Oversea direct	
Clears Fremantle for Adelaide . . . . .	.. ..	Interstate direct
Enters Adelaide from United Kingdom	.. ..	.. .. Oversea <i>via</i> States
<i>via</i> Fremantle . . . . .	.. ..	.. .. Interstate direct
Clears Adelaide for Melbourne . . . . .	.. ..	.. .. Oversea <i>via</i> States
Enters Melbourne from United Kingdom	.. ..	.. .. Interstate direct
<i>via</i> Adelaide . . . . .	.. ..	.. .. Oversea <i>via</i> States
Clears Melbourne for Sydney . . . . .	.. ..	.. .. Interstate direct
Enters Sydney from United Kingdom <i>via</i>	.. ..	.. .. Oversea <i>via</i> States
Melbourne . . . . .	.. ..	.. ..
<b>Outward Voyage—</b>		
Clears Sydney for United Kingdom <i>via</i>	.. ..	.. .. Oversea <i>via</i> States
Melbourne . . . . .	.. ..	.. .. Interstate direct
Enters Melbourne from Sydney . . . . .	.. ..	.. .. Oversea <i>via</i> States
Clears Melbourne for United Kingdom <i>via</i>	.. ..	.. .. Interstate direct
Adelaide . . . . .	.. ..	.. .. Oversea <i>via</i> States
Enters Adelaide from Melbourne . . . . .	.. ..	.. .. Interstate direct
Clears Adelaide for United Kingdom <i>via</i>	.. ..	.. .. Oversea <i>via</i> States
Fremantle . . . . .	.. ..	.. .. Interstate direct
Enters Fremantle from Adelaide . . . . .	.. ..	.. .. Oversea <i>via</i> States
Clears Fremantle for United Kingdom . .	Oversea direct	

From the method outlined above, the requirements for Australia and for the individual States are ascertained as follows. (a) The aggregate of all ships recorded for each State as “Oversea *direct*” gives the oversea shipping for Australia as a whole;

(b) the aggregate for all ships recorded in any State as "Oversea direct" plus those recorded as "Oversea via States" gives the total *oversea shipping* for that State; and (c) the aggregate for all ships recorded as "Oversea via States" may also be used, together with those recorded as "Interstate direct", to furnish figures showing the total *interstate movement of shipping*.

It should be remembered, however, that all oversea vessels do not follow the same itinerary as the vessel in the table above.

2. Interstate Movement.—(i) *Interstate direct*. The following table shows the number of entrances and the net tonnage of vessels recorded into each State from any other State (including oversea vessels on interstate direct voyages) during each of the years 1946-47 to 1950-51 compared with the year 1938-39. The shipping of the Murray River, between the States of New South Wales, Victoria and South Australia, is excluded :—

**INTERSTATE MOVEMENT OF SHIPPING : ENTRANCES OF VESSELS INTERSTATE DIRECT.**

State or Territory.	1938-39.	1946-47.	1947-48.	1948-49.	1949-50.	1950-51.
NUMBER.						
New South Wales .. ..	2,183	1,136	1,133	1,227	1,176	1,122
Victoria .. ..	2,243	1,209	1,224	1,288	1,329	1,288
Queensland .. ..	639	340	306	360	379	395
South Australia .. ..	1,036	647	678	756	710	790
Western Australia .. ..	382	256	326	405	420	484
Tasmania .. ..	1,301	705	717	711	765	796
Northern Territory .. ..	39	14	16	15	27	20
<b>Australia .. ..</b>	<b>7,823</b>	<b>4,308</b>	<b>4,400</b>	<b>4,822</b>	<b>4,806</b>	<b>4,895</b>

NET TONS ('000).						
New South Wales .. ..	6,205	3,041	2,977	3,636	3,570	3,391
Victoria .. ..	4,751	2,568	2,690	3,067	3,245	3,399
Queensland .. ..	1,730	728	587	927	987	993
South Australia .. ..	3,322	1,871	1,903	2,578	2,687	2,889
Western Australia .. ..	2,019	1,165	1,395	2,164	2,167	2,472
Tasmania .. ..	1,770	739	772	668	746	759
Northern Territory .. ..	103	28	25	26	36	30
<b>Australia .. ..</b>	<b>19,900</b>	<b>10,140</b>	<b>10,409</b>	<b>13,066</b>	<b>13,438</b>	<b>13,933</b>

From 1938-39 the total net tonnage of interstate shipping declined steadily each year up to 1942-43, when it represented only 38 per cent. of the total for the pre-war year. It remained practically unchanged during the next three years, but increased by over 29 per cent. in 1946-47. There was little change in 1947-48, the tonnage for that year being about 52 per cent. of the 1938-39 total. By 1950-51 the total had risen to 70 per cent. of the 1938-39 total.

(ii) *Oversea via States*. To ascertain the aggregate movement of shipping between the States, including the total interstate movements of oversea vessels, the figures in the following table, which show the number of entrances and clearances of vessels to and from oversea countries via other Australian States and the aggregate tonnage, must be added to those in the preceding table.

**INTERSTATE MOVEMENT OF SHIPPING : ENTRANCES AND CLEARANCES OF VESSELS OVERSEA VIA OTHER AUSTRALIAN STATES, 1950-51.**

State or Territory.	Entrances.		Clearances.		Total.	
	Number.	Net Tons ('000).	Number.	Net Tons ('000).	Number.	Net Tons ('000).
New South Wales .. ..	583	3,119	398	2,221	981	5,340
Victoria .. ..	573	3,185	423	2,387	996	5,572
Queensland .. ..	256	1,368	156	822	412	2,190
South Australia .. ..	393	1,699	232	1,323	535	3,022
Western Australia .. ..	33	155	25	136	58	291
Tasmania .. ..	79	393	82	416	161	809
Northern Territory .. ..	1	..	1	5	2	5
<b>Australia .. ..</b>	<b>1,828</b>	<b>9,919</b>	<b>1,317</b>	<b>7,310</b>	<b>3,145</b>	<b>17,229</b>

Oversea vessels moving interstate are with few exceptions not engaged in the active interstate trade of Australia, but are merely proceeding to the several States in continuation of their oversea voyages.

(iii) *Total, Australia.* The following table shows the total interstate movement of shipping, including oversea vessels travelling oversea via States and interstate direct, for each of the years 1938-39 and 1946-47 to 1950-51 :—

**INTERSTATE MOVEMENT OF SHIPPING : TOTAL, AUSTRALIA.**

Year.	Entrances.		Clearances.	
	Number.	Net Tons ('000).	Number.	Net Tons ('000).
1938-39 .. ..	9,603	29,977	9,669	30,000
1946-47 .. ..	5,122	14,181	5,173	14,258
1947-48 .. ..	5,557	16,246	5,594	16,386
1948-49 .. ..	6,213	20,651	6,212	20,553
1949-50 .. ..	6,588	23,110	6,710	23,296
1950-51 .. ..	6,723	23,852	6,754	23,946

(iv) *Total, States.* The following table shows, for each State, the number of entrances and clearances of vessels from and for other States, and the aggregate tonnage, during the year 1950-51, and includes the interstate movements of oversea vessels :—

**INTERSTATE MOVEMENT OF SHIPPING : TOTAL, STATES, 1950-51.**

State or Territory.	Entrances.		Clearances.	
	Number.	Net Tons ('000).	Number.	Net Tons ('000).
New South Wales .. ..	1,705	6,510	1,767	6,727
Victoria .. ..	1,861	6,584	1,969	7,001
Queensland .. ..	651	2,361	584	1,983
South Australia .. ..	1,093	4,588	1,073	4,571
Western Australia .. ..	517	2,627	450	2,513
Tasmania .. ..	875	1,152	891	1,121
Northern Territory .. ..	21	30	20	30
<b>Australia .. ..</b>	<b>6,723</b>	<b>23,852</b>	<b>6,754</b>	<b>23,946</b>

3. **Shipping Engaged Solely in Interstate Trade.**—The following table shows, for each State, the number of entrances direct from other States, of vessels engaged solely in interstate trade during the year 1950-51, together with the net tonnage.

**SHIPPING ENGAGED SOLELY IN INTERSTATE TRADE : ENTRANCES, 1950-51.**

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	Australia.
Ships Engaged No.	766	929	261	471	103	752	19	3,301
Net Tons '000	1,790	1,416	502	1,253	315	547	25	5,848

4. **Interstate and Coastal Shipping Services.**—The following table shows particulars, so far as they are available, of all vessels engaged in the regular interstate or coastal services at the end of each of the years 1947 to 1951 compared with the year 1939 :—

**INTERSTATE AND COASTAL SHIPPING SERVICES : AUSTRALIA.**

Particulars.	1939.	1947.	1948.	1949.	1950.	1951.
Number of companies operating .. .. .	34	30	31	30	31	32
Number of vessels .. .. .	162	177	175	175	179	173
Tonnage { Gross .. .. .	361,066	519,343	496,768	509,425	490,496	492,558
{ Net .. .. .	199,585	294,553	281,611	286,490	272,801	272,003
Horse-power (Nominal) .. .. .	39,096	51,083	45,319	44,147	57,500	47,027
Number of 1st class .. .. .	3,385	1,481	1,443	1,475	2,003	2,171
passengers for 2nd class .. .. .						
which licensed and steerage .. .. .	1,370	390	363	364	559	706
(a) Masters and officers .. .. .	565	644	670	670	650	629
Engineers .. .. .	589	709	704	710	736	738
Crew .. .. .	4,365	4,801	4,725	4,733	4,985	4,907

(a) Excluding purely day passenger accommodation.

NOTE.—This table excludes particulars of a small number of chartered vessels for which returns could not be obtained.

**§ 6. Shipping Cargo.**

1. **Oversea and Interstate Cargo.**—(i) *Australia.* The table hereunder shows the aggregate tonnage of oversea cargo discharged and shipped and the tonnage of interstate cargo shipped in Australian ports for the years 1946-47 to 1950-51 compared with the year 1938-39. Cargo which was stated in cubic feet has been converted to tons measurement on the basis of 40 cubic feet to the ton.

**SHIPPING CARGO MOVEMENT : AUSTRALIA.**  
( '000.)

Year.	Oversea Cargo.				Interstate Cargo.	
	Discharged.		Shipped.		Shipped.	
	Tons Weight.	Tons Meas.	Tons Weight.	Tons Meas.	Tons Weight.	Tons Meas.
1938-39 .. .. .	4,208	2,191	5,138	1,093	7,221	1,731
1946-47 .. .. .	4,171	1,304	3,097	1,357	7,264	1,272
1947-48 .. .. .	4,982	1,916	4,532	1,245	7,109	1,261
1948-49 .. .. .	5,849	2,572	5,423	1,366	6,230	1,173
1949-50 .. .. .	7,686	3,576	5,061	1,388	6,419	1,207
1950-51 .. .. .	9,084	3,989	5,405	1,295	6,723	1,326

(ii) *Principal Ports.* The following table shows the tonnage of oversea and interstate cargo discharged and shipped at principal ports during 1950-51.

**CARGO DISCHARGED AND SHIPPED AT PRINCIPAL PORTS, 1950-51.**

(Tons Weight and Tons Measurement Combined—'000.)

Port.	Discharged.			Shipped.		
	Oversea.	Interstate.	Total.	Oversea.	Interstate.	Total.
Sydney .. .. .	3,718	880	4,598	1,315	589	1,904
Newcastle .. .. .	350	1,221	1,571	157	2,090	2,247
Port Kembla .. .. .	135	1,341	1,476	103	422	525
Other .. .. .	..	..	..	18	9	27
<b>Total, New South Wales ..</b>	<b>4,203</b>	<b>3,442</b>	<b>7,645</b>	<b>1,593</b>	<b>3,110</b>	<b>4,703</b>
Melbourne .. .. .	4,069	1,947	6,016	877	685	1,562
Geelong .. .. .	471	131	602	784	4	788
Portland .. .. .	51	..	51	6	..	6
<b>Total, Victoria .. .. .</b>	<b>4,591</b>	<b>2,078</b>	<b>6,669</b>	<b>1,667</b>	<b>689</b>	<b>2,356</b>
Brisbane .. .. .	982	476	1,458	401	151	552
Cairns .. .. .	53	28	81	87	105	192
Townsville .. .. .	69	53	122	135	81	216
Other .. .. .	44	54	98	230	213	443
<b>Total, Queensland .. .. .</b>	<b>1,148</b>	<b>611</b>	<b>1,759</b>	<b>853</b>	<b>550</b>	<b>1,403</b>
Adelaide .. .. .	1,308	958	2,266	522	413	935
Port Pirie .. .. .	115	93	208	230	182	412
Wallaroo .. .. .	39	..	39	178	17	195
Whyalla .. .. .	..	221	221	5	2,251	2,256
Other .. .. .	42	19	61	186	44	230
<b>Total, South Australia ..</b>	<b>1,504</b>	<b>1,291</b>	<b>2,795</b>	<b>1,121</b>	<b>2,907</b>	<b>4,028</b>
Fremantle .. .. .	1,188	453	1,641	799	74	873
Bunbury .. .. .	34	..	34	188	38	226
Geraldton .. .. .	47	..	47	257	10	267
Other .. .. .	78	18	96	27	16	43
<b>Total, Western Australia ..</b>	<b>1,347</b>	<b>471</b>	<b>1,818</b>	<b>1,271</b>	<b>138</b>	<b>1,409</b>
Hobart .. .. .	226	369	595	138	242	380
Devonport .. .. .	17	47	64	10	75	85
Launceston .. .. .	4	155	159	29	120	149
Other .. .. .	20	98	118	18	214	232
<b>Total, Tasmania .. .. .</b>	<b>267</b>	<b>669</b>	<b>936</b>	<b>195</b>	<b>651</b>	<b>846</b>
Darwin (Northern Territory)	13	30	43	..	4	4
<b>Total, AUSTRALIA .. .. .</b>	<b>13,073</b>	<b>8,592</b>	<b>21,665</b>	<b>6,700</b>	<b>8,049</b>	<b>14,749</b>

2. **Oversea Cargo by Nationality of Vessels.**—The following table shows the total oversea cargo discharged and shipped combined, according to the nationality of the vessels, during the years 1946-47 to 1950-51 compared with the year 1938-39:—

**OVERSEA CARGO DISCHARGED AND SHIPPED : NATIONALITY OF VESSELS.  
AUSTRALIA.**

(Tons Weight and Tons Measurement Combined—'000.)

Vessels Registered at Ports In—	1938-39.	1946-47.	1947-48.	1948-49.	1949-50.	1950-51.
<b>British Countries—</b>						
Australia .. ..	416	267	286	306	237	262
United Kingdom .. ..	7,731	6,957	8,293	10,167	11,468	12,718
Canada .. ..	53	121	85	132	83	54
New Zealand .. ..	503	233	203	226	253	162
Other British .. ..	446	187	425	305	370	510
<b>Total British .. ..</b>	<b>9,149</b>	<b>7,765</b>	<b>9,292</b>	<b>11,136</b>	<b>12,411</b>	<b>13,706</b>
<b>Proportion of Total %</b>	<b>72.43</b>	<b>77.51</b>	<b>73.30</b>	<b>73.21</b>	<b>70.08</b>	<b>69.32</b>
<b>Foreign Countries—</b>						
Denmark .. ..	184	38	105	265	378	414
France .. ..	189	90	95	123	187	249
Germany .. ..	370	..	..	..	..	..
Italy .. ..	84	37	18	217	176	244
Japan .. ..	260	..	..	..	..	..
Netherlands .. ..	(a) 573	(a) 327	(a) 512	(a) 531	(a) 646	616
Norway .. ..	834	547	566	1,149	1,712	1,925
Sweden .. ..	354	314	408	453	589	675
United States of America ..	159	659	1,083	688	397	464
Other Foreign .. ..	475	241	597	649	1,215	1,480
<b>Total Foreign .. ..</b>	<b>3,482</b>	<b>2,253</b>	<b>3,384</b>	<b>4,075</b>	<b>5,300</b>	<b>6,067</b>
<b>Proportion of Total %</b>	<b>27.57</b>	<b>22.49</b>	<b>26.70</b>	<b>26.79</b>	<b>29.92</b>	<b>30.68</b>
<b>Grand Total .. ..</b>	<b>12,631</b>	<b>10,018</b>	<b>12,676</b>	<b>15,211</b>	<b>17,711</b>	<b>19,773</b>

(a) Includes Netherlands East Indies.

Owing to war conditions the proportion of cargo carried in British vessels decreased from 72.43 per cent. in 1938-39 to 41.37 in 1943-44, but increased to 77.51 per cent. in 1946-47. It has since declined again to 69.32 per cent. in 1950-51.

### § 7. Control of Shipping.

1. **War-time Control.**—An account of the action taken by the Commonwealth Government to control and regulate shipping throughout Australian waters during the 1939-45 War is given in Official Year Book No. 36, pp. 121-130.

2. **Post-war Control and Developments.**—A brief account of the post-war control of shipping and the establishment of the Australian Stevedoring Industry Board and the Australian Shipping Board will be found in Official Year Book No. 39, pp. 147-8.

As at 1st November, 1952, the Australian Shipping Board operated 38 vessels totalling 156,344 gross tons, of which seven vessels totalling 47,030 gross tons were operated on time charter from private owners. The Government-owned tonnage, totalling 114,534 gross tons (of which three vessels totalling 4,203 gross tons were on charter to private companies or other shipping organizations), comprised thirteen "A" or River Class vessels of an average of 5,150 gross tons, two "B" Class vessels of an average of 3,952 gross tons, nine "D" Class vessels of an average of 2,326 gross tons, five "G" Class vessels of an average of 584 gross tons, all of which were built in Australian yards, plus five vessels, totalling approximately 16,000 gross tons, which were built overseas.

In the international sphere, ratification is still being awaited from 21 ship-owning nations of a Convention establishing an Inter-Governmental Maritime Consultative Organization within the framework of the United Nations. The major objectives of this Organization are to provide machinery for co-operation among Governments with shipping engaged in international trade, and to encourage the removal by Governments of discriminatory action and unnecessary restrictions regarding such shipping.

This Organization is designed to replace the United Maritime Consultative Council which was established on a tentative basis after the expiry of the war-time United Maritime Authority and Combined Adjustment Board.

### § 8. Miscellaneous.

1. **Lighthouses.**—A list of the principal lighthouses on the coast of Australia, giving details of the location, number, colour, character, period, candle-power and visibility of each light so far as particulars were available was published in *Transport and Communication Bulletin* No. 14.

2. **Distances by Sea.**—The distances by sea between the ports of the capital cities of Australia and the most important ports in other countries which trade with Australia are shown in *Transport and Communication Bulletin* No. 43.

3. **Shipping Freight Rates.**—The *Quarterly Summary of Australian Statistics* shows a list of the ruling freight rates for general merchandise in respect of both oversea and interstate shipments. At 31st December, 1952, the rate for general merchandise from Australia to the United Kingdom and Continent was 155s. od. per ton weight or measurement while the rates for wheat (bagged) and wool (greasy) were respectively 110s. od. per ton weight and 2.57d. less 7 per cent. per lb. These rates, which are expressed in sterling, are subject to an adjustment of 25½ per cent. when freight is prepaid in Australia.

4. **Depth of Water at Main Ports.**—A table, compiled from information supplied by the Director of Navigation, showing the depth of water available and tides at principal ports of Australia at 1st January, 1953, is included in *Transport and Communication Bulletin* No. 43.

5. **Shipping Casualties.**—Courts of Marine Inquiry are constituted by a Magistrate assisted by skilled assessors, and, when necessary, are held at the principal port in each State and at Launceston (Tasmania). Such courts have power to deal with the certificates of officers who are found at fault. Particulars of shipping casualties reported on or near the coast during the years 1947 to 1951 are shown in the table below. This information also was furnished by the Director of Navigation :—

#### TOTAL SHIPPING CASUALTIES AND LOSSES : AUSTRALIA.

Year.	Total Losses of Vessels.			Total Casualties to Vessels.		
	Number.	Net Tons.	Lives Lost.	Number.	Net Tons.	Lives Lost.
1947 ..	2	396	..	151	442,685	10
1948 ..	1	113	..	206	652,047	..
1949 ..	3	3,795	12	155	435,935	12
1950 ..	4	9,735	20	191	611,084	22
1951 ..	5	2,908	5	205	650,718	5

6. **Commonwealth Navigation and Shipping Legislation.**—By Section 51 (i) of the Commonwealth Constitution, the Parliament of the Commonwealth is empowered to make laws in respect of trade and commerce with other countries and among the States. By Section 98 the power in this particular respect is further defined as extending to navigation and shipping.

The first essay in the way of legislation in this direction was made in March, 1904, when a Bill for a Navigation and Shipping Act was introduced in the Senate by the Attorney-General of the first Deakin Administration. This Bill was withdrawn at an early stage for further consideration and redrafting. The Deakin Ministry resigned in April, 1904, and the succeeding Watson Government, in view of the far-reaching and important character of the matters comprehended in the measure, decided to refer the Bill for consideration and report to a Royal Commission. In 1905 the Commission presented a Draft Bill, the main principles of which, insofar as they affected oversea shipping, were then, at the invitation of the Imperial Government, considered at an Imperial Shipping Conference held in London in 1907, at which representatives of Great Britain, Australia, and New Zealand were present. The Conference considered, *inter alia*, the following recommendation of the Royal Commission:—"That the coastal trade of the Commonwealth be reserved for ships on the Australian Register, or ships conforming to Australian conditions, and licensed to trade on the Australian coast": and recommended:—"That the vessels to which the conditions imposed by the law of Australia or New Zealand are applicable should be (i) vessels registered in the colony, while trading therein, and (ii) vessels wherever registered, while trading on the coast of the colony". Further modifications were made in the draft (by the Royal Commission) to conform to the resolutions of the Conference, and the resultant Bill was re-introduced in the Senate in September, 1907, by the second Deakin Administration. Owing to pressure of other business, however, it lapsed. The Bill was again introduced in the Senate in September, 1908, but again it lapsed; proceedings were resumed in 1909, but again the Bill lapsed. It was brought in again in 1910 by the second Fisher Administration, revived in 1911, lapsed again, and finally became, under the last-mentioned Government, the Navigation Act of 1912. While preparations were being made to bring it into operation, the war broke out, and it was postponed.

In 1919 another Bill was introduced by the Australian National War Government to give the power to proclaim different portions of the Act to commence at different times. This Act (No. 32 of 1919) also extended the operation of the Act to the Territories under the authority of the Commonwealth, and those governed under a Mandate. But in 1925 it was found necessary in the interest of the development of the Territories to issue an Order in Council directing that trade with and in the Territories of Papua and New Guinea should not be deemed to be engaging in the coasting trade. Another amending Act was passed by the same Government in 1920, enabling the Commonwealth to fulfil its obligations under the International Convention for the Safety of Life at Sea, and to grant permits to British ships to trade on the coast in special circumstances. A 1934 amendment brought the Act into line with a new International Convention on Safety of Life at Sea (1929) and with an International Load Line Convention (1930). Further amendments were made in 1942 and by the Statute Law Revision Act (1950). The citation of the Act is now therefore "the Navigation Act, 1912-1950". Still another International Safety of Life at Sea Convention was adopted in 1948 and legislation is being prepared to enable the Commonwealth to ratify it.

The British Merchant Shipping Act 1894 requires that any legislation by the Parliament of a British Possession, repealing wholly or in part any provisions of that Act, shall not take effect until the approval of the Sovereign has been proclaimed in that Possession. All the early Navigation Bills, therefore, had been drawn to commence on dates to be fixed by proclamation after Royal Assent thereto had been proclaimed in the Commonwealth. But as a consequence of the adoption of the Statute of Westminster in 1942, Navigation Bills will no longer be reserved in this manner.

At the conclusion of the 1914-18 War, the proclamation of the 1912 Act could no longer be delayed. In order to make the change as gradual as possible, groups of sections have (under the power granted by the 1919 Act) been brought into operation from time to time. The first group—the Coasting Trade provisions—commenced on 1st July, 1921. Others commenced on the first day of October, 1921, March, 1922, February, 1923, March, 1923, and October, 1923, and the only important sections not yet in operation are those relating to the inspection and testing of anchors, chain cables and gear, and to pilotage.



Soon after the coasting trade provisions commenced, the owners of a number of intra-state ships took steps to have tested the validity of the application to their ships of the manning and accommodation provisions of the Act. The judgment of the High Court was to the effect that those provisions did not apply to vessels engaged *solely* in the domestic trade of a State. In consequence of this judgment, the Government decided not to enforce the provisions of the Act then in force on any intra-state ship, and similarly other sections since brought into force have not been applied to these ships.

Notwithstanding the fact that a considerable amount of shipping has thereby been left to the control of the various State Governments, for all ships trading beyond one State there is uniform procedure in regard to (i) the engagement and discharge of seamen; (ii) the inspection of accommodation provided for crews; (iii) scales of medicines; (iv) the survey of hulls, machinery and gear; (v) the carriage and stowage of cargo; (vi) loadlines; (vii) the adjustment of compasses; (viii) the examination of masters, mates, and engineers for certificates of competency, etc. A system of "sectional" surveys has been introduced, by means of which a ship may have portions of the annual survey carried out at different ports, thereby minimizing interference with the regular time-table.

The Act is in many respects flexible, provision being made for granting relief from some of its most stringent provisions. The provision that the coastal trade of the Commonwealth shall be reserved to Australian ships, or ships conforming to Australian conditions, is contained in Section 288 of the Act, but by Section 286 the Minister has power to grant permits to British ships which do not conform to those conditions, in circumstances where he is satisfied that the licensed service provided is inadequate. Such power is frequently made use of, and, in addition, foreign ships have occasionally been permitted to trade under exemptions granted under Section 422A of the Act.

Another direction in which the provisions of the Act may be varied is in regard to the manning scales, which are contained in Schedules appended to the Act. These scales may be varied by regulation, and Committees of Advice may be appointed to deal with individual cases. The scales in regard to many ships have, under these provisions, been increased or reduced according to the recommendations received by the Department.

The Act is administered by the Marine Branch of the Department of Shipping and Transport, there being, under the Assistant Secretary (Marine), a Director of Navigation and a staff of technical and clerical officers attached to the head office, with a Deputy Director of Navigation and technical and clerical staffs in each State. The Department, when necessary, seeks the advice of a body called the "Marine Council", consisting of six members, representing ship-owners, underwriters, deck and engineer officers, and seamen, with the Director of Navigation, *ex officio*, as Chairman. Any question regarding administration, or the making of regulations, etc., may be referred to the Council for advice, but it is obligatory on the Minister to seek the Council's advice upon all proposed regulations with respect to the scales of officers, crew and provisions.

During the 1939-45 War, a Maritime Industry Commission was established under National Security Regulations to deal with a limited number of industrial questions, and many of its Orders extended or modified provisions of the Navigation Act in regard to officers and seamen.

Other shipping Acts under the Trade and Commerce power of the Commonwealth are the Sea Carriage of Goods Act 1924, the Seamen's Compensation Act 1911-1949, and the Seamen's War Pensions and Allowances Act 1940-1952.

7. **Ports and Harbours.**—A report on "The Turn-round of Ships in Australian Ports" was submitted to the Commonwealth Government by Henry Basten, C.M.G., on 4th January, 1952. The report, which is divided into three sections, deals with all factors affecting the turn-round of ships and congestion in Australian ports and the measures that might be taken to effect improvement on both short-term and long-term bases.

**B. GOVERNMENT RAILWAYS.**

1. **General.**—The policy of Government ownership and control of railways has been adopted in each State and at 30th June, 1951, 24,753 route-miles were owned by the State Governments and 2,201 route-miles by the Commonwealth Government. In the following tables details of the four lines owned by the Commonwealth are grouped and shown with the totals for the various State-owned systems. Separate particulars for each Commonwealth line are shown in the *Transport and Communication Bulletin* issued by this Bureau.

In some States, there are comparatively small privately-owned railway systems offering passenger and freight services to the public. Details of these private railways were included in Official Year Book No. 39 and previous issues, but owing to their relative unimportance and the incomplete nature of the statistics available the series has been discontinued.

2. **Railway Communication in Australia.**—An account of the progress of railway construction in Australia since the opening of the first line in 1854 will be found in Official Year Books No. 6, p. 681 and No. 22, p. 259. The main ports on the mainland are connected by lines running approximately parallel to the coast and are the focal points of lines which radiate inland to the agricultural, mining and pastoral areas of the continent to a distance which reaches 600 miles at some points. However, Darwin in the Northern Territory is not connected by rail to any other port in Australia. A 3 ft. 6 in. railway extends southward from Darwin to Birdum, a distance of 317 miles, and from Port Augusta in South Australia northwards to Alice Springs in Central Australia, a distance of 771 miles. The report by the late Sir Harold Clapp to the Commonwealth Government, details of which appear in Official Year Book No. 37, p. 146, did not recommend the linking of the termini at Alice Springs and Birdum.\* An all-weather road was built to cover the intervening distance and much goods traffic now passes along this road. The travelling times of trains on the main lines of Australia are being lessened and the haulage capacity increased by the introduction of diesel and diesel-electric locomotives, which in the near future will be the only source of power on the Trans-Australian Railway between Port Pirie and Kalgoorlie.

3. **Standardization of Railway Gauges.**—A summary of the report and recommendations relating to the standardization of Australia's railway gauges on the basis of a 4 ft. 8½ in. gauge, made in March, 1945 at the request of the Commonwealth Government by the late Sir Harold Clapp, then Director-General of Land Transport, Commonwealth Department of Transport, together with an outline of the agreement between the Commonwealth Government and the States of New South Wales, Victoria and South Australia regarding the standardization of railway gauges in their respective States is contained in Official Year Book No. 37 (Chapter V.—Transport and Communication, pp. 146–9). The agreement, which was signed in 1946, was ratified by the Governments of the Commonwealth, of Victoria and of South Australia, but not by the New South Wales Government. After some time had elapsed and New South Wales had failed to ratify the agreement, the Commonwealth Government decided to enter into a separate agreement with South Australia, and the necessary legislation was enacted in 1949 by each Government concerned. Action was also taken to invite the Victorian Government to discuss the subject of a separate agreement, but to date there has been no legislative action. The Commonwealth–South Australia Agreement provides for the same standardization work to be carried out in South Australia as would have been carried out had New South Wales ratified the original Commonwealth–Three States Agreement, and that over a period of years the Commonwealth should contribute 70 per cent. and South Australia be responsible for the remaining 30 per cent. of the estimated cost of £24,000,000.

4. **Government Railways: Lines under Construction and Lines Authorized, 1950–51.**—  
(i) *Lines under Construction.* In spite of the great extensions of State railways since 1875 and also the construction of various railways by the Commonwealth Government, there are still, in some States, immense areas of country which are as yet practically

\* This is, however, provided for in the Commonwealth–South Australia Agreement referred to in par. 3.

undeveloped, and in which little in the nature of permanent settlement has been accomplished. The general policy of the States was to extend the existing lines inland in the form of light railways as settlement increased, and while it is true that lines which were not likely to be commercially successful in the immediate future have been constructed from time to time for the purpose of encouraging settlement, the general principle that the railways should be self-supporting was kept in view.

(a) *New South Wales.* Work continued on the eastern suburbs electric railway and steady progress was made on the St. James to Wynyard section whilst the tunnelling from Haymarket to Town Hall and Central stations was commenced. Plans were prepared for the location of tracks between Town Hall, Martin Place, King's Cross and Bondi Junction together with surveys, boring and tunnelling operations on the preparatory works in other suburbs. The duplication and deviation of the main northern line between Branxton and Muswellbrook and the quadruplication of the Lidcombe to Penrith line, various sections of which were brought into service, continued, and considerable progress was made on the new double-line bridge on the upstream side of the existing bridge over the Parramatta River at Meadowbank. On the Sydney to Newcastle line strengthening and improvement works were carried out. The new goods yard at Cook's River on the Sydney to Botany line was 80 per cent. completed.

(b) *Victoria.* The work on the duplication and electrification of sections of the Gippsland line continued throughout the year. A new section of line between Drouin and Warragul and a section of single track from Darnum to Yarragon were brought into service.

(c) *Queensland.* Duplication of small sections of suburban line were completed and placed in service whilst work continued on the quadruplicate of the Roma Street to Corinda suburban line. Work continued throughout the year on the deviation designed to eliminate the rack service between Moonmerra and Moongan on the Mount Morgan line and this undertaking was completed early in 1952. Reconditioning work was carried out between Almaden and Mount Surprise and contracts were let for the concrete and earthworks on the Callide Coalfield Railway. Drawings for the new high level bridge over the Haughton River at Giru were sufficiently advanced to enable pier construction to be commenced. Plans were made for the layout of new railway workshops at Redbank, the civil engineer's workshop at Banyo and the goods depot at Normanby.

(d) *South Australia.* Work on converting the Naracoorte to Mount Gambier line from 3 ft. 6 in. to 5 ft. 3 in. gauge was continued and by June, 1951, the 5 ft. 3 in. gauge stretched from Adelaide to a point 10 miles south of Naracoorte. Earthworks on this section were completed to within 5 miles of Mount Gambier.

(e) *Other.* At 30th June, 1951, there was no railway construction work in progress in Western Australia or Tasmania or for the Commonwealth Government.

(ii) *Lines Authorized for Construction.* In the States of New South Wales, Victoria, Queensland, South Australia and Western Australia at 30th June, 1951 there were certain lines authorized for construction but not commenced. These lines were authorized many years ago, some as early as 1910 and none later than 1933. Particulars may be found in Official Year Book No. 36, p. 133. There have been no later authorizations.

5. *Grafton-South Brisbane (Uniform Gauge) Line.*—For particulars of the construction of the Grafton-South Brisbane (Uniform Gauge) Line completed in 1930, which constituted the first step towards uniform gauge railway communication between the capitals of the mainland States, see Official Year Books No. 31, p. 122 and No. 38, p. 165.

6. *Mileage Open for Traffic, all Lines.*—Almost all the railways open for general traffic in Australia are owned and controlled by the State or Commonwealth Governments. Private lines have been laid down for the purpose of opening up forest lands, mining districts or sugar areas. These lines are not generally used for the conveyance of passengers or the public conveyance of goods.

The following table shows the route-mileage of Commonwealth and State lines open in each State, at different periods since the inauguration of railways in Australia in 1854 up to the year 1950-51:—

**GOVERNMENT RAILWAYS : ROUTE-MILEAGE OPEN.**  
(Miles.)

Year.	N.S.W.	Vic.	Q'ld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1855 ..	14	2	..	7	..	..	..	..	23
1861 ..	73	114	..	56	..	..	..	..	243
1871 ..	358	276	..	133	..	45	..	..	1,030
1881 ..	996	1,247	800	832	92	45	..	..	4,012
1890-91 ..	2,182	2,763	2,195	1,666	198	351	145	..	9,500
1900-01 ..	2,846	3,237	2,801	1,736	1,355	457	145	..	12,577
1910-11 ..	3,762	3,523	3,868	1,935	2,376	470	145	..	16,079
1920-21 ..	5,043	4,267	5,752	3,408	3,992	630	199	5	23,296
1930-31 ..	6,044	4,717	6,529	3,898	4,634	665	317	5	26,809
1940-41 ..	6,127	4,759	6,567	3,809	4,835	642	490	5	27,234
1946-47 ..	6,128	4,748	6,566	3,799	4,802	641	490	5	27,179
1947-48 ..	6,128	4,725	6,560	3,799	4,802	614	490	5	27,123
1948-49 ..	6,113	4,697	6,560	3,799	4,775	614	490	5	27,053
1949-50 ..	6,113	4,687	6,560	3,805	4,706	613	490	5	26,979
1950-51 ..	6,113	4,686	6,560	3,805	4,682	613	490	5	26,954

The next table shows for each State the length of Government lines open in relation to both population and area at 30th June, 1951.

**GOVERNMENT RAILWAYS : ROUTE-MILEAGE OPEN AT 30th JUNE, 1951.**  
(Miles.)

Particulars.	N.S.W.	Vic.	Q'ld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Mileage open (route)	6,113	4,686	6,560	3,805	4,682	613	490	5	26,954
Per 1,000 of population ..	1.84	2.07	5.42	5.28	8.06	2.11	30.63	0.20	3.20
Per 1,000 square miles ..	19.75	53.25	9.78	10.01	4.80	23.57	0.94	5.32	9.06

7. Classification of Lines according to Gauge, 1950-51.—The next table shows the route-mileage of Government railways open in each State and Territory at 30th June, 1951, classified according to gauge.

**GOVERNMENT RAILWAYS : GAUGES, AT 30th JUNE, 1951.**  
(Miles.)

State or Territory.	Route-mileage having a gauge of—					Total.
	5 ft. 3 in.	4 ft. 8½ in.	3 ft. 6 in.	2 ft. 6 in.	2 ft. 0 in.	
New South Wales ..	2	6,111	..	..	..	6,113
Victoria ..	4,571	..	..	115	..	4,686
Queensland ..	..	69	6,461	..	30	6,560
South Australia ..	1,530	654	1,621	..	..	3,805
Western Australia ..	..	454	4,228	..	..	4,682
Tasmania ..	..	..	613	..	..	613
Northern Territory ..	..	..	490	..	..	490
Aust. Cap. Territory ..	..	5	..	..	..	5
<b>Australia ..</b>	<b>6,103</b>	<b>7,293</b>	<b>13,413</b>	<b>115</b>	<b>30</b>	<b>26,954</b>

NOTE.—The table above includes 2,201 miles of Commonwealth Government railways as follows:—4 ft. 8½ in. gauge—South Australia 654 miles, Western Australia 454 miles and Australian Capital Territory 5 miles; 3 ft. 6 in. gauge—South Australia 598 miles and Northern Territory 490 miles.

8. **Summary of Operations, 1950-51.**—In the following table a summary is shown of the working of Government railways open in Australia during the year ended 30th June, 1951 :—

**GOVERNMENT RAILWAYS : SUMMARY OF OPERATIONS, 1950-51.**

Particulars.		Common-wealth Railways.	State Railways.	Total.
Mileage open (route) 30th June, 1951	.. miles	2,201	24,753	26,954
Gross revenue	.. £'000	2,153	103,491	105,644
"    "    per train-mile	.. pence	280.69	286.04	285.93
Working expenses	.. £'000	(a) 2,434	110,338	112,772
"    "    per train-mile	.. pence	317.29	304.94	305.21
Net revenue	.. £'000	— 281	— 6,847	— 7,128
"    "    per train-mile	.. pence	—36.60	—18.93	—19.29
Train-miles run	.. miles '000	1,841	86,835	88,676
Passenger-journeys	.. No. '000	186	475,927	476,113
Tons of goods, etc., carried	.. tons '000	591	40,733	41,324
Average number of employees(b)	.. No.	2,472	125,387	127,859
"    earnings per employee	.. £	581	595	594

(a) Excludes amounts paid for Commissioner's salary (£3,500), Government contributions under the Superannuation Act (£31,005), Accident and Insurance Fund (£11,236) and proportion of salaries of Auditor-General's staff (£1,600). (b) Excludes construction staff.

9. **Summary, States, 1950-51.**—The following table shows particulars of the mileage open, passengers and goods carried, and train-miles run, for Government railways in Australia during 1950-51. Owing to differences in the composition of the figures for the several States, the details of cost of construction and equipment which were given in previous issues of the Official Year Book have been omitted.

**GOVERNMENT RAILWAYS : SUMMARY, 1950-51.**

System.	Mileage Open.(a)		Passenger-journeys.	Goods and Live Stock Carried.	Train-miles Run.(b)
	Route.	Track.			
	Miles.	Miles.	'000.	'000 tons.	'000.
New South Wales	6,113	8,409	268,567	18,324	38,112
Victoria	4,686	6,072	141,313	7,539	14,575
Queensland	6,560	7,484	34,145	7,182	18,562
South Australia	2,553	3,157	17,177	3,794	6,379
Western Australia	4,228	4,789	11,543	3,033	7,136
Tasmania	613	707	3,182	861	2,071
Commonwealth	2,201	2,360	186	591	1,841
Australia	26,954	32,978	476,113	41,324	88,676

(a) At 30th June, 1951.

(b) Excludes assistant and light miles.

10. **Gross Revenue.**—(i) *General.* The gross revenue is composed of (a) receipts from coaching traffic, including the carriage of mails, horses, parcels, etc., by passenger trains; (b) receipts from the carriage of goods and live stock; and (c) rents and miscellaneous items. The following have been excluded :—State Government grants of £300,000 for the working of country developmental lines in New South Wales; £9,000 towards reduction in outer suburban fares and £1,795,000 to limit interest payments to 1 per cent. on loan liability in Victoria; £1,800,000 towards working expenses and £300,000 towards interest payments in South Australia; and £10,000 for sick leave funds in Tasmania.

(ii) *Coaching, Goods and Miscellaneous Receipts. (a) Summary.* In the following table the gross revenue is shown for the year 1950-51, classified according to the main three sources of receipts, together with the revenue per average mile worked and the revenue per train-mile run :—

**GOVERNMENT RAILWAYS : GROSS REVENUE(a), 1950-51.**

System.	Coaching.	Goods and Live Stock.	Miscellaneous.	Total.	Per Route-mile.	Per Train-mile.
	£'000.	£'000.	£'000.	£'000.	£	d.
New South Wales	15,089	28,351	6,008	49,448	8,089	311
Victoria ..	7,225	9,992	1,434	18,651	3,979	307
Queensland ..	3,973	15,168	631	19,772	3,014	256
South Australia..	1,406	5,305	604	7,315	2,865	275
Western Australia	1,151	5,362	456	6,969	1,648	234
Tasmania ..	201	1,108	27	1,336	2,180	155
Commonwealth ..	570	1,408	175	2,153	978	281
<b>Australia ..</b>	<b>29,615</b>	<b>66,694</b>	<b>9,335</b>	<b>105,644</b>	<b>3,919</b>	<b>286</b>

(a) Excludes Governmental Grants, see para. 10 (i) above.

(b) *Proportions to Total.* The following table shows for the year 1950-51 the proportion of each class of receipts to the total gross revenue :—

**GOVERNMENT RAILWAYS : PROPORTION OF EACH CLASS OF RECEIPTS TO TOTAL RECEIPTS, 1950-51.**  
(Per Cent.)

System.	Coaching.	Goods and Live Stock.	Miscellaneous.
New South Wales .. .. .	30.52	57.33	12.15
Victoria .. .. .	38.74	53.57	7.69
Queensland .. .. .	20.09	76.72	3.19
South Australia .. .. .	19.22	72.52	8.26
Western Australia .. .. .	16.52	76.94	6.54
Tasmania .. .. .	15.05	82.93	2.02
Commonwealth .. .. .	26.47	65.40	8.13
<b>Australia .. .. .</b>	<b>28.03</b>	<b>63.13</b>	<b>8.84</b>

(iii) *Totals, 1938-39 and 1946-47 to 1950-51.* The following table shows the gross revenues for State and Commonwealth railways for the years 1946-47 to 1950-51 in comparison with the year 1938-39 :—

**GOVERNMENT RAILWAYS : GROSS REVENUE.**  
(£'000.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth.	Australia.
1938-39 ..	19,146	9,274	7,798	3,119	3,599	487	547	43,970
1946-47 ..	30,353	13,528	11,033	4,593	4,046	893	1,099	65,545
1947-48 ..	36,906	16,304	11,532	5,079	4,549	958	1,237	76,565
1948-49 ..	39,663	17,259	15,392	5,849	5,090	1,050	1,673	85,976
1949-50 ..	40,121	20,355	15,088	6,512	6,292	1,049	1,875	92,192
1950-51 ..	49,448	18,651	19,772	7,315	6,969	1,336	2,153	105,644

NOTE.—Details of gross revenue classified according to coaching, goods (including live stock) and miscellaneous receipts for the years 1941-42 to 1950-51 are shown in *Transport and Communication Bulletin* No. 42.

11. Working Expenses.—(i) *General*. In order to make an adequate comparison of the working expenses as between the several States and Territories, allowance should be made for the variation of gauges and of physical and traffic conditions, not only on the different systems of the State and Commonwealth railways, but also on different portions of the same systems. When traffic is light, the proportion of working expenses to revenue is naturally greater than when traffic is heavy; and this is especially true in Australia, where ton-mile rates are in many cases based on a tapering principle—i.e., a lower rate per ton-mile is charged upon merchandise from remote interior districts—and where on many of the lines there is but little back loading.

Working expenses, wherever represented in the Railways section of this chapter, exclude interest, sinking fund, exchange and certain other payments (see para. 13 following).

During the war years large amounts were set aside by the Railways as reserves, mainly to provide for depreciation and accrued leave, to be expended as circumstances permit. Particulars of these amounts, which were included in Working Expenses and which in the year 1942-43 aggregated nearly £10,000,000 and over the whole period about £30,000,000, are given in previous issues of the Official Year Book.

(ii) *Working Expenses, Summary, 1950-51*. The following table shows, for the year 1950-51, total working expenses classified according to the main four expenditure headings, together with the working expenses per route-mile and per train-mile and the proportion of working expenses to gross revenue:—

**GOVERNMENT RAILWAYS : WORKING EXPENSES, 1950-51.**

System.	Mainten- ance of Way and Works.	Rolling Stock.	Trans- portation and Traffic.	Other.	Total.	Per Route- mile.	Per Train- mile.	Proportion of Working Expenses to Gross Revenue.
	£'000.	£'000.	£'000.	£'000.	£'000.	£	d.	%
New South Wales	8,353	18,901	11,359	10,555	49,168	8,043	310	99.43
Victoria	3,752	7,031	5,417	4,610	20,810	4,440	343	111.58
Queensland	4,154	9,303	4,756	1,214	19,427	2,961	251	98.26
South Australia	1,530	4,915	2,479	1,068	9,992	3,914	376	136.60
Western Australia	1,430	4,306	1,846	1,350	8,932	2,112	300	128.17
Tasmania	352	879	418	360	2,009	3,278	233	150.35
Commonwealth(a)	557	1,349	379	149	2,434	1,106	317	113.04
Australia	20,128	46,684	26,654	19,306	112,772	4,184	305	106.75

(a) See para. 8, note (a) ante.

(iii) *Totals*. In the following table the total working expenses are shown for the years 1938-39 and 1946-47 to 1950-51:—

**GOVERNMENT RAILWAYS : TOTAL WORKING EXPENSES.**

(£'000.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth. (a)	Australia.
1938-39 ..	14,543	8,060	6,193	2,931	2,911	678	642	35,958
1946-47 ..	25,886	12,916	10,191	5,045	4,424	1,253	1,224	60,939
1947-48 ..	31,015	15,225	10,640	5,947	5,526	1,455	1,439	71,247
1948-49 ..	35,738	17,815	14,164	7,237	6,612	1,613	1,777	84,956
1949-50 ..	39,280	19,983	15,857	8,440	7,387	1,728	1,979	94,654
1950-51 ..	49,168	20,810	19,427	9,992	8,932	2,009	2,434	112,772

(a) See para. 8, note (a) ante.

NOTE.—Details of working expenses under the main four headings are shown for the years 1941-42 to 1950-51 in *Transport and Communication Bulletin* No. 42.

12. **Net Revenue.**—The following table shows, for the year 1950-51, the net revenue, i.e., the excess of gross revenue over working expenses, the amount of such net revenue per route-mile open and per train-mile run, the interest on railway loan expenditure and the profit or loss after paying interest:—

**GOVERNMENT RAILWAYS : NET REVENUE, INTEREST, AND PROFIT OR LOSS, 1950-51.**

System.	Net Revenue.			Interest.	Profit or Loss.
	Total.	Per Route-mile.	Per Train-mile.		
	£'000.	£	d.		
New South Wales ..	280	46	1.76	5,620	-5,340
Victoria ..	-2,159	461	35.56	2,069	-4,228
Queensland ..	345	53	4.46	1,586	-1,241
South Australia ..	-2,677	-1,049	100.71	1,028	-3,705
Western Australia ..	-1,963	464	66.03	717	-2,680
Tasmania ..	673	-1,098	77.97	162	835
Commonwealth ..	(a) - 281	(a) - 128	(a) - 36.60	295	(a) - 576
<b>Australia ..</b>	<b>-7,128</b>	<b>- 264</b>	<b>- 19.29</b>	<b>(b) 11,559</b>	<b>-18,687</b>

(a) See para. 8, note (a) ante. (b) Includes Commonwealth Government share of interest on Uniform Gauge Railway 1950-51. £82,375.

In the graphs accompanying this Chapter the gross and net revenue and working expenses are shown from 1870 to 1951.

13. **Exchange.**—Exchange on interest payments abroad and certain other charges are not included in the table above. These items are not charged against the railways in Queensland and Western Australia and have been excluded for the purposes of comparison. In the remaining States the amounts paid on account of exchange were:—New South Wales, £591,000; Victoria, £157,292; South Australia, £69,612; and Tasmania, £6,070.

14. **Profit or Loss.**—The following table shows, for the years 1938-39 and 1946-47 to 1950-51, the actual profit or loss after deducting working expenses and interest, but excluding exchange, from the gross revenue:—

**GOVERNMENT RAILWAYS : PROFIT OR LOSS AFTER PAYMENT OF WORKING EXPENSES AND INTEREST.**  
(£'000.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth. (a)	Australia.
1938-39 ..	43	- 636	- 37	- 886	- 313	-272	-490	- 2,718
1946-47 ..	- 659	-1,228	- 598	-1,465	-1,411	-460	-463	- 6,366
1947-48 ..	746	- 783	- 539	-1,869	-2,023	-609	-519	- 5,678
1948-49 ..	-1,113	-2,437	- 191	-2,394	-2,585	-676	-413	- 9,892
1949-50 ..	-4,509	-1,563	-1,322	-2,951	-2,188	-800	-402	-13,817
1950-51 ..	-5,340	-4,228	-1,241	-3,705	-2,680	-835	-576	-18,687

(a) See para. 8, note (a) ante.

15. **Traffic.**—(i) *General.* Reference has already been made to the difference in the traffic conditions on many of the lines. These conditions differ not only in the several State and Commonwealth systems, but also on different lines in the same system, and apply to both passenger and goods traffic. By far the greater part of the population of Australia is confined to a fringe of country near the coast, more especially in the eastern



and southern districts. A large proportion of the railway traffic between the chief centres of population is therefore carried over lines in the neighbourhood of the coast, and is thus, in some cases, open to seaborne competition. In recent years competition from road and air transport has become an important factor.

The following table shows particulars for the years 1946-47 to 1950-51 in comparison with 1938-39 :—

**GOVERNMENT RAILWAYS : TRAFFIC.**

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth.	Australia.
<b>PASSENGER-JOURNEYS.</b> (‘000.)								
1938-39 ..	186,720	142,123	24,639	17,529	11,416	2,297	117	384,841
1946-47 ..	261,644	170,165	34,188	19,827	13,879	3,252	223	503,178
1947-48 ..	263,047	182,210	29,325	19,067	13,928	2,974	216	510,767
1948-49 ..	263,116	176,555	32,687	18,210	12,624	3,295	217	506,704
1949-50 ..	258,183	182,101	32,366	17,385	11,188	3,231	194	504,648
1950-51 ..	268,567	141,313	34,145	17,177	11,543	3,182	186	476,113
<b>PASSENGER-JOURNEYS PER AVERAGE ROUTE-MILE WORKED.</b> (Number.)								
1938-39 ..	30,541	29,896	3,752	6,854	2,608	3,490	53	14,134
1946-47 ..	42,697	35,839	5,207	7,784	3,192	5,074	101	18,513
1947-48 ..	42,925	38,563	4,470	7,486	3,203	4,844	98	18,832
1948-49 ..	42,986	37,469	4,983	7,150	2,921	5,366	99	18,714
1949-50 ..	42,235	38,811	4,934	6,820	2,631	5,270	89	18,705
1950-51 ..	43,934	30,150	5,205	6,728	2,730	5,191	85	17,663
<b>GOODS AND LIVE STOCK CARRIED.</b> (‘000 Tons.)								
1938-39 ..	15,417	5,976	5,234	2,640	2,859	844	186	33,156
1946-47 ..	17,594	7,562	5,750	3,215	2,577	896	343	37,937
1947-48 ..	18,518	8,440	5,523	3,560	2,858	817	423	40,139
1948-49 ..	18,080	8,859	6,888	3,793	2,737	802	546	41,705
1949-50 ..	16,996	9,125	6,943	3,692	2,843	770	549	40,918
1950-51 ..	18,324	7,539	7,182	3,794	3,033	861	591	41,324
<b>GOODS, ETC., CARRIED PER AVERAGE ROUTE-MILE WORKED.</b> (Tons.)								
1938-39 ..	2,522	1,257	797	1,032	653	1,282	84	1,218
1946-47 ..	2,871	1,503	876	1,262	593	1,398	156	1,396
1947-48 ..	3,022	1,786	841	1,398	657	1,331	192	1,480
1948-49 ..	2,954	1,880	1,050	1,489	633	1,306	248	1,540
1949-50 ..	2,780	1,945	1,058	1,448	669	1,257	249	1,517
1950-51 ..	2,998	1,608	1,095	1,486	717	1,405	269	1,533

(ii) *Metropolitan and Country Passenger Traffic and Revenue, 1950-51.* A further indication of the difference in passenger traffic conditions is obtained from the comparison of the volume of metropolitan and suburban and country traffic during 1950-51 shown below.

**GOVERNMENT RAILWAYS: METROPOLITAN AND SUBURBAN AND COUNTRY PASSENGER TRAFFIC AND RECEIPTS, 1950-51.**

System.	Passenger-journeys. (‘000.)			Revenue. (£‘000.)		
	Metro- politan and Suburban.	Country.	Total.	Metro- politan and Suburban.	Country.	Total.
New South Wales ..	(a)	(a)	268,567	(a)	(a)	(b)13,557
Victoria ..	134,344	6,969	141,313	3,647	2,783	6,430
Queensland ..	27,602	6,543	34,145	630	2,450	3,080
South Australia ..	15,619	1,558	17,177	381	717	1,098
Western Australia ..	10,034	1,509	11,543	186	645	831
Tasmania ..	2,136	1,046	3,182	35	133	168
Commonwealth ..	..	186	186	..	411	411
Australia ..	(a)	(a)	476,113	(a)	(a)	25,575

(a) Not available. (b) Estimated.

(iii) *Goods Traffic. (a) Classification.* Some indication of the differing conditions of the traffic in each system may be gained by an examination of the tonnage of the various classes of commodities carried, and of the revenue derived therefrom. The following table shows the number of tons of various commodities carried during 1950-51.

**GOVERNMENT RAILWAYS: CLASSIFICATION OF COMMODITIES CARRIED, 1950-51.**  
(‘000 Tons.)

System.	Coal, Coke and Shale.	Other Minerals.	Grain and Flour.	Wool.	Live Stock.	All other Com- modities.	Total.
New South Wales ..	(a)	(a)	(b)1,461	(c) 170	(c)1,192	15,501	18,324
Victoria ..	1,120	145	1,750	74	496	3,954	7,539
Queensland ..	1,434	573	(d)2,707	73	752	1,643	7,182
South Australia ..	722	626	851	38	232	1,325	3,794
Western Australia ..	486	259	812	41	140	1,295	3,033
Tasmania ..	153	52	(a)	3	27	626	861
Commonwealth ..	340	9	10	5	80	147	591
Australia ..	(e)	(e)	(e)	404	2,919	24,491	41,324

(a) Included with "All other Commodities". (b) Grain only. (c) Estimated.  
(d) Agricultural produce. (e) Not available.

(b) *Revenue.* The following table shows the revenue derived from goods and live stock traffic during 1950-51 :-

**GOVERNMENT RAILWAYS: REVENUE FROM GOODS AND LIVE STOCK TRAFFIC, 1950-51.**  
(£‘000.)

System.	General Merchan- dise.	Wool.	Live Stock.	Minerals.		Miscel- laneous.	Total.
				Coal and Coke.	Other.		
New South Wales ..	(a)	(a)	2,371	(a)	(a)	(a)	28,351
Victoria ..	8,095	262	696	687	109	143	9,992
Queensland ..	7,293	701	1,779	1,700	980	(b)2,715	15,168
South Australia ..	2,993	137	386	250	1,067	(c) 472	5,305
Western Australia ..	4,112	151	248	480	228	143	5,362
Tasmania ..	471	9	44	172	84	328	1,108
Commonwealth ..	822	17	181	367	13	8	1,408
Australia ..	(a)	(a)	5,705	(a)	(a)	(a)	66,694

(a) Not available. (b) Includes agricultural produce, £2,600,336. (c) Includes wheat, £354,877.

(iv) *Passenger-mileage and Ton-mileage.* Particulars of passenger-mileage and ton-mileage in respect of the Government railways in Australia for the years 1938-39 and 1947-48 to 1950-51 are shown in the following tables.

(a) *Passenger-mileage.* The following table shows particulars of passenger-mileage in respect of the Government railways in Australia for the years 1938-39 and 1947-48 to 1950-51.

GOVERNMENT RAILWAYS : PASSENGER-MILEAGE SUMMARY.

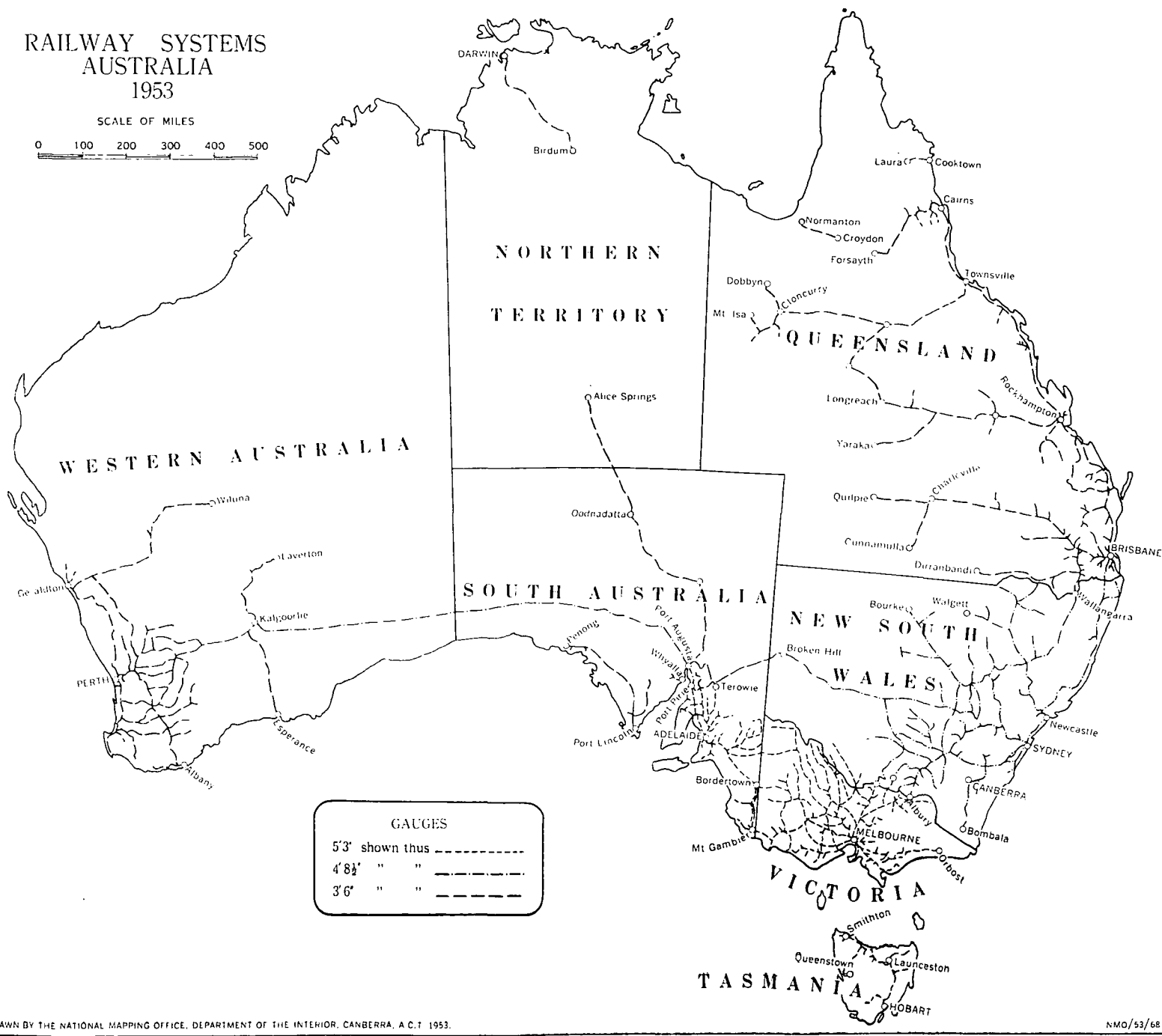
Year ended 30th June—	Passenger Train-miles. (‘000.)	Total Passenger-miles. (‘000.)	Average Number of Passengers per Train-mile.	Average Mileage per Passenger-journey. (Miles.)	Passenger Earnings.				Density of Traffic (a).
					Gross. (£‘000.)	Per Average Route-mile Worked. (£)	Per Passenger-mile. (d.)	Per Passenger Train-mile. (d.)	
NEW SOUTH WALES.									
1939	19,173	2,149,154	112	11.51	6,024	985	0.67	75.41	351,526
1948	(b)	(b)	(b)	(b)	c 11,689	1,907	(b)	(b)	(b)
1949	(b)	(b)	(b)	(b)	c 12,097	1,976	(b)	(b)	(b)
1950	(b)	(b)	(b)	(b)	c 12,114	1,982	(b)	(b)	(b)
1951	(b)	(b)	(b)	(b)	c 13,557	2,218	(b)	(b)	(b)
VICTORIA.									
1939	12,434	1,292,843	104	9.10	3,855	811	0.72	74.40	271,948
1948	10,960	1,838,932	168	10.09	6,448	1,305	0.84	141.31	389,192
1949	11,436	1,858,640	163	10.53	6,646	1,410	0.86	139.46	394,448
1950	11,597	1,857,065	160	10.20	7,251	1,547	0.94	150.07	395,794
1951	9,693	1,521,106	157	10.76	6,430	1,372	1.02	159.21	324,537
QUEENSLAND.(d)									
1939	5,750	(b)	(b)	(b)	1,523	232	(b)	63.55	(b)
1948	5,553	(b)	(b)	(b)	2,282	352	(b)	98.64	(b)
1949	6,405	(b)	(b)	(b)	2,740	418	(b)	102.67	(b)
1950	6,409	(b)	(b)	(b)	2,739	418	(b)	102.56	(b)
1951	6,753	(b)	(b)	(b)	2,971	458	(b)	105.59	(b)
SOUTH AUSTRALIA.									
1939	3,747	212,982	57	12.15	600	235	0.68	38.45	83,281
1948	3,597	312,575	87	16.39	1,039	407	0.80	69.31	122,723
1949	3,363	307,241	91	16.87	1,075	422	0.84	76.87	120,628
1950	3,617	290,848	80	16.73	1,064	417	0.88	70.83	114,102
1951	3,640	274,174	75	16.96	1,098	430	0.96	72.40	107,393
WESTERN AUSTRALIA.									
1939	2,795	(b)	(b)	(b)	514	117	(b)	44.12	(b)
1948	3,107	(b)	(b)	(b)	860	198	(b)	66.46	(b)
1949	2,935	186,488	64	14.77	872	202	1.12	71.34	43,159
1950	2,476	175,152	71	15.66	831	195	1.14	80.53	41,192
1951	2,528	173,227	69	15.01	831	197	1.15	78.89	40,971
TASMANIA.									
1939	1,027	35,193	34	15.32	129	196	0.88	30.15	53,485
1948	1,093	(b)	(b)	(b)	221	359	(b)	53.04	(b)
1949	1,087	(b)	(b)	(b)	193	314	(b)	42.72	(b)
1950	1,043	38,957	36	11.78	164	268	1.04	37.81	62,083
1951	949	38,200	40	12.00	168	274	1.05	42.49	62,316
COMMONWEALTH.(e)									
1939	388	34,085	88	290.98	146	66	1.03	90.21	15,486
1948	454	67,685	149	312.62	329	149	1.17	173.64	30,752
1949	473	63,669	135	293.53	367	167	1.38	186.18	28,927
1950	464	58,335	126	300.69	378	172	1.55	195.73	26,503
1951	533	60,700	114	326.18	411	187	1.63	185.07	27,578

(a) Total passenger-miles per average route-mile worked. (b) Not available. (c) Estimated.  
(d) Excludes Queensland portion of Grafton-South Brisbane (Uniform Gauge) Line. (e) Railways controlled by Commonwealth Government.

# RAILWAY SYSTEMS AUSTRALIA 1953

SCALE OF MILES

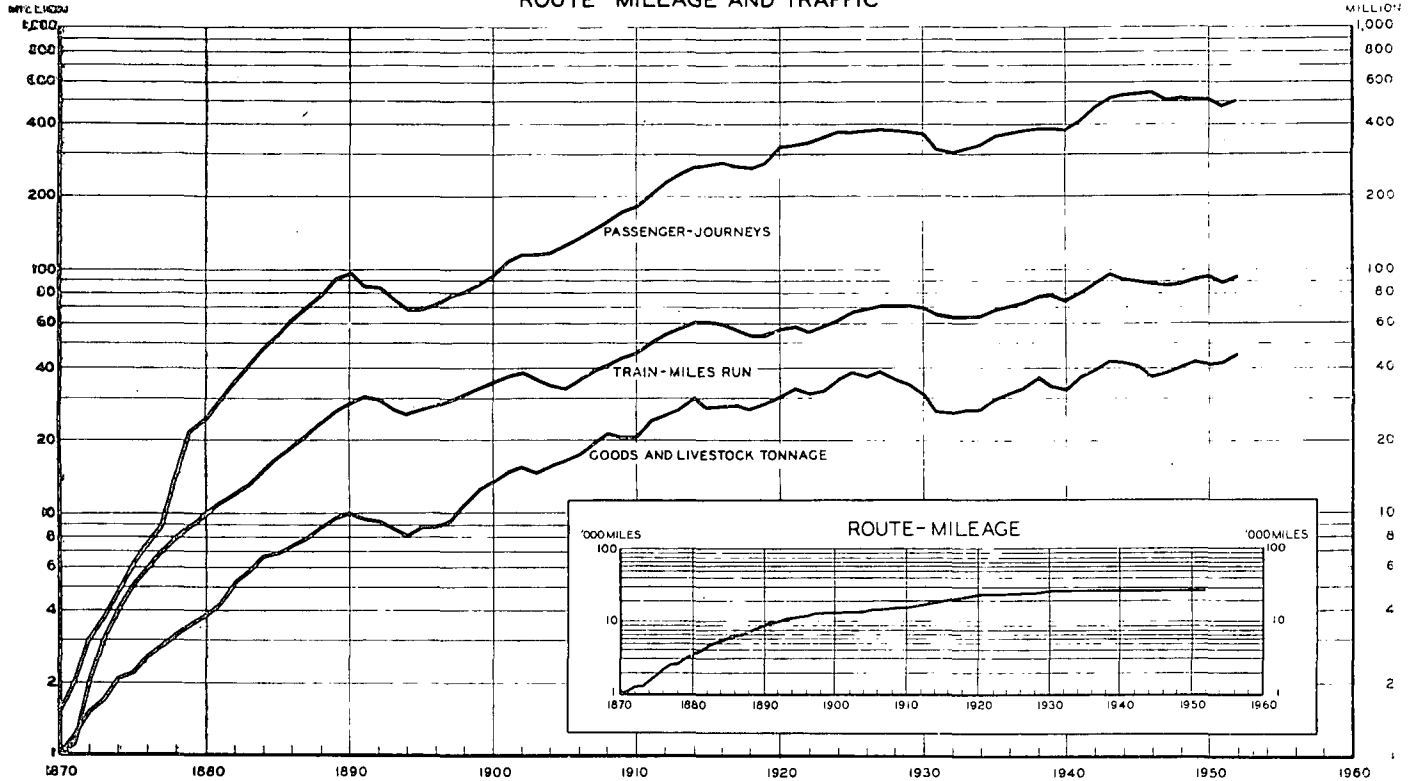
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# GOVERNMENT RAILWAYS: AUSTRALIA, 1870 TO 1952

RATIO GRAPH

## ROUTE - MILEAGE AND TRAFFIC

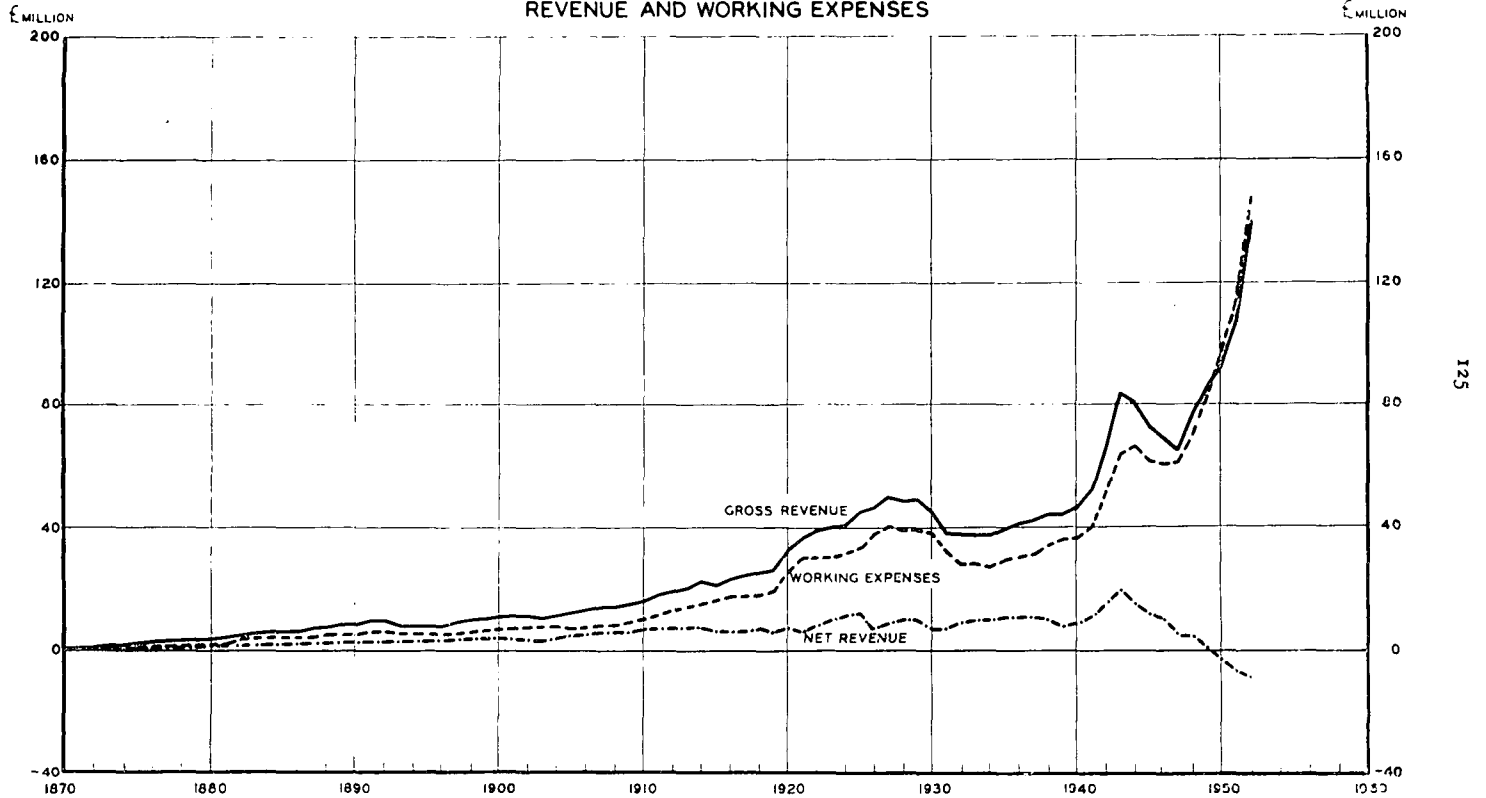


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NOTE:— VERTICAL SCALE IS LOGARITHMIC, AND THE CURVES RISE AND FALL ACCORDING TO RATE OF INCREASE OR DECREASE. ACTUAL NUMBERS ARE INDICATED BY SCALE.

# GOVERNMENT RAILWAYS: AUSTRALIA, 1870 TO 1952

## REVENUE AND WORKING EXPENSES

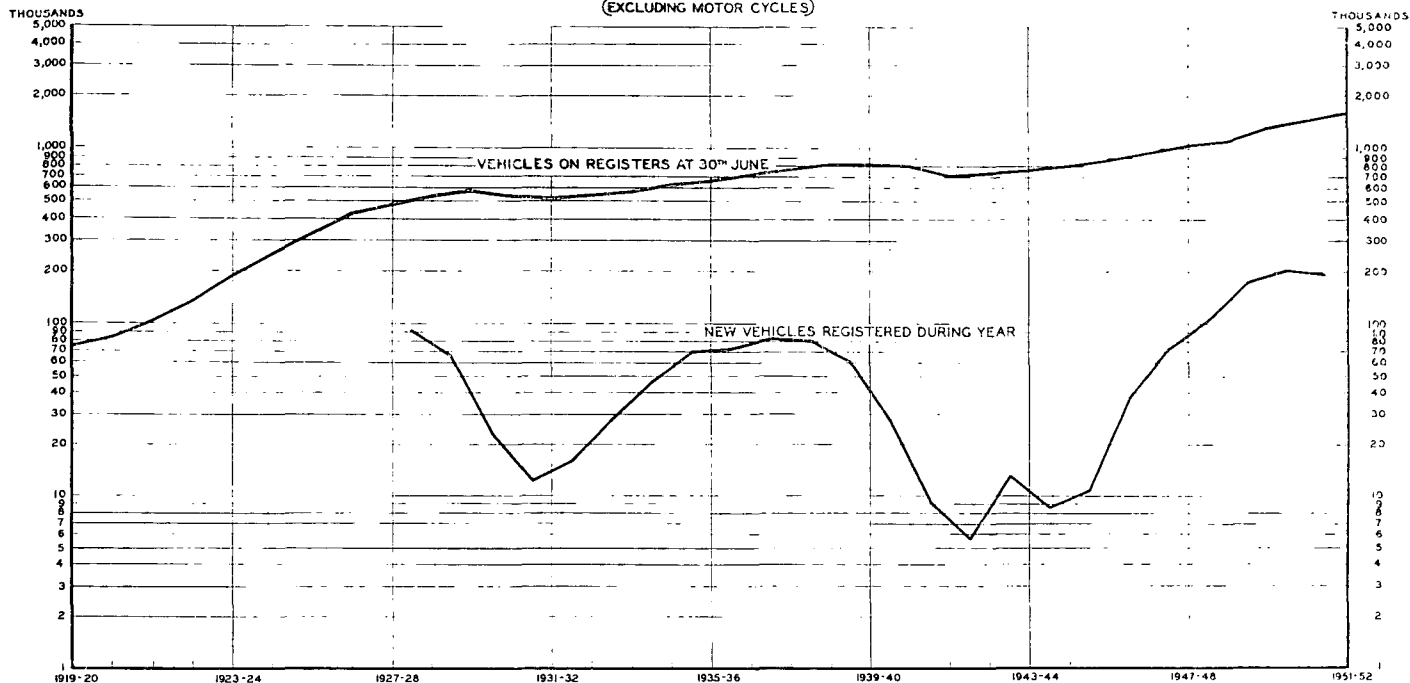


NOTE—Gross Revenue excludes Government Grants.

# MOTOR VEHICLE REGISTRATIONS : AUSTRALIA, 1920 TO 1952

## RATIO GRAPH

(EXCLUDING MOTOR CYCLES)



NOTE:—VERTICAL SCALE IS LOGARITHMIC, AND THE CURVES RISE AND FALL ACCORDING TO RATE OF INCREASE OR DECREASE. ACTUAL NUMBERS ARE INDICATED BY SCALE.

(See pages 130-40.)

(b) *Ton-mileage.* Particulars of total ton-mileages are shown in the following table for each of the years 1938-39 and 1947-48 to 1950-51.

GOVERNMENT RAILWAYS : TON-MILEAGE SUMMARY.

Year ended 30th June—	Goods Train-miles.	Total Ton-miles.	Average Freight Paying Load per Train-mile.	Average Haul per Ton.	Goods and Live Stock Earnings.				Density of Traffic. (a)
					Gross.	Per Average Route-mile Worked.	Per Ton-mile.	Per Goods Train-mile.	
	('000.)	('000.)	(Tons.)	(Miles.)	(£'000.)	(£)	(d.)	(d.)	
<b>NEW SOUTH WALES.</b>									
1939	10,933	1,760,534	161	115.95	10,356	1,694	1.41	227.34	287,961
1948	(b)	2,777,137	(b)	149.97	19,804	3,232	1.71	(b)	453,188
1949	(b)	2,834,875	(b)	156.80	21,597	3,528	1.83	(b)	463,139
1950	(b)	2,708,654	(b)	159.37	21,892	3,581	1.94	(b)	443,097
1951	(b)	2,783,470	(b)	151.01	28,351	4,638	2.45	(b)	455,336
<b>VICTORIA.</b>									
1939	5,455	760,485	139	127.26	4,276	899	1.35	188.11	159,967
1948	5,859	1,154,631	197	136.81	7,992	1,689	1.66	327.34	244,371
1949	5,915	1,167,582	197	131.80	8,506	1,824	1.77	348.77	247,789
1950	5,952	1,206,767	203	132.25	10,817	2,305	2.15	436.12	257,197
1951	4,882	1,057,051	217	140.21	9,992	2,132	2.27	491.21	225,528
<b>QUEENSLAND.(c)</b>									
1939	8,073	745,351	92	147.57	5,404	823	1.73	160.67	118,248
1948	9,186	966,016	105	184.63	7,871	1,213	1.96	205.63	148,824
1949	10,870	1,140,694	105	173.06	11,019	1,698	2.32	243.28	175,735
1950	11,100	1,182,102	107	177.61	11,514	1,774	2.34	248.95	182,114
1951	11,592	1,252,442	108	182.48	14,752	2,273	2.83	305.42	192,951
<b>SOUTH AUSTRALIA.</b>									
1939	2,430	348,553	143	132.01	2,144	838	1.48	211.72	136,293
1948	2,537	445,472	176	125.14	3,380	1,327	1.82	318.75	174,901
1949	2,696	485,241	180	127.94	3,998	1,570	1.98	355.88	190,515
1950	2,739	489,516	179	132.60	4,611	1,809	2.26	404.08	192,042
1951	2,739	510,122	186	131.77	5,305	2,078	2.50	464.76	190,813
<b>WESTERN AUSTRALIA.</b>									
1939	3,779	378,089	100	132.24	2,807	641	1.78	178.26	86,393
1948	4,004	415,988	104	145.57	3,160	727	1.82	189.41	95,673
1949	4,101	393,525	96	143.79	3,635	841	2.22	212.69	91,073
1950	4,257	426,359	100	149.95	4,749	1,117	2.67	267.72	100,273
1951	4,607	459,973	100	151.65	5,362	1,268	2.80	279.30	108,792
<b>TASMANIA.</b>									
1939	880	38,088	43	46.80	296	450	1.87	80.76	57,885
1948	1,119	65,144	58	79.68	664	1,082	2.45	142.51	106,097
1949	1,105	67,327	61	83.95	785	1,279	2.80	170.48	109,653
1950	1,037	67,738	65	87.94	816	1,332	2.89	188.94	110,502
1951	1,122	79,915	71	92.78	1,108	1,807	3.33	236.97	130,367
<b>COMMONWEALTH.(d)</b>									
1939	514	34,801	68	187.28	224	102	1.54	104.38	15,811
1948	1,148	109,586	95	258.91	675	307	1.48	141.07	49,789
1949	1,194	123,122	103	225.38	1,059	481	2.06	212.70	55,939
1950	1,207	121,804	101	221.81	1,193	542	2.35	237.11	55,340
1951	1,308	133,747	102	226.19	1,408	640	2.53	258.42	60,767

(a) Total ton-miles per average route-mile worked. (b) Not available. (c) Excludes Queensland portion of Grafton-South Brisbane (Uniform Gauge) Line. (d) Railways controlled by the Commonwealth Government.



16. **Rolling Stock.**—The following table shows the number of rolling stock of Government railways as at 30th June for each of the years 1939, 1950 and 1951. Further details may be found in the *Transport and Communication Bulletin*.

**GOVERNMENT RAILWAYS : ROLLING STOCK.**

System.	30th June—								
	1939.			1950.			1951.		
	Locos.	Coaching Stock.	Other Stock.	Locos.	Coaching Stock.	Other Stock.	Locos.	Coaching Stock.	Other Stock.
New South Wales ..	1,284	2,808	24,257	1,153	2,849	26,302	1,159	2,891	27,246
Victoria ..	581	2,439	20,993	597	2,439	21,267	628	2,424	21,671
Queensland ..	752	1,413	18,733	797	1,430	20,796	824	1,424	22,557
South Australia ..	335	594	7,966	335	595	8,591	344	592	8,790
Western Australia ..	427	475	11,110	421	448	11,136	439	429	11,047
Tasmania ..	95	225	2,120	92	202	2,387	101	201	2,474
Commonwealth ..	113	89	1,359	141	107	1,930	143	111	1,929
Australia ..	3,587	8,043	86,538	3,536	8,117	92,409	3,638	8,120	95,714

(a) Includes, interstate coaching stock jointly owned by Victoria and South Australia 47 in 1950 and 48 in 1951.

17. **Accidents.**—The following table shows particulars of the number of persons killed and injured through train accidents and the movement of rolling stock on the Government railways of Australia for each of the years 1938-39, 1949-50 and 1950-51:—

**GOVERNMENT RAILWAYS : ACCIDENTS.**

System.	1938-39.		1949-50.(a)		1950-51.(a)	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
New South Wales ..	57	625	46	369	55	463
Victoria ..	48	466	58	482	67	513
Queensland ..	23	132	17	89	19	111
South Australia ..	9	187	9	122	16	83
Western Australia ..	14	142	22	149	19	231
Tasmania ..	7	62	1	24	4	14
Commonwealth ..	1	20	..	20	1	12
Australia ..	159	1,634	153	1,255	181	1,427

(a) Excludes accidents to railway employees.

18. **Consumption of Coal and Oil.**—The following table shows the quantities and values of coal and oil consumed by the various Government Railway Departments during 1950-51:—

**GOVERNMENT RAILWAYS : COAL, OIL AND PETROL CONSUMED, 1950-51.**

Particulars.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	C'with.	Aust.
<b>Coal—</b>								
Locomotives .. '000 tons	1,427	302	702	244	364	72	72	3,183
£'000	2,959	1,201	1,177	907	653	152	347	7,396
Other purposes '000 tons	1,001	92	22	6	10	(b)	1	1,132
£'000	2,564	349	51	19	17	1	3	3,004
<b>Oil—</b>								
Lubrication .. '000 gals.	(a)	233	358	(a)	172	61	52	(a)
£'000	(a)	44	82	(a)	45	16	12	(a)
Diesel and Distillate								
'000 gals.	(a)	97	167	66	2,899	258	3,135	(a)
£'000	(a)	8	14	6	181	6	214	(a)
Furnace Oil .. '000 gals.	(a)	15,032	315	15,106	..	..	252	(a)
£'000	(a)	557	19	608	..	..	11	(a)
Other purposes '000 gals.	(a)	1,801	235	(a)	945	143	381	(a)
£'000	(a)	96	25	(a)	82	(a)	30	(a)
<b>Petrol—</b>								
Rail Cars .. '000 gals.	(a)	213	126	420	56	..	5	(a)
£'000	(a)	28	17	52	7	..	(c)	(a)

(a) Not available.

(b) 287 tons.

(c) £419.

19. Staff Employed and Salaries and Wages Paid.—The following table shows details of the average staff employed and the salaries and wages paid by the Government railways of Australia during 1950-51:—

**GOVERNMENT RAILWAYS: AVERAGE STAFF EMPLOYED, AND SALARIES AND WAGES PAID, 1950-51.**

System.	Number of Operating Staff.			Number of Construction Staff.			Total Salaries and Wages Paid. (£'000.)	Average Earnings Per Employee. (£.)
	Salaried.	Wages.	Total.	Salaried.	Wages.	Total.		
New South Wales	9,118	40,770	49,888	825	8,897	9,722	37,427	628
Victoria	4,500	20,248	24,748	445	2,003	2,448	15,042	553
Queensland	4,170	22,085	26,255	15	434	449	15,661	586
South Australia	1,920	8,189	10,109	9	1,344	1,353	6,854	593
Western Australia	1,832	10,006	11,838				6,658	562
Tasmania	318	2,231	2,549	17	136	153	1,319	488
Commonwealth	296	2,176	2,472		78	78	1,483	581
<b>Australia</b>	<b>22,154</b>	<b>105,705</b>	<b>127,859</b>	<b>1,311</b>	<b>12,892</b>	<b>14,203</b>	<b>84,444</b>	<b>594</b>

(a) In Victoria, Queensland and Western Australia a considerable amount of construction work is carried out by private contractors and the staff engaged are therefore not under the control of the Railways Commissioners.

### C. TRAMWAYS.

1. Systems in Operation.—(i) *General.* Tramway systems are in operation in all the capital cities and in a number of the larger towns of Australia.

Since 1st April, 1947, when the last private company system to operate (the Kalgoorlie-Boulder electric tramway system in Western Australia) was taken over by the Eastern Goldfields Transport Board, all systems have been operated by governmental or municipal authorities. From 1941-42 all systems have been electric.

In many parts of Australia private lines used for special purposes in connexion with the timber, mining, sugar, or other industries are often called tramways, but they are more properly railways and the traffic on them has nothing in common with that of the street tramways for the conveyance of passengers, which are dealt with in the present section.

In recent years there has been considerable replacement of tramway services by omnibus services, one of the more recent of importance affecting the Newcastle system in New South Wales where the change was made on 11th June, 1950. Information on omnibus services is contained in Division D. of this chapter.

(ii) *Total Mileage Open and Classification of Lines.* The following tables show, for each State, the total mileage of tramway lines open for general passenger traffic at 30th June, 1951, classified (a) according to the controlling authority; (b) according to gauge:—

**ELECTRIC TRAMWAYS: ROUTE-MILEAGE OPEN AT 30th JUNE, 1951.**

(Miles.)

Particulars—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
<b>ACCORDING TO CONTROLLING AUTHORITY.</b>							
Government	134	174	..	96	40	..	348
Municipal	..	..	67	96	8	48	219
<b>Total</b>	<b>134</b>	<b>174</b>	<b>67</b>	<b>96</b>	<b>48</b>	<b>48</b>	<b>567</b>
<b>ACCORDING TO GAUGE.</b>							
Gauge—							
5 ft. 3 in.	..	5	..	..	..	..	5
4 ft. 8½ in.	134	169	67	96	..	..	466
3 ft. 6 in.	..	..	..	..	48	48	96
<b>Total</b>	<b>134</b>	<b>174</b>	<b>67</b>	<b>96</b>	<b>48</b>	<b>48</b>	<b>567</b>

2. **Summary of Operations, Australia.**—The following table is a summary of the working of all electric tramway systems in Australia for the years 1938-39 and 1946-47 to 1950-51 :—

**ELECTRIC TRAMWAYS ; SUMMARY OF OPERATIONS, AUSTRALIA.**

Particulars.	1938-39.	1946-47.	1947-48.	1948-49.	1949-50.	1950-51.
Average mileage open for traffic						
Route-miles	586	614	606	589	573	567
Track-miles	1,046	1,064	1,057	1,048	1,032	1,017
Tramcars	No. 3,471	3,527	3,515	3,440	3,281	3,189
Cost of construction and equipment	£'000 26,275	27,067	(a) 27,293	(a) 25,880	(a) 26,219	(a) 30,416
Cost per route-mile	£ 44,827	44,083	(a) 45,038	(a) 44,014	(a) 45,758	(a) 53,044
Gross revenue	£'000 7,649	(a) 11,210	(a) 12,456	(a) 12,347	(a) 12,008	(a) 13,765
Working expenses	" 6,089	9,495	(a) 11,392	(a) 11,738	(a) 11,992	(a) 13,940
Net revenue	" 1,560	1,715	(a) 1,064	(a) 609	16	(a) -175
Interest	" 909	628	(a) 654	(a) 507	(a) 480	(a) 491
Proportion of working expenses to gross revenue	% 79.60	84.71	(a) 91.46	(a) 95.07	(a) 99.86	(a) 101.27
Proportion of net earnings to capital cost	% 5.94	6.33	(a) 3.90	(a) 2.35	0.06	(a) -0.05
Car-miles run	'000 miles 81,361	87,581	87,650	81,311	72,423	71,746
Gross revenue per car-mile run	pence 22.56	(a) 30.72	(a) 34.11	(a) 36.44	(a) 39.63	(a) 45.82
Working expenses per car-mile run	" 17.96	26.02	(a) 31.19	(a) 34.64	(a) 39.58	(a) 46.40
Net revenue per car-mile run	" 4.60	4.70	(a) 2.92	(a) 1.80	(a) 0.05	(a) -0.58
Passenger-journeys	'000 695,476	a 1,000,813	(a) 948,877	(a) 875,922	(a) 754,483	(a) 749,138
Passenger-journeys per car-mile run	No. 8.55	(a) 11.43	(a) 10.83	(a) 10.77	(a) 10.42	(a) 10.44
Average gross revenue per passenger-journey	pence 2.64	(a) 2.69	(a) 3.15	(a) 3.38	(a) 3.82	(a) 4.41
Persons employed at end of year	No. 17,207	(b) 21,705	(b) 22,266	(b) 19,015	(b) 17,561	(b) 16,566
Accidents—						
Persons killed	61	113	90	81	61	71
" injured	2,750	6,704	5,939	5,518	4,942	5,409

(a) Includes particulars of Hobart Municipal Council Omnibus Service. (b) Includes motor omnibus employees, South Australia, Western Australia and Hobart Municipal Council Omnibus Services.

3. **Traffic and Accidents.**—Particulars of the traffic of electric tramways and the accidents which occurred in the movement of rolling stock are shown in the following table for each State during 1950-51 :—

**ELECTRIC TRAMWAYS : TRAFFIC AND ACCIDENTS, 1950-51.**

State.	Average Mileage Open for Traffic.		Number of Tram-cars.	Car-miles Run.	Pas-senger-journeys.	Average Number of Pas-sengers per Car-mile.	Accidents.	
	Route-miles.	Track-miles.					Killed.	Injured.
New South Wales	134	253	1,291	(a) 24,065	253,170	10.52	17	3,509
Victoria	174	322	870	23,411	257,888	11.02	34	1,060
Queensland	67	122	425	9,350	108,359	11.59	6	348
South Australia	96	166	321	9,203	68,737	7.47	11	169
Western Australia	48	82	164	3,438	34,443	10.02	2	274
Tasmania	48	72	118	2,279	(b) 26,541	(c) 10.11	1	49
<b>Australia</b>	<b>567</b>	<b>1,017</b>	<b>3,189</b>	<b>72,746</b>	<b>749,138</b>	<b>(c) 10.44</b>	<b>71</b>	<b>5,409</b>

(a) Estimated. (b) Includes passengers carried by Hobart Municipal Council Omnibus Service. (c) Calculated from tramcar-miles plus Hobart Municipal Council omnibus-miles.

4. *State Details.*—(i) *General.* For details of the various systems operating in the several States see Official Year Book No. 37 and issues prior to No. 32.

(ii) *Summary of Operations.* The following table shows particulars of the working of electric tramways in each State of Australia for the years 1946-47 to 1950-51 in comparison with the year 1938-39 :—

ELECTRIC TRAMWAYS : SUMMARY OF OPERATIONS.

Year ended 30th June—	Mileage Open for Traffic at 30th June.	Total Cost of Construction and Equipment.	Gross Revenue.	Working Expenses.	Net Revenue.	Interest.	Pro-portion of Working Expenses to Gross Revenue.	Car-miles Run.	Passenger-journeys.	Persons employed at end of year.
	(Route-miles.)	(£'000.)	(£'000.)	(£'000.)	(£'000.)	(£'000.)	(Per cent.)	('000.)	('000.)	

NEW SOUTH WALES.

1939	182	8,944	3,449	3,080	369	310	89.30	34,941	322,238	8,062
1947	172	8,736	4,360	4,378	— 18	220	100.42	a 34,700	408,388	9,760
1948	171	8,754	5,310	5,378	— 68	239	101.28	a 34,500	373,519	9,651
1949	158	7,168	5,098	5,259	—161	159	103.15	a 29,600	317,310	(b) 6,433
1950	153	6,891	4,984	5,280	—296	155	105.94	a 26,368	278,842	(b) 5,785
1951	134	6,865	5,162	5,892	—730	140	114.14	a 24,065	253,170	(b) 5,367

VICTORIA.

1939	166	8,086	2,112	1,388	724	254	65.72	22,803	175,198	4,355
1947	172	9,120	3,427	2,324	1,103	111	67.82	24,830	285,450	5,322
1948	172	9,276	3,332	2,593	739	107	77.83	25,002	279,451	5,728
1949	172	9,522	3,470	2,970	500	74	85.60	25,563	290,081	5,631
1950	172	9,815	3,105	2,894	211	63	93.22	20,666	225,049	5,156
1951	174	10,286	4,190	3,591	599	75	85.70	23,411	257,888	4,860

QUEENSLAND.

1939	60	2,391	831	632	199	120	76.05	8,100	91,444	1,911
1947	64	2,575	1,337	1,034	303	89	77.32	10,227	135,757	2,521
1948	64	2,962	1,508	1,221	287	91	80.98	10,314	132,107	2,650
1949	66	2,699	1,531	1,246	285	94	81.40	10,085	125,587	2,654
1950	66	2,692	1,526	1,359	167	97	89.09	9,545	115,239	2,517
1951	67	4,872	1,675	1,517	158	105	90.61	9,350	108,359	2,475

SOUTH AUSTRALIA.

1939	78	4,438	711	494	217	154	69.48	8,712	52,906	(b) 1,750
1947	99	3,975	1,228	1,019	209	147	82.92	9,757	83,365	2,284
1948	96	4,013	1,417	1,244	173	151	87.77	9,674	76,819	2,310
1949	96	4,107	1,320	1,287	33	112	97.47	8,924	71,876	2,436
1950	96	4,225	1,469	1,504	— 35	113	102.36	9,420	71,390	2,343
1951	96	5,417	1,670	1,888	—218	122	113.07	9,203	68,737	2,405

See following page for footnotes.

ELECTRIC TRAMWAYS: SUMMARY OF OPERATIONS—*continued.*

Year ended 30th June—	Mileage Open for Traffic at 30th June.	Total Cost of Construction and Equipment.	Gross Revenue.	Working Expenses.	Net Revenue.	Interest.	Proportion of Working Expenses to Gross Revenue.	Car-miles Run.	Passenger-journeys.	Persons employed at end of year.
(Route-miles.)	(£'000.)	(£'000.)	(£'000.)	(£'000.)	(£'000.)	(£'000.)	(Per cent.)	('000.)	('000.)	

## WESTERN AUSTRALIA.

1939	71	1,752	367	342	25	44	93.19	4,756	38,095	792
1947	69	1,869	535	526	9	48	98.32	5,361	53,016 (c)	1,196
1948	68	1,433	550	635	-85	52	115.44	5,431	53,148 (c)	1,238
1949	60	1,469	550	627	-77	53	114.09	4,555	41,389 (c)	1,209
1950	51	1,557	530	599	-69	33	112.97	4,009	38,977 (c)	1,127
1951	48	1,509	574	585	-11	24	101.89	3,438	34,443	820

## TASMANIA.

1939	29	664	179	153	26	27	85.47	2,049	15,595	337
1947	38	792 (d)	323	214	109	13	66.37	2,706 (d)	34,837 (d)	622
1948	35 (d)	855 (d)	339 (d)	321 (c)	18 (d)	14 d	94.62	2,729 (d)	33,833 (d)	689
1949	36 (d)	915 (d)	378 (d)	349 (c)	29 (d)	15 d	92.19	2,584 (d)	20,679 (d)	652
1950	36 (d)	1,039 (d)	394 (d)	356 (c)	38 (d)	19 d	90.30	2,415 (d)	29,143 (d)	633
1951	48 (d)	1,407 (d)	494 (d)	467 (c)	27 (d)	25 d	94.51	2,279 (d)	26,541 (d)	639

## AUSTRALIA. (e)

1939	586	26,275	7,649	6,089	1,560	909	79.60	81,361	695,476	17,207
1947	614	27,067	11,210	9,495	1,715	628	84.71	87,581	1,000,813	21,705
1948	606	27,293	12,456	11,392	1,064	654	91.46	87,650	948,877	22,266
1949	588	25,880	12,347	11,738	609	507	95.07	81,311	875,922	19,015
1950	574	26,219	12,008	11,992	16	480	99.86	72,423	754,483	17,561
1951	567	30,416	13,765	13,940	-175	491	101.27	71,746	749,138	16,566

(a) Estimated. (b) Excludes administrative staff not distributable between bus and tram services. (c) Includes motor omnibus employees. (d) Includes Hobart Municipal Council Omnibus Service. (e) See notes (a) to (d).

## D. MOTOR OMNIBUS SERVICES.

1. **General.**—Motor omnibus services have been in operation for some years in the capital cities and some of the larger towns of the States of Australia, and in the Australian Capital Territory.

Governmental and municipal authorities operate certain services and the others are run by private operators; in the States the former are run in conjunction with the existing electric tramway systems.

2. Government and Municipal Services.—(i) *Summary of Operations, 1950-51.* The following table is a summary of the operations during the year ended 30th June, 1951 of omnibus systems controlled by governmental and municipal authorities.

MOTOR OMNIBUS SERVICES : GOVERNMENT AND MUNICIPAL, 1950-51.

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	A.C.T.	Aust.
Length of route .. miles	435	67	333	23 <sup>1</sup>	2,533	592	11	3,994
Buses .. No.	1,031	317	221	93	168	84	67	1,981
Capital cost .. £'000	5,530	1,218	1,059	465	833 <sup>(a)</sup>	222	276	9,603
Gross revenue .. £'000	5,120	1,032	539	172	511 <sup>(a)</sup>	258	104	7,717
Working expenses .. £'000	(b) 5,558	1,042	487	229	480 <sup>(a)</sup>	164	139	8,099
Bus-mileage run .. '000 miles	32,217	7,626	4,342	1,516	5,305	1,941	928	53,895
Passenger-journeys .. '000	209,223	67,442	29,509	6,699	17,372 <sup>(a)</sup>	4,921	5,148	340,314
Persons employed .. No.	(c) 5,640	1,208	481	(d)	(e) 91 <sup>(f)</sup>	110	190 <sup>(g)</sup>	7,720

(a) Excludes Hobart Municipal Council Service. (b) Includes estimate of administrative and general charges. (c) Excludes administrative staff not distributable between omnibus and tram services. (d) Not available, employees interchangeable with Electric Tramways and included therein (Division C). (e) Excludes 450 Government employees. (f) Excludes employees of Hobart Municipal Council Service who are interchangeable with Electric Tramways and included therein (see Division C). (g) See notes (e) to (f).

(ii) *Summary of Operations, Australia.* The following table is a summary of the working of motor omnibus services in Australia under governmental and municipal control during the five years ended 1950-51.

MOTOR OMNIBUS SERVICES : GOVERNMENT AND MUNICIPAL, AUSTRALIA.

Particulars.	1946-47.	1947-48.	1948-49.	1949-50.	1950-51.
Length of route .. miles	1,062	2,454	3,268	3,208	3,994
Buses .. No.	1,112	1,423	1,728	1,962	1,981
Capital cost .. £'000	2,842 <sup>(a)</sup>	4,745 <sup>(a)</sup>	6,867 <sup>(a)</sup>	7,945 <sup>(a)</sup>	9,603
Gross revenue .. £'000	(a) 2,725 <sup>(a)</sup>	3,862 <sup>(a)</sup>	5,409 <sup>(a)</sup>	6,394 <sup>(a)</sup>	7,717
Working expenses .. £'000	3,000 <sup>(a)</sup>	4,109 <sup>(a)</sup>	5,690 <sup>(a)</sup>	6,579 <sup>(a)</sup>	8,099
Net revenue .. £'000	-275 <sup>(a)</sup>	-247 <sup>(a)</sup>	-191 <sup>(a)</sup>	-185 <sup>(a)</sup>	-382
Proportion of working expenses to gross revenue .. per cent.	110.11 <sup>a</sup>	106.39 <sup>a</sup>	103.47 <sup>a</sup>	102.89 <sup>a</sup>	104.94
Proportion of net revenue to capital cost .. per cent.	-9.74 <sup>a</sup>	-5.21 <sup>a</sup>	-2.78 <sup>a</sup>	-2.32 <sup>a</sup>	-3.98
Bus-mileage run .. '000 miles	31,716	37,929	48,958	54,102	53,895
Gross revenue per bus-mile run .. pence	(a) 20.62 <sup>(a)</sup>	24.44 <sup>(a)</sup>	27.08 <sup>(a)</sup>	28.51 <sup>(a)</sup>	34.59
Working expenses per bus-mile run .. pence	22.70 <sup>(a)</sup>	26.00 <sup>(a)</sup>	28.02 <sup>(a)</sup>	29.33 <sup>(a)</sup>	36.30
Net revenue per bus-mile run .. pence	-2.08 <sup>a</sup>	-1.56 <sup>a</sup>	-0.94 <sup>a</sup>	-0.82 <sup>a</sup>	-1.71
Passenger-journeys .. '000	a 214,684 <sup>a</sup>	a 249,563 <sup>a</sup>	a 309,096 <sup>a</sup>	a 325,079 <sup>a</sup>	a 340,314
Passenger-journeys per bus-mile run ..	(a) 6.77 <sup>(a)</sup>	(a) 6.58 <sup>(a)</sup>	(a) 6.34 <sup>(a)</sup>	(a) 6.04 <sup>(a)</sup>	(a) 6.36
Average gross revenue per passenger-journey .. pence	(e) 3.05 <sup>(a)</sup>	(a) 3.71 <sup>(a)</sup>	(a) 4.27 <sup>(a)</sup>	(a) 4.72 <sup>(a)</sup>	(a) 5.44
Persons employed (b) .. No.	(a) 4,697 <sup>(a)</sup>	(a) 6,200 <sup>(a)</sup>	(a) 7,077 <sup>(a)</sup>	(a) 7,721 <sup>(a)</sup>	(a) 7,720

(a) Excludes Hobart Municipal Council Service. (b) See relevant notes to table above.

3. Private Services.—(i) *General.* Particulars of motor omnibus services under the control of private operators are recorded in the States of New South Wales, Victoria, South Australia and Western Australia only.

In New South Wales, particulars are compiled for the Metropolitan and Newcastle Transport districts only, and in Victoria for the Metropolitan district only, but in South Australia and in Western Australia all operators throughout the State are represented.

(ii) *Summary of Operations.* The following table shows the operations of motor omnibus services under the control of private operators in New South Wales, South Australia and Western Australia during the five years ended June, 1951 and in Victoria during the years 1949, 1950 and 1950-51 :—

**MOTOR OMNIBUS SERVICES : PRIVATE.**

Year.	Number of Buses.	Capital Cost. (£'000.)	Gross Revenue. (£'000.)	Bus-mileage Run. (°000 miles.)	Passenger-journeys. (°000.)	Persons Employed.
<b>NEW SOUTH WALES.(a)</b>						
1946-47	615	569	1,065	14,261	73,703	1,085
1947-48	673	783	1,278	15,626	77,985	1,234
1948-49	740	881	1,505	17,490	86,859	1,327
1949-50	795	928	1,698	17,666	98,030	1,437
1950-51	823	1,032	1,995	18,221	99,740	1,418
<b>VICTORIA.(b)</b>						
1949(c)	430	(d)	1,169	17,223	72,311	1,047
1950(c)	437	(d)	1,351	18,968	83,288	1,031
1950-51	425	(d)	1,414	19,292	83,628	1,027
<b>SOUTH AUSTRALIA.</b>						
	(b)					
1946-47	81	(d)	399	4,929	8,465	(d)
1947-48	90	(d)	457	5,362	9,774	(d)
1948-49	104	(d)	515	5,645	10,836	(d)
1949-50	112	(d)	530	5,900	11,496	(d)
1950-51	116	(d)	573	6,031	12,470	(d)
<b>WESTERN AUSTRALIA.</b>						
1946-47	276	309	642	9,210	27,699	758
1947-48	317	455	721	10,214	28,048	865
1948-49	356	591	844	11,318	30,931	937
1949-50	396	736	1,002	13,027	34,998	1,011
1950-51	399	767	1,106	12,645	34,346	1,050

(a) Metropolitan and Newcastle Transport districts only.  
(c) Year ended 31st December.

(b) Metropolitan area only.

(d) Not available.

**E. FERRY (PASSENGER) SERVICES.**

1. *General.*—Ferry services to transport passengers are operated in Sydney and Newcastle, New South Wales, on the Swan River at Perth in Western Australia, and on the Derwent River at Hobart and in Devonport, Tasmania. Control is exercised both by Governmental authorities and by private operators. In Victoria and Queensland the services operated are not extensive, and there are no ferry services in South Australia.

2. *Summary of Operations.*—The operations of ferry passenger services in New South Wales, Western Australia and Tasmania during the years 1946-47 to 1950-51 are summarized in the following table. For New South Wales and Western Australia details are also shown for the year 1938-39. Particulars of passengers carried on vehicular ferries are not included.

## FERRY (PASSENGER) SERVICES.

Year.	Number of Vessels.	Passenger-accommodation. (No.)	Passenger-journeys. (‘000.)	Gross Revenue. (£.)	Persons Employed.	
NEW SOUTH WALES—SYDNEY AND NEWCASTLE.						
1938-39	.. ..	54	38,971	27,864	418,500	(a) 830
1946-47	.. ..	46	28,591	31,558	471,976	452
1947-48	.. ..	47	28,808	28,319	502,947	437
1948-49	.. ..	46	27,759	23,314	558,390	411
1949-50	.. ..	44	26,477	21,914	534,853	403
1950-51	.. ..	39	22,793	20,274	612,661	389
WESTERN AUSTRALIA—PERTH.						
1938-39	.. ..	6	880	1,184	11,001	25
1946-47	.. ..	7	1,022	1,367	13,007	25
1947-48	.. ..	6	957	1,375	13,354	28
1948-49	.. ..	3	727	928	11,955	21
1949-50	.. ..	4	811	909	12,669	20
1950-51	.. ..	4	785	712	10,311	18
TASMANIA.						
1946-47(b)	.. ..	7	1,348	974	16,029	32
1947-48	.. ..	7	1,362	987	17,066	31
1948-49	.. ..	7	1,362	978	17,664	30
1949-50	.. ..	7	1,570	980	19,782	30
1950-51	.. ..	7	1,570	966	20,002	31

(a) Includes administrative staff.

(b) Particulars are not available for 1938-39.

## F. MOTOR VEHICLES.

1. **Motor Industry.**—Chapter XXIV.—Manufacturing Industry of this Year Book contains summarized information on the motor industry of Australia and includes therein some data on the imports of motor bodies and chassis. Chapter VI.—Trade contains further data on imports, including those of petroleum products.

2. **Registration.**—(i) *General.* The arrangements for the registration of motor vehicles and the licensing of drivers and riders are not uniform throughout Australia. The following statement indicates the procedure followed at 30th June, 1952 in each of the States and Territories, and the fees for registration and licensing and the amount of motor tax payable where such tax is not incorporated in the registration fees. Complete or partial exemption from the payment of registration fees or motor tax is usually granted for certain vehicles, such as ambulances, fire-brigade vehicles, those owned by farmers and used solely for carting the produce of, or requisites for, their farms, Government-owned vehicles, etc.

Before a licence to drive a motor vehicle or ride a motor cycle is issued the applicant must, by passing the prescribed test, satisfy the competent authority that he is capable of driving or riding the vehicle concerned. All vehicles, before being registered, must be tested for road-worthiness.

(ii) *New South Wales.* The registration of vehicles, licensing of drivers, and collection of various taxes, fees and charges are functions of the Superintendent of Motor Transport. By arrangement with the Superintendent of Motor Transport, the police effect the registrations and collect the taxes and fees in certain areas. The normal term of registrations and licences and renewals thereof is a year, but quarterly registrations of motor vehicles are permitted under certain conditions.

A driver's licence costs 15s. per annum for a motor vehicle and a rider's licence 10s. per annum for a motor cycle. A learner's permit, which has a currency of two months, costs 5s.



Annual registration fees are as follows :—Motor cycles, 10s. ; motor cars, lorries, trailers and tractors, £1 5s. ; taxi-cabs and hire cars, metropolitan and Newcastle, £2, country, £1 10s. ; motor omnibuses, metropolitan area and Newcastle, £3, country, £2 ; traders' plates, motor cycles, £2, other vehicles, £8. An additional fee of 5s. per annum is payable in respect of any vehicle used in trade or business.

A motor tax is payable in addition to the registration fee. For motor cycles the tax is :—without side-car, £1 7s. ; with side-car or box, £2 7s. 6d. For vehicles other than motor cycles, the tax is payable on the unladen weight of the vehicle. The taxes payable for different classes of vehicles are as follows :—

(a) *Motor Cars (including taxi-cabs, etc.)*. The rate commences at 3s. 6d. per  $\frac{1}{2}$  cwt. but decreases slightly as the weight of the vehicle increases.

(b) *Motor Lorries and Trailers*. The tax payable commences at £1 15s. for a vehicle of 5 cwt. or less, and rises by a proportionately greater amount for each increase of 5 cwt., so that the average amount payable per cwt. increases with the weight of the vehicle.

(c) *Tractors*. The rates of tax are the same as for motor lorries, subject to a maximum of £31 14s. 6d.

(d) *Motor Omnibuses*. The rate commences at 5s. per  $\frac{1}{2}$  cwt., but decreases slightly as the weight of the vehicle increases.

In the case of vehicles with solid rubber tyres, the rates shown above are increased by 25 per cent. Double the ordinary rates of tax are payable in respect of vehicles powered by a diesel engine.

(iii) *Victoria*. The registration of motor vehicles and the licensing of drivers and riders is controlled by the Chief Commissioner of Police under provisions of the Motor Car Act 1951. The fees payable per annum for the registration of motor vehicles and licensing of drivers and riders are as follows :—

Motor cycles (without trailer, fore-car or side-car attached)	£1
Motor cycles (with trailer, etc.)	£1 10s.
Motor cars (private use)	3s. for each power-weight unit. (The number of power-weight units equals the sum of the horse-power and the weight in cwt. of a motor car unladen and ready for use.)
Trailers attached to motor cars	£1 to £4, according to the unladen weight and type of tyres.
Motor omnibuses (operating on specified routes in the metropolitan area)	£5 plus additional fees for each passenger seat.
Motor cars used for carrying passengers or goods for hire or in the course of trade	From 3s. 9d. to 8s. 9d. for each power-weight unit according to the unladen weight and type of tyres. Rates are 10 per cent. less where the vehicle is wholly of British or Australian manufacture or part British, part Australian.
Motor cars (constructed for the carriage of goods) owned by primary producers and used solely in connexion with their business	From 2s. to 5s. 3d. for each power-weight unit according to the number of wheels and type of tyres.
Drivers' and riders' licences	10s.

Where a vehicle is powered by a diesel engine the registration fee is double that charged for a vehicle of the same power-weight units fitted with a petrol engine.

(iv) *Queensland*. The Main Roads Department controls the registration of motor vehicles within the State. The rates operating from 8th February, 1952, are as follows :—Annual registration fees for pneumatic-tyred vehicles are determined by adding the horse-power to the weight in cwt. of the vehicle ready for use, and charging 6s. per unit. For solid-tyred vehicles the sum of the horse-power, weight of the vehicle, and maximum

permissible load (in cwt.) is charged at 5s. per unit if the capacity is not over 2 tons, and 9s. per unit if over 2 tons. Vehicles fitted with compression ignition (diesel) engines are charged at double the foregoing rates, with the exception of vehicles whose capacity does not exceed 2 tons, where the rate is 9s. 9d. per unit. Registration fees for trailers are determined at the rate of 6s. per cwt., and for caravan trailers at the rate of 9s. per cwt. Traction engines are registered at the fixed rate of £3 3s. per year. The fees payable according to these rates on motor cars range from £4 16s. to approximately £25. On pneumatic-tyred trucks and utilities, the fees are from about £12 12s. to over £15 for a truck with a capacity of 1 ton, and up to £30 for 5-ton trucks. Fees for motor cycles are £2 5s., or £3 8s. with a side-car. With the above-mentioned fees, an annual driving fee of 7s. 6d. for a private motor vehicle or motor cycle or 12s. 6d. for a commercial vehicle must be paid to the Main Roads Department.

The driver of any motor vehicle or the rider of any motor cycle must hold a licence from the Commissioner of Police. Licences are endorsed according to the types of vehicles in the operation of which the holder has shown proficiency and which he or she is permitted to operate. The period of currency of a licence varies according to the age of the applicant, viz. :—Aged under 41 years, 10 years; 41 years and under 46 years, until 51st birthday; 46 years and under 62 years, 5 years; 62 and under 66 years, until 67th birthday; 66 years and over, 1 year.

(v) *South Australia.* Under the provisions of the Road Traffic Act 1934-1951, the Registrar of Motor Vehicles controls the registration of all motor vehicles and the granting of licences. The fee prescribed for a motor vehicle propelled by a compression ignition (diesel) engine is double that for a vehicle of the same horse-power and weight propelled by a petrol engine. The power-weight unit is the basis for the calculation of registration fees. The period of registration is for six or twelve months, commencing with the date of registration. Commercial vehicles of declared British origin are registered at a discount of 10 per cent., whilst primary producers' vehicles are registered at 50 per cent. of the ordinary fee. The ordinary fees payable for yearly registration of motor vehicles, other than motor cycles and trailers, extend from a minimum of £4 for 25 power-weight units or less to £38 for 160 power-weight units. The ordinary fees for motor cycles are:—solo, up to 1 cwt., £1, over 1 cwt., £1 10s.; with side-car attached, £2. Fees for trailers vary according to the weight of the vehicle and range from £1 10s. for 1 ton or less to £3 for 2 tons or more. An extra 50 per cent. is charged for trailers with solid rubber tyres and 100 per cent. for those with metal tyres. Fees for drivers' and riders' licences are:—for any motor vehicle, 10s.; for motor cycle only, 5s.

(vi) *Western Australia.* The Traffic Act 1919-1951 provides for the registration of motor vehicles by (i) the Commissioner of Police for the Metropolitan Traffic District and (ii) individual Local Government Authorities (Municipalities and Road Boards) throughout the remainder of the State. Ministerial supervision is exercised by the Minister for Local Government.

Annual registration fees are calculated on a power-weight basis for passenger vehicles (cars, buses, etc.), and for vehicles designed for the carriage of goods, according to the power-load-weight of the vehicle. Fees in the power-weights scale range from £2 10s. not exceeding 20 power-weight units, to £13 for 70 units with each additional unit at 7s. 6d. The power-load-weight scale commences at £3 10s. not exceeding 25 units, and rises to £22 for 150 units; additional thereafter and not exceeding 200, 7s. 6d. per unit; up to 300, 10s. per unit; and every additional unit, 12s. 6d. The power-weight or power-load-weight of vehicles is the sum of the weight in cwt. of the vehicle ready for use plus rated horse-power (power-weight), plus declared maximum load in cwt. (power-load-weight). Where a fraction is contained in the result the next higher integral figure shall apply. In Western Australia the Dendy Marshall formula<sup>2</sup> for calculating horse-power is prescribed.

\* Where cylinder and stroke measurements are expressed in inches:—

$$\text{Horse-power} = \frac{(\text{Diameter of cylinder})^2 \times \text{number of cylinders} \times \text{stroke}}{12}$$

and where measurements are expressed in millimetres:—

$$\text{Horse-power} = \frac{(\text{Diameter of cylinder})^2 \times \text{number of cylinders} \times \text{stroke}}{200,000}$$

The annual fee payable for the registration of a solo motor cycle is £1 and for combination outfits 10s. per wheel irrespective of the power-weight.

Vehicles used in the carriage of either passengers or goods for hire or reward are further subject to the additional licence fee of 10s. per wheel. Where dual wheels are fitted, the fee payable is, in effect, £1 per axle.

The issue of drivers', riders' and conductors' licences, at an annual fee of 5s., is the sole prerogative of the Commissioner of Police.

The maximum period of a licence is twelve months, although short-term renewals may be effected at quarterly intervals. Date-to-date licensing periods operate in the metropolitan traffic area only. The licensing year in other areas ends on 30th June.

(vii) *Tasmania.* By the Transport Act 1938 the Transport Commission assumed control of the registration and taxation of motor vehicles, the licensing of drivers and the regulation of commercial transport. Annual registration fees are as follows:—Motor vehicle, £1 10s.; motor cycle or trailer, £1. Charges for transfer of registration and duplicate certificates are 5s. and 1s. respectively. A licence to drive or ride any motor vehicle costs 10s. per annum.

Motor tax is calculated on a power-weight basis—i.e., unladen weight units and horse-power. Separate rates are provided for lorries, for trailers and for other motor vehicles. For lorries and trailers, every  $\frac{1}{2}$  cwt., and for other motor vehicles every cwt., constitutes a weight unit. The rate of tax for lorries is 2s. per unit and for motor vehicles other than lorries and trailers, 3s. 3d. per unit. In the case of a trailer, if the number of weight units does not exceed ten, no tax is payable, but for every unit exceeding ten the rate is 2s. The rate on motor vehicles propelled otherwise than by any volatile spirit by means of an internal combustion engine (steam, electric, diesel, or petrol-electric engines) is 4s. 9d. per weight unit.

(viii) *Australian Capital Territory.* The registration of motor vehicles and the licensing of drivers and riders in the Australian Capital Territory is controlled by the Services Branch of the Department of the Interior under the provisions of the Motor Traffic Ordinance 1936–1951 and the Traffic Ordinance 1937.

The rates charged for the annual registration of motor vehicles, except motor cycles, are calculated at 2s. 3d. per  $\frac{1}{2}$  cwt. of the tare weight of the vehicle for British vehicles and 2s. 9d. per  $\frac{1}{2}$  cwt. for foreign vehicles. Motor cycle rates are:—British, £1 1s. solo, £1 18s. with side-car attached; foreign, £1 2s. 6d. solo, £2 with side-car attached. The registration fee for a motor omnibus is 8s. 6d. per cwt. Increased registration fees are not charged for diesel-powered motor vehicles.

The annual fee for a licence to drive a car, lorry or motor cycle is 10s. and for a motor omnibus, hire car or licensed goods vehicle the fee is 12s. 6d. There are no road taxes imposed for the carriage of goods.

(ix) *Northern Territory.* In the Northern Territory the Registrar of Motor Vehicles controls the licensing of drivers and the registration of motor vehicles. Annual licence fees are:—motor cycles, 5s.; motor vehicles for hire, £1; any other motor vehicle, 10s. Under the Motor Vehicles Ordinance 1930–1940 the following registration fees are payable:—motor cycle (with or without side-car), £1; motor car for private use (including utility truck), £2; motor car for hire, £10; lorry, £3; tractor, £3; trailer (four-wheeled), £3; and trader's plate, £1.

3. **Taxi-cabs and Other Hire Vehicles.**—In all the capital cities of the States and in many of the provincial centres taxi-cabs and other vehicles ply for hire under licence granted by either the Commissioner of Police or the local government authority concerned. As most of these vehicles are independently controlled by individuals or small companies, it has not been possible to obtain complete data in respect of their operations.

4. **Motor Omnibuses.**—In both urban and provincial centres motor omnibus traffic has assumed considerable proportions during recent years and in some States the railway and tramway systems run motor services complementary to their main services. There has been a considerable replacement also, during the last few years, of existing tramway services by trolley-bus and motor-bus services. (See Divisions C. and D. of this Chapter.)

5. Motor Vehicles on the Register, etc.--(i) States and Territories, 1950-51. Particulars of the registration of motor vehicles, licences issued and revenue received for 1950-51 are contained in the following table. A graph showing for all motor vehicles other than motor cycles the registrations in force at 30th June of each year from 1920 to 1952 may be found on p. 126.

**MOTOR VEHICLES : REGISTRATIONS AND REVENUE, 1950-51.**  
(Excluding Defence Service Vehicles.)

State or Territory.	Number of Motor Vehicles Registered at 30th June, 1951.(a)				Per 1,000 of Population at 30th June, 1951.	Number of Drivers' and Riders' Licences in force at 30th June, 1951.	Gross Revenue derived from—			
	Motor Cars.(b)	Commercial Vehicles (c)	Motor Cycles.	Total.			Vehicle Registrations and Motor Tax.	Drivers' and Riders', etc., Licences.	Other Sources.	Total.
						£	£	£	£	
N.S. Wales	312,453	185,041	46,851	544,345	164	748,343	4,617,402	587,218	119,185	6,396,472
Victoria	263,714	417,049	33,637	444,400	196	575,723	3,299,848	212,514	400,524	3,912,886
Q'land	115,432	103,341	22,011	240,784	199	252,366	1,947,978	95,432	568,687	2,611,198
S. Australia	102,461	48,356	22,246	173,043	240	208,107	1,862,388	126,490	92,640	1,481,318
W. Aust.	56,235	47,922	14,535	118,692	204	134,864	829,680	46,628	97,856	974,158
Tasmania	28,833	15,068	5,272	49,173	159	53,936	343,066	26,968	82,772	452,806
Nor. Terr.	1,155	2,684	552	4,391	267	4,645	7,711	2,125	..	9,896
A.C.T.	3,327	1,616	580	5,523	222	7,837	26,402	4,085	299	30,486
<b>Australia</b>	<b>883,610</b>	<b>251,057</b>	<b>145,684</b>	<b>1,280,351</b>	<b>187</b>	<b>1,985,821</b>	<b>12,333,075</b>	<b>1,101,461</b>	<b>2,434,624</b>	<b>15,869,160</b>

(a) Excludes Trailers (79,012), Road Tractors, etc. (11,543), and Dealers' plates (6,280). (b) Includes Taxis and Hire Cars. (c) Includes Lorries, Vans, Buses and Utility Trucks. (d) Includes vehicles registered as primary producers' vehicles (69,552). (e) Includes primary producers' vehicles, Victoria.

(ii) Australia, 1938-39 and 1946-47 to 1950-51. The following table shows the number of vehicles registered, licences issued, and revenue received therefrom during each of the years 1946-47 to 1950-51 in comparison with 1938-39:—

**MOTOR VEHICLES : REGISTRATIONS AND REVENUE, AUSTRALIA.**  
(Excluding Defence Service Vehicles.)

Year.	Number of Motor Vehicles Registered at 30th June.				Per 1,000 of Population at 30th June.	Number of Drivers' and Riders' Licences in force at 30th June.	Gross Revenue derived from—			
	Motor Cars.	Commercial Vehicles. (a)	Motor Cycles.	Total.			Vehicle Registrations and Motor Tax.	Drivers' and Riders', etc., Licences.	Other Sources.	Total.
						£	£	£	£	
1938-39	562,271	258,025	79,237	899,533	129	1,238,497	6,318,435	508,387	257,652	7,084,474
1946-47	550,400	375,646	86,712	1,012,758	134	1,499,765	6,562,232	633,993	476,001	7,672,226
1947-48	593,077	444,072	100,196	1,107,345	144	1,601,394	7,437,294	650,294	955,798	9,043,386
1948-49	655,497	452,147	117,133	1,224,777	155	1,700,008	8,276,780	713,509	1,442,796	10,433,085
1949-50	768,558	501,721	133,979	1,404,258	172	1,845,265	9,596,034	862,509	1,811,989	12,270,532
1950-51	883,610	251,057	145,684	1,280,351	187	1,985,821	12,333,075	1,101,461	2,434,624	15,869,160

(a) Includes primary producers' vehicles, Victoria.

(iii) Relation to Population. The table hereunder shows the number of vehicles (excluding motor cycles) registered per 1,000 of population in each State and Territory at 31st December, 1921, and at 30th June for each of the years 1939 and 1947 to 1951.

**MOTOR VEHICLES (EXCLUDING MOTOR CYCLES) REGISTERED PER 1,000 OF POPULATION.**

(Excluding Defence Service Vehicles.)

Date.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
31st Dec., 1921 ..	15	16	8	24	12	13	(a)	..	15
30th June, 1939 ..	107	125	118	137	133	96	218	174	118
.. 1947 ..	106	131	133	152	129	107	259	148	122
.. 1948 ..	114	140	140	162	137	115	249	141	131
.. 1949 ..	122	149	149	174	148	127	223	149	140
.. 1950 ..	135	168	164	191	164	135	223	173	155
.. 1951 ..	150	181	181	209	179	151	234	199	170

(a) Not available.

6. **New Vehicles Registered.**—(i) *States and Territories, 1950-51.* The following table shows the number of new vehicles registered in each State and the Australian Capital Territory during 1950-51. A graph showing the number of new motor vehicles (excluding motor cycles) registered during each of the years 1929 to 1952 will be found on p. 126.

**NEW MOTOR VEHICLES REGISTERED, 1950-51.**

(Excludes Defence Service Vehicles.)

Vehicles.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	A.C.T.	Total. (a)
Motor cars ..	46,984	36,692	17,898	13,089	8,214	4,187	607	127,671
Commercial vehicles, etc. ...	29,226	(b) 19,432	12,533	7,405	6,724	2,319	294	77,933
Motor cycles ..	8,855	5,442	4,025	4,928	2,802	960	139	27,151
<b>Total ..</b>	<b>85,065</b>	<b>61,566</b>	<b>34,456</b>	<b>25,422</b>	<b>17,740</b>	<b>7,466</b>	<b>1,040</b>	<b>232,755</b>

(a) Excludes Northern Territory.

(b) Includes vehicles registered as primary producers' vehicles.

(ii) *Australia, 1938-39 and 1946-47 to 1950-51.* Particulars of the number of new vehicles registered in Australia during the years 1938-39 and 1946-47 to 1950-51 are shown in the following table:—

**NEW MOTOR VEHICLES REGISTERED : AUSTRALIA.(a)**

(Excluding Defence Service Vehicles.)

Vehicles.	1938-39.	1946-47.	1947-48.	1948-49.	1949-50.	1950-51.
Motor cars ..	54,107	21,237	42,745	66,471	115,012	127,671
Commercial vehicles, etc.(b)	24,927	16,317	28,769	36,678	57,946	77,933
Motor cycles ..	7,370	8,220	14,308	22,226	26,782	27,151
<b>Total ..</b>	<b>86,404</b>	<b>45,774</b>	<b>85,822</b>	<b>125,375</b>	<b>199,740</b>	<b>232,755</b>

(a) Excludes Northern Territory.  
Victoria.

(b) Includes vehicles registered as primary producers' vehicles.

7. **World Motor Vehicle Statistics, 1951.**—Particulars of motor vehicle registrations throughout the world were included in issues of the Official Year Book prior to No. 39. This information was derived from the results of the World Motor Census, conducted by the *American Automobile* magazine. Detailed information is not repeated in this issue, but the following particulars from the same source show that there were 73,148,436 motor cars, trucks and buses registered in various countries of the world at 1st January, 1952. This was an increase of 6.5 per cent. on the figure for the previous year, 68,695,200,

and was the highest figure attained to that date. Of these vehicles, 51,425,647 or 70.3 per cent. of the world total were in the United States of America, and Australian registrations amounted to 2.0 per cent.

8. Survey of Motor Vehicles, 1947-48.—A survey of motor vehicles on the roads (excluding motor cycles) during 1947-48 was carried out by the Commonwealth Statistician in collaboration with the Government Statisticians and Road Transport authorities in the States. Results were published in a series of bulletins dealing with each State separately and with the Commonwealth as a whole, and summarized particulars were included in *Transport and Communication Bulletin* No. 40—1948-49 published by this Bureau. Similar surveys, but of modified scope, have been carried out for later periods in respect of new vehicles only. The results have been published by this Bureau in the *Transport and Communication Bulletin* and, since July, 1951, in the *Monthly Bulletin of Registrations of New Motor Vehicles*. Information contained in the latter includes the make, type and horse-power of new motor vehicles registered in each State and the Australian Capital Territory.

**G. TRAFFIC ACCIDENTS.**

1. General.—Prior to the year 1949-50 it was not possible to make proper comparisons between States of the number of accidents recorded, because of the differences in legislation regarding the reporting of accidents and the degree to which the legislation could be enforced. However, arrangements were made, in co-operation with the Australian Road Safety Council and the various police and transport authorities concerned, to obtain the numbers of road traffic accidents on a comparable basis from all States in respect of the year ended 30th June, 1950 and subsequent years. This has been achieved by restricting the statistics so as to relate only to those accidents which result in death or bodily injury to any person, or in damage in excess of £10 to property. It should be noted, however, that the comparability of the statistics between States even on this basis still depends on the degree to which accidents so defined are in fact recorded by the police. Except in the case of Western Australia, where statistics shown relate to all accidents which occurred in the metropolitan area and to those which involved fatal or "near-fatal" injury only in the remainder of the State, it is considered that there is little difference in the recording of accidents as between States.

For further particulars of traffic accidents see *Transport and Communication Bulletins* issued by this Bureau.

2. Total Accidents Reported, 1950-51.—(i) Summary. The following table shows, for each State and the Australian Capital Territory during the year 1950-51, the total accidents reported to the police, the number of accidents involving casualties, and the number of persons killed or injured—totals and per 100,000 of mean population and per 10,000 motor vehicles registered.

**ACCIDENTS (KNOWN TO THE POLICE) WHICH OCCURRED IN PUBLIC THOROUGHFARES: ACCIDENTS RECORDED AND CASUALTIES, 1950-51.**

State or Territory.	Total Accidents Reported. (a)	Accidents Involving Casualties.	Persons Killed.			Persons Injured.(b)		
			Number.	Per 100,000 of Mean Population.	Per 10,000 Motor Vehicles Registered.	Number.	Per 100,000 of Mean Population.	Per 10,000 Motor Vehicles Registered.
N.S. Wales ..	19,878	9,694	699	21	13	11,817	361	217
Victoria ..	14,861	9,274	581	26	13	11,364	508	256
Queensland ..	9,599	4,557	218	18	9	5,512	462	229
South Australia	6,325	2,001	197	28	11	2,332	327	135
W. Australia(c)	3,580	2,084	167	29	14	2,686	470	226
Tasmania ..	2,724	1,013	57	20	12	1,212	421	246
Aust. Cap. Ter.	294	137	7	32	13	172	782	313
Total, 1950-51	57,261	(d)28,760	1,926	23	12	(e)35,095	423	223
Total, 1949-50	46,959	(d)25,965	1,643	20	12	(e)31,447	391	224

(a) Total accidents causing death or injury to persons or damage exceeding £10 to property.  
 (b) Persons injured to an extent requiring surgical or medical treatment. (c) Includes for the Metropolitan Area all accidents causing death or injury to persons or damage exceeding £10 to property, and, for the remainder of the State, only those accidents causing fatal or "near-fatal" injuries.  
 (d) Accidents involving persons killed, and persons injured to an extent requiring surgical or medical treatment, except in Western Australia where only persons injured and detained in hospital are included.  
 (e) As defined in note (d).

(ii) *Riders, Drivers, Pedestrians, etc., Killed or Injured.* The following table shows the number of persons killed and the number injured during 1950-51 in each State and the Australian Capital Territory, classified into riders, drivers, pedestrians, etc.

**ACCIDENTS (KNOWN TO THE POLICE) WHICH OCCURRED IN PUBLIC THOROUGHFARES : RIDERS, DRIVERS, PEDESTRIANS, ETC., KILLED OR INJURED, 1950-51.**

Riders, Drivers, Pedestrians, etc.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
<b>PERSONS KILLED.</b>								
Drivers of Motor Vehicles	115	104	32	28	30	8	1	318
Motor Cyclists	121	107	54	58	37	21	4	402
Pedal Cyclists	33	48	17	20	9	3	1	131
Passengers (all types) (a)	208	137	61	54	48	9	1	518
Pedestrians	215	181	51	36	42	16	..	541
Other Classes (b)	7	4	3	1	1	..	..	16
Not Stated	..	..	..	..	..	..	..	..
<b>Total</b>	<b>699</b>	<b>581</b>	<b>218</b>	<b>197</b>	<b>167</b>	<b>57</b>	<b>7</b>	<b>1,926</b>
<b>PERSONS INJURED.(c)</b>								
					(d)			
Drivers of Motor Vehicles	1,955	1,987	816	300	392	184	23	5,657
Motor Cyclists	2,167	1,616	1,271	699	594	293	43	6,683
Pedal Cyclists	983	1,415	772	256	322	163	25	3,936
Passengers (all types)(a)	3,925	3,813	1,674	741	961	359	63	11,536
Pedestrians	2,720	2,447	941	328	390	204	18	7,048
Other Classes (b)	67	86	38	8	26	7	..	232
Not Stated	..	..	..	..	1	2	..	3
<b>Total</b>	<b>11,817</b>	<b>11,364</b>	<b>5,512</b>	<b>2,332</b>	<b>2,686</b>	<b>1,212</b>	<b>172</b>	<b>35,095</b>

(a) Includes pillion riders. (b) Includes tram drivers, riders of horses and drivers of animal-drawn vehicles. (c) Persons injured to an extent requiring surgical or medical treatment. (d) Includes all persons injured (i.e., requiring surgical or medical treatment) in the Metropolitan area but only those suffering "near-fatal" injuries in the remainder of the State.

(iii) *Ages of Persons Killed or Injured.* The following table shows the age groups of persons killed or injured in traffic accidents in each State and the Australian Capital Territory during 1950-51:—

**ACCIDENTS (KNOWN TO THE POLICE) WHICH OCCURRED IN PUBLIC THOROUGHFARES : AGES OF PERSONS KILLED OR INJURED, 1950-51.**

Age Group (Years).	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
<b>PERSONS KILLED.</b>								
Under 5	21	27	7	7	3	4	..	69
5 and under 7	10	6	3	2	2	..	..	23
7 " " 17	36	32	12	8	7	2	..	97
17 " " 30	244	199	85	76	58	27	6	695
30 " " 40	90	56	36	24	27	10	..	243
40 " " 50	81	69	29	26	19	3	1	219
50 " " 60	55	56	19	15	17	3	..	165
60 and over	145	136	36	33	34	7	..	391
Not Stated	17	..	..	6	..	1	..	24
<b>Total</b>	<b>699</b>	<b>581</b>	<b>218</b>	<b>197</b>	<b>167</b>	<b>57</b>	<b>7</b>	<b>1,926</b>
<b>PERSONS INJURED.(a)</b>								
					(b)			
Under 5	380	394	163	60	70	39	7	1,113
5 and under 7	245	270	125	39	38	27	8	752
7 " " 17	1,210	1,202	651	222	303	120	11	3,719
17 " " 30	4,554	4,222	2,309	1,075	1,181	492	84	13,977
30 " " 40	1,750	1,845	732	365	325	146	25	5,188
40 " " 50	1,174	1,305	517	186	281	84	15	3,562
50 " " 60	889	1,089	406	178	174	64	10	2,810
60 and over	1,065	1,035	466	194	202	66	6	3,034
Not Stated	550	2	83	13	112	174	6	940
<b>Total</b>	<b>11,817</b>	<b>11,364</b>	<b>5,512</b>	<b>2,332</b>	<b>2,686</b>	<b>1,212</b>	<b>172</b>	<b>35,095</b>

(a) Persons injured to an extent requiring surgical or medical treatment. (b) Includes all persons injured (i.e., requiring surgical or medical treatment) in the Metropolitan area but only those suffering "near-fatal" injuries in the remainder of the State.

(iv) *Accidents Recorded and Casualties, classified according to Type of Vehicle, Road User, etc., Involved.* The following table shows, for Australia during 1950-51, the number of accidents in which each of several classes of vehicles, road users, etc., were involved. The accidents involving casualties and persons killed and injured are similarly classified.

**ACCIDENTS (KNOWN TO THE POLICE) WHICH OCCURRED IN PUBLIC THOROUGHFARES : ACCIDENTS RECORDED AND CASUALTIES, CLASSIFIED ACCORDING TO TYPE OF VEHICLE, ROAD USER, ETC., INVOLVED, AUSTRALIA, 1950-51.(a)**

Particulars.	Motor Vehicle.	Motor Cycle.	Pedal Cycle.	Tram.	Animal and Animal-drawn Vehicle.	Pedestrian.	Other Vehicle.
Total Accidents Reported(b)	50,808	10,243	4,471	1,968	1,725	7,172	360
Accidents Involving Casualties	22,861	8,378	4,278	1,023	642	7,155	217
Persons Killed	1,556	534	146	74	34	535	68
Persons Injured(c)	28,377	9,640	4,476	1,178	733	7,168	271

(a) It should be noted that, as accidents and casualties classified according to one type of road user, etc., may also be classified according to another, these totals cannot be added across to obtain grand totals. The table excludes 46 accidents reported for which no cause was stated, of which 40 involved casualties—6 persons killed and 34 persons injured. (b) Total accidents causing death or injury to persons or damage exceeding £20 to property. (c) Persons injured to an extent requiring surgical or medical treatment.

It will be seen, therefore, that motor vehicles were involved in 50,808 accidents, of which 22,861 involved casualties (1,556 persons killed and 28,377 persons injured). The 50,808 accidents in which motor vehicles were involved comprised 21,040 collisions with other motor vehicles, 5,725 with motor cycles, 3,059 with pedal cycles, 1,141 with trams, 1,223 with animals and animal-drawn vehicles, 5,709 with pedestrians, 5,653 with fixed objects, 293 with vehicles other than those mentioned, 6,303 instances of overturning or leaving the roadway, and 662 accidents to passengers only. The particulars of accidents in which motor cycles, pedal cycles, etc., were involved with motor vehicles are also included under their respective headings in the table above. Consequently, since the figures in each column refer to the total accidents in which the particular type of vehicle, etc., was involved, any aggregation across would result, through duplication, in considerable overstatement of the actual totals.

3. **Persons Killed or Injured in Traffic Accidents, 1938-39 and 1946-47 to 1950-51.**—The following table shows the numbers of persons killed or injured in traffic accidents in each State and the Australian Capital Territory during the years 1938-39 and 1946-47 to 1950-51 :—

**ACCIDENTS (KNOWN TO THE POLICE) WHICH OCCURRED IN PUBLIC THOROUGHFARES : PERSONS KILLED OR INJURED.**

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.	Per 10,000 Motor Vehicles Registered.
<b>PERSONS KILLED.</b>									
1938-39	552	418	173	118	126	43	3	1,483	16
1946-47	508	386	188	101	101	61	1	1,346	13
1947-48	508	362	182	128	127	40	1	1,348	12
1948-49	564	426	169	119	90	53	3	1,424	12
1949-50	561	501	202	170	142	64	3	1,643	12
1950-51	699	581	218	197	167	57	7	1,926	12
<b>PERSONS INJURED.</b>									
1938-39	(a) 8,388	(a) 7,428	(a) 4,026	(b) 3,536	(c) 937	(a) 1,300	(a) 38	25,653	285
1946-47	8,752	7,810	3,799	2,768	780	805	45	24,759	245
1947-48	8,557	7,210	3,799	2,927	668	898	68	24,062	218
1948-49	9,253	8,225	4,017	(a)2,025	747	952	91	25,310	207
1949-50	10,408	10,538	4,771	(a)2,574	(a)1,929	1,154	136	31,447	224
1950-51	11,817	11,364	5,512	(a)2,332	(a)2,686	1,212	172	35,095	223

(a) Persons injured to an extent requiring surgical or medical treatment. (b) Figures shown for years prior to 1948-49 include all persons injured whether surgical or medical treatment was required or not. (c) Figures shown for years prior to 1949-50 include persons injured and detained in hospital only. Includes all persons injured, (i.e., requiring surgical or medical treatment), in the metropolitan area but only those suffering "near-fatal" injuries in the remainder of the State.



## H. AVIATION.

1. **Historical.**—A short review of the progress of civil aviation in Australia up to the date of foundation of a Civil Aviation Administration appears in Official Year Book No. 16, pp. 334-5.

2. **Foundation and Administration of Civil Aviation.**—A brief account of the foundation and objects of this Administration will be found in Official Year Book No. 19, p. 299. Official Year Book No. 38 and earlier issues contain information on the control of civil aviation by the Board (1936) and later (1939) by the Department of that name. The Acts defining the broad principles of operation of the administration of civil aviation and the Regulations amplifying them, and the principal functions of the administration are also described.

A recent change in the administration of the Department is its regional organization based on State boundaries, except that one region embraces Victoria and Tasmania.

The work of the Department is divided into two main sections. Administrative and Technical. The three Administrative Divisions are:—(i) the Division of Air Transport and External Relations; (ii) the Division of Administration and Personnel; and (iii) the Division of Finance and Stores. The three Technical Divisions are:—(i) the Division of Air Navigation; (ii) the Division of Airways; and (iii) the Division of Airports.

The Accident Investigation Branch is an independent section of Head Office, concerned mainly with major accidents, and directly responsible to the Director-General.

Full details of the functions of the three Administrative Divisions and the three Technical Divisions may be found in Official Year Book No. 38.

3. **International Activity.**—(i) *International Organizations.* A full report of the formation of the International Civil Aviation Organization, the Commonwealth Air Transport Council and the South Pacific Air Transport Council appears in Official Year Book No. 37 and particulars of subsequent activity in the international field were included in issue No. 38. Further ratifications of the Chicago Convention raised the membership of the International Civil Aviation Organization to 57 States as at 30th June, 1951. In accordance with the ICAO policy of broadening Council representation by enabling the views of non-Council member States to be presented, Australia and New Zealand agreed that the representative of Australia on the Council will keep the New Zealand authorities informed on all matters before the Council or Committees under its control which are of particular interest to New Zealand, and will also on request present any views which the New Zealand Government would wish to have submitted. An account of the establishment of the Air Navigation Commission will be found in Official Year Book No. 39, p. 183.

The Air Transport Committee has been established with a full membership of twelve members nominated by the Council from among its members.

Australia has been represented at various Annual Assemblies of, and meetings convened by, ICAO, and also at meetings of the South Pacific Air Transport Council. Further details will be found in Official Year Book No. 39 and earlier issues.

The 4th Session of the Communications Division, ICAO, was held in Montreal during April and May, 1951. A representative attended the conference to present the Australian viewpoint on matters relating to communications procedures, frequency planning and communications systems.

(ii) *International Air Services.* Events which have transpired in connexion with international air services since the developments referred to in Official Year Book No. 39 are outlined in the following paragraphs.

Changes have been made in the operation of the Qantas Empire Airways—British Overseas Airways Corporation freighter services. On 6th September, 1950, B.O.A.C. suspended its weekly Lancastrian freighter service which operated right through to Australia and introduced in its place a York service between London and Singapore. Q.E.A. has provided a connecting service between Singapore and Sydney with Lancastrian aircraft which were replaced in October, 1950, by DC.4's.

Changes have also occurred in the intermediate stops served by the Kangaroo services. Following arrangements made with the Indonesian authorities, Q.E.A. has included, since August, 1950, calls at Djakarta on both its Constellation service to the

United Kingdom and the Skymaster service to Singapore. Djakarta had been served by B.O.A.C. for some time before Q.E.A. introduced the stop. Both Q.E.A. and B.O.A.C. introduced Beirut in Lebanon as a stopping place at the end of January, 1952.

Q.E.A. increased the frequency of the fortnightly Sydney–Noumea–Suva service to once weekly in April, 1951, and the fortnightly Sydney–Noumea–Espiritu Santo and Vila service to once weekly in June, 1951, thus providing New Caledonia with a twice-weekly service.

Tasman Empire Airways Limited introduced a service between Sydney and Wellington with Solent aircraft on 3rd October, 1950. Another route across the Tasman was opened on 28th June, 1951, when Qantas Empire Airways, under charter to Tasman Empire Airways, commenced a weekly Melbourne–Christchurch service with DC.4 aircraft. With the opening of this service, Melbourne was used for the first time as an international airport. Altogether there are now ten frequencies a week being operated between Australia and New Zealand.

On 8th March, 1951 a twice-weekly Stratocruiser service was inaugurated between San Francisco and Sydney.

During June, 1949 Qantas Empire Airways Ltd. inaugurated a fortnightly Australia–Hong Kong service based on Sydney and operating via Darwin and Labuan (British North Borneo). With the agreement of the United Kingdom authorities and the authority of the Supreme Commander, Allied Powers, Japan, this service was extended in October, 1950, to Iwakuni (and later to Tokyo) and the frequency increased to once weekly.

4. **Regular Air Services within Australia.**—As a result of negotiations conducted between major airline operators unprofitable duplication of services on some routes has been largely eliminated without detriment to the convenience of air travellers generally.

During April, 1952, approval was given for an increase of between 10 and 20 per cent. in fares on the main trunk services.

5. **Air Ambulance Services.**—A brief statement of the foundation and objects of the Air Ambulance Services will be found in Official Year Book No. 32, pp. 145 and 146.

During the year 1950–51 the Air Ambulance and Flying Doctor Services continued to provide medical aid for the outback regions of Australia. The Commonwealth Department of Health operates the Northern Territory Aerial Medical Service with two DH84 aircraft based at Darwin, and the Bush Church Aid Society for Australia and Tasmania, supported by funds from the Church of England, maintains one DH84 aircraft based at Ceduna, and one DH83 at Wudinna, South Australia.

6. **Training of Air Pilots.**—A brief statement of the pre-war policy of the Commonwealth Government regarding assistance to Aero Clubs was given in Official Year Book No. 32, p. 146.

Payment to the Clubs, under a revised scheme for financial assistance from July, 1951 to June, 1952, has been made as follows :—(i) a maintenance grant (for each aircraft-hour flown) at the following rates per hour subject to certain limitations—(a) at home base, £1 13s. 9d., (b) away from home base, £2 7s. 6d. ; (ii) an issue bonus (for each pupil trained *ab initio* to “A” licence standard)—(a) at home base, £84, (b) away from home base, £107 10s. ; (iii) a renewal bonus (for each licence renewed on club aircraft)—(a) at home base, £11, (b) away from home base, £15. In addition, the Commonwealth has accepted a contingent liability to contribute at the rate of 10s. per flying hour towards each club’s replacement reserve. This amount is intended to supplement the club’s reserve for the purchase of aircraft and spares specifically approved by the Department of Civil Aviation.

During the year 1950–51, 225 issue bonuses and 579 renewal bonuses were earned. Hours flown by subsidized Aero Clubs totalled 39,770 and a total subsidy of £93,399 was earned by the nine clubs.

7. **Gliding Clubs.**—For the year 1950–51 a total subsidy of £1,499 was distributed among the controlling gliding authorities in each State. Distribution was on an active membership basis.

8. **Airways Engineering.**—During the year 1950–51 the Airways Communications System both within Australia and with overseas countries was improved and developed. This work includes the fixed, or point-to-point communication service, and the service between the ground and aircraft.

A start was made in 1949-50 with the V.H.F. communication service, installations being completed at Williamstown and Guildford, and on 17th May, 1951 the manual radio telegraph circuit between Melbourne and Honolulu was replaced by a radio teletype circuit between Sydney and Honolulu.

New 75-megacycle marker beacon equipment has been installed at points along airways. An approach control radar system, which operates on a frequency of 3,000 megacycles, has been installed at Essendon. The Department of Civil Aviation has undertaken installation of a chain of fifteen radar stations throughout Australia for radar tracking of balloons, wind finding purposes and for detecting radio-sonde balloon flights.

The lighting of airways and airports has been closely studied by the Departmental Lighting Committee, consisting of representatives of the Department of Civil Aviation and two members from the Airline Pilots' Association.

9. **Air Traffic Control.**—The period 1950-52 has been characterized by procedural development and consolidation, and by general acceptance for the first time of the need for inter-departmental co-ordination in the use of air space. Civil aircraft movements have increased and military flying programmes have been greatly expanded. In consequence, the traffic patterns at major airports and along the lanes leading to them have reached a high degree of complexity. Efficient control has been maintained largely by continuous attention to, and modification of, procedures.

10. **Meteorological Aids to Civil Aviation.**—Professional meteorological officers of the Department of the Interior are on duty at many of Australia's aeradio stations. At the remainder, communications personnel make local weather observations and take barometer and thermometer readings for transmission to Area Meteorological Offices.

11. **Construction and Development of Airports.**—During 1950-52 the scarcity of suitable material, labour and plant slowed the rate of airport construction throughout Australia. Effort was concentrated mainly on the provision of buildings, housing and safety equipment, and facilities were provided where the need was greatest.

*Kingsford-Smith Airport.* Work progressed steadily on the construction of an international airport at Mascot. Cook's River was diverted to flow into Botany Bay west of the new airport, and the old river bed was filled to form the base of the first of the new runways. At the same time work was carried out on the diversion of sewer lines and a main highway (General Holmes Drive). The 64° runway was completed.

*Essendon Airport.* The section of taxiway "N" east of the 168° runway and portion of taxiway "M" were completed. Work continued on the erection of oil company depots on a new site in the building area and the erection of two large Igloo hangars was commenced.

*Moorabbin Airport.* Work continued on this secondary landing ground, which accommodates all non-radio equipment aircraft and so relieves the hazard created at Essendon.

*Adelaide Airport.* The 6,850 feet Class "C" runway was completed, including the concrete ends. The large drain constructed for the diversion of Keswick and Brownhill Creeks was completed downstream from Brownhill Creek, leaving only the lined section between Brownhill Creek and Keswick Creek to be constructed.

Work on other runways, taxiways, aprons and hangars proceeded favorably during 1952, some sections being completed. The complete changeover of operations from Parafield is dependent upon the construction of the combined terminal and operations building.

*Hobart Airport.* To replace the Cambridge Airport, which does not meet international standards and cannot be improved, plans have been developed for the construction of a Class "D" ICAO airport for Hobart at Llanherne, and during the period good progress was made in the construction of this new airport. When completed, it will provide one sealed runway 5,800 feet long and 200 feet wide, with good approaches and associated taxiways, aprons, buildings and roads. Work also continued on earth-works for associated runways.

12. **Aircraft Parts and Materials.**—The number of firms and organizations approved by the Department of Civil Aviation to trade in the aircraft industry now totals 349, and extensions of approval have been granted to 186 firms to cover the extensive increase in their operations.

13. **Aircraft Maintenance Certificates of Repair.**—Aircraft maintenance repair and overhaul is carried out under the supervision of a works inspection section or licensed ground engineer in workshops approved by the Department of Civil Aviation. Workshops are authorized to issue certificates of repair which serve as evidence to the licensed ground engineer responsible for the fitment of the part that the work so covered has been done in an authorized workshop by competent tradesmen and has been subjected to proper inspection. Such specialized work as the overhaul of instruments, electrical equipment, aeronautical pumps and carburettors is carried out by these approved workshops.

14. **Test and Examination of Aircraft Parts and Materials.**—A number of laboratories are approved by the Department of Civil Aviation and authorized to issue laboratory reports covering the physical test, chemical analysis, radiological and metallurgical examination of materials and parts used in connexion with the civil aircraft industry.

15. **Statistical Summaries.**—(i) *Registrations, Licences, Accidents, etc.* The following table provides a summary of the civil aviation registrations and licences in force in Australia at 30th June of each of the years 1939 and 1947 to 1951, and also of the numbers of persons killed and injured in civil flying accidents during the years 1938-39 and 1946-47 to 1950-51.

**CIVIL AVIATION : REGISTRATIONS, LICENCES, ACCIDENTS, ETC., AUSTRALIA.**

Particulars.	At 30th June—						
		1939.	1947.	1948.	1949.	1950.	1951.
Registered Aircraft Owners ..	No.	149	323	334	335	359	351
Registered Aircraft ..	"	295	643	670	748	779	838
<b>Pilots' Licences—</b>							
Private ..	"	1,096	(a) 600	614	756	872	1,065
Commercial ..	"	346	(a) 499	495	481	469	441
Student ..	"	"	(a) 939	1,114	1,169	1,778	1,840
1st Class Airline Transport ..	"	"	(a) 341	361	397	417	495
2nd " ..	"	"	(a) 25	35	27	30	35
3rd " ..	"	"	(a) 372	360	363	326	377
<b>Navigators' Licences—</b>							
Flight Navigator ..	"	59	(a) 72	84	118	126	139
Cadet ..	"		(a) 10	12	44	18	(b)
<b>Radio Operators' Licences—</b>							
1st Class Flight Radio Telegraphy Operator ..	"	"	(a) 80	106	113	103	96
Flight Radio Telephony Operators—	"	"	"	"	"	"	"
1st Class ..	"	"	(a) 559	590	715	701	754
2nd " ..	"	"	(a) 192	211	230	211	237
3rd " ..	"	"	(a) 5	6	27	38	33
Flight Engineers' Licences ..	"	"	(a) 8	16	47	40	39
Ground Engineers' Licences ..	"	525	(a) 1,660	1,660	(c)	1,684	1,643
<b>Aerodromes—</b>							
Government ..	"	71	(a) 131	133	142	183	184
Public ..	"	213	(a) 243	240	222	213	239
Emergency Grounds ..	"	147	(a) 54	49	43	(d)	(d)
Flying Boat Bases ..	"	7	5	5	5	5	5
<b>Accidents (year ended 30th June)—</b>							
Persons Killed ..	"	38	15	13	42	61	13
" Injured ..	"	15	17	27	21	22	36

(a) At 1st April, 1948; new categories in accordance with standards of the International Civil Aviation Organization. (b) Category cancelled during 1950-51. (c) Not available. (d) Included with Public Aerodromes.

(ii) *Operations of Regular Internal Services.* The next table summarizes the flying activities of regular internal services operating within Australia during the years 1938-39 and 1946-47 to 1950-51.

## CIVIL AVIATION : OPERATIONS OF REGULAR INTERNAL SERVICES, AUSTRALIA.

Particulars.	Year ended 30th June—						
		1939.	1947.	1948.	1949.	1950.	1951.
Hours flown .. .. .	No.	39,312	154,772	212,233	224,853	225,841	252,333
Miles .. .. .	'000	5,302	23,038	32,371	35,242	36,519	40,680
Paying Passengers .. .. .	No.	41,429	849,647	1,207,839	1,409,300	1,499,816	1,685,089
Paying Passenger-miles .. .. .	'000	22,423	366,150	503,494	566,038	590,429	669,087
Freight—							
Actual tons .. .. .	No.	391	12,247	25,845	33,381	44,144	53,002
Ton-miles .. .. .	'000	(a)	5,972	11,920	15,240	19,873	24,198
Mall—							
Actual tons .. .. .	No.	(b) 64	1,120	1,248	1,580	2,594	2,887
Ton-miles .. .. .	'000	(a)	621	674	789	1,250	1,333

(a) Not available. (b) Net weight.

NOTE.—Figures shown for 1939 relate to subsidized services only, and include Oversea Services of Qantas Empire Airways Ltd., but exclude operations of aircraft chartered for defence purposes.

(iii) *Operations of Australian and International Oversea Services.* The following table furnishes a summary of Australian and other oversea services operating between Australia and oversea countries, including Pacific islands, during the years 1938-39 and 1946-47 to 1950-51. Particulars are not available in respect of certain services and the figures shown are therefore incomplete.

## CIVIL AVIATION : OPERATIONS OF OVERSEA SERVICES.(a)

Particulars.	Year ended 30th June—						
		1939.	1947.	1948.	1949.	1950.	1951.
Route-miles .. .. .	No.	6,985	19,459	26,667	29,695	39,217	43,633
Hours flown .. .. .	"	12,686	32,633	39,488	40,262	40,692	48,947
Miles .. .. .	'000	1,736	5,921	7,555	7,982	8,768	10,500
Paying Passengers .. .. .	No.	5,350	31,055	41,124	45,296	59,832	87,599
Paying Passenger-miles .. .. .	'000	7,335	75,225	122,678	144,869	165,077	241,817
Freight—							
Actual tons .. .. .	No.	6	349	660	765	1,121	1,976
Ton-miles .. .. .	'000	(b)	978	2,630	2,808	4,001	6,214
Mall—							
Actual tons .. .. .	No.	(b)	465	638	577	651	842
Ton-miles .. .. .	'000	(b)	2,112	3,408	3,331	3,453	4,792

(a) Incomplete. (b) Not available.

16. *Papua-New Guinea Activities.*—(i) *General.* Issues of the Official Year Book up to and including No. 34, 1941 showed particulars of the development of civil aviation in New Guinea and of the companies operating at the outbreak of war with Japan, while issues Nos. 35 to 37 carried the accompanying statistical summary of operations up to the end of September, 1941. Similar statistics of post-war operations, however, are not at present available.

(ii) *Territory of Papua and New Guinea.* At 30th June, 1952 there were 100 fully operational aerodromes in the Territory of Papua and New Guinea and a further 52 in the course of development. Of these, 32 were controlled by the Department of Civil Aviation, 56 by the Civil Administration and the remainder were privately owned by missions and commercial interests. In addition, there were 30 seadromes.

Aerial activity within the Territory is intensive, and several companies conduct regular services to the major aerodromes while charter flights can be arranged to almost any locality.

During 1951 Qantas Empire Airways reduced their DC3 services between Australia and New Guinea to two services per week and introduced an additional freighter service between Sydney and Lae. Q.E.A. also operated a DC3 service between Townsville and Momele for the R.A.A.F. on a weekly basis.

At the beginning of 1951 Mount Lamington erupted and, in the subsequent action, approximately 900 tons of stores and equipment were flown to the stricken area.

The accident rate increased as compared with the previous year. There were four fatal accidents, in which 12 people lost their lives.

## I. POSTS, TELEGRAPHS, TELEPHONES AND WIRELESS.

NOTE.—In all the tables in this Division returns for the Australian Capital Territory are included with those for New South Wales, while the South Australian returns include particulars for the Northern Territory.

## § 1. General.

1. The Postmaster-General's Department.—Under the provisions of the Post and Telegraph Act 1901, the Department was placed under the control of the Postmaster-General, being a responsible Minister. The Director-General of Posts and Telegraphs controls the Department under the Postmaster-General, whilst the principal officer in each State is the Deputy-Director of Posts and Telegraphs.

2. Postal Facilities.—(i) *Relation to Area and Population.* The following statement shows the number of post offices, the area in square miles and the number of inhabitants to each post office (including non-official offices) and the number of inhabitants to each 100 square miles in each State and in Australia at 30th June, 1951. In order to judge clearly the relative postal facilities provided in each State, the area of country to each office as well as the number of inhabitants per office should be taken into account.

POSTAL FACILITIES : RELATION TO AREA AND POPULATION,  
AT 30th JUNE, 1951.

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aust.
Number of post offices (a) ..	2,560	2,430	1,293	876	635	521	8,315
Number of square miles of territory per office .. .. .	121	36	519	1,032	1,537	50	358
Number of inhabitants per office ..	1,305	934	937	841	916	558	1,014
Number of inhabitants per 100 square miles .. .. .	1,077	2,582	181	81	60	1,109	283

(a) Includes "official," "semi-official," and "non-official" offices.

The foregoing table does not include "telephone" offices at which there is no postal business.

(ii) *Number of Offices.* The following table shows the number of post offices (exclusive of telephone offices) in each State for the years 1921, 1931, 1941 and 1951.

## NUMBER OF POST OFFICES AT 30th JUNE.

State.	1921.		1931.		1941.		1951.	
	Official and Semi-Official.	Non-Official.	Official and Semi-Official.	Non-Official.	Official and Semi-Official.	Non-Official.	Official and Semi-Official.	Non-Official.
New South Wales ..	462	2,147	439	2,103	453	2,086	489	2,071
Victoria ..	269	2,307	279	2,280	286	2,293	299	2,131
Queensland ..	205	1,057	199	1,000	197	1,036	207	1,086
South Australia ..	138	659	146	620	152	648	160	716
Western Australia ..	128	499	124	432	129	488	145	490
Tasmania ..	47	451	43	472	46	465	49	472
Australia ..	1,249	7,120	1,230	6,907	1,263	7,016	1,349	6,966

(iii) *Employees and Mail Contractors.* The number of employees and mail contractors in the Central Office and in each of the States in the years 1921, 1931, 1941 and 1951 is given in the following table :—

## NUMBER OF POSTAL EMPLOYEES AND MAIL CONTRACTORS AT 30th JUNE.

State.	1921.		1931.		1941.		1951.	
	Em- ployees.	Mail Con- tractors.	Em- ployees.	Mail Con- tractors.	Em- ployees.	Mail Con- tractors.	Em- ployees.	Mail Con- tractors.
Central Office ..	139	..	174	..	393	..	981	..
New South Wales ..	11,669	2,046	12,336	1,884	18,121	2,590	32,569	2,337
Victoria ..	8,117	1,091	9,574	1,129	14,659	1,605	23,905	1,241
Queensland ..	4,728	750	4,865	908	6,849	1,470	13,221	1,907
South Australia ..	2,826	439	3,340	359	4,387	474	7,744	442
Western Australia..	2,111	302	2,548	323	3,549	431	5,601	390
Tasmania ..	1,220	223	1,354	257	1,809	216	3,016	305
Australia ..	30,810	4,851	34,191	4,860	49,767	6,786	87,037	6,622

3. **Gross Revenue, Branches—Postmaster-General's Department.**—The gross revenue (actual collections) in respect of each branch of the Department during the year 1950–51 is shown in the table hereunder :—

## POSTMASTER-GENERAL'S DEPARTMENT : GROSS REVENUE(a), 1950–51.

(£'000.)

Sources.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total. Aust.
Postage ..	6,375	4,661	2,140	1,325	1,064	455	16,020
Money Order Commission and Poundage on Postal Notes	189	152	56	36	26	13	472
Private Boxes and Bags ..	52	31	27	17	11	6	144
Miscellaneous ..	386	306	145	79	93	22	1,031
Total, Postal	7,002	5,150	2,368	1,457	1,194	496	17,667
Telegraphs ..	1,770	1,206	673	368	322	103	4,442
Telephones ..	9,064	6,642	3,122	2,008	1,240	592	22,668
Grand Total	17,836	12,998	6,163	3,833	2,756	1,191	44,777

(a) The figures in this table relate to revenue actually collected during the year as recorded for Treasury purposes.

The gross revenue (actual collections) from the various branches in each State for the years 1945–46 to 1949–50 are shown in comparison with the year 1938–39 in Official Year Book No. 39. For the years 1938–39, 1946–47, 1947–48, 1948–49 and 1949–50 the gross revenue for Australia was £17,350,000, £29,802,000, £31,390,000, £33,307,000 and £38,348,000 respectively.

Compared with the corresponding figures for the previous year an increase of 16.8 per cent. was shown in the gross revenue earned for the year 1950–51. Increases in the several branches were as follows :—Postal 14.5 per cent., Telephone 18.3 per cent., and Telegraph 18.3 per cent.

The gross revenue in 1950–51 was 158.1 per cent. higher than in the last complete pre-war year, 1938–39, the corresponding percentage increases for the several branches being as follows :—Postal, 138.1, Telegraph 223.8, and Telephone 181.9.

4. **Expenditure, Postmaster-General's Department.**—(i) *Distribution, 1950–51.* The following table shows, as far as possible, the distribution of expenditure (actual payments) on various items in each State during the year ended 30th June, 1951, as shown by records

kept for Treasury purposes. The table must not be regarded as a statement of the working expenses of the Department, since items relating to new works, interest, etc., are included therein.

**POSTMASTER-GENERAL'S DEPARTMENT : DISTRIBUTION OF EXPENDITURE.**  
1950-51.

(£'000.)

Particulars.	Central Office.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
<b>Expenditure under Control of Department—</b>								
Salaries and payments in the nature of salary ..	255	9,187	6,480	3,770	2,239	1,459	827	24,217
General expenses ..	41	898	651	237	178	125	55	2,185
Stores and material ..	12	603	451	224	186	109	62	1,647
Mail services ..	(a)2,303	946	551	558	263	176	80	4,877
Engineering services (other than New Works) ..	444	6,787	4,143	2,394	1,323	973	544	16,608
Other services ..	119	..	..	..	..	..	..	119
<b>Total ..</b>	<b>3,174</b>	<b>18,421</b>	<b>12,276</b>	<b>7,183</b>	<b>4,189</b>	<b>2,842</b>	<b>1,568</b>	<b>49,653</b>
Rent, repairs, maintenance, fittings, etc. ..	..	302	161	83	62	42	17	667
Other expenditure, n.e.i. ..	..	11	8	2	1	11	1	34
Capital Works and Services (b)—								
Telegraph and Telephone New Buildings, etc. ..	34	8,169	16,747	2,957	1,674	1,036	522	31,139
Other expenditure not allocated to States ..	(d)4,730	1,172	1,069	331	589	220	96	3,477
<b>Grand Total ..</b>	<b>(e)7,938</b>	<b>28,075</b>	<b>30,261</b>	<b>10,556</b>	<b>6,515</b>	<b>4,151</b>	<b>2,204</b>	<b>89,700</b>

(a) Expenditure on air-mail services, etc. (b) Includes expenditure from loan. (c) Includes £11,000,000 working advance for payment to credit of Post Office Stores and Transport Trust Account. (d) Particulars of apportionment to States not available. Includes superannuation contributions, £775,279; sinking fund payments, £2,150,213; interest on loans, £757,753; exchange, £696,005; Subscriptions to Share Capital—Amalgamated Wireless (Australasia) Ltd., £157,081; Public Works Staff, Salaries and General Expenses, £189,605; and Transferred Officers' Pensions and Allowances, £3,262. (e) Includes expenditure not apportioned to States.

(ii) Totals 1938-39 and 1946-47 to 1950-51. Actual payments made for each of the years 1938-39 and 1946-47 to 1950-51, respectively, were :—£18,374,000, £32,724,000, £40,391,000, £53,544,000, £64,304,000 and £89,700,000. Total expenditure increased by 39.5 per cent. during 1950-51.

5. Profit or Loss, Postmaster-General's Department.—(i) States, 1950-51. The foregoing statements of gross revenue and expenditure represent actual collections and payments made and cannot be taken to represent the actual results of the working of the Department for the year. The net results for each branch in the several States, after providing for working expenses (including superannuation, pensions and depreciation) and interest charges including exchange, were as follows :—

**POSTMASTER-GENERAL'S DEPARTMENT : PROFIT OR LOSS, 1950-51.**

(£'000.)

Branch.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Postal ..	— 541	— 230	— 636	— 150	— 133	— 123	— 1,813
Telegraph ..	— 389	— 201	— 325	— 150	— 30	— 23	— 818
Telephone ..	— 78	661	— 143	— 118	— 103	— 245	— 26
<b>All Branches ..</b>	<b>— 1,008</b>	<b>230</b>	<b>— 1,104</b>	<b>— 118</b>	<b>— 266</b>	<b>— 391</b>	<b>— 2,657</b>

NOTE.—Minus sign (—) indicates loss.

(ii) Branches, 1938-39 and 1946-47 to 1950-51. The following statement shows particulars of the operating results of each branch for the years 1938-39 and 1946-47 to 1950-51.



## POSTMASTER-GENERAL'S DEPARTMENT : PROFIT OR LOSS, BRANCHES.

( £'000.)

Year.	Postal.	Telegraph.	Wireless.	Telephone.	All Branches.
1938-39.. ..	2,105	52	76	1,392	3,625
1946-47.. ..	2,841	148	419	2,534	5,104
1947-48.. ..	1,623	326	697	1,250	1,850
1948-49.. ..	297	1,080	(a)	346	1,723
1949-50.. ..	1,154	722	(a)	721	1,155
1950-51.. ..	1,813	818	(a)	26	2,657

(a) Prior to 15th March, 1949, the operations of the Australian Broadcasting Commission were financed by apportionment of the fees collected from the issue of broadcast listeners' licences, part being paid to the Commission, the remainder being retained by the Postmaster-General's Department for technical services provided, and particulars thereof were included in the Department's accounts. Since that date the Commission's operations have been financed through Consolidated Revenue Fund.

NOTE.—Minus sign (-) indicates loss.

6. Fixed Assets.—(i) *Details, 1950-51.* The following statement shows particulars of the fixed assets of the Postmaster-General's Department from 1st July, 1950 to 30th June, 1951 :—

## POSTMASTER-GENERAL'S DEPARTMENT : FIXED ASSETS.

( £'000.)

Particulars.	Net Value, 1st July, 1950.	Capital Expendi- ture, 1950-51.	Gross Value, 30th June, 1951.	Deprecia- tion, etc., 1950-51. (a)	Net Value, 30th June, 1951.
Telephone service plant (excluding trunk lines) .. ..	89,864	20,498	110,362	1,059	109,303
Joint trunk and telegraph plant (aerial wires, conduits, and cables) .. ..	20,287	2,659	22,946	115	22,831
Telegraph service plant .. ..	1,304	185	1,489	8	1,481
Postal service plant .. ..	733	70	803	1	802
Sites, buildings, furniture and office equipment .. ..	17,752	3,685	21,437	321	21,116
Miscellaneous plant .. ..	4,993	1,936	6,929	416	6,513
Total .. ..	134,933	29,033	163,966	1,920	162,046

(a) Includes dismantled assets, depreciation written off, and assets transferred.

(ii) *Net Value, 1938-39 and 1946-47 to 1950-51.* The net value of the fixed assets of the Postmaster-General's Department at 30th June, 1939 and 1947 to 1951, respectively, was :—£65,135,000, £94,986,000, £104,281,000, £115,956,000, £134,933,000 and £162,046,000.

At 30th June, 1951 the net value of fixed assets was 148.8 per cent. greater than at 30th June, 1939.

## § 2. Posts.

1. *Postal Matter Dealt With.*—(i) *States.* The following table shows a summary of the postal matter dealt with in each State during the year 1950-51. Mail matter posted in Australia for delivery therein is necessarily handled at least twice, but only the number of distinct articles handled is included in the following table.

**POSTAL MATTER DEALT WITH(a) : STATES, 1950-51.**  
(<sup>'000.</sup>)

State.	Letters.	Papers and	Parcels.	Regis-	Letters.	Papers and	Parcels.	Regis-
	(b)	Packets.	(d)	tered	(b)	Packets.	(d)	tered
	(b)	(c)	(d)	Articles.	(b)	(c)	(d)	Articles.
	(e)				(e)			
	Posted for delivery within Australia.				Posted for Delivery Overseas.			
New South Wales	432,503	94,055	7,397	7,696	11,943	6,517	640	684
Victoria	349,369	58,470	4,947	4,770	9,264	2,703	423	118
Queensland	147,447	29,537	3,053	2,222	3,107	916	149	68
South Australia	94,075	11,875	1,646	1,121	2,745	670	145	68
Western Australia	76,779	14,276	1,198	882	3,435	1,257	129	58
Tasmania	51,241	7,181	305	582	406	46	53	75
<b>Australia</b>	<b>1,142,414</b>	<b>215,394</b>	<b>18,551</b>	<b>17,273</b>	<b>30,900</b>	<b>12,109</b>	<b>1,539</b>	<b>1,071</b>
	Received from Overseas.				Total Postal matter dealt with.			
New South Wales	34,944	13,919	267	711	479,390	114,491	8,304	9,091
Victoria	9,921	5,886	198	160	359,554	67,059	5,568	5,048
Queensland	4,314	3,010	59	30	154,868	33,463	3,266	2,320
South Australia	2,863	2,975	41	36	99,683	15,520	1,832	1,225
Western Australia	2,271	2,792	45	99	82,485	18,325	1,372	1,039
Tasmania	658	1,299	14	20	52,305	8,520	372	677
<b>Australia</b>	<b>54,971</b>	<b>29,881</b>	<b>624</b>	<b>1,056</b>	<b>1,228,285</b>	<b>257,384</b>	<b>20,714</b>	<b>19,400</b>

(a) See explanation in para. 1. (i) above. (b) Includes letters, cards and other postal articles enclosed in envelopes and sorted with letters. (c) Includes newspapers and postal articles not included in letter mail. (d) Includes registered, cash on delivery and duty parcels. (e) Includes registered articles other than parcels.

(ii) *Australia*. The next table shows the total postal matter dealt with in Australia during the five years 1946-47 to 1950-51 in comparison with the year 1938-39.

**TOTAL POSTAL MATTER DEALT WITH : AUSTRALIA.**

Year.	Letters, Postcards and Letter-cards.		Newspapers and Packets.		Parcels.(a)		Registered Articles other than Parcels.	
	Total ('000.)	Per 1,000 of Population. No.	Total ('000.)	Per 1,000 of Population. No.	Total ('000.)	Per 1,000 of Population. No.	Total ('000.)	Per 1,000 of Population. No.
1938-39(b)	903,090	130,245	165,362	23,849	9,585	1,382	8,371	1,207
1946-47 ..	984,367	130,900	210,343	27,971	20,252	2,693	19,859	2,641
1947-48 ..	1,036,835	135,708	228,957	29,967	21,880	2,864	19,913	2,606
1948-49 ..	1,094,617	140,356	238,939	30,639	21,200	2,718	20,705	2,655
1949-50 ..	1,178,837	146,446	247,134	30,700	21,340	2,651	19,165	2,381
1950-51 ..	1,228,285	147,784	257,384	30,968	20,714	2,492	19,400	2,334

(a) Includes registered, c.o.d. and duty parcels. (b) Packets were included with letters.

2. **Cash on Delivery Parcels Post.**—(i) *General*. The Postal Department undertakes, upon prepayment of a prescribed commission, to deliver registered articles sent by parcel post within Australia, or between Lord Howe Island, Norfolk Island, Nauru, Territory of Papua and New Guinea, or Fiji and Australia, to recover from the addressee on delivery a sum of money specified by the sender, and to remit the sum to the sender. The object of the system is to meet the requirements of persons who wish to pay at the time of receipt for articles sent to them, and of traders and others who do not wish their goods to be delivered except on payment.

(ii) *States, 1950-51*. The next table shows particulars regarding the cash on delivery parcels posted in each State for the year 1950-51.

**CASH ON DELIVERY PARCELS POST : STATES, 1950-51.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Parcels posted '000	585	97	295	80	95	3	1,155
Value .. £'000	1,588	248	755	173	163	6	2,933
Revenue(a) £'000	104	20	57	17	14	..	212

(a) From commission and postage.

(iii) *Australia*. In the following table particulars of cash on delivery parcels posted in Australia are shown for the years 1946-47 to 1950-51 in comparison with the year 1938-39.

**CASH ON DELIVERY PARCELS POST : AUSTRALIA.**

Particulars.		1938-39.	1946-47.	1947-48.	1948-49.	1949-50.	1950-51.
Parcels posted ..	'000	633	906	970	1,079	1,106	1,155
Value ..	£'000	783	1,097	1,843	2,361	2,697	2,933
Revenue(a) ..	£'000	86	126	138	157	188	212

(a) From commission and postage.

3. **Total Cost of Carriage of Mails.**—During 1950-51 the total amounts paid for the carriage of mails, as disclosed by the Profit and Loss Account of the Postal Branch, were as follows:—Inland mails—Road £1,490,581. Railway £763,832. Air £815,576; Coastwise mails—£34,453; Oversea mails—Sea £454,445. Air £1,135,180; Grand Total—£4,694,067.

4. **Transactions of the Dead Letter Offices.**—During the year 1950-51 there were, in the several States of Australia, 1,669,849 letters, post cards, and lettercards returned to writers or delivered, 209,866 destroyed in accordance with the Act, and 137,961 returned to other States or countries as unclaimed—a total of 2,017,676. Corresponding particulars for packets and circulars were—434,382, 230,370, 31,258 and 696,010. There were 2,713,686 articles handled in all, containing money and valuables amounting to £605,899.

5. **Money Orders and Postal Notes.**—(i) *General*. The issue of money orders and postal notes is regulated by Sections 74-79 of the Post and Telegraph Act 1901. The maximum amount for which a single money order payable within Australia may be obtained is £40, but additional orders will be issued upon request when larger amounts are to be remitted. The maximum amount permitted to be sent to any person in the sterling area is £8 per month but varying conditions apply for remittance to countries outside the sterling area. A postal note, which is payable only within Australia and in Papua, cannot be issued for a larger sum than twenty shillings.

(ii) *States, 1950-51*. Particulars regarding the business transactions in each State for 1950-51 are shown hereunder:—

**MONEY ORDERS AND POSTAL NOTES : TRANSACTIONS, 1950-51.**

State.	Money Orders.			Postal Notes.	
	Value Issued.	Value Paid.	Net Commission Received.	Value Issued.	Poundage Received.
	£'000.	£'000.	£	£'000.	£
New South Wales ..	20,929	21,233	99,066	5,152	99,923
Victoria ..	10,471	10,694	48,654	4,552	104,564
Queensland ..	6,042	5,724	28,761	1,161	25,752
South Australia ..	2,752	2,609	13,978	979	21,618
Western Australia ..	2,502	2,444	13,738	643	13,069
Tasmania ..	1,414	1,286	6,960	259	5,925
<b>Australia ..</b>	<b>44,110</b>	<b>43,990</b>	<b>211,157</b>	<b>12,746</b>	<b>270,851</b>

(iii) *Australia, 1938-39 and 1946-47 to 1950-51*. The next table shows the number and value of money orders and postal notes issued and paid in Australia in each of the years 1946-47 to 1950-51 compared with 1938-39.

## MONEY ORDERS AND POSTAL NOTES : TRANSACTIONS, AUSTRALIA.

Year.	Money Orders.				Postal Notes.			
	Issued.		Paid.		Issued.		Paid.	
	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.
	'000.	£'000.	'000.	£'000.	'000.	£'000.	'000.	£'000.
1938-39 ..	3,239	18,349	3,254	18,548	21,942	7,926	21,966	7,934
1946-47 ..	3,653	27,918	3,662	28,348	24,864	9,536	24,710	9,512
1947-48 ..	3,898	29,799	3,952	30,532	26,517	10,527	26,353	10,469
1948-49 ..	4,194	33,012	4,215	33,262	28,059	11,266	27,810	11,246
1949-50 ..	4,586	37,014	4,626	37,503	30,181	12,206	29,998	12,130
1950-51 ..	5,166	44,110	5,135	43,990	29,440	12,746	29,297	12,680

(iv) *Classification of Money Orders Issued and Paid.* Of the total money orders issued in Australia during 1950-51, 5,018,496 valued at £43,513,517 were payable in Australia, 10,330 (£29,425) in New Zealand, 101,286 (£378,814) in the United Kingdom and 35,960 (£188,485) in other countries. Of the total money orders paid in Australia during 1950-51, 4,998,249 (£43,279,573) were issued in Australia, 29,383 (£83,848) in New Zealand, 69,640 (£352,062) in the United Kingdom and 37,979 (£274,546) in other countries.

Money orders payable or issued in foreign countries, which have been sent from or to Australia through the General Post Office in London, are included in those payable or issued in the United Kingdom.

(v) *Postal Notes Paid.* The following table shows the number and value of postal notes paid in each State during 1950-51. Particulars regarding the number and value of postal notes issued and paid in each of the last five years have been given in the previous table.

## POSTAL NOTES PAID : STATE OF ISSUE, 1950-51.

Issued in—	Postal Notes Paid in—						
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Same State No. '000	9,167	5,014	1,982	1,137	1,006	471	18,777
Value £'000	4,531	2,374	911	536	468	186	9,006
Other States No. '000	1,174	849	708	161	435	7,193	10,520
Value £'000	519	391	317	84	93	2,270	3,674
Total No. '000	10,341	5,863	2,690	1,298	1,441	7,664	29,297
Value £'000	5,050	2,765	1,228	620	561	2,456	12,680

## § 3. Telegraphs.

1. *General.*—A review of the development of telegraph services in Australia up to 1921 appears in Official Year Book No. 15, p. 625, and subsequent developments of importance have been dealt with in later issues. During the past few years substantial improvements in both the speed and grade of telegraph service throughout Australia have been effected, the entire system being subjected to intensive reorganization. The external circulation system of the Australian telegraph service has been considerably modified, and direct communication has been established between cities and towns which formerly were served through intermediate repeating centres.

Telephone subscribers may telephone telegrams for onward transmission, or have messages telephoned to them. The fee for the service is small, and the system means, in effect, that the telegraph system is brought into the home of every telephone subscriber. The number of telegrams lodged by telephone during the year ended 30th June, 1951 was 9,264,799 or 27 per cent. of the total lodgments.

A radiogram service is provided to certain isolated places throughout Australia and a number of privately operated wireless transceiver stations have been established at various centres throughout the Commonwealth, enabling telegrams to be exchanged with departmental telegraph offices. Stations sponsored by the Flying Doctor Service of Australia can communicate by wireless with base stations.

The picturegram service between Melbourne and Sydney, which was established in 1929, but which was suspended during 1942, was restored and extended to Brisbane and Adelaide in 1949, to Perth in 1950 and to Hobart and Newcastle in 1951. The equipment installed at these points also permits the direct transmission and reception of overseas photo-telegrams. Portable picture-transmitting apparatus has been provided for use at country centres in New South Wales and Victoria and was first used for the opening of the 19th Federal Parliament at Canberra on 21st February, 1950.

Teletypewriter services (i.e., typewriting over electrical circuits), affording the great advantage of direct and instantaneous communication between points within the same building or separated by distances up to thousands of miles, and printergram services, connecting any business premises with the local telegraph office for the transmission and reception of telegrams, are available.

A direct radiotelegraph service was established between Australia and Portuguese Timor on 15th August, 1950, providing for the transmission of ordinary and urgent rate telegrams, letter telegrams and press telegrams between these countries.

2. Telegraph and Telephone Mileages.—The following table shows the combined single wire mileage for both telegraph and telephone purposes in each State as at 30th June, 1951. The lengths of conduits and pole routes are also shown.

TELEGRAPHS AND TELEPHONES : MILEAGE, 30th JUNE, 1951.

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Aust.
<b>Cables—</b>							
Exchange aerial, underground and submarine .. single wire miles '000	1,513	1,215	465	307	250	78	3,828
Trunk telephone and telegraph aerial, underground and submarine .. single wire miles '000	52	58	8	15	10	3	146
Total .. ..	1,565	1,273	473	322	260	81	3,974
Conduits .. duct miles '000	8	6	2	1	2	1	20
<b>Aerial wires—</b>							
Telephone, trunk and/or telegraph purposes .. single wire miles '000	138	91	113	63	49	18	472
Exchange and non-exchange service lines .. single wire miles '000	201	161	87	81	41	26	597
Total .. ..	339	252	200	144	90	44	1,069
Pole routes .. total miles '000	33	22	18	15	14	4	106

3. **Telegraph Offices and Telegrams Dispatched within Australia.**—(i) *States.* The following table shows, for each State in 1950-51, the number of telegraph offices (including railway telegraph offices), and the number of telegrams dispatched to places within the Commonwealth and to adjacent islands and to ships at sea, according to the class of message transmitted:—

## TELEGRAPH OFFICES, AND TELEGRAMS DISPATCHED. 1950-51.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
Telegraph Offices(a) No. . . . .	3,147	2,425	1,891	926	996	550	9,935
Messages ('000)— Paid and Collect—							
Ordinary . . . . .	10,446	6,961	4,747	2,350	2,599	728	27,831
Urgent . . . . .	924	409	272	120	98	40	1,863
Press . . . . .	101	50	42	40	49	11	293
Lettergram . . . . .	23	17	14	12	18	7	91
Radiogram . . . . .	47	4	43	48	56	1	199
<b>Total . . . . .</b>	<b>11,541</b>	<b>7,441</b>	<b>5,118</b>	<b>2,570</b>	<b>2,820</b>	<b>787</b>	<b>30,277</b>
Unpaid—							
Service . . . . .	326	157	195	57	78	34	847
Meteorological	591	276	386	1,538	453	99	3,343
<b>Total . . . . .</b>	<b>917</b>	<b>433</b>	<b>581</b>	<b>1,595</b>	<b>531</b>	<b>133</b>	<b>4,190</b>
<b>Grand Total . . . . .</b>	<b>12,458</b>	<b>7,874</b>	<b>5,699</b>	<b>4,165</b>	<b>3,351</b>	<b>920</b>	<b>34,467</b>

(a) At 30th June.

(ii) *Australia.* The numbers of telegraph offices, and of telegrams dispatched to destinations within Australia and to adjacent islands and to ships at sea, for each of the years 1938-39 and 1946-47 to 1950-51 respectively, were:—Telegraph offices—9,389, 9,458, 9,599, 9,701, 9,863 and 9,935; Telegrams dispatched—17,252,000, 33,729,000, 34,692,000, 35,647,000, 35,486,000 and 34,467,000

During the years 1938-39 to 1949-50 the volume of telegraph business more than doubled, but in 1950-51 a decrease of 3 per cent. was recorded on the figures for the previous year.

### § 4. Telephones.

1. **General.**—Particulars of the total mileage of lines used exclusively for telephone purposes are not available, but are combined with all other line mileage. A table showing the total single wire mileage used for telephone, trunk and/or telegraph purposes is shown in § 3 on page 156.

During 1950-51 the total number of telephones added to the post office system was 99,422, compared with 81,850 in 1949-50. With an average at 1st January, 1951, of 139 telephones per 1,000 of population, Australia continues to hold a high place amongst the countries of the world in respect of telephone density.

Seventy carrier wave telephone systems were installed during 1950-51 on trunk line routes serving capital cities and important provincial centres. The number of carrier systems now in service totals 569, representing a channel mileage of 317,720.

Seventeen automatic exchanges were brought into operation in metropolitan areas during the year, together with 6 country and 74 rural automatic exchanges. At 30th

June, 1951 there were 191 automatic exchanges in the metropolitan area and 323 in country districts to which 764,944 telephones were connected, representing 63 per cent. of the total number in use in Australia.

2. **Summary for States.**—Particulars relating to the telephone service in each State for the year ended 30th June, 1951 compared with 1939 will be found in the following table :—

**TELEPHONE SERVICES : SUMMARY.**  
(Number.)

Particulars.	Year (30th June).	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Exchanges ..	1939	2,010	1,680	1,053	579	653	358	6,333
	1951	2,182	1,728	1,217	642	701	381	6,851
Telephone Offices (in- cluding Exchanges)	1939	3,040	2,358	1,517	829	907	509	9,160
	1951	3,248	2,450	1,763	975	956	536	9,928
Lines connected ..	1939	189,915	150,570	61,650	45,224	26,032	14,144	487,535
	1951	330,368	269,826	116,314	74,457	47,743	25,380	864,088
Instruments con- nected	1939	257,246	208,230	82,226	60,451	35,830	18,013	661,996
	1951	465,893	381,809	157,212	103,609	66,841	34,042	1,209,406
(i) Subscribers' in- struments	1939	250,511	203,668	79,293	58,512	34,380	17,098	643,462
1951	455,190	373,205	152,282	100,455	64,549	32,730	1,178,411	
(ii) Public tele- phones	1939	4,223	2,573	1,775	1,017	926	562	11,076
1951	5,833	3,900	2,431	1,438	962	669	15,233	
(iii) Other local in- struments ..	1939	2,512	1,989	1,158	922	524	353	7,458
1951	4,870	4,704	2,499	1,716	1,330	643	15,762	
Instruments per 100 of population	1939	9.32	11.09	8.08	10.03	7.62	7.59	9.50
	1951	13.94	16.83	12.98	14.07	11.49	11.70	14.34

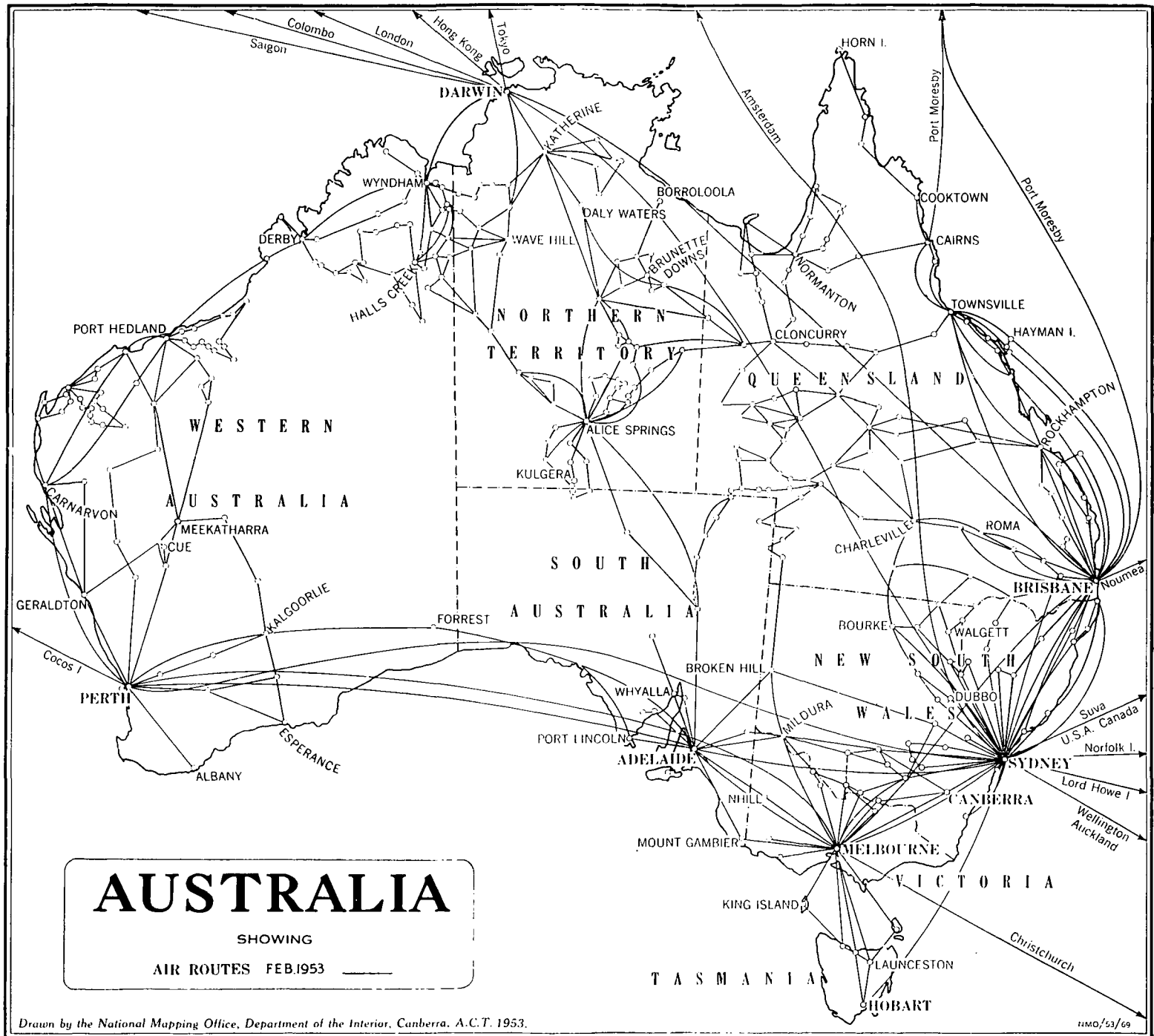
Of the total telephones (1,209,406) in service on 30th June, 1951, 448,849 or 37.11 per cent. were connected to exchanges situated beyond the limits of the metropolitan telephone networks.

3. **Subscribers' Lines and Calling-rates.**—The next table shows the number of subscribers' lines and the daily calling-rates at central, suburban and country telephone exchanges in the several States for 1950-51 :—

**TELEPHONES : SUBSCRIBERS' LINES AND DAILY CALLING-RATES, 1950-51.**

State.	Central Exchanges.		Suburban Exchanges.		Country Exchanges.	
	Sub- scribers' Lines Connected.	Average Outward Calls Daily per line.	Sub- scribers' Lines Connected.	Average Outward Calls Daily per line.	Sub- scribers' Lines Connected.	Average Outward Calls Daily per line.
New South Wales ..	29,513	11.09	186,199	3.90	119,060	1.80
Victoria ..	19,041	12.21	146,534	4.02	88,781	1.50
Queensland ..	9,420	12.67	44,430	3.27	53,713	2.21
South Australia ..	4,943	14.77	38,225	2.85	28,776	1.30
Western Australia ..	8,829	7.92	18,253	3.72	15,534	1.46
Tasmania ..	4,931	5.15	3,944	2.57	14,620	1.79

A comparison of the average daily calling-rates for each class of exchange shows that South Australia registered the greatest number of calls per line at central exchanges, Victoria at suburban exchanges and Queensland at country exchanges.







4. **Effective Paid Local Calls.**—The numbers of effective paid local calls from subscribers and public telephones in the various States during the years ended 30th June, 1950 and 1951 appear hereunder.

**TELEPHONES : NUMBER OF EFFECTIVE PAID LOCAL CALLS.**  
(‘000.)

State.	Subscribers' Calls.		Calls from Public Telephones.		Total Calls.	
	1949-50.	1950-51.	1949-50.	1950-51.	1949-50.	1950-51.
New South Wales ..	341,967	358,669	42,464	44,493	384,431	403,072
Victoria ..	241,313	252,938	23,222	25,099	264,535	278,037
Queensland ..	97,360	102,025	8,884	9,555	106,244	111,580
South Australia ..	57,994	60,511	7,449	7,767	65,443	68,278
Western Australia ..	44,721	46,750	3,601	4,270	48,322	51,020
Tasmania ..	18,021	17,969	1,534	1,580	19,555	19,549
<b>Australia ..</b>	<b>801,376</b>	<b>838,862</b>	<b>87,154</b>	<b>92,674</b>	<b>888,530</b>	<b>931,536</b>

In 1938-39 subscribers' calls numbered 551,511,000, calls from public telephones 44,683,000, and total local calls 596,194,000.

5. **Trunk Line Calls and Revenue.**—In the next table the number of telephone trunk line calls recorded, the amount of revenue received, and the average revenue per call are shown for each of the States for the year 1950-51 compared with 1938-39

**TELEPHONES : TRUNK LINE CALLS AND REVENUE.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
<b>Total Calls ('000)—</b>							
1938-39 ..	14,401	11,198	7,306	4,166	2,311	1,770	41,152
1950-51 ..	24,978	20,262	12,305	7,664	3,881	3,412	72,502
<b>Total Revenue (£)—</b>							
1938-39 ..	739,472	529,190	412,811	196,780	126,141	73,634	2,078,028
1950-51 ..	2,827,546	2,066,906	1,464,630	834,211	461,371	293,505	7,948,169
<b>Average Revenue per Call (pence)—</b>							
1938-39 ..	12.32	11.34	13.56	11.34	13.09	9.58	12.12
1950-51 ..	27.17	24.48	28.57	26.12	28.54	20.64	26.31

The number of trunk line calls during 1950-51 increased by more than 4 million, or 6 per cent., compared with the figures for the previous year, whilst the average revenue per call increased by 14.2 per cent.

6. **Oversea Telephone Services.**—During the year 1950-51 radio-telephone services were established or re-opened between Australia and Hong Kong, Malaya, Manus Island, the Philippine Islands and Venezuela, bringing the number of countries with which radio-telephone communication is available to 61. Service is also provided to certain trans-Atlantic liners, ships off the Australian coast, H.M.A.S. ships, and H.M.N.Z. ships when cruising in Australian waters.

The amount of traffic handled over the radio-telephone services continued to increase rapidly. During 1950-51 the number of calls connected was 39,080, comprising 20,669 originating in Australia and 18,411 incoming calls.

7. **Revenue from Telephones.**—Particulars regarding the revenue from telephone services are included in tables in § 1.

8. **World Telephone Statistics, 1952.**—Information derived, in the main, from statistics compiled by the American Telephone and Telegraph Company shows that at 1st January, 1952 there were more than 80,000,000 telephones in use throughout the world. The United States of America, with almost 46,000,000, possessed by far the greatest proportion of these (58 per cent.). The United States of America also had the highest recorded number of instruments per 100 of population (*viz.* 29). Figures for other leading countries were as follows:—Sweden 25, Canada 22, Switzerland 20, New Zealand 20, Denmark 17. By June, 1952 the number of telephones in Australia per 100 persons had risen to 15.0.

### § 5. Cable and Radio Communication.

1. **First Cable Communication with the Old World.**—In earlier issues of the Official Year Book will be found a detailed account of the connexion of Australia with the Old World by means of submarine cables. (*See* No. 6, p. 770.)

2. **General Cable Service.**—Descriptions of the various cable services between Australia and other countries are given in Official Year Book No. 22, pp. 335-6.

3. **Merging of Cable and Wireless Interests.**—Following upon the recommendations of the Imperial Wireless and Cable Conference in London in 1928 which examined the situation that had arisen as the result of the competition of the beam wireless with the cable services, the Imperial and International Communications Limited (since renamed Cable and Wireless Ltd.) was formed and took over the operations of the Pacific Cable Board and the control of the Eastern Extension Cable Company and the Marconi Wireless Company. For further developments, leading eventually to the establishment of the Overseas Telecommunications Commission, *see* Official Year Book No. 37, pp. 220-4.

4. **Oversea Cable and Radio Traffic.**—(i) *States.* The number of telegrams received from and dispatched overseas in each State during 1950-51 is shown hereunder:—

#### INTERNATIONAL TELEGRAMS, 1950-51.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
Number received ..	618,936	466,491	70,814	68,915	76,358	20,227	1,321,741
„ dispatched	685,555	482,224	62,553	77,818	66,314	21,110	1,395,574
Total ..	1,304,491	948,715	133,367	146,733	142,672	41,337	2,717,315

(ii) *Australia.* (a) *Number of Telegrams.* The following table shows the number of international telegrams received from and dispatched overseas during the years 1938-39 and 1940-47 to 1950-51:—

#### INTERNATIONAL TELEGRAMS: AUSTRALIA.

Particulars.	1938-39.	1946-47.	1947-48.	1948-49.	1949-50.	1950-51.
Number received ..	716,007	944,115	1,047,076	1,123,019	1,233,102	1,321,741
„ dispatched ..	745,754	987,260	1,023,396	1,123,020	1,242,376	1,395,574
Total ..	1,461,761	1,931,375	2,070,472	2,246,039	2,475,478	2,717,315

(b) *Number of Words, 1950-51.* The following statement shows particulars of the international business, originating and terminating in Australia, transacted over the cable and wireless services during the year ended 30th June, 1951.

**INTERNATIONAL TELEGRAMS, AUSTRALIA, 1950-51.**  
(<sup>'000</sup> Words.)

Class of Traffic.	Number of Words Transmitted to—			Number of Words Received from—		
	United Kingdom.	Other Places.	Total.	United Kingdom.	Other Places.	Total.
Ordinary(a) ..	5,222	6,564	11,786	4,632	5,491	10,123
Government(a) ..	1,065	1,765	2,830	2,144	2,365	4,509
Greetings ..	1,449	865	2,314	1,430	840	2,270
Press (including deferred press) ..	3,936	3,631	7,567	8,459	5,369	13,828
Daily letter ..	8,340	9,981	18,321	7,662	8,527	16,189
Other ..	..	28	28	..	56	56
<b>Total</b> ..	<b>20,012</b>	<b>22,834</b>	<b>42,846</b>	<b>24,327</b>	<b>22,648</b>	<b>46,975</b>

(a) Includes code telegrams.

Words transmitted to "Other places" included 3,542,328 to the United States of America and 6,248,162 to New Zealand and the Pacific Islands. Words received from "Other places" included 3,434,184 from the United States of America and 4,596,041 from New Zealand and the Pacific Islands.

5. **Coast Stations.**—There are 26 wireless stations established at points around the Australian coast and 7 about the coast of Papua and New Guinea. During 1950-51 these stations handled 500,188 messages (379,686 paying, 16,274 service and 104,228 weather) with a total of 7,950,511 paying words. For further information see *Transport and Communication Bulletin* No. 42, 1950-51.

6. **Radio-communication Stations Authorized.**—(i) *States and Territories, 30th June, 1951.* The following table shows particulars of the different classes of radio-communication stations authorized at 30th June, 1951 in each State and Territory of the Commonwealth. Figures relate to radio-communication (radio telegraph and radio telephone) stations only; particulars of broadcasting stations and of broadcast listeners' are shown in § 6, para. 3 and 4, following.

**RADIO-COMMUNICATION STATIONS AUTHORIZED, 30th JUNE, 1951.**

State or Territory for which Authorized.	Transmitting and Receiving.					Receiving Only.			Grand Total.	
	Aero-nautical.(a)	Coast.(b)	Land.(c)	Mobile (General).(d)	Miscellaneous.	Total.	Land.(c)	Mobile (General).(d)		Total.
New South Wales	11	2	371	872	26	1,282	75	36	111	1,393
Victoria ..	9	5	233	724	13	984	197	138	335	1,319
Queensland ..	11	6	309	243	8	577	64	25	89	666
South Australia ..	8	2	146	248	3	407	1	..	1	408
Western Australia	13	6	288	110	5	422	31	6	37	459
Tasmania ..	5	4	48	57	4	118	1	..	1	119
Northern Territory	5	1	142	3	..	151	2	..	2	153
Aust. Cap. Terr.	1	..	12	55	1	69	..	2	2	71
<b>Total, Australia</b>	<b>63</b>	<b>26</b>	<b>1,549</b>	<b>2,312</b>	<b>60</b>	<b>4,010</b>	<b>371</b>	<b>207</b>	<b>578</b>	<b>4,588</b>
Papua-New Guinea	7	7	198	49	..	261	..	..	..	261
<b>Grand Total ..</b>	<b>70</b>	<b>33</b>	<b>1,747</b>	<b>2,361</b>	<b>60</b>	<b>4,271</b>	<b>371</b>	<b>207</b>	<b>578</b>	<b>(e)4,849</b>

(a) Ground stations (aeradio stations) for communication with aircraft stations. (b) Ground stations for communication with ship stations. (c) Stations established at fixed locations on land for the conduct of point-to-point services and for communication with mobile stations. (d) Stations installed in motor vehicles and small harbour vessels not falling within the definition of ship stations or aircraft stations, and stations comprising small portable apparatus used for various purposes. (e) Excludes 218 aircraft stations, 656 ship stations and 146 "other" stations which cannot be classified according to States, etc.

(ii) *Australia and Papua-New Guinea 30th June, 1947 to 1951.* The following table shows the total number of radio-communication stations authorized in Australia and Papua-New Guinea at 30th June of the years 1947 (the earliest date for which the present classification is available) to 1951.

**RADIO-COMMUNICATION STATIONS AUTHORIZED : AUSTRALIA AND PAPUA-NEW GUINEA.**

At 30th June—	Transmitting and Receiving.					Receiving only.		Ship.	Air-craft.	Other.	Grand Total.
	Acro-nautical.	Coast.	Land.	Mobile (General).	Miscellaneous.	Land.	Mobile (General).				
1947 ..	59	20	788	827	26	326	233	219	87	..	2,585
1948 ..	59	24	1,009	1,208	68	331	239	345	168	..	3,471
1949 ..	69	28	1,325	1,717	47	330	323	520	205	..	4,504
1950 ..	68	29	1,517	2,011	49	375	311	617	226	139	5,342
1951 ..	70	33	1,747	2,361	60	371	207	656	218	146	5,869

See notes to previous table.

## § 6. Broadcasting and Television.

1. **The Australian Broadcasting Control Board.**—The Australian Broadcasting Act, 1942–1946 was amended in 1948 to provide for the establishment of the Australian Broadcasting Control Board. The amending Act was assented to on 6th December, 1948, and subsequently proclaimed to commence on 15th March, 1949.

The Board operates under the Ministerial jurisdiction of the Postmaster-General, and its principal functions, as set out in Section 6K of the Act, are to ensure:—(a) the provision of services by broadcasting stations, television stations and facsimile stations, and services of a like kind, in accordance with plans from time to time prepared by the Board and approved by the Minister; (b) that the technical equipment and operation of such stations are in accordance with such standards and practices as the Board considers to be appropriate; and (c) that adequate and comprehensive programmes are provided by such stations to serve the best interests of the general public.

In addition, the Board may exercise such other functions as are prescribed by regulation in relation to broadcasting stations, television stations and facsimile stations.

In the exercise of its functions in respect of programmes, the Board is required—(a) to consult the Australian Broadcasting Commission and representatives of licensees of commercial broadcasting stations in relation respectively to the programmes of the national and commercial broadcasting services; and (b) in particular to—(i) ensure reasonable variety of programmes; (ii) ensure that divine worship or other matter of a religious nature is broadcast for adequate periods and at appropriate times, and that no matter which is not of a religious nature is broadcast by a station during any period during which divine worship or other matter of a religious nature is broadcast by that station; (iii) ensure that facilities are provided on an equitable basis for the broadcasting of political or controversial matter; (iv) determine the extent to which advertisements may be broadcast in the programme of any commercial broadcasting station; and (v) fix the hours of service of broadcasting stations, television stations and facsimile stations.

The Board is empowered to make recommendations to the Minister as to the exercise by him of any power under Division 1 of Part III. of the Act, which prescribes the conditions under which licences are granted to commercial broadcasting stations.

Under the Television Act (assented to on 20th March, 1953) the Minister is required to take into consideration any recommendations made by the Board as to the exercise of his power to grant licences for commercial television stations.

The Board also has power, subject to the directions of the Minister—(a) to determine the situation and operating power of any broadcasting station, television station or facsimile station; (b) to determine the frequency of each broadcasting station, television station or facsimile station, within bands of frequencies notified to the Board by the Postmaster-General as being available for such stations; (c) after consultation with the Commission to determine the conditions upon which a commercial broadcasting station may broadcast a programme of the National Broadcasting Service; and (d) to regulate the establishment of networks of broadcasting stations and the making of agreements or arrangements by licensees of commercial broadcasting stations for the provision of programmes or the broadcasting of advertisements.

Subject to the approval of the Minister and of the Treasurer, the Board may provide financial and other assistance to commercial broadcasting stations for the purpose of ensuring that programmes of adequate extent, standard and variety are provided in the areas served by these stations.

In addition to prescribing the functions of the Board as set out in section 61 of the Act, the amending Act of 1948 also transferred to the Board certain powers which had previously been exercised by the Minister in connexion with the general control of the broadcasting service, particularly in relation to the operations and programmes of commercial stations.

Section 61 of the Act provides that the Board shall consist of three members appointed by the Governor-General, one of whom shall be chairman. The Board was constituted on 15th March, 1949.

Section 61 of the Act provides that no person shall be appointed as a member of the Board who—(a) has any financial interest, whether direct or indirect, in any company which is the licensee of a commercial broadcasting station or manufactures or deals in equipment for the transmission or reception of broadcasting, television or facsimile programmes; (b) is a member of the governing body of any company or other association of persons which is the licensee of a commercial broadcasting station; or (c) is the licensee of a commercial broadcasting station.

2. **The Australian Broadcasting Commission.**—(i) *General.* The Australian Broadcasting Commission was established under the Australian Broadcasting Commission Act 1932 to take over control of national broadcasting with the object of raising the standards of broadcasting in Australia. Control of the Australian Broadcasting Commission is vested in seven Commissioners (originally five), one of whom is an officer of the Treasury and one an officer of the Postmaster-General's Department, and its income is derived from an annual government grant. (For information about the original method of finance see earlier issues of the Official Year Book.) Technical services are provided by the Postmaster-General's Department.

Broadcasting in Australia is a compromise between the system in operation in Great Britain and that in the United States of America. The Australian Broadcasting Commission aims to provide the best possible majority entertainment and also to cater for the needs of important minorities. The programmes of the Australian Broadcasting Commission cover a wide range of activities which are indicated briefly in the following paragraphs. The proportion of broadcasting time allocated to the various types of programmes during 1951-52 was as follows:—Music—Classical and light classical, 21.8 per cent., light music, 18.5 per cent., total music, 40.3 per cent.; Variety, 16.3 per cent.; Drama and Features, 4.4 per cent.; Children's Session, 2.0 per cent.; Youth Education, 3.2 per cent.; Talks, 6.7 per cent.; Parliament, 4.0 per cent.; Religious Broadcasts, 3.7 per cent.; News, 7.7 per cent.; Sport, 5.0 per cent.; Rural Broadcasts, 1.8 per cent.; Non-departmental, 4.9 per cent.

(ii) *Music.* The Australian Broadcasting Commission is to-day the biggest concert-giving organization in the Commonwealth, and the immense growth of interest in music in this country is illustrated by the fact that Australian listeners in increasing numbers now welcome the opportunity of hearing fine music on the air and in the concert hall, and have magnificently supported the presentation of orchestral concerts and of recitals by the best musicians from their own country and from overseas. In 1936 small regular

orchestras were formed by the Australian Broadcasting Commission in Sydney, Melbourne, Brisbane, Adelaide, Perth and Hobart, and from these foundations have grown our present orchestras. Those in Sydney and Melbourne measure up to first-class orchestras overseas, whilst those in the other capital cities are showing rapid improvement and are now the equal of those in many places of comparable size in Europe or America. Until 1946 the cost of these orchestras was met solely by the Australian Broadcasting Commission, but since then State Governments and major municipal bodies in all States have agreed to contribute towards the expense.

The close co-operation between a broadcasting organization, city authorities and State Governments to establish and maintain symphony orchestras is unique in the world.

In 1952, the Australian Broadcasting Commission organized 504 public orchestral concerts (including 130 free concerts for school children and 50 free concerts for adults) and 200 public recitals by famous artists throughout the Commonwealth. Of these concerts, 136 were given outside the capital cities, including 68 free orchestral concerts for school children.

The policy of the Australian Broadcasting Commission so far as individual artists are concerned has always been to develop local talent and at the same time give its audiences the opportunity of hearing famous international musicians.

(iii) *Drama and Features.* Drama programmes are designed to give listeners opportunities, which they might not otherwise have, of hearing the great plays of all nations as well as adaptations of the best modern stage plays and also those written specially for broadcasting. The main regular drama programmes are broadcast on Saturday and Monday evenings, and special series of longer plays are also given at various times during the year.

In recent years the technique of the feature programme has also been developed in this country. The feature is a form of entertainment which is unique to radio, consisting of specially written programmes designed to present information in an interesting way, and it may deal with a very wide variety of subjects ranging from history and current events to science and the arts. A number of Australian writers have become interested in this form of entertainment and about 97 per cent. of the features broadcast are written by Australians. Local writers also contribute a large proportion of the plays broadcast and every effort is made to assist and encourage their work.

(iv) *Youth Education.* The Australian Broadcasting Commission provides a regular series of broadcasts to schools as an addition to normal class-room education. The total number of listening schools at the end of 1952 was 7,682 or nearly 73 per cent. of all schools, State and private, throughout the Commonwealth. Many of the school broadcasts are presented in dramatized form, as this method makes the material more vivid and interesting to the young listener. For the very young children, the Commission broadcasts every week-day the "Kindergarten of the Air", a type of broadcast which originated in Australia. (See also Chapter XI.—Education, on this subject.)

(v) *Talks.* The aim of the Talks Department is to provide programmes which will keep the listener well informed on current affairs and on general topics. Many of the talks in the first category are now presented in a magazine type of session consisting of a number of short items linked by a narrator. The most complete of these built-up programmes is the documentary, in which radio goes into the field to analyse or to describe, using the actual sounds and voices recorded on location.

Controversial topics are covered in two sessions—the weekly discussion broadcast, in which the main conflicting points of view on a current topic are discussed by competent authorities, and the "Nation's Forum of the Air", using the debating technique with questions in person from the studio audience and telephoned from listeners. Another outstanding session is "News Review", containing at least five comments on the news of the day recorded over landline from all States of the Commonwealth and, in the case of significant world events, from overseas by radio-telephone.

(vi) *Rural Broadcasts.* The Rural Broadcasts Department was commenced in 1945 to serve the needs of country listeners. It has proved to be of great value to men and women on the land throughout Australia, by giving them the latest market reports and information on general conditions, and by keeping them informed on rural development overseas. The interstate market report is the only Australia-wide market service available to the Australian rural population. Programmes are exchanged with radio organizations in England, Canada, the United States of America and elsewhere, and several visits to Australia by well-known farm radio personalities have also been arranged. The department has encouraged the work of Junior Farmers' Clubs in Australia, and has sponsored competitions for members in connexion with the Royal Agricultural Shows in Sydney and Melbourne.

(vii) *News.* On 1st June, 1947, the Australian Broadcasting Commission's independent News Service came into full operation. Since that date the Commission has collected the news for its bulletins independently of the press and it now has, in addition to a large staff throughout Australia, a London news room for the selection and transmission of overseas news secured from the great news agencies. Nine national news bulletins are broadcast daily, and are followed by State bulletins of news of State interest. In addition, two or more regional bulletins are broadcast by local stations in country areas on most days of the week, and for remote country districts special bulletins are broadcast on shortwave. For overseas listeners 19 bulletins daily are broadcast through the Radio Australia transmitters. These bulletins, which are given in English, French and Malay, are directed to every continent, but concentrate on the Pacific and Asian areas. The Australian Broadcasting Commission also rebroadcasts for Australian listeners, by arrangement with the British Broadcasting Corporation, two British Broadcasting Corporation news bulletins each day.

(viii) *Other Activities.* The broadcasting of the proceedings of Federal Parliament commenced as a regular service in July, 1946, and Australian listeners are now able to hear debates from the House of Representatives and from the Senate. At present these broadcasts are confined to one of the two transmitters in each capital city, but it is hoped that eventually country listeners will also be able to hear them.

The National Children's Session, presented seven days a week, is composed of over 30 programme items, including stories, music, games, and items about art, literature and natural history. There is a children's newsreel and a Brain's Trust, discussing, through children, more than 100 topics each year. The Argonauts' Club is an important part of the session and encourages children between the ages of 7 and 17 in self-expression and the appreciation of cultural subjects, although fun and the future are not overlooked.

In co-operation with the various religious denominations, the Australian Broadcasting Commission broadcasts several religious sessions each week day in addition to those given on Sundays. These religious broadcasts include relays of normal church services and a variety of special programmes of talks and sacred music. The modern trend towards the use of religious drama is also followed.

The Australian Broadcasting Commission's variety and sporting programmes provide the lighter side of the service. In its variety sessions the Australian Broadcasting Commission does everything possible to assist local artists in order to increase the amount of first-class talent in this country, and encouragement is also given to Australian composers of light music. The Australian Broadcasting Commission's dance bands in Sydney and Melbourne are regarded as being two of the most outstanding bands in Australia.

The Australian Broadcasting Commission's coverage of sport at home and abroad is comprehensive. On Saturday afternoons the sporting panel provides listeners with the progress results and scores, and also descriptions from half a dozen or more fields of sport. Events of international interest such as Test Matches, the Davis Cup, etc., are covered by simultaneous descriptions from Australian Broadcasting Commission commentators. In covering events overseas, the Australian Broadcasting Commission is indebted to the British Broadcasting Corporation for its collaboration in Great Britain, and to the New Zealand Broadcasting Service for events in New Zealand.



(ix) *Transmission Services.* In July, 1953, the Australian Broadcasting Commission's home programmes for Australian listeners were transmitted by 44 medium-wave and 8 short-wave stations, and its overseas programmes were transmitted by 4 short-wave stations, two of which are of 100 kW. power and one of 50 kW. The 56 stations in operation at 1st July, 1953 are shown on page 169. The domestic short-wave stations are used for giving service to listeners in the sparsely populated parts of Australia, and in New Guinea and adjacent islands, while the other short-wave stations are directed to listeners overseas. Thirty of the medium-wave stations are situated outside the capital cities, and further regional stations are to be constructed. When these additions have been made, the medium-wave and short-wave stations together will provide for clear reception of the Commission's programmes in practically every part of Australia.

3. *Broadcast Licences Issued.*—(i) *States and Territories, 30th June, 1951.* The following table shows the number of broadcast licences issued in each State and Territory of the Commonwealth at 30th June, 1951.

#### BROADCAST LICENCES ISSUED, 30th JUNE, 1951.

State or Territory in which Issued.	Broadcasting.		Broadcast Listeners.		Experimental.
	National Stations. (a)	Commercial Stations.	One Receiver.	More than one Receiver.	
New South Wales .. .. .	12	35	674,576	74,195	1,004
Victoria .. .. .	7	19	522,502	63,891	931
Queensland .. .. .	12	20	270,587	17,432	314
South Australia .. .. .	4	8	203,473	39,546	313
Western Australia .. .. .	7	12	139,669	19,767	184
Tasmania .. .. .	3	8	68,149	9,594	94
Northern Territory .. .. .	2	..	1,222	70	14
Australian Capital Territory .. .. .	1	1	4,656	331	12
Total .. .. .	(b)50	103	1,884,834	224,826	(c)2,897

(a) Includes Short-wave Stations: New South Wales 1; Victoria, 3; Queensland 2; Western Australia 2. (b) Includes 1 medium-wave and 1 short-wave station in Papua. (c) Includes 31 stations operated in Papua-New Guinea.

Of broadcast listeners' licences in respect of one receiver, 1,039,287 or 55.14 per cent. were held by persons situated in metropolitan areas and 845,547 or 44.86 per cent. by persons in country areas.

(ii) *Broadcast Listeners' Licences, 30th June, 1925 to 1951.* The following table shows the number of broadcast listeners' licences issued at 30th June, 1925, 1930, 1935, 1939, 1940 and 1946 to 1951:—

#### BROADCAST LISTENERS' LICENCES ISSUED.

At 30th June—	N.S.W. (a)	Victoria.	Q'land. (b)	S. Aust. (c)	W. Aust.	Tasmania.	Australia. (b)
1925 .. .. .	33,719	19,243	1,061	3,118	3,417	501	61,059
1930 .. .. .	111,080	139,887	23,263	25,671	5,715	6,032	311,648
1935 .. .. .	278,648	236,886	67,369	76,365	41,176	20,088	720,532
1939 .. .. .	433,029	327,579	133,217	117,307	79,262	39,392	1,129,786
1940 .. .. .	458,155	348,158	151,110	124,891	87,764	42,182	1,212,260
1946(d) .. .. .	575,864	415,785	191,186	164,724	106,529	51,992	1,506,080
1947 .. .. .	679,505	499,944	228,066	180,909	121,149	61,674	1,771,247
1948 .. .. .	699,250	505,106	239,342	197,326	128,703	63,080	1,832,816
1949 .. .. .	706,452	531,722	261,054	212,416	139,290	68,088	1,919,022
1950 .. .. .	748,268	557,556	274,279	227,911	149,328	72,286	2,029,628
1951 .. .. .	753,758	586,393	288,019	244,311	159,436	77,743	2,109,660

(a) Includes Australian Capital Territory. (b) Includes Papua. (c) Includes Northern Territory. (d) Commencing in July, 1942. Licences for receivers in excess of one are included.

4. **Broadcasting.**—(i) *The National Broadcasting Service.* (a) *Transmitting Stations.* The technical services for the National Broadcasting System are provided by the Postmaster-General's Department, and the programmes by the Australian Broadcasting Commission (see page 165).

At 1st July, 1953, the National Broadcasting System of Australia comprised 53 transmitting stations as follows:—

*Medium-wave Stations—*

2CN and 2CY Canberra, 2BL and 2FC Sydney, 2CO Corowa, 2CR Cummoek, 2LG Lithgow, 2NA and 2NC Newcastle, 2NB Broken Hill, 2NR Grafton, 2NU Manilla, 2TR Taree, 3AR and 3LO Melbourne, 3GI Sale, 3WV Dooen, 4QG and 4QR Brisbane, 4AT Atherton, 4QB Pialba, 4QL Longreach, 4QN Townsville, 4QA Mackay, 4GM Gympie, 4QS Dalby, 4QY Cairns, 4RK Rockhampton, 4SO Southport, 5AN and 5CL Adelaide, 5CK Crystal Brook, 5LN Port Lincoln, 5AL Alice Springs, 5DR Darwin, 6WF and 6WN Perth, 6GF Kalgoorlie, 6GN Geraldton, 6WA Wagin, 7ZL and 7ZR Hobart, 7NT Kelso, 9PA Port Moresby, Papua.

*Short-wave Stations—*

VLI Sydney, New South Wales, VLG, VLH and VLR Lyndhurst, Victoria. VLQ and VLM Brisbane, Queensland, VLW and VLX Perth, Western Australia, VLT Port Moresby, Papua.

With the exception of the short-wave stations, all transmitters operate in the medium frequency broadcast band 540 to 1,600 kilocycles per second. From the short-wave stations, using frequencies within the band 3 to 30 megacycles per second, service is given to listeners in sparsely populated parts of Australia such as the north-west of Western Australia, Northern Territory, and Northern and Central Queensland.

In addition to the short-wave stations under the National Broadcasting System there are also three short-wave stations at Shepparton, Victoria (VLA, VLB, VLC) for oversea services only.

Programmes for country regional stations are normally relayed from the central studio of the nearest capital city, high quality programme transmission lines being used for the purpose. A number of programme channels is utilized to link national broadcasting stations in the capital cities of Australia, and frequently this system is extended to connect both the national and commercial broadcasting stations.

(b) *Broadcast Listeners' Licences.* (1) Consequent upon an amendment to the Broadcasting Act which was proclaimed to take effect from 1st January, 1952, the fee payable for a broadcast listener's licence or renewal thereof is:—Zone 1, £2; Zone 2, £1 8s. That portion of the Act relating to the payment of additional fees for radio receivers in excess of one was repealed, and the licence now applies to every broadcast receiver which is in possession of the holder of the licence or of a member of his family at the address specified in the licence and/or ordinarily kept at that address or installed in a vehicle which is ordinarily kept at that address while not in use.

(2) Free licences are granted to blind persons and to schools. Invalid and age pensioners who live alone or with another such pensioner are required to pay only one-quarter the ordinary fee.

Zone 1 is the area within 250 miles of a National Broadcasting Station. Zone 2 is the remainder of the Commonwealth.

(c) *Financial Operations.* Since the amendment to the Australian Broadcasting Act, assented to on 6th December, 1948, the Australian Broadcasting Commission prepares estimates of its receipts and expenditure for each financial year and submits these estimates to the Minister. Appropriations are made by Parliament for the purposes of the Commission and these, together with all other moneys received by the Commission, are paid into an account in the Commonwealth Bank of Australia. From this account all costs, charges, expenses, etc., incurred by the Commission in the exercise of its powers and functions under the Act are defrayed. For particulars of the financial operations of the Commission see Chapter XVII.—Public Finance.

(ii) *Commercial Broadcasting Stations.* The services of other broadcasting stations are conducted by private enterprise under licence from the Postmaster-General. Licences are granted on conditions which ensure satisfactory alternative programmes for listeners. The fee for a broadcasting station licence is £25 per annum, plus one-half of one per cent. of the gross earnings from the operations of a station which has made a profit in the year preceding. The maximum initial period of a licence is three years, and it is renewed for a period of one year at the discretion of the Postmaster-General. Licensees of these stations rely for their income on revenue received from the broadcasting of advertisements and other publicity. The number of these stations in operation at 30th June, 1952, was 103 and there are other stations in prospect.

(iii) *Radio Inductive Interference.* The Postmaster-General's Department takes active measures to suppress, so far as possible, interference with broadcast reception resulting from the radiations of energy from electrical machinery and appliances. During the year 1950-51, 7,577 instances of interfering noises were eliminated with the co-operation of the owners of the offending equipment.

(iv) *Prosecutions under the Wireless Telegraphy Act.* During the year 1950-51, 2,991 persons were convicted for using unlicensed broadcast receiving equipment. The total fines and costs amounted to £7,608.

5. **Television.**—Under the Television Act 1953, the Postmaster-General may establish television stations or may grant licences for commercial television stations. No television stations have yet been established. Further reference to television appears in para. 1 above.

## CHAPTER VI. TRADE.

### § 1. Introductory.

**Constitutional Powers of the Commonwealth in regard to Commerce.**—The powers vested in the Commonwealth Parliament by the Commonwealth Constitution with respect to oversea trade and commerce will be found in Sub-section 51 (i) and Sections 86 to 95 thereof (*see* Official Year Book No. 39, pp. 15 and 21–22).

### § 2. Commonwealth Legislation affecting Oversea Trade.

1. **General.**—In previous issues of the Official Year Book brief particulars of the various Commonwealth Acts and amendments thereof affecting oversea trade are given in chronological order. The Customs Acts represent the administrative or machinery Acts under which the Department of Trade and Customs operates, while the Customs Tariff provides the statutory authority for imposing the actual rates of duties operative from time to time.

The Acts at present in force are :—The Customs Act 1901–1952 ; Customs Tariff 1933–1952 ; Customs Tariff (Canadian Preference) 1931 and Customs Tariff (Canadian Preference) 1934–1952 ; Customs Tariff (Industries Preservation) Act 1921–1936 ; Customs Tariff (New Zealand Preference) 1933–1952 ; Customs Tariff (Papua and New Guinea Preference) 1936–1950 ; Customs Tariff (Southern Rhodesian Preference) 1941–1948 ; Customs Tariff (Primage Duties) 1934–1950 ; Trading with the Enemy Act 1939–1947.

2. **Customs Tariffs.**—(i) *General.* The Customs Tariff 1921–1930 provided a British Preferential Tariff, an Intermediate Tariff and a General Tariff. The Intermediate Tariff was omitted from the Customs Tariff 1933 but was restored by the Customs Tariff 1936.

(ii) *British Preference.* “British Preferential Tariff” rates of duty apply to goods the produce or manufacture of the United Kingdom, provided such goods comply with the laws and statutory regulations for the time being in force affecting the grant of British preference, and that the goods have been shipped in the United Kingdom to Australia and have not been transhipped, or, if transhipped, it is proved to the satisfaction of the Collector of Customs that the intended destination of the goods, when originally shipped from the United Kingdom, was Australia. Preferential Tariff rates were provided for in the Commonwealth Tariff 1908. Subsequent legislation has extended the list of articles to which these rates apply. For the purpose of preferential treatment the following goods are deemed by Section 151A of the Customs Act 1901–1952 to be the produce or manufacture of the United Kingdom, provided the final process of their production or manufacture was performed in that country :—

- (a) Goods which are wholly produced or wholly manufactured in the United Kingdom from materials in one or more of the following classes—
  - (i) Materials wholly produced or wholly manufactured in the United Kingdom or in Australia ;
  - (ii) Imported unmanufactured raw materials ;
  - (iii) Imported manufactured raw materials as determined by the Minister.
- (b) Goods of the factory or works, cost of which not less than seventy-five per cent. is represented—
  - (i) by labour or material of the United Kingdom ; or
  - (ii) by labour or material of the United Kingdom and labour or material of Australia.
- (c) Goods of a class or kind not commercially produced or manufactured in Australia and of the factory or works, cost of which not less than twenty-five per cent. or fifty per cent., if the Minister so determines, is represented—
  - (i) by labour or material of the United Kingdom ; or
  - (ii) by labour or material of the United Kingdom and labour or material of Australia.

The benefits of the British Preferential Tariff have also been extended by separate Trade Agreements to certain goods the produce of the Dominions of Canada and New Zealand and by separate Tariff legislation to the Territories of Papua and New Guinea, and the above-mentioned conditions apply *mutatis mutandis* to each. They may be extended wholly or in part to any non-self-governing colony, including British Protectorates and certain British Trust Territories.

The Customs Tariff (Papua and New Guinea Preference) 1936-1950 which repealed the Act of 1934 provides for Customs Preference on goods the produce of the Territory of Papua and on goods the produce of the Territory of New Guinea. Imports into Australia from the Territory of Papua or the Territory of New Guinea of such of the goods specified in the schedule to the Act as were produced in the Territory from which they were imported, are, for the most part, free of duty. Other imports from Papua and New Guinea are subject to British Preferential Tariff rates of duty under the Customs Tariff 1933-1952. The goods specified in the schedule to the Customs Tariff (Papua and New Guinea Preference) 1936-1950 are coffee, dried lychee nuts, bananas, various native fresh fruits, edible fungi, green and dry ginger, coco-nuts, Rangoon beans, kapok and sesame seeds, arcaea nuts, cocoa beans, massoi oil, nuts (edible), sago, tapioca, spices, vanilla beans, gums, pyrites, denatured spirit and tea.

At the Imperial Economic Conference held at Ottawa, Canada, during July and August, 1932, a trade agreement providing for special preferential trade conditions was made between the Governments of the United Kingdom and the Commonwealth of Australia. A summary of the provisions of this agreement appears in Official Year Book No. 26, pp. 868-873, and further references have been made in subsequent issues.

The five years' currency of the agreement terminated on 19th August, 1937, but, in view of the negotiations then in progress between the Governments of the United Kingdom and the United States of America for a trade agreement, a review of the terms of the Ottawa Agreement became a matter of urgency. The United Kingdom Government at the time sought the concurrence of the Dominions in the modification of certain preferences granted under the Ottawa Agreement in order to facilitate the satisfactory conclusion of an agreement with the United States of America. As a consequence, a conference of United Kingdom and Australian Ministers was held in London early in 1938, and a joint statement setting out the result of the conference was issued by the two Governments in the form of a Memorandum of Conclusions which was published by the United Kingdom Government on 20th July, 1938. Details of the Memorandum have been published in previous issues of the Official Year Book. The full text may be found on pages 479-482 of Official Year Book No. 32.

The future of the agreement and of Empire preferences generally has been discussed in connexion with the proposals for the establishment of an International Trade Organization which are referred to in paragraph 6.

(iii) *Intermediate Tariff.* In submitting tariff schedules to Parliament on 20th March, 1936, the Minister for Trade and Customs said: "Another new feature of the schedules is the Intermediate Tariff. It has been re-introduced to provide a convenient avenue for expressing the level of duties which the Government proposes should form the basis for trade treaties. The rates proposed under the protective items of the Intermediate Tariff express, in every case, a protective level for Australian industry as well as preserving the margins required under the Ottawa Agreement." The Customs Tariff 1933-1952 provides that the Governor-General may from time to time by proclamation declare that the Intermediate Tariff shall apply from a date and time specified to goods specified in the proclamation which are the produce or manufacture of the British or foreign country specified in the proclamation. The Intermediate Tariff came into operation on 1st January, 1937, in respect of a selected list of items. This list has been substantially extended from time to time, but many rates have not yet been proclaimed to come into operation. Those items which have been proclaimed apply to goods from countries with which specific most-favoured-nation arrangements exist, including goods from all members of the British Commonwealth of Nations not receiving

preferential Tariff treatment. They apply also to goods from certain other Foreign countries in respect of which Australia has no formal obligation to accord Intermediate Tariff treatment.

(iv) *General Tariff.* The "General Tariff" applies to such importations as are not :—

(a) Goods the produce or manufacture of the United Kingdom, shipped in the United Kingdom :

(b) Goods the produce or manufacture of the following countries when admissible under the British Preferential Tariff or at a special rate of duty : Canada, New Zealand, Norfolk Island, Papua and New Guinea, Southern Rhodesia, and British non-self-governing Colonies.

(c) Goods admitted under the provisions of the Intermediate Tariff.

(v) *Deferred Duties.* The Customs Tariff 1933-1952 provides for duties on certain goods to be deferred. Where a deferred duty on any goods is provided for in the Schedule, the Minister shall refer to the Tariff Board for inquiry and report on the question whether the deferred duty should or should not operate on and after the date to which it has been deferred. The Board shall report whether the goods in respect of which the deferred duty is provided are being made or produced in Australia or will be so made or produced on, or immediately after, the date to which the duty has been deferred—(a) in reasonable quantities ; (b) of satisfactory quality ; and (c) at a reasonable price having regard, among other things, to the probable economic effect of the imposition of the deferred duty upon other industries concerned, and upon the community in general. Upon receipt of a report from the Tariff Board, the Minister may defer the duty further by notice published in the *Commonwealth Gazette*.

3. **Exchange Adjustment.**—The Customs Tariff (Exchange Adjustment) Act 1933-1939 provided for adjustments in Duties of Customs consequent upon depreciation in the value of Australian currency relative to sterling. This Act came into operation on 5th October, 1933 and ceased to operate on 15th November, 1947, as a result of the Customs Tariff (Exchange Adjustment) Act Repeal Act 1948.

A summary of the provisions of the Customs Tariff (Exchange Adjustment) Act 1933-1939 is contained in previous issues of the Official Year Book.

4. **Primage Duty.**—An account of the imposition of primage duty since its introduction on 10th July, 1930 is contained in Official Year Book No. 39 (pp. 456-7).

In addition to duties imposed by the Customs Tariff 1933-1952, ad valorem primage duties at rates of 4 per cent., 5 per cent., or 10 per cent., are charged according to the type of goods and origin thereof. Goods the produce or manufacture of New Zealand, Norfolk Island, Fiji, Papua and New Guinea, are exempt from primage duty. A large proportion of goods admissible under the British Preferential Tariff is also exempt from primage duty and a number of specified goods used by primary producers and many machines, tools of trade and raw materials not manufactured in Australia are free of primage duty regardless of their country of origin.

Primage duties at the rates applicable to the British Preferential Tariff are accorded to Canadian goods admissible under the British Preferential Tariff, and also to proclaimed commodities from Ceylon and various British non-self-governing Colonies, Protectorates, and Trust Territories. Primage duties at concessional rates (in most cases at the rate equivalent to the British Preferential Tariff rate) are payable on a limited number of goods the product of proclaimed countries.

5. **Trade Agreements.** (See also para. 6 following)—(i) *United Kingdom.* A reciprocal trade agreement between the United Kingdom and Australia came into force on 14th October, 1932, and is referred to briefly in paragraph 2 above. Broadly speaking, Australia secured preferences in the United Kingdom market for a wide range of Australian export commodities and in return Australia incurred obligations to the United Kingdom in respect of Tariff rates and the grant of preferences to United Kingdom goods.

(ii) *Dominion of Canada.* A reciprocal trade agreement between Canada and Australia which came into force on 1st October, 1925, was superseded by a new agreement operating from 3rd August, 1931. The basis of the new agreement was, generally, the mutual accord of British Preferential Tariff treatment. The exceptions to this general rule are listed in the schedules to the agreement.

Certain administrative provisions, including a special concession to Canada in respect of the inland freight charges to be included in the dutiable value of Canadian goods on importation into Australia, were incorporated in the agreement.

The Customs Tariff (Canadian Preference) 1931 and the Customs Tariff (Canadian Preference) 1934-1952 give effect to the agreement so far as Australia is concerned.

(iii) *Dominion of New Zealand.* A reciprocal trade agreement between New Zealand and Australia came into force on 1st December, 1933, superseding an earlier agreement of 1922. The basis of the new agreement was, generally, the mutual accord of British Preferential Tariff treatment. The exceptions to this general rule are listed in the schedules to the agreement.

The Customs Tariff (New Zealand Preference) 1933, giving effect to the agreement, repealed earlier Acts and provides that duties on all goods specified in the schedule to the Act shall be at the rates indicated therein, and that all goods other than those provided for in the schedule shall be subject to the rates in force under the British Preferential Tariff. An amendment to this Act in 1934 provides that, where the rate of duty upon any class of goods under the New Zealand British Preferential Tariff is less than that operating in Australia under the British Preferential rate, upon request by the New Zealand Government such goods may, after proclamation, be admitted at the lower rate. The rates of duty on goods re-exported from New Zealand (not being goods the produce or manufacture of New Zealand) and which are imported into Australia, and which if they had been imported into Australia direct from the country of origin would have been subject to the rates of duty under the British Preferential Tariff, shall be the rates of duty in force under that tariff.

The Act provides also that films produced in New Zealand by or for the Government of New Zealand for publicity purposes shall be admitted free of duty, also that cocoa beans the produce of Western Samoa shall not be subject to any higher duties than those paid on cocoa beans the produce of any British non-self-governing Colony or Protectorate or any Territory under British mandate. The provisions of the Act do not, however, apply to goods the produce of Cook Islands.

Goods the produce or manufacture of the Dominion of New Zealand are exempt from primage duty.

The conditions of preference in the Act provide that goods shall be deemed to be the produce or manufacture of New Zealand if they conform to the laws and regulations in force in Australia which apply to such goods when imported under the British Preferential Tariff (*vide* section 151A of the Customs Act 1901-1952), except that special conditions apply to goods not wholly produced or manufactured in New Zealand.

(iv) *Southern Rhodesia.* An agreement between Southern Rhodesia and Australia came into operation on 9th April, 1941.

Under the agreement the principal undertakings by the Commonwealth Government were—(a) to accord a preferential rate of ninepence per lb. lower than the British Preferential Tariff on unmanufactured tobacco from Southern Rhodesia; and (b) to admit raw asbestos and chrome at rates of duty not higher than those applicable to these products from other countries, and to admit them free of primage duty.

The Southern Rhodesian Government on its part agreed—(a) to admit free of duty a schedule of Australian goods comprising 33 items; (b) to accord specified preferential rebates ranging from 10 per cent. to 50 per cent. from the duties applicable to United Kingdom goods on a schedule of Australian goods comprising 19 items; (c) to accord British Preferential Tariff rates to a schedule of Australian goods comprising 14 items and (d) to accord similar tariff treatment to Australian wheat and wheat flour, in the event of permits being issued for importation from any other country at rates of duty lower than those accorded to Australia under the agreement.

The Trade Agreement (Southern Rhodesia) Act 1941 approved the agreement, which was given effect to, so far as Australia is concerned, by the Customs Tariff (Southern Rhodesian Preference) 1941.

(v) *Union of South Africa.* A trade agreement between Australia and the Union of South Africa came into force as from 1st July, 1935.

This agreement provides that the products of the Union of South Africa or of the mandated territory of South-West Africa entering Australia and the products of Australia entering the Union of South Africa or the mandated territory of South-West Africa shall be subject to customs duties not higher than those imposed by the importing country on like products from the most favoured foreign nation. A reciprocal tariff arrangement under which products of Mozambique are admitted duty free to the Union of South Africa is exempt from the agreement.

The Trade Agreement (South Africa) Act 1936 approves the terms of this agreement.

(vi) *Foreign Countries.* Trade agreements between the Commonwealth Government and the Governments of Belgium, Czechoslovakia and France were in operation prior to the outbreak of war in September, 1939, but were inoperative during the war, owing to the provisions of the Trading with the Enemy Act 1939-1940. These agreements are again in force.

The trade agreement concluded in 1938 between Australia and Switzerland continued in limited operation during the war period.

Between December, 1939 and April, 1944 the Commonwealth Government also entered into trade agreements with Brazil and Greece.

Summaries of the texts of these agreements appear in previous issues of the Official Year Book.

**6. The Charter for an International Trade Organization and the General Agreement on Tariffs and Trade.**—(i) *The Charter for an International Trade Organization.* Details of the passage of events leading up to the drafting of the Havana Charter for an International Trade Organization and of the scope of the Charter itself may be found in Official Year Book No. 38, p. 466.

In accordance with the decisions reached at the conclusion of the United Nations Conference on Trade and Employment in March, 1948, the Havana Charter was submitted to Governments of the countries represented at the Conference. Because of the predominant influence of the United States of America in world trade, most other countries waited for a decision from that country before determining their own attitudes to the Charter.

On 6th December, 1950, the United States Government announced that it did not propose to resubmit the Havana Charter to Congress for approval, but would ask Congress to consider legislation to make American participation in the General Agreement on Tariffs and Trade more effective. It now seems unlikely that the Charter will come into force in its present form.

(ii) *The General Agreement on Tariffs and Trade.* On 10th April, 1947 (about a month prior to the resumption of the Charter discussions) the member nations of the Preparatory Committee engaged in negotiations with the object of arriving at a satisfactory basis on which the reduction of tariff barriers could be effected.

The Tariff negotiations were kept quite distinct from the Charter discussions, as the aim was to bring the results into effect without necessarily awaiting the establishment of the International Trade Organization.

The results of the negotiations were incorporated in a draft General Agreement on Tariffs and Trade which was tabled in the House of Representatives on 18th November, 1947, together with the tariff schedules implementing the tariff reductions which Australia had undertaken to afford.

A Protocol of Provisional Application provided that, upon signature by Australia, Belgium, Canada, France, Luxembourg, the Netherlands, the United Kingdom and the United States of America not later than 15th November, 1947, those countries should undertake to apply provisionally on and after 1st January, 1948—

(1) Parts I. and III. of the Agreement,

(2) Part II. of the Agreement to the fullest extent not inconsistent with existing legislation in their respective countries.

These conditions were satisfied and the Agreement is provisionally in force. Tariff reductions undertaken by Australia operated from 19th November, 1947. The General Agreement is now being provisionally operated by Australia, Austria, Belgium, Brazil,



Burma, Canada, Ceylon, Chile, Cuba, Czechoslovakia, Denmark, Dominican Republic, Federal Republic of Germany, Finland, France, Greece, Haiti, India, Indonesia, Italy, Liberia, Luxembourg, Netherlands, New Zealand, Nicaragua, Norway, Pakistan, Peru, Southern Rhodesia, Sweden, Turkey, Union of South Africa, United Kingdom and the United States of America. China, Lebanon and Syria have withdrawn from the General Agreement.

The agreement does not come definitively into force until 30 days after instruments of acceptance have been lodged by countries accounting for 85 per cent. of the total external trade of the countries signatory to the Final Act. The percentage is to be calculated in accordance with a table set out in Annexe H to the Agreement. No country has yet definitively accepted the agreement, but as in the case of the Charter, Parliament has approved Australia lodging an instrument of acceptance when the United Kingdom and United States of America have done likewise.

Many of the articles of the General Agreement are identical with articles in the Charter and were only incorporated in the Agreement to prevent tariff concessions being circumvented by other measures pending the coming into force of the Charter. Had the Charter come into force, Part II. of the General Agreement which contains such articles would have been suspended.

The three component parts of the Agreement contain briefly—

Part I. Schedules of negotiated tariff reductions and an undertaking to extend most-favoured-nation treatment to other participating countries except where existing preferences are deemed valid.

Part II. Undertakings regarding commercial policy to prevent tariff concessions being offset by other protective measures.

Rights are preserved, however, to—

- (1) Impose new duties for protective purposes except in respect of commodities where rates of duty have been bound under the general agreement ;
- (2) impose import restrictions to protect the balance of payments ;
- (3) take emergency action where any industry is endangered by any negotiated tariff or preference reduction.

Part III. Main/ machinery provisions.

Under the tariff negotiations associated with the Agreement, concessions were offered to Australia on almost all the principal products of which Australia is an actual or potential exporter to the individual countries concerned. Generally the offers were made directly to Australia, but in some cases benefits will arise indirectly from concessions granted to third countries which are more important suppliers of the particular product. These latter benefits occur through the operation of the most-favoured-nation principle.

In April, 1949 a second series of tariff negotiations commenced at Annecy, in France, between the 23 Contracting Parties which were then operating the General Agreement on Tariffs and Trade and eleven additional countries which had expressed a desire to accede to the General Agreement. Nine of these countries—Denmark, Dominican Republic, Finland, Greece, Haiti, Italy, Liberia, Nicaragua and Sweden subsequently acceded to the Agreement.

In addition, Ceylon, which, for domestic reasons, had been unable to operate concessions it negotiated at Geneva in 1947, took the opportunity of re-negotiating with certain countries including Australia.

The tariff concessions exchanged by Australia at Annecy were put into effect from 12th May, 1950.

A third series of tariff negotiations was conducted at Torquay, England, from September, 1950 to April, 1951, and was attended by representatives of all contracting parties except Burma, Liberia, Nicaragua and Syria, and by representatives of seven new countries—Austria, Federal Republic of Germany, Korea, Peru, Philippines Republic, Turkey and Uruguay. Australia completed agreements with Austria, Denmark, Federal Republic of Germany, Philippines, Turkey and Sweden. These tariff concessions exchanged by Australia were put into force on 27th September, 1951.

Questions concerning the application of the Agreement arise from time to time. The Contracting Parties have held seven sessions to deal with such matters: the first at Havana in March, 1948; the second at Geneva in August, 1948; the third at Annecy during 1949; the fourth at Geneva in February–April, 1950; the fifth at Torquay in November–December, 1950; the sixth at Geneva in September–October, 1951; and the seventh at Geneva in September–October, 1952.

7. *Import Controls.*—(i) *Customs (Import Licensing) Regulations.* The Customs (Import Licensing) Regulations No. 163 were first promulgated in December, 1939, and were made pursuant to the Customs Act 1901–1936, Sections 52 (g) and 56. These regulations provide, *inter alia*, that the importation into the Commonwealth of any goods shall be prohibited, unless:—

- (a) a licence to import the goods is in force and the terms and conditions (if any) to which the licence is subject are complied with; or
- (b) the goods are excepted from the application of the regulations.

The regulations were at first applied only to imports from non-sterling sources with the object of conserving non-sterling exchange and enabling priority in shipping space to be given to essential imports. However, with a subsequent decline in Australia's sterling balances in London and changes in the general war situation the restrictions were extended to cover a wide range of imports from sterling countries in December, 1941. The position remained basically the same during the remainder of the war and in the immediate post-war period.

As Australia's external financial position improved, the restrictions were progressively relaxed until, by November, 1950, imports from most countries had been exempted from the application of the regulations and, with minor exceptions, the restrictions applied only to imports from the Dollar Area and Japan. This position obtained until March, 1952.

During the financial year 1951–52, following a fall in the price of wool and a large increase in the volume of imports (the product, in turn, of the wool boom of 1950–51), Australia incurred a substantial deficit in overall payments on current account. Oversea reserves fell rapidly in the latter part of 1951 and early 1952, endangering Australia's external financial position to such a degree that it became necessary on 8th March, 1952 to apply the Customs (Import Licensing) Regulations to imports from all sources, with the exception of goods originating in Papua, New Guinea and Norfolk Island. As from that date no goods (with minor exceptions) may be imported from any country, except Papua, New Guinea and Norfolk Island, unless the importer holds a licence issued under the Customs (Import Licensing) Regulations authorizing the importation of the particular goods.

In order to conserve resources of foreign exchange and to ensure that the requirements of essential industry are satisfied, imports from all sources other than the Dollar Area countries and Japan are licensed on the basis of their relative essentiality. The Dollar Area countries and Japan are regarded as hard currency countries by all members of the Sterling Area, including Australia. Imports from these sources are limited to goods of an essential nature, due consideration being given to the question of the availability of similar goods from sources other than these countries.

(ii) *Customs (Prohibited Imports) Regulations.* In addition to the Import Licensing Regulations which are imposed for balance of payments reasons, Section 52 of the Customs Act provides for the prohibition of the importation of specified types of commodities and also provides for the making of regulations prohibiting the importation of other types of commodities.

Prohibition by regulation may be exercised by—(a) prohibiting the importation of goods completely; (b) prohibiting the importation of goods except with the consent of the Minister; (c) prohibiting the importation of goods except subject to conditions. Lists of products subject to prohibition are set out in the Customs (Prohibited Imports) Regulations. Commodities the importation of which has been prohibited under the regulations include dangerous drugs, firearms, undesirable publications and articles deleterious to public health.

8. **Export Control.**—(i) *Commodity Control.* Section 112 of the Customs Act provides that the Governor-General may by regulation prohibit the exportation of goods from Australia and that this power may be exercised by—(a) prohibiting the exportation of goods absolutely; (b) prohibiting the exportation of goods to a specified place; and (c) prohibiting the exportation of goods unless prescribed conditions or restrictions are complied with. Goods subject to export control are listed in the Customs (Prohibited Exports) Regulations.

(ii) *Monetary Control—Banking Act 1945.* As an integral part of the framework of Exchange Control, a control over goods exported from Australia is maintained under the provisions of Part III. of the Banking (Foreign Exchange) Regulations to ensure that the full proceeds of such goods are received into the Australian banking system and that these proceeds are received in the currency and in the manner prescribed by the Commonwealth Bank of Australia. This action is complementary to that taken under other parts of the Banking (Foreign Exchange) Regulations to control the movement out of Australia of capital in the form of securities, gold and currency.

Provision is made in the regulations for the grant of export licences subject to such terms and conditions as are imposed. On the receipt in Australia by the Commonwealth Bank, or by a bank acting as agent for that Bank, of advice that the foreign currency has been paid to the Commonwealth Bank or to an agent of the Bank in payment for goods exported in accordance with a licence granted under the regulations, the Bank, or an agent of the Bank, pays the licensee, or such other person as is entitled to receive it, an amount in Australian currency equivalent to the foreign currency received. In addition to commercial transactions, exports by private individuals are controlled. Persons leaving Australia for overseas are required to obtain licences to cover their bona fide baggage, personal effects and household effects in any individual case where the gold content thereof exceeds £A50, or where jewellery and other articles of high intrinsic worth either exceed £A250 in value or have not been the personal property of the passenger for at least twelve months.

9. **Industries Preservation.**—The Customs Tariff (Industries Preservation) Act 1921–1936 provides that, after inquiry and report by the Tariff Board, special duties shall be collected in the following cases when the importation of the goods referred to might be detrimental to an Australian industry. In the case of goods sold for export to Australia at a price less than the fair market value for home consumption or at a price which is less than a reasonable price, a special dumping duty shall be collected equal to the difference between the price at which the goods were sold and the fair market value, or the difference between the price at which the goods were sold and a reasonable price. Similar provision is made for goods consigned to Australia for sale. With regard to goods exported to Australia at rates of freight less than the normal rate of freight the dumping freight duty shall be—on goods carried free—the amount payable as freight at the normal rate; and in the case of any other goods—an amount equal to the difference between the freight paid and the freight which would have been payable at the normal rate. Special duties are also imposed in the case of goods imported from countries whose currency is depreciated. Provision is also made for the protection of the trade of the United Kingdom in the Australian market from depreciated foreign currency.

The Act provides that the Minister for Trade and Customs, after inquiry and report by the Tariff Board, may publish a notice in the *Commonwealth Gazette* specifying the goods upon which the special rates of duty under this Act shall thereupon be charged and collected.

10. **Imperial Preference in the United Kingdom.**—(i) *Preferential Tariff of the United Kingdom.* Prior to 1919 the United Kingdom levied duties on a limited number of items for revenue purposes and did not extend preferential treatment to any of the Empire countries. The majority of imported goods entered the United Kingdom free of duty and, in fact, there was no scope for preferential treatment. In 1919, however, the range of revenue duties was extended and preferential rates of duty were established on some eighteen items. Of these, the preferential rate on twelve items was to be equivalent to five-sixths of the full rate, on four to two-thirds of the full rate and on another (wine) to 50–70 per cent. of the full rate. The items so affected of interest to Australia at that time were currants, dried and preserved fruit, sugar, molasses and wine.

The extension of preferential treatment was conditional on the goods being consigned from, and grown, produced or manufactured in, the British Empire. In the case of manufactured articles, preference applied only where a prescribed proportion of their value was the result of labour within the British Empire. The conditions have been embodied in all subsequent preference arrangements in substantially the same form.

During the period from 1919 to 1932 it became increasingly obvious that the United Kingdom, for economic reasons, was being forced to depart from the free trade principles which had conditioned trade during the years preceding the 1914-18 War. Every time a new duty was introduced, provision was made for further preferential treatment to Empire products, although, in a great many cases, the preferences were of little or no significance to Australia, because the new duties were on products which were neither grown nor manufactured in Australia. The *Safeguarding of Industries Act 1921* provided for the imposition of duties on imports of key industry goods from foreign countries with free entry or preferential rates on similar goods from Empire countries. The purpose of these duties was to provide protection to vital United Kingdom industries in order to encourage their growth without fear of foreign competition. Similarly the *Dyestuff Import Regulation* of the previous year allowed the unrestricted import of dyestuffs of Empire origin, whereas imports of foreign dyestuffs were subjected to licensing restrictions. In 1925 preferences were accorded or increased on sugar (for ten years), tobacco, dried fruit, wine and several other items. In succeeding years Key Industries Duties were imposed on a further range of industrial goods and in 1927 screening quotas for British films and in 1928 further sugar concessions were introduced.

By 1931, therefore, the United Kingdom imposed duties on a fairly wide range of goods, provision being made in all cases for preferential treatment to Empire goods. The important preferences for Australia which emerged from these enactments were those on sugar, dried fruits, wine and jams and jellies. Even at this time, however, the United Kingdom adhered to the principles of free trade and by far the greater part of imports was free of duty.

In order to counteract the flood of dumping which followed the collapse of world trade in 1929-30 the United Kingdom introduced emergency tariff legislation in 1931. Ad valorem duties were imposed on almost all goods imported into the United Kingdom with the exception of certain raw materials, goods from Empire countries being exempt from these duties. These temporary measures were embodied in the *Import Duties Act of March, 1932*, by the enactment of which the United Kingdom finally abandoned free trade as a policy. This Act provided for the free entry for Empire goods pending the conclusion of some permanent agreement. The *Ottawa Agreements Act of November, 1932* emerged from the Imperial Economic Conference held in Ottawa and embodied agreements concluded between the various Dominions which participated. For the purpose of considering the present preferences enjoyed by Australia in the United Kingdom, it is expedient to regard the *Import Duties Act* and the *Ottawa Agreements Act* as complementary.

The *Import Duties Act* provided for the imposition of a general ad valorem duty of 10 per cent. on all imports with certain exceptions (i.e., those on the Free List and those already dutiable under previous enactments). Additional duties could be imposed and items on the Free List subjected to duty, and in fact, the range of items subject to duties under this Act has been extended from time to time since its enactment.

The freedom of Empire goods from these duties was guaranteed under the *Ottawa Agreements Act*, which also provided for the imposition of new duties on imports from foreign, but not Empire, countries of a number of products of special interest to the Empire countries concerned. Whilst free entry was guaranteed to Empire producers on a wide range of products, the margins of preference thereby applicable were not bound, and the duties could be varied up or down by the United Kingdom Government without the consent of Empire countries. On a selected range of items, however, which are specified in the schedules to the *Ottawa Agreements Act*, the duties may not be varied by the United Kingdom without the consent of the other party to the respective agreement.

(ii) *The Australia-United Kingdom Trade Agreement.* This Agreement is a unit of the Ottawa Agreements and through it preferences in the United Kingdom were established on a number of export items of considerable importance to Australia. The preferences accorded are summarized as follows:—

- (a) Continued free entry was guaranteed for three years for Australian eggs, poultry, butter, cheese and other milk products. (This freedom of entry still continues). Similar foreign goods were subjected to duty, thus giving Australia a preference of 1s. to 1s. 9d. per great hundred eggs; 10 per cent. ad val. on poultry; 15s. per cwt. on butter; 15 per cent. ad val. on cheese; 5s. per cwt. on sweetened whole condensed milk; and 6s. per cwt. on unsweetened whole condensed milk and milk powder and other unsweetened preserved milk.
- (b) Preferences were created on the following products by imposing a duty on like foreign articles whilst guaranteeing free entry to Australian produce: wheat (2s. per quarter); apples and pears (4s. 6d. per cwt.); canned apples (3s. 6d. per cwt.); other canned fruits (15 per cent. ad val.); certain dried fruits, raisins, etc. (10s. 6d. per cwt.); honey (7s. per cwt.); oranges (3s. 6d. per cwt. in season); raw grapefruit (5s. per cwt. in season); and grapes (1½d. per lb. in season).
- (c) The preferential margins on the commodities mentioned in (a) and (b) above were not to be reduced without the consent of the Australian Government and this provision also applied to the 10 per cent. preference on leather, tallow, canned meats, barley, wheat flour, macaroni, dried peas, casein, eucalyptus oil, meat extracts and essences, copra, sugar of milk, sausage casings, wattle bark, asbestos and certain dried fruits.
- (d) The Agreement also provided for a preference of 2d. per lb. on unwrought copper, but this was never implemented as Empire producers could not demonstrate their ability to continue offering their copper on first sale to the United Kingdom at prices not exceeding the world price, which was a condition of the preference. A similar condition applied to wheat, zinc and lead. In the case of zinc and lead the duty was changed at an early stage in the life of the Agreement from an ad valorem rate of 10 per cent. to a specific rate.
- (e) Australia, although not securing in the Agreement with the United Kingdom a commitment on the amount and duration of the preference margin applying to a number of commodities of some importance to Australia (e.g., rice), had its interests safeguarded by the fact that such items were usually covered by the United Kingdom's agreement with another Empire country. Such benefits were generalized to Australia.
- (f) The United Kingdom agreed to regulate meat imports and stated that its policy was to give the Dominions an expanding share of United Kingdom meat imports.
- (g) Preferential tariff advantages were also obtained in the British non-self-governing colonies and protectorates.

The preferences operating before, and not increased by, the Ottawa Agreement were continued. Thus the preferential margins on heavy wines, sugar, the sugar content of goods containing added sweetening matter, currants, etc., remained in operation.

(iii) *Developments since the Ottawa Agreement.* The Australia-United Kingdom Agreement operated with virtually no alteration until the beginning of 1939. Since then three major factors have been responsible for altering its terms or significance:—

- (a) *The United Kingdom-United States of America Trade Agreement, 1938.* This Agreement became effective from 1st January, 1939, and, to enable the United Kingdom to secure concessions from the United States of America, Australia agreed to the following reductions in the preferences which her products were enjoying in the United Kingdom:—

Wheat (preference eliminated); apples and pears (1s. 6d. per cwt. in Northern Hemisphere season); honey (2s. per cwt.); canned apples (1s. 3d. per cwt.); canned grapefruit (preference eliminated). The ad valorem duty of 15 per cent. was replaced by specific duties of 5s. 6d. per cwt. on canned fruit salad, 5s. per cwt. on canned pineapples and 4s. per cwt. on canned loganberries.

- (b) *Long-term Contracts with United Kingdom.* During and since the war Australia has made contracts under which the United Kingdom is obligated to purchase the whole or a substantial part of the exportable surplus of several important Australian products normally entitled to preferential treatment. Meat, sugar, dried fruits, apples and pears, butter, cheese and eggs are notable examples. The tariff preference is not significant whilst these contracts are operative and is further depreciated in importance since Australia would experience no difficulty in selling primary products in a wide range of markets if supplies were available.
- (c) *The General Agreement on Tariffs and Trade.* Australia has participated in the three rounds of tariff negotiations under this agreement held at Geneva, 1947, Annecy, 1949, and Torquay, 1950-51. In order to reach agreements with the various countries participating in these tariff negotiations, Australia consented to a number of reductions in preference margins guaranteed to her under the Ottawa Agreements, in return for more favourable tariff treatment in some twenty-seven countries with which agreements have been made. The reductions are summarized below :—

Apples (margin eliminated during Northern Hemisphere season); raisins (2s. per cwt.); canned peaches, pears and apricots (3 per cent. ad val.); non-tropical canned fruit salad (margin eliminated); dried apricots (2s. 6d. per cwt.); dried prunes, apples, peaches and nectarines (margin eliminated); honey (nil to 1s. 6d. per cwt. according to value for duty.) The preference margin was also modified on a number of items in which Australia was interested but on which her consent to reduction was not required under the Ottawa Agreement. Examples are fruit pulp, pig iron, rice, hard soap, glue, gelatine and size. The preference on heavy wine was increased from 4s. per gallon to 10s. per gallon.

11. **Tariff Board.**—The Tariff Board Act 1921-1947 provides for the appointment of a Tariff Board consisting of four members, one of whom shall be an administrative officer of the Department of Trade and Customs. This member may be appointed Chairman of the Board. Members of the Board are appointed for a term of not less than one year nor more than three years, and two members may be appointed as a Committee for making special inquiries. The purpose of the Tariff Board is to assist the Minister in the administration of matters relating to trade and customs. The more important matters which the Minister shall refer to the Board for inquiry and report include disputes arising out of the interpretation of any Customs or Excise Tariff; the necessity for new, increased or reduced duties; the necessity for granting bonuses; any proposal for the application of the British Preferential Tariff to any part of the British Dominions or any foreign country; and any complaint that a manufacturer is taking undue advantage of the protection afforded him by the Tariff by charging unnecessarily high prices for his goods or acting in restraint of trade. The Minister may refer to the Board for inquiry and report the following matters :—the classification of goods under items of the Tariff that provide for admission under By-laws; the determination of the value of goods for duty; the general effect of the working of the Customs Tariff and the Excise Tariff; the fiscal and industrial effects of the Customs laws of the Commonwealth; the incidence between the rates of duty on raw materials and on finished or partly finished products; and any other matter affecting the encouragement of primary and secondary industries in relation to the Tariff.

Inquiries conducted by the Board relating to any revision of the Tariff, any proposal for a bounty, or any complaint that a manufacturer is taking undue advantage of the protection afforded him by the Tariff shall be held in public, and evidence in such inquiries shall be taken in public on oath, unless any witness objects to giving any evidence in public which the Board is satisfied is of a confidential nature, when the Board may take such evidence in private. Evidence taken by the Board in connexion with any inquiry under the Customs Tariff (Industries Preservation) Act 1921-1936 shall be taken in public on oath.

12. **Trade Descriptions.**—The Commerce (Trade Descriptions) Act 1905 as amended by the Acts of 1926, 1930 and 1933 gives power to compel the placing of a proper

description on certain prescribed goods, or on packages containing the same, being imports or exports of the Commonwealth. The goods to which a trade description must be applied are :—(a) Articles used for food or drink by man, or used in the manufacture or preparation of articles used for food or drink by man ; (b) medicines or medicinal preparations for internal or external use ; (c) manures ; (d) apparel (including boots and shoes) and the materials from which apparel is manufactured ; (e) jewellery ; (f) seeds and plants ; and (g) brushware.

### § 3. Trade Commissioner Service.

Empire and foreign countries have deemed it necessary in their trade interests to establish generous oversea representation and have for many years maintained extensive oversea trade services.

Prior to 1929, Australian representation abroad was limited to the High Commissioner's Office in London, with a subsidiary agent in Paris, and the Office of the Commissioner-General for Australia in New York. Apart from the facilities afforded by those offices, the only form of oversea trade representation available to Australia was that of the British Oversea Trade Service, a service whose activities are naturally more particularly devoted to the development of United Kingdom rather than Dominion trade.

The growing importance of Australia's trade with Canada led to the appointment in 1929 of an Australian Trade Commissioner in that country. The part played by that official in the subsequent negotiations of the Trade Agreement with Canada, in the cultivation of close and cordial relations with the Canadian authorities, and in general in focussing interest on Australia and Australian products, amply demonstrated the value of such appointments both to the Commonwealth Government and the Australian trading community.

The general advantages to be derived from the appointment of Trade Commissioners may be briefly stated as follows :—(a) fostering of goodwill, (b) correction and avoidance of misunderstandings, and (c) dissemination of knowledge concerning the respective countries. Particular facilities which they are able to afford to the trading community are (a) information as to present and prospective demand for goods, (b) information as to foreign and local competition, (c) advice as to best selling methods, (d) reports as to the standing of foreign buyers, (e) specification of articles in demand, (f) dealing with trade inquiries, (g) advice and assistance to commercial visitors regarding trade matters, (h) settlement of difficulties between exporters in Australia and buyers abroad, and (i) furnishing of information as to foreign import requirements, customs duties, trade regulations, etc.

In addition to the foregoing particular trading functions, it is the duty of a Trade Commissioner to watch and advise the Government regarding any developments in his Territory affecting not only trade and commerce, but any other matters of concern to his home Government.

Trade Commissioners are drawn either from the commercial world or from the ranks of the Public Service, as circumstances dictate. With each Trade Commissioner, however, it is customary to provide an Assistant Trade Commissioner, who is selected to undergo training in the service and qualify at a later stage for appointment as a Trade Commissioner. The staffing arrangements are in this way designed to enable the Government to avail itself of the best procurable executives of either the Public Service or the commercial world and at the same time to build up a first class personnel to carry out a vigorous policy of expansion in connexion with Australia's oversea trade.

The oversea trade representation is shown in Chapter XXIIX.—Miscellaneous.

### § 4. Method of Recording Imports and Exports.

1. **Source of Statistics.**—Oversea trade statistics are compiled from documents obtained under the Customs Act and supplied to this Bureau by the Department of Trade and Customs.

2. **Customs Area.**—The Customs Area, to which all oversea trade statistics issued by this Bureau apply, is the whole area of the Commonwealth of Australia, comprising the States of New South Wales (including the Australian Capital Territory), Victoria, Queensland, South Australia, Western Australia and Tasmania, and the Northern Territory.

Non-contiguous territories and mandated areas are treated as outside countries, and trade transactions between Australia and these non-contiguous territories are part of the oversea trade of Australia. Such transactions are shown separately, i.e., the trade of Australia with each particular country is separately recorded and tabulated.

3. **The Trade System.**—There are two generally accepted systems of recording oversea trade statistics, namely, (a) special trade and (b) general trade, and statistics of both are published by the Bureau, although greater emphasis is placed on general trade. Special exports can be readily identified in the general export tabulations, while special imports are obtained from separate tabulations. The United Nations Statistical Office defines the two systems as follows:—

(a) *Special Trade.* Special imports are the combined total of imports directly for domestic consumption and withdrawals from bonded warehouses or free zones for domestic consumption, transformation or repair. Special exports comprise exports of national merchandise, namely goods wholly or partly produced or manufactured in the country, together with exports of nationalized goods. (Nationalized goods are goods which, having been included in special imports, are then exported).

(b) *General Trade.* General imports are the combined total of imports directly for domestic consumption and imports into bonded warehouse or free zone. Direct transit trade and trans-shipment under bond are excluded. General exports are the combined total of national exports and re-exports of imported merchandise including withdrawals from bonded warehouse or free zone for re-export.

Except for those appearing in § 14, para. 2, the tables which follow refer to general trade.

4. **Statistical Classification of Imports and Exports.**—Statistics of oversea imports and exports from which the summary tables in this issue of the Official Year Book have been extracted were compiled according to the revised classification which came into operation on 1st July, 1945. This classification is designed to allow for the inclusion of items which become significant with varying trade conditions, and in 1951–52 provided for 2,858 separate import items and 1,495 export items.

5. **The Trade Year.**—From 1st July, 1914 the statistics relating to Oversea Trade have been shown according to the financial year (July to June). Prior to that date the figures related to the calendar year. A table is included in § 15 showing the total value of imports and exports in the calendar years 1939 and 1948 to 1952 inclusive.

6. **Valuation.**—(i) *Imports.* The recorded value of goods imported from countries beyond Australia as shown in the following tables represents the amount on which duty is payable or would be payable if the duty were charged ad valorem. By Act No. 54 of 1947, which operated from 15th November, 1947, the Customs Act was amended to provide that the value for duty of goods imported into Australia should be the f.o.b. value in Australian currency instead of the British currency f.o.b. value plus 10 per cent.

Section 154 (1) of the Customs Act 1901–1947 provides that “when any duty is imposed according to value, the value for duty shall be the sum of the following:—

- (a) (i) the actual money price paid or to be paid for the goods by the Australian importer plus any special deduction, or
- (ii) the current domestic value of the goods, whichever is the higher;
- (b) all charges payable or ordinarily payable for placing the goods free on board at the port of export.”

“Current domestic value” is defined as “the amount for which the seller of the goods to the purchaser in Australia is selling or would be prepared to sell for cash, at the date of exportation of these goods, the same quantity of identically similar goods to any and every purchaser in the country of export for consumption in that country.” All import values shown throughout this and other chapters of this issue of the Official Year Book are therefore uniform f.o.b. values at port of shipment in Australian currency.

(ii) *Exports.* Since 1st July, 1937, the following revised definitions of f.o.b. values have been adopted for exports generally:—

- (1) Goods sold to oversea buyers before export— the f.o.b. port of shipment equivalent of the price at which the goods were sold (e.g. as regards wool, the actual price paid by the oversea buyer plus the cost of all services incurred by him in placing the wool on board ship).



- (2) Goods shipped on consignment—the Australian f.o.b. port of shipment equivalent of the current price offering for similar goods of Australian origin in the principle markets of the country to which the goods were despatched for sale (as regards wool, the f.o.b. port of shipment equivalent of current price ruling in Australia will normally provide a sufficient approximation to the f.o.b. port of shipment equivalent of the price ultimately received).

Exporters are required to show all values in terms of Australian currency, and to include cost of containers.

An account of the bases of valuation in operation prior to 1st July, 1937 was given on page 469 of Official Year Book No. 39.

**7. Inclusions and Exclusions.**—(i) *Ships' Stores.* Prior to 1906, goods shipped in Australian ports on oversea vessels as ships' stores were included as exports. From 1906, ships' stores have been specially recorded as such, and omitted from the tabulation of exports. A table showing the value of these stores (including bunker coal and oil) shipped each year since 1943-44, compared with 1938-39, is shown in § 10, page 207.

(ii) *Outside Packages.* Outside packages (containers, crates, etc.) have always been included as a separate item in the tabulation of imports, but apart from those received from United Kingdom a classification according to country of origin has been available only since 1950-51. For exports, however, the value recorded for each item includes the value of the outside package.

(iii) *Trade on Government Account.* Imports and exports on Government account are treated as normal transactions and are an integral part of oversea trade transactions.

(iv) *Currency and Coinage.* Currency notes and coins of base metal are included in the oversea trade statistics at their commodity value only.

(v) *Gold Content of Ores and Concentrates.* The value of ores and concentrates imported and exported includes the value of the gold content. The latter is not recorded separately for purposes of inclusion in imports and exports of gold.

(vi) *Personal Effects.* Migrants' effects are included in imports and exports.

**8. Countries to which Trade is Credited.**—From 1st January, 1905, in addition to the record of the countries whence goods directly arrived in Australia, a record of the countries of their origin was kept, as it was considered that classification of imports according to country of origin was of greater interest and value than classification according to country of shipment. Up to and including the year 1920-21, imports continued to be classified both according to country of shipment and according to country of origin, but the former tabulation was discontinued as from the year 1921-22.

**9. Pre-Federation Records.**—In the years preceding Federation, each State independently recorded its trade, and in so doing did not distinguish other Australian States from foreign countries. As the aggregation of the records of the several States is necessarily the only available means of ascertaining the trade of Australia for comparison with later years, it is unfortunate that past records of values and the direction of imports and exports were not on uniform lines. The figures in the following tables for years prior to Federation have been carefully compiled and may be taken as representative of the oversea trade of Australia as a whole. On the introduction of the Customs Act 1901 the methods of recording values were made uniform throughout the States.

## § 5. Total Oversea Trade.

**1. Including Gold.**—The following table shows the total trade (including gold) of Australia with oversea countries from the earliest date for which records are available. To save space, the period 1826 to 1945-46 has been divided into five-yearly periods, and the figures shown represent the annual averages for the periods specified. Figures for individual years were published in earlier issues of the Official Year Book, but it should be borne in mind that the figures for imports in issues prior to No. 38 are in British currency. (See note to following table.)

In this chapter the values in all tables of imports and exports are shown in Australian currency f.o.b. at port of shipment.

**TOTAL OVERSEA TRADE : AUSTRALIA.**  
(INCLUDING GOLD.)

Period.(a)	Value (£'000.)			Excess of Exports (+) or Imports (-)	Ratio of Exports to Imports	Value per Head of Population.		
	Imports.	Exports.	Total.			Imports.	Exports.	Total.
				£'000.	%	£	£	£
1826 to 30..	580	153	733	-427	26.4	9.7	2.5	12.2
1831 ,, 35..	1,040	613	1,653	-427	58.9	10.9	6.4	17.3
1836 ,, 40..	2,075	1,112	3,187	-903	53.6	13.4	7.2	20.6
1841 ,, 45..	1,723	1,378	3,111	-355	79.5	6.9	5.5	12.4
1846 ,, 50..	2,163	2,264	4,427	+101	104.7	6.3	6.6	12.9
1851 ,, 55..	10,846	11,414	22,260	+568	105.2	17.8	18.8	36.6
1856 ,, 60..	17,105	16,019	33,124	-1,086	93.7	16.6	15.6	32.2
1861 ,, 65..	18,302	18,699	37,001	+ 397	102.2	14.4	14.7	29.1
1866 ,, 70..	16,992	19,417	36,409	+2,425	114.3	11.0	12.6	23.6
1871 ,, 75..	19,984	24,247	44,231	+4,263	121.3	11.1	13.5	24.6
1876 ,, 80..	22,384	23,772	46,156	+1,388	106.2	10.7	11.3	22.0
1881 ,, 85..	31,723	28,955	59,778	-3,668	88.4	12.7	11.2	23.9
1886 ,, 90..	31,523	26,579	58,102	-4,944	84.3	10.6	8.9	19.5
1891 ,, 95..	24,850	33,683	58,533	+8,833	135.5	7.4	10.0	17.4
1896 ,, 1900	30,694	41,994	71,788	+10,400	133.9	8.4	11.2	19.6
1901 ,, 05..	35,689	51,237	86,926	+15,548	143.6	9.1	13.1	22.2
1906 ,, 10..	46,825	(b)69,336	116,161	+22,511	148.1	11.0	16.3	27.3
1911 ,, 15-16	66,737	74,504	141,241	+ 7,767	111.6	13.8	15.4	29.2
1916-17 to 1920-21..	91,577	115,066	206,643	+23,489	125.6	17.4	21.9	39.3
1921-22 to 1925-26..	124,404	134,545	258,949	+10,141	108.2	21.1	22.9	44.0
1926-27 to 1930-31..	119,337	131,382	250,719	+12,045	110.1	18.6	20.5	39.1
1931-32 to 1935-36..	73,798	120,958	194,756	+47,160	163.9	11.1	18.1	29.2
1936-37 to 1940-41..	123,553	157,610	281,163	+34,057	127.6	17.8	22.7	40.5
1941-42 to 1945-46..	211,514	163,955	375,469	-47,559	77.5	29.1	22.4	51.5
1946-47 ..	209,485	309,029	518,514	+99,544	147.5	27.9	41.1	69.0
1947-48 ..	339,746	409,954	749,700	+70,208	120.7	44.5	53.6	98.1
1948-49 ..	415,194	542,673	957,867	+127,479	130.7	53.2	69.6	122.8
1949-50 ..	538,069	613,697	1,151,766	+ 75,628	114.1	66.8	76.3	143.1
1950-51 ..	743,871	981,796	1,725,667	+237,925	132.0	89.5	118.1	207.6
1951-52 ..	1,053,423	675,008	1,728,431	-378,415	64.1	123.4	79.0	202.4

(a) The figures shown for the years 1826 to 1945-46 represent the annual averages for the periods covered. The trade of the individual years will be found in Official Year Book No. 37 and earlier issues, but it should be noted that imports are shown in British currency. From 1914-15 onwards the particulars relate to financial years. (b) Prior to 1906, ships' stores were included in exports. For value of such goods shipped on overseas vessels during each of the years 1938-39 and 1943-44 to 1951-52 see later table, § 10.

In issues of the Official Year Book prior to No. 23 fluctuations in the value of the overseas trade of Australia for earlier years were treated in some detail. The enhanced prices ruling for commodities and the peculiar conditions affecting Australian trade were responsible for the high value of imports in the years following the 1914-18 War and these factors should be taken into consideration in making comparisons with earlier years.

In 1924-25 the total value of overseas trade exceeded £300 million for the first time. Of the total value of trade, amounting to £318,454,000, imports represented £157,143,000 and exports £161,311,000. Imports in 1924-25, however, included an exceptionally large quantity of bullion and specie valued at £10,543,000. In the three years ended 1928-29 imports fell while exports were well maintained, but in 1929-30 both imports and exports declined substantially. The full effects of the economic depression are reflected in the greatly diminished trade figures for the period 1931-32 to 1935-36 and some years thereafter. The lowest level was recorded in 1931-32 when the total trade amounted to £137,538,000.

The outbreak of war in the Pacific in 1941 resulted in a substantial increase in the value of imports during the years 1941-42 to 1945-46. Since the end of the war the annual values of imports and exports have increased considerably, largely because of higher prices.

2. **Excluding Gold.**—The fluctuations in merchandise trade (including silver as merchandise) are shown more clearly in the following table, from which *all* gold movements have been excluded:—

**TOTAL OVERSEA TRADE : AUSTRALIA.**  
(EXCLUDING GOLD.)

Year.	Imports Excluding Gold.		Exports Excluding Gold.		Total Trade Excluding Gold.		Ratio of Exports to Imports.		Value per Head of Population.		
	£'000.	£'000.	£'000.	£'000.	%	%	Imports.	Exports.	Total Trade.	£	£
1938-39 ..	113,298	122,543	235,841	108.2	10.3	17.7	34.0				
1946-47 ..	208,362	309,027	517,389	148.3	27.7	41.1	68.8				
1947-48 ..	338,103	406,123	744,226	120.1	44.3	53.1	97.4				
1948-49 ..	414,086	542,668	956,754	131.1	53.1	69.6	122.7				
1949-50 ..	536,146	613,695	1,149,841	114.5	66.6	76.2	142.8				
1950-51 ..	741,412	981,796	1,723,208	132.4	89.2	118.1	207.3				
1951-52 ..	1,050,164	668,019	1,718,183	63.6	123.0	78.2	201.2				

**§ 6. Direction of Oversea Trade.**

1. **Imports according to Country of Origin.**—(i) *Values.* The following table shows the value of the imports into Australia, during the years 1947-48 to 1951-52 compared with the year 1938-39, of commodities stated to be the produce or manufacture of the undermentioned countries.

**AUSTRALIAN IMPORTS : COUNTRIES OF ORIGIN.**  
(EXCLUDING GOLD.)  
(£'000.)

Country of Origin.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
<b>British Countries—</b>						
United Kingdom ..	46,079	132,238	209,313	278,748	356,881	465,705
<b>Australian Territories—</b>						
Nauru ..	741	359	1,033	1,264	1,175	1,062
New Guinea ..	189	885	1,384	1,635	1,794	2,681
Papua ..	237	174	228	305	953	1,278
Canada ..	8,806	15,341	11,952	13,276	16,957	23,559
Ceylon ..	957	8,133	7,512	8,937	11,317	11,173
India ..	3,272	26,698	25,862	27,664	35,424	47,825
Malaya, Federation of ..	1,029	3,863	4,028	4,926	20,647	18,632
New Zealand ..	1,618	3,436	3,649	3,728	3,106	6,559
Union of South Africa ..	278	3,232	2,714	3,640	5,320	4,418
Other British Countries ..	1,984	11,766	18,605	23,448	37,294	36,863
<b>Total, British Countries</b>	<b>65,190</b>	<b>206,125</b>	<b>286,280</b>	<b>367,571</b>	<b>490,868</b>	<b>619,755</b>
<b>Foreign Countries—</b>						
Belgium ..	1,120	5,220	3,557	3,589	11,350	27,528
China ..	526	1,667	2,542	1,451	2,657	3,082
France ..	1,172	3,118	3,998	10,645	16,414	22,390
Germany ..	4,710	639	1,849	6,584	14,726	33,240
Indonesia, Republic of ..	8,117	4,419	11,097	14,750	21,788	25,530
Italy ..	781	2,710	3,797	9,058	16,655	27,712
Japan ..	4,666	1,433	1,711	6,999	15,595	43,582
Netherlands ..	799	2,595	3,874	3,203	8,231	14,975
Norway ..	432	3,174	4,367	3,100	4,962	11,650
Philippines Republic ..	138	48	14	69	52	101
Sweden ..	1,079	4,905	9,225	7,755	16,298	27,537
Switzerland ..	1,072	1,951	2,418	2,758	5,077	7,000
United States of America ..	16,696	66,826	41,527	52,248	60,878	109,141
Other Foreign Countries ..	4,166	25,673	28,630	35,270	55,523	76,644
<b>Total, Foreign Countries</b>	<b>45,474</b>	<b>124,378</b>	<b>118,606</b>	<b>157,479</b>	<b>250,206</b>	<b>430,112</b>
<b>Origin not Disclosed</b>	<b>..</b>	<b>1,000</b>	<b>1,175</b>	<b>226</b>	<b>338</b>	<b>297</b>
<b>Outside Packages ..</b>	<b>2,634</b>	<b>6,600</b>	<b>8,025</b>	<b>10,871</b>	<b>(a)</b>	<b>(a)</b>
<b>Total ..</b>	<b>113,298</b>	<b>338,103</b>	<b>414,086</b>	<b>536,147</b>	<b>741,412</b>	<b>1,050,164</b>

(a) Outside packages distributed according to country of origin.

(ii) *Percentages.* In view of the fluctuations in the total values of imports, it is somewhat difficult to ascertain from the preceding table the relative importance of the various countries in the import trade of Australia. A better idea of the proportions of imports supplied by the various countries may be obtained from the following table of percentages.

**AUSTRALIAN IMPORTS : PROPORTIONS FROM COUNTRIES OF ORIGIN.**

(EXCLUDING GOLD.)

(Per Cent. of Total.)

Country of Origin.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
<b>British Countries—</b>						
United Kingdom .. .. .	40.67	39.11	50.55	51.99	48.13	44.35
<b>Australian Territories—</b>						
Nauru .. .. .	0.65	0.11	0.25	0.24	0.16	0.10
New Guinea .. .. .	0.17	0.26	0.33	0.30	0.24	0.26
Papua .. .. .	0.21	0.05	0.06	0.06	0.13	0.12
Canada .. .. .	7.77	4.54	2.89	2.48	2.29	2.24
Ceylon .. .. .	0.84	2.40	1.81	1.67	1.53	1.06
India .. .. .	2.89	7.90	6.25	5.16	4.78	4.55
Malaya, Federation of .. .. .	0.91	1.14	0.97	0.92	2.78	1.78
New Zealand .. .. .	1.43	1.02	0.88	0.69	0.42	0.62
Union of South Africa .. .. .	0.25	0.96	0.66	0.68	0.72	0.42
Other British Countries .. .. .	1.75	3.48	4.49	4.37	5.03	3.51
<b>Total, British Countries</b>	<b>57.54</b>	<b>60.97</b>	<b>69.14</b>	<b>68.56</b>	<b>66.21</b>	<b>59.01</b>
<b>Foreign Countries—</b>						
Belgium .. .. .	0.99	1.54	0.86	0.67	1.53	2.62
China .. .. .	0.46	0.49	0.61	0.27	0.36	0.29
France .. .. .	1.03	0.92	0.97	1.99	2.21	2.13
Germany .. .. .	4.16	0.19	0.45	1.23	1.99	3.17
Indonesia, Republic of .. .. .	7.16	1.31	2.68	2.75	2.93	2.43
Italy .. .. .	0.69	0.80	0.92	1.69	2.25	2.64
Japan .. .. .	4.12	0.42	0.41	1.30	2.10	4.15
Netherlands .. .. .	0.71	0.77	0.94	0.60	1.11	1.43
Norway .. .. .	0.38	0.94	1.05	0.58	0.67	1.11
Philippines Republic .. .. .	0.12	0.02	..	0.01	0.01	0.01
Sweden .. .. .	0.95	1.45	2.23	1.45	2.20	2.62
Switzerland .. .. .	0.95	0.58	0.58	0.51	0.68	0.67
United States of America .. .. .	14.74	19.77	10.03	9.74	8.21	10.39
Other Foreign Countries .. .. .	3.68	7.59	6.91	6.58	7.49	7.30
<b>Total, Foreign Countries</b>	<b>40.14</b>	<b>36.79</b>	<b>28.64</b>	<b>29.37</b>	<b>33.74</b>	<b>40.96</b>
<b>Origin not Disclosed</b> .. .. .	<b>..</b>	<b>0.29</b>	<b>0.28</b>	<b>0.04</b>	<b>0.05</b>	<b>0.03</b>
<b>Outside Packages</b> .. .. .	<b>2.32</b>	<b>1.95</b>	<b>1.94</b>	<b>2.03</b>	<b>(a)</b>	<b>(a)</b>
<b>Total</b> .. .. .	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

(a) Outside packages distributed according to country of origin.

Imports from the United Kingdom were 44.35 per cent. of the total value of imports during 1951-52, compared with 40.67 per cent. during 1938-39. Imports from the United States of America have diminished during recent years to 8.21 per cent. in 1950-51, compared with 14.74 per cent. during the year 1938-39. However, a rise to 10.39 per cent. occurred in 1951-52.

2. **Exports according to Destination.**—(i) *Values.* The following table shows the value of commodity exports to the principal countries during the years 1938-39 and 1947-48 to 1951-52.

**EXPORTS FROM AUSTRALIA TO VARIOUS COUNTRIES.**

(EXCLUDING GOLD.)

(£'000.)

Country of Destination.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
<b>British Countries—</b>						
United Kingdom .. .. .	66,725	152,104	229,794	237,525	320,605	208,072
Canada .. .. .	1,994	5,009	8,647	9,048	17,212	9,177
Ceylon .. .. .	1,327	10,213	8,801	6,070	8,950	10,630
Fiji .. .. .	623	2,060	2,202	2,419	2,628	3,156
Hong Kong .. .. .	475	6,365	3,875	6,848	5,968	3,800
India .. .. .	1,965	26,689	25,986	37,934	21,981	16,911
Malaya, Federation of .. .. .	1,911	7,785	6,101	5,566	8,214	8,532
New Zealand .. .. .	6,682	15,258	17,343	21,286	20,265	37,321
Papua .. .. .	299	1,619	1,962	2,484	2,749	3,754
Union of South Africa .. .. .	813	2,772	5,103	2,832	4,178	3,528
Other British Possessions .. .. .	2,364	29,116	26,715	24,806	33,592	38,379
<b>Total, British Countries</b>	<b>85,178</b>	<b>258,990</b>	<b>336,529</b>	<b>355,918</b>	<b>446,342</b>	<b>343,260</b>
<b>Foreign Countries—</b>						
Belgium .. .. .	5,547	19,261	19,935	27,492	48,245	24,940
Chile and Peru .. .. .	3	6	81	1,465	3,072	226
China .. .. .	3,023	2,757	1,438	502	850	283
Czechoslovakia .. .. .	378	858	698	3,085	3,716	1,280
Egypt .. .. .	601	5,852	9,531	9,696	22,306	8,976
France .. .. .	9,379	36,483	46,668	40,661	89,820	53,609
Germany .. .. .	2,652	4,021	4,141	16,578	27,738	20,389
Indonesia, Republic of .. .. .	1,373	132	1,285	507	3,243	3,967
Italy .. .. .	1,211	11,860	29,054	19,406	49,010	37,998
Japan .. .. .	4,866	2,506	7,389	23,974	61,550	48,514
Netherlands .. .. .	1,039	3,373	4,532	9,878	11,240	11,353
Norway .. .. .	25	1,024	328	1,375	1,507	200
Poland .. .. .	426	1,207	7,706	13,169	14,785	5,008
Sweden .. .. .	637	3,037	4,545	5,044	12,426	6,086
United States of America .. .. .	3,614	35,074	32,289	49,644	148,830	77,215
U.S.S.R. (Russia) .. .. .	278	2,858	12,360	11,187	8,396	..
Other Foreign Countries .. .. .	2,313	16,824	24,219	24,114	28,720	24,715
<b>Total, Foreign Countries</b>	<b>37,365</b>	<b>147,133</b>	<b>206,139</b>	<b>257,777</b>	<b>535,454</b>	<b>324,759</b>
<b>Total</b> .. .. .	<b>122,543</b>	<b>406,123</b>	<b>542,668</b>	<b>613,695</b>	<b>981,796</b>	<b>668,019</b>

(ii) *Percentages.* The relative importance of various countries as markets for Australian produce is shown by the following table of percentages. Exports to the United Kingdom were 31.15 per cent. and to all British countries 51.38 per cent. of the total in 1951-52, compared with 54.45 per cent. and 69.51 per cent. respectively during 1938-39.

Foreign countries absorbed 48.62 per cent. of the total exports during 1951-52 compared with 30.49 per cent. during the year 1938-39.

### EXPORTS FROM AUSTRALIA : PROPORTIONS TO VARIOUS COUNTRIES.

(EXCLUDING GOLD.)

(Per Cent. of Total.)

Country of Destination.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
<b>British Countries—</b>						
United Kingdom ..	54.45	37.45	42.35	38.70	32.65	31.15
Canada ..	1.63	1.23	1.59	1.47	1.75	1.37
Ceylon ..	1.08	2.51	1.62	0.99	0.91	1.59
Fiji ..	0.51	0.51	0.41	0.40	0.27	0.47
Hong Kong ..	0.39	1.57	0.71	1.12	0.61	0.57
India ..	1.60	6.57	4.79	6.03	2.24	2.53
Malaya, Federation of ..	1.56	1.92	1.12	0.91	0.84	1.28
Mauritius ..	0.09	0.55	0.20	0.27	0.72	0.22
New Zealand ..	5.45	3.76	3.20	3.47	2.06	5.58
Papua ..	0.25	0.40	0.36	0.40	0.28	0.56
Union of South Africa ..	0.66	0.68	0.94	0.46	0.43	0.53
Other British Possessions ..	1.84	6.62	4.72	3.78	2.70	5.53
<b>Total, British Countries</b>	<b>69.51</b>	<b>63.77</b>	<b>62.01</b>	<b>58.00</b>	<b>45.46</b>	<b>51.38</b>
<b>Foreign Countries—</b>						
Belgium ..	4.53	4.74	3.67	4.48	4.91	3.73
Chile and Peru ..	..	..	0.01	0.24	0.31	0.04
China ..	2.46	0.68	0.27	0.08	0.09	0.04
Egypt ..	0.49	1.44	1.76	1.58	2.27	1.34
France ..	7.65	8.99	8.59	6.63	9.15	8.03
Germany ..	2.17	0.99	0.76	2.70	2.83	3.95
Indonesia, Republic of ..	1.12	0.03	0.24	0.08	0.33	0.60
Italy ..	0.99	2.92	5.35	3.16	4.99	5.69
Japan ..	3.97	0.62	1.36	3.91	6.27	7.26
Netherlands ..	0.85	0.83	0.84	1.61	1.14	1.70
Norway ..	0.02	0.25	0.06	0.22	0.15	0.03
Philippines Republic ..	0.41	0.06	0.09	0.11	0.05	0.07
Sweden ..	0.52	0.75	0.84	0.82	1.27	0.91
United States of America ..	2.95	8.64	5.95	8.09	15.16	11.56
U.S.S.R. (Russia) ..	0.23	0.70	2.28	1.82	0.86	..
Other Foreign Countries ..	2.13	4.59	5.92	6.47	4.76	4.57
<b>Total, Foreign Countries</b>	<b>30.49</b>	<b>36.23</b>	<b>37.99</b>	<b>42.00</b>	<b>54.54</b>	<b>48.62</b>
<b>Total</b> ..	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

## § 7. Trade with the United Kingdom.

1. Imports.—The following table shows, according to statistical classes, the value of imports into Australia of United Kingdom origin during the years 1947-48 to 1951-52 compared with the year 1938-39.

**IMPORTS INTO AUSTRALIA OF UNITED KINGDOM ORIGIN : CLASSES.**  
(£'000.)

Class.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
I. Animal foodstuffs, etc. . . . .	342	698	762	891	1,366	1,883
II. Vegetable foodstuffs; non-alcoholic beverages, etc. . . . .	214	760	1,130	1,400	1,772	2,061
III. Alcoholic liquors, etc. . . . .	700	573	677	973	1,127	1,676
IV. Tobacco, etc. . . . .	22	1,907	3,808	4,949	5,458	6,949
V. Live animals . . . . .	55	173	311	281	285	217
VI. Animal substances, etc. . . . .	41	170	91	147	220	393
VII. Vegetable substances, etc. . . . .	241	892	1,411	1,361	2,718	3,658
VIII. Apparel, textiles, etc. . . . .	11,438	44,122	70,778	65,785	83,705	109,268
IX. Oils, fats and waxes . . . . .	154	203	366	433	645	1,837
X. Paints and varnishes . . . . .	137	895	944	934	1,058	1,537
XI. Stones and minerals, etc. . . . .	317	140	693	569	234	309
XII. Metals, metal manufactures and machinery . . . . .	20,801	52,681	92,403	158,057	189,771	225,918
XIII. Rubber and leather, etc. . . . .	282	1,635	3,009	5,965	6,726	12,182
XIV. Wood and wicker, etc. . . . .	97	240	354	437	487	647
XV. Earthenware, etc. . . . .	1,079	1,939	5,993	6,803	7,311	11,010
XVI. Paper and stationery . . . . .	3,358	8,088	8,185	9,893	14,617	22,359
XVII. Jewellery, etc. . . . .	314	2,478	2,837	3,469	4,329	3,939
XVIII. Optical, surgical and scientific instruments . . . . .	597	2,872	4,396	4,117	4,976	6,683
XIX. Drugs, chemicals, etc. . . . .	2,609	5,086	5,885	5,971	9,846	13,834
XX. Miscellaneous (a) . . . . .	2,980	3,684	5,279	6,312	20,229	38,978
XXI. Gold and silver; bronze specie . . . . .	16	2	1	1	1	367
<b>Total</b> . . . . .	<b>46,094</b>	<b>132,238</b>	<b>209,313</b>	<b>278,748</b>	<b>356,881</b>	<b>465,705</b>

(a) Includes Arms, Ammunition and Explosives.

2. Exports.—In the following table the exports from Australia to the United Kingdom are shown in classes according to the same classification as for imports.

**EXPORTS FROM AUSTRALIA TO THE UNITED KINGDOM : CLASSES.**  
(£'000.)

Class.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
I. Animal foodstuffs, etc. . . . .	24,484	43,679	51,898	57,372	41,424	31,395
II. Vegetable foodstuffs; non-alcoholic beverages, etc. . . . .	14,369	33,949	64,769	33,161	46,077	45,064
III. Alcoholic liquors, etc. . . . .	906	1,313	840	232	313	253
IV. Tobacco, etc. . . . .	1	1	3	..	1	1
V. Live animals . . . . .	2	2	3	3	12	5
VI. Animal substances, etc. . . . .	19,475	54,054	83,349	118,461	199,779	92,091
VII. Vegetable substances, etc. . . . .	110	269	115	74	232	238
VIII. Apparel, textiles, etc. . . . .	41	663	311	599	506	158
IX. Oils, fats and waxes . . . . .	179	305	1,072	1,052	882	533
X. Paints and varnishes . . . . .	3	26	1	4	18	2
XI. Stones and minerals, etc. . . . .	847	1,506	2,008	2,508	4,601	8,237
XII. Metals, metal manufactures and machinery . . . . .	5,291	13,059	21,383	17,921	20,087	24,369
XIII. Rubber and leather, etc. . . . .	423	794	600	570	968	683
XIV. Wood and wicker, etc. . . . .	207	424	444	673	392	377
XV. Earthenware, etc. . . . .	4	9	18	41	34	25
XVI. Paper and stationery . . . . .	32	66	82	104	161	212
XVII. Jewellery, etc. . . . .	32	14	22	29	30	132
XVIII. Optical, surgical and scientific instruments . . . . .	16	54	100	192	126	174
XIX. Drugs, chemicals, etc. . . . .	100	292	216	320	706	787
XX. Miscellaneous . . . . .	167	480	1,275	1,640	1,669	1,734
XXI. Gold and silver; bronze specie . . . . .	2,018	4,914	1,287	1,970	2,587	1,689
<b>Total</b> . . . . .	<b>68,716</b>	<b>155,933</b>	<b>229,796</b>	<b>237,526</b>	<b>320,605</b>	<b>208,159</b>

3. **Imports of Principal Articles.**—The following table shows the value of the principal articles imported into Australia from the United Kingdom during the years 1947-48 to 1951-52 compared with the year 1938-39. The articles are shown in the order in which they appear in the detailed classification.

**IMPORTS OF PRINCIPAL COMMODITIES OF UNITED KINGDOM ORIGIN :  
AUSTRALIA.**

( £'000.)

Article.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Whisky . . . . .	630	495	423	608	758	1,035
Cigarettes . . . . .	17	1,075	3,455	4,528	5,113	6,570
Plastic material . . . . .		023	1,003	1,155	2,305	3,119
Towels and towelling . . . . .	329	975	2,186	2,000	1,373	2,605
Apparel . . . . .	797	5,330	9,178	8,061	9,972	15,190
Carpets and carpeting . . . . .	1,065	3,941	5,303	7,450	10,751	10,991
Floorcloths and linoleums . . . . .	539	1,837	2,751	2,539	2,905	4,079
Piece goods—						
Canvas and duck . . . . .	477	604	697	873	1,025	1,318
Cotton and linen . . . . .	4,174	9,089	18,611	17,086	22,370	33,618
Silk and rayon . . . . .	968	11,592	13,416	10,613	12,726	15,087
Woolen or containing wool . . . . .	252	1,266	4,072	4,793	3,698	3,164
All other piece goods . . . . .	908	1,678	2,929	2,864	4,097	5,551
Sewing silks, cottons, etc. . . . .	535	946	1,673	1,522	1,781	2,650
Yarns—						
Cotton . . . . .	417	2,119	3,223	1,867	4,046	5,073
Rayon . . . . .	232	2,110	2,922	2,598	4,685	4,543
Woolen . . . . .	54	78	388	415	295	210
Other . . . . .	49	210	335	188	441	446
Electrical machinery and appliances . . . . .	2,999	6,076	11,045	15,060	19,713	26,240
Electrical cable and wire, covered . . . . .	1,270	1,677	3,909	5,743	4,495	3,933
Agricultural machinery . . . . .	46	659	670	1,205	2,018	3,893
Metal-working machinery . . . . .	861	2,147	2,289	2,688	3,086	4,487
Motive-power machinery . . . . .	1,025	3,994	8,157	15,075	22,444	26,160
Machines and machinery, other . . . . .	2,795	9,235	15,448	19,902	26,475	38,857
Iron and steel—						
Pipes and tubes . . . . .	474	244	342	709	1,151	1,287
Plate and sheet . . . . .	2,425	2,749	5,051	6,994	10,526	9,630
Other . . . . .	513	458	1,393	4,573	7,488	4,625
Cutlery and platedware . . . . .	519	2,069	1,491	1,744	2,190	2,760
Tools of trade . . . . .	445	1,759	1,857	2,240	2,624	3,602
Motor vehicles, chassis, bodies and parts . . . . .	3,187	11,606	25,022	58,137	61,737	63,953
Vehicles, other . . . . .	1,861	4,198	6,754	10,066	8,067	5,915
Rubber and rubber manufactures . . . . .	200	1,281	2,650	5,450	6,058	11,275
Crockery . . . . .	459	2,494	2,931	3,071	2,997	4,302
Glass and glassware . . . . .	331	1,492	1,603	1,812	2,135	3,309
Paper, printing . . . . .	940	864	1,165	3,068	5,571	9,331
Stationery and paper manufactures . . . . .	1,611	4,684	4,961	4,999	5,695	7,066
Cinematograph films . . . . .	65	113	225	225	241	306
Toys . . . . .	41	516	727	1,230	1,890	1,829
Optical, surgical and scientific instruments . . . . .	532	2,759	4,171	3,893	4,735	6,381
Drugs, chemicals, and fertilizers . . . . .	2,609	5,086	5,885	5,970	9,846	13,834
Arms and explosives . . . . .	1,087	874	1,411	1,087	1,455	9,755
Musical instruments, pianos, etc. . . . .	65	226	379	496	555	568
Prefabricated houses and buildings . . . . .			25	1,436	5,861	9,220
All other articles . . . . .	8,291	20,692	26,797	32,680	49,487	78,817
<b>Total Imports</b> . . . . .	<b>46,094</b>	<b>132,238</b>	<b>209,313</b>	<b>278,748</b>	<b>a 356,881</b>	<b>a 465,705</b>

(a) Includes outside packages, 1950-51, £8,119,000; 1951-52, £11,971,000.

4. **Exports of Principal Articles of Australian Produce.**—(i) *Quantities.* The following table shows the quantities of the principal articles of Australian produce exported to the United Kingdom during the years 1947-48 to 1951-52 compared with the year 1938-39. The articles are shown in the order in which they appear in the detailed classification.



**PRINCIPAL COMMODITIES EXPORTED TO THE UNITED KINGDOM : QUANTITIES,  
AUSTRALIA.**

Article.		1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Butter .. .. .	cntl.	2,170,515	1,703,262	1,622,522	1,562,245	968,505	100,583
Cheese .. .. .	"	347,991	391,723	484,503	402,482	317,415	296,393
Eggs in shell .. .. .	doz.	10,069,570	13,354,405	18,112,045	20,192,785	11,015,622	11,246,510
Beef .. .. .	cntl.	2,477,128	2,120,260	1,514,838	1,369,229	1,134,684	502,263
Lamb .. .. .	"	1,557,485	1,006,368	803,294	1,153,258	335,457	129,140
Mutton .. .. .	"	253,074	138,245	232,358	938,947	44,702	10,011
Pork .. .. .	"	301,204	21,721	168,488	117,353	92,498	11,590
Meats, preserved in tins .. .. .	"	116,553	605,432	853,444	877,975	692,724	916,549
Milk and Cream .. .. .	"	28,806	65,820	79,960	255,520	41,822	151,723
Fruits, dried .. .. .	"	1,173,664	729,356	523,401	250,641	484,854	519,556
"    fresh .. .. .	"	2,023,970	1,203,068	842,923	1,059,385	1,597,287	1,315,774
Barley .. .. .	"	1,027,952	1,093,171	1,984,618	1,765,731	2,222,662	3,135,194
Wheat .. .. .	bus.	32,234,017	17,225,932	34,523,448	9,435,385	11,816,784	17,931,685
Flour .. .. .	cntl.	2,379,151	1,127,312	4,070,894	704,711	2,359,065	1,028,632
Sugar (cane) .. .. .	ton	391,497	58,791	321,425	328,423	233,819	68,734
Wine .. .. .	gal.	3,597,410	2,157,016	1,368,811	613,546	701,024	553,114
Wool (in terms of greasy wool) .. .. .	cntl.	4,125,467	4,375,182	4,283,273	5,304,441	3,701,017	2,842,586
Pearl-shell .. .. .	cwt.	20,877	2,562	1,623	3,013	2,536	1,293
Tallow (unrefined) .. .. .	"	167,095	7,202	77,286	220,228	143,896	57,612
Timber, undressed, including logs (a) .. .. .	sup. ft.	13,188,491	9,029,426	7,025,097	15,317,864	7,265,613	5,066,866
Soap .. .. .	cntl.	9,746	315	3,910	8,529	1,774	488

(a) Excludes undressed timber not measured in super. ft.

(ii) *Values.* The values of the principal articles of Australian produce exported to the United Kingdom during the years 1947-48 to 1951-52 compared with the year 1938-39 are shown in the table hereunder:—

**PRINCIPAL COMMODITIES EXPORTED TO THE UNITED KINGDOM : VALUES,  
AUSTRALIA.  
(£'000.)**

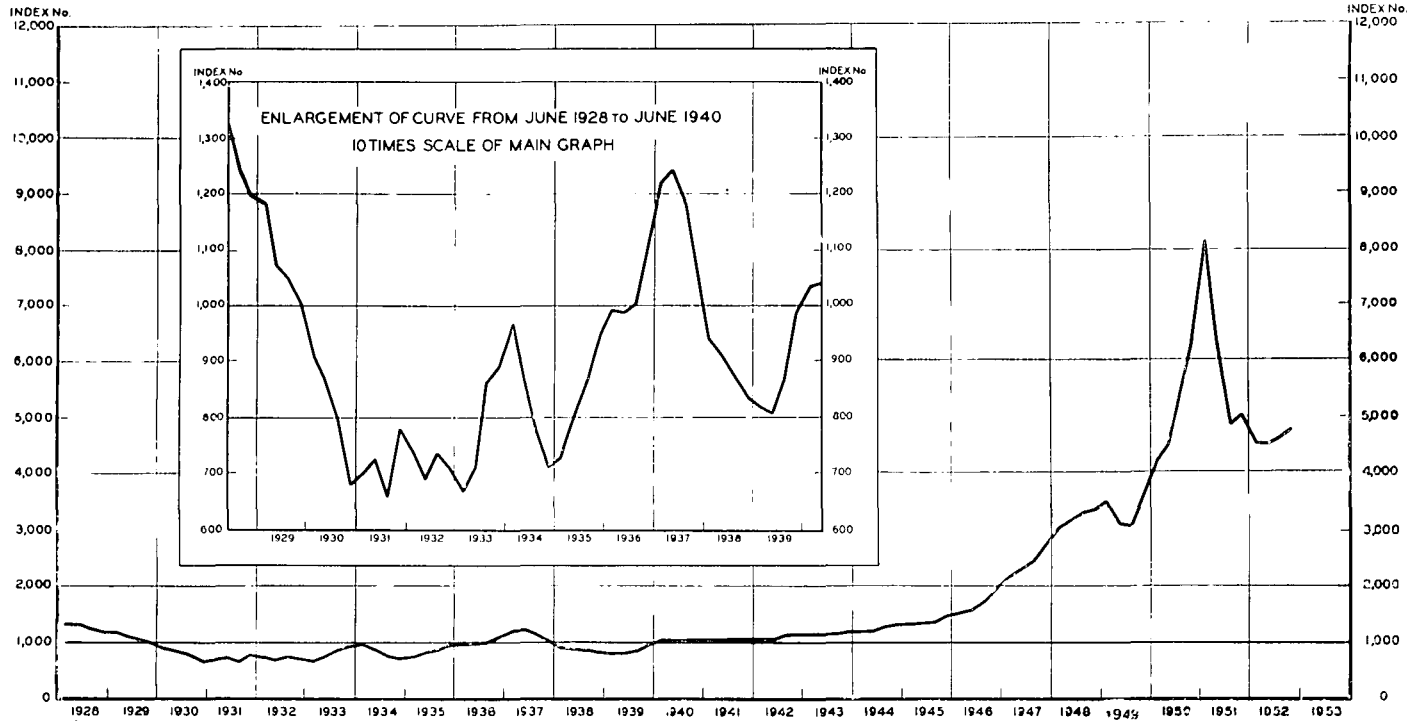
Article.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Butter .. .. .	12,127	18,998	20,667	21,155	14,495	1,456
Cheese .. .. .	1,020	2,308	3,178	2,971	2,603	2,625
Eggs in shell .. .. .	632	1,439	2,153	2,515	1,481	1,841
Meats .. .. .	10,581	17,658	21,740	26,793	19,927	22,783
Milk and cream .. .. .	88	240	399	1,360	162	720
Fruits, dried .. .. .	2,046	1,795	1,335	740	2,294	2,884
"    fresh .. .. .	1,401	2,262	1,580	1,816	3,784	4,147
"    preserved in liquid .. .. .	1,041	1,996	2,623	1,697	2,253	3,143
Barley .. .. .	278	2,165	2,199	2,042	2,820	5,390
Wheat .. .. .	4,444	14,751	26,888	6,215	15,417	15,053
Flour .. .. .	706	2,403	8,928	1,098	4,110	3,744
Sugar (cane) .. .. .	3,686	1,773	10,284	10,597	3,855	2,733
Wine .. .. .	807	1,136	682	206	300	248
Hides and skins .. .. .	813	1,973	2,734	3,305	5,865	2,755
Wool .. .. .	18,513	51,967	80,495	114,983	193,598	89,068
Pearl-shell .. .. .	91	57	38	54	64	30
Tallow (unrefined) .. .. .	137	35	519	1,022	529	251
Lead bullion .. .. .	.. .. .	2,685	5,065	4,124	4,466	4,950
Lead, pig .. .. .	4,108	7,927	12,305	9,962	9,898	12,221
Zinc bars, etc. .. .. .	281	1,504	3,113	2,776	4,606	5,723
Leather .. .. .	320	750	595	554	957	656
Timber, undressed, including logs (a) .. .. .	152	340	268	594	317	268
Soap .. .. .	22	2	21	22	7	2
Gold .. .. .	1,991	3,829	1	1	.. .. .	87
Silver bullion .. .. .	22	1,069	1,275	1,959	2,577	1,584
All other articles .. .. .	2,907	14,055	19,835	17,664	17,711	22,645
<b>Total Exports (Australian Produce)</b> .. .. .	<b>68,394</b>	<b>155,087</b>	<b>228,920</b>	<b>236,225</b>	<b>319,096</b>	<b>207,007</b>

(a) Excludes undressed timber not measured in super. ft.

5. **Proportion of Trade from United Kingdom and Competing Countries.**—Since 1908, permanent resident Commissioners appointed by the British Board of Trade have been located in Australia for the purpose of advising manufacturers and merchants in the United Kingdom with regard to Australian trade affairs. From 8th August, 1907, the Commonwealth Customs Tariffs have provided preferential rates of Customs Duties on certain goods the produce or manufacture of the United Kingdom, with the object of assisting the British manufacturer to retain or improve his position in this market in relation to other countries. The main provisions in these Acts relating to preference are dealt with on previous pages in this Chapter.

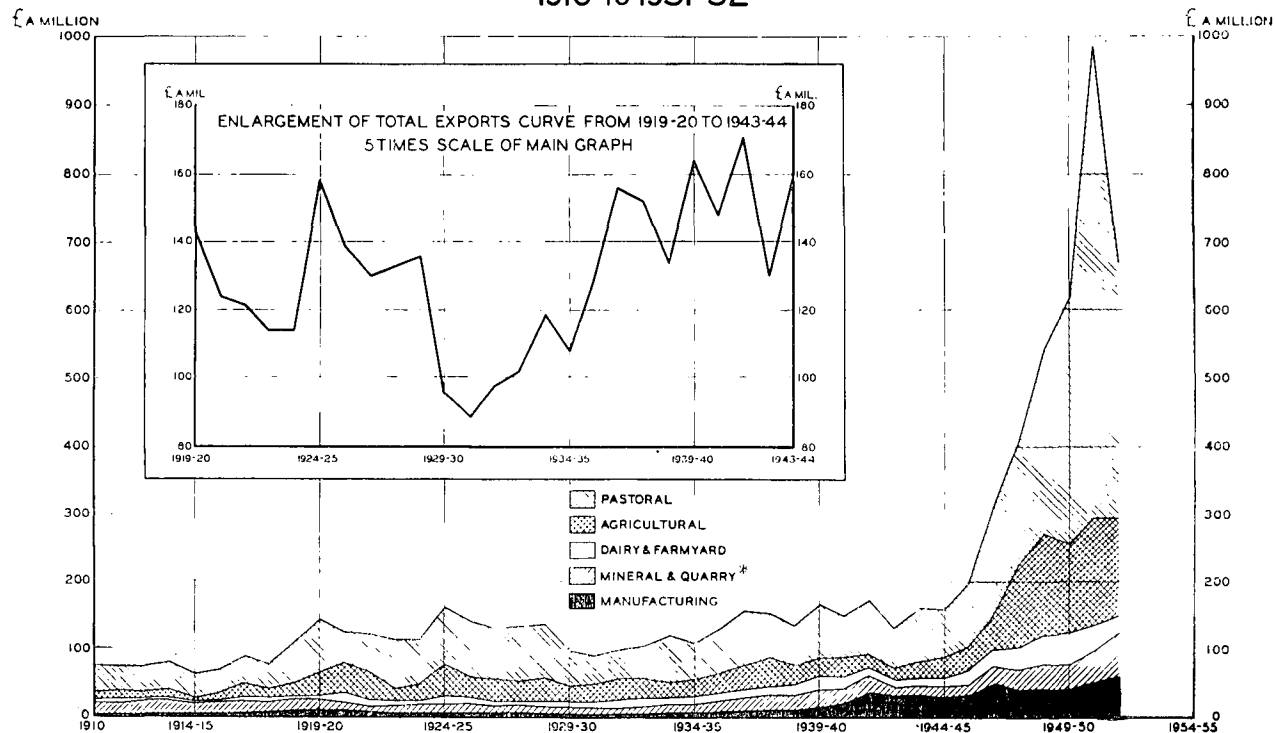
# EXPORT PRICE INDEX - NUMBERS: AUSTRALIA, 1928 TO 1952

SIMPLE AGGREGATIVE INDEX: FIXED WEIGHTS  
(BASE: AVERAGE OF THREE YEARS ENDED JUNE, 1939 = 1,000)



# EXPORTS OF AUSTRALIAN PRODUCTS ACCORDING TO INDUSTRIES

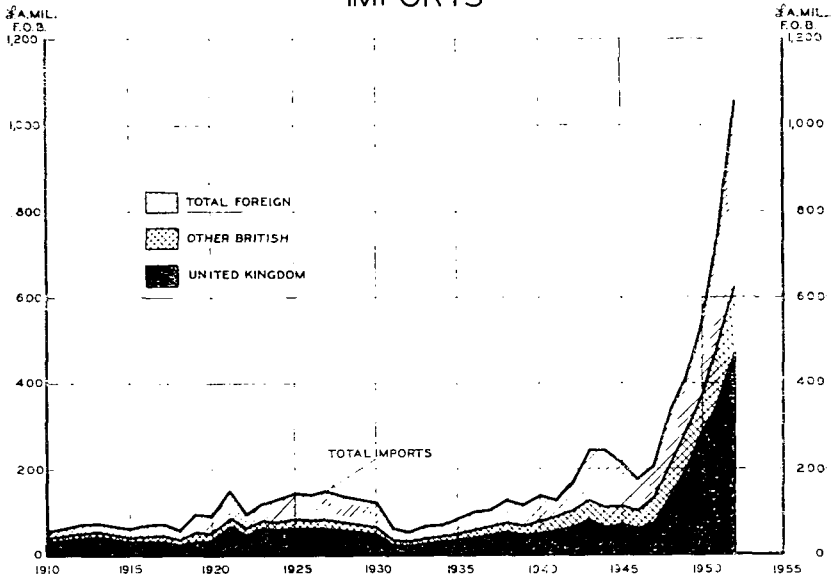
## 1910 TO 1951-52



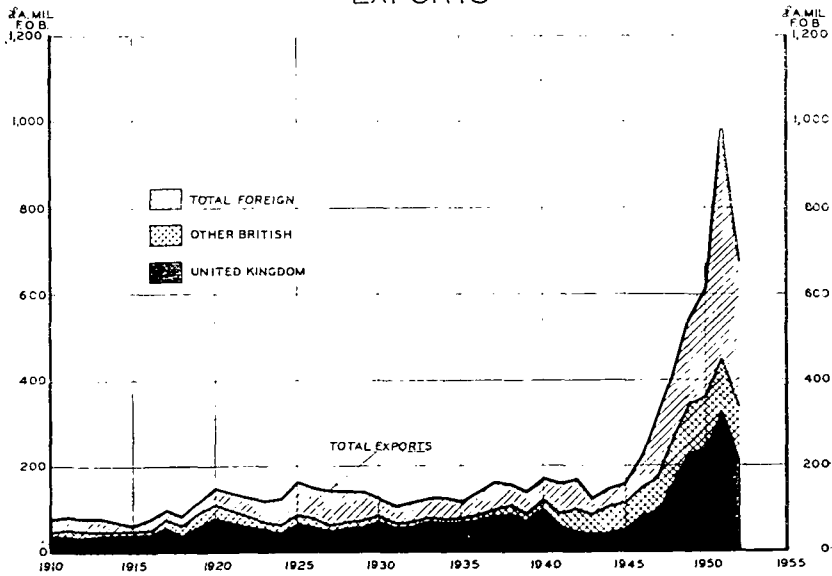
\* Australian production of gold substituted for exports of gold each year (see page 209).

# OVERSEAS TRADE : AUSTRALIA, 1910 TO 1952

## IMPORTS



## EXPORTS



In an investigation into the relative position occupied by the United Kingdom in the import trade of Australia, the comparison must, of course, be restricted to those classes of goods which are produced or manufactured in the United Kingdom. The imports into Australia include many commodities, such as tea, rice, raw coffee, unmanufactured tobacco, petroleum products, copra, timber, etc., which the United Kingdom could not supply. These items, in addition to others not available from that country, have therefore been omitted from the computation following.

The imports into Australia have been classified under nine headings, and the trade of the United Kingdom therein is compared with that of France, Germany, Japan and the United States of America. These countries have been selected as the principal competitors in normal times with the United Kingdom for the trade of Australia under the specified headings. Totals for the years 1913, 1938-39, 1950-51 and 1951-52 are shown in the following table.

**IMPORTS FROM THE UNITED KINGDOM AND ITS MAIN COMPETITORS.**  
(£'000.)

Nature of Imports.	Year.	United Kingdom.	France.	Germany.	Japan.	United States of America.	All Countries.
Foodstuffs of animal origin	{ 1913 ..	274	3	11	6	263	863
	{ 1938-39	342	1	1	200	308	1,824
	{ 1950-51	1,366	31	73	..	277	4,970
	{ 1951-52	1,883	39	191	51	562	6,724
Spirituous and alcoholic liquors	{ 1913 ..	1,117	312	130	1	3	1,772
	{ 1938-39	700	67	5	..	1	821
	{ 1950-51	1,127	187	7	..	2	1,464
	{ 1951-52	1,676	305	42	..	1	2,355
Apparel, textiles, and manufactured fibres	{ 1913 ..	11,154	875	1,559	433	567	18,145
	{ 1938-39	11,438	468	574	2,901	321	20,242
	{ 1950-51	83,705	3,305	566	3,162	2,348	138,669
	{ 1951-52	109,268	4,765	3,632	9,044	2,277	203,569
Metals, metal manufactures, and machinery	{ 1913 ..	12,656	198	2,166	7	3,475	19,724
	{ 1938-39	20,801	61	1,652	101	7,850	35,053
	{ 1950-51	189,771	8,355	10,504	11,122	36,497	289,833
	{ 1951-52	225,918	11,664	17,698	20,163	56,147	392,911
Rubber and leather and manufactures thereof, and substitutes therefor	{ 1913 ..	442	62	316	1	395	1,563
	{ 1938-39	282	6	54	44	130	1,026
	{ 1950-51	6,726	256	40	..	431	30,448
	{ 1951-52	12,182	440	311	16	919	35,083
Earthenware, cements, glass, etc.	{ 1913 ..	592	37	412	19	57	1,425
	{ 1938-39	1,079	19	233	209	103	2,123
	{ 1950-51	7,311	201	43	316	431	11,120
	{ 1951-52	11,009	457	480	1,770	438	19,667
Paper and stationery	{ 1913 ..	1,629	20	243	10	367	2,853
	{ 1938-39	3,358	59	361	101	425	7,052
	{ 1950-51	14,617	240	532	79	821	30,595
	{ 1951-52	22,359	617	2,213	1,164	2,481	68,759
Jewellery, timepieces and fancy goods	{ 1913 ..	474	80	240	18	126	1,313
	{ 1938-39	314	36	197	200	139	1,632
	{ 1950-51	4,329	594	448	1	28	8,913
	{ 1951-52	3,939	238	1,225	37	26	9,281
Drugs, chemicals and fertilizers	{ 1913 ..	929	223	277	127	192	2,477
	{ 1938-39	2,600	224	544	54	1,144	6,382
	{ 1950-51	9,846	1,162	1,063	166	1,408	18,693
	{ 1951-52	13,834	1,413	2,607	922	2,517	28,999
Total, above-mentioned imports	{ 1913 ..	29,267	1,810	5,354	622	5,445	50,135
	{ 1938-39	40,923	941	3,621	3,900	10,421	77,655
	{ 1950-51	318,798	14,331	13,276	14,846	42,243	534,705
	{ 1951-52	402,068	19,938	28,459	39,167	65,368	767,348
Total imports (less bullion and specie)	{ 1913 ..	37,271	2,023	6,398	865	9,928	72,906
	{ 1938-39	46,079	1,172	4,710	4,666	16,606	113,217
	{ 1950-51	356,881	16,414	14,726	15,595	60,878	741,378
	{ 1951-52	465,338	22,390	33,240	43,582	109,141	1,049,751

(a) Includes outside packages.

Stated as percentages the figures in the preceding table are shown below.  
**IMPORTS FROM THE UNITED KINGDOM AND ITS MAIN COMPETITORS :**  
**PROPORTIONS FROM EACH COUNTRY.**  
 (Per Cent.)

Nature of Imports.	Year.	United Kingdom.	France.	Germany.	Japan.	United States of America.	All Countries.
Foodstuffs of animal origin	1913 ..	31.77	0.33	1.27	0.74	30.52	100.00
	1938-39	18.77	0.06	0.03	10.98	16.86	100.00
	1950-51	27.47	0.62	1.47	..	5.56	100.00
	1951-52	28.00	0.58	2.84	0.76	8.36	100.00
Spiritous and alcoholic liquors	1913 ..	63.04	17.64	7.37	0.09	0.14	100.00
	1938-39	85.26	8.15	0.60	0.02	0.16	100.00
	1950-51	76.98	12.77	0.51	..	0.11	100.00
	1951-52	71.17	12.95	1.78	..	0.04	100.00
Apparel, textiles, and manufactured fibres	1913 ..	61.48	4.82	8.59	2.39	3.13	100.00
	1938-39	56.51	2.32	2.84	14.33	1.59	100.00
	1950-51	66.36	2.38	0.41	2.28	1.09	100.00
	1951-52	53.68	2.34	1.78	4.44	1.12	100.00
Metals, metal manufactures, and machinery	1913 ..	64.17	1.00	10.98	0.04	17.62	100.00
	1938-39	58.34	0.17	4.63	0.54	22.02	100.00
	1950-51	65.49	2.88	3.62	3.84	12.60	100.00
	1951-52	57.50	2.97	4.50	6.66	14.29	100.00
Rubber and leather and manufactures thereof, and substitutes therefor	1913 ..	28.26	4.00	20.21	0.04	25.27	100.00
	1938-39	14.66	0.29	2.80	2.26	6.76	100.00
	1950-51	22.09	0.84	0.13	..	1.41	100.00
	1951-52	34.72	1.25	0.89	0.05	2.62	100.00
Earthenware, cements, glass, etc.	1913 ..	41.52	2.57	28.94	1.37	4.02	100.00
	1938-39	50.82	0.91	10.98	9.83	4.83	100.00
	1950-51	65.74	1.81	0.39	2.84	3.88	100.00
	1951-52	55.98	2.32	2.44	9.00	2.23	100.00
Paper and stationery	1913 ..	57.09	0.70	8.50	0.34	12.88	100.00
	1938-39	47.62	0.83	5.12	1.43	6.02	100.00
	1950-51	47.78	0.78	1.74	0.26	2.69	100.00
	1951-52	32.52	0.90	3.22	1.69	3.61	100.00
Jewellery, timepieces and fancy goods	1913 ..	36.14	6.11	18.28	1.34	9.58	100.00
	1938-39	19.23	2.19	12.07	12.25	8.52	100.00
	1950-51	48.57	6.67	5.02	0.01	0.31	100.00
	1951-52	42.44	2.56	13.20	0.40	0.28	100.00
Drugs, chemicals and fertilizers	1913 ..	37.49	9.02	11.18	5.11	7.74	100.00
	1938-39	40.87	3.50	8.52	0.85	17.93	100.00
	1950-51	52.67	6.22	5.68	0.89	7.53	100.00
	1951-52	47.71	4.87	9.20	3.18	8.68	100.00
Total, above-mentioned imports	1913 ..	58.38	3.61	10.68	1.24	10.86	100.00
	1938-39	52.69	1.21	4.66	5.02	13.42	100.00
	1950-51	59.63	2.68	2.48	2.78	7.90	100.00
	1951-52	52.40	2.60	3.71	5.10	8.52	100.00
Total imports (less bullion and specie)	1913 ..	52.37	2.84	8.99	1.22	13.95	100.00
	1938-39	40.70	1.03	4.16	4.12	14.75	100.00
	1950-51	48.14	2.21	1.09	2.08	8.21	100.00
	1951-52	44.33	2.13	3.16	4.14	10.36	100.00

The total value of the commodities included in the competitive classes increased from £50,135,000 in 1913 to £77,655,000 in 1938-39 and to £767,348,000 in 1951-52. The principal classes of competitive imports are metals, metal manufactures and machinery (value £392,911,000 in 1951-52) and apparel, textiles and manufactured fibres (value £203,569,000 in 1951-52). The value of goods included in these two groups represented 77.7 per cent. of the total value of competitive commodities during 1951-52.

In 1938-39 the United Kingdom supplied 52.69 per cent. of the total value of competitive goods. In 1913 the corresponding figure was 58.38 per cent. and in 1951-52 52.40 per cent.

Japan's share in the competitive trade increased in proportion to other countries from 1.24 per cent. in 1913 to 5.02 per cent. in 1938-39. Owing to the effects of war it was reduced to 0.06 per cent. in 1946-47. In 1951-52 it was 5.10 per cent.

The proportion supplied by the United States of America improved from 10.86 per cent. in 1913 to 13.42 per cent. in 1938-39 and to 20.28 per cent. in 1947-48, but had fallen to 8.52 per cent. in 1951-52.

The proportion of imports of French origin declined from 3.61 per cent. in 1913 to 1.21 per cent. in 1938-39, but in 1951-52 had risen to 2.60 per cent.

The proportion supplied by Germany was 10.68 per cent. in 1913, and 4.66 per cent. in 1938-39. In consequence of the war, the proportion of imports from Germany fell to 0.52 per cent. during 1948-49, but it has since risen and in 1951-52 was 3.71 per cent.

### § 8. Trade with Eastern Countries.

1. **Imports of Merchandise from Eastern Countries.**—The values of imports into Australia from Eastern countries during the year 1938-39 and the years 1947-48 to 1951-52 are shown in the following table. The principal commodities imported in 1951-52 according to countries of origin were :—Ceylon—Tea, £9,958,000 ; India—Bags and Sacks, £27,982,000, Cotton and Linen Piecegoods, £3,888,000, Hessian, £4,934,000, Linseed Oil, £2,098,000 ; Malaya—Crude Rubber, £14,604,000 ; Singapore—Crude Rubber, £2,207,000, Petroleum Spirit, £3,114,000, Solar and Residual Oil, £2,205,000 ; Indonesia—Crude Rubber, £1,981,000, Kerosene, £3,172,000, Petroleum Spirit, £11,183,000, Residual and Solar Oil, £5,685,000 ; Japan—Cotton and Linen Piecegoods, £7,084,000, Iron and Steel, £21,808,000, Timber, £1,880,000, Wire, £1,989,000.

#### IMPORTS OF MERCHANDISE INTO AUSTRALIA FROM EASTERN COUNTRIES. (£'000.)

Country of Origin.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
<b>British Countries—</b>						
Borneo .. .. .	215	3,414	4,145	4,578	5,673	6,903
Ceylon .. .. .	957	8,133	7,512	8,936	11,317	11,173
Hong Kong .. .. .	41	252	647	700	1,915	2,254
India .. .. .	3,272	26,698	25,862	27,664	35,424	47,825
Malaya, Federation of .. .. .	1,029	3,862	4,028	4,926	20,647	18,632
Pakistan .. .. .	..	..	102	1,228	7,290	1,774
Singapore .. .. .	..	392	4,655	7,308	10,502	8,764
<b>Foreign Countries—</b>						
Bhutan and Nepal .. .. .	..	..	..	1	..	2
Burma .. .. .	30	23	27	30	13	31
China (including Formosa) .. .. .	526	1,667	2,542	1,451	2,657	3,133
Chinese Dependency—						
Manchuria .. .. .	17	..	..	5	14	32
French Dependencies—						
India (French) .. .. .	1	1	..	..	..	8
Indo-China .. .. .	1	2	14	51	51	19
Indonesia, Republic of .. .. .	8,116	4,429	11,097	14,750	21,788	25,530
Japan .. .. .	4,666	1,433	1,711	6,999	15,595	43,582
Korea .. .. .	..	1	..	1	8	3
Philippines Republic .. .. .	138	48	14	69	52	101
Portuguese Dependency—						
Timor .. .. .	..	..	..	..	79	114
Siam .. .. .	3	20	27	83	103	72
<b>Total</b> .. .. .	<b>19,012</b>	<b>50,375</b>	<b>62,383</b>	<b>78,780</b>	<b>(a) 133,128</b>	<b>(a) 169,952</b>

(a) Includes outside packages.

2. **Exports.**—(i) *Principal Articles.* The following table shows the value of exports of Australian and other produce from Australia to Eastern countries for the years 1938-39 and 1947-48 to 1951-52. The countries concerned in this trade are Borneo (British), Ceylon, Hong Kong, India, Federation of Malaya, Pakistan, Singapore, Burma, China (including Formosa) and the Chinese dependencies of Kwantung and Manchuria, French dependencies in India and Indo-China, Republic of Indonesia, Japan, Korea, Philippines Republic, the Portuguese dependencies in India, Macao and Timor, and Siam.

**TOTAL EXPORTS FROM AUSTRALIA TO EASTERN COUNTRIES.**  
(£'000.)

Article.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Army stores .. .. .	(a)	208	1,376	1,207	2,636	3,924
Butter .. .. .	588	680	982	1,168	1,742	1,779
Cheese .. .. .	41	227	484	428	341	631
Confectionery .. .. .	10	384	175	84	270	273
Eggs .. .. .	..	116	149	362	290	390
Fruits—						
Fresh .. .. .	166	923	864	901	882	1,259
Dried or preserved .. .. .	43	203	301	255	333	532
Grain and cereals—						
Wheat .. .. .	2,403	19,661	17,066	33,990	18,133	6,981
Flour .. .. .	3,037	18,116	16,636	19,021	18,682	20,228
Other (prepared and un- prepared) .. .. .	70	1,798	4,932	2,710	4,542	6,245
Infants' and invalids' foods .. .. .	194	875	1,120	1,147	1,289	1,792
Jams and jellies .. .. .	45	336	108	156	275	206
Lead, pig .. .. .	13	256	57	533	1,399	507
Leather .. .. .	131	358	730	955	1,202	653
Machines and machinery .. .. .	55	2,077	1,546	1,156	1,783	1,746
Meats—						
Bacon and hams .. .. .	95	309	333	395	436	509
Other .. .. .	274	1,303	1,339	1,717	2,389	3,343
Milk and cream .. .. .	437	2,784	4,060	3,642	4,454	5,869
Sheep .. .. .	68	132	178	226	316	321
Soap and soap substitutes .. .. .	16	21	57	129	75	171
Spirituous and alcoholic liquors .. .. .	78	97	87	71	219	171
Tallow, inedible .. .. .	156	385	413	306	106	407
Vegetables, fresh .. .. .	9	902	471	446	236	362
Wool .. .. .	4,181	3,937	7,428	14,535	54,169	42,506
Zinc bars, blocks, etc. .. .. .	597	398	14	497	499	1,230
Other merchandise .. .. .	2,122	10,545	7,165	5,206	9,204	7,259
Total Merchandise .. .. .	14,835	67,031	68,071	91,543	125,902	109,294
Gold and silver; and bronze specie .. .. .	934	..	145	..	1	19
Total Exports .. .. .	15,769	67,031	68,216	91,543	125,903	109,313

(a) Not recorded separately.

(ii) *Destination of Exports of Merchandise.* The next table shows the destination of merchandise exported to Eastern countries during the years 1938-39 and 1947-48 to 1951-52.

**EXPORTS OF MERCHANDISE FROM AUSTRALIA TO EASTERN COUNTRIES.**  
(£'000.)

Country of Destination.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
British Countries—						
Borneo .. .. .	13	390	362	411	661	904
Ceylon .. .. .	423	10,213	9,341	6,070	8,950	10,630
Hong Kong .. .. .	475	6,365	3,918	6,848	5,968	3,781
India .. .. .	1,942	26,689	25,985	37,034	21,981	16,911
Malaya, Federation of .. .. .	1,911	7,785	6,299	5,566	8,214	8,532
Pakistan .. .. .	..	..	2,273	362	950	845
Singapore .. .. .	..	6,481	7,372	8,071	10,875	11,810
Foreign Countries—						
Burma .. .. .	59	1,992	796	456	893	1,001
China (including Formosa) .. .. .	3,023	2,757	1,439	502	850	333
Chinese Dependencies—						
Kwantung .. .. .	61	..	..	..	..	..
Manchuria .. .. .	2	..	..	..	..	..
French Dependencies—						
India (French) .. .. .	1	..	11	9	32	8
Indo-China .. .. .	55	685	288	45	63	31
Indonesia, Republic of .. .. .	1,373	132	1,140	507	3,243	3,967
Japan .. .. .	4,866	2,506	7,389	23,978	61,549	48,534
Korea .. .. .	12	377	116	8	42	315
Philippines Republic .. .. .	499	256	514	654	478	444
Portuguese Dependencies—						
India (Portuguese) .. .. .	..	82	221	223	251	128
Macao .. .. .	..	..	..	51	1	7
Timor .. .. .	..	76	16	18	24	37
Siam .. .. .	120	245	591	730	877	1,076
Total .. .. .	14,835	67,031	68,071	91,543	125,902	109,294

The balance of trade with Eastern countries, which can be ascertained by comparison with the table on page 199, shows an excess of imports into Australia during the years 1938-39, 1950-51 and 1951-52, and an excess of exports during the years 1947-48 to 1949-50.



§ 9. Classified Summary of Australian Oversea Trade.

r. Imports.—The following table shows, according to statistical classes, the value of imports into Australia during each of the years 1947-48 to 1951-52 compared with the year 1938-39.

IMPORTS INTO AUSTRALIA : CLASSES.  
(£'000.)

Class.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
I. Animal foodstuffs, etc.	1,824	3,696	3,961	3,745	4,970	6,724
II. Vegetable foodstuffs; non-alcoholic beverages, etc.	4,512	16,521	13,933	20,694	24,796	24,978
III. Alcoholic liquors, etc.	821	762	985	1,169	1,464	2,355
IV. Tobacco, etc.	2,125	7,721	9,183	12,395	16,437	18,820
V. Live animals	208	385	487	492	464	616
VI. Animal substances, etc.	2,214	3,440	2,926	2,817	3,789	4,817
VII. Vegetable substances, etc.	2,961	11,470	13,150	13,776	24,908	30,269
VIII. Apparel, textiles, etc.	20,242	96,065	109,198	99,761	138,669	203,569
IX. Oils, fats and waxes	9,915	34,757	43,179	52,382	69,825	87,460
X. Paints and varnishes	662	1,639	1,909	1,812	2,453	3,953
XI. Stones and minerals, etc.	1,027	2,837	3,637	6,573	8,970	5,950
XII. Metals, metal manufactures and machinery	35,653	85,379	128,036	227,343	289,833	392,911
XIII. Rubber and leather, etc.	1,926	5,352	6,695	11,259	30,448	35,083
XIV. Wood and wicker, etc.	2,371	4,877	8,137	8,822	15,795	28,029
XV. Earthenware, etc.	2,123	7,250	7,841	9,074	11,120	19,667
XVI. Paper and stationery	7,051	23,383	21,061	18,883	30,595	68,759
XVII. Jewellery, etc.	1,632	4,131	4,915	6,514	8,913	9,281
XVIII. Optical, surgical and scientific instruments	1,825	4,410	5,849	6,089	7,552	10,416
XIX. Drugs, chemicals, etc.	6,382	11,036	11,878	12,091	18,693	28,999
XX. Miscellaneous (a)	7,743	12,974	17,096	20,433	31,685	67,380
XXI. Gold and silver; bronze specie	3,537	1,661	1,138	1,945	2,492	3,672
Total	116,754	339,746	415,194	538,069	743,871	1,053,423

(a) Includes Arms, Ammunition and Explosives.

2. Exports.—In the following table the exports from Australia are shown according to the same classification as for imports, distinguishing (A) Australian produce; (B) Other produce (re-exports); and (C) Total exports.

EXPORTS FROM AUSTRALIA : CLASSES.  
(£'000.)

Class.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
<b>A. AUSTRALIAN PRODUCE.</b>						
I. Animal foodstuffs, etc.	27,223	57,696	73,233	79,859	67,524	60,689
II. Vegetable foodstuffs; non-alcoholic beverages, etc.	25,533	123,993	152,568	137,583	163,202	148,700
III. Alcoholic liquors, etc.	1,158	2,064	1,535	940	1,248	1,339
IV. Tobacco, etc.	238	158	142	189	208	293
V. Live animals	197	491	444	490	629	692
VI. Animal substances, etc.	47,193	161,733	244,502	329,280	661,726	342,007
VII. Vegetable substances, etc.	298	1,028	908	1,039	1,487	1,722
VIII. Apparel, textiles, etc.	446	4,786	3,531	2,702	3,094	3,392
IX. Oils, fats and waxes	611	1,390	2,337	2,970	3,578	3,595
X. Paints and varnishes	173	608	464	505	779	1,068
XI. Stones and minerals, etc.	2,668	5,149	6,425	6,279	12,004	21,417
XII. Metals, metal manufactures and machinery	9,510	28,385	37,191	30,168	38,223	49,506
XIII. Rubber and leather, etc.	745	1,910	1,802	2,119	2,926	2,035
XIV. Wood and wicker, etc.	1,066	1,673	1,963	2,177	1,657	2,315
XV. Earthenware, etc.	210	496	374	539	730	993
XVI. Paper and stationery	365	753	822	885	1,085	2,043
XVII. Jewellery, etc.	106	365	312	286	517	596
XVIII. Optical, surgical and scientific instruments	151	701	744	817	830	1,347
XIX. Drugs, chemicals, etc.	718	3,144	2,787	2,887	5,053	5,470
XX. Miscellaneous (a)	916	3,252	4,089	4,728	6,432	8,124
XXI. Gold and silver; bronze specie	15,951	4,941	1,397	2,020	2,682	9,716
Total	135,476	404,716	537,570	608,462	975,614	667,059

(a) Includes Arms, Ammunition and Explosives.

EXPORTS FROM AUSTRALIA: CLASSES—*continued.*  
(£'000.)

Class.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
<b>B. OTHER PRODUCE: RE-EXPORTS.</b>						
I. Animal foodstuffs, etc. . . . .	29	94	112	24	28	56
II. Vegetable foodstuffs; non-alcoholic beverages, etc. . . . .	67	189	248	363	384	403
III. Alcoholic liquors, etc. . . . .	43	22	33	32	35	55
IV. Tobacco, etc. . . . .	113	64	167	119	43	51
V. Live animals . . . . .	20	11	11	29	11	82
VI. Animal substances, etc. . . . .	136	50	26	37	246	155
VII. Vegetable substances, etc. . . . .	9	67	59	37	42	38
VIII. Apparel, textiles, etc. . . . .	223	2,085	321	425	613	585
IX. Oils, fats and waxes . . . . .	102	673	465	343	526	688
X. Paints and varnishes . . . . .	5	9	3	5	4	4
XI. Stones and minerals, etc. . . . .	2	52	17	11	22	46
XII. Metals, metal manufactures and machinery . . . . .	548	1,171	1,658	2,043	2,061	2,711
XIII. Rubber and leather, etc. . . . .	11	51	10	28	22	40
XIV. Wood and wicker, etc. . . . .	43	57	50	51	50	52
XV. Earthenware, etc. . . . .	9	20	20	11	22	118
XVI. Paper and stationery . . . . .	128	97	138	99	64	76
XVII. Jewellery, etc. . . . .	74	27	83	97	79	156
XVIII. Optical, surgical and scientific instruments . . . . .	234	165	198	313	317	388
XIX. Drugs, chemicals, etc. . . . .	48	128	138	168	142	208
XX. Miscellaneous . . . . .	164	181	1,173	976	1,453	1,985
XXI. Gold and silver; bronze specie . . . . .	3,012	25	173	24	18	52
Total . . . . .	5,020	5,238	5,103	5,235	6,182	7,949

**C. TOTAL EXPORTS: AUSTRALIAN PRODUCE AND RE-EXPORTS.**

I. Animal foodstuffs, etc. . . . .	27,252	57,790	73,345	79,883	67,552	60,745
II. Vegetable foodstuffs; non-alcoholic beverages, etc. . . . .	25,600	124,182	152,816	137,946	163,586	149,103
III. Alcoholic liquors, etc. . . . .	1,201	2,086	1,568	972	1,283	1,394
IV. Tobacco, etc. . . . .	351	222	309	308	251	344
V. Live animals . . . . .	217	502	455	519	640	774
VI. Animal substances, etc. . . . .	47,329	161,783	244,528	329,317	661,972	342,162
VII. Vegetable substances, etc. . . . .	307	1,095	967	1,076	1,529	1,760
VIII. Apparel, textiles, etc. . . . .	669	6,871	3,852	3,127	3,707	3,977
IX. Oils, fats and waxes . . . . .	713	2,063	2,802	3,313	4,104	4,283
X. Paints and varnishes . . . . .	178	617	467	510	783	1,072
XI. Stones and minerals, etc. . . . .	2,670	5,201	6,442	6,290	12,026	21,463
XII. Metals, metal manufactures and machinery . . . . .	10,058	29,556	38,849	32,211	40,284	52,217
XIII. Rubber and leather, etc. . . . .	756	1,961	1,812	2,147	2,948	2,075
XIV. Wood and wicker, etc. . . . .	1,109	1,730	2,013	2,228	1,707	2,367
XV. Earthenware, etc. . . . .	219	516	394	550	752	1,111
XVI. Paper and stationery . . . . .	493	850	960	984	1,149	2,119
XVII. Jewellery, etc. . . . .	180	392	395	383	596	752
XVIII. Optical, surgical and scientific instruments . . . . .	385	866	942	1,130	1,147	1,735
XIX. Drugs, chemicals, etc. . . . .	766	3,272	2,925	3,055	5,195	5,678
XX. Miscellaneous (a) . . . . .	1,080	3,433	5,262	5,704	7,885	10,109
XXI. Gold and silver; bronze specie . . . . .	18,963	4,966	1,570	2,044	2,700	9,768
Total . . . . .	140,496	409,954	542,673	613,697	981,796	675,008

(a) Includes Arms, Ammunition and Explosives.

3. *Imports of Principal Articles.*—The next table shows the quantity, where available, and the value of the principal articles imported into Australia during the years 1947-48 to 1951-52 compared with the year 1938-39. The articles are shown in the order in which they appear in the detailed classification.

PRINCIPAL COMMODITIES IMPORTED : AUSTRALIA.

Article.		1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Fish, preserved in tins	lb.	28,902,983	20,572,917	19,563,423	17,474,837	22,929,407	22,634,687
	£	1,078,755	2,298,253	2,445,025	2,092,931	2,944,113	3,320,390
Cocoa beans	lb.	4,048,865	26,540,589	18,405,631	29,165,829	13,222,680	21,350,697
	£	138,464	2,428,435	1,894,714	2,449,272	1,850,885	3,458,309
Cocoa butter	lb.	3,740,180	2,646,335	2,495,024	6,640,584	6,354,407	3,943,893
	£	133,429	659,529	730,552	1,451,925	1,951,972	1,286,510
Coffee and chicory	lb.	4,566,633	5,921,131	7,400,938	8,494,396	6,061,792	7,364,252
	£	105,936	368,180	501,945	964,618	1,088,477	1,445,513
Edible nuts	lb.	17,835,355	10,152,646	9,836,204	14,487,120	21,112,000	16,458,670
	£	291,336	924,092	771,737	1,137,807	1,887,126	1,408,788
Tea	lb.	49,530,941	54,522,049	42,570,780	54,733,541	61,235,742	54,358,024
	£	2,830,487	10,189,590	8,127,721	11,828,272	14,178,420	11,757,743
Whisky	pf. gal.	523,346	286,230	220,216	334,587	416,315	445,542
	£	631,032	496,240	429,282	622,275	775,186	1,052,242
Tobacco and preparations thereof	£	2,124,831	7,721,388	9,182,959	12,394,839	16,436,773	18,826,421
Copra	cwt.	484,181	470,135	583,622	652,548	474,146	639,994
	£	199,587	788,828	1,399,223	1,036,244	1,452,288	2,155,067
Fibres	£	1,023,441	5,441,719	6,599,405	6,653,269	16,257,122	18,631,685
Hides and skins	£	793,067	1,388,266	993,915	887,222	1,109,103	1,454,094
Wool	lb.	16,591,619	10,654,156	6,476,526	5,960,604	3,005,916	4,287,421
	£	767,132	895,490	822,632	1,032,295	1,200,920	1,409,325
Seeds	£	587,874	1,345,008	1,920,411	1,901,021	1,561,180	1,089,896
	cwt.	116,788	79,859	79,859	102,125	404,749	183,545
Plastic materials	£	1,656,929	1,524,847	1,807,091	2,973,658	4,446,251	4,463,591
Towels and towelling	£	406,293	1,137,662	2,482,696	2,200,007	1,451,204	2,873,258
Socks and stockings	£	49,599	693,580	2,644,120	1,827,748	1,593,102	2,479,988
Gloves	£	420,050	713,461	633,122	625,401	990,497	1,380,707
Hats and caps	£	204,541	447,591	558,551	520,803	912,658	931,814
Men's and boys' outer clothing	£	140,076	558,211	1,207,299	1,146,564	1,664,736	2,644,604
Blouses, skirts, costumes, etc.	£	96,046	350,666	702,136	1,155,345	1,387,239	1,896,255
Trimnings and ornaments	£	440,035	2,912,178	2,393,919	2,776,461	3,785,004	5,032,333
Other apparel and attire	£	1,011,703	1,147,591	2,351,816	2,322,703	3,282,645	5,755,444
Carpets and carpeting	£	1,253,690	4,994,897	5,519,016	7,424,512	11,111,637	17,604,225
Linoleums	£	641,129	2,017,518	2,786,384	2,502,778	2,892,364	4,680,978
Piece goods—							
Canvas and duck	£	649,330	1,100,261	1,348,780	1,313,210	2,291,920	3,884,092
Cotton and linen	£	5,501,674	27,010,288	30,960,983	26,390,842	39,766,919	63,571,498
Silk and rayon	£	2,991,495	20,186,008	17,045,686	14,960,634	20,278,035	26,978,447
Woolen or containing wool	£	321,779	1,346,979	4,150,696	4,896,630	3,793,213	3,298,349
All other piece goods	£	1,799,304	5,048,539	5,387,213	5,304,852	9,718,697	14,082,006
Sewing silks, cottons, etc.	£	573,179	1,155,615	2,324,565	1,617,976	1,877,275	2,677,028
Bags and sacks	£	1,720,965	12,619,995	12,539,246	13,006,133	13,015,571	28,074,399
Yarns—							
Rayon	£	609,134	4,327,977	5,232,271	3,608,092	7,583,938	8,120,911
Cotton	£	449,534	4,015,432	4,120,000	1,928,188	4,521,971	6,496,363
Woolen	£	55,192	80,436	472,072	476,957	280,010	217,688
Other	£	71,546	271,779	366,614	260,107	620,193	655,102
Oils, in bulk—							
Kerosene	gal.	54,714,472	114,409,936	111,407,858	115,197,513	124,623,350	118,399,914
	£	753,424	3,622,616	4,051,276	4,539,878	5,021,950	5,855,579
Linseed oil	gal.	188,629	1,411,625	2,081,703	1,498,572	2,104,712	4,508,718
	£	23,087	1,376,487	1,388,496	989,060	1,461,500	4,002,270
Lubricating (mineral)	gal.	15,519,442	26,259,104	30,942,390	37,515,084	29,797,188	48,977,835
	£	890,181	3,034,416	3,722,270	4,610,745	4,368,152	9,188,643
Petroleum, including crude	gal.	399,517,906	486,345,051	560,424,813	645,103,493	783,378,962	859,242,557
	£	6,450,724	16,340,640	21,272,764	28,053,919	39,422,727	44,530,025
Residual and solar	gal.	130,288,368	290,044,210	390,649,416	441,145,202	471,547,554	511,405,539
	£	1,060,969	7,305,094	10,090,468	11,287,213	14,583,718	17,830,663
Dry colours	cwt.	149,846	343,279	403,983	413,131	512,236	738,016
	£	347,377	1,457,421	1,737,506	1,643,731	2,181,610	3,584,111
Coal	ton	86,970	3,974	215,253	493,803	597,866	285,409
	£	119,041	16,282	863,925	1,708,186	1,865,737	873,738
Sulphur	cwt.	2,302,004	2,335,048	2,297,783	3,558,854	3,318,680	1,682,588
	£	559,982	599,487	818,818	2,499,695	3,515,936	981,146
Iron and steel—							
Pipes and tubes	£	514,304	171,742	320,559	1,451,794	3,050,262	5,720,430
Plate and sheet	£	2,880,282	6,303,506	8,543,753	14,922,209	30,016,848	41,544,766
Other	£	50,471	718,739	1,534,560	9,503,236	12,341,981	21,371,997
Copper	cwt.	22,115	196,187	302,021	486,913	708,304	520,287
	£	125,041	1,581,330	2,514,033	4,055,439	7,924,776	7,585,907
Cutlery and platedware	£	597,915	2,130,332	1,528,525	1,787,141	2,339,073	3,167,047
Tools of trade	£	971,730	2,361,165	2,294,569	3,017,586	3,573,458	5,292,642
Motor vehicles, chassis, bodies, and parts	£	5,577,193	20,749,580	34,306,470	73,135,786	74,159,936	84,902,102
Wire and manufactures	£	272,194	1,213,863	2,104,969	6,831,368	8,869,591	13,379,305
Electrical machinery and appliances	£	4,193,781	8,494,926	13,222,029	18,707,826	23,271,968	31,749,713
Electrical cable and wire-covered	cwt.	258,064	161,442	296,824	434,109	343,910	191,975
	£	1,407,230	1,813,388	3,984,839	5,752,103	4,537,083	3,197,234
Agricultural machinery	£	236,526	877,756	802,549	1,582,674	2,808,785	5,679,855
Metal-working machinery	£	1,508,118	4,252,510	3,315,959	4,016,409	5,309,038	9,062,178
Motive-power machinery	£	2,844,624	8,501,038	14,670,315	27,213,577	38,145,470	48,664,886
Other machines and machinery	£	5,398,921	14,621,672	22,046,568	32,604,518	42,445,556	62,736,616
Rubber and rubber manufactures	£	1,761,717	4,023,016	6,204,870	10,682,489	20,673,074	33,075,643

## PRINCIPAL COMMODITIES IMPORTED: AUSTRALIA—continued.

Article.		1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Timber, undressed, including logs (a)	sup. ft.	348,098,462	34,410,267	215,843,249	210,571,507	313,849,634	330,730,568
Crockery	£	1,688,325	3,576,206	5,407,346	5,466,552	10,123,838	16,014,576
Glass and glassware	£	637,461	2,618,787	3,018,288	3,116,752	3,073,887	4,482,510
Paper, printing	£	912,536	3,049,649	2,471,704	3,082,958	4,015,111	6,708,846
Pulp for paper-making	£	3,089,786	7,197,214	6,623,518	7,220,245	9,801,537	26,677,412
Stationery and paper manufactures	£	37,704	52,041	53,693	33,819	41,911	60,159
Jewellery	£	366,564	3,091,462	2,523,118	1,255,700	2,374,966	7,365,390
Toys	£	2,175,837	5,254,387	4,988,192	5,571,600	6,148,055	8,564,424
Timpieces	£	383,088	1,199,661	1,413,902	1,532,058	2,320,747	1,585,486
Cinematograph films	lin. ft.	212,656	563,409	764,818	1,278,096	2,063,420	2,260,261
Surgical and dental appliances	£	566,948	1,264,447	1,453,159	2,258,045	2,563,318	3,237,986
Drugs, chemicals, and fertilizers	£	73,859,662	63,821,810	107,498,516	109,892,369	90,062,309	106,052,395
Arms and explosives	£	644,618	744,277	1,034,989	1,052,944	1,076,344	1,412,839
Musical instruments, pianos, etc.	£	421,007	1,215,125	1,179,987	1,390,051	2,229,872	3,031,535
Pr-fabricated houses and buildings	£	6,382,350	11,035,975	11,877,918	12,091,046	18,692,989	28,998,867
All other articles	£	1,231,323	2,012,846	3,242,599	1,844,605	2,471,281	16,912,434
	£	200,368	433,649	626,065	686,517	908,394	982,361
	£			35,709	1,532,374	7,644,059	14,562,982
Total Imports	£	26,084,671	56,246,340	64,079,590	74,704,282	106,711,485	177,238,956

(a) Excludes undressed timber not measured in super. feet.

4. Exports of Principal Articles of Australian Produce.—(i) Quantities. The following table shows the quantities of the principal articles of Australian produce exported during the years 1947-48 to 1951-52 compared with the year 1938-39. The articles are shown in the order in which they appear in the detailed classification.

## EXPORTS OF PRINCIPAL ARTICLES OF AUSTRALIAN PRODUCE—QUANTITIES, AUSTRALIA.

Article.		1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Butter	cntl.	2,295,428	1,847,738	1,835,520	1,774,517	1,200,397	254,170
Cheese	..	359,236	509,445	582,539	514,036	447,899	403,162
Eggs in shell	doz.	10,144,344	14,518,033	19,604,507	23,046,749	13,522,133	13,831,552
Honey	lb.	687,007	14,985,753	32,093,553	20,768,811	7,483,618	15,911,673
Beef	cntl.	2,719,638	2,371,501	1,916,531	1,823,613	1,584,045	958,760
Lamb	..	1,583,327	1,030,888	873,548	1,233,479	456,844	252,461
Mutton	..	281,558	193,941	275,090	607,440	84,240	59,066
Pork	..	307,164	37,281	201,259	149,752	124,718	38,973
Milk and cream	..	191,039	932,832	(a) 980,540	(a) 1,180,334	(a) 1,054,273	(a) 997,110
Fruits—							
Dried	..	1,681,270	967,591	1,184,484	881,004	1,010,859	980,864
Fresh	..	2,752,381	1,899,863	1,509,330	1,901,074	2,122,773	1,984,508
Breakfast foods	..	2,834,137	68,183,327	78,077,853	28,171,602	27,447,093	40,009,705
Barley	..	1,309,084	4,025,008	5,438,162	5,351,397	6,103,910	6,030,797
Oats	..	2,094	121,275	376,357	118,311	141,906	231,629
Wheat	bus.	63,129,023	60,173,560	83,030,165	78,426,111	86,202,181	62,920,928
Other unprepared grains	ton	7,053	39,059	46,590	65,361	137,574	57,211
Rice	cntl.	268,423	626,847	617,921	597,881	652,510	561,685
Flour	..	14,501,304	15,687,411	17,095,607	15,422,175	17,660,198	15,780,327
Jams and jellies	lb.	13,869,935	59,641,653	53,662,768	65,228,426	42,128,747	19,917,679
Sugar (cane)	ton	443,014	100,351	415,194	432,711	387,841	167,431
Wine	gal.	3,719,401	2,688,303	1,877,536	1,101,834	1,222,466	1,160,315
Tobacco, manufactured	cntl.	9,665	3,778	5,078	3,855	3,381	4,063
Wool (in terms of greasy wool)	..	9,469,604	11,286,350	13,203,770	11,170,412	11,988,990	10,357,076
Pearl-shell	cwt.	52,532	15,915	27,885	33,840	22,880	14,202
Sandalwood	..	32,962	2,946	3,117	3,890	6,882	7,229
Tallow (unrefined)	..	562,500	68,540	142,179	348,214	260,560	126,618
Coal	ton	382,085	67,228	36,913	68,404	72,283	139,140
Ores and concentrates	cwt.	5,916,685	4,577,737	4,139,114	4,593,203	4,906,129	6,253,633
Copper	..	21,555	37,803	24,034	12,470	3,822	19,615
Iron and steel	..	5,634,878	2,619,629	2,500,707	1,323,709	1,215,563	1,207,165
Lead, pig	..	4,099,919	2,255,410	2,549,002	2,441,452	2,145,618	2,136,335
Zinc—bars, blocks, slabs, ingots	..	802,630	500,297	700,584	788,417	640,668	619,331
Tin—ingots	..	29,431	14	1	13	..	3,102
Timber, undressed, including logs (b)	sup. ft.	77,833,352	23,813,186	24,794,384	20,354,842	29,345,644	28,620,376
Soap	cntl.	49,871	23,599	37,619	59,518	107,021	104,848

(a) Excludes Infants' and Invalids' Foods (essentially of Milk) included for previous years.

(b) Excludes undressed timber not measured in super. feet.

(ii) *Values.* The values of the principal articles of Australian produce exported during the years 1947-48 to 1951-52 compared with the year 1938-39 are shown in the following table:—

EXPORTS OF PRINCIPAL ARTICLES OF AUSTRALIAN PRODUCE: VALUES,  
AUSTRALIA.

(£'000.)

Article.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Butter .. .. .	12,892	20,629	23,806	24,670	18,469	4,593
Cheese .. .. .	1,074	3,253	4,097	4,145	4,025	4,064
Eggs in shell .. .. .	638	1,575	2,360	2,949	1,893	2,364
Honey .. .. .	14	579	1,217	814	293	706
Fish .. .. .	10	266	835	638	1,033	1,222
Meats .. .. .	11,777	22,583	29,761	34,960	30,390	35,480
Milk and cream .. .. .	791	(a) 4,608	(a) 5,547	(a) 6,627	(a) 6,419	(a) 7,609
Fruits—						
Dried .. .. .	2,865	2,543	3,450	2,825	4,663	5,660
Fresh .. .. .	2,023	3,886	3,117	3,933	5,727	6,869
Preserved in liquid .. .. .	1,267	2,763	4,132	4,018	5,476	6,500
Breakfast foods .. .. .	31	1,424	1,689	870	508	986
Barley .. .. .	342	8,134	6,864	6,433	9,053	11,154
Oats .. .. .	19	3,942	6,161	2,303	3,529	8,001
Wheat .. .. .	8,735	52,813	64,705	62,173	74,151	55,237
Other unprepared grains .. .. .	41	1,351	442	1,317	2,686	1,851
Rice .. .. .	179	1,044	1,243	1,180	1,500	1,709
Flour .. .. .	4,540	31,823	33,721	26,333	32,894	33,018
Jams and jellies .. .. .	262	2,232	2,049	2,407	1,872	1,149
Sugar (cane) .. .. .	4,178	3,062	13,199	14,147	14,792	6,896
Vegetables, including pulse .. .. .	121	3,011	2,280	2,192	1,575	2,024
Wine .. .. .	981	1,430	992	514	634	726
Tobacco, manufactured .. .. .	225	138	187	170	175	249
Hides and skins .. .. .	4,095	12,347	12,205	15,150	27,198	17,114
Wool .. .. .	42,629	148,738	231,396	313,136	633,298	323,428
Pearl-shell .. .. .	244	409	607	624	486	370
Yarns .. .. .	446	1,363	1,065	713	1,229	884
Piece goods .. .. .	82	1,431	920	895	909	1,085
Apparel and attire .. .. .	115	1,286	1,192	791	528	565
Sandalwood .. .. .	42	36	36	46	81	83
Tallow (unrefined) .. .. .	483	462	965	1,574	1,322	729
Coal .. .. .	347	109	97	206	243	608
Ores and concentrates .. .. .	1,847	4,412	5,460	5,325	11,452	20,371
Copper .. .. .	16	220	147	61	38	335
Iron and steel .. .. .	2,238	2,556	2,571	1,591	1,500	2,179
Lead, pig .. .. .	4,267	10,909	16,349	12,521	15,755	20,720
Motor vehicles and parts .. .. .	117	315	332	583	531	821
Zinc—bars, blocks, slabs, ingots .. .. .	887	1,822	3,254	3,404	5,279	6,867
Tin, ingots .. .. .	370	..	..	1	..	152
Dynamo electrical machinery .. .. .	276	1,049	1,276	1,157	1,336	1,561
Machines and machinery (excluding dynamo electrical) .. .. .	470	4,774	4,317	3,806	4,695	6,891
Leather .. .. .	626	1,469	1,566	1,932	2,570	1,481
Timber, undressed, including logs (b) .. .. .	926	769	884	1,226	1,299	1,615
Drugs, chemicals and fertilizers .. .. .	718	3,144	2,787	2,887	4,672	5,046
Soap .. .. .	75	103	184	186	380	424
Arms, ammunition and explosives .. .. .	190	806	1,347	1,664	3,464	4,612
Gold .. .. .	14,959	3,831	4	1	..	6,989
Silver .. .. .	992	1,110	1,392	2,019	2,681	2,726
All other articles .. .. .	5,014	28,157	35,363	31,189	32,905	41,286
<b>Total Exports (Australian Produce)</b>	<b>135,476</b>	<b>404,716</b>	<b>537,570</b>	<b>608,462</b>	<b>975,614</b>	<b>667,059</b>

(a) Excludes Infants' and Invalids' Foods (essentially of Milk) included for previous years.  
(b) Excludes undressed timber not measured in super. feet.

5. **Imports of Merchandise, Specie and Bullion.**—The table hereunder shows the value of imports into Australia during each of the years 1947-48 to 1951-52 compared with the year 1938-39, grouped under the headings—Merchandise, and Specie and Bullion. The imports of merchandise are shown under the sub-headings of “free” and “dutiable” goods.

## IMPORTS OF MERCHANDISE, SPECIE AND BULLION : AUSTRALIA.

(£'000.)

Year.	Merchandise.			Specie and Bullion.	Total Imports.
	Free Goods.	Dutiable Goods.	Total Merchandise.		
1938-39 ..	46,358	66,859	113,217	3,537	116,754
1947-48 ..	143,894	194,191	338,085	1,661	339,746
1948-49 ..	179,203	234,853	414,056	1,138	415,194
1949-50 ..	239,145	296,979	536,124	1,945	538,069
1950-51 ..	366,229	375,149	741,378	2,493	743,871
1951-52 ..	554,959	494,792	1,049,751	3,672	1,053,423

6. Exports of Merchandise, Specie and Bullion.—The next table shows the recorded value of exports from Australia during the years 1947-48 to 1951-52 compared with the year 1938-39, grouped under the headings—Merchandise, and Specie and Bullion, showing the exports of Australian Produce and Other Produce separately :—

## EXPORTS OF MERCHANDISE, SPECIE AND BULLION : AUSTRALIA.

(£'000.)

Year.	Merchandise.			Specie and Bullion.			Total.
	Australian Produce.	Other Produce.	Total.	Australian Produce.	Other Produce.	Total.	
1938-39 ..	119,524	2,009	121,533	15,951	3,012	18,963	140,496
1947-48 ..	399,775	5,214	404,989	4,941	24	4,965	409,954
1948-49 ..	536,173	4,930	541,103	1,397	173	1,570	542,673
1949-50 ..	606,442	5,211	611,653	2,020	24	2,044	613,697
1950-51 ..	972,933	6,163	979,096	2,682	18	2,700	981,796
1951-52 ..	657,344	7,896	665,240	9,716	52	9,768	675,008

7. Imports in Tariff Divisions.—In the following table the imports into Australia during the years 1947-48 to 1951-52 compared with the year 1938-39 have been classified in accordance with the sixteen divisions of the Customs Tariff.

## IMPORTS CLASSIFIED ACCORDING TO DIVISIONS OF THE TARIFF : AUSTRALIA.

(£'000.)

Tariff Division.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
I. Ale, Spirits, and Beverages ..	1,042	1,087	1,327	1,591	2,184	3,283
II. Tobacco and Preparations thereof ..	2,125	7,726	9,186	12,405	16,370	18,640
III. Sugar ..	46	49	41	54	83	208
IV. Agricultural Products and Groceries ..	7,218	22,884	21,499	28,020	33,281	35,837
V. Textiles, Felts and Furs, and Manufactures thereof and Attire ..	18,150	81,430	94,889	99,056	121,169	179,826
VI. Metals and Machinery ..	25,272	44,869	80,103	138,554	196,347	287,311
VII. Oils, Paints and Varnishes ..	10,898	34,277	44,903	53,715	71,843	91,290
VIII. Earthenware, Cement, China, Glass and Stone ..	2,632	7,510	7,957	9,440	11,630	20,998
IX. Drugs and Chemicals ..	4,600	7,534	8,114	10,526	17,900	24,463
X. Wood, Wicker and Cane ..	2,411	4,480	8,251	9,692	19,068	33,538
XI. Jewellery and Fancy Goods ..	2,332	4,910	6,671	10,229	13,818	16,075
XII. Hides, Leather and Rubber ..	2,138	5,912	7,853	12,883	27,576	33,707
XIII. Paper and Stationery ..	7,370	20,117	20,072	17,749	28,577	68,514
XIV. Vehicles ..	10,560	23,760	41,817	79,611	84,838	96,884
XV. Musical Instruments ..	326	421	655	672	900	1,082
XVI. Miscellaneous ..	16,088	71,119	60,720	60,927	95,794	138,095
Total, Merchandise ..	113,217	338,085	414,056	536,124	741,378	1,049,751
Total, Specie and Bullion ..	3,537	1,661	1,138	1,945	2,493	3,672
Grand Total ..	116,754	339,746	415,194	538,069	743,871	1,053,423

8. Imports and Net Customs Revenue.—The percentage of net Customs revenue, omitting Primage, collected on the total value of all merchandise imported in each year was as follows :—1938-39, 21.9 per cent. ; 1947-48, 14.9 per cent. ; 1948-49, 14.0 per cent. ; 1949-50, 13.4 per cent. ; 1950-51, 11.3 per cent. ; and 1951-52, 10.0 per cent. Primage duty was in force during these years and if this is added to net Customs revenue the percentages become :—1938-39, 25.0 per cent. ; 1947-48, 17.0 per cent. ; 1948-49, 15.3 per cent. ; 1949-50, 14.5 per cent. ; 1950-51, 12.4 per cent. ; and 1951-52, 10.9 per cent. The percentages of net Customs revenue, omitting primage, on the total value of dutiable goods only were—1938-39, 37.1 per cent. ; 1947-48, 26.0 per cent. ; 1948-49, 24.7 per cent. ; 1949-50, 24.6 per cent. ; 1950-51, 22.4 per cent. ; and 1951-52, 21.1 per cent. The calculations are based on Australian currency values and on the assumption that the value of clearances approximated to the value of imports during the same period.

9. Protective and Revenue Customs Duties.—The value of goods cleared for Australian consumption classified under protective and revenue duties and the gross duty collected are shown in respect of the United Kingdom and other countries for each of the years 1937-38 to 1939-40 in Official Year Book No. 37, page 418. Information for later years is not available.

### § 10. Ships' Stores.

Prior to 1906, goods shipped in Australian ports on board oversea vessels as ships' stores were included in the general exports. From 1906, ships' stores have been specially recorded as such, and have been omitted from the export figures. The value of these stores shipped each year during the period 1943-44 to 1951-52 compared with 1938-39, with fuel oils separate, is shown in the following table :—

VALUE OF STORES SHIPPED ON OVERSEA VESSELS : AUSTRALIA.  
(£.)

Period.	Fuel Oils.	All Stores (including Fuel Oils).	Period.	Fuel Oils.	All Stores (including Fuel Oils).
1938-39..	606,515	2,105,619	1947-48 ..	2,551,736	5,599,945
1943-44 ..	6,078,800	8,478,714	1948-49 ..	3,839,986	7,814,722
1944-45 ..	8,229,307	11,373,252	1949-50 ..	3,169,374	7,580,959
1945-46 ..	2,849,156	6,331,657	1950-51 ..	4,635,486	9,358,022
1946-47 ..	1,684,502	4,506,599	1951-52 ..	5,532,415	10,477,911

In addition to fuel oils, the principal items of ships' stores supplied to oversea vessels in 1951-52 were :—Meats, £1,596,690 ; Fruit and Vegetables, £567,716 ; Bunker Coal, £246,258 ; Eggs, £176,825 ; Fish, £170,801 ; Oils, other than Fuel, £133,388 ; Butter, £128,785 ; Milk and Cream, £113,540 ; Rice, £109,125 ; and Flour (Wheaten), £100,091.

### § 11. Movement of Specie and Bullion.

1. Imports and Exports.—The following tables show the values of gold and silver specie and bullion, and of bronze specie imported into and exported from Australia during the years 1938-39 and 1947-48 to 1951-52.

IMPORTS AND EXPORTS. SPECIE AND BULLION : AUSTRALIA.  
(£.)

Item.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
<b>IMPORTS.</b>						
Gold—Specie ..	16,686	..	165	814	223	..
Bullion ..	3,439,322	1,643,606	1,108,506	1,922,045	2,457,994	3,259,400
Total ..	3,456,008	1,643,606	1,108,671	1,922,859	2,458,217	3,259,400
Silver—Specie ..	57,841	5,753	20,970	14,948	4,861	299,532
Bullion ..	22,963	11,502	8,769	6,953	29,342	44,047
Total ..	80,804	17,255	29,739	21,901	34,203	343,579
Bronze—Specie ..	224	13	..	..	6	69,313
Total ..	3,537,036	1,660,874	1,138,410	1,944,760	2,492,426	3,672,292

IMPORTS AND EXPORTS, SPECIE AND BULLION: AUSTRALIA—*continued.*  
(£.)

Item.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
<b>EXPORTS.</b>						
Gold—Specie ..	110,204	30	..	..	52	..
Bullion ..	17,843,088	3,830,908	4,281	1,301	294	6,989,188
Total ..	17,953,292	3,830,938	4,281	1,301	346	6,989,188
Silver—Specie ..	42,726	64,488	249,052	81,513	122,089	603,547
Bullion ..	966,716	1,069,956	1,281,500	1,960,574	2,577,263	2,174,267
Total ..	1,009,442	1,134,444	1,530,552	2,042,087	2,699,352	2,777,814
Bronze—Specie ..	278	126	34,856	175	404	1,060
Total—						
Australian Pro- duce ..	15,951,167	4,940,854	1,396,569	2,020,122	2,681,808	9,715,869
Other Produce ..	3,011,845	24,654	173,120	23,441	18,354	52,210
Grand Total ..	18,963,012	4,965,508	1,569,689	2,043,563	2,700,162	9,768,088

2. **Imports and Exports by Countries.**—The next table shows the imports and exports of specie and bullion from and to various countries during the year 1951-52:—

IMPORTS AND EXPORTS OF SPECIE AND BULLION BY COUNTRIES: AUSTRALIA.  
1951-52.  
(£.)

Country.	Imports.			Exports.		
	Specie.	Bullion.	Total.	Specie.	Bullion.	Total.
Australia (re-imported)	2,152	..	2,152	..	..	..
United Kingdom ..	366,586	28	366,614	23,520	2,242,334	2,265,854
Australian Territories—						
New Guinea ..	..	1,668,267	1,668,267	85,990	..	85,990
Papua ..	100	48,408	48,508	10,208	8	10,216
Canada ..	..	127	127	..	..	..
Hong Kong ..	..	46	46	..	18,986	18,986
New Zealand ..	..	853,299	853,299	32,105	..	32,105
Pacific Islands—						
Fiji ..	..	733,199	733,199	..	..	..
New Hebrides ..	..	..	..	38,210	..	38,210
Union of South Africa	..	47	47	..	..	..
Total British Countries ..	368,838	3,303,421	3,672,259	190,933	2,261,328	2,451,361
France ..	..	25	25	340,696	4,266,386	4,613,084
French Dependencies—						
New Caledonia ..	..	..	..	500	..	500
Netherlands ..	..	..	..	58,380	226,599	284,979
Switzerland ..	..	..	..	777	2,469,146	2,469,917
United States of America	7	1	8	8,247	..	8,247
Total Foreign Countries ..	7	20	33	414,600	6,992,127	7,316,727
Grand Total ..	368,845	3,303,447	3,672,292	604,633	9,163,455	9,768,088

### § 12. Exports according to Industries.

1. **Classification.**—The following table provides an analysis of the exports of Australian produce, according to the main classes of industry in which the goods were produced, for the years 1950-51 and 1951-52 in comparison with those for the years 1913 and 1938-39. The index-numbers based on the year 1913 show the variations in the



total recorded value only of exports in each industrial group, and have not been adjusted either for price changes or in accordance with the variation of the Australian £ in relation to sterling.

A graph is published on page 194 of this chapter which shows the value of exports of Australian produce according to industrial groups from 1910 onward.

**EXPORTS OF AUSTRALIAN PRODUCE ACCORDING TO INDUSTRIAL ORIGIN: VALUE.**

Industrial Group.	1913.(a)		1938-39.		1950-51.		1951-52.	
	£'000.	Index No.	£'000.	Index No.	£'000.	Index No.	£'000.	Index No.
Agriculture ..	10,678	100	26,361	247	100,930	1,507	145,381	1,362
Pastoral ..	42,057	100	59,115	141	691,049	1,643	374,832	891
Dairy and Farm-yard ..	3,855	100	15,640	406	36,147	938	25,926	673
Mines and Quarries <i>b</i> ..	21,926	100	23,984	109	49,156	224	65,546	299
Fisheries ..	425	100	288	68	1,746	411	2,010	473
Forestry ..	1,106	100	1,056	95	1,515	137	1,993	180
Total, Primary Produce ..	80,047	100	126,444	158	940,543	1,175	615,688	749
Manufacturing ..	2,305	100	8,650	375	48,638	2,110	58,270	2,528
Total ..	82,352	100	135,094	164	989,181	1,201	673,958	818

(a) Base Year. (b) Australian production of gold substituted for exports of gold each year.

2. **Relative Importance of Industrial Groups.**—In the previous table the value of commodities in each industrial group of exports of Australian produce is that recorded at the date of shipment from Australia, with the exception that the value of the production of gold in Australia in each year has been substituted in the Mines and Quarries group for actual shipments of gold in each year. This has been done to eliminate the exports of gold for monetary purposes. In order of importance the pastoral group occupied the highest place, representing, in 1913, 51.1 per cent. of the total exports, as compared with 43.7 per cent. in 1938-39, 69.8 per cent. in 1950-51 and 55.6 per cent. in 1951-52.

Exports of agricultural produce rank next in importance. From 13.0 per cent. of the total exports in 1913, agricultural produce increased to 19.5 per cent. in 1938-39. It represented 16.3 per cent. and 21.6 per cent. in 1950-51 and 1951-52 respectively.

According to value, exports of dairy and farmyard produce increased from 4.7 per cent. in 1913 to 11.6 per cent. in 1938-39, but declined to 3.6 per cent. in 1950-51 and to 3.8 per cent. in 1951-52. Though the products of mines and quarries declined seriously subsequently to the year 1913, a recovery was made in later years, the figures for 1938-39 representing 17.7 per cent., but in 1950-51 and 1951-52 the percentages were only 5.0 and 9.7 respectively. The manufacturing group of exports, which represented 2.8 per cent. in 1913, had increased to 6.4 per cent. in 1938-39 and to 15.7 per cent. in 1945-46. In 1950-51 this group represented 4.9 per cent. and in 1951-52 8.6 per cent.

**§ 13. Australian Index of Export Prices.**

1. **General.**—Over the past fifty years the exports of Australia have become increasingly diversified, but, although the proportion of highly manufactured exports has increased, it is still small in relation to total exports. Most of these exports still consist of basic products, such as wool, wheat, butter, etc.

2. **Historical.**—An annual index of export prices has been published by this Bureau since its inception.

The first index was compiled annually for the years 1901 to 1916-17. The method of computation was to select all those articles of export which were recorded by units of quantity, and to apply to the quantities of these export commodities actually exported during any year the average price per unit ruling in the year 1901 (adopted as the base year). The total value so obtained was divided into the total actual (recorded) value of these exports for that year. The quotient (multiplied by 1,000) thus obtained was the export price index-number for that year.

The method was changed in 1918. A weight for all principal exports was calculated on the average quantities of exports for the nineteen and a half years from 1st January, 1897 to 30th June, 1916. To these weights were applied the "average unit export values" of each export in successive years, and a weighted aggregative index of "price" variations was derived. It was published for the years 1897 to 1929-30, and particulars of this index were last published in Official Year Book No. 24, 1931, on page 147.

After the 1914-18 War, however, the relative importance of different exports changed considerably. In addition, the pattern of exports had become liable to vary considerably from year to year.

3. **Present Indexes.**—For the reasons just mentioned, two new series of monthly export price indexes—one using fixed weights, the other changing weights—were published in 1937, computed back to 1928. These are the only export price indexes now published.

The data on which both series are based differ from those utilized in the old series of annual index-numbers. The most important change was the use of actual (or calculated) export parities, based on actual price quotations, in place of the "unit-values" declared at the Customs.

The old index took no account of gold exports. The omission is natural and reasonable for countries which produce little or no gold. For gold-producing countries, although some exports of gold would be irrelevant (e.g., the Australian shipments of gold reserves during the depression), the exports of newly-produced gold should be taken into account. In the new series, therefore, gold is included, but the weight given to it is not the quantity exported but the quantity produced.

The two series are compiled monthly, and both relate to commodities which normally constitute about 80 per cent. of the total value of exports of merchandise and silver and gold production.

4. **Monthly Index (Fixed Weights).**—This is a weighted aggregative index of price variations. It was computed back to 1928, with that year taken as base. It is now usually published on the base—average of three years ended June, 1939 = 100.

The purpose of this index is to provide comparisons, over a limited number of years, of the level of prices of those commodities normally exported from Australia, making no allowance for any benefit or disadvantage accruing from variations during the period in the relative proportions of the different kinds of exports.

(a) *Weights.* The original weights (used for the period 1928 to 1936) were, in round figures, the average annual exports (or production, in the case of gold) during the five years 1928-29 to 1932-33.

From July, 1936 the weights were revised, and are now based on the average annual exports (production in the case of gold) during the three years 1933-34 to 1935-36. The break of continuity has been bridged by the usual method of splicing. Consideration is being given to adopting weights for a post-war period.

The weight adopted for wheat takes into account the wheat equivalent of flour exported, the weight allotted to greasy wool takes account of the greasy equivalent of scoured wool, tops, and wool on skins, whilst for some metals allowance is made for the metallic content of ores and concentrates exported.

The twenty items, together with the units of quantity and the weights or "quantity multipliers", are given in the following table.

EXPORT PRICE INDEX : COMMODITIES AND WEIGHTING SYSTEM.  
(FROM 1ST JULY, 1936.)

Item.	Unit of Quantity.	"Quantity Multipliers".	Percentage Distribution of Aggregative Value.			
			Base Period 1936-37 to 1938-39.		Year 1951-52.	
			Excluding Gold.	Including Gold.	Excluding Gold.	Including Gold.
Wool .. ..	lb.	975,000,000	49.05	45.63	55.89	54.37
Wheat (a) .. ..	Bushel	101,000,000	18.34	17.06	16.16	15.72
Butter .. ..	Cwt.	2,140,000	12.21	11.36	7.19	6.99
Metals—						
Silver .. ..	Oz.	7,300,000	0.68	0.64	0.52	0.50
	(standard)					
Copper .. ..	Ton	3,600	0.20	0.20	0.21	0.20
Tin .. ..	"	1,300	0.31	0.28	0.27	0.26
Zinc .. ..	"	99,000	2.05	1.90	3.96	3.86
Lead .. ..	"	208,500	4.10	3.81	7.07	6.88
Meats—						
Beef .. ..	lb.	182,000,000	2.56	2.38	1.74	1.69
Lamb .. ..	"	138,000,000	3.56	3.31	1.56	1.52
Mutton .. ..	"	44,000,000	0.58	0.54	0.23	0.22
Pork .. ..	"	16,000,000	0.43	0.40	0.26	0.25
Sugar .. ..	Ton	305,000	2.58	2.40	2.43	2.37
Dried Fruits—						
Sultanas .. ..	"	38,200	1.45	1.35	0.86	0.84
Lexias .. ..	"	3,000	0.12	0.11	0.07	0.07
Currants .. ..	"	13,400	0.37	0.35	0.25	0.24
Tallow .. ..	Cwt.	600,000	0.69	0.64	0.63	0.61
Hides—						
Cattle .. ..	lb.	28,000,000	0.64	0.59	0.63	0.62
Calf .. ..	"	1,800,000	0.08	0.07	0.07	0.07
Gold .. ..	Oz. (fine)	937,000	..	6.98	..	2.72
			100.00	100.00	100.00	100.00

(a) Includes "wheat equivalent" of flour.

The percentage distributions of the "Aggregative Values" shown in the foregoing table are of importance, firstly, as showing their variations from time to time as the result of differential price movements as between the various commodities, and secondly, as regards the effect on the indexes as a whole of the percentage price variations in each commodity.

(b) *Prices.* The adoption of current market prices (as distinct from the former average unit export values) in the present indexes permitted the use of standards for each commodity. All export parities are calculated from price quotations from the most reliable and representative sources available. In most cases, the prices used are those at which current sales are being effected. In recent years, however, great difficulty has been experienced in obtaining appropriate current market price data for some commodities. It has become impossible to adhere to a common principle. Actual (or calculated) export parities currently prevailing, priced at f.o.b. Australian ports, are still used whenever possible. However, since dual or multiple price systems have become operative for some exports, the prices used in the index for wheat (from July, 1945 to September, 1951) and for certain metals represent average actual realizations for current *shipments*. From October, 1951 the prices used for wheat are the estimated average realizations after weighting prices of quota and non-quota wheat. Notes on earlier prices used for wheat were given on pages 508 and 509 of Official Year Book No. 38-1951. Current market prices used for the main commodities are:—

- (i) the price for wool is a weighted average (based on clean scoured prices) of representative types at Sydney auctions, expressed in terms of pence per lb., greasy;

(ii) where contracts exist between the Australian and the United Kingdom Governments for certain commodities and when most of the exports of such items are sold at these rates, contract prices are used (e.g., meats, butter, dried fruits, tallow); and

(iii) for those metals which are at present not actually exported, Australian export parities are estimated on the basis of the prices ruling in London.

(c) *Index-numbers.* The following table shows export price index-numbers for Australia for individual commodities, groups of commodities, and all groups combined for each financial year from 1936-37 to 1951-52 and monthly for the year 1951-52.

### EXPORT PRICE INDEXES : AUSTRALIA.

SIMPLE AGGREGATIVE INDEX ; FIXED WEIGHTS.

INDIVIDUAL COMMODITIES, GROUPS OF COMMODITIES AND ALL GROUPS (COMBINED).

(Base of each section : Average of three years ended June, 1939 = 100.)

Period.	Wool.	Wheat.	Butter.	Metals. (a)	Meats. (b)	Sugar.	Dried Fruits. (c)	Tallow.	Hides. (d)	Gold. (e)	All Groups.	
											Ex- cluding Gold.	In- cluding Gold.
Percentage Dis- tribution of Base Aggregate— (f)	45.63	17.06	11.36	6.83	6.63	2.40	1.81	0.64	0.66	6.98	..	100.00
(g)	49.05	18.34	12.21	7.34	7.13	2.58	1.94	0.69	0.72	..	100.00	..
1936-37	122	123	92	120	98	104	103	122	113	99	116	115
1937-38	99	111	107	96	106	92	103	100	100	98	102	102
1938-39	79	66	101	84	96	104	94	78	87	103	82	83
1939-40	98	82	108	92	102	126	94	76	120	118	96	98
1940-41	101	102	110	95	103	137	95	82	98	121	103	104
1941-42	101	105	110	101	109	137	106	114	133	120	105	106
1942-43	117	106	114	100	112	152	112	119	145	119	114	114
1943-44	117	116	114	113	113	159	121	123	151	119	117	117
1944-45	117	154	147	129	122	172	128	151	147	120	130	130
1945-46	117	213	147	196	123	213	137	161	152	122	148	146
1946-47	173	305	173	308	139	264	152	361	334	122	209	203
1947-48	287	420	193	372	146	320	157	436	364	122	296	283
1948-49	365	413	233	478	171	343	162	499	421	122	348	332
1949-50	473	400	250	421	196	369	176	400	479	164	399	383
1950-51	999	432	271	689	209	410	226	356	752	176	690	654
1951-52	564	436	291	811	263	464	302	451	486	184	495	473
1951-52—												
July	(h) 717	449	291	842	237	426	303	354	616	176	572	544
August	551	452	291	842	237	426	303	354	521	176	490	468
September	498	445	291	862	237	426	303	354	541	176	465	445
October	686	432	291	869	271	426	303	483	575	176	559	532
November	603	432	291	835	271	426	303	483	566	176	515	492
December	581	432	291	860	271	426	303	483	561	189	506	484
January	566	432	291	825	271	501	303	483	531	193	498	477
February	520	432	291	827	271	501	303	483	451	196	475	456
March	460	432	291	817	273	501	300	483	378	193	445	427
April	475	432	291	799	273	501	300	483	398	187	451	432
May	543	432	291	711	273	501	300	483	346	184	477	457
June	566	432	291	641	273	501	300	483	343	186	483	463

(a) Non-Ferrous—silver, copper, tin, zinc, lead. (b) Beef, lamb, mutton, pork. (c) Sultanas, lexias, currants. (d) Cattle hides, calf skins. (e) The price used in the index since 14th December, 1951 is the price of Australian gold on overseas premium markets. (f) For "All Groups (including Gold)"—applicable from 1936-37. (g) For "All Groups (excluding Gold)"—applicable from 1936-37. (h) Nominal.

Reference to the group indexes in the table above will show the great increases and the wide dispersion of prices of export commodities in recent years. In particular, very great movements upwards and downwards have occurred in the price of wool in recent years. Similar, but less marked, movements have occurred in prices of metals and hides. Since wool is a predominant export (with 46 per cent. of the Base Aggregate of the index) fluctuations in wool prices obscure the movements affecting the other components in the All Groups index. For purposes of comparison they are shown separately below.

**RECENT TRENDS—EXPORT PRICE INDEX : WOOL AND "OTHER GROUPS".**  
*(Base of each section : Average of three years ended June, 1939 = 100.)*

Year ended June—	Wool.	Other Groups.	All Groups.	Month.	1950-51.			1951-52.		
					Wool.	Other Groups.	All Groups.	Wool.	Other Groups.	All Groups.
1937 ..	122	108	115	July ..	(a)592	333	451	(a)717	400	544
1938 ..	99	105	102	August ..	864	340	579	551	400	468
1939 ..	79	87	83	September ..	890	355	599	498	400	445
				October ..	890	360	602	686	403	532
1944 ..	117	118	117	November ..	965	366	639	603	398	492
1945 ..	117	141	130	December ..	973	366	643	581	403	484
1946 ..	117	171	146							
1947 ..	173	228	203	January ..	1,252	368	771	566	402	477
1948 ..	287	280	283	February ..	1,339	369	811	520	402	456
1949 ..	365	305	332	March ..	1,437	377	860	460	400	427
1950 ..	473	308	383	April ..	1,094	384	708	475	397	432
1951 ..	999	365	654	May ..	973	385	653	543	385	457
1952 ..	564	397	473	June ..	717	383	535	566	376	463

(a) Nominal.

5. **Monthly Index (Changing Weights).**—This series was designed for shorter period comparisons—from one or more months of the current year to the corresponding months of the previous year. It is compiled in such a way as to take closer account of the actual quantities of each article exported at current prices; and hence to indicate with rather greater accuracy the extent to which price movements have affected the actual value of our current exports.

For any given month, the procedure is to multiply the price of each commodity in that month, and its price in the corresponding month of the previous year, by the quantity exported during the given month. A comparison of the resulting aggregates gives one possible measure of the change in prices over the period; i.e., the change assuming that the proportions of the different kinds of exports whose prices are to be measured were the same as their proportions in the given month. Another possible measure is given by assuming that the proportions of the different kinds of exports in the given month had been the same as their proportions in the corresponding month of the previous year. Accordingly the first step in the procedure is repeated, substituting the quantities exported during the corresponding month of the previous year.

The index-numbers so obtained have been proved over a period of years to lie very close together. As it is convenient for practical reasons to have one single figure rather than two close alternatives the two index-numbers are multiplied together and the square root of the product extracted. This is taken to be the index-number for the month, the prices of the corresponding month of the previous year being taken as base.

The index-numbers for two or more months of one year, as compared with the corresponding period of the previous year, are computed in very much the same way. The process involves merely the cumulative addition of the aggregates computed for the individual months, and extraction of the index-numbers as explained above.

Index numbers computed on this basis are shown in the following table for the years 1950-51 and 1951-52 :—

**MONTHLY EXPORT PRICE INDEX (CHANGING WEIGHTS) : AUSTRALIA.**

*(Base : Weighted Average Price Level in corresponding months of preceding year = 100.)*

Month.	Month stated compared with same month of preceding year.				Period of trade year ending in month stated compared with same period of preceding year.			
	1950-51.		1951-52.		1950-51.		1951-52.	
	Ex-cluding Wool.	In-cluding Wool.	Ex-cluding Wool.	In-cluding Wool.	Ex-cluding Wool.	In-cluding Wool.	Ex-cluding Wool.	In-cluding Wool.
July ..	119	150	116	119	119	150	116	119
August ..	119	182	113	87	119	168	114	104
September ..	117	174	110	80	118	170	113	96
October ..	114	184	107	85	117	175	111	92
November ..	117	196	106	70	117	181	110	85
December ..	115	182	106	67	117	181	110	82
January ..	112	196	106	54	116	184	109	75
February ..	109	192	107	50	115	185	109	71
March ..	113	226	105	41	115	191	109	66
April ..	113	174	100	53	115	180	108	64
May ..	112	145	98	65	114	183	107	65
June ..	114	119	95	84	114	178	106	66

Monthly export price index-numbers are issued in the mimeographed publication *Monthly Index of Australian Export Prices*, in the *Monthly Review of Business Statistics* and in the *Quarterly Summary of Australian Statistics*.

### § 14. External Trade of Australia and other Countries.

1. **Essentials of Comparisons.**—Direct comparisons of the external trade of any two countries are possible only when the general conditions prevailing therein, and the system of record, are more or less identical. For example, in regard to the mere matter of record, it may be observed that in one country the value of imports may be the value at the port of shipment, while in another the cost of freight, insurance and charges may be added thereto. Again, the values of imports and exports in one may be declared by merchants, whereas in another they may be the official prices fixed from time to time by a commission constituted for the purpose. In later years, moreover, a very substantial difference in the value of imports would rise from the different methods of converting the moneys of foreign countries, i.e., from the application of current rates of exchange or of the mint par. Lastly, the figures relating to the external trade of any country are also affected in varying degree by the extent to which they include transit or re-export trade. This class of trade represents a much greater proportion of the trade of Switzerland and Belgium than that of other countries. France and the United Kingdom also re-export largely, whereas in Canada, Australia and New Zealand the same class of trade represents a comparatively small proportion of the total trade.

2. **"Special Trade" of Various Countries.**—In the following table the figures, which represent Australian currency values, relate as nearly as possible to imports entered for consumption in the various countries specified, and to exports of their domestic products. It is to be noted, however, that these figures do not invariably denote the same thing throughout, since, in the United Kingdom and other manufacturing countries, raw or partly manufactured materials are imported as for home consumption, and, after undergoing some process of manufacture or further modification, are re-exported as domestic production. Nevertheless, a comparison of this character reveals approximately the extent of the external trade which otherwise would not be manifest. The latest figures relating to foreign countries have been extracted from the publications of the United Nations and converted to Australian currency.

#### IMPORTS FOR HOME CONSUMPTION, AND EXPORTS OF DOMESTIC PRODUCTS (MERCHANDISE ONLY): VARIOUS COUNTRIES, 1951.

Country.	Trade (£A. Million).			Trade per Head of Population (£A.).		
	Imports.	Exports.	Total.	Imports.	Exports.	Total.
Australia .. ..	918.3	903.4	1,821.7	108.9	107.2	216.1
United Kingdom ..	4,730.5	3,231.1	7,961.6	935.7	639.1	1,574.8
Canada .. ..	1,736.1	1,684.2	3,420.3	124.0	120.2	244.2
Austria .. ..	296.1	203.4	499.5	42.8	29.4	72.2
Belgium .. ..	1,131.2	1,184.5	2,315.7	130.4	136.5	266.9
Denmark .. ..	452.9	374.8	827.7	105.2	87.1	192.3
Egypt .. ..	299.5	262.1	561.6	14.5	12.6	27.1
Finland .. ..	304.7	366.2	670.9	75.2	90.5	165.7
France .. ..	2,023.6	1,860.7	3,884.3	47.9	44.1	92.0
Germany, Fed. Republic	1,566.1	1,551.1	3,117.2	32.6	32.2	64.8
Italy .. ..	954.6	732.1	1,686.7	20.5	15.7	36.2
Netherlands .. ..	1,140.7	871.7	2,012.4	111.2	84.9	196.1
Norway .. ..	391.7	277.0	668.7	118.9	84.1	203.0
Portugal .. ..	148.3	118.1	266.4	17.3	13.7	31.0
Spain .. ..	24.1	28.9	53.0	0.9	1.0	1.9
Sweden .. ..	795.4	796.0	1,591.4	112.5	112.5	225.0
Switzerland .. ..	605.0	479.8	1,084.8	127.4	101.0	228.4
Turkey .. ..	180.2	140.8	321.0	8.6	6.7	15.3
United States of America	4,884.6	6,656.5	11,541.1	31.7	43.1	74.8

## § 15. Oversea Trade in Calendar Years.

For the purpose of comparison with countries which record oversea trade in calendar years the following table has been compiled to show Australian imports and exports for each quarter of the calendar years 1939 and 1948 to 1952 :—

## OVERSEA TRADE IN CALENDAR YEARS : AUSTRALIA.

( £'000.)

Year.	Merchandise.		Bullion and Specie.		Total.	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
QUARTER ENDED MARCH.						
1939.. ..	28,611	30,905	925	4,361	29,536	35,266
1948.. ..	86,409	119,521	392	218	86,801	119,739
1949.. ..	106,656	138,934	126	285	106,782	139,219
1950.. ..	142,137	179,299	672	843	142,809	180,142
1951.. ..	188,009	277,992	387	561	188,396	278,553
1952.. ..	305,620	186,389	853	4,016	306,473	190,405
QUARTER ENDED JUNE.						
1939.. ..	26,815	26,309	703	4,798	27,518	31,107
1948.. ..	95,011	125,468	457	259	95,468	125,727
1949.. ..	108,231	137,003	325	355	108,556	137,358
1950.. ..	153,792	174,933	317	630	154,109	175,563
1951.. ..	219,901	313,299	597	1,190	220,498	314,489
1952.. ..	211,740	163,303	2,036	4,504	213,776	167,807
QUARTER ENDED SEPTEMBER.						
1939.. ..	28,367	24,596	870	4,778	29,237	29,374
1948.. ..	102,536	121,645	146	513	102,682	122,158
1949.. ..	113,124	108,795	462	183	113,586	108,978
1950.. ..	171,514	133,587	1,140	453	172,654	134,040
1951.. ..	255,547	142,607	198	710	255,745	143,317
1952.. ..	131,720	148,919	946	6,030	132,666	154,949
QUARTER ENDED DECEMBER.						
1939.. ..	25,541	41,918	1,228	6,185	26,769	48,103
1948.. ..	96,633	143,521	541	416	97,174	143,937
1949.. ..	127,071	148,626	494	388	127,565	149,014
1950.. ..	161,954	254,288	369	426	162,323	254,714
1951.. ..	276,843	172,871	586	608	277,429	173,479
1952.. ..	118,736	252,344	1,082	1,810	119,818	254,154
TOTAL FOR YEAR.						
1939.. ..	109,334	123,728	3,726	20,122	113,060	143,850
1948.. ..	380,589	510,155	1,536	1,406	382,125	511,561
1949.. ..	455,082	533,358	1,407	1,211	456,489	534,569
1950.. ..	629,397	742,107	2,498	2,352	631,895	744,459
1951.. ..	940,300	906,769	1,768	3,069	942,068	909,838
1952.. ..	767,816	750,955	4,917	16,360	772,733	767,315

## § 16. Excise.

Although excise goods have no immediate bearing on oversea trade, the rates of excise duty are in some cases related to the import duty on similar goods. Moreover, as the Excise Acts are administered by the Department of Trade and Customs, it is convenient to publish here the quantities of Australian produce on which excise duty has been paid. Particulars of Customs and Excise Revenue are shown in Chapter XVII.—Public Finance. The following table shows the quantities of spirits, beer, tobacco, etc., on which excise duty was paid in Australia during the years 1947-48 to 1951-52 compared with the year 1938-39.

**QUANTITIES OF SPIRITS, BEER, TOBACCO, ETC., ON WHICH EXCISE DUTY WAS PAID : AUSTRALIA.**

Article.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
	proof gal.	proof gal.	proof gal.	proof gal.	proof gal.	proof gal.
Spirits -						
Brandy .. .. .	198,583	392,046	446,368	419,195	535,371	426,102
Gin .. .. .	269,118	598,660	603,817	495,552	606,346	473,933
Whisky .. .. .	157,708	426,426	466,984	568,373	623,999	548,101
Rum .. .. .	347,648	675,279	690,816	738,420	784,583	678,401
Liqueurs .. .. .	3,705	43,472	32,359	32,782	34,794	52,541
Spirits, n.e.i. .. .. .	170	765	4,548	679	163	73
Spirits for Industrial or Scientific purposes .. .. .	114,129	184,152	168,533	184,891	211,952	200,285
Spirits for Fortifying Wine .. .. .	770,997	2,289,580	2,463,758	2,433,373	3,651,938	3,124,032
Spirits for Making Vinegar .. .. .	17,965	58,675	63,345	74,133	63,543	54,169
	gal.	gal.	gal.	gal.	gal.	gal.
Amylic Alcohol and Fusel Oil .. .. .	23	3	1	45	58	50
	proof gal.	proof gal.	proof gal.	proof gal.	proof gal.	proof gal.
Spirits for the manufacture of Essences .. .. .	57,376	100,520	88,881	112,809	120,038	110,779
Spirits for the manufacture of Scents, etc. .. .. .	47,778	86,711	84,124	72,579	65,174	63,492
	gal.	gal.	gal.	gal.	gal.	gal.
Beer .. .. .	83,901,644	118,090,552	138,838,184	145,824,777	162,863,148	172,922,583
	lb.	lb.	lb.	lb.	lb.	lb.
Tobacco .. .. .	21,380,795	19,138,523	18,552,433	19,723,547	20,704,749	20,748,72
Cigars—Machine-made .. .. .	71,051	36,425	55,012	83,676	112,328	109,307
Hand-made .. .. .	187,486	123,337	111,467	92,683	68,417	54,541
Total, Cigars .. .. .	258,501	162,262	166,479	176,359	180,745	163,848
Cigarettes—Machine-made .. .. .	6,891,144	9,782,288	9,550,936	10,184,242	10,680,179	11,239,425
Hand-made .. .. .	114	..	..	..	..	4,804
Total, Cigarettes .. .. .	6,891,258	9,782,288	9,550,936	10,184,242	10,680,179	11,244,229
	60 papers or tubes.	60 papers or tubes.	60 papers or tubes.	60 papers or tubes.	60 papers or tubes.	60 papers or tubes.
Cigarette Tubes and Papers .. .. .	101,977,824	145,380,471	123,091,390	137,453,001	159,934,662	148,767,698
	gross of boxes.	gross of boxes.	gross of boxes.	gross of boxes.	gross of boxes.	gross of boxes.
Matches .. .. .	3,278,759	3,264,439	3,315,463	3,314,672	3,747,633	3,259,989
	gal.	gal.	gal.	gal.	gal.	gal.
Petrol .. .. .	27,878,012	56,301,529	64,095,876	75,605,070	86,491,522	96,523,558
	doz. packs.	doz. packs.	doz. packs.	doz. packs.	doz. packs.	doz. packs.
Playing Cards .. .. .	117,412	116,339	134,826	123,432	126,010	111,028
	lb.	lb.	lb.	lb.	lb.	lb.
Saccharin .. .. .	..	7,354	266	66	55	..

## § 17. The Australian Balance of Payments.\*

1. **General.**—Information regarding the Australian balance of payments has always been of peculiar importance in view of the marked effect which fluctuations in world trade tend to exercise on the level of activity of the Australian economy.

Comprehensive estimates of Australia's balance of payments will be found in *The Australian Balance of Payments 1928-29 to 1949-50*, which contains a full explanation of the principles on which the estimates are based and the techniques employed in their compilation. Continuous investigations are being conducted with a view to improving the methods of estimation employed, and further revisions to current estimates may be necessary as more refined techniques are adopted in the future.

\* See Appendix to this volume for more recent figures.



2. *Australia's Balance of Payments on Current Account, 1949-50 to 1951-52.*—The table on page 218 shows estimates of Australia's balance of payments on current account from 1949-50 to 1951-52.

In the immediate post-war years the balance of payments on current account, after recording a deficit of £48.3 million in 1946-47, improved to a small favourable balance of £3.6 million in 1947-48 and this was increased to a favourable balance of £31.3 million in 1948-49, due mainly to a favourable trade balance of £106.6 million in that year. In 1949-50 Australia's favourable trade balance fell to £55.0 million; freight and insurance payable on imports and investment income payable overseas increased by £22.7 million and £12.2 million respectively and, after allowing for minor fluctuations in other invisibles, the net result was an unfavourable balance on current account of £44.9 million.

In 1950-51 the favourable trade balance rose to £233.4 million, the highest figure ever recorded. The main movement in invisible credits was an increase of £4.3 million in expenditure by oversea ships in Australian ports. On the debit side there were increases of £28.7 million, £11.7 million and £8.0 million respectively in freight and insurance payable on imports, investment income payable overseas and government expenditure overseas on services. The value of debits in respect of donations and reparations fell by £9.9 million, owing mainly to the gift of £10.0 million to the United Kingdom in 1949-50. As a result of these movements and minor fluctuations in other items, a favourable balance on current account of £101.1 million was achieved in 1950-51.

In 1951-52 Australia's unfavourable balance of payments on current account was £589.0 million—a deterioration of £690.1 million compared with 1950-51.

The unfavourable balance on current account in the first half of 1951-52 was £316.7 million and, after further deterioration in January and February, the Commonwealth Government re-introduced import licensing for imports from all sources early in March, 1952. At that stage, licences were already necessary for purchases from the Dollar Area, Japan and a few other non-sterling countries, but all outstanding licences for imports from those countries were recalled during March, and some licences were subsequently cancelled. By June, 1952 the level of imports had fallen to £55.7 million compared with the peak of £114.4 million in January, 1952.

The sharp adverse movement in Australia's balance of payments on current account between 1950-51 and 1951-52 can be accounted for almost entirely by the decrease in exports and the increase in imports (including freight and insurance charges).

The value of exports in 1951-52 fell by £310.6 million or nearly one-third, compared with 1950-51.

The value of imports f.o.b. increased by £309.6 million in 1951-52 to the record level of £1,051.5 million—almost double the total in 1949-50. Freight and insurance charges on imports amounted to £152.9 million, or £55.6 million more than in 1950-51, and these charges accounted for most of the increase in the invisible deficit from £132.3 million in 1950-51 to £202.2 million in 1951-52. Increases of £8.7 million in government expenditure overseas on services and £7.4 million in debits in respect of donations and reparations also contributed to the increased invisible deficit between 1950-51 and 1951-52.

The value of exports increased by £282.2 million between 1949-50 and 1950-51 and then decreased by £310.6 million between 1950-51 and 1951-52. Both movements were mainly the result of variations in the level of wool exports, the recorded value of which rose by £320.2 million between 1949-50 and 1950-51 and then fell by £309.0 million to a value of £323.4 million in 1951-52.

Exports of most other commodities experienced moderate increases in value between 1949-50 and 1951-52. Exports of butter, however, fell from £24.7 million in 1949-50 to £4.4 million in 1951-52 and exports of wheat and flour, after rising from £88.5 million in 1949-50 to £107.0 million in 1950-51, fell to £88.3 million in 1951-52.

The Commonwealth Statistician's Export Price Index (excluding gold) which stood at 399 (wool 473) in 1949-50 rose to 690 (wool 999) in 1950-51 and fell to 495 (wool 564) in 1951-52. These movements in the overall index correspond quite closely with movements in the value of exports, indicating that there was very little significant variation in the volume of exports during the period.

There was a steady increase in the value of invisible credits over the period 1949-50 to 1951-52. The value of these items, which was £80.1 million in 1949-50, increased to £89.1 million in 1950-51 and to £96.1 million in 1951-52. Almost all items of invisible credits were affected by these increases.

The value of Australia's imports f.o.b. increased by £203.8 million between 1949-50 and 1950-51 and by £309.6 million between 1950-51 and 1951-52. The increases affected most classes of imports. The Australian import price index prepared by the Commonwealth Bank showed much smaller increases during this period (8 per cent. in 1949-50, 21 per cent. in 1950-51 and 11 per cent. in 1951-52), and it is evident that an increased volume of imports was responsible for most of the rise in the value of imports between 1949-50 and 1951-52.

**AUSTRALIA : BALANCE OF PAYMENTS ON CURRENT ACCOUNT.**  
(£A. million.)

	1949-50.	1950-51.	1951-52.
<b>CREDITS.</b>			
1. Exports, f.o.b. . . . .	593.1	975.3	664.7
2. Gold Production . . . . .	11.6	13.2	(a) 14.2
3. Transportation—			
(a) Freight earnings of Australian Ships . . . . .	1.4	1.5	1.5
(b) Expenditure by Oversea Ships in Australian Ports . . . . .	24.6	28.9	32.1
4. Foreign Travel . . . . .	26.0	30.4	33.6
5. Income from Investment—	4.1	3.4	3.4
(a) Direct Investment . . . . .	1.5	1.9	1.9
(b) Other . . . . .	5.9	6.9	7.3
6. Government Transactions—	7.4	8.8	9.2
(a) Recoveries from other Administrations, &c. . . . .	2.6	2.2	3.2
(b) Other . . . . .	3.2	3.8	3.3
7. Miscellaneous . . . . .	5.8	6.0	6.5
8. Donations and Reparations—	6.3	6.0	6.5
(a) Immigrants' Funds and Household Effects . . . . .	14.0	17.3	19.4
(b) Other . . . . .	4.9	4.0	3.3
9. TOTAL CREDITS . . . . .	18.9	21.3	22.7
	673.2	1,064.4	760.8
<b>DEBITS.</b>			
10. Imports, f.o.b. . . . .	538.1	741.9	1,051.5
11. Transportation—			
(a) Freight on Imports . . . . .	64.8	92.1	145.4
(b) Insurance on Imports . . . . .	3.8	5.2	7.5
(c) Expenditure by Australian Ships in Oversea Ports . . . . .	0.5	0.5	0.5
12. Foreign Travel . . . . .	69.1	97.8	153.4
13. Income from Investment—	12.2	12.3	14.0
(a) Public Authority Interest . . . . .	19.1	19.1	19.1
(b) Income from Direct Investment . . . . .	13.3	17.5	18.2
(c) Income from Portfolio Investment . . . . .	5.8	6.5	6.8
(d) Undistributed Income Accruing to Oversea Parent Companies . . . . .	16.3	23.1	25.0
14. Government Transactions—	54.5	66.2	69.1
(a) Public Authority Defence Expenditure . . . . .	2.9	9.0	13.0
(b) Other . . . . .	9.8	11.7	15.4
15. Miscellaneous . . . . .	12.7	20.7	28.4
16. Donations and Reparations—	11.2	14.0	15.6
(a) Gifts to United Kingdom . . . . .	10.0	..	..
(b) U.N.R.R.A., U.N.I.C.E.F., International Post-War Relief, etc., and Colombo Plan . . . . .	2.5	0.8	4.0
(c) Other . . . . .	7.8	9.6	13.8
17. TOTAL DEBITS . . . . .	20.3	10.4	17.8
	718.1	963.3	1,349.8
<b>BALANCE ON CURRENT ACCOUNT . . . . .</b>	<b>-44.9</b>	<b>101.1</b>	<b>-589.0</b>

(a) Includes gold sold on the premium market valued at the price obtained.

Almost all invisible debits showed increases over the period 1949-50 to 1951-52. The largest increases were recorded in freight and insurance payable on imports, investment income payable overseas, and government transactions.

The value of freight and insurance payable on imports, which was £68.6 million in 1949-50, rose to £97.3 million in 1950-51 and increased further to £152.9 million in 1951-52. These increases were due in part to increases in the tonnage of oversea cargo discharged, but were attributable mainly to increases in the level of freight rates.

Investment income payable overseas rose from £54.5 million in 1949-50 to £69.1 million in 1951-52. The major element in this increase was the increase of Undistributed Income accruing to Oversea Parent Companies from £16.3 million in 1949-50 to a tentative total of £25.0 million in 1951-52.

The value of Government expenditure overseas on services (excluding public authority interest payments and some other items of expenditure included in Items 15 and 16 in the table on page 220) rose from £12.7 million in 1949-50 to £28.4 million in 1951-52.

3. Australia's Balance of Payments on Capital Account, 1949-50 to 1951-52.—The table on page 220 sets out estimates of Australia's balance of payments on capital account from 1949-50 to 1951-52.

The balance of payments on capital account records the net changes in Australia's international assets and liabilities in each year. Theoretically, the balance of payments on current account and the balance of payments on capital account together constitute a complete system of accounts, on the double-entry principle, recording Australia's international transactions in each year, and the favourable (unfavourable) balance on current account should coincide with the net increase (decrease) in assets shown in capital account.

In practice, because of various imperfections in the estimates, it is necessary to introduce a "Balancing Item" (see item 22, table on page 220) in the capital account in order to make that account balance at the same figure as the current account.

This "Balancing Item" consists of errors in estimating the balance on current account, errors in estimating the other items in capital account and various capital account transactions which cannot yet be accurately measured. This last group is considered to be the most important component of the "Balancing Item", and in recent years is believed to consist mainly of various types of private capital movements.

The individual items in the table may be conveniently examined in groups.

Items 6 and 17 record transactions on capital account between Australia and the Joint Organization (Wool). The assets item consists of the share of Joint Organization profits on the sale of Australian wool accruing to Australia each year (less any disbursements of profits to Australia) and the liabilities item is the change in Joint Organization investments in Australia each year.

Items 7 and 19 record the payment of the increased Australian currency equivalent of the subscriptions to the International Monetary Fund and the International Bank for Reconstruction and Development following the devaluation of the Australian pound in September, 1949. Item 18 shows Australia's liability in respect of \$20 million purchased from the International Monetary Fund in 1949-50 and drawings of \$9 million in 1950-51 and \$56 million in 1951-52 under the \$100 million loan from the International Bank.

Item 13 shows the repayments of public authority debt overseas from 1949-50 to 1951-52. These repayments were substantial in 1949-50 and 1950-51, but fell to a much lower level in 1951-52.

Australia's international reserves increased by £391.3 million during 1949-50 and 1950-51 (see items 10, 11 in table on page 220) to reach the record level of £843.0 million at 30th June, 1951. A sharp decline occurred in 1951-52 and at 30th June, 1952 the level of international reserves had fallen to £361.9 million.

The main reason for the increase in international reserves in 1949-50 and 1950-51 may be found in a group of items (items 3, 4, 16, 20 (a) (ii), 20 (b) (ii), 21 and 22 in the table on page 220) which may be conveniently grouped as "private capital movements and balancing items". As mentioned above, the "balancing item" is believed to consist predominantly of private capital movements which cannot yet be measured.

The transactions included in this group of items resulted in net inflows of funds of £229.2 million in 1949-50 and £83.7 million in 1950-51. In 1951-52 a further net inflow of £32.8 million in respect of these transactions was recorded, offsetting to some extent the fall in international reserves from other causes.

Items 3, 4, 20 (a) (ii), 20 (b) (ii) and 21 are based on the results of a *Survey of Companies with Oversea Affiliations* which has been conducted annually by the Commonwealth Statistician since 1947-48. Only preliminary results are available as yet for 1951-52, but from the information available at present it seems likely that the net capital inflow located by the Survey for the three years 1949-50 to 1951-52 will be about £150 million.

The remaining items in capital account are of minor importance only.

**AUSTRALIA : BALANCE OF PAYMENTS ON CAPITAL ACCOUNT.**  
(£A. million.)

	1949-50.	1950-51.	1951-52.
INCREASE IN ASSETS.			
1. New Zealand Public Debt domiciled in Australia ..	— 0.3	— 0.8	..
2. Oversea Assets of National Debt Sinking Fund ..	..	..	..
3. Direct Investment Overseas—			
(a) Branches .. .. .	— 0.5	0.7	..
(b) Subsidiaries .. .. .	0.3	0.9	(b) — 1.5
4. Portfolio Investment Overseas .. .. .	— 0.4	— 0.3	..
5. Wool Credits to Czechoslovakia .. .. .	..	0.6	..
6. Investment in Joint Organization, etc. .. .. .	— 6.4	— 11.6	— 31.1
7. Subscription to I.M.F. and I.B.R.D. .. .. .	31.0	..	..
8. Other Government Transactions .. .. .	..	1.7	4.4
9. Commonwealth and State Government Bank Balances held Overseas with Trading Banks .. .. .	..	0.5	0.3
10. Monetary Gold Holdings .. .. .	(a) 0.5	4.6	6.3
11. Foreign Exchange Holdings .. .. .	(a) 185.2	188.3	(a) — 470.3
12. TOTAL INCREASE IN ASSETS .. .. .	210.0	182.8	— 491.9
INCREASE IN LIABILITIES.			
13. Public Authority Debt—			
(a) Commonwealth—Long-term .. .. .	— 4.8	— 1.9	— 0.6
(b) Commonwealth—Short-term .. .. .	— 0.3	— 0.3	— 0.3
(c) States—Long-term .. .. .	— 19.0	— 17.7	— 1.0
(d) States—Short-term .. .. .	..	..	..
(e) Local Authorities .. .. .	— 5.9	— 0.7	— 0.4
14. Increase (—) in marketable Australian Securities held in London by the Commonwealth Bank .. .. .	..	..	..
15. Discounts and Cash Bonuses on the Conversion of Public Debt .. .. .	..	..	..
16. Australian Currency Holdings of Foreign Banks and Governments .. .. .	46.6	— 4.0	— 35.7
17. Joint Organization Investments, etc., in Australia .. .. .	0.1	— 9.8	— 31.8
18. Dollars received from I.M.F. and I.B.R.D. .. .. .	8.9	4.0	24.9
19. Other transactions with I.M.F. and I.B.R.D. .. .. .	31.0	..	..
20. Direct Investment in Australia—			
(a) Branches—			
(i) Unremitted Profits .. .. .	7.5	8.0	(b) 7.0
(ii) Other .. .. .	12.5	8.2	(b) 5.0
(b) Subsidiaries—			
(i) Undistributed Income .. .. .	8.8	15.1	(b) 18.0
(ii) Other .. .. .	37.7	27.2	(b) 49.0
21. Portfolio Investment in Australia .. .. .	1.8	3.8	(b) 4.0
22. Balancing Item .. .. .	130.0	49.8	59.0
23. TOTAL INCREASE IN LIABILITIES .. .. .	254.9	81.7	97.1
24. NET INCREASE IN ASSETS .. .. .	— 44.9	101.1	— 589.0

(a) Excludes movements due to revaluation of holdings following devaluation of the Australian pound in September, 1949 and to adjustments of an accounting nature during 1951-52 which were not related to balance of payments transactions. (b) Provisional estimates only.

NOTE.—Minus sign (—) denotes decrease.

4. Australia's Balance of Payments on Current Account—Various Countries and Monetary Areas, 1949-50 to 1951-52.—The overall improvement in Australia's balance of payments on current account between 1949-50 and 1950-51 was £146.0 million. The table below shows that this improvement was concentrated mainly in the balance of payments with the dollar area and with those countries which are members of the Organization for European Economic Co-operation. In addition, there was a less important improvement in the balance with "other" Other Non-sterling countries, but an increased deficit was recorded in the balance with the sterling area.

Between 1950-51 and 1951-52 there was a substantial deterioration in the balance of payments on current account and from the table below it will be seen that this adverse movement affected the balances on current account with all the countries and areas shown in the table.

Of the total deterioration in the current balance of £690.1 million between 1950-51 and 1951-52, £249.6 million was in respect of sterling area countries, £155.2 million in respect of dollar area countries, £190.2 million in respect of member countries of the Organization for European Economic Co-operation and £96.1 million in respect of "other" Other Non-sterling countries. However, there was an increase of £1.0 million in the value of current gold production between the two years.

**AUSTRALIA : BALANCE OF PAYMENTS ON CURRENT ACCOUNT, VARIOUS COUNTRIES AND MONETARY AREAS.**

(Minus (—) denotes debit ; other items are credits.)

(£A. million.)

	Gold Production.	Sterling Area.		Dollar Area.			Other Non-Sterling.		Total.
		United Kingdom.	Other.	U.S.A.	Canada.	Other.	O.E.E.C.	Other.	
1949-50.									
Exports, f.o.b.	..	217.7	110.8	49.7	9.0	2.6	130.4	72.9	593.1
Imports, f.o.b.	..	-286.3	-82.9	-55.2	-13.7	-0.2	-50.1	-49.7	538.1
Invisibles (net)	11.6	-60.7	6.0	-22.1	3.0	0.1	4.2	15.4	99.9
		-129.3	21.9	-27.6	-7.7	2.3	76.1	7.8	
Balance on Current Account	11.6	-107.4		-33.0			83.9		44.9
1950-51.									
Exports, f.o.b.	..	316.6	108.7	149.0	17.2	4.1	252.7	127.0	975.3
Imports, f.o.b.	..	-356.7	-127.5	-61.6	-17.0	-0.1	-99.9	-79.1	741.9
Invisibles (net)	13.2	-67.9	18.5	-25.5	5.1	-0.1	7.3	21.1	132.3
		-108.0	37.3	61.9	4.9	3.9	145.5	26.8	
Balance on Current Account	13.2	-145.3		60.9			172.3		101.1
1951-52.									
Exports, f.o.b.	..	208.6	127.9	77.4	9.1	2.6	165.3	73.8	664.7
Imports, f.o.b.	..	-466.6	-145.7	-109.6	-23.6	1.5	-189.2	-115.3	1,051.5
Invisibles (net)	14.2	-89.3	29.8	40.2	7.7	0.8	20.8	27.8	202.2
		-347.3	47.6	72.4	22.2	0.3	44.7	69.3	
Balance on Current Account	14.2	-394.9		-94.3			-114.0		589.0

5. *Australia's Balance of Payments with the Dollar Area, 1949-50 to 1951-52.*—The estimates of the balance of payments with the dollar area included in the previous table are on a purely geographic basis. The more detailed estimates shown in the table on page 223 include the trade statistics and invisible items included in the former table, but also included in "Other Items (net)" (see item 16 in the table on page 223) are several items which make allowance for the fact that not all Australian transactions with the dollar area involve dollar receipts or payments, and that some dollar receipts and payments are involved in Australian transactions with countries outside the dollar area and with international bodies.

Principal among these transactions are receipts of dollars for exports to non-dollar countries (e.g., sales of gold on premium markets); imports of dollar area origin for which payment in dollars is not required (these are included in item 2 and an offset is necessary); interest payments to sterling area holders of Australian dollar bonds (included in total dollar interest payments in item 13); dollar payments to international bodies; and the difference between the estimated dollar component of Australia's imports of petroleum products from all sources and the estimated c.i.f. value of her direct imports of petroleum products from the dollar area.

The statistics in the table are presented in United States dollars.

Australia's estimated net drawings from the Sterling Area Dollar Pool were only \$2 million in 1949-50 and in 1950-51 a net contribution of \$97 million was made to the Pool. In 1951-52, however, Australia's estimated net drawings from the Pool amounted to \$133 million.

The main reason for the sharp deterioration in the dollar balance of payments between 1950-51 and 1951-52 was the adverse movement in the balance of trade with the dollar area from \$205 million in 1950-51 to *minus* \$102 million in 1951-52. This adverse movement of \$307 million was offset to some extent by a small reduction in the negative invisible balance, increased receipts in 1951-52 under the \$100 million loan from the International Bank for Reconstruction and Development, and the halting in 1951-52 of the apparent net outflow of private capital which occurred in the previous year.

The value of exports to the United States and Canada decreased by \$178 million between 1950-51 and 1951-52. This decrease was mainly attributable to a decrease of \$182 million in the value of wool exports to those countries.

The value of imports from the United States of America and Canada rose from \$176 million f.o.b. in 1950-51 to \$298 million f.o.b. in 1951-52. Imports of goods purchased under the \$100 million loan from the International Bank for Reconstruction and Development increased from \$12 million in 1950-51 to \$35 million in 1951-52.

The negative invisible balance with the dollar area fell from *minus* \$96 million in 1950-51 to *minus* \$83 million in 1951-52. An increase of \$38.1 million in freight charges on imports was more than offset by an improvement of \$52.6 million in "Other Items (net)" (item 16). The composition of item 16 has been commented on above.

Private capital movements between Australia and the dollar area are included in "Investment Account" in the table (see items 21 and 22). After an apparent net private capital inflow of \$67 million in 1949-50, an outflow of \$54 million was recorded in 1950-51. In 1951-52 net private capital movements were nil.

The final section of the table shows how Australia's dollar surplus or deficit in each year was financed. After taking into account dollars received from international financial institutions, sales of gold to the United Kingdom and movements in Australia's dollar

balances, Australia's transactions with the Sterling Area Dollar Pool showed an estimated improvement of \$99 million between 1949-50 and 1950-51, followed, however, by an estimated deterioration of \$230 million between 1950-51 and 1951-52.

**AUSTRALIA : BALANCE OF PAYMENTS WITH THE DOLLAR AREA (UNITED STATES DOLLARS).**

(Credit Items +, Debit Items -.)

	1949-50.	1950-51.	1951-52.
	United States \$million.	United States \$million.	United States \$million.
<b>CURRENT ACCOUNT.</b>			
<b>Merchandise Trade.</b>			
1. Merchandise exports, f.o.b., to United States of America and Canada	+ 137	+ 372	+ 194
2. Merchandise imports, f.o.b., from United States of America and Canada	- 173	- 176	- 295
3. Trade balance with United States of America and Canada	- 36	+ 196	- 104
4. Trade balance with other American account countries	+ 5	+ 9	+ 2
5. Trade balance with the Dollar Area	- 31	+ 205	- 102
<b>Other Current Transactions.</b>			
6. Freight on imports	-24.3	-22.1	-60.2
7. Insurance on imports	- 1.9	- 1.7	- 2.4
8. Expenditure by Australian travellers	- 2.6	- 2.8	- 2.8
9. Expenses of Australian companies in North America	- 4.3	- 5.0	- 4.2
10. Film remittances	- 3.6	- 3.9	- 5.8
11. Profits and dividends remitted	- 8.2	- 8.8	- 7.4
12. Undistributed income accruing to companies incorporated in dollar area	-11.1	-18.6	-21.7
13. Public authority interest payments	- 9.1	- 8.5	- 8.1
14. Other miscellaneous debits	- 6.5	- 7.4	- 8.1
15. Miscellaneous credits	+ 8.7	+ 9.5	+11.0
16. Other items (net)	-21.1	-26.3	+26.3
17. Invisible balance with the Dollar Area	- 84	- 96	- 83
18. Balance on current account (5 + 17)	- 115	+ 109	- 185
<b>INVESTMENT ACCOUNT.</b>			
19. Increase in debt of public authorities	- 11	- 3	- 3
20. Undistributed income (see item 12)	+ 11	+ 19	+ 22
21. Identified private capital inflow	+ 22	+ 25	(a) + 45
22. Balancing item	+ 45	- 79	- 45
23. Balance on Investment Account	+ 67	- 38	+ 19
24. Dollar Surplus or Deficit (18 + 23)	- 48	+ 71	- 166
<b>DOLLAR FINANCING.</b>			
25. Dollar purchases from I.M.F.	+ 20		
26. Dollar loans from I.B.R.D.		+ 9	+ 56
27. Gold sales to United Kingdom	+ 30	+ 21	
28. Estimated dollar drawings from (+) or contributions to (-) Sterling Area Dollar Pool	+ 2	- 97	+ 133
29. Movement in Australian dollar balances (increase -)	- 4	- 4	- 23
30. Total	+ 48	- 71	+ 166

(a) Provisional estimate only.

### § 18. Interstate Trade.

Prior to the federation of the Australian Colonies (now States), each Colony published statistics of its trade with the other Colonies. A similar record was continued by the Commonwealth Government under the provisions of the Constitution (Section 93). On the expiry of the "book-keeping" period, these records were discontinued as from 13th September, 1910, and the latest published statements were for the year 1909. Later, the Governments of Western Australia and Tasmania revived the records, and relevant statistics are available again for those States.

At the Conference of Statisticians held in January, 1928 it was resolved that efforts should be made in other States to record the interstate movement of certain principal commodities.

The Government Statist for South Australia publishes some figures for that State, made up from the records of Western Australia and Tasmania and from various other sources. Since February, 1940 statistics in some detail have been collected by the Government Statistician of Queensland. The statistics of interstate trade for New South Wales and Victoria are very meagre. The Melbourne Harbour Trust publishes, in its annual report, the quantities of various commodities of interstate trade loaded and discharged in the Port of Melbourne. The trade with individual States is not disclosed.



## CHAPTER VII.

## THE TERRITORIES OF AUSTRALIA.

NOTE.—The Territories under the control of Australia are : The Northern Territory ; the Australian Capital Territory ; Norfolk Island ; Papua (formerly British New Guinea) ; the Territory of New Guinea (under Trusteeship Agreement with the United Nations) ; Nauru (under Trusteeship Agreement with the United Nations) ; Heard and McDonald Islands and Macquarie Island ; the Australian Antarctic Territory ; and the Territory of Ashmore and Cartier Islands. Information on all except the Australian Antarctic Territory and Ashmore and Cartier Islands is contained in the following pages, and details of the acquisition of all the Territories will be found on pp. 5-7 of this issue.

## THE NORTHERN TERRITORY.

## § 1. Area and Population.

1. **Area.**—Upon the extension of New South Wales westward to the 129th meridian in 1825, the Northern Territory was incorporated in that colony, but in 1863 was annexed by Royal Letters Patent to the province of South Australia. With the adjacent islands, it was transferred to the Commonwealth on 1st January, 1911. The total area is 523,620 square miles, or 335,116,800 acres—about six times as large as Victoria.

2. **Population.**—(i) *Population excluding Full-blood Aborigines.* The white population of the Northern Territory increased slowly from 670 at the Census of 1881 to 3,767 in 1918. By 1921 it had decreased to 2,459, and in 1933 was only 3,306. At the Census of 1947 it had risen to 9,116, an increase of 176 per cent. on the 1933 figures.

Although at one time there were more than 4,000 Chinese in the Territory, at 30th June, 1947 there were only 250, these comprising the major proportion of the 388 full-blood non-European population, excluding Australian aborigines, at that date.

The half-caste population recorded at the Census of 1947 numbered 1,364, of whom 1,247 were half-caste Australian aborigines. Corresponding figures at the 1933 Census were, respectively, 800 and 743.

The total population at the Census of 30th June, 1947, excluding full-blood aborigines, was 7,378 males and 3,490 females, 10,868 persons.

The estimated population at 31st December in each of the years 1939 and 1948 to 1952 is shown in the following table:—

## NORTHERN TERRITORY : ESTIMATED POPULATION (EXCLUDING FULL-BLOOD ABORIGINES).

Particulars.	At 31st December—					
	1939.	1948.	1949.	1950.	1951.	1952.
Males .. ..	5,136	8,065	8,728	9,520	9,507	9,642
Females .. ..	2,151	4,429	5,122	5,611	6,020	6,242
Persons .. ..	7,287	12,494	13,850	15,131	15,527	15,884

(ii) *The Aborigines.* The total number of full-blood aborigines at 30th June, 1952 was estimated at 12,314, of whom approximately 3,080 (2,475 males and 605 females) were in regular employment. Part-aborigines who are subject to the Aborigines Ordinance numbered about 2,000. There are sixteen "aboriginal" reserves, comprising an area of approximately 67,733 square miles. (See also Chapter IX.—Population.)

## § 2. Legislation and Administration.

On 1st January, 1911 the Territory was transferred by South Australia to the Commonwealth. The terms are outlined in Official Year Book No. 15, p. 940. For particulars of the administration up to the Northern Territory (Administration) Act 1931, when it was placed in the hands of an Administrator, residing at Darwin, see Official Year Book No. 38 and earlier issues.

The Northern Territory (Administration) Act 1947 enabled the Northern Territory to set up a Legislative Council. The Council consists of the Administrator and seven official and six elected members who make ordinances for the Territory, which must be submitted to the Administrator for assent. The Administrator may, or may not, assent to them, or he may reserve them for the Governor-General. The Governor-General may also disallow any ordinance assented to by the Administrator within six months from the date of assent, and the operation of ordinances relating to certain land or pecuniary transactions or to aboriginal affairs are dependent on his approval. Money votes may be proposed in the Council only by the Administrator himself, or by his permission or direction.

The Territory elects a member to the House of Representatives, who was granted the right to take part in debates but not to vote, except on a motion for the disallowance of any ordinance of the Northern Territory or on any amendment of any such motion. However, the power of the Federal Parliament to disallow ordinances was repealed by the Northern Territory (Administration) Act 1947 referred to above.

## § 3. Physiography.

1. *Tropical Nature of the Country.*—The Territory is within the torrid zone, with the exception of a strip  $2\frac{1}{2}$  degrees wide which lies south of the Tropic of Capricorn.

2. *Contour and Physical Characteristics.*—The low flat coast-line seldom reaches a height of 100 feet. Sandy beaches and mud flats, thickly fringed with mangroves, prevail. Sandstone, marl and ironstone form the occasional cliffy headlands. The sea frontage of more than 1,000 miles is indented by bays and inlets and intersected by numerous rivers, many of which are navigable for considerable distances from their estuaries.

The principal features of the coast-line are enumerated in Official Year Book No. 1, p. 66; the rivers in No. 2, p. 76; the mountains in No. 3, p. 67; the lakes in No. 4, pp. 77, 78; the islands in No. 5, pp. 71, 72; and the mineral springs in No. 6, p. 65.

Inland, the country generally is destitute of conspicuous landmarks. From the coast there is a general rise southwards to the vicinity of the 17th or 18th parallel of south latitude, where the higher lands form the watershed between the rivers that flow northwards to the sea and those that form the scanty supply of the interior systems. Towards the centre of the continent the land over a wide area is of considerable elevation, and there are several mountain ranges, generally with an east and west trend.

#### § 4. Climate, Fauna and Flora.

1. **The Seasons.**—There are two main climatic divisions—the wet season, November to April, and the dry season, May to October, with uniform and regular changes of weather. Nearly the whole of the rainfall occurs in the summer months. Fuller particulars appear in Official Year Book No. 6, p. 1116.

2. **Fauna.**—The ordinary types of native Australian fauna inhabit the Territory. As elsewhere on the continent, the higher *Theria* are rare, but marsupials, birds, crocodiles, fresh-water tortoises, snakes (mostly non-venomous) and frogs abound. There are many varieties of fresh-water fish and littoral mollusca. Butterflies and beetles are strongly represented. The white ant is a pest, anthills in the Territory sometimes attaining great dimensions. Mosquitoes and sandflies are very troublesome, particularly in the wet season. Native fauna are in some cases protected. Buffalo formerly existed in large herds, but their number has been greatly reduced by indiscriminate shooting. Buffalo shooting is now controlled.

3. **Flora.**—The vegetation is North Australian in type, but a number of the forms belong to the Malayan and Oceanic regions. The timber trees are not of great commercial value, but in the coastal regions tropical vegetation grows luxuriantly to the water's edge. In the north, cypress pine, bloodwood and paperbark timbers are now cut and milled for local building purposes. These three timbers are resistant to termites. On the wide expanses of plain country in the interior there is little vegetation, the principal orders represented being:—*Euphorbiaceae*, *Compositae*, *Convolvulaceae*, *Rubiaceae*, *Godeniaceae*, *Leguminosae*, *Utricaceae*.

Fuller particulars regarding fauna and flora are given in Official Year Book No. 6, pp. 1116-7.

#### § 5. Production.

1. **Agriculture.**—Up to the present, agriculture has made little progress in the Territory, although it has been proved that rice, tobacco, coco-nuts, mangoes, bananas, cotton, various fodder plants, and peanuts can be successfully grown. Expense of harvesting is, at present, an obstacle to the economic production of rice, and until labour-saving machinery is procured it cannot be produced with profit. There is a large stretch of first-class coco-nut land on the coast, but hitherto planting has not been attempted on a commercial scale. For the encouragement of primary production a Primary Producers' Board was established in 1931. After the end of the 1939-45 War, returned servicemen and others began to grow, with some initial success, vegetables, fruit and other crops in the Darwin environs and as far south as Katherine. Vegetables grown were of consistently good quality and found ready local markets. In 1949 a group of Queensland farmers began an experiment in large-scale sorghum growing near Newcastle Waters, but the experiment has been unsuccessful in its early seasons.

During 1952 a Growers' Co-operative Market was established in Darwin, providing a regular supply of local fruit and vegetables. This venture is at present prospering. Bananas and beans in season have been supplied regularly to southern markets within the limits of aircraft backloading space. The 1952 peanut harvest was very profitable to most Daly River farmers but gave poor returns in the Katherine area. In June, 1952 field work began on Government experimental plots in the Darwin area and in January, 1953 an experimental base at Katherine was established. Pineapples, tobacco, rice, peanuts and grain sorghum are the main crops under trial. It has already been established that these crops can be grown successfully. The experiments aim at widening the soil range and investigating the possibilities of economic production.

2. **Pastoral Industry.**—The pastoral possibilities of certain parts of the Northern Territory were recognized at an early date, and in 1866 stock was brought into the Macdonnell Range country from South Australia. Six years later cattle were moved from Queensland to the northern parts of the Territory, and in 1879 Giles reached the Katherine River with 2,000 head of cattle and 12,000 sheep from South Australia. For various reasons sheep-raising did not succeed. The cattle industry, however, progressed steadily and development of stock routes and other plans for the expansion of the industry are continuing.

Cattle exported during 1951-52 numbered 84,108—40,459 to Queensland, 37,649 to South Australia, and 6,000 to Western Australia. Importations of live stock were :— bulls, 466; other cattle, 1,309; stallions, 10; other horses, 498; rams, 98; other sheep, 814; pigs, 30.

The estimated number of live stock in the Territory at the end of the years 1939 and 1947 to 1951 is given in the table hereunder :—

**NORTHERN TERRITORY : LIVE STOCK.**

31st December—	Horses.	Cattle.	Sheep.	Pigs.	Goats.	Camels.	Donkeys.	Mules.
1939 .. ..	32,721	922,581	38,587	483	20,335	331	1,443	366
1947 .. ..	32,318	991,429	19,058	680	15,260	193	1,232	632
1948 .. ..	33,197	1,052,811	25,791	384	14,045	173	1,192	609
1949 .. ..	32,904	1,048,875	25,725	419	12,102	165	935	466
1950 .. ..	29,366	1,019,149	28,888	1,122	12,329	94	918	603
1951 .. ..	32,519	1,057,906	30,935	794	10,520	98	1,180	603

3. **Hides and Skins.**—The number of hides and skins exported from the Northern Territory during 1951-52 was as follows :—buffalo, 13,333; sheep, 776; crocodile, 4,224; goat, 25; snake, 24; and horse, 218. In addition, a considerable number of kangaroo skins were exported, but details are not available.

4. **Mining.**—Alluvial gold digging in the Northern Territory commenced in 1869 and in 1881 maximum production was achieved when the yearly return was valued at £111,945. All of this production was confined to the northern part of the Territory. At present, Tennant Creek is the principal producer of gold. Three batteries are operated by companies. The Government-owned battery closed down at the end of 1951. This area is noted for its rich patches of ore. The Harts Range Mica Field continues to produce the bulk of the Australian high grade mica. Wolfram mining has increased since considerable rises in the price of wolfram concentrates occurred during late 1950 and early 1951. A Government-owned treatment plant is in operation at Hatches Creek. Tin concentrates were produced from the Maranboy Field, where a Government-owned battery is in operation.

The following table shows the value of mineral production for the years 1947 to 1951 compared with 1939 :—

**NORTHERN TERRITORY : MINERAL PRODUCTION.**

( £ )

Year.	Gold.	Tin Concentrates.	Ochre.	Copper Ore.	Mica.	Wolfram.	Tantalite.	Silver-lead.	Total Value all Minerals.
1939 .. ..	163,414	4,487	607	2,248	15,539	58,183	..	..	244,478
1947 .. ..	118,563	4,698	2,504	..	62,547	41,020	45	..	229,437
1948 .. ..	163,482	12,055	2,374	7,370	75,796	30,780	814	1,407	294,078
1949 .. ..	369,027	10,138	501	145,839	52,014	20,321	240	973	599,253
1950 .. ..	543,121	15,139	4,199	56,741	61,813	25,647	520	883	708,063
1951 .. ..	603,313	22,446	797	44,409	59,084	257,164	260	..	987,473

5. **Pearl and Other Fisheries.**—In 1884, mother-of-pearl-shell was discovered in the harbour of Port Darwin. Since that time the areas fished have extended to the various banks to seaward and coastwise along the Northern Territory coast. Production of shell has varied considerably, year by year, since the war, but since 1950 has shown a decided increase :—1948—49 tons, value, £19,400; 1949—40 tons, value, £18,000; 1950—40 tons, value, £20,000; 1951—86 tons, value, £60,200; 1952—116 tons, value, £63,800.

The 1953 season will be fished by eleven vessels against eight for 1952. The price of shell still remains high, £700 a ton for good grade shell being the average for 1952.

Darwin continues to provide a firm and ready market for fish, but supplies are somewhat irregular.

## § 6. Land Tenure.

1. **General.**—A description of the system of land tenure in force in the Territory in 1928 given in Chapter V.—Land Tenure and Settlement, Official Year Book No. 22 was revised in this section of the previous Year Book, pp. 329–30, and Chapter IV.—Land Tenure and Settlement of this issue contains statistical information on the subject.

Almost half the land in the Northern Territory is reserved, or unoccupied and unreserved, the remainder, apart from a very small proportion alienated, being held under various forms of lease and licence, which are described briefly below and in more detail in Official Year Book No. 39, pages 329–30.

2. **Pastoral, Agricultural, etc., Leases.**—*Pastoral Leases*—granted for periods not exceeding 42 years.

*Agricultural Leases*—granted in perpetuity, with area for any one lease limited according to type of farm (Cultivation Farms, Class 1, 1,280 acres, Class 2, 2,560 acres; Mixed Farming and Grazing, Class 1, 12,800 acres, Class 2, 38,400 acres).

*Leases of Town Lands*—except in Darwin, granted in perpetuity (in Darwin granted for periods up to 99 years).

*Miscellaneous Leases*—granted for any prescribed or approved purpose, for periods not exceeding 21 years.

*Grazing Licences*—granted to graze stock on Crown lands for periods not exceeding one year.

*Occupation Licences*—granted for manufacturing, industrial or any prescribed purposes, for periods not exceeding 5 years.

*Miscellaneous Licences*—granted for periods not exceeding 12 months.

*Leases to Aborigines*—granted for areas not exceeding 160 acres each for any period of years upon such terms and conditions as thought fit.

The foregoing leases and licences are granted at specified rentals or rentals fixed by the Administrator and subject to re-appraisal, and under various prescribed or specified conditions.

3. **Mining Leases, etc.**—*Holdings under Miners' Rights*—entitling holder, for a fee of 5s. for 12 months from date of issue, to occupy Crown lands for mining and to carry out works thereon.

*Gold-mining Leases*—granted for a period of 21 years, renewable for a further 21 years, for areas not exceeding 20 acres each, at an annual rent of 2s. per acre and with payment of a royalty of 3d. in the £1.

*Mineral Leases*—granted in blocks not exceeding 40 acres each, at an annual rent of 1s. per acre, with term and renewal and royalty as for gold-mining leases (payment of royalty temporarily suspended).

*Dredging Claims*—granted for gold or minerals claims, the area not exceeding 300 acres each, at an annual rent of 2s. per acre.

*Mineral Oil and Coal Licences*—granted to search for mineral oil and/or coal over an area not exceeding 1,000 square miles for a period of 5 years, at an annual fee of £10, with preferential rights to lease if payable quantities are discovered and a reward area also in respect of oil.

*Mineral Oil and Coal Leases*—granted for a period of 21 years, renewable for a further 21 years, for mining areas not exceeding 160 acres each for mineral oil and 640 acres for coal, at an annual rent of 1s. per acre, and royalty of 5 per cent. for oil and fixed by regulation in the case of coal.

*Business and Residence Areas*—granted at the prescribed fee, authorizing the holder to occupy on a gold or mineral field an area not exceeding one acre for residence and carrying on business (one-quarter of an acre if for residence only).

*Garden Areas*—granted under prescribed conditions, on a gold or mineral field for growing fruit or other garden produce, the area of each garden not exceeding 5 acres.

There are various conditions regarding working, employment and value of machinery used, which apply to the foregoing leases and licences.

### § 7. Trade, Transport and Communication.

1. **Trade.**—No record is kept of the trade between the States and the Territory. Direct oversea imports amounted to £34,000 in 1938-39. In the post-war years 1945-46 to 1948-49 they averaged about £200,000 a year, but in the three years 1949-50 to 1951-52 they have averaged about £700,000 a year. Direct oversea exports amounted to £13,000 in 1938-39 and are still relatively small—£35,000 in 1951-52.

2. **Shipping.**—The Territory is dependent for its shipping facilities on a visit every two months by a ship of the Australian Shipping Board from the eastern States and a monthly service from Western Australia by ships of the Western Australian State Shipping Service. An oversea tanker visits Darwin quarterly with supplies of aircraft fuel and other petroleum products. During the post-war years up to 1951-52 oversea and interstate shipping averaged about 30 entrances and 50,000 net tons a year. Figures for pre-war years were between two and three times greater.

3. **Air Services.**—Darwin, a first class international airport, is the first port of arrival in Australia for virtually all aircraft from Europe and Asia. Qantas Empire Airways Ltd. (under contract to the Commonwealth Government) operates, through Darwin, a Sydney-Singapore-London passenger and freight service; a Sydney-Hong Kong-Japan service; and a Sydney-Manila-Japan service. British Overseas Airways Corporation operates a London-Singapore-Sydney service, and Australian National Airways, in conjunction with Air-Ceylon, operates a service to London. Both these services call at Darwin. Regular inland services calling at Darwin are Trans-Australia Airlines (Adelaide-Darwin and Brisbane-Darwin), MacRobertson-Miller Aviation, which runs regular services between Darwin and Perth, and Darwin and Wyndham, and Connellan Airways, which operates services between Alice Springs, Wyndham, Borroloola, Katherine and the Queensland border. From Darwin the Aerial Medical Service operates two aircraft and the North Australian Airways local charter flights. An aero club with headquarters at the airport also operates.

4. **Railways.**—Under the agreement made between the Commonwealth and the State of South Australia for the transfer of the Northern Territory, which was ratified by the Northern Territory Acceptance Act 1910, the Commonwealth was to construct the Northern Territory portion of the transcontinental railway line (connecting Adelaide and Darwin via Port Augusta).

The northern line from Adelaide terminates at Alice Springs, about 192 miles north of the southern boundary of the Territory. The Commonwealth Government acquired, on 1st January, 1911, the property in the line from Port Augusta to Oodnadatta (478 miles), and on 1st January, 1926 the control thereof was transferred to the Commonwealth Railways Commissioner. The extension to Alice Springs (293 miles) was opened for traffic in 1929. The line from Darwin to Pine Creek, about 146 miles, was extended to Katherine River (200 miles from Darwin) in 1917, and as far as Birdum (316 miles from Darwin) in 1929.

The Clapp plan for the standardization of Australian railways recommended, *inter alia*, the construction of a standard gauge (4 ft. 8½ in.) strategic and developmental railway between Dajarra (Queensland) and Birdum, and the conversion to standard gauge of the Birdum-Darwin line, but not the conversion of the Port Augusta-Alice Springs line nor the construction of a 4 ft. 8½ in. line between Alice Springs and Birdum. Provision for both of the last two projects, however, was included in an agreement with South Australia enacted in 1949.

It was agreed by the Governments of the Commonwealth and South Australia in 1950 that a standard gauge railway from Stirling North to Leigh Creek coalfields (157 miles) should be constructed. This is now under construction and is regarded as the first step in the ultimate provision of a standard gauge railway between Port Augusta and Alice Springs.

5. **Roads.**—During the war, roads were built connecting Alice Springs with Darwin, and Mount Isa (Queensland) with Tennant Creek. The first of these roads, known as the North-South Road or Stuart Highway, is 954 miles long, and runs via Larrimah and Tennant Creek. The Mount Isa-Tennant Creek Road (Barkly Highway) is 403 miles long. Both were used extensively during the war, the Stuart Highway, in particular, experiencing very heavy and continuous traffic. Since the war, the Stuart Highway has been used continually as a means of transporting foodstuffs and other supplies to Darwin and northern centres, and is now the main route for overland tourists and travellers from the southern States to Darwin. Both roads have good water bores and communications.

6. **Posts, Telegraphs, Telephones and Wireless.**—Postal communication is maintained by road and rail transport between Darwin and the capital cities of Australia. In addition, the vessels belonging to the Western Australian State Shipping Service give a regular service between Fremantle and Darwin. Mail is also carried between the capital cities of Australia and Darwin by the airway companies operating in each State. Inland, the northern part of the Territory receives its mail via Darwin or by means of the aerial services, and the southern districts are served via Adelaide.

The transcontinental telegraph line, covering a length of 2,230 miles, runs in a northerly direction from Adelaide to Darwin, and provides telegraphic communication between Darwin and other parts of the world.

Long-distance telephone communication is established between Darwin and the other capital cities of Australia, and oversea telephone communication through Sydney is also available.

Regional national broadcasting stations are situated at Darwin and Alice Springs. The majority of homesteads on pastoral leases are equipped with pedal wireless sets operated under licence from the Postmaster-General's Department. These stations are in daily communication with Flying Doctor Bases situated at Alice Springs (Northern Territory), Wyndham (Western Australia) and Cloncurry (Queensland), and are used for transmission of radio-telegrams and other communications.

## § 8. Education.

1. **General.**—The South Australian Education Department provides teachers and determines the curriculum for all schools in the Northern Territory with the exception of pre-school kindergartens and schools for full-blood aboriginal children. An officer of the South Australian Education Department is on loan to the Northern Territory Administration. This officer, designated the Assistant Supervisor of Education, Northern Territory Schools, works in close co-operation with the Administration.

The number of teachers at 30th June, 1952 in schools catering for white and part-aboriginal children was 42, all officers of the South Australian Education Department.

The number of pupils under instruction in departmental schools on 30th June, 1952 was 1,250, of whom 1,118 were in the primary section, while the number of children in convent schools at 30th June, 1952 was 381, including 23 post-primary pupils.

Facilities have been provided in schools at Alice Springs and Darwin for instruction to Leaving (Matriculation) standard in general and commercial courses. Students sit for the examinations (Intermediate and Leaving) of the Public Examination Board, University of Adelaide. Six exhibitions are offered annually on the results of the Intermediate examinations. These exhibitions carry a subsistence allowance of £50 a year, £5 for books, and return fares between home and school once a year, and are tenable for two years at any approved secondary school in Australia.

New schools are under construction at Darwin and Alice Springs. The school in Darwin has been planned on tropical lines and will cater for 330 primary children. The total enrolment in the Darwin school on 30th June, 1952, was 640, including 90 secondary students. Consideration is being given to building a separate technical high school in Darwin, and a site has been set aside in the town plan for this purpose. Because of the scattered nature of Darwin, transport is provided for school children and more than 500 children are conveyed to school every day in government buses. At Alice Springs, 120 children are conveyed to and from school each day.

Alice Springs has established itself as the educational centre for a large part of the Northern Territory. One hundred and sixty children from outback areas are accommodated at hostels provided by Methodist, Church of England and Roman Catholic organizations. A boarding allowance of £40 a year for each child is paid by the Commonwealth Government to assist parents to keep their children at school, and the Government also makes a contribution towards children's return fares between home and school each term.

The construction of the new school at Alice Springs was commenced in August, 1952, and it is expected that the building will be ready for occupation by February, 1954.

The secondary block in this school will have practical rooms, including woodwork, sheet metalwork, domestic arts and a science laboratory. A fine library will also be provided.

For the year ended 30th June, 1952, 103 primary and 6 secondary pupils received instruction from the Correspondence School of South Australia.

A pre-school kindergarten is functioning at Alice Springs, and there are three centres in Darwin. Each kindergarten is paid a government subsidy of £350 per annum.

2. **School of the Air.**—The "School of the Air" was officially opened by the Administrator on 8th June, 1951. The school has an enrolment of 53 pupils, some of whom live 400 miles from Alice Springs. Five half-hour lessons are given each week from the studio in the Alice Springs school. A unique feature of this service is that children are able to converse with their teacher.

The programme of lessons includes stories and songs for the younger children; number, spelling and language lessons; health talks; appreciation of music and literature; social studies and a "Question and Answer" session.

3. **Native Education.**—At 30th June, 1952, there were 18 special schools for full-blood aboriginal children. These consisted of six Government schools, eleven mission schools and one private school. Eleven hundred and fifty children, or approximately one half of children of school age, were enrolled at these schools, and of this number about 70 per cent. attended the non-governmental schools.

The Commonwealth Government opened special schools at Bagot and Delissaville (near Darwin), Phillip Creek, Areyonga, Yuendumu and Alice Springs. Nine teachers were employed. The staff, curriculum and supervision of these schools are under the control of the Commonwealth Office of Education. The office has a Senior Education Officer in the Northern Territory who works in close association with the Native Affairs Branch as, at this stage, the education of full-bloods is linked more closely with the overall native welfare programme than with the normal school service.

In addition to child endowment the Commonwealth makes other direct payments to assist missions with their educational work. The advisory services of the Commonwealth Office of Education are now available to missions, and readers and other teaching aids produced especially for native children will be supplied to mission schools.



4. **Theoretical Training of Apprentices.**—The recognition that technical school training is an extension of workshop training has led to the introduction of day-time classes which apprentices attend without loss of pay. Apprentices are directed by the Apprentices Board to undertake correspondence courses conducted by the Technical Correspondence School of the South Australian Education Department and the Sydney Technical School, these courses covering the work prescribed for the various trades in South Australia and New South Wales.

### § 9. Finance.

Details of revenue and expenditure of the Territory for the year 1951-52 are shown below :—

#### NORTHERN TERRITORY : REVENUE AND EXPENDITURE, 1951-52.

(£.)

Revenue.		Expenditure.			
Item.	Amount.	Item.	Capital Works.	Other Services.	Total.
Taxation—		Public Debt Charges—			
Probate and Stamp Duties ..	6,201	Interest (a) ..	..	231,773	231,773
		Sinking Fund(a) ..	..	123,679	123,679
Business Undertakings—					
Railways—		Total ..	..	355,452	355,452
North Australia ..	48,929				
Central Australia ..	1,241,050	Business Undertakings—			
Postmaster-General's Department ..	166,533	Railways—			
Electricity Supply ..	139,572	North Australia ..	20,209	90,966	111,175
Total ..	1,596,084	Central Australia ..	133,699	1,178,320	1,312,019
		Postmaster-General's Department ..	4,144	181,093	185,237
Other—		Electricity Supply ..	..	280,064	280,064
Rent and Rates ..	101,263	Water Supply ..	..	56,151	56,151
Miscellaneous ..	167,536	Hostels Loss ..	..	29,185	29,185
Total ..	268,799	Total ..	158,052	1,815,779	1,973,831
		Social Expenditure—			
		Aboriginal Affairs ..	..	286,041	286,041
		Educational Services ..	..	75,870	75,870
		Public Health and Recreation ..	..	376,472	376,472
		Total ..	..	738,383	738,383
		All Other—			
		Territory Administrations ..	..	560,452	560,452
		Developmental Services ..	215,366	88,170	303,536
		Buildings, Works, Sites, etc. ..	974,058	..	974,058
		Plant and Equipment ..	91,651	..	91,651
		Municipal, Sanitary and Garbage Services ..	..	73,565	73,565
		Shipping Subsidy ..	..	3,800	3,800
		Airmail Service Subsidy ..	..	5,200	5,200
		Rent, Repairs and Maintenance ..	..	137,919	137,919
		Total ..	1,281,075	869,106	2,150,181
Grand Total ..	1,871,084	Grand Total ..	1,439,127	3,778,720	5,217,847

(a) Includes Railways Interest, £189,853, and Sinking Fund, £97,199.

The following table shows a summary of Northern Territory revenue and expenditure for the years 1938-39 and 1947-48 to 1951-52 :—

### NORTHERN TERRITORY : REVENUE AND EXPENDITURE.

(£.)

Item.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Revenue—						
Taxation .. .. .	6,375	3,314	4,951	7,185	9,307	6,201
Business Undertakings(a) ..	(b)224,001	576,505	886,361	1,032,194	1,108,238	1,596,084
Other .. .. .	49,346	124,867	132,660	163,591	190,246	268,799
Total .. .. .	279,722	704,686	1,023,972	1,202,970	1,307,791	1,871,084
Expenditure—						
Capital Works .. .. .	273,184	533,737	690,266	805,213	1,391,465	1,439,127
Other Services—						
Public Debt Charges .. .. .	407,304	378,566	356,201	353,024	354,434	355,452
Business Undertakings(a) ..	299,953	731,803	979,716	1,148,337	1,297,258	1,815,779
Social Expenditure .. .. .	35,014	204,122	269,950	367,477	530,208	738,383
All Other .. .. .	282,114	493,587	614,835	762,577	919,450	869,106
Total .. .. .	1,297,569	2,341,815	2,910,968	3,436,628	4,592,815	5,217,847

(a) Includes railways operating in the Northern Territory, included with "Other".

(b) Excludes electricity supply,

### AUSTRALIAN CAPITAL TERRITORY.

1. **Introductory.**—Information regarding the selection and establishment of Canberra as the Australian capital city, the physiography of the Territory and its early history will be found in previous issues of the Official Year Book—See List of Special Articles, etc., at the end of this volume under Canberra and Federal Capital City.

On 12th March, 1913 the official ceremony to mark the initiation of operations in connexion with the establishment of the Seat of Government was carried out. At this ceremony the selection of "Canberra" as the name of the capital city was announced.

On 9th May, 1927 Parliament House at Canberra was officially opened by His Royal Highness Albert, Duke of York—afterwards His Majesty King George VI.—the occasion being the 26th anniversary of the opening of the first Parliament of the Commonwealth at Melbourne by His Royal Highness George, Duke of Cornwall and York—afterwards His Majesty King George V.—on 9th May, 1901. (For particulars of the opening ceremony see Official Year Book No. 21, p. 604.)

The development of the Territory administration prior to the taking over of control by the Federal Capital Commission on 1st January, 1925 is described in summarized form in Official Year Book No. 18, and in Official Year Book No. 22 a summary is given of the administrative activities of the Federal Capital Commission. The administration of the Territory by this authority was continued until 30th April, 1930, when the Seat of Government (Administration) Act 1924-1929 was repealed, and the powers and functions of the Commission reverted to the Government.

Since April, 1932 the general control of the Territory has been exercised by the Minister for the Interior, certain specific services, however, being undertaken by the Department of Health, the Department of Works and Housing (title changed in 1952 to Department of Works), and the Attorney-General's Department.

An amendment to the Seat of Government Acceptance Act in 1938 provides that the Territory shall be known as the Australian Capital Territory.

2. **Progress of Work.**—(i) *General.* Since the resumption of general development in Canberra after interruption by the war when defence works only were carried out, the succeeding works programmes have been designed to overtake the lag and keep abreast of the current requirements, the demands of which have been abnormally enlarged by the expansion in Government business generally and the continuous implementation of the policy of gradual centralization of departmental head offices in the national capital. To accommodate the influx of personnel, expediency has necessitated erecting temporary houses, guest houses and offices while permanent buildings are being built.

During 1951–52 the total cost of the works programme amounted to approximately £5,625,000. Throughout this period a continual increase was experienced in costs of building operations caused by rising wages and costs of materials, and this was followed by curtailment of Canberra's works programme. A change in methods of contracting has eventuated, costs plus fixed fee contracts giving place to lump sum contracts.

The average combined labour forces of the Department of Works and contractors working for the Department during 1951–52 numbered 2,888 men.

(ii) *Works Programme.* (a) *Housing.* During 1951–52, 635 dwelling units were completed (532 built by contract and 103 by day labour), including 113 brick, 100 brick flats, 136 timber, and 281 prefabricated (203 Riley Newsum, 57 Monocrete, 21 Econo-Steel). Of the total units, 181 and 46, respectively, were built in the newly developed suburbs of O'Connor and Narrabundah, 150 in the longer established but recently extended suburbs of Ainslie (85) and Yarralumla (65), 50 each in the suburbs of Reid and Turner adjacent to Civic Centre, and the bulk of the remainder in the outlying suburbs of Harman (50), the R.A.N. station area, Duntroon (32), the Royal Military College area, and Fairbairn (23), the R.A.A.F. Station area. Four hundred and seventy-eight were built for the Department of the Interior, 119 for the Defence Forces, 19 for War Service Homes, 17 for the Australian National University and 2 for the Department of Works. At 30th June, 1952 there were 825 houses under construction in various projects.

(b) *Other Building.* Amongst major architectural projects completed during 1951–52 was a high tension laboratory for the Research School of Physical Sciences of the Australian National University. Major projects under construction for this institution included University House, a building designed to provide living quarters for staff and students, a workshop for medical research, a temporary library building and a permanent stores building. The Research School of Physical Sciences was nearing completion at the end of the year, and progress was made on the central Administrative Block for C.S.I.R.O. Foundations were laid for an annexe for the Australian National Library designed to provide further storage space for archives and records.

At 30th June, 1952 an infants' school at Narrabundah, commenced during November, 1951, was almost complete, and in February, 1952 work was begun at Turner on an infants' school which will have prefabricated aluminium classrooms.

Further progress was made on the permanent Administrative Building, where the basement and sub-basement of the whole building and about a third of "A" block had been completed at 30th June, 1952. During the year it was decided that work should be concentrated on completing "A" block and that work on "B" and "C" blocks would be temporarily suspended.

Extensions and additions to various hostels and to accommodation at the R.A.A.F. Station, Fairbairn, were carried out during 1951–52.

(c) *Engineering Works and Services.* During 1951-52, 15½ miles of subdivisional roads were constructed to serve newly built areas, bringing the length of city roads at 30th June, 1952 to 161 miles, comprising 3 miles of concrete, 83 miles bitumen paved and 75 miles of gravel. At the same date the length of city footpaths was 96 miles. Road maintenance work during 1951-52 included the resealing of country roads and of the taxiways and runways at the R.A.A.F. aerodrome, Fairbairn.

During 1951-52, 72,500 feet of water mains were laid to reticulate water services to new houses. At 30th June, 1952, 5,541 houses and buildings had been connected to the water supply system. The consumption rate for 1951-52 was 1,692 million gallons with an average daily consumption of about 4½ million gallons.

During the same period 72,000 feet of sewer mains were laid to connect newly built houses to the sewerage system and 5,260 houses and buildings had been connected to the sewerage system by 30th June, 1952.

Extensions to electricity low tension supply lines to service newly built houses in various areas were completed. Other electrical work included installations to the Research School of Physical Sciences, the conversion of sections of the city system to carry 11,000 volts, and extensiors connecting rural properties to the city power supply.

The maximum electricity demand at 30th June, 1952 was 10,650 kVA., 2,175 kVA. greater than at 30th June, 1951.

3. *Forestry.*—A considerable amount of reforestation work has been undertaken and plantations (mainly *Pinus radiata*) have been established at Uriarra, Mount Stromlo, Pierce's Creek, Green Hills and Kowen. Experimental plots have been established in the Brindabella mountains and soil conservation areas at various locations throughout the Territory.

The total area of softwood plantations at 30th June, 1952 was 15,000 acres, of which 13,000 acres were *Pinus radiata*, the balance consisting of other softwood species, chiefly *Pinus ponderosa* and *Pinus laricio*.

Forestry operations were begun on Mount Stromlo in 1915. Plantings up to 1925 were chiefly on aesthetic lines, but since then a much wider programme has been undertaken. Sawmill timber is now being obtained from the logs resulting from thinning operations and clear felling of mature plantations. The yearly output of sawmill logs has increased from 30,000 super. feet of softwood in 1930-31 to 13,200,000 super. feet log measure during 1951-52. This was made up of 8,900,000 super. feet from clear felling of mature pines and 4,300,000 super. feet from thinning operations on mature stands. Of the total production, 8,400,000 super. feet consisted of saw log timber, the balance of 4,800,000 super. feet consisting of case-making material. This was a record output, which was brought about partly by the necessity to convert fire-killed timber at Mount Stromlo, where about 600 acres were burnt by bush fires in February, 1952.

In 1926 a comprehensive review was undertaken of the Territory's potentialities for forest development. A system of forest management was instituted in the existing forest area, and a considerable amount of survey and assessment work has been completed, resulting in the extension of operations, including fire protection, to 100,000 acres of hardwood forests in the Cotter Catchment Area. Hardwood timber produced during the year ended June, 1952 amounted to 3,100,000 super. feet log measure (6,600,000 super. feet in 1950-51), all of which was used in building operations in Canberra.

4. *Lands.*—(i) *General.* Reference has been made in previous issues of the Official Year Book to the general conditions of land tenure in the Australian Capital Territory and to the area of alienated and leased land and Chapter IV.—Land Tenure and Settlement of this issue contains statistical information on the subject.

Under the Seat of Government (Administration) Act 1910, Crown lands in the Territory may not be sold or disposed of for any estate in freehold except in pursuance of some contract entered into before the commencement of that Act. Leases of land in the City Area are granted under the City Area Leases Ordinance 1936-1951, and leases of other lands under the Leases Ordinance 1918-1937. Land is also leased for various purposes in the City Area under the Church Lands Leases Ordinance 1924-1932 and the Leases (Special Purposes) Ordinance 1925-1943, and one lease under the Church of England Lands Ordinance 1926 has been granted for church purposes.

As considerable portions of the Territory lands are not required in connexion with the establishment of the city, large areas have been leased under special improvement conditions in regard to the extermination of noxious weeds and the destruction of rabbits and other pests. The lands are classified into three grades of agricultural and three grades of grazing land. Leases may be granted for grazing, fruitgrowing, horticulture, agriculture, residential, business, or other purposes for a period not exceeding 25 years. The annual rental is 4 per cent. of the assessed value of the land, including improvements which are the property of the Crown, plus the amount of rates payable. No person may hold under lease land of a greater value than £10,000, exclusive of the value of buildings and fences thereon.

Under the City Area Leases Ordinance 1936-1951 the Government may grant leases in the city area of any Crown land for business or residential purposes. Such leases may be issued for a period not exceeding 99 years at a rental equal to 5 per cent. of the unimproved value of the land, which value is subject to re-appraisal at the expiration of 20 years, and thereafter every 20 years. A suitable building must be commenced within 6 months and completed within 12 months unless an extension of time is allowed.

(ii) *Jervis Bay Territory.* The Commonwealth acquired from the State of New South Wales sovereign rights over the area comprising about 28 square miles of land and water at Jervis Bay for possible use as a port in connexion with the Australian Capital. The Royal Australian Naval College was established in this area on a site known as Captain's Point, but was removed in 1930 to Flinders Naval Base, Victoria. Leases have been granted over an area of about 13,000 acres in the Jervis Bay Territory.

5. **Transport and Communication.**—Canberra is connected with the railway system of New South Wales at Queanbeyan by a line  $4\frac{3}{4}$  miles long. This line was opened for goods traffic on 25th May, 1914, and for passenger traffic on 15th October, 1923. The railway terminus is situated in the suburb of Kingston. A daily passenger service operates each way between Canberra and Sydney and Canberra and Melbourne.

Two airline operators provide several services daily each way on the Sydney-Canberra-Melbourne route.

Regular motor-coach services link Canberra with towns in New South Wales, Victoria and South Australia.

There are three radio broadcasting stations in the Australian Capital Territory, 2CY and 2CN of the national broadcasting system and 2CA, a commercial station.

6. **Population.**—From 1911 until 1921 the population of the Australian Capital Territory remained at about 2,000 persons. In 1922 it commenced to rise, and by 1927 was nearing 6,000. The following year, with the transfer of departments from Melbourne, it passed 8,000. Since then the general trend has been upward, if, until recently, only gradually.

The census return of population on 30th June, 1938, was 11,290 in the Australian Capital Territory and 272 in the Jervis Bay Territory, or a total of 11,562 persons. The population at the Census of 30th June, 1947, was 16,905 persons—15,156 in the city area, 1,389 in the rural districts and 360 in the Jervis Bay area. A census was taken of the

city area on 14th–16th September, 1951, the population then being 23,617 persons. At that time the estimated population of the Australian Capital Territory was 25,400 persons. The estimated population of the Territory at 31st December, 1952 was 28,481 persons, and of Canberra, 26,732 persons.

7. **Production.**—During 1951–52 the production of the more important items of the agricultural and pastoral industry was—Wheat, 14,556 bushels; wool, 1,765,000 lb.; whole milk, 720,000 gallons; butter, 5 tons; meat (bone-in weight, fresh), 3,104 tons. The numbers of live stock depastured at 31st March, 1952, were—Horses, 923; cattle, 10,293; sheep, 243,959; and pigs, 249.

8. **Education.**—Arrangements exist with the New South Wales Education Department for the administration of education up to and including the secondary level in the Territory, the expenditure involved being refunded to the State.

There are ten public schools in the Australian Capital Territory. The largest is situated at Telopea Park, Barton, with accommodation for 1,200 scholars. Secondary education is provided at the Canberra High School, Acton, and the Telopea Park Central School has a secondary department. The High School has accommodation for 450 scholars, and its curriculum provides a standard of education comparable in range of subjects with that provided at the Government High Schools in New South Wales. The High School also provides for commercial and junior technical classes, and has an evening continuation college attached, with commercial, matriculation and other classes.

In addition, there are four private schools in the Territory. These are the Canberra Grammar School, the Canberra Church of England Girls' Grammar School, St. Christopher's Convent School and St. Patrick's Convent School. St. Patrick's School provides infants' and primary education, while the other three provide infants', primary and secondary education.

The Australian Capital Territory Education Ordinance 1937–1952 provides for bursaries, registration of private schools and compulsory attendance. Four bursaries were awarded in 1952.

During 1952 classes in English for new comers to the country were conducted to assist in their assimilation into the local community.

The Canberra Technical College at Kingston, which is controlled and staffed in a manner similar to that of the public schools, is provided with modern equipment for supplementary courses for apprentices and journeymen desirous of improving their trade qualifications. In addition, tuition is also given in a wide range of professional and vocational courses for students of building, surveying, accountancy and commercial subjects, engineering and printing. Special facilities have been established for recreational as well as instructional purposes in the fields of art, pottery, women's handicrafts, woodwork and the like. Provision is also made for the training of ex-service personnel under the Commonwealth Reconstruction Training Scheme.

The Canberra Nursery School, Acton, established in 1944, provides pre-school education for children between the ages of 3 and 5 years. It is staffed and supervised by teachers of the New South Wales Department of Education.

Nine neighbourhood pre-school centres, together with a mobile unit, provide modified nursery school facilities for children between the ages of 3 and 5 years. Additional centres of this type are being established.

An area of about 250 acres has been set aside at Acton at the foot of Black Mountain, a short distance from the City, for the Australian National University. Provision has been made for the University to establish such research schools as may be thought desirable, including a School of Medical Research, and Research Schools of Physical Sciences, Social Sciences and Pacific Studies. Further reference to this University appears in § 8 of Chapter XI.—Education.

9. Finance.—Details of revenue and expenditure for the year 1951-52 are given in the following table :—

AUSTRALIAN CAPITAL TERRITORY : REVENUE AND EXPENDITURE, 1951-52.

(£.)

Revenue.		Expenditure.			
Item.	Amount.	Item.	Capital Works.	Other Services. (a)	Total.
<b>Taxation—</b>		<b>Public Debt Charges—</b>			
Motor Registration .. ..	37,723	Interest .. ..	..	173,836	173,836
Liquor .. ..	15,689	Sinking Fund .. ..	..	81,530	81,530
Rates .. ..	18,271				
Other .. ..	765	<b>Total .. ..</b>	<b>..</b>	<b>255,366</b>	<b>255,366</b>
<b>Total .. ..</b>	<b>72,448</b>	<b>Business Undertakings—</b>			
		Railways .. ..	7,620	37,058	44,678
<b>Business Undertakings—</b>		Electricity Supply .. ..	223,297	329,707	553,004
Railways .. ..	10,246	Water Supply and Sewerage .. ..	362,735	59,040	421,775
Electricity Supply .. ..	230,303	Abattoirs .. ..	8,558	17,736	26,294
Water Supply and Sewerage .. ..	24,086	Transport Services .. ..	46,844	(b) 63,000	109,844
Abattoirs .. ..	22,337	Firewood Supplies Loss .. ..	..	1,000	1,000
		Hostels .. ..	(c) 1,918	(d) 64,688	66,606
<b>Total .. ..</b>	<b>287,032</b>	<b>Total .. ..</b>	<b>650,972</b>	<b>572,229</b>	<b>1,223,201</b>
<b>Rent—</b>		<b>Social Expenditure—</b>			
Housing .. ..	334,020	<b>Education—</b>			
Land .. ..	77,832	Primary and Secondary Education .. ..	3,003	158,298	161,301
Miscellaneous .. ..	11,246	Technical College .. ..	..	28,005	28,005
		University .. ..	..	48,100	48,100
<b>Total .. ..</b>	<b>423,098</b>	Science, Art, Research, etc. .. ..	128	4,444	4,572
		Nursery Schools and Pre-School Centres .. ..	..	12,690	12,690
<b>Interest .. ..</b>	<b>11,798</b>	Public Health and Recreation .. ..	3,631	62,218	65,849
<b>Fees for Services and Fines .. ..</b>	<b>18,456</b>	Charitable—			
<b>Mortgages—Principal .. ..</b>	<b>267,399</b>	Hospital—General .. ..	37,361	135,487	172,848
<b>Other .. ..</b>	<b>73,644</b>	Relief of Aged, Indigent, etc. .. ..	..	2,933	2,933
		Other .. ..	..	8,459	8,459
		<b>Law, Order and Public Safety—</b>			
		Justice .. ..	..	14,297	14,297
		Police .. ..	146	63,995	64,141
		Public Safety .. ..	2,214	16,264	18,478
		<b>Total .. ..</b>	<b>46,483</b>	<b>555,190</b>	<b>601,673</b>
		<b>All Other—</b>			
		Roads and Bridges .. ..	110,616	184,824	295,440
		Parks and Gardens, etc. .. ..	24,695	189,546	214,241
		Public Works, n.e.i. .. ..	658,769	27,112	685,881
		Lands and Surveys .. ..	72	43,584	43,656
		Agriculture and Pasture .. ..	..	26,162	26,162
		Forestry .. ..	80,370	12,000	92,370
		Housing .. ..	2,265,388	94,038	2,359,426
		Legislative and General Administration .. ..	..	175,458	175,458
		Miscellaneous .. ..	..	(e) 60,641	60,641
<b>Grand Total .. ..</b>	<b>1,153,875</b>	<b>Grand Total .. ..</b>	<b>3,837,365</b>	<b>2,196,150</b>	<b>6,033,515</b>

(a) Includes Repairs and Maintenance. (b) Payment to Australian Capital Territory Transport Trust Account (loss on omnibus service). (c) Expenditure on plant and equipment by Department of Interior only. (d) Includes loss on operations, £54,900. (e) Includes restoration of bushfire damage, £54,441.

The following table is a summary of the main classes of revenue and expenditure during the years 1947-48 to 1951-52 :—

**AUSTRALIAN CAPITAL TERRITORY : REVENUE AND EXPENDITURE.**

(£.)

Item.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
<b>Revenue—</b>					
Taxation .. .. .	34,988	38,773	46,458	60,004	72,448
Business Undertakings(a) .. .. .	149,526	170,854	184,268	243,221	287,032
Other .. .. .	302,509	318,380	433,980	542,490	794,395
<b>Total .. .. .</b>	<b>487,023</b>	<b>528,007</b>	<b>664,706</b>	<b>845,715</b>	<b>1,153,875</b>
<b>Expenditure—</b>					
Capital Works .. .. .	1,076,029	1,843,570	2,426,154	3,713,375	3,837,365
Other Services—					
Public Debt Charges .. .. .	283,427	283,975	267,345	264,394	255,366
Business Undertakings(a) .. .. .	193,009	270,075	344,316	564,228	572,229
Social Expenditure .. .. .	202,239	255,851	304,303	426,023	555,190
All Other .. .. .	382,961	449,302	623,163	696,764	813,365
<b>Total .. .. .</b>	<b>2,137,665</b>	<b>3,102,773</b>	<b>3,965,341</b>	<b>5,664,784</b>	<b>6,033,515</b>

(a) Includes Commonwealth Railways operating in the Australian Capital Territory.

The following table, which was prepared by the Department of the Interior, shows the total receipts and expenditure of the Australian Capital Territory from 1901-2 to 30th June, 1952 :—

**AUSTRALIAN CAPITAL TERRITORY : RECEIPTS AND EXPENDITURE TO 30th JUNE, 1952.**

Receipts.	£	Expenditure.	£
Commonwealth Treasury—		Lands .. .. .	919,802
Parliamentary Appropriations—		Engineering works .. .. .	8,103,236
Revenue .. .. .	21,603,738	Architectural works .. .. .	10,731,097
Loan .. .. .	5,725,508	Other capital expenditure, sundry debtors, etc. .. .. .	2,252,904
			22,007,039
		Seat of Government Establishment Account, being maintenance and administration less revenue; expenditure of a capital nature for which assets no longer exist; profit and loss accounts of trading activities, etc. .. .. .	45,322,207
<b>Total Receipts .. .. .</b>	<b>27,329,246</b>	<b>Net Expenditure .. .. .</b>	<b>27,329,246</b>

(a) Excludes interest £5,474,683 net.

The foregoing figures exclude part cost of national buildings (Parliament House, the secretariats, etc.), federal highways within the Territory, the Queenbeyan-Canberra Railway, the housing loan, etc., and loans for housing.



## NORFOLK ISLAND.

1. *Area, Location, etc.*—Norfolk Island, discovered by Captain Cook in 1774, is situated in latitude  $29^{\circ} 03' 30''$  South, longitude  $167^{\circ} 57' 05''$  East. Its total area is 8,528 acres, the island being about 5 miles long and 3 miles wide. From Sydney it is distant 930 miles, and from Auckland, 630 miles. The length of the coast line is 20 miles, and its form that of an irregular ellipse. Except for a portion on the south side and the landing place at Cascade on the northern side, almost inaccessible cliffs rise from the water's edge. The climate is equable, the temperature ranging between  $49^{\circ}$  and  $85^{\circ}$  F. with a mean of  $68^{\circ}$  F. The average annual rainfall is 53 inches. It has been said that the salubrious climate, coupled with the beauty of its landscapes and seascapes, should render Norfolk Island "the Madeira of the Pacific". The island, both pre-war and post-war, has been visited annually by a number of tourists. Pre-war the only means of transport to the island was by ship. However, with the inauguration of direct air services from Australia and New Zealand the majority of tourists now take advantage of these services. The tourist traffic is rapidly increasing.

2. *Settlement and Population.*—The first colonization, in 1788, was by Lieutenant King, who in H.M.S. *Supply* established a small penal station as a branch settlement of that at Port Jackson. The settlement was abandoned in 1813, and for 13 years thereafter its chief use was a whaling station and place of call for British warships.

From 1826 to 1855 it was again made a penal station. In 1844 it was annexed to Van Diemen's Land (Tasmania).

The descendants of the *Bounty* mutineers, having become too numerous to subsist on Pitcairn Island, were removed thence to Norfolk Island in 1856. The new community numbering 94 males and 100 females were the descendants of British sailors and Tahitian women. The last of those transferred died at Norfolk Island on 1st March, 1943. The population of the island as disclosed by the Census of 30th June, 1947, was 938, consisting of 505 males and 433 females. The population at 30th June, 1952 was 1,176.

3. *Administration.*—In 1856 the island was created a distinct and separate settlement under the jurisdiction of New South Wales. In 1896 it was made a dependency under the Governor of that Colony, and finally by the passage of the Norfolk Island Act 1913 it was accepted by the Federal Parliament as a territory of Australia. From July, 1914 until 1st January, 1929, Norfolk Island was administered by the Department of Home and Territories, and then, until 25th June, 1941, by the Territories Branch of the Prime Minister's Department, but is now administered by the Minister for Territories through an Administrator. An amending measure, the Norfolk Island Act 1935, provided for the establishment of an Advisory Council of eight elected members to advise the Administrator.

4. *Economic Activity.*—The major economic activities of the island are primary production, tourism and employment in Government instrumentalities.

(i) *Primary Industries.* The soil on the island is particularly fertile, the climate equable, and the rainfall fairly evenly distributed except for a pronounced dry period in November. This enables a wide range of temperate and semi-tropical products to be cultivated. However, the island's comparative isolation and trading difficulties with New Zealand has hampered production in the past. Recent negotiations with New Zealand, however, have led to a relaxation of some restrictions and should enable the island to air freight out-of-season produce to Auckland.

Pre-war the principal primary product was passion fruit pulp. However, the introduction of disease together with the high cost of trellising and land reclamation has led to the curtailment of this industry. The production of bean seed has now become the main industry. The island's isolation from many plant diseases found on the mainland, plus the fairly reliable dry period (which is conducive to the setting and maturing of seed), together with recent high prices, have induced a rapid expansion of production. In 1951-52, 2,013 bushels were exported and prices ranged from £8 to £9 per bushel. These conditions also favour the production of other types of seed. Lord Howe Island Palm, Wild Lemon and Norfolk Island Pine seeds are the most important.

Island conditions are also conducive to good pasture growth but for a number of reasons meat production is insufficient to satisfy the demands of both the tourists and the local inhabitants. However, as a joint product to pastoral pursuits appreciable quantities of hides and wool are exported.

Fish and (in certain months) whales abound off the island. In the past a number of ventures have been formed to exploit these resources. They have been short-lived owing, for the most part, to the lack of a sheltered harbour.

(ii) *Tourists.* The unique history and unusual beauty of the island had always attracted a number of tourists in pre-war days. The building of the airstrip during the war has made the island far more accessible and a considerable tourist industry has developed, particularly with visitors from New Zealand. The industry is at present limited only by the accommodation available. Approximately 120 can now be catered for and accommodation is being continually expanded.

(iii) *Government Instrumentalities.* A large proportion of the population is employed by Commonwealth Government instrumentalities which are:—Department of Civil Aviation, Norfolk Island Administration, Department of Works, Overseas Telecommunications Commission and Department of the Interior (Meteorological Branch). The bulk of the finance for operation of these instrumentalities is supplied by the Commonwealth Government and this greatly increases the income of the island.

**5. Trade, Transport and Communication.**—Imports to Norfolk Island in 1938–39 amounted to £27,590, mainly from Australia. Since the 1939–45 War they have risen from £32,402 in 1945–46 to £225,040 in 1951–52, the major proportion (£170,894 or 76 per cent.) still coming from Australia, although New Zealand supplied about 23 per cent. in that year. Exports were valued at £16,970 in 1938–39, and have risen from £9,024 in 1945–46 to £46,694 in 1951–52. Australia again is the principal country concerned (£34,510), with New Zealand's proportion of the trade showing a steady increase from negligible amounts pre-war and early post-war to one-quarter or one-third of the total exports in recent years.

No duties are chargeable on goods imported into Australia from Norfolk Island if the goods are (a) the produce or manufacture of Norfolk Island; (b) shipped direct to Australia; and (c) not goods which if manufactured or produced in Australia would be subject to excise duty.

A shipping service to the Territory is maintained at approximately seven-weekly intervals by vessels of Burns Philp & Co. Ltd., Sydney. The journey from Sydney to Norfolk Island occupies about four days.

The construction of an aerodrome on the island was completed during 1943. A fortnightly passenger and air freight service between Sydney and Norfolk Island is maintained by Qantas Empire Airways Ltd. There is also a weekly air service from New Zealand.

There are approximately 50 miles of usable road on Norfolk Island. As a substantial section of the population possesses private motor cars and taxi-cab services are available, transport is almost exclusively by motor vehicle.

The "all-red" cable from Great Britain via Vancouver, Fanning Island and Fiji bifurcates at Norfolk Island, one line connecting with New Zealand, the other with Brisbane. Until 10th June, 1947, the post office at Norfolk Island was part of the Commonwealth postal system, but as from that date Norfolk Island was established as a separate postal administration with its own issue of stamps.

**6. Social Condition.**—Education is free and compulsory up to the age of fifteen years. The school conforms to the Australian standard of public education, ranging from kindergarten to the intermediate certificate, with a two years' super-primary course of instruction in cultural subjects and in woodwork, needlework, leatherwork, basketry

and hat-making. The headmaster and assistant teachers are lent by the New South Wales Education Department, but they are paid by the Norfolk Island Administration. The number of scholars enrolled at 30th June, 1952 was 135. Dental examination and free dental service are provided to school children.

The Court of Norfolk Island is a court of record with dual jurisdiction. Sitting in its Limited Jurisdiction the Court has power to hear and determine actions of claims not exceeding £30 and to punish summarily all crimes and offences involving a pecuniary penalty or a sentence of imprisonment not exceeding six months. In its Full Jurisdiction the Court can hear and determine all actions, punish all crimes and offences, grant probate and letters of administration, hear and determine appeals from any conviction of the Court sitting in its Limited Jurisdiction, and has authority in all other matters. An appeal lies to the High Court of Australia from any judgment, order, decree or sentence of the Court sitting in its Full Jurisdiction when constituted by a Judge or the Chief Magistrate.

7. **Finance.**—The revenue of the Territory, together with an annual grant from the Commonwealth Government in aid of administrative expenses, is paid to the credit of the Norfolk Island Trust Fund, and advances for administrative and developmental expenses are drawn from the account. The principal sources of revenue in 1951–52 were:—Sale of liquor, £20,432; Commonwealth subsidy, £15,000; customs duties, £8,332. The total revenue was £60,945. Major items of expenditure in 1951–52 were:—Salaries, £16,975; purchase of liquor, £15,706; public works, £12,227. Total expenditure amounted to £67,355. In 1938–39 revenue amounted to £11,784 and expenditure to £13,565.

## PAPUA AND NEW GUINEA.

### § 1. Administration.

Following the outbreak of the Pacific War civil administration in Papua and New Guinea was suspended on 11th February, 1942, and military control commenced. The Territory of New Guinea came under Japanese occupation in 1942, but the greater part had already been recaptured by Australian and Allied Forces when the Japanese surrendered in August, 1945. Information relating to the transfer back from military to civil control under the Papua-New Guinea Provisional Administration Act 1945–1946 may be found in Official Year Book No. 39 and earlier issues.

The Papua-New Guinea Provisional Administration Act 1945–1946 was repealed by the Papua and New Guinea Act 1949 which came into force on 1st July, 1949. The latter Act approved the placing of the Territory of New Guinea under the International Trusteeship system and provides for an Administrative Union, one Administrator, one Supreme Court and one Public Service.

Provision is made for an Executive Council of not less than nine officers of the Territory, who shall be appointed by the Governor-General, and a Legislative Council consisting of twenty-nine members, namely:—(a) the Administrator; (b) sixteen officers of the Territory (who shall be known as official members); (c) three non-official members possessing such qualifications as are provided by Ordinance and elected, as provided by Ordinance, by electors of the Territory; (d) three non-official members representing the interests of the Christian missions in the Territory; (e) three non-official native members; and (f) three other non-official members.

The Legislative Council was inaugurated on 26th November, 1951 by His Excellency Sir John Northcott, while Administrator of Australia.

Subject to the Act, provision may be made by Ordinance for the establishment of Advisory Councils for Native Matters and Native Village Councils.

The Act also makes provision for the continuance of the existing laws of the Territory of Papua and the Territory of New Guinea.

### § 2. Finance.

The following table shows particulars of the financial operations of the Papua and New Guinea Administration since its inception in July, 1949, together with particulars of the earlier provisional administration, and of the combined Territories in 1938–39. See pp. 252 and 259 for some information on each Territory.

**TERRITORY OF PAPUA AND NEW GUINEA : REVENUE AND EXPENDITURE.**  
(£.)

Particulars.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
<b>REVENUE.</b>						
<b>Taxation—</b>						
Customs Duties .. .. .	257,460	530,170	806,798	915,036	970,880	1,475,117
Stamp Duties .. .. .	7,061	6,048	20,691	8,211	13,267	10,742
Licences .. .. .	15,185	11,353	16,380	17,574	20,140	39,104
Other Taxes .. .. .	45,831					
Commonwealth Grants .. .. .	42,500	1,866,942	3,196,668	4,184,454	4,354,564	5,285,559
Post Office .. .. .	40,548	41,127	51,896	52,707	69,967	94,946
Lands .. .. .	24,429	16,894	19,175	25,738	29,034	48,172
Forestry .. .. .	(a)	43,193	46,480	34,849	33,436	105,676
Agriculture .. .. .	11,381	37,045	25,752	31,738	61,496	75,659
Mining—						
Royalty on Gold .. .. .	b 107,975	35,581	49,053	58,636	67,845	79,684
Other .. .. .	18,682	14,218	10,867	12,248	11,237	9,084
Harbour Dues, Wharfage, etc. .. .. .	16,930	110,109	107,494	128,819	144,708	111,566
Fees, Fines and Forfeitures, u.e.i. .. .. .	11,122	17,972	22,905	29,799	44,397	50,587
Electric Light and Power Supply .. .. .	6,094	10,768	18,455	30,837	46,455	65,573
Other Revenue .. .. .	36,969	39,412	37,205	54,328	351,387	224,957
<b>Total .. .. .</b>	<b>642,167</b>	<b>2,780,832</b>	<b>4,429,939</b>	<b>5,584,974</b>	<b>6,220,813</b>	<b>7,676,426</b>
<b>EXPENDITURE.</b>						
Post Office .. .. .	8,875	78,867	105,558	151,733	183,769	246,529
Social Expenditure—						
Education .. .. .	12,904	103,008	147,238	395,903	393,032	438,322
Public Health Services, Hospitals, etc. .. .. .	113,571	303,699	564,025	908,495	1,172,958	1,351,508
Law, Order and Public Safety .. .. .	92,797	104,440	232,898	315,543	487,295	553,010
Grants to Missions for Education and Medical Services .. .. .	14,238	22,366	41,713	46,021	153,532	117,516
District Services and Native Affairs .. .. .	128,398	583,068	733,553	788,174	820,394	932,773
Wages due to Natives under Pre-war Contracts .. .. .		13,970	2,633	95		
Compensation to Natives for war injuries and war damage .. .. .		289,032	368,486	272,567	116,421	286,653
New Works, Buildings, etc. .. .. .	(b) 69,146	242,974	628,879	919,933	1,413,234	1,755,970
Other Public Works and Services .. .. .	57,422	414,478	488,127	745,199	315,520	605,820
Electric Light and Power .. .. .	2,837	52,235	76,523	116,802	153,460	243,811
Legislative, General Administration and Other Expenditure .. .. .	179,514	418,914	621,745	887,955	1,176,797	1,164,345
<b>Total .. .. .</b>	<b>679,702</b>	<b>2,687,051</b>	<b>4,011,378</b>	<b>5,548,420</b>	<b>6,386,412</b>	<b>7,696,257</b>

(a) Included with Lands.

(b) Trust Territory of New Guinea only.

### § 3. Agriculture and Animal Industry.

1. **Soils.**—Although a large proportion of Papua and New Guinea is covered by skeletal soils unsuitable for agriculture, there are extensive areas in all parts where fertile soils occur, suitable for growing a wide range of crops. Most of the agriculture of the Territory up to the present has been on soils of the coastal plains, which, apart from the swamp soils, consist mainly of alluvium and podsolized alluvium. So far, these have been mostly under coco-nut plantations, although other crops such as rubber have also been grown. The swamp soils, of which there are extensive areas in the Delta plains and other parts of the Gulf of Papua, and in smaller areas, are found intermittently around the coasts and along the lower reaches of the rivers, and are in general quite unsuited to any form of agricultural development.

Volcanic soils probably offer the greatest prospects for development. They are found mostly on the Central Plateau and southern foothills of the main island, but there are also areas in New Britain (particularly in the Gazelle and Willaumez Peninsulas),

Bougainville and New Ireland, as well as in numbers of smaller islands. Other rich soils are the alluvials of the river valleys. The largest single area of this type is in the trough occupied by the Ramu and Markham Rivers.

2. **Climate.**—The climate, particularly the rainfall, over so wide an area as Papua and New Guinea, with its numerous islands and varying elevations, naturally presents many variations. Generally speaking, the climate is moist and tropical, except at high altitudes. There are only small differences in both daily and seasonal extremes. The Territory has no winter and summer, and thus no great variation in day-length over the year. The two seasons which are experienced are generally described as the "south-east" and the "north-west", corresponding with the periods of the year when the south-east trade winds and the north-west monsoons direct the main Territory air-flow. The south-east season prevails approximately from May to October, the trade winds attaining maximum velocities during July and August. The north-west monsoon operates over a considerably shorter period, between the end of December and about March. During the periods between these seasons, November and early December, and about March to April, there are two short spells of calm weather.

Rainfall varies considerably from an average annual rainfall of 245 in. at Gasmata in New Britain and 231 in. at Kikori in Papua, to about 88 in. at Wewak in New Guinea and 40 in. at Port Moresby.

Although the Territory has no summer and winter, it has an extreme temperature range, due to altitude differences, varying from an absolute highest temperature of about 100° F. along the coast, to freezing point on its highest peak, Mt. William (15,400 ft.).

Humidity in the Territory is very high throughout the year. Some coastal stations register an average relative humidity of more than 90 per cent. Humidities below 60 per cent. are rare at coastal stations, average figures varying from 80 per cent. at 9 a.m. to 65 per cent. at noon and 75 per cent. at 3 p.m. Humidity in mid-mountain forests appears to be higher than in the lowlands, while in the mossy forests there are periods when the whole belt is saturated.

3. **Suitable Crops.**—The crops which can be grown in Papua and New Guinea include copra, rubber, tea, coffee, cocoa, jute, kenaf, manila hemp, sisal, rice, pepper, tobacco, peanuts, kapok, cassava, ginger, cinchona, nutmeg, vanilla, tropical fruits and vegetables, sago and tung oil.

The agricultural commodities which, because of their marketing prospects, and suitability for production in the Territory, are considered to have the best possibility for development are copra, rubber, cocoa, coffee, tea, kenaf, sisal, manila hemp, and peanuts for export; and rice, fresh meat, dairy products, fresh vegetables and fresh fruit (e.g. bananas, paw-paws, citrus and pineapples) for local consumption.

4. **Plantation Agriculture.**—The principal plantation crops cultivated are coco-nuts, rubber, cocoa and coffee.

*Coco-nuts.* Territory coco-nut plantations suffered severely from damage and neglect during the last war, but rehabilitation has been rapid and about 490 plantations together with native coco-nut stands produced 76,904 tons of copra in 1951–52, valued at £4,547,492. The area (excluding native stands) planted with coco-nut palms in March, 1952, was 228,000 acres, of which 8,600 acres were not yet bearing. In addition, 1,469 tons of desiccated coco-nut, valued at £235,778, were exported.

A contract with the United Kingdom commenced on 1st March, 1949, for a period of nine years, for the sale of Territory copra in excess of Territory and Australian requirements. The price of copra sold for the first contract year, 1949, was £60 per ton f.o.b. Territory ports, and the contract provides that the price for each subsequent year is to be not more than 10 per cent. higher or lower than the preceding year's and is to be negotiated before the end of the preceding year. Early in 1952 the termination date of the contract was varied to 31st December, 1957, and prices are now negotiated on the basis of calendar years. The price for the calendar year 1953 is £81 5s. per ton f.o.b. Territory ports for sun dried copra with small price differentials for the other grades.

*Rubber.* Rubber exports have more than doubled since before the Japanese invasion, increasing from an average of 1,352 tons per year during the three years 1937-38 to 1939-40 to 2,849 tons in 1951-52, valued at £1,244,259. Of a total area of 26,600 acres planted with rubber trees in March, 1952, 6,000 acres were not bearing.

*Cocoa.* Exports of cocoa beans increased from 207 tons in 1949-50 and 317 tons in 1950-51 to 477 tons in 1951-52, valued at £148,091. The area (including native stands) planted with cocoa trees in March, 1952 was 9,125 acres, of which 4,968 acres were not yet bearing.

*Coffee.* Exports of coffee beans increased from 21 tons in 1949-50 and 33 tons in 1950-51 to 35 tons in 1951-52, valued at £10,511. The area planted with coffee trees in March, 1952 was 603 acres, of which 373 acres were not yet bearing.

5. **Native Agriculture.**—Most of the native inhabitants of Papua and New Guinea are agriculturists producing fruit and vegetables for their own consumption. The crops grown vary according to environment and altitude, and include yams, taro and sweet potatoes, coco-nuts, bananas, paw-paws, maize, sugar-cane, cassava, beans, peanuts, rice, cucurbits and tobacco. Sago is the staple food in the extensive semi-inundated areas which occur along the lower valleys of the major rivers. In these areas it is usually cut largely from naturally occurring stands. In other parts of the country small areas of sago are grown along stream banks and in swampy patches and are regarded as a reserve in times of poor harvest. Natives also produce a large amount of copra (about 11,200 tons in 1951-52) and in some areas (e.g. the Gazelle Peninsula in New Britain) are taking an increasing interest in producing cocoa beans for export.

In many localities the natives follow a farming system known as "Bush Fallowing Rotation". The inhabitants of each village have, at any one time, a number of distinct and separate cleared garden areas in the land surrounding the village. The garden clearings may be located some miles from the village and are not usually contiguous. Each garden area may be made up of a number of distinct plots owned by individual natives or families. Communal ownership of gardens is rare. The number of garden clearings (and their area) attached to each village depends on the size of the village and the fertility of the land.

The method of cultivation followed is for the jungle trees to be felled and undergrowth cleared, with axes and knives, the larger trees being usually left standing. The timber and foliage is allowed to dry out and then burnt. In some localities there is a little cultivation before the crops are planted, and root vegetables are placed in holes dug with a stick. In other places, however, there is careful preparation of the soil. Some weeding is done while the crops are growing. After harvesting, a second crop is rarely planted immediately in that garden area, but a new area of land is selected, cleared, burnt and planted. The natives return to the first area to harvest fruit from trees, such as paw-paw and banana, that may have been planted in the garden, but these are soon submerged in the new growth which quickly appears. The plot is allowed to lie fallow for a number of years, the period varying from 7 to 10 years or even longer, depending upon the local population pressure. During this time high secondary jungle has probably grown. Ultimately the natives return to the original plot, and clear, burn and plant again. The cycle continues year by year throughout the agricultural land belonging to the village. The foregoing is a broad generalization of the method followed. However, there are many variations.

The business of growing food is done by both the men and women. The division of work is usually clearly defined within the village itself but this division is not necessarily the same in all areas. Generally it is found that felling the forests is always done by the men, and carrying the harvested food home to the village is nearly always done by the women. However, other work such as cultivating, planting, weeding, may be done by either men or women according to the customs of the particular village or area.

6. **Animal Industry.**—At 31st March, 1952, the live-stock in the Territory consisted of 3,722 cattle, 2,099 sheep, 2,986 goats, 3,088 pigs, besides horses, mules and poultry. These figures exclude native-owned livestock. The introduction of rabbits, foxes, hares and monkeys is prohibited.

A number of British breeds of cattle are represented in Territory herds. For dairying Jersey and Australian Illawarra Shorthorns are most popular, while Black Poll, Polled and Horned Shorthorns are represented for meat production. These breeds have done well in the Territory under good management.

Most of the sheep now in the Territory are Romney Marsh sheep located at Nondugl in the highlands of New Guinea. This breed has been tried in various parts of the Territory. It produces a good carcass, and in drier parts a useful sheep. There are also some Asiatic sheep, and crossed with Romney Marsh they produce good carcasses and are hardy. Current investigations on sheep raising include tests and observations to determine the most suitable breeds and areas for grazing for both mutton and wool.

## PAPUA.

### § 1. General Description.

1. **Early Administration.**—Particulars of the early administration of Papua are given in Official Year Book No. 19, p. 576.

2. **Administration by Commonwealth of Australia.**—The Territory was placed under the authority of the Commonwealth on 1st September, 1906, by proclamation issued in pursuance of Letters Patent of 18th March, 1902, and was accepted by the Commonwealth by the Papua Act 1905, which came into force by virtue of the aforesaid proclamation. The transfer was made under the authority of Section 122 of the Constitution. The Territory is now under the control of the Commonwealth, but not included within it, and is divided into six magisterial districts, viz. :—Southern Highlands, Western, Gulf, Central, Milne Bay and Northern.

3. **Area, etc.**—Papua lies wholly within the tropics. The northernmost point touches 5° S. latitude ; its southernmost portion, comprising Sudest and Rossel Islands, lies between 11° S. and 12° S. latitude. It is separated from Australia by Torres Strait. The length of Papua from east to west is upwards of 920 miles ; towards either end the breadth from north to south is about 200 miles, but about the centre it is considerably narrower. The Territory comprises also the islands of the Trobriand, Woodlark, D'Entrecasteaux and Louisiade groups. The length of coast-line is estimated at 3,664 miles—1,728 on the mainland, and 1,936 on the islands. The total area is about 90,540 square miles, of which 87,786 are on the mainland, and 2,754 on the islands. A reference to the physical characteristics of the Territory appears in previous issues of the Official Year Book (*see* No. 18, p. 633).

### § 2. Population.

1. **Non-Indigenous Population.**—The European population of Papua has increased slowly, and with some reversals in trend, from less than 700 in 1906, the year in which the Territory came under Commonwealth control, to 1,343 at the Census of 1921. At the 1933 Census, however, it numbered only 1,148, but amounted to 2,542 at the 1947 Census (1,700 males and 842 females), and at 30th June, 1952 it was estimated at 4,242 persons.

The non-European section of the non-indigenous population at 30th June, 1947 was 697, of whom 194 were full-bloods and 503 were half-castes with one of the parents a European. Comparable figures as at the 1933 and 1921 Censuses, respectively, were :—full-bloods—786 and 577 ; half-castes—227 and 158.

The total non-indigenous population at the Censuses of 1921, 1933 and 1947, respectively, was 2,078, 2,173 and 3,239.

2. **Native Population.**—It is not possible to give exact data regarding the number of natives, because part of the interior has not as yet been under complete Government control. However, the enumerated (based on the results of the census up to 30th June, 1952 which at that date was still proceeding) and estimated population of the Territory of Papua at 30th June, 1952 numbered 369,975 persons. This comprised 271,335 enumerated persons (144,605 males and 126,730 females) and 98,640 estimated. The total number was distributed through districts as follows :—Southern Highlands, 79,946 persons ; Western, 32,023 ; Gulf (including the former Delta district), 50,000 ; Central, 80,532 ; Milne Bay, 82,646 ; Northern, 44,828.

### § 3. Native Labour, Taxation, Health, etc.

1. **Native Labour.**—The laws relating to the employment of natives are uniform in Papua and New Guinea, and may be found in the Native Labour Ordinances 1951–1952. These provide for the engagement of natives under a permit. Permits are issued by a District Officer, and authorize the holder to engage natives for employment on his own behalf, or on behalf of a registered employer who has authorized him to act on his behalf. Under this Ordinance a native may be issued with a Native Assistant's Permit, which authorizes him to solicit natives to work for his employer, or for other employers who have authorized him to act on their behalf.

Natives are employed under written agreements which have been sanctioned and attested by a District Officer. The period of the agreement must not exceed two years, but one further agreement, for a period not exceeding one year, may be drawn up, if both parties desire it. The period, in both cases, begins on the day on which the agreement is sanctioned and attested. Both parties may, by mutual consent, and with the approval of a District Officer, cancel an agreement. On the termination of an agreement, employers are required to repatriate workers to their own villages.

Natives under the age of sixteen years may not be employed. Employers must provide native employees with housing, medical attention, food and clothing free of charge. A minimum monthly wage of fifteen shillings and a working week of 44 hours are prescribed by Ordinance. Provision is also made for compensation in the case of injury or death.

2. **Native Taxes.**—Under the Native Taxes Ordinance 1917–1936, a tax not exceeding £1 per annum may be imposed on natives, except native constables, mission teachers and mission students, natives unfit for work, and those who have four living children. The proceeds of the tax must be expended on native education, or devoted to purposes directly benefiting the natives.

No direct taxes have been levied on natives since the war. Native Village Councils (which are formed voluntarily by the natives) are, however, empowered to levy rates on villagers for the purpose of providing for local services carried out by the Councils.

3. **Health.**—The Department of Health has the general oversight of all medical and dental services. It maintains a large number of hospitals, which are staffed by fully-trained European medical personnel and trained native assistants, for both European and native patients. The Department has adequate facilities for research in tropical medicine.

At 30th June, 1952, there were three European hospitals (one privately controlled); 31 native hospitals (one private and 14 mission); 186 village aid posts (69 mission); 39 welfare clinics (35 mission); and two Hansenié colonies in the Territory. The Missions employ their own doctors and nurses in their medical establishments. A training school has been established for the purpose of training natives in first aid, elementary physics, chemistry, anatomy, physiology and pathology in preparation for their employment as Native Medical Assistants. Natives are also attending the Central Medical School at Suva, Fiji, to be trained as Native Medical Practitioners. The chief complaints treated in hospital are malaria, yaws, tropical ulcers, respiratory infections, hookworm, venereal and skin diseases.

### § 4. Land Tenure.

The basic principle of the land laws of Papua is that all land not specifically alienated by due process from the natives is native land. On 30th June, 1952, of the total estimated area of Papua, approximately 58,000,000 acres, only 1,836,860 acres had been alienated. The distribution of all land in Papua at 30th June, 1952, according to tenure, was as follows:—Alienated: Held by private non-indigenous inhabitants—Freehold, 24,284 acres, leasehold, 252,819 acres; Held by Administration, 1,498,850 acres; Native Reserves, 60,907 acres; Total Alienated, 1,836,860 acres; Held by Natives, 56,163,140 acres.



Although, as the figures above show, a small amount of freehold land exists in Papua, no further estates in fee-simple or other estate in freehold can be granted under the provisions of the Land Ordinance 1911-1952 of Papua. Leases of various kinds may be granted by the Administration. The principal types of lease available are agricultural leases, pastoral leases, leases of town allotments, business leases and residence leases of other than town allotments, and various forms of special leases and licences over land. Leasehold terms are liberal and, in general, leases may be granted for periods of up to 99 years. Rent is based on the unimproved value of the land. For agricultural leases the rental rate per annum is 5 per cent. of the unimproved value and for pastoral leases the rate is  $2\frac{1}{2}$  per cent. Concessions regarding freedom from, or reduced, rents apply during the early developmental periods of agricultural and pastoral leases. All leases are subject to improvement conditions which may be varied or relaxed under certain circumstances. The following classes of leases were in force in Papua on 30th June, 1952:—Agricultural, 598—221,491 acres; pastoral, 25—29,549 acres; residence, 139—166 acres; special, 123—512 acres; mission, 308—798 acres; business, 76—155 acres; town allotment, 409—148 acres; total, 1,678—252,819 acres.

Leases of Crown land may be obtained from the Administration. Dealings in privately-owned land are a matter for private treaty. Native-owned land, however, cannot be acquired or leased from the native owners by private individuals. If a lease of land which is native-owned is desired, application must be made to the Administration. If the native owners are willing to sell the land, and the Administrator is satisfied that the land over which the lease is applied for is not required or likely to be required by the native owners, and if otherwise satisfied that the lease should be granted, the Administration itself purchases the land and grants an appropriate form of lease to the applicant.

The registration of titles, interests and dealings in land is provided for under the Real Property Ordinance 1913-1951 modelled on the Torrens system of land registration.

## § 5. Production.

1. **General.**—The products of the Territory are obtained from its agricultural, fishing and mining industries. The only manufacturing industry of importance is that of desiccated coco-nut, although a factory for the extraction of cutch from mangrove bark is being established at Kikori in the Gulf District. Native subsistence agriculture, fishing and hunting produce most of the food requirements of the native population. The main native agricultural products are taro, yams, sweet potatoes, bananas and paw-paw. Non-indigenous enterprise produces most of the commodities exported. Natives, however, do produce copra for export and native enterprise in other fields of agricultural production for export purposes is being encouraged. The principal agricultural products of Papua for the export trade are copra and rubber. Most of the timber milled during 1951-52 was absorbed by local building requirements; exports of timber being less than three per cent. of total production. The main products of fisheries exported from Papua are trochus and green snail shell. Gold and manganese, zinc-lead and copper ores have been mined in commercial quantities.

Agricultural and pastoral conditions in Papua and New Guinea have been dealt with, for the sake of convenience, as a whole, and reference should be made to pp. 244-7 for information on the soils, climate, crops, methods of cultivation, etc., throughout both Territories. The following paragraphs relate to forestry, mining and water power resources in Papua.

2. **Forestry.**—(i) *Timbers.* Mixed species tropical rain forest covers most of Papua, although behind Port Moresby there is an area of monsoonal savannah country. On account of the mixed nature of the timbers in any one area, their utilization on an economical basis is somewhat difficult. Kwila, the only hardwood found in millable quantities in Papua and New Guinea occurs in important stands east of Port Moresby. Mangroves occur in large areas fringing the Gulf of Papua and are cut for the preparation of cutch from the bark.

(ii) *Survey Work.* Forestry field work is actively being carried out in Papua with a view to assessing the forest resources available and to survey areas that will be thrown open for cutting.

(iii) *Permits.* Three timber permits were granted during the year ended 30th June, 1952. This brings the total of emergency permits granted to eleven, and there is still one licence continuing under the previous timber Ordinance. The total area of forest involved is 72,645 acres.

3. *Mining.*—(i) *Variety of Minerals.* A wide variety of minerals has been found in Papua including, platinum, gold, silver, copper, tin, lead, zinc, cinnabar, iron, osmiridium, manganese, sulphur, chromite, gypsum and lignite, but for the most part in too small quantities or too difficult country for their economic extraction.

Gold was discovered in 1888 and has been found in many parts of Papua. Before the war gold was an important item in the Territory's production and in 1938-39 (valued at more than £150,000) was the major export, but since the war gold production has dwindled to insignificance. The average annual estimated quantity of gold yielded for the five years ended 1951-52 was less than 300 fine oz. compared with almost 28,000 fine oz., the average for the last three pre-war years. The total value of gold won to 30th June, 1952 was £3,293,000.

Of precious stones, only the topaz and beryl have been obtained. Large beds of apparently good coal also exist.

Manganese ore valued at £1,689 and zinc-lead ore valued at £900 were exported from Papua during the year ended 30th June, 1952. Large quantities of copper ore were mined and exported, prior to the 1939-45 War. Good samples of galena (sulphide of lead) have been obtained, while cinnabar (sulphide of mercury), graphite, zinc-blende, and native sulphur are known to exist, but not in commercial quantities.

(ii) *Oil Search.* Since oil search began in Papua and New Guinea after the 1914-18 War nearly £10,000,000 has been spent, mainly in Papua. The existence of petroleum has been traced at scattered intervals over a large area. Two companies hold permits under the provisions of the Petroleum (Prospecting and Mining) Ordinances 1951 and oil prospecting has been carried on in the Western, Delta, Gulf and Central Divisions.

4. *Water Power.*—Most of the rivers in Papua carry a large volume of water from a great height over a relatively short distance, thereby offering opportunities for the installation of hydro-electric power plants. It is estimated that there is at least 10,000,000 h.p. available for this purpose.

## § 6. Trade, Transport and Communication.

1. *Customs Tariff.*—As from 1st July, 1950, a new customs tariff came into force. This provides high revenue rates on ale, spirits, wines, timepieces, cigarette papers, fancy goods, jewellery and certain apparel and piece goods made of silk. Of 74 items now mentioned in the import schedule, 58 are on the free list and two are partially free. The new tariff allows duty-free treatment of necessities, but increases rates on non-necessities. The purpose of the revision is to relieve both general industrial costs and the basic costs of living with a view to encouraging further development of the Territory. The rate of duty on items not specified in the schedule is 10 per cent. ad valorem. No preferential rates are specified in the schedule. A surcharge equal to ten per cent. of duty payable was imposed as from 17th January, 1952. Export duties are imposed on copra, rubber, mother-of-pearl shell and gold.

Provision is made in the Australian Customs Tariff (Papua and New Guinea Preference) 1936 for the free entry into Australia of certain goods produced and imported direct from Papua (see Chapter VI.—Trade), and a proclamation of 25th September, 1935 exempted from primage duty goods produced or manufactured in the Territory.

2. Imports and Exports.—A table of imports during the years 1938-39 and 1949-50 to 1951-52 appears below. The classification for the two later years differs from that for the earlier years.

TERRITORY OF PAPUA : IMPORTS.  
(£.)

Particulars.	1938-39.	1949-50.	Particulars.	1950-51.	1951-52.
Ale, spirits and beverages ..	14,813	101,844	Foodstuffs of animal origin, excluding living animals	563,799	643,452
Tobacco and manufactures ..	27,466	214,427	Foodstuffs of vegetable origin, non-alcoholic beverages and substances used in the making ..	713,034	1,026,712
Agricultural products and groceries	138,551	1,134,129	Spirituous and alcoholic liquors ..	110,395	117,899
Textiles, felts, furs, attire, etc. ..	37,712	267,500	Tobacco and preparations thereof ..	160,151	170,292
Metals and machinery ..	76,068	1,605,347	Live animals ..	679	1,020
Oils, paints and varnishes ..	33,331	358,247	Animal substances (mainly un-manufactured, not foodstuffs) ..	55	38
Earthenware, cement, glass, etc. ..	5,585	57,509	Vegetable substances and fibres ..	8,894	14,479
Drugs and chemicals ..	12,828	47,902	Apparel, textiles and manufactured fibres ..	521,431	497,081
Wood, wicker and cane ..	13,076	115,157	Oils, fats and waxes ..	151,984	238,666
Jewellery and fancy goods ..	7,756	39,047	Paints and varnishes ..	43,807	60,185
Leather and rubber ..	8,076	87,026	Stones and minerals, including ores and concentrates ..	18,030	8,952
Paper and stationery ..	8,521	53,866	Metals, metal manufactures and machinery ..	1,437,253	1,849,726
Miscellaneous ..	94,273	602,027	Rubber and leather and manufactures thereof, and substitutes therefor ..	98,369	76,340
Government stores ..	36,747		Wood and wicker, raw and manufactured ..	127,764	165,349
			Earthenware, cement, china, glass and stoneware ..	62,474	92,211
			Paper and stationery ..	77,612	154,162
			Jewellery, timepieces and fancy goods ..	49,438	60,050
			Optical, surgical and scientific instruments ..	135,845	190,878
			Drugs, chemicals and fertilizers ..	126,522	166,260
			Miscellaneous ..	235,452	324,471
Total .. ..	514,808	4,684,028	Total .. ..	4,642,988	5,858,223

Exports during these years were valued (Australian currency) at £490,158, £1,202,694, £1,923,289 and £2,789,157, 1938-39 and 1949-50 to 1951-52 respectively. The major components in 1938-39 were :—gold, £152,103 ; rubber, £114,949 ; copra, £57,999 ; and desiccated coco-nut, £48,140. In recent years copra and rubber have been the most prominent exports, constituting about three-quarters of the value of total exports. Major exports during 1951-52 were as follows :—rubber, £1,244,259 ; copra, £958,109 ; desiccated coco-nut, £124,934. Corresponding particulars for 1950-51 were, respectively, £802,177, £644,532 and £105,509.

Surplus war stores, trochus shell, gold and coffee beans comprised the bulk of the remaining exports.

In the years immediately preceding the 1939-45 War, the value of imports into Papua from Australia comprised almost half the total value of goods imported, the United Kingdom and the United States of America supplying the next highest values of imports, contributing about 14 per cent. each. In recent years the Australian proportion has increased to about two-thirds, and that of the United Kingdom, after declining, has now risen to about pre-war proportions, while that of the United States of America has declined. In 1951-52 major countries in the Papuan import trade were

as follows :—Australia, £3,897,992 ; United Kingdom, £765,760 ; United States of America, £370,401 ; Indonesia, £148,327. In the export trade of Papua during the same period Australia has predominated to an increasing extent, and in 1951–52 received £2,582,567 or 93 per cent. of the total value of exports, the United Kingdom being next in importance with £188,430 or nearly 7 per cent.

3. **Shipping.**—Prior to the war in the Pacific the aggregated entrances and clearances of oversea vessels at Papuan ports each year amounted to well over 200 and the net tonnage to as much as 490,000 tons, 70 or 80 per cent. thereof in each instance being British. Early post-war years showed a considerable reduction in tonnages although not in numbers, but the figures for 1949–50 and 1950–51 were somewhat higher than those for pre-war years. In 1951–52 they declined, however, to 196 entrances and clearances, with a net tonnage of 400,344 tons (entrances, 102—200,319 net tons ; clearances, 94—200,025 net tons). British vessels in 1951–52 constituted 182 of the combined entrances and clearances (93 per cent.) and 342,660 of the aggregate tonnage (85 per cent.).

A regular passenger and freight service operates between Australia and the Territory of Papua. Vessels trading between Australia and the East also call at Territory ports. Coastal and inter-island shipping services are maintained by vessels operating from the two principal ports of Port Moresby and Samarai.

4. **Other Forms of Transport and Communication.**—Air services link Papua with Australia, and there are also internal air services linking Port Moresby with Daru to the west, with Samarai and Bwagaioia to the east, with Kokoda, Popondetta, Goroka, Madang and Wewak in the highlands and north coast of the Territory of New Guinea, and with Rabaul in New Britain. Mail is carried on these services.

There are nearly 780 miles of roads in Papua, about three quarters being suitable for medium and heavy traffic, and the greater proportion located in the Central and Northern Districts, which are north-east of Port Moresby.

Radio stations at Port Moresby for both transmission and reception are jointly shared by the Overseas Telecommunications Service and the Administration.

The former provides a service between Papua, Australia and the Territory of New Guinea by radio and radio-telephone, while the latter is responsible for radio communications within the Territory.

### § 7. Finance.

The principal source of revenue for the Territory of Papua is the annual grant received from the Commonwealth Government, which in 1951–52 amounted to £2,159,500. Customs duties, £586,399 in 1951–52, are next in importance. The total revenue during 1951–52 was £3,063,992, compared with £2,645,091 in 1950–51 and £165,823 in 1938–39. Of a total expenditure in 1951–52 of £3,083,823, £1,286,386 was spent on public works, £481,559 on medical services, £331,240 on native affairs and £984,638 on ordinary votes. In 1950–51 expenditure amounted to £2,810,691 and in 1938–39 to £166,330.

For particulars of the finances of the combined Territory administration *see* p. 244.

## TRUST TERRITORY OF NEW GUINEA.

### § 1. General Description.

The land area of the Territory of New Guinea is about 93,000 square miles and the area including the sea within the lines drawn through its extreme outer points is more than 1,000,000 square miles. As the coast of the Territory has not been completely surveyed, the areas of the various islands are known only approximately.

The approximate areas of the principal islands together with the small islands adjacent thereto are as follows :—North-East New Guinea (also called “ The Mainland ”), 69,700 sq. miles ; Bismarck Archipelago—New Britain, 14,600 sq. miles, New Ireland, 3,340 sq. miles, Lavongai, 460 sq. miles, Admiralty Islands, 800 sq. miles, total Bismarck Archipelago, 19,200 sq. miles ; Solomon Islands—Bougainville, 3,880 sq. miles, Buka, 220 sq. miles, total Solomon Islands, 4,100 sq. miles ; grand total, 93,000 sq. miles.

Information regarding physiography and climate will be found in Official Year Book No. 22, p. 613, and in the *Official Handbook of the Territory*.

## § 2. Government.

1. **The Military Occupation (1914-18) War.**—On 17th September, 1914, the Acting Governor of German New Guinea signed terms of capitulation with the officer commanding a Naval and Military Expedition sent from Australia, and thereafter the Territory was under military administration until the establishment of Civil Government on 9th May, 1921.

2. **Mandate (1920).**—In 1919 it was decided by the Principal Allied and Associated Powers that the Territory of New Guinea, which Germany gave up as one of the terms of peace, should be entrusted under Mandate from the League of Nations to the Government of the Commonwealth. The issuing of the Mandate was, however, delayed, and it was not until 17th December, 1920 that its terms were settled, and the Mandate itself did not reach Australia until April, 1921.

The terms of the Mandate are given in Official Year Book No. 33 (*see p. 264.*)

3. **1939-45 War.**—For the events following the outbreak of the Pacific War and the formation of the Papua-New Guinea Provisional Administration in 1945, *see p. 243 ante* and earlier Year Books.

4. **Trusteeship (1946).**—The Commonwealth Government undertook to place the Territory of New Guinea under the Trusteeship System established under the Charter of the United Nations. The Trusteeship Agreement for the Territory, under which the Government of Australia is the sole administering authority, was approved by the General Assembly of the United Nations Organization on 13th December, 1946. The terms of the Agreement are shown in Official Year Book No. 39, pp. 355-7.

5. **Administration.**—For particulars of the administration of the Territory of New Guinea prior to the setting-up of the Papua and New Guinea Administration *see* Official Year Book No. 36 and earlier issues.

For administrative purposes the Territory is divided into the following nine districts:—New Britain, comprising New Britain and adjacent islands; Morobe, Madang, Eastern Highlands, Western Highlands, and Sepik on the mainland; New Ireland, comprising New Ireland, Lavongai and adjacent islands; Manus, comprising the Admiralty Group; and Bougainville in the Solomon Islands. Each district is under a District Officer, assisted by a small staff.

## § 3. Population.

1. **Non-indigenous Population.**—The European population of the Territory of New Guinea increased from 64 in 1885 to 1,288 at the Census of 1921, at the 1933 Census it had risen to 3,191, and it reached its pre-war peak of 4,608 in 1939. At the 1947 Census the European population numbered 3,412 (2,604 males and 808 females).

Malays seem to have been the first Asiatics brought by the Germans to German New Guinea; 37 of them were recorded on the mainland in 1885. About 1889 the New Guinea Company began to bring Chinese, Malays and Javanese in growing numbers from Singapore and Java to work on the plantations; in the year 1892 there were about 1,800 Asiatics on the mainland. By 1898 the number had decreased to 300 or 400, but it had risen to 1,830 at the time of the 1933 Census, and at 30th June, 1941 numbered 2,228, mostly Chinese. At the census of 30th June, 1947, non-Europeans numbered 2,215, of whom Chinese (1,769) and Filipinos (276) constituted the major proportion. At the same date half-castes with one of the parents a European numbered 573.

The total non-indigenous population at the Censuses of 1921, 1933 and 1947 was, respectively, 3,173, 5,216 and 6,200, and the estimated figure at 30th June, 1952 was 9,926 persons.

2. **Native Population.**—The enumerated and estimated native population of the Territory of New Guinea as at 30th June, 1952, numbered 1,090,332 persons, comprising enumerated, 864,372 (458,008 males, 404,164 females and 2,200, details of sex not available), and estimated, 225,960. The total population was distributed throughout the several districts as follows:—Eastern Highlands, 262,551 persons; Western Highlands, 157,181; Sepik, 194,603; Madang, 123,564; Morobe, 174,825; New Britain, 85,115; New Ireland, 33,930; Bougainville, 44,143; Manus, 14,420.

## § 4. The Natives.

1. **General.**—The natives are divided into two main groups—Melanesian and Papuan—the former, with a few exceptions, constituting the population of the Bismarck Archipelago, the Solomon Islands, and the coastal districts of the New Guinea mainland, the latter inhabiting the interior of the mainland. Odd tribes of Negritos exist in the mountains of New Guinea. There is a strain of Papuan, and possibly, of Polynesian blood in the Admiralty Islanders, while the Western Islanders and the inhabitants of the small islands east and south-east of New Ireland are Micronesians. (See Official Year Book No. 16, p. 670, and *Official Handbook of the Territory*, Pt. V.)

2. **Land Tenure.**—Native customs in regard to the ownership and use of land may be briefly outlined as follows. The ownership and use of the land are generally individual, although, in some rare cases, particularly in North Bougainville, the communal system exists. In districts where a great many coco-nut palms are growing on native lands it is often found that the land is the property of a chief or of one of the old men of the tribe, and that the coco-nut palms growing thereon are divided into small groves, and are the property of several members of the tribe. Customs with regard to the use of unoccupied forest lands vary. Right of inheritance to land is almost invariably through the maternal branch. (See Official Year Book No. 17, p. 634, and *Official Handbook of the Territory*.)

3. **Research Work.**—During the German occupation of the Territory a certain amount of research work was carried out, partly by scientific expeditions, and partly by missionaries and by a local resident. For many years an anthropologist was engaged consolidating the work already done, and extending it throughout the Territory. The results of his work appear in special reports.

4. **Education.**—Education in the Territory is provided by the Administration and various mission organizations. Schools for natives have also been established by Native Village Councils. The Education Ordinance 1952 enables the Administrator to establish an education advisory board, district education committees, European and native schools and to grant financial aid for educational purposes. European teachers are recruited from Australia, and native teachers are trained in the Territory by the Administration and the missions. During the year ended 30th June, 1952, 69 schools were maintained by the Administration for 3,757 children, of whom 272 were Europeans, 370 were part-native and Malay, and 3,115 were natives. The total number of pupils in the various grades of mission schools was 91,389, of whom 488 were Europeans and part-native. To assist the educational work of the missions the Administration provides expert advice, educational equipment and text-books. In addition, the sum of £55,879 was distributed among the missions as grants-in-aid during the year ended 30th June, 1952.

5. **Health of Natives.**—The main diseases affecting the natives are malaria, yaws, respiratory diseases, dysentery, framboesia, tropical ulcers, hookworm, filariasis and beri-beri. The Department of Health is engaged in combating these diseases with a staff of fully-trained medical officers, medical assistants and orderlies in native hospitals at Administration stations and sub-stations (its staff also supervises hospitals on plantations). It has adequate facilities for research in tropical medicine, and a training scheme for natives as medical orderlies. The Department also provides the missions with much of their medical stores and supplies, and maintains two Hansenide colonies for the treatment of natives suffering from Hansen's Disease. The Department also undertakes the general oversight of sanitary conditions in the Territory.

6. **Missions.**—A number of mission societies operate in the Territory.

The Society of the Sacred Heart of Jesus works in the Bismarck Archipelago, the Society of the Holy Ghost, the Franciscan Order and the Society of the Divine Word along the coast of north-east New Guinea from Sek to the Dutch border and in the Central Highlands, and the Marists in Buka and Bougainville. These are Roman Catholic Missions. The Protestant Missions are the Australian Methodist Mission in New Britain and New Ireland, the New Zealand Methodist Mission in Bougainville,

the Lutheran Mission (supported and staffed by the Lutheran Churches in Australia and America) which works in Morobe, Madang, the Central Highlands, New Britain and Manus, the Melanesian Mission (Anglican) in New Britain, the Seventh Day Adventist Mission in Bougainville, New Britain, the mainland of New Guinea and Manus, the East and West Indies Bible Mission and the Baptist Mission in the Central Highlands. The South Seas Evangelical Mission (Undenominational) and the Assemblies of God Mission are also working in the Sepik area. All these societies include teaching with their missionary work.

### § 5. Land Tenure.

The principles governing the acquisition and ownership of land and types of tenure available in New Guinea are in general similar to those which obtain in Papua. In New Guinea, although under the Land Ordinance 1922-1951 grants of freehold estates may be made, as a matter of policy freehold estates are no longer granted by the Administration, all grants now being restricted to leaseholds. However, in New Guinea the amount of freehold land of earlier origin held by private non-indigenous owners amounts to more than half a million acres. Freehold titles to this land, which includes a good deal of plantation land, may be transferred by purchase subject only to the general provision in New Guinea that dealings in land are subject to the approval of the Administrator.

The area of the Territory of New Guinea is estimated at 59,520,000 acres, of which, at 30th June, 1952, 1.70 per cent. was alienated. The following was the distribution according to tenure on 30th June, 1952:—Alienated: Held by private non-indigenous inhabitants—Freehold, 519,380 acres, Leasehold, 175,817 acres; Held by Administration, 291,875 acres; Native Reserves, 26,611 acres; Total Alienated, 1,013,683 acres; Held by Natives, 58,506,317 acres.

Leases in force at 30th June, 1952 were as follows:—Agricultural, 509-154,031 acres; dairying, 9-1,900 acres; pastoral, 4-11,296 acres; residential and business, 581-724 acres; special, 71-1,511 acres; mission, 495-1,775 acres; leases granted to Chinese in towns, 219-62 acres; long period leases from German regime, 105-4,518 acres; total, 1,993-175,817 acres.

Under German law there was a system of registration of titles in a "Ground Book," but registration did not confer an indefeasible title. The German system has been replaced by one modelled on the Torrens plan, embodied in an Ordinance entitled the Lands Registration Ordinance 1924-1951.

### § 6. Production.

1. **General.**—The products of the Territory are obtained from its agricultural, fishing, forestry and mining industries. The only important manufacturing industry at present in existence is that of desiccated coco-nut. However, a company (Commonwealth New Guinea Timbers Ltd.), in which the Commonwealth Government has a controlling interest, is erecting a modern factory at Bulolo for the manufacture of plywood and veneer, and the export of these products is expected to commence by the end of 1953. Native subsistence agriculture, fishing and hunting produce most of the food requirements of the native population. The main native agricultural products are taro, yams, sweet potatoes, bananas and paw-paw. Non-indigenous enterprise produces most of the commodities exported. Natives, however, do produce copra for export and native enterprise in other fields of agricultural production for export purposes is being encouraged. The principal agricultural products of New Guinea for the export trade are copra and cocoa. Most of the timber milled during 1951-52 was absorbed by local building requirements, exports of timber absorbing approximately 10 per cent. of production. The main products of fisheries exported from New Guinea are trochus and green snail shell. Gold is the principal mineral mined.

For information on the agricultural and pastoral industries, which for the sake of convenience is related to the Territory of Papua and New Guinea as a whole, see pp. 244-7. The following paragraphs relate to the timber, fishing and mining industries in the Territory of New Guinea.

2. **Timber.**—Surveys of the timber resources of the Morobe District indicate that there are approximately 500 million super. feet of timber in the pine forests of the Bulolo Valley. This is supporting sawmills cutting for local use and export, and fitches are also being exported to Australia for the manufacture of battery separator veneer. It is proposed that Commonwealth New Guinea Timbers Ltd. will harvest this forest, the area being progressively reforested as it is cut. Sawmills controlled by the Administration are established at Yalli and Keravat, and are supplying local requirements. The log export trade has not yet returned to the pre-war volume, but in 1951–52 shipments of some 1,882,169 super. feet of timber in the log were made.

The Forestry Ordinance 1936–1951 provides for the issue of permits and licences to cut timber. Present policy calls for the orderly development of the timber industry on sound forestry principles; the grant of emergency timber permits to provide timber for Territory requirements; the disposal by public tender of timber areas designated by forest officials of the Territory; and the development of the pine stand in the Bulolo Valley by a joint company in which the Commonwealth Government has a majority shareholding. Timber growing on native lands cannot be acquired by private purchasers direct from the natives but must be obtained through the Administration. A royalty is payable on all forest produce taken under permit or licence. Nineteen timber permits, covering an area of 223,000 acres, were in operation during the year.

3. **Fisheries.**—The wealth of the waters of the Territory has been little exploited. Fish are caught at many places along the coast to supply the small local demand of the natives and of the few resident Europeans. Trochus shell to the value of £44,294 and green snail shell to the value of £32,996 were exported during 1951–52.

4. **Mining.**—The production of gold and silver is the most important mining activity in New Guinea. Gold has been discovered on the Waria, the Ramu, the Francisco, and the Markham Rivers, and in tributaries of the Sepik River. Rich gold deposits were discovered in the Morobe District in 1926; the field is situated about 90 miles (40 by air) inland from Lae, the nearest coastal port. Communication is established with the coast by a regular aeroplane service and by road transport. Silver is usually found associated with the gold in these deposits. Osmiridium is reported to have been found on the upper tributaries of the Ramu, and platinum on the Kabenau River. Copper has been discovered in the form of chalcopyrite and malachite in the Baining District. Iron occurs as magnetite and hæmatite in the Baining District, apparently in large quantities. Sulphur occurs in several localities in the volcanic regions of the Territory. Brown coal has been found on the mainland in the vicinity of Astrolabe Bay, and in the southern portion of New Ireland. Except for gold and silver, costs of extraction, treatment and transport have rendered production uneconomical.

The granting of rights, leases and claims for mining purposes are provided for in the Mining Ordinance 1928–1947 and Regulations thereunder. Copies of the Ordinance and Regulations may be obtained from the Secretary, Department of Territories, Canberra.

The production of gold in New Guinea during the last three pre-war years averaged about 228,000 fine oz. a year, at an average value of £2,000,000. In 1940–41 it amounted to 263,113 fine oz., valued at £2,808,835. Although the market price of gold has been fixed at a much higher level than in 1938–39, mining costs have risen to a much larger extent, and, as a consequence production since the war has been on a much smaller scale, averaging 91,000 fine oz., at a value of £1,200,000 a year over the five years ended 1951–52. Production in 1951–52 amounted to 110,214 fine oz., value, £1,707,401, and in 1950–51 to 87,593 fine oz., value, £1,356,962.

The Petroleum Ordinance 1936 has been superseded by the Petroleum (Prospecting and Mining) Ordinances 1951, which has facilitated the carrying out of geological surveys and prospecting activities generally. A search for petroleum is no longer being actively conducted, however, and no permits to search for petroleum were in force at 30th June, 1952.

## § 7. Trade, Transport and Communication.

1. **Customs Tariff.**—As from 1st July, 1950, a new customs tariff came into force. This provides high revenue rates on ale, spirits, wines, timepieces, cigarette papers, fancy goods, jewellery and certain apparel and piece goods made of silk. Of 74 items



now mentioned in the import schedule, 58 are on the free list and two are partially free. The new tariff allows duty-free treatment of necessities, but increases rates on non-necessities. The purpose of the revision is to relieve both general industrial costs and the basic costs of living with a view to encouraging further development of the Territory. The rate of duty on items not specified in the schedule is 10 per cent. ad valorem. No preferential rates are specified in the schedule. A surcharge equal to 10 per cent. of duty payable was imposed as from 17th January, 1952.

Export duties are imposed on copra, trepang, tortoise shell, mother-of-pearl shell, feathers, sulphur and sulphur-bearing substances.

Provision is made in the Australian Customs Tariff (Papua and New Guinea Preference) for the free entry into Australia of certain goods produced and imported direct from the Territory of New Guinea (see Chapter VI.—Trade), and a proclamation of 25th September, 1935 exempted from primage duty goods produced or manufactured in the Territory.

2. Imports and Exports.—Values of the principal classes of imports for the years 1938–39 and 1948–49 to 1951–52 are shown below.

## TERRITORY OF NEW GUINEA : IMPORTS.

(£.)

Particulars.	1938–39.	1948–49.	1949–50.	1950–51.	1951–52.
Foodstuffs of animal origin ..	152,023	546,683	722,518	813,701	1,177,614
Foodstuffs of vegetable origin ..	158,895	767,728	692,387	966,090	1,218,081
Spirituos and alcoholic liquors ..	54,969	154,724	182,039	176,597	252,016
Tobacco and preparations thereof	63,122	154,029	269,029	263,195	240,960
Live animals ..	1,328	10,553	13,349	20,720	53,864
Animal substances ..	1,124	..	392	25	24
Vegetable substances and fibres ..	3,307	6,611	5,599	8,993	14,480
Apparel, textiles and manufac- tured fibres ..	138,077	562,418	565,497	847,268	993,729
Oils, fats and waxes ..	65,901	453,387	288,965	514,890	579,478
Paints and varnishes ..	10,934	30,350	43,439	61,228	68,190
Stones and minerals ..	8,164	2,801	9,456	12,495	12,070
Metals, manufactures and mach- inery ..	470,781	1,044,340	1,164,363	1,350,608	2,094,821
Rubber and leather and manu- factures thereof ..	16,365	42,867	62,444	85,072	161,728
Wood and wicker ..	29,195	78,814	141,879	139,706	121,370
Earthenware, cement, glass, etc.	13,215	40,492	64,464	99,679	123,630
Paper and stationery ..	22,829	57,279	65,337	87,792	121,450
Jewellery and fancy goods ..	14,133	76,145	81,844	104,625	137,986
Optical and scientific instruments	22,318	57,003	75,251	131,977	192,014
Drugs, chemicals and fertilizers ..	46,163	99,889	104,926	159,466	234,437
Miscellaneous ..	47,992	207,760	238,621	342,542	356,160
Total ..	1,340,835	4,393,873	4,791,799	6,186,669	8,154,102

Exports from New Guinea during these years were valued at £2,973,895, £3,202,257, £4,234,978, £5,436,617 and £6,517,881, 1938–39 to 1951–52 respectively. In 1938–39 gold exported was valued at £2,129,263, and copra at £727,949, comprising the bulk of the exports in that year. These two commodities still predominate in the value of exports, but with gold falling into second place instead of copra. Major commodities exported during 1951–52 (1950–51 in parenthesis) were as follows :—Copra, £3,589,383 (£3,200,715); gold, £1,707,401 (£1,356,962); cocoa beans, £147,503 (£92,181); timber, £127,621 (£24,332); desiccated coco-nut, £110,844 (£218,166); shell (trochus, green snail, etc.), £77,302 (£127,913). Surplus war stores exported by the purchasers comprised the bulk of the remaining exports.

Imports into New Guinea in the years just before the 1939-45 War came in the main from Australia (about 40 per cent.), United States of America (20 per cent.), and the United Kingdom (10 per cent.), with China, Japan and Germany contributing about 5 per cent. each. In recent years Australia's proportion has advanced to about 60 per cent., the United States of America and the United Kingdom between them sharing a further 15 to 20 per cent. In 1951-52 major countries in the New Guinea import trade were:—Australia, £4,920,231; the United Kingdom, £592,885; United States of America, £565,513; Hong Kong, £367,910; India, £144,455.

About three-quarters of the New Guinea exports in the immediate pre-war years went to Australia; of the balance most went to the United Kingdom. Australia still predominates in the New Guinea export trade, but in the last three years has averaged less than 60 per cent. of the total, and the United Kingdom about 40 per cent. In 1951-52 the value of exports to Australia amounted to £3,746,451, to the United Kingdom, £2,503,723, and to Sweden, £235,446.

3. **Shipping.**—A regular passenger and freight service operates between Australia and the Territory of New Guinea. Vessels trading between Australia and the East also call at Territory ports. Coastal and inter-island shipping services are maintained by vessels operating from the principal ports of the Territory. Some of these vessels are provided by the Commonwealth Government. Shipping within the Territory is regulated by the Shipping Ordinances 1951 and the Coastal Shipping, Ports and Harbours Regulations.

Main ports of call for oversea vessels are established at Lae, Madang and Finschhafen (mainland), Rabaul (New Britain), Kavieng (New Ireland) and Lorengau (Manus). Ports proclaimed under the Coastal Shipping Ports and Harbour Regulations for the service of local vessels are, in addition to the main ports above-mentioned, Salamaua, Wewak, Aitape and Wanimo (mainland), Gasmata and Talasea (New Britain), Namatanai (New Ireland), and Kieta and Buka Passage (Bougainville).

There are no prepared inland waterways. The natural river system is not generally suitable for vessels except those of small tonnage.

Prior to the 1939-45 War the annual average entrances and clearances of oversea vessels at ports of New Guinea amounted to about 240, and the aggregate net tonnage to 660,000 tons, about 80 per cent. being of British nationality. Oversea shipping in post-war years has not reached these figures, either in numbers or in tonnage, and in 1951-52 entrances numbered 91 with a net tonnage of 232,402 tons, and clearances 88; 228,721 net tons—total 179; 461,123 net tons, of which 77 per cent. was British.

4. **Other Forms of Transport and Communication.**—Means of communication on land are scanty. There are no railways. Roads lead from Rabaul to places within 30 or 40 miles, and there is a road 200 miles long in New Ireland and also a road 90 miles long from Lae to Wau in the Morobe District. The total mileage of roads in the Territory of New Guinea at 30th June, 1952 was 2,346, of which 770 were suitable for heavy traffic.

The discovery of gold in New Guinea resulted in great aviation activity in the vicinity of the gold-fields. On account of the mountainous country and dense undergrowth between the coast and the goldfields the task of transporting food and stores to the fields and of bringing the gold to the seaboard by land was an irksome and costly process. The fields are situated about 90 miles (40 by air) inland from Lae. Qantas Empire Airways Ltd. operates a regular service from Australia to Lae, Madang, Rabaul, Bulolo and Wau with extensions to Finschhafen, Torokina, Kavieng and Manus Island. Commercial aircraft operators located at Lae also maintain passenger and freight-carrying services to Wau, Bulolo, Mount Hagen, Kainantu, Goroka, Finschhafen, Madang, Wewak, Aitape, Maprik and Angorum. Charters are undertaken to other parts of the Territory as occasion arises. Further reference to New Guinea air activities is contained in Chapter V.—Transport and Communication.

A radio telephone trunk service has been installed linking Lae, Rabaul, Madang, Port Moresby and Samarai. Arrangements are being made to bring these stations into the oversea radio telephone circuit. Three zone or group centres for radio telephone communication have been established with the following associated stations:—Lae—12

associated stations; Madang—33; Rabaul—52. There were a total of 134 teleradio stations licensed in the Territory of New Guinea at 30th June, 1952, of which 22 were not operating.

### § 8. Revenue and Expenditure.

The principal sources of revenue for the Territory of New Guinea are the grant by the Commonwealth Government and customs duties. Total expenditure in 1951–52 amounted to £4,612,434, towards which the grant contributed £3,126,059 and customs duties, £1,000,284. The major groupings into which the various items of expenditure may be classed were in 1951–52 as follows:—Health, £987,465; district services and native affairs, £861,405; education, £300,155; justice, £301,757; agriculture, etc., £203,069; customs and marine, £148,558; forestry, £107,003; capital works and services, £871,473; maintenance, £447,742. Total expenditure in 1950–51 was £3,575,721. In 1938–39 revenue and expenditure each amounted to about £500,000, customs duties and royalty on gold constituting the major items of revenue and district services and native affairs the major items of expenditure.

For information on the finances of the combined Territory administration see Papua and New Guinea, § 2, p. 244.

### TRUST TERRITORY OF NAURU.

1. **General.**—Nauru is an oval-shaped atoll about 12 miles in circumference, having an area of about 5,263 acres, of which approximately two-thirds is phosphate-bearing. It is situated in latitude 0° 32' south of the Equator and longitude 166° 55' east of Greenwich. Portion of the island between the sandy beach and the coral cliffs is fertile, and it is there that most of the Nauruans reside. With the exception of a small fringe around an inland lagoon, the plateau which contains the phosphate deposits possesses few food plants and is uninhabited, but portion of the area has been planted with fruit trees. The system of land tenure is governed by an old custom, and, with the exception of small allotments held by the Government, the British Phosphate Commissioners and the Missions, the whole of the island is owned by individual natives. The temperature range is from 76° F. at night to 94° F. during the day and the average humidity about 80 per cent. Normally the rainfall is comparatively low for islands of the Pacific, the average for twenty years from 1920 to 1940 being 80.5 inches. However, falls as high as 181.76 inches during 1940 and as low as 12.29 inches during 1950 have been recorded.

2. **History.**—The island, discovered by Captain Fearn in 1798, was annexed by Germany in 1888, and prior to 1914 was part of the protectorate of German New Guinea.

In November, 1914, Nauru was occupied by a detachment from the Australian Naval and Military Expedition at Rabaul, and it was included in the cession of colonies made by Germany in 1919 to the Allied and Associated Powers, whose representatives agreed that a mandate for its administration should be conferred upon His Britannic Majesty. The mandate was confirmed by the Council of the League of Nations on 17th December, 1920. On 2nd July, 1919, the British, Australian and New Zealand Governments agreed that the administration (which, since 1915, had been in charge of an official appointed by the British Colonial Office) should be vested in an Administrator, who took up duty in June, 1921. The agreement between the three Governments was approved by the Commonwealth Parliament in the Nauru Island Agreement Act 1919, and is shown in the Schedule to that Act. A supplementary agreement concerning Nauru was drafted in May, 1923, and ratified by the Commonwealth Parliament by the Nauru Island Agreement Act 1932.

On 25th August, 1942, nine months after the outbreak of the war in the Pacific, communications with Nauru ceased, and the island was occupied by Japanese forces. It was re-occupied by a joint Australian Naval and Military Force on 14th September, 1945, and civil administration was re-established on 1st November, 1945.

3. **Trusteeship Agreement.**—On 1st November, 1947 the General Assembly of the United Nations approved a Trusteeship Agreement for the Territory of Nauru submitted by the Governments of Australia, New Zealand and the United Kingdom in substitution for the terms of the mandate under which the Territory had been administered. This

Agreement designates the Governments of Australia, New Zealand and the United Kingdom as the Joint Administering Authority, with the Government of Australia continuing, on behalf of the Administering Authority, to exercise full powers of legislation, administration and jurisdiction in and over the Territory. The terms of the Agreement were given in Official Year Book No. 39, pp. 370-1.

4. **Administration.**—The administration of the island is vested in the Administrator, who is obliged to conform to instructions issued by the Government which appointed him. Until the Government of Australia ceases to exercise full powers of legislation, administration and jurisdiction in and over the Territory on behalf of the Administering Authority in pursuance of Article 4 of the Trusteeship Agreement, all ordinances made by the Administrator are subject to confirmation or disallowance by the Governor-General of Australia acting on the advice of the Federal Executive Council. All administration expenses are met from local revenue and phosphate royalties. Native industries such as canoe-building, fishing, mat-making, etc., are encouraged by the provision of prizes at annual competitions. An agency of the Commonwealth Savings Bank has been established. There is a co-operative store managed to a large extent by the natives. The store books, however, are audited by Government officers. Natives are not allowed to carry or be in possession of firearms, and the use by them of intoxicating liquors and deleterious drugs is prohibited.

5. **Population.**—The Nauruan component of the population of Nauru numbered about 1,100 in 1921, but had grown to more than 1,800 before the Japanese invasion in August, 1942. In 1946 it numbered less than 1,400 but by 30th June, 1952 it had risen again to 1,672. Chinese have for many years formed a considerable part of the population of Nauru; their numbers increased, with some reversals of trend, from about 600 in 1921 to more than 1,500 before the 1939-45 War. After the war they increased from about 800 in 1946 to 1,491 in 1950, but in 1952 numbered only 759. Other Pacific islanders in the early 1920's numbered almost 300 persons, but not until recent years have they since numbered more than 40. The 1952 figure was 560. The European population after 1921 fluctuated, but with a generally upward trend, between one and two hundred persons, and in 1940 numbered 192. In 1948 it numbered 247 and in 1952 it was 253. The total population of Nauru at 30th June, 1952 was 3,244.

6. **Health.**—Cases of the usual diseases known in the Pacific occur. Venereal disease is rare, but elephantiasis is occasionally met with. An area has been set apart for the segregation of lepers, and the latest methods of treatment are applied. The total number of persons receiving treatment at 30th June, 1952, was 50 of whom 9 were in segregation at the Leper Hospital. Two hospitals are maintained on the island, one by the Administration for Nauruans, and one by the British Phosphate Commissioners for their employees. In common with other natives, the Nauruans are very susceptible to tuberculosis and influenza, and in 1921 an influenza epidemic caused the deaths of 230 islanders. Dysentery, both amebic and bacillary, is endemic. A regular anti-mosquito campaign is conducted. Steps have been taken by the authorities to improve the water supply and to provide efficient sanitation generally. Every Nauruan is required to undergo a medical examination at intervals of three months. Baby clinics have been established to give help and advice to Nauruan mothers in regard to infant nurture.

7. **Education.**—Formerly the education of native children was undertaken by the missions, which were subsidized by the Administration, but the Administration assumed full responsibility for education on 1st October, 1923. There are eight primary schools and one secondary school for natives, together with one primary school for Europeans. At 30th June, 1952, 411 natives and 34 Europeans were enrolled in the primary schools, and 42 at the secondary school. A teacher, who is on loan from the Victorian Education Department, is in charge of the European school, but education is controlled by a Director of Education.

The curriculum is based on that used in Australian schools, and the teaching is generally in English. Education is compulsory for native children from six to sixteen years. At 30th June, 1952, 19 Nauruans were attending secondary schools in Australia, many as scholarship holders under the Nauru Royalty Trust Fund Scheme; 10 were

studying to be teachers, 2 to be doctors, 3 to be accountants and one each to be a chemist, a nurse, a native affairs officer and a home science teacher. In addition to these, there were two students at the Central Medical School, Suva, and two theological students in Australia. Altogether, 17 students were sponsored by the Administration, 2 by the missions and 4 by their own families.

8. **Judiciary.**—The judicial power is vested in the Administrator in a Central Court and a District Court. The right of appeal is provided.

9. **Religion.**—The London Missionary Society (Protestant) and the Sacred Heart of Jesus Mission (Roman Catholic) operate in Nauru.

10. **Phosphate Deposits.**—(i) *General.* From 1906 to 1919 the deposits were worked by the Pacific Phosphate Company, which also worked the deposits on Ocean Island (about 165 miles east of Nauru and part of the Gilbert and Ellice Islands Colony administered by the Colonial Office). The quantity remaining on Nauru has been estimated at about 70,000,000 tons, and the exports average 85 per cent. to 88 per cent. of tricalcium phosphate.

The interests of the Pacific Phosphate Company in the two islands (though not in other islands in the Pacific in which it had workings) were bought by the British, Australian and New Zealand Governments in 1919 for £3,500,000, the purchase money being contributed in the proportions of 42, 42 and 16 per cent. respectively. The Agreement of 2nd July, 1919, provides for the working of the deposits by three British Phosphate Commissioners, one appointed by each Government; and the three countries are entitled to receive the output in the same proportions of 42, 42, and 16 per cent.

(ii) *Royalty on Phosphate.* Under a revised agreement between the British Phosphate Commissioners and the Nauruan landowners, an increased royalty of 1s. 4d. per ton of phosphate exported has been payable from 1st July, 1950, as follows:—

- (a) 6d. per ton to be paid to the Nauruan landowner concerned;
- (b) 3d. per ton to the Administrator for the benefit of the Nauruan people;
- (c) 2d. per ton to the Administrator to be held in trust for the Nauruan landowner concerned and invested at compound interest for a period of 20 years. The capital will then remain invested and the interest thereon will be paid to the landowner.
- (d) 5d. per ton to the Administrator to be held in trust for the Nauruan community and invested until the year 2000 at compound interest.

From 1st July, 1947 the lump sums payable to landowners from whom phosphate-bearing lands are leased were also increased to £45 per acre, with a minimum payment of £7 10s. for areas less than an acre.

(iii) *Nauru and Ocean Island Phosphate Industry.* Exports of phosphate from Nauru and Ocean Island in 1939-40 amounted to 1,243,428 tons, of which Australia received 54 per cent. and New Zealand 32 per cent. Following the interruption to production by the war in the Pacific, this figure was not exceeded until 1949-50 when 1,285,998 tons were exported (76 per cent. to Australia, 24 per cent. to New Zealand). Figures for 1951-52 are:—1,328,950 tons exported, 57 per cent. Australia, 43 per cent. New Zealand.

Receipts from sales of phosphate in 1939-40 amounted to £1,041,418, and the f.o.b. cost, including interest on capital sinking fund, etc., amounted to £1,037,208. In 1946-47 sales and costs each amounted to about £500,000, but they have since increased to more than £2,300,000. In 1951-52 receipts from sales, etc., amounted to £2,360,996, and costs, etc., to £2,338,320.

During the period of the Japanese occupation from August, 1942 to September, 1945, while waiting to resume activities at Nauru and Ocean Island, the Commissioners were engaged in meeting the phosphate requirements of Australia and New Zealand from other available sources. Reconstruction of equipment destroyed during the Japanese occupation is now completed and a programme of improvements and additions has been commenced.

The amount due by the British Phosphate Commissioners to the partner Governments for purchase-money and other capital sums was £3,666,457 on 30th June, 1921, and at 30th June, 1942, this had been reduced to £3,024,373. The partner Governments agreed

to a suspension of interest and sinking fund payments from 1st July, 1942, while operations at Nauru and Ocean Island were curtailed. Modified payments were resumed in 1946-47, pending a review of the position.

The review was carried out in 1950, as a result of which the revised capital indebtedness of the Commissioners to the partner Governments at 30th June, 1950 was determined at £3,881,711. Interest and sinking fund payments were resumed with effect from 1st July, 1950 on the basis of repayment of the revised capital indebtedness in 35 years.

(iv) *Employees.* Apart from a limited number of Europeans, the employees are Chinese and Pacific Islanders engaged under a one year's contract. Increasing numbers of Nauruans are being employed, mainly in trade capacities.

(v) *Christmas Island Phosphates.* It may not be inappropriate to refer here to the phosphate deposits on Christmas Island in which the Australian Government is interested. The concession to work phosphate at Christmas Island, situated in the Indian Ocean near Java, had been held since 1897 by the Christmas Island Phosphate Company Limited, a private company incorporated in England.

The Australian and New Zealand Governments, jointly, have acquired the Company's interests and assets at Christmas Island as at 31st December, 1948.

The undertaking is controlled by a Board of Commissioners appointed by the Australian and New Zealand Governments. Phosphate is distributed by the British Phosphate Commissioners who have been appointed by the Board as its managing agents.

11. *Trade.*—The Customs Tariff of Nauru provides for the free admission of all goods other than cigars, cigarettes, tobacco, spirits, wines, beer, cider, and perry, and cylinder blocks for motor cycle engines. Articles imported by the Administration for its own use and spirits for scientific purposes are exempt. The tariff rates apply to all countries alike. Imports into Nauru were valued at £192,749 in 1940, and exports (808,400 tons of phosphate) at £541,168. In 1951-52 imports were valued at £544,001, and exports (1,061,797 tons of phosphate) at £1,725,420. Of the total imports in 1951-52 Australia supplied £388,065 or 71 per cent.; the balance came mainly from the United Kingdom, New Zealand and China in that order.

In 1951-52, 592,675 tons of phosphate were exported to Australia, and 469,122 tons to New Zealand.

12. *Revenue and Expenditure.*—The revenue of the Administration has risen from £33,084 in 1939 to £90,414 in 1951-52, and expenditure from £29,391 to £146,742.

Of the revenue for the year ended 30th June, 1952, royalty on phosphate amounted to £56,701, post office and radio receipts, £4,967 and customs duties, £1,803. Main items of expenditure were salaries, £67,305, works and services, £45,426, and stores and materials, £24,140.

#### HEARD AND McDONALD ISLANDS AND MACQUARIE ISLAND.

On 26th December, 1947, by an exchange of notes with the United Kingdom Government, the United Kingdom sovereignty over the Heard and McDonald Islands was transferred to the Commonwealth of Australia. The laws of the Australian Capital Territory were declared to be in force in the Territory of Heard and McDonald Islands by the Heard and McDonald Islands Act passed 18th March, 1953.

At the end of 1947 an Australian scientific post was established on Heard Island and has been maintained as a scientific base since that date. The island party is relieved annually.

Heard Island lies 2,500 miles south-west of Fremantle in the South Indian Ocean, and is about 27 miles long and 13 miles wide. The McDonald Islands are 26 miles to the west of Heard. They are small, rocky and precipitous.

Macquarie Island, together with a few rocky islets nearby, has constituted a dependency of Tasmania since early in the 19th century.

In December, 1911, five members of the Australian National Antarctic Expedition landed on the island and remained there until 1915. On 3rd March, 1948, another party was landed to man a new base and this has been maintained as a scientific base since that date.

The island is 1,000 miles south-east of Hobart, and is 21 miles long and 2 miles wide.

## CHAPTER VIII.

### LABOUR, WAGES AND PRICES.

NOTE.—References in this chapter to the basic wage relate to the position prior to the announcement by the Commonwealth Court of Conciliation and Arbitration on 12th September, 1953, of its decision in the Basic Wage Inquiry, reference to which will be found in the Appendix to this volume.

#### A. RETAIL PRICES AND PRICE INDEXES.

##### § 1. General.

The information on retail prices and price indexes presented in this chapter is extracted from the annual *Labour Report* of the Commonwealth Bureau of Census and Statistics. For a full explanation of methods adopted and an analysis of problems involved see the detailed reference in Chapter I. of *Labour Report* No. 40, 1951.

The retail prices of the extensive range of commodities and services in common demand (generally referred to as the "regimen") used in compiling the "C" Series Retail Price Index have been ascertained at frequent and regular intervals since 1923 for each of the six capital cities and for 27 of the more important towns of Australia. Comparable information is available for the month of November in each year 1914 to 1922 for each of the six capital cities. The complete list of items covered by the retail price regimen is published in the annual *Labour Report*.

Retail prices of food and groceries and average rentals of houses for earlier years extending back to 1901 were collected by this Bureau, and in some cases have been recorded by the Statisticians of various States as far back as 1864.

##### § 2. Retail Price Indexes.

Two main series of retail price index-numbers are compiled and shown in some detail in the following pages, namely:—

- (i) the "B" Series Index relating only to food, groceries and housing, continuously available from 1907;
- (ii) the "C" Series Index relating to food, groceries, housing, clothing, household drapery and utensils, fuel and light, and other miscellaneous items of household expenditure, continuously available from 1914.

The "B" Series Index comprises only the food, groceries and housing sections of the "C" Series Index.

The "C" Series Index in total provides a reliable measure of aggregate variations in retail prices (as well as of group indexes for component sections) of a high percentage of goods and services used in wage-earner households. This index is compiled for—

- (a) the capital city of each of the six States,
- (b) four other principal towns in each of the six States,
- (c) weighted average of five towns (including the capital city) in each of the six States,
- (d) weighted average for the six capital cities combined,
- (e) weighted average for the thirty towns (including capital cities),
- (f) separate indexes for Warwick, Port Augusta, Whyalla and Canberra.

The "C" Series Index forms the basis of the "Court" Series Index used by the Commonwealth Court of Conciliation and Arbitration for the "cost of living" adjustments of wages prescribed by awards made by the Court. (See § 7, p. 273.)

### § 3. Retail Price Levels ("C" Series Index) 1914-1953.

The aggregate indexes for November, 1914, 1921 and the years 1929, 1939 and 1947 to 1952 for the Thirty Towns are published in summary form on page 270 of this chapter, while the following table furnishes the relevant index-numbers for the Six Capital Cities as a whole for certain significant dates since November, 1914—the earliest date for which this index is available.

#### "C" SERIES RETAIL PRICE INDEX-NUMBERS.

##### WEIGHTED AVERAGE OF SIX CAPITAL CITIES.

(Base : *Weighted Average of Six Capital Cities, 1923-27 = 1,000.*)

1914, November	..	..	..	687 (Beginning of War I.)
1918, November	..	..	..	905 (End of War I.)
1920, November	..	..	..	1,166 (Post-War peak)
1922, November	..	..	..	975 (Post-War trough)
1929, Year	..	..	..	1,033 (Pre-Depression peak)
1933, Year	..	..	..	804 (Depression trough)
1939, September Quarter	..	..	..	916 (Pre-War II.)
1943, March Quarter	..	..	..	1,123 (Pre-Price Stabilization)
1943, June Quarter	..	..	..	1,143 (War II. peak)
1945, September Quarter	..	..	..	1,126 (End of War II.)
1948, September Quarter	..	..	..	1,311
1950, September Quarter	..	..	..	1,572
1952, September Quarter	..	..	..	2,238
1953, June Quarter	..	..	..	2,293

The index reveals a rise of approximately 32 per cent. during the first world war, followed by a further rise of 29 per cent. in the two post-war years (November, 1918, to November, 1920). From November, 1920 to November, 1922, there was a fall of 16 per cent. and the index remained relatively stable until the onset of the depression in 1929. During the four years of the depression 1929 to 1933 the index fell by 22 per cent., rising thereafter steadily until 1939 when it was nearly 14 per cent. above the level of 1933, and approximately at the level it had occupied at the date of the Armistice of 1918. Between the outbreak of war (September, 1939) and March, 1943 (pre-price stabilization) the index rose by approximately 23 per cent. to a level slightly below that reached at the height of the post-war boom in 1920. Compared with the March Quarter, 1943, the index-number at the close of the war was practically unchanged.

Immediately after the outbreak of the war price control was established by the Government under Regulations dated 28th September, 1939, and a national policy of price stabilization was applied as from 12th April, 1943, backed by more stringent price control and price subsidies. The retail price level, as measured by the index, remained relatively steady throughout 1944 and 1945 at the level of March, 1943. This stabilized level was approximately 23 per cent. above that of 1939 and 63 per cent. above the level prevailing at the beginning of the first world war in 1914. After June Quarter, 1946, war-time controls, subsidies, etc., were progressively modified and by the end of 1948 and early 1949 had been virtually eliminated. Price control was transferred from Commonwealth to State Authorities in September, 1948. In the latter part of 1950 export prices (especially for wool) rose very substantially and have remained relatively



very high. In December, 1950, the Commonwealth Court of Conciliation and Arbitration raised the basic wage by approximately 14 per cent. Concurrently, public works expenditure and private investment rose to very high levels.

The movement in the various groups of the index and in the index as a whole for each year for which it has been compiled is shown in the following table for the six capital cities combined :—

**"C" SERIES RETAIL PRICE INDEX AND ITS "GROUP" INDEX-NUMBERS(a)**  
**FOR THE SIX CAPITAL CITIES COMBINED, 1914 TO 1952.**

(Base of Each Group : Weighted Average of Six Capital Cities, 1923-27 = 1,000.)

Period.	Food and Groceries.	Rent (4 and 5-Rooms). (b)	Food, Groceries and Rent (4 and 5-Rooms) ("B" Series).	Clothing.	Miscellaneous.	Total "C" Series Index.
1914 (c)	641	649	644	754	749	687
1915 (c)	842	659	777	792	786	782
1916 (c)	812	665	760	881	802	795
1917 (c)	836	685	782	992	882	847
1918 (c)	861	722	812	1,097	972	905
1919 (c)	1,026	768	934	1,238	1,036	1,022
1920 (c)	1,209	851	1,082	1,365	1,194	1,166
1921 (c)	950	877	934	1,246	1,010	1,013
1922 (c)	945	929	939	1,052	999	975
1923..	1,009	950	988	1,045	999	1,003
1924..	969	988	975	1,003	1,004	987
1925..	998	1,008	1,002	991	992	997
1926..	1,023	1,026	1,024	986	998	1,011
1927..	1,000	1,030	1,011	975	1,008	1,002
1928..	985	1,066	1,014	997	1,010	1,009
1929..	1,044	1,073	1,054	996	1,007	1,033
1930..	941	1,047	978	951	999	975
1931..	826	901	852	853	973	873
1932..	796	817	803	804	958	830
1933..	751	804	768	787	950	804
1934..	783	810	792	785	944	817
1935..	806	839	818	783	946	832
1936..	825	879	844	792	947	850
1937..	851	912	872	811	960	873
1938..	886	942	906	829	961	897
1939..	927	965	939	841	962	920
1940..	939	973	950	966	998	957
1941..	947	976	956	1,118	1,060	1,008
1942..	1,031	976	1,007	1,308	1,112	1,091
1943..	1,037	975	1,011	1,440	1,160	1,131
1944..	1,026	976	1,004	1,435	1,165	1,126
1945..	1,034	975	1,009	1,425	1,161	1,126
1946..	1,036	976	1,010	1,505	1,167	1,145
1947..	1,100	977	1,050	1,566	1,199	1,188
1948..	1,256	979	1,145	1,744	1,257	1,295
1949..	1,394	982	1,230	1,997	1,338	1,415
1950..	1,566	987	1,336	2,286	1,435	1,560
1951..	2,041	1,009	1,634	2,749	1,679	1,883
1952..	2,526	1,057	1,947	3,096	1,958	2,196
1952—March Quarter	2,404	1,023	1,860	2,992	1,828	2,098
June "	2,567	1,041	1,966	3,099	1,949	2,206
September "	2,592	1,070	1,992	3,115	2,018	2,238
December "	2,542	1,094	1,971	3,177	2,035	2,243

(a) "Group" or "Sectional" index-numbers in the various tables in this chapter cannot be compared with each other in order to show the relative cost of Food and Groceries, Housing, Clothing or Miscellaneous requirements, since each "Group" or "Section" (or combination thereof) has its own Base = 1000, viz.—the weighted average cost for the Six Capital Cities as a whole during the five-yearly period 1923-27 for that "Group" or "Section". (b) Rent.—The rent index-numbers shown in the tables in this publication measure the proportionate rise and fall in the average weekly rentals paid for houses of four and five rooms taking corresponding houses throughout. They are "price" indexes in the strict sense, i.e., they are designed to measure only the "price" element in rent fluctuations. Similarly, "average rents" where shown are indexes of "price" changes in rentals expressed in terms of pence. They are not the average of rents actually paid by all tenants of 4 and 5-roomed houses. It would be inappropriate to include the average of rents actually paid in an index price designed to measure price changes only. The average of rents actually paid is ascertained periodically by Census methods—see also pages 32 and 33 of Labour Report, No. 40. Rentals of new tenanted houses completed since the end of the war are not taken into account. (c) November.

### § 4. Increases in Retail Prices in Recent Years.

1. **Australia.**—The following statement shows, for the six capital cities combined, the percentage increases which have taken place between specified dates in respective groups included in the "C" Series Retail Price Index.

#### "C" SERIES RETAIL PRICE INDEX : WEIGHTED AVERAGE FOR SIX CAPITAL CITIES.

##### A. PERCENTAGE INCREASES IN GROUP INDEXES, AND IN INDEX AS A WHOLE.

The following table shows, for the six capital cities combined, the percentage increases in the "C" Series Retail Price Index as a whole, and in the prices of items in each group considered as a group, between the dates specified :—

Period.	Aggregate "C" Series Index.	Food and Groceries Group.	Rent Group.	Clothing Group.	Miscel- laneous Group.
	%	%	%	%	%
Sept. Qtr. 1939 to Sept. Qtr. 1945	22.9	13.0	0.8	69.3	20.8
Sept. Qtr. 1945 to Sept. Qtr. 1948	16.5	22.5	0.4	25.6	9.4
Sept. Qtr. 1948 to Sept. Qtr. 1950	19.9	24.1	0.8	30.2	12.7
Sept. Qtr. 1950 to Sept. Qtr. 1952	42.4	63.8	8.4	34.5	40.9
Sept. Qtr. 1952 to June Qtr. 1953	2.5	0.5	6.1	4.2	1.6
Sept. Qtr. 1939 to June Qtr. 1953	150.3	183.2	17.4	288.3	113.4

##### B. CONTRIBUTION OF EACH GROUP TO THE PERCENTAGE INCREASE OF THE TOTAL INDEX.

The following table dissects the percentage increases in the aggregate "C" Series Retail Price Index in such a way as to show the component parts of such increases due to the rise in each of the four main groups of the index :—

Group.	Sept. Qtr. 1939 to Sept. Qtr. 1945.	Sept. Qtr. 1945 to Sept. Qtr. 1948.	Sept. Qtr. 1948 to Sept. Qtr. 1950.	Sept. Qtr. 1950 to Sept. Qtr. 1952.	Sept. Qtr. 1952 to June Qtr. 1953.	Sept. Qtr. 1939 to June Qtr. 1953.
	%	%	%	%	%	%
Food and Groceries ..	4.7	7.5	8.5	23.1	0.2	66.3
Rent ..	0.2	0.1	0.1	1.2	0.7	4.2
Clothing ..	13.9	7.1	9.0	11.2	1.3	57.8
Miscellaneous ..	4.1	1.8	2.3	6.9	0.3	22.0
Total ("C" Series Index) ..	22.9	16.5	19.9	42.4	2.5	150.3

This table shows that rises in prices of clothing caused the aggregate of the index to rise by 13.9 per cent. in the six years September Quarter, 1939 to September Quarter, 1945. Increased prices of food and groceries caused the aggregate "C" Series Index to rise by 4.7 per cent. For other groups, the corresponding contributory increases were :— in the miscellaneous group 4.1 per cent. and in the rent group 0.2 per cent., making a total increase of 22.9 per cent. in the aggregate "C" Series Index. Following the corresponding lines across the table it is evident that the rise in prices of food and groceries has become the major cause of the rise in the aggregate "C" Series Retail Price Index since September Quarter, 1950.

2. *International Comparisons.*—The following table shows the increase in recent years in Australia and certain other countries.

**RETAIL PRICE INDEX-NUMBERS.**  
(FOOD, RENT, CLOTHING, MISCELLANEOUS HOUSEHOLD EXPENDITURE.)

Date.	Australia.	United Kingdom.	Canada.	New Zealand.	Union of South Africa.	United States of America.
1939—					(a)	
September Quarter	100	100	100	100	100	100
1940—Year (b) ..	105	119	105	104	104	100
1941— " (b) ..	110	128	111	108	109	105
1942— " (b) ..	119	129	116	111	118	116
1943— " (b) ..	124	128	117	114	126	123
1944— " (b) ..	123	129	118	(c) 116	130	125
1945— " (b) ..	123	131	119	118	133	127
1946— " (b) ..	125	131	123	118	135	138
1947— " (b) ..	130	(d) 102	134	122	141	158
1948— " (b) ..	141	108	154	132	149	170
1949— " (b) ..	154	111	160	(e) 134	154	168
1950— " (b) ..	170	114	165	142	160	171
1951— " (b) ..	206	124	183	157	172	185
1952— " ..	240	136	186	170	187	189
1952—March Quarter	229	133	189	167	183	187
June " ..	241	136	186	169	185	188
Sept. " ..	244	137	186	171	188	190
Dec. " ..	245	138	183	172	192	190

(a) Food, Rent and Miscellaneous Expenditure. (b) Quarterly indexes appear in preceding issues. (c) War-time Index linked to former series. (d) New series (Base : 17th June, 1947 = 100), commencing from September Quarter, 1947. (e) Consumers' Retail Price Index from March Quarter, 1949, onwards. Index-numbers for earlier periods (shown for purposes of comparison) are obtained by linking the movement in the Retail Price Index (base 1926-30) with the new index.

During the second world war most of these countries introduced price control measures at an early stage and these became more stringent as the war progressed, culminating in a policy of price stabilization.

Immediately after the outbreak of war in September, 1939, the Commonwealth Government took steps to control prices, and, by proclamations issued from day to day, pegged prices of various commodities at those ruling on 31st August, 1939. The National Security (Prices) Regulations, proclaimed on 28th September, 1939, under the authority of the National Security Act, established the basic principles of war-time price control, provided for the appointment of a Commonwealth Prices Commissioner and conferred upon him extensive powers to control the price of goods declared for that purpose by the Minister for Trade and Customs. Further reference to this control appears on page 279.

### § 5. Relative "Aggregate Expenditure" of Items and Groups.

In the *base period* of the index (the years 1923 to 1927) the relative importance of each of the four main groups expressed as a percentage of the weighted average "aggregate expenditure" in the six capital cities (from which all relative index-numbers are derived) was as shown in the third column of the following table. Although the "weights" of each item in the regimen are kept virtually constant the relative "aggregate expenditure" of the various items and groups varies from time to time as relative prices change.

The percentage distribution of the weighted average "aggregate expenditure" in the six capital cities for December Quarter, 1952, is shown in the fourth column of the table for comparison with that of the *base period*.

Group.	Section.	Proportion of "Aggregate Expenditure".			
		1923-27 (Base). Six Capital Cities.		Dec. Qtr. 1952. Six Capital Cities.	
		%		%	
I. Food and Groceries	{ A Groceries .. ..	17.44	} 38.66	13.32	} 40.81
	{ B Dairy Produce .. ..	10.28		11.70	
	{ C Meat .. ..	10.94		15.70	
II. Housing	D House Rent— (4 and 5-roomed houses)	21.26	21.26	11.27	11.27
III. Clothing ..	{ E Man .. ..	8.69	} 23.04	12.80	} 31.12
	{ F Woman .. ..	9.12		13.50	
	{ G, H, J Children .. ..	5.23		4.82	
IV. Miscellaneous	{ K Household Drapery .. ..	1.09	} 17.04	2.05	} 16.80
	{ L Household Utensils .. ..	0.49		0.67	
	{ M Fuel and Light .. ..	4.92		4.53	
	{ N Other Miscellaneous .. ..	10.54		9.55	
		100.00		100.00	

### § 6. Tabular Statements of Retail Price Index-Numbers.

1. **General.**—The results of inquiries into price movements are available as follows :—

(i) *Monthly.* The *Monthly Review of Business Statistics* contains annual, quarterly and monthly index-numbers to the latest available date.

(ii) *Quarterly.* A statement is issued about three weeks after the end of each quarter giving the "C" Series index-numbers for that quarter and immediately preceding quarters in respect of each of the 30 cities and towns originally adopted and for certain other towns, e.g., Canberra, for which the "C" Series index-numbers are now compiled. The *Quarterly Summary of Australian Statistics* contains annual, quarterly and monthly index-numbers to the latest available date. This publication also contains the average prices of the items of food and groceries for each month of the last available quarter, in the 30 towns covered by the investigation. Particulars of movements in certain average rents of 4 and 5-roomed houses in these towns are also shown therein.

(iii) *Annual.* The *Labour Report* contains index-numbers for past years, and the monthly and quarterly results for recent years. The average prices for the last year of the items of food and groceries and house rents are also published in this report.

2. **"C" Series Retail Price Index.**—On page 265 is published a table of "C" Series index-numbers for the weighted average of the six capital cities combined, together with index-numbers for each of the four main groups of items in the "C" Series Index for each year 1914 to 1952 and quarterly for the year 1952.

In the pages immediately following are published :—

- (i) the "C" Series index-number for the last quarter of each year 1939 and 1948 to 1952 (page 269) for each capital city and for the six capital cities combined, and showing also separate indexes for each of the four main groups of items; and
- (ii) the "C" Series index-number for November, 1914 and 1921 and the years 1929, 1939 and 1947 to 1952 (page 270) for each of the 30 towns, with the weighted averages for each State, the six capital cities and 30 towns, and index-numbers for the same periods for four additional towns for which this index is tabulated.

" C " SERIES RETAIL PRICE INDEX-NUMBERS(a) : CAPITAL CITIES.

(Base of Each Group : Weighted Average of Six Capital Cities, 1923-27 = 1,000.)

Period.	Sydney.	Mel-bourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Six Capitals. (b)
GROUP I.—FOOD AND GROCERIES.							
Dec. Qtr. 1939 ..	940	942	859	888	926	941	927
" " 1948 ..	1,326	1,355	1,280	1,305	1,324	1,416	1,330
" " 1949 ..	1,421	1,451	1,367	1,398	1,488	1,514	1,429
" " 1950 ..	1,713	1,724	1,551	1,606	1,707	1,665	1,689
" " 1951 ..	2,401	2,334	2,145	2,175	2,134	2,252	2,311
" " 1952 ..	2,657	2,547	2,321	2,334	2,439	2,593	2,542

GROUP II.—HOUSING (4 AND 5-ROOMED HOUSES).(c)							
Dec. Qtr. 1939 ..	1,040	960	855	891	882	930	969
" " 1948 ..	1,047	974	866	905	890	938	980
" " 1949 ..	1,049	977	873	914	897	941	983
" " 1950 ..	1,050	979	898	937	904	941	989
" " 1951 ..	1,056	980	947	960	1,073	1,057	1,013
" " 1952 ..	1,188	985	967	1,132	1,190	1,092	1,094

GROUPS I. AND II.—FOOD, GROCERIES AND HOUSING (" B " SERIES INDEX).

Dec. Qtr. 1939 ..	977	947	855	887	907	935	941
" " 1948 ..	1,214	1,203	1,116	1,146	1,152	1,226	1,190
" " 1949 ..	1,273	1,263	1,171	1,206	1,254	1,287	1,252
" " 1950 ..	1,451	1,429	1,293	1,341	1,390	1,379	1,412
" " 1951 ..	1,871	1,801	1,673	1,696	1,715	1,781	1,800
" " 1952 ..	2,078	1,932	1,788	1,860	1,946	2,002	1,971

GROUP III.—CLOTHING.

Dec. Qtr. 1939 ..	854	862	865	869	840	867	858
" " 1948 ..	1,831	1,801	1,817	1,809	1,835	1,807	1,818
" " 1949 ..	2,161	2,117	2,072	2,113	2,155	2,129	2,132
" " 1950 ..	2,447	2,389	2,355	2,390	2,408	2,401	2,410
" " 1951 ..	2,964	2,886	2,864	2,962	2,977	2,942	2,930
" " 1952 ..	3,214	3,162	3,088	3,171	3,172	3,142	3,177

GROUP IV.—MISCELLANEOUS.

Dec. Qtr. 1939 ..	943	983	960	1,027	957	945	967
" " 1948 ..	1,279	1,273	1,249	1,350	1,242	1,191	1,277
" " 1949 ..	1,389	1,397	1,316	1,410	1,305	1,234	1,378
" " 1950 ..	1,527	1,482	1,418	1,555	1,374	1,383	1,492
" " 1951 ..	1,836	1,789	1,694	1,802	1,720	1,744	1,794
" " 1952 ..	2,024	2,076	1,897	2,100	2,023	2,003	2,035

GROUPS I. TO IV.—" C " SERIES INDEX.

Dec. Qtr. 1939 ..	943	932	874	906	899	919	926
" " 1948 ..	1,359	1,345	1,291	1,327	1,316	1,344	1,341
" " 1949 ..	1,486	1,472	1,393	1,440	1,459	1,459	1,466
" " 1950 ..	1,680	1,646	1,546	1,608	1,607	1,601	1,643
" " 1951 ..	2,100	2,033	1,934	1,990	1,989	2,024	2,042
" " 1952 ..	2,312	2,224	2,089	2,188	2,225	2,248	2,243

(a) See footnote (a) on page 265.

(b) Weighted average.

(c) See footnote (b) on page 265.

## "C" SERIES RETAIL PRICE INDEX-NUMBERS: THIRTY TOWNS.

(Base: Weighted Average of Six Capital Cities, 1923-27 = 1,000.)

State and Town.	Nov. 1914.	Nov. 1921.	Year 1929.	Year 1939.	Year 1947.	Year 1948.	Year 1949.	Year 1950.	Year 1951.	Year 1952.
<b>NEW SOUTH WALES—</b>										
Sydney .. .. .	712	1,046	1,073	936	1,212	1,318	1,439	1,593	1,933	2,265
Newcastle .. .. .	..	1,041	1,028	901	1,167	1,279	1,402	1,543	1,901	2,209
Broken Hill .. .. .	..	975	1,018	955	1,257	1,376	1,528	1,692	1,997	2,344
Goulburn .. .. .	..	1,033	1,108	916	1,177	1,291	1,426	1,578	1,921	2,232
Bathurst .. .. .	..	947	979	893	1,162	1,277	1,403	1,552	1,882	2,219
FIVE TOWNS(a) .. .. .	..	1,042	1,067	933	1,208	1,315	1,437	1,591	1,931	2,262
<b>VICTORIA—</b>										
Melbourne .. .. .	671	1,003	1,017	924	1,188	1,294	1,415	1,565	1,880	2,170
Ballarat .. .. .	..	992	957	874	1,132	1,243	1,365	1,509	1,857	2,147
Bendigo .. .. .	..	1,002	999	875	1,141	1,244	1,365	1,520	1,826	2,139
Geelong .. .. .	..	1,019	980	911	1,170	1,278	1,397	1,549	1,871	2,154
Warrnambool .. .. .	..	1,034	960	918	1,186	1,283	1,398	1,558	1,886	2,205
FIVE TOWNS(a) .. .. .	..	1,003	1,011	920	1,184	1,290	1,411	1,561	1,877	2,168
<b>QUEENSLAND—</b>										
Brisbane .. .. .	611	923	923	870	1,137	1,241	1,348	1,472	1,760	2,063
Toowoomba .. .. .	..	949	916	858	1,152	1,246	1,360	1,486	1,773	2,083
Rockhampton .. .. .	..	972	904	867	1,140	1,241	1,357	1,491	1,785	2,091
Townsville .. .. .	..	1,025 <sup>b</sup>	939 <sup>b</sup>	918	1,181	1,282	1,404	1,525	1,818	2,148
Bundaberg .. .. .	..	994 <sup>c</sup>	931 <sup>c</sup>	847	1,115	1,221	1,335	1,464	1,754	2,056
FIVE TOWNS(a) .. .. .	..	941	922	871	1,140	1,244	1,352	1,478	1,767	2,072
<b>SOUTH AUSTRALIA—</b>										
Adelaide .. .. .	699	989	1,037	906	1,165	1,277	1,393	1,521	1,833	2,159
Kadina, etc. .. .. .	..	998	943	810	1,067	1,166	1,295	1,423	1,742	2,077
Port Pirie .. .. .	..	1,025	980	896	1,152	1,260	1,369	1,500	1,811	2,135
Mount Gambier .. .. .	..	1,029	963	872	1,134	1,235	1,340	1,499	1,863	2,145
Peterborough .. .. .	..	948	1,043	897	1,152	1,253	1,368	1,496	1,808	2,129
FIVE TOWNS(a) .. .. .	..	992	1,030	902	1,160	1,272	1,388	1,516	1,829	2,155
<b>WESTERN AUSTRALIA—</b>										
Perth, etc. .. .. .	707	1,008	1,026	901	1,161	1,264	1,410	1,538	1,860	2,170
Kalgoorlie, etc. .. .. .	..	1,048	1,032	1,066	1,265	1,368	1,502	1,636	1,940	2,262
Northam .. .. .	..	1,030 <sup>d</sup>	1,022	915	1,171	1,272	1,420	1,550	1,870	2,186
Bunbury .. .. .	..	1,045	978	936	1,173	1,277	1,424	1,559	1,870	2,195
Geraldton .. .. .	..	1,056	1,051	965	1,221	1,327	1,475	1,611	1,956	2,293
FIVE TOWNS(a) .. .. .	..	1,020	1,026	915	1,170	1,273	1,418	1,547	1,868	2,180
<b>TASMANIA—</b>										
Hobart .. .. .	687	1,070	1,000	908	1,178	1,292	1,419	1,526	1,861	2,180
Launceston .. .. .	..	1,067	967	888	1,147	1,254	1,389	1,493	1,857	2,154
Burnie .. .. .	..	1,003 <sup>e</sup>	966	879	1,132	1,232	1,367	1,484	1,810	2,120
Devonport .. .. .	..	904 <sup>f</sup>	948	861	1,119	1,220	1,351	1,481	1,793	2,093
Queenstown .. .. .	..	1,031	972	903	1,179	1,280	1,400	1,494	1,808	2,119
FIVE TOWNS(a) .. .. .	..	1,057	986	898	1,164	1,274	1,404	1,511	1,852	2,163
THIRTY TOWNS(a) .. .. .	..	1,013	1,026	917	1,185	1,292	1,413	1,556	1,880	2,193
SIX CAPITALS(a) .. .. .	687	1,013	1,033	920	1,188	1,295	1,415	1,560	1,883	2,196
Warwick (Q.)(g) .. .. .	..	994	931	834	1,138	1,234	1,349	1,461	1,751	2,063
Port Augusta (S.A.)(g) .. .. .	..	1,035	1,061	883	1,157	1,267	1,373	1,512	1,823	2,141
Whyalla (S.A.)(g) .. .. .	..	..	..	..	1,175	1,277	1,379	1,515	1,848	2,166
Canberra (A.C.T.)(g) .. .. .	..	..	..	956	1,210	1,327	1,456	1,600	1,931	2,247

(a) Weighted average. (b) Charters Towers. (c) Warwick. (d) Midland Junction.  
(e) Zeehan. (f) Beaconsfield. (g) Not included in weighted averages above.

3. "B" Series Retail Price Index: Food, Groceries and Rent.—This index measures the prices of food and groceries and the rent of 4 and 5-roomed houses. It was first compiled for the year 1925, and retrospectively for several earlier years. It was designed to replace the "A" Series Index (food, groceries and rent of all houses), which was the original index compiled in 1912. The first of the two tables following is split up into the various sections of the regimen, and covers only the six capital cities, while the second

represents the whole regimen and covers the 30 towns included in the tabulation of the "B" Series Index, with the weighted averages for the 5 towns in each State, the six capital cities and the 30 towns.

**RETAIL PRICE INDEX-NUMBERS(a) : CAPITAL CITIES—"B" SERIES.**

(Base of Each Section : Weighted Average of Six Capital Cities, 1923-27 = 1,000.)

Town.	1907.	1911.	1914.	1921.	1939.	1948.	1949.	1950.	1951.	1952.
<b>SECTION A.—GROCERIES.</b>										
Sydney .. .. .	510	574	627	1,115	991	1,167	1,298	1,411	1,806	2,168
Melbourne .. .	461	521	562	1,070	957	1,153	1,206	1,416	1,739	2,031
Brisbane .. .	547	614	607	1,105	941	1,105	1,305	1,387	1,722	1,938
Adelaide .. .	510	541	598	1,076	939	1,144	1,263	1,374	1,724	1,944
Perth .. .	572	720	628	1,103	966	1,183	1,268	1,380	1,650	2,023
Hobart .. .	501	566	604	1,087	947	1,143	1,272	1,390	1,749	2,094
Six Capitals(b) .. .	499	564	599	1,093	969	1,161	1,292	1,404	1,757	2,073

<b>SECTION B.—DAIRY PRODUCE.</b>										
Sydney .. .	551	574	656	1,080	851	1,165	1,306	1,439	1,723	2,393
Melbourne .. .	571	567	635	1,087	885	1,189	1,330	1,441	1,715	2,227
Brisbane .. .	495	581	588	983	793	1,115	1,233	1,312	1,530	2,107
Adelaide .. .	548	651	705	1,018	800	1,136	1,258	1,353	1,611	2,110
Perth .. .	709	733	735	1,152	870	1,166	1,202	1,436	1,705	2,169
Hobart .. .	564	587	695	1,091	844	1,181	1,319	1,410	1,658	2,202
Six Capitals(b) .. .	563	591	654	1,072	853	1,165	1,301	1,418	1,688	2,265

<b>SECTION C.—MEAT.</b>										
Sydney .. .	519	501	668	960	935	1,456	1,571	1,899	2,836	3,520
Melbourne .. .	557	485	663	1,030	968	1,502	1,649	2,000	2,896	3,387
Brisbane .. .	535	488	610	897	822	1,343	1,453	1,605	2,231	2,968
Adelaide .. .	553	541	784	1,095	929	1,423	1,543	1,776	2,503	3,194
Perth .. .	789	824	881	1,103	958	1,411	1,785	2,025	2,608	2,961
Hobart .. .	668	638	780	1,244	961	1,662	1,945	1,962	2,624	3,257
Six Capitals(b) .. .	558	522	691	1,010	936	1,458	1,603	1,909	2,744	3,349

<b>SECTIONS A, B AND C COMBINED.—FOOD AND GROCERIES.</b>										
Sydney .. .	523	553	646	1,062	936	1,258	1,388	1,572	2,099	2,654
Melbourne .. .	517	523	610	1,063	942	1,274	1,418	1,605	2,088	2,509
Brisbane .. .	530	569	603	1,014	864	1,208	1,332	1,462	1,823	2,328
Adelaide .. .	532	570	670	1,066	897	1,230	1,351	1,494	1,931	2,380
Perth .. .	670	753	728	1,166	938	1,251	1,437	1,597	1,963	2,359
Hobart .. .	565	592	678	1,133	923	1,316	1,495	1,574	1,992	2,487
Six Capitals(b) .. .	533	559	640	1,064	927	1,256	1,394	1,566	2,041	2,526

<b>SECTION D.—HOUSING (4 AND 5-ROOMED HOUSES).(c)</b>										
Sydney .. .	593	701	760	989	1,035	1,047	1,049	1,050	1,053	1,118
Melbourne .. .	455	569	628	820	955	974	976	979	980	984
Brisbane .. .	283	373	466	630	854	866	869	883	934	958
Adelaide .. .	510	706	655	809	888	903	912	929	949	1,055
Perth .. .	458	524	589	739	881	889	895	901	1,065	1,185
Hobart .. .	405	452	518	881	925	937	940	941	1,048	1,079
Six Capitals(b) .. .	497	612	662	862	965	979	982	987	1,009	1,057

<b>ALL SECTIONS COMBINED.—FOOD, GROCERIES AND HOUSING ("B" SERIES INDEX).</b>										
Sydney .. .	548	606	687	1,036	972	1,173	1,252	1,365	1,686	2,049
Melbourne .. .	495	539	616	977	945	1,154	1,243	1,357	1,652	1,909
Brisbane .. .	442	590	554	877	858	1,072	1,149	1,233	1,472	1,730
Adelaide .. .	524	618	671	975	801	1,100	1,177	1,270	1,544	1,858
Perth .. .	594	672	670	952	914	1,107	1,222	1,322	1,603	1,896
Hobart .. .	508	542	621	1,044	922	1,165	1,275	1,324	1,620	1,932
Six Capitals(b) .. .	520	578	648	992	939	1,145	1,230	1,336	1,534	1,947

(a) See footnote (a) on page 265. (b) Weighted average. (c) See footnote (b) on page 265.

## RETAIL PRICE INDEX-NUMBERS : THIRTY TOWNS—" B " SERIES.

FOOD, GROCERIES AND RENT.

(Base : Weighted Average of Six Capital Cities, 1923-27 = 1,000.)

State and Town.	Nov. 1914.	Nov. 1921.	1929.	1939.	1947.	1948.	1949.	1950.	1951.	1952.
<b>NEW SOUTH WALES—</b>										
Sydney .. .. .	680	977	1,115	972	1,082	1,173	1,252	1,365	1,686	2,049
Newcastle .. .. .	..	944	1,068	934	1,035	1,129	1,205	1,309	1,672	1,990
Broken Hill .. .. .	..	825	1,078	970	1,110	1,206	1,333	1,459	1,715	2,077
Goulburn .. .. .	..	926	1,146	942	1,030	1,130	1,225	1,341	1,682	2,008
Rathurst .. .. .	..	815	987	900	1,006	1,102	1,190	1,313	1,619	2,009
FIVE TOWNS(a)	..	965	1,110	969	1,078	1,169	1,249	1,362	1,685	2,044
<b>VICTORIA—</b>										
Melbourne .. .. .	613	895	1,036	945	1,054	1,154	1,243	1,357	1,652	1,909
Ballarat .. .. .	..	760	914	849	950	1,052	1,141	1,254	1,593	1,846
Bendigo .. .. .	..	780	962	851	952	1,048	1,140	1,267	1,543	1,838
Geelong .. .. .	..	844	985	917	1,012	1,116	1,204	1,318	1,633	1,877
Warrnambool .. .. .	..	855	940	940	1,042	1,134	1,212	1,342	1,657	1,962
FIVE TOWNS(a)	..	876	1,026	938	1,046	1,146	1,235	1,350	1,646	1,904
<b>QUEENSLAND—</b>										
Brisbane .. .. .	560	840	912	858	978	1,072	1,149	1,233	1,472	1,789
Toowoomba .. .. .	..	771	855	830	1,001	1,087	1,170	1,252	1,498	1,817
Rockhampton .. .. .	..	779	877	843	971	1,063	1,145	1,247	1,493	1,800
Townsville .. .. .	..	820 <sup>b</sup>	975 <sup>b</sup>	920	1,036	1,125	1,214	1,286	1,525	1,882
Bundaberg .. .. .	..	704 <sup>c</sup>	867 <sup>c</sup>	804	942	1,030	1,110	1,195	1,427	1,742
FIVE TOWNS(a)	..	824	906	858	982	1,074	1,153	1,238	1,478	1,796
<b>SOUTH AUSTRALIA—</b>										
Adelaide .. .. .	658	898	1,030	891	998	1,100	1,177	1,270	1,544	1,858
Kadina, etc. .. .. .	..	811	891	743	825	907	1,001	1,089	1,390	1,704
Port Pirie .. .. .	..	839	963	882	971	1,063	1,141	1,241	1,522	1,825
Mount Gambier .. .. .	..	770	866	838	931	1,022	1,091	1,232	1,576	1,799
Peterborough .. .. .	..	844	1,042	890	973	1,067	1,144	1,224	1,504	1,790
FIVE TOWNS(a)	..	885	1,020	885	990	1,091	1,168	1,262	1,538	1,850
<b>WESTERN AUSTRALIA—</b>										
Perth, etc. .. .. .	689	916	1,038	914	1,017	1,107	1,222	1,322	1,608	1,890
Kalgoorlie, etc. .. .. .	..	928	1,010	1,178	1,174	1,266	1,382	1,489	1,739	2,026
Northam .. .. .	..	898 <sup>d</sup>	1,072	936	1,034	1,131	1,257	1,358	1,673	1,977
Bunbury .. .. .	..	907	996	979	1,056	1,148	1,269	1,380	1,679	1,979
Geraldton .. .. .	..	942	1,090	990	1,103	1,193	1,315	1,421	1,746	2,063
FIVE TOWNS(a)	..	918	1,036	936	1,031	1,122	1,237	1,338	1,623	1,912
<b>TASMANIA—</b>										
Hobart .. .. .	630	971	992	922	1,053	1,165	1,275	1,324	1,620	1,932
Launceston .. .. .	..	858	937	887	1,001	1,113	1,227	1,274	1,634	1,907
Burnie .. .. .	..	819 <sup>e</sup>	972	898	1,006	1,108	1,225	1,295	1,600	1,907
Devonport .. .. .	..	696 <sup>f</sup>	930	865	976	1,078	1,197	1,283	1,571	1,860
Queenstown .. .. .	..	871	920	933	1,067	1,173	1,267	1,299	1,586	1,884
FIVE TOWNS(a)	..	911	970	908	1,032	1,143	1,254	1,304	1,620	1,918
THIRTY TOWNS(a) .. .. .	..	907	1,044	935	1,045	1,140	1,226	1,332	1,630	1,943
SIX CAPITALS(a) .. .. .	..	644	924	1,054	939	1,050	1,145	1,230	1,336	1,634
Warwick (Q.)(g) .. .. .	..	794	867	783	956	1,039	1,124	1,203	1,448	1,758
Port Augusta (S.A.)(g) .. .. .	..	861	1,047	864	968	1,063	1,144	1,260	1,541	1,849
Whyalla (S.A.)(g) .. .. .	..	..	..	..	1,013	1,103	1,176	1,284	1,596	1,898
Canberra (A.C.T.)(g) .. .. .	..	..	..	1,026	1,096	1,191	1,280	1,381	1,701	2,061

(a) Weighted average. (b) Charters Towers. (c) Warwick. (d) Midland Junction.  
(e) Zeehan. (f) Beaconsfield. (g) Not included in weighted averages above.

## § 7. Retail Price Indexes and Basic Wage Variations.

Two distinct procedures are adopted by the Commonwealth Court of Conciliation and Arbitration in fixing and varying basic or living wages as follows:—

- (i) The Court periodically fixes the amount of wage in the light of evidence submitted by parties appearing before it. Such evidence usually covers a wide range of facts as to economic conditions



- (ii) Having determined the amount of basic wage the Court further determines whether or not it shall be subject to automatic adjustment for changes in price level and, if so, by what method such *variation* shall be made. This again is decided in the light of evidence and of representations by the parties concerned.

The "C" Series Index is used by the Court to derive the "Court" series of retail price index-numbers upon which the basic portion\* of the wages prescribed in awards is *varied* automatically for changes in price levels quarterly, half-yearly or yearly. These are commonly referred to as "cost of living adjustments" although in fact they relate only to that part of the *change in cost of living* which is due to variations in prices. The Court itself determines from time to time at public sittings the amount of the basic wage, having regard to evidence submitted in relation to other aspects of "cost of living" and other relevant considerations. In fixing the amount of the basic wage the Court does not have regard to either the regimen used in compiling the retail price index or the cost of such regimen. The regimen of the index would not be suited to such a purpose.

The considerations upon which the basic wage is fixed are set out in successive judgments of the Court and briefly summarized in Chapter III. (§ 4) of the *Labour Report*. On this matter, reference should be made to the Basic Wage Judgments of the Court, particularly those of 1934, 1937, 1941 and 1950, and to the general statement of principles set out in the judgment on the "Munition Workers' Case" of 1943. Certain State industrial tribunals use the index-numbers directly for automatic or quasi-automatic adjustments of the rates of wages determined by them as tribunals, while some State tribunals have regard to the index-numbers and other factors in considering what "cost of living" variations they should make in rates of wages.

The use of indexes by industrial authorities for purposes of adjusting rates of wages for changes in price level is a practice of long standing, dating in the case of the Commonwealth Court of Conciliation and Arbitration, for example, back to the year 1913. The tribunals form their own judgment as to relevance of the indexes to their purposes, and periodically hear the representatives of employers and employees on the issues involved, including questions as to whether the index is satisfactory for the purposes to which it is applied by the tribunal. In such proceedings the Statistician or his officers are called at times as witnesses on questions of fact and technical matters relating to the indexes.

The automatic adjustments in wages prescribed in awards of the Court on the basis of retail price index-numbers are sometimes referred to as "cost of living" adjustments and the index is popularly referred to as a "cost of living index". This at times creates misconceptions as to the nature of the retail price index since the term "cost of living" connotes not only change in cost of living due to changes in prices, but also changes in cost of living due to changes in standard of living. Beyond that, use of the term "cost of living index" sometimes creates the erroneous impression that the retail price index purports to embrace all that should be included in a desirable standard of living. The "C" Series Index is a retail price index of specific meaning. The regimen or list of items, on which the index is based, is representative of a high proportion of the expenditure of wage-earner households. While this statement remains broadly true, it relates (in the circumstances of 1951 and 1952) more specifically to what may be termed the basic wage portion of wage-earner expenditures. The index has hitherto been used by industrial tribunals to provide automatic adjustments in the basic wage itself and, until December, 1950, in a basic wage which did not vary very much in real terms of purchasing power in relation to "C" Series units. In 1950 and especially in 1951 various factors produced both a steep rise in prices and an increasingly wide dispersion of price movements as affecting consumer expenditures on items within and without the index. Although the

\* The "needs" portion only was adjustable from July, 1937, to December, 1950.

rise in some prices became less accentuated in 1952, disparate price movements continued. There arose concurrently a tendency to assume, without inquiry, that the index (constructed primarily to measure the incidence of price changes on expenditures from incomes at or about basic wage level) is equally applicable to such diverse matters as measuring the changing incidence of price variations on secondary or marginal portions of wages, on total wages or on total incomes in groups considerably higher than the basic wage, and even on money settlements in some business transactions. While such assumptions may be reasonably reliable during periods in which all prices tend to move together, they should not be made at any time without due inquiry and particularly not in periods when price movements are very marked and are subject to wide dispersion.

Reference should be made to *Labour Report* No. 40 for the actual Automatic Adjustment Scales used for the adjustment of the Commonwealth basic wage.\*

## B. WHOLESALE PRICES AND PRICE INDEXES.

### § 1. General.

Two indexes of wholesale prices have been compiled by the Commonwealth Bureau of Census and Statistics. These are :—

- (i) The Melbourne Wholesale Price Index ;
- (ii) The Wholesale Price (Basic Materials and Foodstuffs) Index.

Particulars of the Melbourne Wholesale Price Index, which is now obsolescent, are given in § 3 commencing on page 276 of this chapter.

After reviewing the regimen and weighting of this index the 1930 Conference of Statisticians resolved that a new index of wholesale prices of basic materials and foodstuffs should be compiled. This index—the Wholesale Price (Basic Materials and Foodstuffs) Index—which extends back to the year 1928 and is compiled monthly, is a special purpose index and one of a series of Wholesale Price Indexes designed for special purposes.

### § 2. Wholesale Price (Basic Materials and Foodstuffs) Index.

1. *Price Quotations.*—The prices used in the index have in the main been obtained directly from manufacturers and merchants, and, with a few important exceptions, from Melbourne sources. Apart from locally produced building materials and one or two minor commodities, however, the price movements may be taken as representative of variations in wholesale prices of basic materials in most Australian markets.

Commodities in the index are priced in their primary or basic form wherever possible and in respect of imported materials as nearly as may be at the point where they first make effective impact on the local price structure. Thus the price of imported goods is not taken at the time of import, but rather on an ex-bond (or into factory) basis.

\* See footnote on p. 273.

## WHOLESALE PRICE (BASIC MATERIALS AND FOODSTUFFS) INDEX. 275

Broadly, where home-consumption prices exist for local products, they have been used in this index. During the year 1950-51 wool for local manufacture was subsidized, and the home-consumption price for wool was used to calculate the index-numbers shown in the table in paragraph 4.

2. **Commodities and Grouping.**—For purposes of this index "basic" materials (as opposed to certain of the Foodstuffs) are commodities in the primary or basic forms in which they first enter into productive processes carried out in Australia. The regimen comprises 80 commodities, divided into seven main groups. Each group is sub-divided into goods which are mainly imported, and goods which are mainly home-produced. The percentage of the "aggregate expenditure" in 1950 contributed by each group is shown in the following table :—

Group.	Percentage Value-Weight, 1950.		
	Principally Imported.	Principally Home Produced.	Total.
Metals and Coal .. .. .	0.05	15.51	15.56
Oils, Fats and Waxes .. .. .	10.90	0.24	11.14
Textiles .. .. .	1.10	5.11	6.21
Chemicals .. .. .	1.18	2.77	3.95
Rubber and Hides .. .. .	1.17	0.68	1.85
Building Materials .. .. .	5.07	4.31	9.38
Foodstuffs and Tobacco .. .. .	12.31	39.60	51.91
All Groups .. .. .	31.78	68.22	100.00

A full list of the commodities in the regimen, showing the quantity-multipliers (weights) for each commodity and the percentage of the total aggregate value in 1950 contributed by each commodity and group, is set out on page 395 of Official Year Book No. 38.

3. **Method of Construction.**—The index is constructed on the simple aggregative fixed-weights formula. The weights (quantity-multipliers) are based on estimates of the average annual consumption of the commodities in Australia during the period 1928-29 to 1934-35 inclusive. Changes in usage, changes of category as between "imported" and "home-produced" as affecting some commodities, and changes in the industrial structure have affected the validity of some of the weights in the index. These and other problems (e.g., dual prices for some commodities) are being examined with a view to revision of the regimen, its grouping and weighting, when conditions are more stable.

4. **Index-numbers.**—Index-numbers for each group of commodities and for all groups combined for the index of wholesale prices of basic materials and foodstuffs are given in the following table. Current index-numbers, on the base: Average of three years ended June, 1939 = 100, are published in the *Monthly Review of Business Statistics*, and a table showing index-numbers computed to the base 1928 = 100 was published on page 47 of *Labour Report* No. 40, 1951.

WHOLESALE PRICE (BASIC MATERIALS AND FOODSTUFFS) INDEX-NUMBERS.  
(Base of Each Group : Average 3 years ended June, 1939 = 100.)

Period.	Basic Materials.							Food-stuffs and Tobacco.	Basic Materials and Foodstuffs.		
	Metals and Coal.	Oils, Fats and Waxes.	Textiles.	Chemicals.	Rubber and Hides.	Building Materials.	Total.		Goods principally Imported. (a)	Goods principally Home Produced.	Total All Groups.
1928-29	127	106	129	121	115	95	114	107	91	118	110
1929-30	126	111	99	116	87	94	107	110	94	118	111
1930-31	116	117	80	117	73	96	105	91	100	99	99
1931-32	108	113	77	119	74	95	101	86	100	92	95
1932-33	104	109	75	119	69	93	98	80	97	87	90
1933-34	103	81	102	111	80	94	92	84	89	89	90
1934-35	97	90	78	102	77	93	89	87	92	89	90
1935-36	92	95	100	99	88	93	90	92	95	92	93
1936-37	96	99	118	99	111	99	99	97	99	98	98
1937-38	101	101	100	100	97	104	102	100	102	100	101
1938-39	103	100	82	101	92	97	99	103	99	102	101
1939-40	105	115	104	107	116	108	109	101	111	103	105
1940-41	107	137	111	124	126	128	122	107	133	106	114
1941-42	117	151	118	137	135	135	133	117	153	112	124
1942-43	129	167	147	142	138	163	149	128	176	121	137
1943-44	131	170	150	143	140	174	153	129	182	122	140
1944-45	131	168	152	143	140	175	152	131	182	123	141
1945-46	130	156	152	142	140	177	149	135	178	126	141
1946-47	132	145	191	140	131	180	149	138	177	129	143
1947-48	146	161	283	148	126	190	166	153	192	145	159
1948-49	185	173	342	159	130	198	188	175	201	173	181
1949-50	214	184	434	187	143	225	214	198	223	198	205
1950-51	256	196	641	242	292	268	264	232	256	242	246
1951-52	343	220	577	314	298	370	321	281	288	305	300
1951-52											
July ..	288	209	490	300	301	314	283	283	271	289	283
Aug. ..	308	209	604	301	351	316	299	292	274	304	295
Sept. ..	314	212	566	305	348	320	301	282	276	297	291
Oct. ..	320	213	698	305	347	344	315	266	282	291	288
Nov. ..	341	223	633	307	323	362	324	261	289	290	290
Dec. ..	344	223	616	313	271	364	322	270	286	297	294
Jan. ..	346	223	605	313	270	365	322	266	286	294	292
Feb. ..	363	223	560	317	264	394	331	280	295	307	304
Mar. ..	365	223	504	327	261	394	330	289	295	313	308
Apr. ..	370	223	517	327	262	395	332	294	296	318	312
May ..	379	230	559	327	278	433	347	294	301	325	318
June ..	379	230	570	331	296	433	349	298	301	330	321

(a) Represents only such imported commodities as are included in the wholesale price index. This index does not measure changes in price of imports generally.

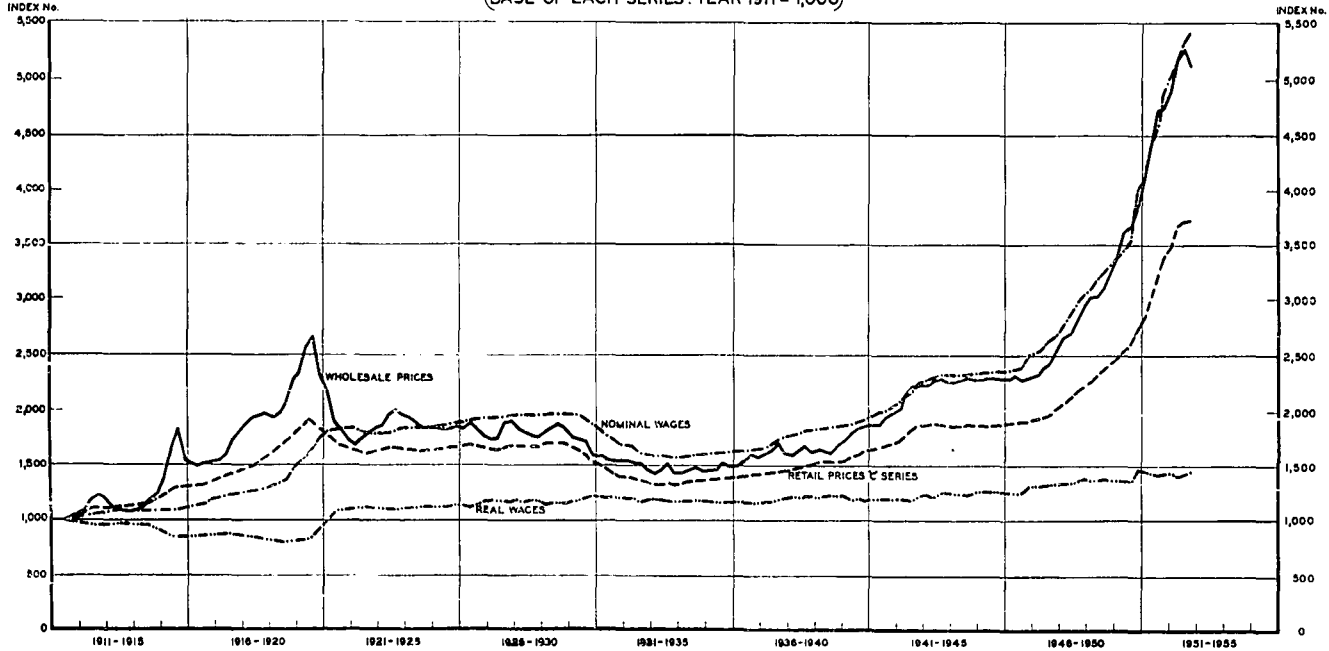
NOTE.—The figures given in this table are comparable in the vertical columns but are not directly comparable horizontally.

### § 3. Melbourne Wholesale Price Index.

1. **General.**—An index of Melbourne wholesale prices was first computed in 1912. It relates chiefly to basic materials and foods weighted in accordance with consumption in the years immediately preceding that date. Neither the component items of the regimen, nor the weighting have been varied. Consequently, the index is outmoded for current use and is a measure of variations in wholesale prices based on the weighting originally determined. It has some historic significance as a measure of changes in the prices of its component items combined in the proportions in which they were in common use about the year 1910. It is now published only on an annual basis and is mainly used as an approximate indication of long term trends since the year 1861, for which it was first compiled. A description of the index and a list of the commodities included in it were published on pages 43 to 45 of *Labour Report* No. 38 for 1949.

## WHOLESALE AND RETAIL PRICES, NOMINAL, AND EFFECTIVE OR REAL WAGES - INDEX-NUMBERS AUSTRALIA, 1911 to 1952

(BASE OF EACH SERIES: YEAR 1911 = 1,000)



EXPLANATION.—The index-numbers in the graph above are for the Six Capital Cities as a whole, with the exception of those for Wholesale Prices up to the fourth quarter of 1927, which are for Melbourne. The wholesale prices graph shows the trend of prices according to the "old" Melbourne Index up to the fourth quarter of 1927, but thereafter, this index having been "spliced" with the Basic Materials and Foodstuffs Index, the curve line moves in accordance with the variations of the latter. The price quotations for this index are, in the main, obtained from Melbourne sources, but their movements may be taken as representative of fluctuations in most Australian markets. For the period 1911-1914 the "C" Series index-numbers are taken back from the true base (November, 1914 = 1,000) by means of the "A" Series Index (Food and Rent of All Houses). Real wages are computed on the basis of the "C" Series Retail Price Index.



2. Index-numbers.—Index-numbers for each group of commodities as well as for all groups combined are shown in the following table :—

### MELBOURNE WHOLESALE PRICE INDEX-NUMBERS.

(Base of each Group : Year 1911 = 1,000.)

Year.	I. Metals and Coal.	II. Wool, Cotton, Leather, etc.	III. Agri- cultural Produce, etc.	IV. Dairy Produce.	V. Gro- ceries.	VI. Meat.	VII. Building Ma- terials.	VIII. Chemicals.	All Groups.
1861..	1,438	1,381	1,583	1,008	1,963	..	1,070	2,030	1,538
1871..	1,096	1,257	1,236	864	1,586	..	1,044	1,409	1,229
1881..	1,178	1,115	1,012	935	1,421	..	1,091	1,587	1,121
1891..	895	847	1,024	995	1,032	888	780	1,194	945
1901..	1,061	774	928	1,029	1,048	1,345	841	917	974
1911..	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
1921..	2,173	1,361	1,767	2,000	1,977	2,158	2,733	2,303	1,903
1931..	1,826	1,040	1,121	1,398	1,794	1,512	2,025	2,166	1,420
1941..	1,960	1,402	1,721	1,554	1,883	1,776	3,138	2,527	1,796
1948..	2,829	3,619	2,383	2,104	2,435	2,976	4,631	3,180	2,824
1949..	3,502	3,066	2,876	2,300	2,558	3,356	4,611	3,221	3,191
1950..	3,902	3,464	3,155	2,459	2,829	4,616	(a) 5,567	3,263	3,816
1951..	3,080	7,943	4,512	2,930	2,850	6,438	(a) 7,074	3,294	5,098
1952..	6,481	7,365	5,038	4,024	3,455	6,289	(a) 9,338	3,723	5,647

(a) The regimen and weighting of the original Building Materials group of this index have become unreal. The movement shown here for this group between 1949 and 1952 has been calculated in accordance with the movement occurring in the Building Materials group of the Basic Materials and Foodstuffs Index.

NOTE.—The figures given in this table are comparable in the vertical columns but are not directly comparable horizontally.

### C. CONTROL OF PRICES DURING AND SINCE THE 1939-45 WAR.

1. General.—An account of the measures taken by the Commonwealth Government to control prices from September, 1939 (immediately after the outbreak of war), until 29th May, 1948 (the date of the Prices Referendum), is given in Official Year Book No. 37, pp. 458-464.

2. Transfer of Price Control to the States.—Consequent upon the rejection of the proposal embodied in the Prices Referendum held on 29th May, 1948, that permanent power to control rents and prices (including charges) be conferred on the Commonwealth Government, responsibility for price fixation was assumed by the State Governments and steps were taken to pass State Prices Acts. These acts were proclaimed to operate simultaneously on 20th September, 1948. Except in the case of Queensland, each Act was to remain in force for a specific period, but the period varied from State to State.

An amendment of the National Security (Prices) Regulations on 15th September, 1948, provided that the Minister may, by declaration published in the *Gazette*, declare that from and including a date specified prices for the sale of goods and rates for the supply of services in a State or Territory of the Commonwealth specified in the declaration shall cease to be controlled under the Regulations. In pursuance of this power, the Minister for Trade and Customs issued declarations on 17th September, 1948, providing for the relinquishment of price control by the Commonwealth in the States as from 20th September, 1948.

On 20th September, 1948, each State Government issued declarations covering uniform lists of goods and services, which were brought under price control. Existing Commonwealth Prices Regulation Orders continued to apply to these goods and services until specially varied in accordance with the terms of the State legislation. At the same time, the Commonwealth Government issued an identical list of declared items to operate in the Australian Capital Territory and other Territories of the Commonwealth.

In the operation of State price control, the State Prices Commissioners closely collaborate. Conferences of Commissioners are held at intervals of approximately two months. The Commissioners are vested with certain powers of price control under the Prices Acts, and it is the usual procedure after the administrative conference for State Prices Ministers to meet to discuss matters of policy and any specific questions referred to them for determination. Thus a large degree of uniformity is attained in controlling and decontrolling items and in the fixation of margins and prices of major items.

3. **Price Stabilization.**—Expenditure by the Commonwealth Government on Price Stabilization Subsidies reached a peak in 1947-48 and since then the Commonwealth Government has progressively reduced the range of commodities eligible for subsidy.

In addition to those subsidies which had been an integral part of the Price Stabilization Plan, the Commonwealth Government paid bounties and subsidies for assistance to primary production, and these payments also had a stabilizing influence on prices.

For details of expenditure by the Commonwealth Government on Price Stabilization and other Subsidies and Bounties, see Chapter XVII.—Public Finance.

## D. WAGES.

### § 1. Arbitration and Wages Board Acts and Associated Legislation.

1. **General.**—Particulars regarding the operation of Commonwealth and State Laws for the regulation of wages, hours and conditions of labour were first compiled for the year 1913, and reviews to the end of each annual period appear in issues of the *Labour Report* up to and including No. 36 and of the *Quarterly Summary of Australian Statistics* up to and including No. 190 and in previous issues of the Official Year Book (see No. 37, p. 465).

2. **The Commonwealth Conciliation and Arbitration Tribunal.**—Under placitum (xxxv) of section 51 of the Commonwealth of Australia Constitution, the Commonwealth Parliament is empowered to make laws with respect to "conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one State". The Parliament has made such a law, namely, the Conciliation and Arbitration Act.

This Act defines "an industrial dispute" as a "dispute (including a threatened, impending or probable dispute) as to industrial matters, which extends beyond the limits of any one State and a situation which is likely to give rise to a dispute as to industrial matters which so extends". Such disputes are dealt with, in part, by a Court constituted under the Act, and otherwise by Conciliation Commissioners appointed under the Act. At the present time, the Court comprises a Chief Judge and six other Judges, whilst there is a Chief Conciliation Commissioner and fifteen other Conciliation Commissioners.

The Court deals with industrial disputes insofar as they concern the standard hours of work in an industry, the basic wage for both adult males and adult females and questions relating to long service leave with pay, but all other matters in dispute are dealt with by a Conciliation Commissioner. There is, however, provision for a Conciliation Commissioner to refer any dispute or any part of a dispute to the Court for determination, but a Conciliation Commissioner is only entitled to so refer a matter if he is of the opinion, and if the Chief Judge concurs in that opinion, that the matter is one of such importance that, in the public interest, it should be dealt with by the Court.

In addition to the functions outlined above, the Act empowers the Court to make orders concerning the interpretation, and relating to the enforcement, of orders and awards. The Act also makes provision for the registration of associations of employees and employers, and certain powers in connexion therewith are, by the Act, given to the Court.



Although, in certain circumstances, there is a right of approach to the High Court with respect to decisions of the Court, the circumstances are very limited, and, for practical purposes, it can be said that decisions given by the Court are final. Decisions given by a Conciliation Commissioner, however, may be made the subject of appeal to the Court (i.e., the Court of Conciliation and Arbitration) provided the party desiring to appeal can satisfy the Chief Judge, by way of application for leave to appeal, that the order or award the subject of the application deals with a matter of such importance that leave to appeal should, in the public interest, be granted.

Whilst many of the minor powers of the Court may be exercised by a Court constituted by one Judge, in all major matters, e.g., questions relating to the basic wage, standard hours of work, long service leave, applications concerning registered organizations and also appeals from orders or awards made by Conciliation Commissioners, the Court must be constituted by at least three Judges one of whom may be the Chief Judge.

Prior to 1947, there was no division of work as between the Court and Conciliation Commissioners, a dispute being dealt with by either one or other part of the Tribunal, with the exception that questions relating to the basic wage and standard hours could only be dealt with by at least three Judges of the Court sitting together. There was also, at that time, a right of appeal to the Court against a decision of a Conciliation Commissioner. The amending Act of 1947 brought about the division of work between the two parts of the Tribunal, and, at the same time, made decisions of Conciliation Commissioners final. However, a further amending Act passed in 1952 altered the position regarding finality of decisions of Conciliation Commissioners, and provided a right of appeal, in the circumstances set out above, to the Court against any such decision.

3. **State Industrial Tribunals.**—In each State, Industrial Tribunals have been established to regulate and arbitrate in industrial matters. The chief of these are the Industrial Commission of New South Wales, the Industrial Courts of Queensland and South Australia, and the Western Australian Court of Arbitration, together with Wages Boards for specific industries or occupations which operate in Victoria, South Australia and Tasmania. Further details concerning the functions and powers of these authorities may be found in *Labour Report* No. 40, page 54.

## § 2. Rates of Wage and Hours of Labour.

1. **General.**—The collection of information respecting the current rates of wage payable in different callings and in occupations in various industries was first undertaken by this Bureau in the early part of 1913. The particulars are obtained primarily from awards, determinations and agreements under Commonwealth and State Industrial Acts, and are therefore the minimum rates prescribed. They refer generally to the capital city in each State, but in industries which are not carried on in the capital cities, e.g., mining, agriculture, etc., the rates in the more important centres are taken. In cases where no award, determination, or agreement is in force, particulars are taken of the ruling union or predominant rate. During recent years the number of predominant rates of wage included in the tabulations has been reduced considerably, as most of the industries and occupations are now covered by awards, determinations, or industrial agreements. The statistics of nominal wages and hours of labour are in course of revision to meet changes in industrial structure. The amounts should not be regarded as actual current average, but as an index of changes expressed in money and hour terms.

The index-numbers for male adult workers are computed with the weighted average wage in 1911 as base (= 1,000). In the case of females, however, it has not been possible to secure information for the years prior to 1914, and the index-numbers are therefore computed with the weighted average rate of wage payable to adult female workers in Australia at 30th April, 1914 as base (= 1,000).

An extensive tabular presentation of the minimum rates of wage for adult male and female workers in the main occupations in the capital city of each State is given each year in the Appendix to the *Labour Report*.

2. *Weekly Rates of Wage, 1939 and 1947 to 1952.*—(i) *General.* The average rate of wage for each industrial group is computed by taking the arithmetic average of the rates of wage payable for all classified occupations within that group. These averages are weighted to give the average for the States and for Australia.

(ii) *Adult Males—States.* The following table gives the weighted average nominal weekly rates of wage payable to adult male workers at the dates specified:—

### WEEKLY WAGE RATES : ADULT MALES, STATES.

WEIGHTED AVERAGE NOMINAL WEEKLY RATES PAYABLE FOR A FULL WEEK'S WORK  
(EXCLUDING OVERTIME) AND INDEX-NUMBERS OF WAGE RATES.(a)

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aust.
No. of Occupations included(b) ..	870	894	615	562	477	466	3,884
RATES OF WAGE.							
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
31st December, 1939 ..	96 7	93 6	97 5	88 11	100 6	89 5	95 3
"   "   1947 ..	141 3	136 10	134 9	133 10	137 8	133 0	137 11
"   "   1948 ..	159 9	155 5	151 4	153 7	156 6	153 2	156 4
"   "   1949 ..	171 11	168 11	167 10	165 3	171 6	165 4	169 8
"   "   1950 ..	209 6	204 5	199 10	200 6	208 3	199 7	205 6
"   "   1951 ..	255 0	245 5	240 10	241 8	251 4	247 3	248 7
31st March, 1952 ..	263 6	254 11	254 3	250 9	260 0	255 5	258 1
30th June, 1952 ..	270 5	258 2	262 5	256 6	269 2	261 3	264 3
30th September, 1952 ..	281 8	269 11	263 9	268 7	277 9	268 8	273 11
31st December, 1952 ..	284 8	274 5	267 9	274 6	284 7	276 2	278 2

### INDEX-NUMBERS.

(Base : Weighted Average Wage for Australia (51s. 3d.), 1911 = 1,000.)

31st December, 1939 ..	1,885	1,825	1,900	1,735	1,962	1,745	1,858
"   "   1947 ..	2,757	2,670	2,630	2,612	2,686	2,595	2,690
"   "   1948 ..	3,117	3,032	2,953	2,997	3,054	2,988	3,050
"   "   1949 ..	3,355	3,296	3,275	3,225	3,346	3,227	3,310
"   "   1950 ..	4,088	3,989	3,900	3,911	4,004	3,895	4,009
"   "   1951 ..	4,975	4,789	4,699	4,715	4,904	4,825	4,850
31st March, 1952 ..	5,141	4,974	4,961	4,892	5,074	4,984	5,036
30th June, 1952 ..	5,277	5,037	5,121	5,005	5,253	5,097	5,156
30th September, 1952 ..	5,496	5,267	5,147	5,241	5,419	5,242	5,345
31st December, 1952 ..	5,555	5,354	5,224	5,356	5,553	5,388	5,428

(a) The statistics of nominal wages and hours of labour are in course of revision to meet changes in industrial structure. The amounts shown should not be regarded as actual current averages but as an index of changes expressed in money and hour terms.

(b) As at 31st December, 1952.

During the early war years nominal weekly wages advanced annually in each State, the greatest increase occurring in 1942 (11 per cent. for Australia), followed by an increase of 3 per cent. in the following year, after which they remained comparatively stable until the fourth quarter of 1946 when they advanced 5.4 per cent. mainly as a result of the increase in the "needs" wage granted by the Commonwealth Court of Conciliation and Arbitration in its judgment of 13th December, 1946. With the relaxation of the Wage Pegging Regulations and the end of Price Stabilization wages rose rapidly during 1947 and subsequent years. At the end of 1950 the upward movement was accelerated as a result of the Basic Wage increases which followed the 1949-50 Basic Wage Inquiry (see page 292).

Male wages at 31st December, 1952, were 192.0 per cent. higher than in December, 1939, and 53.1 per cent. higher than in September, 1950.

(iii) *Adult Males—Industrial Groups.* The following table shows for Australia the average weekly rates of wage and index-numbers in each industrial group and for all groups at the dates specified.

WEEKLY WAGE RATES : ADULT MALES, INDUSTRIAL GROUPS.

WEIGHTED AVERAGE NOMINAL WEEKLY RATES FOR A FULL WEEK'S WORK (EXCLUDING OVERTIME) AND INDEX-NUMBERS OF WAGE RATES IN EACH INDUSTRIAL GROUP.(a)

NOTE.—Index-numbers for each industrial group and for all industrial groups are based on the average wage for all groups in 1911 (51s. 3d.) = 1,000. The index-numbers in this table are comparable throughout:—

Industrial Group.	Weighted Average Nominal Weekly Rate of Wage (shillings and pence) and Index-number at—						
	31st Dec., 1939.	31st Dec., 1947.	31st Dec., 1948.	31st Dec., 1949.	31st Dec., 1950.	31st Dec., 1951.	31st Dec., 1952.
I. Wood, Furniture, etc. . . . .	{ Wage . . . . . 100/1 Index-No. . . . . 1,953	{ Wage . . . . . 140/2 Index-No. . . . . 2,735	{ Wage . . . . . 155/6 Index-No. . . . . 3,034	{ Wage . . . . . 166/7 Index-No. . . . . 3,250	{ Wage . . . . . 199/8 Index-No. . . . . 3,890	{ Wage . . . . . 238/8 Index-No. . . . . 4,656	{ Wage . . . . . 270/2 Index-No. . . . . 5,272
II. Engineering, etc. . . . .	{ Wage . . . . . 99/3 Index-No. . . . . 1,936	{ Wage . . . . . 144/0 Index-No. . . . . 2,811	{ Wage . . . . . 155/10 Index-No. . . . . 3,041	{ Wage . . . . . 166/1 Index-No. . . . . 3,241	{ Wage . . . . . 198/2 Index-No. . . . . 3,867	{ Wage . . . . . 237/1 Index-No. . . . . 4,626	{ Wage . . . . . 267/10 Index-No. . . . . 5,226
III. Food, Drink, etc. . . . .	{ Wage . . . . . 96/0 Index-No. . . . . 1,888	{ Wage . . . . . 134/8 Index-No. . . . . 2,628	{ Wage . . . . . 151/6 Index-No. . . . . 2,956	{ Wage . . . . . 166/2 Index-No. . . . . 3,243	{ Wage . . . . . 199/11 Index-No. . . . . 3,901	{ Wage . . . . . 239/3 Index-No. . . . . 4,668	{ Wage . . . . . 271/5 Index-No. . . . . 5,296
IV. Clothing, Textiles, etc. . . . .	{ Wage . . . . . 93/2 Index-No. . . . . 1,817	{ Wage . . . . . 132/8 Index-No. . . . . 2,589	{ Wage . . . . . 153/7 Index-No. . . . . 2,997	{ Wage . . . . . 164/2 Index-No. . . . . 3,204	{ Wage . . . . . 202/10 Index-No. . . . . 3,957	{ Wage . . . . . 242/10 Index-No. . . . . 4,738	{ Wage . . . . . 273/6 Index-No. . . . . 5,337
V. Books, Printing, etc. . . . .	{ Wage . . . . . 114/3 Index-No. . . . . 2,229	{ Wage . . . . . 158/7 Index-No. . . . . 3,094	{ Wage . . . . . 177/2 Index-No. . . . . 3,457	{ Wage . . . . . 194/7 Index-No. . . . . 3,796	{ Wage . . . . . 228/9 Index-No. . . . . 4,493	{ Wage . . . . . 274/5 Index-No. . . . . 5,355	{ Wage . . . . . 305/5 Index-No. . . . . 5,959
VI. Other Manufacturing . . . . .	{ Wage . . . . . 95/8 Index-No. . . . . 1,867	{ Wage . . . . . 136/8 Index-No. . . . . 2,667	{ Wage . . . . . 153/11 Index-No. . . . . 3,111	{ Wage . . . . . 165/1 Index-No. . . . . 3,221	{ Wage . . . . . 199/0 Index-No. . . . . 3,883	{ Wage . . . . . 238/10 Index-No. . . . . 4,661	{ Wage . . . . . 270/2 Index-No. . . . . 5,272
VII. Building . . . . .	{ Wage . . . . . 106/5 Index-No. . . . . 2,076	{ Wage . . . . . 154/0 Index-No. . . . . 3,005	{ Wage . . . . . 171/9 Index-No. . . . . 3,352	{ Wage . . . . . 183/0 Index-No. . . . . 3,570	{ Wage . . . . . 215/11 Index-No. . . . . 4,212	{ Wage . . . . . 259/0 Index-No. . . . . 5,054	{ Wage . . . . . 293/11 Index-No. . . . . 5,735
VIII. Mining, etc. . . . .	{ Wage . . . . . 109/1 Index-No. . . . . 2,142	{ Wage . . . . . 148/4 Index-No. . . . . 2,895	{ Wage . . . . . 163/5 Index-No. . . . . 3,189	{ Wage . . . . . 175/7 Index-No. . . . . 3,426	{ Wage . . . . . 211/0 Index-No. . . . . 4,118	{ Wage . . . . . 249/2 Index-No. . . . . 4,861	{ Wage . . . . . 281/8 Index-No. . . . . 5,495
IX. Railways, etc. . . . .	{ Wage . . . . . 96/6 Index-No. . . . . 1,884	{ Wage . . . . . 142/3 Index-No. . . . . 2,775	{ Wage . . . . . 156/1 Index-No. . . . . 3,045	{ Wage . . . . . 167/3 Index-No. . . . . 3,263	{ Wage . . . . . 199/2 Index-No. . . . . 3,887	{ Wage . . . . . 238/0 Index-No. . . . . 4,643	{ Wage . . . . . 269/4 Index-No. . . . . 5,256
X. Other Land Transport . . . . .	{ Wage . . . . . 92/10 Index-No. . . . . 1,812	{ Wage . . . . . 128/6 Index-No. . . . . 2,507	{ Wage . . . . . 145/8 Index-No. . . . . 2,843	{ Wage . . . . . 160/0 Index-No. . . . . 3,123	{ Wage . . . . . 192/7 Index-No. . . . . 3,757	{ Wage . . . . . 233/2 Index-No. . . . . 4,550	{ Wage . . . . . 263/11 Index-No. . . . . 5,150
XI. Shipping, etc.(b) . . . . .	{ Wage . . . . . 98/6 Index-No. . . . . 1,922	{ Wage . . . . . 136/4 Index-No. . . . . 2,661	{ Wage . . . . . 182/0 Index-No. . . . . 3,551	{ Wage . . . . . 192/4 Index-No. . . . . 3,753	{ Wage . . . . . 230/2 Index-No. . . . . 4,491	{ Wage . . . . . 271/11 Index-No. . . . . 5,306	{ Wage . . . . . 303/1 Index-No. . . . . 5,914
XII. Agricultural, etc.(c) . . . . .	{ Wage . . . . . 84/0 Index-No. . . . . 1,639	{ Wage . . . . . 136/5 Index-No. . . . . 2,662	{ Wage . . . . . 158/1 Index-No. . . . . 3,085	{ Wage . . . . . 174/7 Index-No. . . . . 3,407	{ Wage . . . . . 222/2 Index-No. . . . . 4,335	{ Wage . . . . . 279/1 Index-No. . . . . 5,445	{ Wage . . . . . 300/11 Index-No. . . . . 5,871
XIII. Domestic, etc.(c) . . . . .	{ Wage . . . . . 89/11 Index-No. . . . . 1,755	{ Wage . . . . . 126/11 Index-No. . . . . 2,476	{ Wage . . . . . 141/5 Index-No. . . . . 2,759	{ Wage . . . . . 154/9 Index-No. . . . . 3,020	{ Wage . . . . . 186/8 Index-No. . . . . 3,643	{ Wage . . . . . 224/8 Index-No. . . . . 4,384	{ Wage . . . . . 255/8 Index-No. . . . . 4,989
XIV. Miscellaneous . . . . .	{ Wage . . . . . 92/10 Index-No. . . . . 1,811	{ Wage . . . . . 130/10 Index-No. . . . . 2,553	{ Wage . . . . . 148/3 Index-No. . . . . 2,893	{ Wage . . . . . 162/0 Index-No. . . . . 3,161	{ Wage . . . . . 192/9 Index-No. . . . . 3,761	{ Wage . . . . . 232/0 Index-No. . . . . 4,527	{ Wage . . . . . 262/10 Index-No. . . . . 5,128
All Industrial Groups . . . . .	{ Wage . . . . . 95/3 Index-No. . . . . 1,858	{ Wage . . . . . 137/11 Index-No. . . . . 2,690	{ Wage . . . . . 156/4 Index-No. . . . . 3,050	{ Wage . . . . . 169/8 Index-No. . . . . 3,310	{ Wage . . . . . 205/6 Index-No. . . . . 4,009	{ Wage . . . . . 248/7 Index-No. . . . . 4,850	{ Wage . . . . . 278/2 Index-No. . . . . 5,428

(a) See note (a) on page 282. (b) Includes the value of victualling and accommodation, where supplied. (c) Includes the value of board and lodging, where supplied.

The foregoing table shows that the highest average weekly wage at 31st December, 1952, was recorded in Group V. (Books, Printing, etc.), 305s. 5d. per week, followed by Groups XI. (Shipping, etc.), 303s. 1d., XII. (Agriculture, etc.), 300s. 11d., VII. (Building), 293s. 11d., VIII. (Mining, etc.), 281s. 8d., IV. (Clothing, Textiles, etc.), 273s. 6d. and III. (Food, Drink, etc.), 271s. 5d. The lowest average rate was recorded in Group XIII. (Domestic, etc.), 255s. 8d. Compared with those prevailing at 31st December, 1951, rates of wage increased in all industrial groups during 1952.

(iv) *Adult Females—States.* The following table shows the weighted average nominal weekly rates of wage payable to adult female workers for a full week's work, in each State and Australia at the dates specified.

## WEEKLY WAGE RATES : ADULT FEMALES, STATES.

WEIGHTED AVERAGE NOMINAL WEEKLY RATES PAYABLE FOR A FULL WEEK'S WORK (EXCLUDING OVERTIME) AND INDEX-NUMBERS OF WAGE RATES.(a)

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aust.
No. of Occupations included(b) ..	84	87	38	47	24	32	312

## RATES OF WAGE.

	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
31st December, 1939 ..	53	3	51	9	55	2	49	7	55	8	50	8
" " 1947 ..	84	3	88	6	85	10	80	10	80	1	81	11
" " 1948 ..	100	0	103	1	98	4	95	1	93	5	96	8
" " 1949 ..	108	1	112	4	108	5	101	0	105	5	106	4
" " 1950 ..	139	11	142	11	135	11	142	1	132	3	137	2
" " 1951 ..	171	1	172	10	161	7	171	4	163	2	168	7
31st March, 1952 ..	178	3	180	7	170	9	178	10	169	10	175	0
30th June, 1952 ..	183	1	184	3	175	11	183	4	175	5	179	10
30th September, 1952 ..	191	10	193	2	181	10	192	5	182	5	186	8
31st December, 1952 ..	193	11	196	2	184	4	195	8	186	0	191	2

## INDEX-NUMBERS.

(Base : Weighted Average for Australia (27s. 2d.), 30th April, 1914 = 1,000.)

31st December, 1939 ..	1,960	1,906	2,031	1,826	2,049	1,866	1,938
" " 1947 ..	3,102	3,256	3,160	2,976	2,947	3,014	3,152
" " 1948 ..	3,681	3,795	3,618	3,499	3,438	3,559	3,694
" " 1949 ..	3,979	4,134	3,990	3,716	3,880	3,915	4,015
" " 1950 ..	5,510	5,259	5,003	5,229	4,866	5,050	5,169
" " 1951 ..	6,296	6,362	5,948	6,305	6,007	6,204	6,268
31st March, 1952 ..	6,562	6,646	6,283	6,583	6,250	6,441	6,549
30th June, 1952 ..	6,738	6,783	6,474	6,748	6,457	6,618	6,712
30th September, 1952 ..	7,061	7,108	6,691	7,082	6,714	6,872	7,020
31st December, 1952 ..	7,138	7,220	6,784	7,202	6,846	7,037	7,120

(a) See note (a) to table on page 282.

(b) As at 31st December, 1952.

It should be noted that the base of these index-numbers is 1914 and not 1911 as in the foregoing tables for adult males. This is because there is no tabulation for adult female rates prior to 1914.

As with the rates for males, increases were recorded in all States during the war years and after, especially after September, 1946 when female rates were increased under the National Security (Female Minimum Wage) Regulations. The weighted average rate for Australia at 31st December, 1946, had advanced by 37s. 4d. per week over that ruling on 31st December, 1933. Female rates have risen rapidly since September, 1950, partly because of the increase in marginal rates but mainly because of the increase in the female basic wage rates. The weighted average rate for Australia at 31st December, 1952 (193s. 5d.) was the highest recorded to that date and was 267.2 per cent. above the average at 31st December, 1939, and 64.2 per cent. above the average at 30th September, 1950.

(v) *Adult Females—Industrial Groups.* The following table shows the weighted average weekly rates of wage payable in Australia to adult female workers in the industrial groups in which they are mainly employed, and in all groups combined.

**WEEKLY WAGE RATES : ADULT FEMALES, INDUSTRIAL GROUPS.**  
**WEIGHTED AVERAGE NOMINAL WEEKLY RATES PAYABLE FOR A FULL WEEK'S WORK**  
**(EXCLUDING OVERTIME) AND INDEX-NUMBERS OF WAGE RATES IN EACH INDUSTRIAL**  
**GROUP.(a)**

Date.	Industrial Group.					
	III. Food, Drink, etc.	IV. Clothing, Textiles, etc.	I., II., V., and VI. All Other Manufacturing.	XIII. Domestic, etc.(b)	XIV. Miscel- laneous.	All Groups.
<b>RATES OF WAGE.</b>						
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
31st December, 1939 ..	48 9	50 9	51 11	54 5	56 8	52 8
" " 1947 ..	83 3	87 7	90 2	76 7	88 5	85 8
" " 1948 ..	95 10	101 7	103 3	89 3	107 9	100 4
" " 1949 ..	105 5	109 5	111 11	97 5	119 1	109 1
" " 1950 ..	135 9	139 2	147 1	132 1	149 9	140 5
" " 1951 ..	164 2	169 6	177 1	160 10	179 10	170 4
31st March, 1952 ..	171 10	177 0	184 9	168 5	187 10	177 11
30th June, 1952 ..	175 10	181 4	188 10	173 0	192 6	182 4
30th September, 1952 ..	184 3	189 6	198 1	180 11	201 4	190 9
31st December, 1952 ..	186 8	192 5	200 9	183 6	203 10	193 5

**INDEX-NUMBERS.**

(Base : Weighted Average for Australia (27s. 2d.), 30th April, 1914 = 1,000.)

31st December, 1939 ..	1,795	1,869	1,910	2,003	2,085	1,938
" " 1947 ..	3,064	3,222	3,317	2,820	3,253	3,152
" " 1948 ..	3,526	3,739	3,802	3,284	3,967	3,694
" " 1949 ..	3,879	4,026	4,118	3,586	4,384	4,015
" " 1950 ..	4,996	5,121	5,412	4,861	5,512	5,169
" " 1951 ..	6,043	6,238	6,517	5,919	6,618	6,268
31st March, 1952 ..	6,323	6,514	6,801	6,197	6,912	6,549
30th June, 1952 ..	6,471	6,674	6,951	6,366	7,085	6,712
30th September, 1952 ..	6,781	6,975	7,291	6,658	7,411	7,020
31st December, 1952 ..	6,869	7,081	7,389	6,755	7,501	7,120

(a) See note (a) to table on page 282.

(b) Includes the value of board and lodging, where supplied.

During 1952 the rate of wage per week for female employees in each industrial group increased as follows:—III. (Food, etc.), 22s. 6d.; IV. (Clothing, etc.), 22s. 11d.; I, II, V. and VI. (all other manufacturing), 23s. 8d.; XIII. (Domestic, etc.), 22s. 8d. and XIV. (Miscellaneous), 24s. 0d. The weighted average for all groups increased by 23s. 1d. per week.

3. Weekly and Hourly Rates of Wage and Weekly Hours of Labour, 1939 and 1947 to 1952.—(i) *General.* The rates of wage referred to in preceding paragraphs are the minima payable for a full week's work. The number of hours constituting a full week's work differs, however, in some instances between various trades and occupations in each State, and between the same trades and occupations in the several States. To secure what may be for some purposes a better comparison, the results in the preceding paragraphs are reduced to a common basis, namely, the rate of wage per hour. The particulars given in the following table relate to (a) the weighted average nominal weekly wage; (b) the weighted average number of working hours constituting a full week's work; and (c) the weighted average hourly wage. The weighted average weekly wage relates to all industrial groups combined and includes the value of board and lodging where supplied in land occupations, and the value of victualling and accommodation where supplied in marine occupations, whereas the number of working hours and the hourly wage relate to all industrial groups other than Groups XI. (Shipping), and XII. (Agricultural, Pastoral, etc.). Some of the occupations included in these groups are of a casual or seasonal nature, and the hours of labour are not generally regulated either by awards or determinations of industrial tribunals or otherwise, hence the necessary definite particulars for the computation of the average number of working hours are not available.

The downward tendency in hours of labour for Australia commenced in the December quarter of 1924, when the weighted averages were 46.66 for males and 46.02 for females, and, except for slight increases in 1929 and 1930, the reduction has continued. During the second half of 1947 hours for males and females in New South Wales were reduced owing to the introduction of the forty-hour week in occupations under the jurisdiction of State arbitration. In Australia generally, the forty-hour week operated from 1st January, 1948 and was responsible for substantial reductions in hours in that year. The weighted averages for Australia at 31st December, 1952 were 39.95 hours for males and 40.00 hours for females. More detailed information relating to the progressive reduction in working hours may be found in *Labour Report* No. 40, page 71.

(ii) *Adult Males and Females.* Particulars of the weekly and hourly wages and hours of labour for adult males and females at the close of the years 1947 to 1952 compared with 1939 are given in the table hereunder.

**WEEKLY AND HOURLY WAGE RATES AND WEEKLY HOURS OF LABOUR :  
ADULT WORKERS.(a)**

31st December—	Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aust.
<b>MALE WORKERS.</b>								
1939	Weekly Wage(b)	96/7	93/6	97/3	88/11	100/6	89/5	95/3
	Weekly Hours of Labour(e)	43.92	44.01	43.46	45.83	44.33	45.33	44.29
	Hourly Wage(c)	2/3½	2/1½	2/3½	1/11½	2/4	2/0	2/2½
1947	Weekly Wage(b)	141/3	136/10	134/9	133/10	137/8	133/0	137/11
	Weekly Hours of Labour(e)	41.11	43.68	43.18	42.84	43.15	43.27	42.51
	Hourly Wage(c)	3/5½	3/1¼	3/0½	3/1½	3/1	3/1	3/3
1948	Weekly Wage(b)	159/9	155/5	151/4	153/7	156/6	153/2	156/4
	Weekly Hours of Labour(e)	40.00	39.99	40.00	40.00	39.57	40.00	39.96
	Hourly Wage(c)	3/11¼	3/10½	3/8½	3/9½	3/11	3/9½	3/10½
1949	Weekly Wage(b)	171/11	168/11	167/10	165/3	171/6	165/4	169/8
	Weekly Hours of Labour(e)	39.99	39.99	40.00	40.00	39.54	40.00	39.96
	Hourly Wage(c)	4/3	4/2½	4/0¼	4/0¼	4/3½	4/1	4/2¼
1950	Weekly Wage(b)	209/6	204/5	199/10	200/6	208/3	199/7	205/6
	Weekly Hours of Labour(e)	39.99	39.99	40.00	40.00	39.54	40.00	39.96
	Hourly Wage(c)	5/1¼	5/0¼	4/8½	4/9½	5/1¼	4/11	5/0
1951	Weekly Wage(b)	255/0	245/5	240/10	241/8	251/4	247/3	248/7
	Weekly Hours of Labour(e)	39.99	39.98	40.00	40.00	39.51	40.00	39.95
	Hourly Wage(c)	6/2¼	5/11¼	5/6½	5/9	6/2¼	5/11	6/0
1952	Weekly Wage(b)	284/8	274/5	267/9	274/6	284/7	276/2	278/2
	Weekly Hours of Labour(e)	39.99	39.98	40.00	40.00	39.51	40.00	39.95
	Hourly Wage(c)	6/11½	6/8½	6/4¼	6/7½	7/0¼	6/8½	6/9½
<b>FEMALE WORKERS.</b>								
1939	Weekly Wage(b)	53/3	51/9	55/2	49/7	55/8	50/8	52/8
	Weekly Hours of Labour	43.88	44.42	44.01	45.96	45.38	45.10	44.36
	Hourly Wage	1/2½	1/2	1/3	1/1	1/2¼	1/1½	1/2¼
1947	Weekly Wage(b)	84/3	88/6	85/10	80/10	80/1	81/11	85/8
	Weekly Hours of Labour	41.78	43.99	44.00	42.19	44.00	44.00	43.08
	Hourly Wage	2/0¼	2/0¼	1/11½	1/11	1/9½	1/10½	1/11½
1948	Weekly Wage(b)	100/0	103/1	98/4	95/1	93/5	96/8	100/4
	Weekly Hours of Labour	40.00	40.00	40.00	40.00	40.00	40.00	40.00
	Hourly Wage	2/6	2/7	2/5½	2/4½	2/4	2/5	2/6
1949	Weekly Wage(b)	108/1	112/4	108/5	101/0	105/5	106/4	109/1
	Weekly Hours of Labour	40.00	40.00	40.00	40.00	40.00	40.00	40.00
	Hourly Wage	2/8½	2/9½	2/8½	2/6½	2/7½	2/8	2/8½
1950	Weekly Wage(b)	139/11	142/11	135/11	142/1	132/3	137/2	140/5
	Weekly Hours of Labour	40.00	40.00	40.00	40.00	40.00	40.00	40.00
	Hourly Wage	3/6	3/6¼	3/4¼	3/6½	3/3¼	3/5¼	3/6¼
1951	Weekly Wage(b)	171/1	172/10	161/7	171/4	163/2	168/7	170/4
	Weekly Hours of Labour	40.00	40.00	40.00	40.00	40.00	40.00	40.00
	Hourly Wage	4/3½	4/3½	4/0½	4/3½	4/1	4/2½	4/3
1952	Weekly Wage(b)	193/11	196/2	184/4	195/8	186/0	191/2	193/5
	Weekly Hours of Labour	40.00	40.00	40.00	40.00	40.00	40.00	40.00
	Hourly Wage	4/10¼	4/10¼	4/7½	4/10¼	4/7½	4/9¼	4/10

(a) See note (a) to table on page 282. (b) Weighted average weekly rate for all industrial groups combined. (c) Weighted average working hours per week (excluding overtime), and computed hourly rates of wage for all industrial groups excepting Groups XI. (Shipping, etc.), and XII. (Agricultural, Pastoral, etc.). Working hours have not been generally regulated by industrial tribunals for some of the occupations classified in industrial groups XI. and XII.

(iii) *Index Numbers.* The effect of changes in hours of labour on the hourly rate of wage as compared with the general increase in the weekly wage is readily seen from the comparative index-numbers for all classes combined given in the following table. It should be noted that these comparative index-numbers for males and females are on the 1914 base as against the 1911 base of the earlier tables for adult males. This is because there was no tabulation for adult female rates prior to 1914:—

INDEX-NUMBERS OF WEEKLY AND HOURLY WAGE RATES AND WEEKLY HOURS OF LABOUR : ADULT WORKERS.(a)

(Base : Weighted Average for Australia, 30th April, 1914\* = 1,000.)

31st December—	Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aust.
<b>MALE WORKERS.</b>								
1939	Weekly Wage ..	1,753	1,697	1,767	1,613	1,824	1,623	1,728
	Weekly Hours of Labour(b)	898	912	888	937	906	926	905
	Hourly Wage(b) ..	1,963	1,834	1,979	1,692	2,001	1,717	1,903
1947	Weekly Wage ..	2,563	2,483	2,445	2,428	2,497	2,413	2,501
	Weekly Hours of Labour(b)	840	893	882	876	882	884	869
	Hourly Wage(b) ..	2,974	2,709	2,638	2,692	2,754	2,648	2,797
1948	Weekly Wage ..	2,899	2,819	2,746	2,787	2,840	2,779	2,836
	Weekly Hours of Labour(b)	817	817	817	817	809	817	817
	Hourly Wage(b) ..	3,399	3,322	3,180	3,246	3,364	3,254	3,327
1949	Weekly Wage ..	3,119	3,064	3,045	2,998	3,111	3,000	3,077
	Weekly Hours of Labour(b)	817	817	817	817	808	817	817
	Hourly Wage(b) ..	3,654	3,607	3,463	3,484	3,691	3,515	3,599
1950	Weekly Wage ..	3,801	3,709	3,626	3,637	3,778	3,622	3,727
	Weekly Hours of Labour(b)	817	817	817	817	808	817	817
	Hourly Wage(b) ..	4,393	4,318	4,047	4,142	4,430	4,230	4,301
1951	Weekly Wage ..	4,626	4,453	4,369	4,384	4,560	4,486	4,510
	Weekly Hours of Labour(b)	817	817	817	817	807	817	816
	Hourly Wage(b) ..	5,318	5,142	4,756	4,948	5,319	5,079	5,153
1952	Weekly Wage ..	5,165	4,978	4,857	4,980	5,163	5,010	5,047
	Weekly Hours of Labour(b)	817	817	817	817	807	817	816
	Hourly Wage(b) ..	5,985	5,785	5,464	5,697	6,066	5,782	5,833
<b>FEMALE WORKERS.</b>								
1939	Weekly Wage ..	1,960	1,906	2,031	1,826	2,049	1,866	1,938
	Weekly Hours of Labour ..	894	905	897	936	925	919	904
	Hourly Wage ..	2,193	2,107	2,267	1,952	2,217	2,032	2,145
1947	Weekly Wage ..	3,102	3,256	3,160	2,976	2,947	3,014	3,152
	Weekly Hours of Labour ..	851	896	896	860	896	896	878
	Hourly Wage ..	3,646	3,634	3,527	3,464	3,289	3,363	3,593
1948	Weekly Wage ..	3,681	3,795	3,618	3,499	3,438	3,559	3,694
	Weekly Hours of Labour ..	814	814	814	814	814	814	814
	Hourly Wage ..	4,518	4,658	4,441	4,295	4,220	4,369	4,535
1949	Weekly Wage ..	3,979	4,134	3,990	3,716	3,880	3,915	4,015
	Weekly Hours of Labour ..	814	814	814	814	814	814	814
	Hourly Wage ..	4,884	5,074	4,898	4,562	4,762	4,806	4,929
1950	Weekly Wage ..	5,150	5,259	5,003	5,229	4,866	5,050	5,169
	Weekly Hours of Labour ..	814	814	814	814	814	814	814
	Hourly Wage ..	6,322	6,455	6,142	6,419	5,973	6,199	6,345
1951	Weekly Wage ..	6,296	6,362	5,948	6,305	6,007	6,204	6,268
	Weekly Hours of Labour ..	814	814	814	814	814	814	814
	Hourly Wage ..	7,729	7,810	7,301	7,741	7,373	7,616	7,694
1952	Weekly Wage ..	7,138	7,220	6,784	7,202	6,846	7,037	7,120
	Weekly Hours of Labour ..	814	814	814	814	814	814	814
	Hourly Wage ..	8,762	8,863	8,328	8,840	8,404	8,639	8,739

(a) See note (a) to table on page 282.

(b) See note (c) to previous table.

\* Approximate Weekly Rates—M = 55s. 1d.; F = 27s. 2d. Hourly Rates—M = 1s. 2d.; F = 6½d. Weekly Hours of Labour—M = 48.93; F = 49.08.

4. **Nominal and Effective Wages.**—(i) *General.* Index-numbers of wage rates are said to be *nominal* when they represent changes in the wage rates themselves but are described as *effective* or *real* when they represent changes in equivalent purchasing power, that is, the purchasing power of the corresponding wages in terms of some definite composite unit or *regimen* the cost of which can be ascertained at different times. The relation between *nominal* and *effective* or *real* wages was discussed at some length in *Labour Report* No. 6, and was also referred to in *Labour Report* No. 11.

Since it is possible to measure purchasing power over more than one composite unit or regimen it is equally possible to convert any given nominal wage series into more than one series of effective or real wages. Prior to 1936 it was the practice of this Bureau to compute effective wage index-numbers by dividing the nominal wage index-numbers by the corresponding retail price index-numbers for food, groceries and rent of all houses ("A" series). While wage rates were generally varied on the basis of the "A" series index-numbers there was a good deal to be said for this procedure. When the Commonwealth Court abandoned the "A" series, the merits of the "C" series for "deflating" nominal wage rates were strengthened and real wages to the end of 1937 were measured in terms of their purchasing power over both regimens. Since 1938 when computations of the "A" series was discontinued, real wages have been measured in terms of their purchasing power over the "C" series only. The "C" series covers food, groceries, rent of four and five-roomed houses, clothing and miscellaneous household requirements.

(ii) *Nominal Weekly Wage Index-numbers—Adult Males, States, 1911 to 1952.* The following table shows for the period 1911 to 1952 the weighted average nominal weekly rates of wage payable for adult males in each State, the weighted average rate for Australia in 1911 being taken as the base (= 1,000). These results are based generally upon rates of wage prevailing in the capital city of each State, but in certain industries, such as mining, rates are necessarily taken for places other than the capital cities. The index-numbers for 1911 are based on rates current at the end of December, annual averages not being available. For 1914 and subsequent years, however, the index-numbers are based on the average rates current at the end of the four quarters of each year:—

#### NOMINAL WAGE(a) INDEX-NUMBERS : ADULT MALES.

(Base : Weighted Average Nominal Wage(a) for Australia, 1911 = 1,000.)

State.	1911.	1914.	1921.	1929.	1931.	1939.	1941.	1948.	1949.	1950.	1951.	1952.
N.S. Wales ..	1,003	1,093	1,862	2,012	1,851	1,874	2,024	2,973	3,259	3,649	4,588	5,367
Victoria ..	985	1,062	1,803	1,964	1,683	1,808	1,984	2,909	3,200	3,584	4,458	5,158
Queensland ..	997	1,035	1,879	1,976	1,769	1,885	1,981	2,840	3,104	3,548	4,377	5,113
South Australia ..	1,013	1,061	1,697	1,891	1,580	1,725	1,897	2,841	3,150	3,503	4,370	5,124
W. Australia ..	1,152	1,223	1,832	1,960	1,745	1,956	2,106	2,888	3,226	3,638	4,557	5,325
Tasmania ..	799	1,027	1,745	1,840	1,625	1,738	1,895	2,861	3,149	3,472	4,441	5,178
Australia ..	1,000	1,081	1,826	1,972	1,752	1,846	1,997	2,914	3,210	3,596	4,495	5,241

(a) For a full week's work (excluding overtime).

(iii) *Effective or Real Wage Index-numbers—Adult Males, States, 1911 to 1952.* In obtaining the effective wage index-numbers in the following table, the nominal wage index-numbers shown above have been divided by the corresponding retail price index-numbers for the capital city and multiplied by 1,000. Since the "C" series index-numbers were not compiled for periods prior to November, 1914, it has been assumed that fluctuations between 1911 (the base of the table) and 1914 in the "C" series would have been similar to the fluctuations observed in the "A" series. A table showing effective or real wage index-numbers from 1901 to 1937 measured in terms of purchasing power over the "A" series regimen appeared in earlier issues of the *Official Year Book* (see No. 37, page 473).



**EFFECTIVE OR REAL WAGE(a) INDEX-NUMBERS : ADULT MALES.**

Measured in terms of purchasing power over the "C" series regimen.

(Base : Weighted Average Real Wage(a) in Australia in 1911 = 1,000.)

State.	1911.	1914.	1921.	1929.	1931.	1939.	1941.	1948.	1949.	1950.	1951.	1952.
N.S. Wales ..	..	925	1,073	1,130	1,210	1,207	1,187	1,359	1,365	1,380	1,430	1,428
Victoria ..	..	954	1,084	1,164	1,200	1,180	1,187	1,355	1,363	1,381	1,429	1,432
Queensland ..	..	1,022	1,227	1,290	1,336	1,306	1,240	1,379	1,407	1,453	1,498	1,494
South Australia ..	..	914	1,034	1,099	1,137	1,147	1,158	1,341	1,362	1,388	1,439	1,430
W. Australia ..	..	1,043	1,096	1,152	1,189	1,308	1,279	1,377	1,379	1,426	1,477	1,479
Tasmania ..	..	902	984	1,108	1,120	1,153	1,142	1,334	1,388	1,371	1,438	1,432
<b>Australia ..</b>	<b>1,000</b>	<b>948</b>	<b>1,087</b>	<b>1,151</b>	<b>1,210</b>	<b>1,211</b>	<b>1,194</b>	<b>1,357</b>	<b>1,367</b>	<b>1,389</b>	<b>1,439</b>	<b>1,438</b>

(a) For a full week's work (excluding overtime).

In the table above, the effective wage index-numbers are computed to the one base, that of Australia for 1911. As the index-numbers are comparable in all respects, comparisons may be made as to the increase or decrease in the effective wage index-number for any State over any period of years.

(iv) *Effective or Real Wage Index-numbers—Adult Males, Australia, 1901 to 1950.* In previous issues of the Official Year Book (see No. 39, page 410) a table was included showing similar index-numbers for Australia as a whole under both the "A" and "C" series at intervals from 1901 to 1950.

### § 3. Basic Wages in Australia.

1. **General.**—Basic wages in Australia are fixed by various industrial tribunals operating under Commonwealth and State industrial legislation, and are varied from time to time according to changes in cost of living, etc. In the industrial legislation of Queensland and Western Australia, provision is made for the tribunals appointed under the Acts to determine the basic rates of wage to be paid to adult unskilled workers. In Tasmania provision for the declaration of a basic rate of wage is not included in the industrial Acts in force. The Wages Board system operates in this State, and each Wages Board determines the rate of wage to be paid to the unskilled worker when the determination for an industry or calling is under review. In Victoria, however, while a similar Wages Board system exists, the Factories and Shops Acts oblige Wages Boards to adopt Commonwealth Award rates and conditions "which such Boards are under the Factories and Shops Acts empowered to include in their determinations." In New South Wales and South Australia, in general, tribunals are required to adopt the prevailing Commonwealth basic wage. As the power of the Commonwealth Court of Conciliation and Arbitration is limited by the Constitution to the settlement, by conciliation and arbitration, of industrial disputes extending beyond the limits of any one State, no similar provision respecting the determination of a basic wage is to be found in the Conciliation and Arbitration Act. In practice, the Court does declare a Commonwealth basic wage, and uses the wage so declared as a basis for all awards made by it in the exercise of its jurisdiction, except in the case of awards made for Whyalla and Iron Knob where the basis of awards has, since 1947, been the South Australian "living" wage plus 5s. That is, upon a new basic wage being declared, the awards made in the settlement of all interstate industrial disputes are re-opened and amended accordingly. In addition to the "basic" wage, these tribunals also determine what is known as the "secondary" wage—"the extra payment to be made for trained skill or other exceptional qualities necessary for an employee exercising the functions required."\* The term "minimum" wage, as distinct from the "basic" wage, is used to express the lowest rate payable in a particular industry or occupation, and is either equal to, or greater than, the "basic" wage.

2. **The Commonwealth Basic Wage.**—(i) *Early Judgments.* The doctrine of a basic wage was propounded as far back as 1890 but it was not until 1907 that the first basic wage, as such, was declared by a Court in Australia. This was declared by Mr. Justice

\* Mr. Justice Higgins—*A New Province of Law and Order.*

Higgins, President of the Commonwealth Court of Conciliation and Arbitration, and was defined as the lowest wage which could be paid to an unskilled labourer on the basis of "the normal needs of an average employee regarded as a human being living in a civilized community."\* This declaration was made by way of an order in terms of Section 2 (d) of the Excess Tariff 1906 in the matter of an application by H. V. McKay, of the Sunshine Harvester Works, Victoria, from which was derived the title of the "Harvester Wage" by which it is popularly known. The rate of wage declared in this case was 7s. per day or £2 2s. per week for Melbourne, the amount considered reasonable for "a family of about five."†

The "Harvester" basic rate was adopted by the Commonwealth Court of Conciliation and Arbitration for incorporation in its awards, and practically the same rates continued until 1913, when the Court took cognizance of the retail price index-numbers, covering food and groceries and rent of all houses ("A" series), for the 30 more important towns of Australia, which had been published by the Commonwealth Statistician for the first time in the preceding year. The basic rates for towns were thereafter fixed largely on their respective index-numbers, taking the index-number 875 for Melbourne for the year 1907 as being equivalent to the "Harvester" rate of 42s. per week, or the base of the index (1,000) as being equivalent to 48s. per week. Exceptions were made in the case of many country towns, where certain "loadings" were applied to counter-balance their lower index-numbers due to cheaper rentals.

In 1922 an amount known as the "Powers' 3s."‡ was added as a general "loading" to the weekly wage for the purpose of securing to the worker during a period of rising prices the full equivalent of the "Harvester" standard. In the same year the system was instituted of making regular quarterly adjustments of the basic wage to accord with variations in purchasing power as disclosed by the "A" Series retail price index-numbers, and of basing the adjustments on the index-number for the quarter in place of that for the previous calendar year or the year ended the preceding quarter.

The Conciliation and Arbitration Act provides that the "basic" wage, or any alteration thereof including the principles on which it is computed, together with any variation or interpretation of any award involving any such alteration, shall be considered by a Court constituted by the Chief Judge and not less than two other Judges, and must be approved by a majority of the members of that Court. By a judgment of the High Court on 21st April, 1933, the "basic" wage is taken to mean, for the foregoing purpose, not only the "Harvester" wage but any "loadings" forming part of the primary wage of an unskilled labourer. A "loading" is defined as an addition to the "basic" wage as compensation for some peculiar condition of labour or environment, and not by way of "margin for skill". The wage payable for skilled labour is assessed on the basis of the "basic" wage, including "loadings".

A Royal Commission was appointed in 1919 to assess a basic wage, but its recommendations were not carried out and no change was made in the method of fixation and adjustment of the basic wage until the onset of the depression which began to be felt severely during 1930. Applications were then made to the Court by employers for some greater measure of reduction of wages than that afforded by the automatic adjustments to falling retail prices. An account of the proceedings which resulted in the Court reducing all wages under its jurisdiction by 10 per cent. from 1st February, 1931, is given in *Labour Report* No. 23, page 74.

(ii) *Basic Wage Inquiry*, 1934. The "Harvester" standard, adjusted to retail price variations, continued as the theoretical basis of the wage of the Commonwealth Court until 30th April, 1934, when it was superseded by a judgment delivered on 17th April, 1934, full particulars of which appear in *Official Year Book* No. 29, 1936, page 545. The basic wage declared on this occasion for the six capital cities ranged from 61s. for Brisbane to 67s. for Sydney and Hobart, the average wage for the six capital cities being 65s.

A comparison for the capital cities of the basic rates granted by the judgment and those ruling under previous practices of the Court is given in *Official Year Book* No. 38, p. 426.

The 10 per cent. special reduction in wages referred to above ceased to operate upon the introduction of the new rates, and the basis of the periodical adjustments to retail

\* *Ibid.*

† See page 291 for Court's interpretation in 1940 *Basic Wage Inquiry* of the "family unit".

‡ Awarded by Mr. Justice Powers in the *Gas Workers' Case*.

price variations was transferred from the "A" and the "D" Series to the "C" Series of index-numbers. The base of the index (1,000) was taken by the Court as equal to 81s. per week. This gave the above rates for the capital cities on the basis of their respective index-numbers. In effect, the new rate for the six capital cities was the same as that previously paid under the "A" Series, without the "Powers' 3s." and without the 10 per cent. reduction.

(iii) *Basic Wage Inquiry, 1937.* In May, 1937, the Commonwealth Court heard an application by the combined unions for an increase in the basic wage. The unions asked that the equivalent of the base (1,000) of the "C" Series Index be increased from 81s. to 93s. which on current index-numbers would have represented an average increase of about 10s. per week. The hearing extended from 10th May to 4th June, 1937, and the Court delivered judgment on 23rd June. The chief features of the judgment were:—

(a) Various amounts were added to the basic wage not as an integral, and therefore adjustable, part of that wage, but as "loadings" on the rates payable under the 1934 judgment which were referred to in the judgment as the "needs" portion of the total resultant basic wages. The loadings, commonly referred to as "Prosperity" loadings, ranged, for capital cities, from 4s. to 6s., that for the "Six Capitals" being 5s.

(b) The basis of the adjustment of wages in accordance with the variations shown by retail price index-numbers was transferred from the "C" series to a special "Court" series based upon the "C" series (see page 273).

(c) Female and junior rates were left for adjustment by individual Judges when dealing with specific awards.

The main parts of the judgment are reprinted in Official Year Book No. 30, and in *Labour Report* No. 28, p. 77.

(iv) *Basic Wage Inquiry, 1940.* On 5th August, 1940 the Full Court commenced the hearing of an application by the combined unions for an increase in the existing basic wage by raising the value of 1,000 (the base of the "C" Series Index upon which the "Court" Series are based) from 81s. to 100s. per week, and the abolition of the existing "Prosperity" loadings, which would be regarded as incorporated in the new rate mentioned. Judgment was delivered on 7th February, 1941, the Court unanimously refusing to grant any increase, and deciding that the application should not be dismissed but stood over for further consideration after 30th June, 1941. The application was refused mainly owing to the uncertainty of the economic outlook under existing war conditions (see (v) following). Extracts from the judgment were published in earlier issues of the Official Year Book (see No. 38, p. 428) and the *Labour Report*.

In regard to the popular idea that the basic wage of the Commonwealth Court of Conciliation and Arbitration was identified with a specific family unit, the Chief Judge made the following statements to clarify the position: "The Court has always conceded the 'needs' of an average family should be kept in mind in fixing a basic wage. But it has never as the result of its own inquiry specifically declared what is an average family or what is the cost of a regimen of food, clothing, shelter and miscellaneous items necessary to maintain it in frugal comfort, or that a basic wage should give effect to any such finding. In the end economic possibilities have always been the determining factor

. . . . . What should be sought is the independent ascertainment and prescription of the highest basic wage that can be sustained by the total of industry in all its primary, secondary and ancillary forms . . . . . More than ever before wage fixation is controlled by the economic outlook".

The Chief Judge also suggested that the more logical system would be to grade the basic wage according to family responsibilities by means of a comprehensive system of child endowment, and that if a scheme of this nature were established,\* future fixations of the basic wage would be greatly simplified.

(v) "*Interim*" *Basic Wage Inquiry, 1946.* As the result of (a) an application made by the Commonwealth Attorney-General for the restoration to the Full Court List of certain adjourned 1940 basic wage applications (see (iv) above), (b) a number of fresh cases which had come to the Court since 1941, and (c) an application by the combined unions for an "interim" basic wage declaration, the Court, on 25th November, 1946, commenced the hearing of this case. Judgment was delivered on 13th December, 1946 whereby an increase of 7s. per week was granted in the "needs" portion of the basic

\* Legislation covering a scheme to become operative on 1st July, 1941, was passed by the Commonwealth Parliament on 3rd April, 1941—see Chapter XIV.—Welfare Services for details.

wage then current and based on the weighted average "Court" index-number for the Six Capital Cities (as a whole) for the September quarter, 1946. This had the effect of raising the base (1923-27) index-number of the "Court" Series Index from 81.0 to 87.0, the corresponding "needs" basic wage from 81s. to 87s. per week, and the current rate for the Six Capital Cities as a whole from 93s. to 100s. per week. All "loadings" on the basic wage were retained at their existing amounts until otherwise ordered by the Court. Further details of this judgment may be obtained from *Labour Report* No. 38, page 79.

(vi) *Basic Wage Inquiry, 1949-50.* This case really finalized the case begun in 1940 and continued in 1946 (see above). In 1946 the Chief Judge ruled that the claim for an increase in the basic wage should be heard concurrently with the "40-Hour Week" claims then before the Court. The unions, however, objected to this course being followed, and, on appeal to the High Court, that Court in March, 1947, gave a decision which obliged the Commonwealth Court of Conciliation and Arbitration to proceed with the "Hours" case to its conclusion without the interpolation of the contemporaneous hearing of the Basic Wage case.\*

Evidence was completed on 22nd August, 1950, and the three judges (Kelly, *C.J.*, Foster and Dunphy, *J.J.*) delivered separate judgments on 12th October, 1950. In these judgments, which were in the nature of general declarations, a majority of the Court (Foster and Dunphy, *J.J.*) was of the opinion that the basic wage for adult males should be increased by £1 per week, and that for adult females should be 75 per cent. of the adult male rate. Kelly, *C.J.*, dissenting, considered that no increase in either the male or female wage was justified.

On 24th October, 1950, and 23rd November, 1950, the Court made further declarations regarding the "Prosperity" loading of 1937 (see page 291) which was being paid at rates between 3s. and 6s. per week according to localities, etc., and the future basis of quarterly adjustments. The "Prosperity" loading was standardized at a uniform rate of 5s. per week for all towns and was declared to be an adjustable part of the basic wage. The Court also declared that the "War" loadings were not part of the basic wage.

With regard to other "loadings" the Court on 17th November, 1950 proceeded to examine the individual awards in the claims before it, for the purpose of determining to what extent such "loadings" formed part of the basic wage. It should be noted that any "loading" declared to be part of the basic wage ceased to be paid as a separate entity, but apart from the special case of the Australian Capital Territory there were very few "loadings" which fell within this category.

The first payment of the new rates was expressed to operate from the beginning of the first pay-period in December, 1950, by way of a flat-rate addition of £1 5s. in all cases to the "needs" rate (2nd Series) on the indexes of September quarter, 1950, inclusive of the standardized "Prosperity" loading of 5s. (see above).

The basic wage rate for the Six Capital Cities (Weighted Average) arrived at by the Court after applying the foregoing declarations was £8 2s., comprising £6 17s. "needs" (2nd Series) plus 5s. uniform "Prosperity" loading plus the £1 addition. For the purpose of determining the corresponding rates to be paid in respect of individual cities and towns, and combinations thereof, and their future automatic adjustment, this new rate of £8 2s. was equated to the "C" Series retail price index-number 1572 for the Six Capital Cities (Weighted Average) for September quarter, 1950. From this was derived a new "Court" Series Index—in future to be known as the "Court" Index (Third Series)—for automatic variation of the new basic wage in accordance with future variations in retail prices, with 103.0 equated to 1,000 in the "C" Series Index. The first automatic quarterly adjustment of the new basic wage on this basis became operative from the beginning of the first pay-period commencing in February, 1951, on the basis of the index numbers for the December quarter, 1950.

\* Printing Industry Employees Union of Australia v. Victorian Chamber of Manufactures, 73 C.L.R. 259.

The basic wage rates operative in November, 1950, are shown below in comparison with those operative from the beginning of the first pay-period commencing in December, 1950 :—

Date of Operation.	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Six Capitals.
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
November, 1950 ..	146 0	143 0	135 0	137 0	139 0	139 0	142 0
December, 1950 ..	165 0	162 0	154 0	158 0	160 0	160 0	162 0

Further details of this judgment are given in *Labour Report* No. 40, page 81.

(vii) *Rates Operative, Principal Towns.* The basic wage rates of the Commonwealth Court of Conciliation and Arbitration for adult males and females, operative as from the beginning of the first pay-period commencing in May, 1953, were as shown in the following table :—

COMMONWEALTH BASIC WAGE : WEEKLY RATES.(a)

City or Town.	Rate of Wage.		City or Town.	Rate of Wage.	
	Males.	Females.		Males.	Females.
	<i>s. d.</i>	<i>s. d.</i>		<i>s. d.</i>	<i>s. d.</i>
New South Wales—			South Australia—		
Sydney ..	241 0	180 6	Adelaide ..	228 0	171 0
Newcastle (b) ..	241 0	180 6	Whyalla and Iron Knob ..	233 0	174 6
Port Kembla—Wolongong (b) ..	241 0	180 6	Five Towns (c) ..	227 0	170 0
Broken Hill ..	246 0	184 6	Western Australia—		
Five Towns (c) ..	240 0	180 0	Perth ..	231 0	173 0
Victoria—			Kalgoorlie ..	241 0	180 6
Melbourne ..	232 0	174 0	Geraldton ..	246 0	184 6
Geelong (d) ..	232 0	174 0	Five Towns (c) ..	233 0	174 6
Warrnambool (d) ..	232 0	174 0	Tasmania—		
Mildura (d) ..	232 0	174 0	Hobart ..	239 0	179 0
Yallourn (d) ..	238 6	179 0	Launceston ..	234 0	175 6
Five Towns (c) ..	231 0	173 0	Queenstown ..	228 0	171 0
Queensland—			Five Towns (c) ..	236 0	177 0
Brisbane ..	217 0	162 6	Thirty Towns (c) ..	233 0	175 6
Five Towns (c) ..	218 0	163 6	Six Capital Cities (c) ..	234 0	174 6

(a) Operative from the beginning of the first pay-period commencing in May, 1953. (b) Based on Sydney. (c) Weighted average. (d) Based on Melbourne.

The rate for provincial towns, other than those mentioned above, is 3s. less than that for their respective capital cities.

The following table shows the movements of this wage in all capital cities and the six capital cities as a whole during the years 1939 to 1953.

**BASIC WAGE : WEEKLY RATES(a), CAPITAL CITIES, PRESCRIBED BY COMMONWEALTH COURT OF CONCILIATION AND ARBITRATION FOR ADULT MALES.**

Date Operative.(b)	Sydney.	Mel- bourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Six Capitals.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
September, 1939 ..	81 0	81 0	76 0	78 0	77 0	77 0	79 0
November, 1940 ..	85 0	84 0	79 0	80 0	80 0	81 0	83 0
„ 1941 ..	89 0	88 0	84 0	84 0	85 0	85 0	87 0
„ 1942 ..	97 0	97 0	91 0	93 0	91 0	92 0	95 0
„ 1943 ..	99 0	98 0	93 0	94 0	94 0	95 0	97 0
„ 1944 ..	99 0	98 0	93 0	93 0	94 0	94 0	96 0
„ 1945 ..	99 0	98 0	93 0	93 0	94 0	94 0	96 0
„ 1946 ..	101 0	99 0	94 0	95 0	95 0	97 0	98 0
December, 1946 ..	108 0	106 0	101 0	102 0	102 0	103 0	105 0
November, 1947 ..	112 0	109 0	105 0	106 0	106 0	107 0	109 0
„ 1948 ..	122 0	120 0	115 0	116 0	116 0	118 0	119 0
„ 1949 ..	132 0	130 0	125 0	126 0	129 0	128 0	129 0
„ 1950 ..	146 0	143 0	135 0	137 0	139 0	139 0	142 0
December, 1950 ..	165 0	162 0	154 0	158 0	160 0	160 0	162 0
February, 1951 ..	173 0	170 0	159 0	166 0	166 0	165 0	169 0
May, 1951 ..	180 0	177 0	166 0	171 0	176 0	173 0	176 0
August, 1951 ..	193 0	189 0	175 0	184 0	188 0	187 0	189 0
November, 1951 ..	207 0	199 0	185 0	195 0	197 0	199 0	200 0
February, 1952 ..	216 0	209 0	199 0	205 0	205 0	208 0	210 0
May, 1952 ..	223 0	212 0	207 0	211 0	214 0	214 0	216 0
August, 1952 ..	235 0	224 0	213 0	224 0	222 0	222 0	227 0
November, 1952 ..	237 0	228 0	216 0	229 0	228 0	230 0	231 0
February, 1953 ..	238 0	229 0	215 0	225 0	229 0	232 0	231 0
May, 1953 ..	241 0	232 0	217 0	228 0	231 0	239 0	234 0

(a) Rates include "prosperity" loadings where applicable. (b) Generally from the beginning of the first pay-period commencing in the month indicated.

3. **Australian Territories.**—A full account of the bases upon which the basic wages are determined in the Australian Capital Territory and in the Northern Territory (both north and south of the 20th parallel of South Latitude) may be found on pages 89 to 96 of *Labour Report* No. 40 for 1951.

In the Australian Capital Territory the rates payable as from the beginning of the first pay-period in May, 1953, were £11 15s. for adult males and £8 16s. for adult females.

In the Northern Territory there are two basic wages operating, one in respect of areas north of the 20th parallel of South Latitude, generally referred to as the "Darwin" rate and the other in respect of areas south of that parallel and extending down to the 26th parallel (the "Port Augusta" rate).

The basic wage rates payable as from the beginning of the first pay-period in May, 1953, were:—"Darwin" rate, adult males, £12 13s., adult females, £9 9s. 6d.; "Port Augusta" rate, adult males, £11 19s., and adult females, £8 19s.

In addition to the above rates special loadings were prescribed in Northern Territory awards following the fixation of the new basic wage rates operative from November, 1951.

4. **Basic Wage Rates for Females.**—Reference should be made to *Labour Report* No. 40, 1951 (page 86) for a statement of the general principles followed by the Commonwealth Court of Conciliation and Arbitration in fixing basic wage rates for females in relation to those of males. At the end of the 1949-50 basic Wage Inquiry (see page 292) the Commonwealth Court of Conciliation and Arbitration by a majority decision fixed a new basic weekly wage for adult females at 75 per cent. of the corresponding male rate from the beginning of the first pay-period commencing in December, 1950.

5. **State Basic Wages.**—(i) *New South Wales.* The first determination under the New South Wales Industrial Arbitration Act of a standard "living" wage for adult male employees was made on 16th February, 1914, by the Court of Industrial Arbitration.

A Board of Trade established in 1918 with power to determine the "living" wage for adult male and female employees in the State made numerous declarations from 1918 to 1925, but ceased to function after the Industrial Arbitration (Amendment) Act 1926 transferred its powers to the Industrial Commission of New South Wales as from 15th April, 1926.

The adult male rate was determined on the family unit of a man, wife and two children from 1914 to 1925; a man and wife only in 1927, with family allowances for dependent children; and a man, wife and one child in 1929, with family allowances for other dependent children. With the adoption in 1937 of the Commonwealth basic wage referred to below, however, the identification of a specified family unit with the basic wage disappeared.

A table showing the variations in the living wages determined by the industrial tribunals of New South Wales up to 27th April, 1937 was published in previous issues of the Official Year Book (*see* No. 37, page 481). Employees in rural industries are not covered by the rates in this table. Since 27th April, 1937, changes have been made automatically in accordance with the procedure outlined in the next paragraph, and the latest current rate payable will be found in the table in sub-par. vi., page 299.

Following on the judgment of the Commonwealth Court of Conciliation and Arbitration referred to on page 291, the Government of New South Wales decided to make the State Basic Wage accord with the Commonwealth rates ruling in the State, and secured an amendment of the Industrial Arbitration Act to give effect thereto which came into operation from the commencement of the first pay-period in October, 1937. The general principles laid down by the Commonwealth Court were followed as closely as practicable, and provision was made for the automatic adjustment of wages in conformity with variations in retail prices as shown by the Commonwealth Court's "All Items" Retail Price Index-numbers, shortly known as the "Court" Series of Index-numbers. The Commonwealth Court's principle of treating the "prosperity" loadings as a separate and non-adjustable part of the total basic wage was adopted. The basic rate for adult females was fixed at 54 per cent. of the adult male rate to the nearest sixpence. The provisions of the main Acts for the periodic declaration of the living wage by the Industrial Commission were repealed, but the amending Act placed on the Commission the responsibility for altering all awards and agreements in conformity with the intentions of the new Act; for defining boundaries within which the various rates are to operate; and for specifying the appropriate "Court" Series retail price index-numbers to which they are to be related.

The judgment of the Commonwealth Court of Conciliation and Arbitration on 12th October, 1950 necessitated attention by the legislature to the clauses of the Industrial Arbitration Act providing for the automatic adjustment of rates of pay based on the Commonwealth Basic Wage Judgment of 23rd June, 1937.

An amendment to the Industrial Arbitration Act was assented to on 23rd November, 1950 which empowered the Industrial Commission to vary the terms of awards and industrial agreements affecting male rates of pay, to the extent to which the Commission thought fit, to give effect to the alteration in the basic wage for adult males made by the Commonwealth judgment. In the case of female rates of pay the Commission was empowered to review the terms of awards and industrial agreements and to vary such terms as in the circumstances the Commission decided proper, but no variation was to fix rates of pay for female employees lower than the Commonwealth basic wage for adult females. Further details of this amendment and recent judgments of the Commission may be found in *Labour Report* No. 40, *see* page 98.

By an amendment of the Industrial Arbitration Act in June, 1951, the differentiation in rates for the basic wage in different districts and for employees under Crown awards was eliminated as a general rule, making the basic wage throughout the State equal to that paid in Sydney, with the main exception of the Broken Hill district where a different basic rate still prevails.

The basic wage rates applicable in the metropolitan area from the beginning of the first pay-period commencing in May, 1953, were £12 1s. per week for adult males and £9 0s. 6d. for adult females.

The principle of supplementing wages by a payment in respect of dependent children under fourteen years of age was operative in New South Wales from July, 1927 until

superseded by the Commonwealth Government Scheme operative from 1st July, 1941, and a brief account of the main features of the system appears in Official Year Book No. 37, pp. 485-6.

(ii) *Victoria and Tasmania.* A State basic rate of wage is not declared in Victoria and Tasmania. In these States the Wages Board system of wage fixation is in operation, and each Board determines the minimum rate of wage to be paid in the industry or calling under review. In the majority of cases the practice of the Commonwealth Court of Conciliation and Arbitration of adjusting wages in accordance with variations in retail prices has been followed in the past by these bodies. In the case of Victoria, by amendments of the Factories and Shops Act No. 4275 of 1934 and No. 4461 of 1936, it is obligatory on all Wages Boards to adopt provisions of Commonwealth Awards "which such Boards are empowered under the Factory and Shops Acts to include in their determinations". The Secretary of Labour is also empowered under this Act to make adjustments of wages according to variations in retail price index-numbers without calling the Board together.

In accordance with the decisions of the Commonwealth Court of Conciliation and Arbitration to increase the male and female basic wages from December, 1950 (*see* page 292) the Wages Boards in both States met and incorporated the new Commonwealth rates in their determinations. The Commonwealth weekly adult male rate operative from the beginning of the first pay-period commencing in May, 1953, was £11 12s. for Melbourne and £11 19s. for Hobart. Female basic wages were 75 per cent. of these rates.

(iii) *Queensland.* The first formal declaration of a basic wage by the Queensland Court of Industrial Arbitration was gazetted on 24th February, 1921. Prior to this declaration the rate of £3 17s. per week for adult males had been generally recognized by the Court in its awards as the basic or living wage. The basic wage is nominally intended to provide for the needs of a man, his wife and three children. The variations in the adult basic wages determined by the Court up to 1st April, 1937, were published in previous issues of the Official Year Book (*see* No. 37, page 482). Variations since that date are shown below:—

**BASIC WAGE VARIATIONS IN QUEENSLAND. (State Jurisdiction.)**

Date of Operation.	Adult Basic Wage.	
	Male.	Female.
	£ s. d.	£ s. d.
1st April, 1938 .. .. .	4 1 0	2 3 0
7th August, 1939 .. .. .	4 4 0	2 5 0
31st March, 1941 .. .. .	4 9 0	2 8 0
4th May, 1942(a) .. .. .	4 11 0	2 9 6
23rd December, 1946(b) .. .. .	5 5 0	3 0 6
7th December, 1950(b) .. .. .	7 14 0	5 2 6

(a) Quarterly adjustments provided by judgment of 21st April, 1942—*see* below.

(b) Consequent upon basic wage increases granted by the Commonwealth Court of Conciliation and Arbitration.

The rates shown above are applicable throughout the Southern Division (Eastern District), which includes the metropolitan area; allowances are added for the following divisions—Northern (Eastern District), 10s.; Northern (Western District), 17s. 4d.; Mackay, 5s. 6d.; and Southern (Western District), 7s. 4d. Half of these allowances are granted to females.

On 15th April, 1942, the Court declared the rates operative from 31st March, 1941 as adequately meeting the requirements of Section 9 of the Industrial Conciliation and Arbitration Act 1932, having regard to the level of the "C" Series Retail Price Index for Brisbane for the December quarter, 1941 and decided to make a quarterly declaration of the basic wage on the basis of the variations in the "cost of living" as disclosed by the "C" Series Index for Brisbane, commencing with the figures for the March quarter, 1942. This declaration was duly made by the Court on 21st April, 1942, at the rates



of £4 11s. for adult males, and £2 9s. 6d. for adult females. Since then, quarterly adjustments have been made to the basic wage in accordance with changes in the "C" Series Index.

In view of the "interim" basic wage judgment of the Commonwealth Court of Conciliation and Arbitration in December, 1946 (*see page 291*) the Queensland Industrial Court granted increases of 7s. and 5s. in the basic wages for adult males and adult females respectively to operate from 23rd December, 1946.

Following the decision of the Commonwealth Court of Conciliation and Arbitration to increase the male and female basic wages from December, 1950 (*see page 292*) the Queensland Industrial Court conducted an inquiry as to what change should be made to the State basic wage for Queensland. By a majority decision on 30th November, 1950, the Industrial Court granted an increase of 15s. weekly to both adult males and adult females, the new male rate of £7 14s. corresponding to the Commonwealth basic wage for the Brisbane metropolitan area. The basic wage payable to adult females is now approximately 66 per cent. of the male rate. The judgment of the Queensland Industrial Court may be found in the supplement to the *Queensland Industrial Gazette* Vol. 35, No. 4, page 1253.

The rates payable in the Southern Division (Eastern District) in accordance with regular quarterly variations from 4th May, 1953, were £10 18s. for adult males and £7 6s. for adult females.

(iv) *South Australia.* The Industrial Code 1920-1951 provides that the Board of Industry shall after public inquiry declare the living wages to be paid to adult male and female employees. The Board has power also to fix different rates to be paid in different defined areas.

The family unit is not specifically defined in the Code, but the South Australian Industrial Court in 1920 decided that the average employee in respect of whom the living wage is to be declared is a man with a wife and three children.

The first declaration by the Board of Industry was made on 15th July, 1921, when the living wage for adult male employees in the metropolitan area was determined at £3 19s. 6d. per week.

Following on the declaration of an "interim" increase in its "needs" basic wage by the Commonwealth Court of Conciliation and Arbitration on 13th December, 1946 (*see p. 291*) the South Australian Parliament provided for the "daily living wage" for adult males in the metropolitan area to be declared as one-sixth of the Commonwealth weekly basic wage for this area. The Act mentioned also provided for similar declarations in respect of any adjustment of such wage, but the powers of the Board of Industry to declare a "living wage" were retained, and any such wage so declared will supersede that declared by proclamation.

The variation in the living wages determined by the Board of Industry up to 25th November, 1937, were published in previous issues of the Official Year Book (*see No. 37, page 483*). Variations since that date are shown below:—

LIVING WAGE VARIATIONS IN SOUTH AUSTRALIA. (*State Jurisdiction.*)

Date of Operation.	Living Wage per Week.			
	Male.		Female.	
	£	s. d.	£	s. d.
5th January, 1939 .. .. .	3	18 0	1	18 0
28th November, 1940 .. .. .	4	4 0	2	1 0
26th November, 1941 .. .. .	4	7 0	2	3 6
15th October, 1942 .. .. .	4	14 0	2	6 2
26th September, 1946 .. .. .	4	18 6	2	15 0
7th January, 1947(a) .. .. .	5	2 0	2	17 0
21st August, 1947 .. .. .	5	4 0	2	18 0
13th November, 1947 .. .. .	5	6 0	2	19 0
7th July, 1948 .. .. .	5	17 0	3	6 6
19th May, 1949 .. .. .	6	5 0	3	8 6

(a) Commonwealth rate for metropolitan area adopted.

The Industrial Code Amendment Act No. 65 of 1949 made provision for the quarterly adjustment of the "living wage" in accordance with the variations in the Commonwealth basic wage consequent on the changes in the "Court" Series index of retail prices for Adelaide. In effect this resulted in parity between the State living wage and the Commonwealth basic wage from the beginning of the first pay-period commencing in February, 1950. The prescribed adjustment to the female "living wage" was seven-twelfths of the same adjustment to the Commonwealth male basic wage. The Board of Industry retained power to amend the "living wage" but any new "living wage" was to be adjusted quarterly as above.

Following the decisions of the Commonwealth Court of Conciliation and Arbitration in the 1949-50 Basic Wage Inquiry (*see* page 292), the South Australian legislation was amended to enable, *inter alia*, the "living wage" to be altered by proclamation, and by proclamation dated 30th November, 1950, the South Australian Living Wage in the metropolitan area was fixed at increased rates identical with the December rates fixed by the Commonwealth Court of Conciliation and Arbitration for the metropolitan area of South Australia. The female basic wage, which had been approximately 54 per cent. of the male basic wage, was increased to 75 per cent. of the corresponding male rate.

The rates payable in accordance with the quarterly adjustments notified by the President of the Board of Industry, operating from the beginning of the first pay-period commencing in May, 1953, were £11 8s. per week for adult males, and £8 11s. for adult females.

(v) *Western Australia.* The Industrial Arbitration Act 1912-1952 provides that the Court of Arbitration may determine and declare a basic wage at any time on its own motion and must do so when requested by a majority of industrial unions or by the Western Australian Employers' Federation, with the limitation that no new determination shall be made within twelve months of the last preceding inquiry.

The term "basic wage" is defined in the Act as "a wage which the Court considers to be just and reasonable for the average worker to whom it applies". In determining what is just and reasonable the Court must take into account not only the "needs of an average worker" but also the "economic capacity of industry" and any other matters the Court deems relevant.

Provision is also made in the Act for quarterly adjustments of the "basic wage" by the Court of Arbitration when an official statement supplied to the Court by the State Government Statistician relating to the cost of living shows that a variation of 1s. or more per week has occurred, compared with the preceding quarter. These adjustments apply from the dates of declaration by the Court.

The first declaration of the basic wage by the Court of Arbitration, since the authority to fix one was vested in the Court in 1925, was made on 11th June, 1926. The family unit is not specifically defined in the Act, but it has been the practice of the Court to take as a basis for its calculations a man, his wife and two dependent children. The variations in the annual declarations of the Court of Arbitration up to 1937 were published in previous issues of the Official Year Book (*see* No. 37, page 484). Annual and special declarations since 1937 are shown in the following table.

BASIC WAGE VARIATIONS IN WESTERN AUSTRALIA. (State Jurisdiction.)

Date of Operation.	Metropolitan Area.		South-West Land Division (excluding Metropolitan Area).		Other Parts of State.	
	Male.	Female.	Male.	Female.	Male.	Female.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1st July, 1938 ..	4 0 0	2 3 2	4 1 0	2 3 9	4 13 3	2 10 4
" " 1939 ..	4 2 2	2 4 4	4 3 1	2 14 10	4 16 4	2 12 0
" " 1940 ..	4 2 8	2 4 8	4 3 3	2 4 11	4 16 3	2 12 0
" " 1941(b) ..	4 8 0	2 7 6	4 9 3	2 8 2	5 3 6	2 15 11
" " 1942 ..	4 10 5	2 8 10	4 10 10	2 9 1	5 5 7	2 17 0
" " 1943 ..	4 19 1	2 13 6	4 18 1	2 13 0	5 5 9	2 17 1
" " 1944 ..	4 19 11	2 13 11	4 19 8	2 13 10	5 7 1	2 17 10
" " 1945 ..	5 0 1	2 14 1	4 19 7	2 13 9	5 7 5	2 18 0
" " 1946 ..	5 1 1	2 14 7	5 0 6	2 14 3	5 9 0	2 18 10
26th Feb, 1947(c) ..	5 7 1	2 17 10	5 6 6	2 17 6	5 15 4	3 2 3
1st July, 1947 ..	5 7 10	2 18 3	5 7 3	2 17 11	5 16 0	3 2 8
" " 1948 ..	5 15 9	3 2 6	5 15 2	3 2 2	6 4 9	3 7 4
" " 1949 ..	6 7 1	3 8 8	6 6 9	3 8 5	6 15 1	3 12 11
" " 1950 ..	7 0 0	3 15 7	6 19 9	3 15 6	7 7 3	3 19 6
18th Dec., 1950(c) ..	8 6 6	4 14 1	8 6 7	4 14 2	8 14 8	4 18 6

(a) Applicable from 24th April, 1939. (b) Applicable from 28th April, 1941. (c) Special declarations following basic wage increases granted by the Commonwealth Court of Conciliation and Arbitration.

The increased basic wage of 26th February, 1947 was granted after an inquiry by the Western Australian Court of Arbitration consequent upon the "interim" basic wage judgment of the Commonwealth Court of Conciliation and Arbitration in December, 1946 (see page 291).

Following the judgment of the Commonwealth Court of Conciliation and Arbitration in the 1949-50 Basic Wage Inquiry (see page 292) the Western Australian Court of Arbitration resumed an inquiry which had been adjourned, to ascertain what change should be made in the State basic wage rates. In its judgment of 7th December, 1950 the Court decided that the basic wage should be increased by £1 per week for adult males and by 15s. per week for adult females. As the result of a subsequent inquiry the basic wage for adult females was increased to 65 per cent. of the corresponding male rate, operative from 1st December, 1951. This was subject to the condition that the increase should be offset by the reduction in or deletion of existing margins between the basic wage and the total wage as specified by the appropriate award or determination.

The judgment of the Court of 7th December, 1950, may be found on page 336 of the *Western Australia Industrial Gazette*, Volume 30, Nos. 3-4.

The rates payable in the metropolitan area in accordance with the quarterly adjustments declared by the Court, operative from 27th April, 1953, are £12 1s. 10d. for adult males and £7 17s. 2d. for adult females.

(vi) *State Basic Wage Rates.* The "basic" wage rates of State industrial tribunals operative in May, 1952 and May, 1953 are summarized in the following table:—

STATE BASIC WAGE—WEEKLY RATES.

State.	May, 1952.			May, 1953.		
	Date of Operation.	Males.	Females.	Date of Operation.	Males.	Females.
		s. d.	s. d.		s. d.	s. d.
New South Wales—						
Metropolitan and Country excluding Broken Hill ..	(a)	223 0	167 0	(a)	241 0	180 6
Broken Hill ..	(a)	231 0	173 0	(a)	246 0	184 6
Victoria(b) ..	(a)	212 0	159 0	(a)	232 0	174 0
Queensland—						
Southern Division (Eastern District)—including Brisbane(c) ..	28.4.52	207 0	138 6	4.5.53	218 0	146 0
South Australia ..	(a)	211 0	158 0	(a)	228 0	171 0
Western Australia—						
Metropolitan Area ..	28.4.52	223 10	145 6	27.4.53	241 10	157 2
South-West Land Division ..	28.4.52	222 5	144 7	27.4.53	243 0	157 11
Goldfields and other areas ..	28.4.52	228 10	148 9	27.4.53	247 9	161 0
Tasmania(b) ..	(a)	214 0	160 6	(a)	239 0	179 0

(a) Operative from beginning of first pay-period commencing in month shown. (b) None declared but rates (capital city) shown are those of Commonwealth Court of Conciliation and Arbitration which are followed to a large extent. (c) Allowances added for other areas:—Males—Southern Division (Western District), 7s. 4d.; Mackay Division, 5s. 6d.; Northern Division (Eastern District), 7s.; Northern Division (Western District), 17s. 4d.; Females—half of these allowances.

6. **Royal Commission on the Basic Wage, 1920.**—Only one comprehensive attempt has been made by the Commonwealth authorities to ascertain specifically what the actual requirements were in the various States according to reasonable standards of comfort, including all matters comprised in the ordinary expenditure of a household, in respect of a family consisting of a man, wife and three children under fourteen years of age. This was made by a Royal Commission which in its report, in 1920, made recommendations for the various capital cities which were not carried out owing largely to the marked advance of the amounts suggested over ruling rates and the grave doubts expressed as to the ability of industry to pay such rates. Further details of these recommendations are given in *Labour Report* No. 40 (see page 106).

#### § 4. Child Endowment in Australia.

1. **General.**—The principle of supplementing wages by a payment in respect of dependent children under sixteen years of age became prominent in Australia following the recommendations of the Royal Commission on the Basic Wage of 1920, and was implemented in Australia as described in the following paragraphs. The system has been in force in various forms in England and on the Continent as far back as 1795, the first instance occurring in England in that year.

2. **National Scheme.**—Details of the appointment of another Royal Commission in 1927 and a brief summary of its findings and of consequent Government decisions were given in previous issues of the *Official Year Book* (see No. 39, page 425).

In 1941, the Commonwealth Government introduced a scheme of child endowment throughout Australia. The main features of the scheme and a summary of the operations under the scheme from 1st July, 1947 to 30th June, 1952, are given in Chapter XIV.—Welfare Services.

3. **Earlier Schemes.**—Consequent upon the operation of the Commonwealth Child Endowment Scheme, appropriate steps were taken for the termination of the schemes operating in the Commonwealth Public Service and in New South Wales. The Commonwealth Public Service Scheme was the first system instituted in Australia and came into operation on 1st November, 1920. In New South Wales an abortive attempt to institute the system was made in 1919 and a scheme was adopted under the Family Endowment Act 1927 which operated from 23rd July, 1927. For further details of these schemes reference may be made to *Official Year Book* No. 37, pages 485 and 486.

### E. EMPLOYMENT AND UNEMPLOYMENT.

#### § 1. Employment.

1. **Total Occupied Persons.**—(i) *General.* The following estimates of the total numbers of occupied males and females are based principally on data from the 1933 Census (June), the National Register (July, 1939), the Civilian Register (June, 1943), the Occupation Survey (June, 1945) and the 1947 Census (June). These sources of information have been supplemented by Pay-roll Tax returns, which commenced in July, 1941. Owing to some difference in coverage, 1947 figures in the following tables differ slightly from Census figures as shown in Chapter IX.—Population. The 1947 figures are subject to revision.

(ii) *Australia.* The estimates in the table below are divided into three categories (a) Defence Forces; (b) all persons fully occupied as employers, or as self-employed in businesses or on farms; and (c) wage or salary earners fully employed, or occupied as casual, part-time, intermittent or seasonal workers. Wage earners unemployed, in the sense that they are incapacitated or have no work to go to, are excluded, as also are persons engaged on Government relief works.

All unpaid "helpers" in non-rural industry have been included with wage and salary earners. Male unpaid "helpers" in rural industry have been included with employers and self-employed persons, as it is considered that the majority of these are sons or other close relatives of farmers working in an unofficial partnership, or as learners with the farm owner. Unpaid female "helpers" on farms are very numerous, but their exact number is not known. Generally, they combine part-time dairy or other farm work with part-time duties in the home. Together with women occupied in unpaid home duties they have been excluded from the category of occupied persons.

Statistics of net enlistments in the Defence Forces shown in the table below represent total enlistments for full-time duty less deaths and discharges. Prior to December, 1941, men in certain age-groups were called-up for short training courses but these men are excluded from the figures. In July, 1941, the number of such men was approximately 50,000.

## TOTAL OCCUPIED PERSONS : AUSTRALIA.

('000.)

Year and Month.	De- fence Forces (Net Enlist- ments). (a)	Employers and Self- employed.			Wage and Salary Earners.			Total Occupied Civilians.	Total Occupied Persons, including Forces. (a)
		Rural Indus- try.	Other Indus- tries.	Total.	Rural Indus- try.	Other Indus- tries.	Total.		

## MALES.

1933—June ..	5.8	292.4	248.3	540.7	200.0	992.0	1,192.0	1,732.7	1,738.5
1939—July ..	12.9	300.0	299.0	599.0	202.0	1,293.1	1,495.1	2,094.1	2,107.0
1941—July ..	282.8b	284.0	208.0	492.0	188.0	1,363.4	1,551.4	2,043.4	2,326.2
1943—June ..	685.0	262.0	150.0	412.0	120.9	1,273.2	1,394.1	1,806.1	2,491.1
1945—June(c) ..	603.5	287.5	187.1	474.6	130.2	1,294.2	1,424.4	1,899.0	2,502.5
1947—June ..	53.2	278.9	286.8	565.7	148.2	1,649.4d	1,797.6d	2,363.3d	2,416.5d

## FEMALES.

Year and Month.					(e)			Total Occupied Civilians.	Total Occupied Persons, including Forces. (a)
		Rural Indus- try.	Other Indus- tries.	Total.	Rural Indus- try.	Other Indus- tries.	Total.		
1933—June ..	..	15.1	56.2	71.3	4.4	447.5	451.9	523.2	523.2
1939—July ..	..	16.0	62.0	78.0	4.0	561.6	565.6	643.6	643.6
1941—July ..	1.8	14.0	56.8	70.8	6.0	656.2	662.2	733.0	734.8
1943—June ..	44.0	11.7	34.4	46.1	28.1	682.1	710.2	756.3	800.3
1945—June(e) ..	45.4	17.0	43.1	60.1	23.0	667.1	690.1	750.2	795.6
1947—June ..	0.8	13.8	55.8	69.6	8.1	659.9d	668.0d	737.6d	738.4d

## PERSONS.

1933—June ..	5.8	307.5	304.5	612.0	204.4	1,439.5	1,643.9	2,255.9	2,261.7
1939—July ..	12.9	316.0	361.0	677.0	206.0	1,854.7	2,060.7	2,737.7	2,750.6
1941—July ..	284.6b	298.0	264.8	562.8	194.0	2,019.6	2,213.6	2,776.4	3,061.0
1943—June ..	729.0	273.7	184.4	458.1	149.0	1,955.3	2,104.3	2,562.4	3,291.4
1945—June(c) ..	648.9	304.5	230.2	534.7	153.2	1,961.3	2,114.5	2,649.2	3,298.1
1947—June ..	54.0	292.7	342.6	635.3	156.3	2,309.3d	2,465.6d	3,100.9d	3,154.9d

(a) Includes those serving outside Australia. (b) Excludes approximately 50,000 men called up for short training courses. (c) Occupation Survey, 1st June, 1945. (d) Subject to revision. (e) Includes females, in thousands, in private domestic service as follows:—106.7 in June, 1933; 124.5 in July, 1939; 100.0 in July, 1941; 41.5 in June, 1943; 47.6 in June, 1945; and 40.3 in June, 1947.

From June, 1933 to July, 1939, the number of occupied persons of both sexes increased by 488,900, due to the increase of 223,700 in the number of available breadwinners and to the decrease of 265,200 in the number unemployed from 563,200 to 298,000. During the war years from July, 1939 to June, 1943, the number of males occupied as civilians decreased by 288,000, while females occupied as civilians increased by nearly 113,000, representing a net decrease of 175,000 persons. This decrease, together with decrease of unemployment (272,000), normal increase of breadwinners (91,000) and an abnormal war-time increase of 178,000 bread winners (persons who would not otherwise have been working), balanced the net intake into the Defence Forces at June, 1943 (716,000). The estimate of 659,000 female wage and salary earners employed in non-rural industries as at June, 1947, includes 40,300 private domestics (the Census figure). The remaining 619,600 females in the estimate include females working part-time. The 1947 Census figure for the same industries (i.e., excluding rural and private domestic) was 579,200. Persons working regularly but for considerably less than normal working hours were instructed on the Census Schedule to exclude themselves from the work force, unless their earnings from such work formed their principal means of livelihood.

(iii) *States.* The following table shows total occupied males and females in each State in July, 1939, and June, 1947, divided into Defence Forces, Employers and Self-employed, and Wage and Salary Earners.

**TOTAL OCCUPIED PERSONS : STATES.**  
(\*000.)

State.	Defence Forces (Net Enlistments). (a)		Employers and Self-employed.		Wage and Salary Earners.		Total Occupied Persons, including Forces. (a)	
	July, 1939.	June, 1947.	July, 1939.	June, 1947.	July, 1939.	June, 1947.(b)	July, 1939.	June, 1947.(b)
<b>MALES.</b>								
New South Wales ..	4.9	23.1	216.2	197.5	596.2	723.6	817.3	944.2
Victoria ..	4.4	15.9	162.9	158.1	399.5	480.9	566.8	654.9
Queensland ..	1.0	5.9	95.1	96.9	218.6	255.4	314.7	358.2
South Australia ..	1.1	2.6	54.6	51.8	127.7	154.4	183.4	208.8
Western Australia ..	1.0	3.4	47.4	39.8	99.7	115.6	148.1	158.8
Tasmania ..	0.5	0.8	21.5	20.1	46.9	58.1	68.9	79.0
Australia(c) ..	12.9	53.2	599.0	565.7	1,495.1	1,797.6	2,107.0	2,416.5
<b>FEMALES.</b>								
New South Wales ..	..	0.3	28.4	25.4	220.8	268.8	249.2	294.5
Victoria ..	..	0.4	25.5	22.4	175.3	203.4	200.8	226.2
Queensland ..	..	0.1	11.1	10.2	71.2	83.2	82.3	93.5
South Australia ..	..	..	6.0	5.2	47.4	52.9	53.4	58.1
Western Australia ..	..	..	4.8	4.3	33.2	38.4	38.0	42.7
Tasmania ..	..	..	2.2	1.9	16.3	19.0	18.5	20.9
Australia(c) ..	..	0.8	78.0	69.6	565.6	668.0	643.6	738.4
<b>PERSONS.</b>								
New South Wales ..	4.9	23.4	244.6	222.9	817.0	992.4	1,066.5	1,238.7
Victoria ..	4.4	16.3	188.4	180.5	574.8	684.3	767.6	881.1
Queensland ..	1.0	6.0	106.2	107.1	289.8	338.6	397.0	451.7
South Australia ..	1.1	2.6	60.6	57.0	175.1	207.3	236.8	266.9
Western Australia ..	1.0	3.4	52.2	44.1	132.9	154.0	186.1	201.5
Tasmania ..	0.5	0.8	23.7	22.0	63.2	77.1	87.4	99.9
Australia(c) ..	12.9	54.0	677.0	635.3	2,060.7	2,465.6	2,750.6	3,154.9

(a) Includes those serving outside Australia.

(b) Subject to revision.

(c) Includes Australian Capital Territory and Northern Territory.

Between July, 1939 and June, 1947, the occupied population of Australia (including Defence Forces but excluding unemployed, pensioners, retired persons of independent means and dependants) increased by approximately 14.7 per cent. The proportionate increase in each State was as follows: New South Wales, 16.1; Victoria, 14.8; Queensland, 13.8; South Australia, 12.7; Western Australia, 8.3; Tasmania, 14.3.

2. *Wage and Salary Earners in Civilian Employment.*—(i) *Australia and States.* Estimates are made monthly of wage and salary earners in employment (excluding employees in rural industry and female domestics in private homes), based on Pay-roll Tax returns and supplementary returns of Government employment. Pay-roll Tax returns cover only a small proportion of wage earners on rural holdings, and practically no private domestic servants. It is not possible to obtain actual numbers of farm employees and private domestic servants except when a Census or quasi-Census such as

Occupation Survey (1st June, 1945) is taken, but estimates have been made from time to time using available data. The next table shows for each State and for Australia as a whole the trend in that section of wage and salary earning employment which it is possible to estimate monthly. Figures are shown as at June, 1933 (Census) and July, 1939 (based on National Register). From July, 1941 (commencement of Pay-roll Tax returns) the estimates are available for each month, and the table shows the level in June of the years 1947 and 1948, in May, 1949, and in June, 1950, 1951 and 1952.

### WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT.

(Excluding Rural Wage Earners, Female Domestics in Private Homes, Persons on Paid Strength of Defence Forces and National Service Trainees in Camp.)

('000.)

Year and Month.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia. (a)
MALES.							
1933—June .. .. .	380.6	288.6	139.8	80.5	70.1	29.0	992.0
1939—July .. .. .	529.9	357.5	172.8	106.7	82.9	37.4	1,293.1
1947—June(b) .. .. .	671.8	452.6	220.2	140.9	103.9	51.1	1,649.4
1948—June(b) .. .. .	702.3	473.3	232.6	149.0	109.2	54.5	1,730.9
1949—May(b)(c) .. .. .	721.4	489.3	239.8	155.0	112.8	57.4	1,787.1
1950—June(b) .. .. .	740.8	510.7	250.4	165.7	120.5	58.4	1,858.7
1951—June(b) .. .. .	758.2	525.8	259.3	170.0	125.3	60.2	1,911.5
1952—June(b) .. .. .	754.4	524.4	258.1	171.5	126.0	61.0	1,908.1
FEMALES.							
1933—June .. .. .	125.8	118.2	40.5	26.0	20.6	9.1	340.8
1939—July .. .. .	168.0	142.9	53.2	34.0	26.2	11.6	437.1
1947—June(b) .. .. .	252.1	190.5	74.5	48.0	35.6	16.9	619.6
1948—June(b) .. .. .	261.9	196.7	77.9	50.1	37.0	18.0	644.0
1949—May(b)(c) .. .. .	269.9	202.5	80.1	52.2	37.8	18.8	664.1
1950—June(b) .. .. .	278.5	210.0	83.1	54.3	39.9	19.4	688.2
1951—June(b) .. .. .	290.9	219.6	86.1	57.0	41.6	20.3	718.8
1952—June(b) .. .. .	270.5	206.6	83.8	54.9	40.5	19.8	679.4
PERSONS.							
1933—June .. .. .	506.4	406.8	180.3	106.5	90.7	38.1	1,332.8
1939—July .. .. .	697.9	500.4	226.0	140.7	109.1	49.0	1,730.2
1947—June(b) .. .. .	923.9	643.1	294.7	188.9	139.5	68.0	2,269.0
1948—June(b) .. .. .	964.2	670.0	310.5	199.1	146.2	72.5	2,374.9
1949—May(b)(c) .. .. .	991.3	691.8	319.9	207.2	150.6	76.2	2,451.2
1950—June(b) .. .. .	1,019.3	720.7	333.5	220.0	160.4	77.8	2,546.9
1951—June(b) .. .. .	1,049.1	745.4	345.4	227.0	166.9	80.5	2,630.3
1952—June(b) .. .. .	1,024.9	731.0	341.9	226.4	166.5	80.8	2,587.5

(a) Includes Australian Capital Territory and Northern Territory. (b) Subject to revision. (c) Figures for May, 1949 have been used for purposes of annual comparison because of the effects of the coal dispute in June, 1949.

Estimates for recent months for Australia, corresponding to the foregoing, together with details for certain industrial groups, are published regularly in the *Monthly Review of Business Statistics* and the *Monthly Bulletin of Employment Statistics*.

(ii) *Industrial Groups*. The following table shows the total male and female wage and salary earners in civilian employment (excluding employees in rural industry, female private domestics, persons on the paid strength of the Defence Forces and National Service Trainees in camp) subdivided to show the extent of employment provided by Governmental authorities and by private employers respectively. Some principal industrial groups included in the total are shown separately and include both Governmental and private employees, except in the case of retail trade, where there are no Governmental employees.

### WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT : INDUSTRIAL GROUPS, AUSTRALIA.

(Excluding Rural Wage Earners, Female Domestics in Private Homes, Persons on Paid Strength of Defence Forces and National Service Trainees in Camp.)

('000.)

Industrial Group.	July, 1939.	June, 1948. (a)	May, 1949. (a)(b)	June, 1950. (a)	June, 1951. (a)	June, 1952. (a)
<b>MALES.</b>						
Mining and Quarrying .. .. .	52.2	52.7	52.3	53.9	55.8	58.8
Manufacturing, etc.(c) .. . . .	456.1	680.5	692.6	716.4	733.0	721.4
Building and Construction .. . . .	149.7	167.8	180.9	197.2	212.7	214.0
Rail and Air Transport .. . . .	73.0	96.5	99.1	100.9	100.9	106.9
Other Transport and Communication .. . . .	112.9	173.4	182.6	191.9	193.8	193.0
Retail Trade .. . . .	259.7	123.3	125.6	127.1	129.7	124.8
Other Commerce and Finance .. . . .		161.7	169.9	178.0	188.4	191.2
Health .. . . .	17.8	24.5	24.7	24.8	24.8	25.3
Education .. . . .	22.1	28.6	29.7	30.7	31.9	33.2
Entertainment, Sport and Recreation .. . . .	17.4	17.7	18.4	18.0	18.0	18.1
Personal Services .. . . .	37.0	52.9	54.4	55.9	54.6	53.2
Other .. . . .	95.2	151.3	156.9	163.9	167.9	168.2
Total .. . . .	1,293.1	1,730.9	1,787.1	1,858.7	1,911.5	1,908.1
Governmental (d) .. . . .	349.8	494.4	518.9	553.5	570.4	577.4
Private Employers .. . . .	943.3	1,236.5	1,268.2	1,305.2	1,341.1	1,330.7
Total .. . . .	1,293.1	1,730.9	1,787.1	1,858.7	1,911.5	1,908.1
<b>FEMALES.</b>						
Mining and Quarrying .. . . .	0.3	0.6	0.7	0.7	0.8	0.9
Manufacturing, etc.(c) .. . . .	169.0	213.9	221.9	230.4	241.1	206.3
Building and Construction .. . . .	1.2	2.9	3.1	3.3	3.8	4.2
Rail and Air Transport .. . . .	2.5	7.8	8.0	8.0	8.2	8.6
Other Transport and Communication .. . . .	10.1	27.2	29.0	30.8	31.9	30.9
Retail Trade .. . . .	114.9	109.3	111.1	113.3	119.1	112.6
Other Commerce and Finance .. . . .		56.9	59.8	64.8	71.3	72.9
Health .. . . .	34.0	59.6	62.0	65.0	67.4	68.7
Education .. . . .	32.0	37.1	37.7	39.1	39.7	41.8
Entertainment, Sport and Recreation .. . . .	4.0	8.4	8.8	8.4	8.7	8.6
Personal Services .. . . .	43.0	70.4	71.3	72.8	72.1	68.9
Other .. . . .	26.1	49.9	50.7	51.6	54.7	55.0
Total .. . . .	437.1	644.0	664.1	688.2	718.8	679.4
Governmental (d) .. . . .	55.2	94.9	99.2	107.6	113.8	115.2
Private Employers .. . . .	381.9	549.1	564.9	580.6	605.0	564.2
Total .. . . .	437.1	644.0	664.1	688.2	718.8	679.4
<b>PERSONS.</b>						
Mining and Quarrying .. . . .	52.5	53.3	53.0	54.6	56.6	59.7
Manufacturing, etc.(c) .. . . .	625.1	894.4	914.5	946.8	974.1	927.7
Building and Construction .. . . .	150.9	170.7	184.0	200.5	216.5	218.2
Rail and Air Transport .. . . .	75.5	104.3	107.1	108.9	109.1	115.5
Other Transport and Communication .. . . .	123.0	200.6	211.6	222.7	225.7	223.9
Retail Trade .. . . .	374.6	232.6	236.7	240.4	248.8	237.4
Other Commerce and Finance .. . . .		218.6	229.7	242.8	259.7	264.1
Health .. . . .	51.8	84.1	86.7	89.8	92.2	94.0
Education .. . . .	54.1	65.7	67.4	69.8	71.6	75.0
Entertainment, Sport and Recreation .. . . .	21.4	26.1	27.2	26.4	26.7	26.7
Personal Services .. . . .	80.0	123.3	125.7	128.7	126.7	122.1
Other .. . . .	121.3	201.2	207.6	215.5	222.6	223.2
Total .. . . .	1,730.2	2,374.9	2,451.2	2,546.9	2,630.3	2,587.5
Governmental (d) .. . . .	405.0	580.3	618.1	661.1	684.2	692.6
Private Employers .. . . .	1,325.2	1,794.6	1,833.1	1,885.8	1,946.1	1,894.9
Total .. . . .	1,730.2	2,374.9	2,451.2	2,546.9	2,630.3	2,587.5

(a) Subject to revision. (b) Figures for May, 1949, have been used for purposes of annual comparison because of the effects of the coal dispute in June, 1949. (c) Estimates (subject to revision) based on Pay-roll Tax returns, etc., of employees predominantly engaged in secondary production. The figures include a considerable number of employees outside the scope of the factory employment figures as defined and published in Chapter XXIV.—Manufacturing Industry. (d) Includes employees of Commonwealth, State and Local Government Authorities.

A graph showing wage and salary earners in civilian employment by main industrial groups appears on page 311.

(iii) *Factories.* Actual mid-monthly factory employment derived from the results of annual factory censuses is published in the *Secondary Industries Bulletin* issued by this Bureau.



Additional tables regarding employment in factories may be found in Chapter XXIV. "Manufacturing Industry".

An index of factory employment in Australia, published in the *Monthly Review of Business Statistics*, shows that in 1951-52 factory employment was 70 per cent. higher than the average employment for the three years ended June, 1939.

3. Government Employees.—(i) *Australia, 1939 and 1948 to 1952.* The following table shows at June in each of the years 1948 to 1952, in comparison with 1939, the number of civilian employees of Commonwealth, State, Semi-Governmental and Local Government authorities. These include all employees of Governmental authorities on services such as railways, tramways, banks, post office, air transport, education, broadcasting, police, public works, factories and munitions establishments, migrant hostels, etc., as well as administrative employees, within Australia.

**GOVERNMENT EMPLOYEES(a) : AUSTRALIA.**

June—	Commonwealth.			State and Semi-Governmental.			Local Government.			Total.		
	Males.	Fe-males.	Persons.	Males.	Fe-males.	Persons.	Males.	Fe-males.	Persons.	Males.	Fe-males.	Persons.
1939(b) ..	56,099	11,764	67,863	235,066	40,586	275,652	58,637	2,887	61,524	349,802	55,237	405,039
1948 ..	130,420	38,375	168,795	306,835	52,563	359,398	56,808	3,946	60,754	494,063	94,884	588,947
1949 ..	142,019	40,197	182,216	321,992	55,718	377,710	58,703	4,277	62,980	522,714	100,192	622,906
1950 ..	156,332	44,970	201,302	337,196	58,146	395,342	59,988	4,453	64,441	553,516	107,569	661,085
1951 ..	160,690	48,063	208,753	347,598	61,001	408,599	62,096	4,751	66,847	570,384	113,815	684,199
1952 ..	157,880	45,117	202,997	358,322	64,948	423,270	61,167	5,111	66,278	577,369	115,176	692,545

(a) See explanation above.

(b) July.

(ii) *Commonwealth and States, etc., June 1951 and 1952.* The numbers of employees of Commonwealth Government authorities in Australia as at June, 1951 and 1952, are shown in the following table, together with the numbers of employees of State, Semi-Governmental and Local Government authorities in each State.

**GOVERNMENT EMPLOYEES(a), JUNE, 1951 AND 1952.**

Employed by—	June, 1951.			June, 1952.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
Commonwealth ..	160,690	48,063	208,753	157,880	45,117	202,997
New South Wales ..	151,391	24,078	175,469	159,464	26,088	185,552
Victoria ..	105,290	19,998	125,288	104,145	20,785	124,930
Queensland ..	67,503	6,922	74,425	67,986	7,191	75,177
South Australia ..	36,186	6,772	42,958	38,389	7,437	45,826
Western Australia ..	34,389	5,090	39,479	34,352	5,386	39,738
Tasmania ..	14,935	2,892	17,827	15,153	3,172	18,325
<b>Total ..</b>	<b>570,384</b>	<b>113,815</b>	<b>684,199</b>	<b>577,369</b>	<b>115,176</b>	<b>692,545</b>

(a) See explanation in para. 3 (i) above.

**§ 2. Unemployment.**

1. **Total Persons Unemployed.**—The total number of persons unemployed has been recorded only at the dates of the various censuses. The Census records include all persons who state that they are unemployed, and distinguish between unemployment on account of sickness, accident, scarcity of work, industrial dispute, and all other causes combined.

The following table sets out the number of unemployed at the Censuses of 1911, 1927, 1933 and 1947, the National Register, 1939, and the Occupation Survey, 1945. The percentage which the unemployed bore at each date to all wage and salary earners of the same sex, comprising those estimated to be in employment and those unemployed, is also shown.

UNEMPLOYMENT (ALL CAUSES) : AUSTRALIA.

Year and Month.	Wage and Salary Earners Unemployed.			Proportion of Wage and Salary Earners Unemployed.		
	Males.	Females.	Total.	Males.	Females.	Total.
	'000.	'000.	'000.	%	%	%
1911—April (Census) ..	48.0	8.3	56.3	4.3	2.7	4.0
1921—April ..	139.4	21.5	160.9	10.7	5.7	9.6
1933—June(a) ..	460.2	103.1	563.3	27.9	19.1	25.8
1939—July(b) ..	264.0	34.0	298.0	15.0	5.7	12.6
1945—June(c) ..	39.9	16.2	56.1	2.7	2.3	2.6
1947—June (Census)(d)	66.6	16.9	83.5	3.6	2.5	3.3

(a) The figures shown for 1933 are in excess of those actually recorded at the Census, through an allowance having been made for a number of youths and girls who would normally have been wage and salary earners, but who, on account of the economic depression, having never been employed, were not classed as wage and salary earners. (b) Derived from National Register, 1939. (c) Derived from Occupation Survey, 1945. (d) Persons in the work force who were not at work at the time of the Census.

The estimates and percentages of unemployment given above for periods subsequent to the Census of 1933 should be interpreted in conjunction with the notes below.

The estimates for 1939 were based on the National Register, which covered males aged 18–64 years, and data available from other sources. The proportion of wage earners unemployed in July, 1939, immediately prior to the 1939–45 War, was estimated at approximately 12½ per cent. In July, 1941, it was about 4 per cent. and by June, 1943, under conditions of intensive mobilization of manpower for war purposes, involuntary unemployment was practically nil. Owing to the use on the Occupation Survey (1945) card of the definition “a person normally working for wages but without a job on 1st June”, it appears that the 1945 figures exclude some persons who were temporarily absent from their jobs at the date of the survey.

Of the numbers at the 1947 Census shown above 25.6 per cent. were not at work owing to sickness or accident and 26.6 per cent. stated that they were resting. Of the latter, approximately half said they expected to resume their former jobs.

2. **Unemployment in Reporting Trade Unions.**—(i) *General.* The particulars given in the following tables are based upon information furnished by the secretaries of trade unions. The percentages of unemployment derived from trade union returns are an indication of the trend of unemployment among trade unionists as estimated or recorded by secretaries of trade unions which supply returns. The membership of the reporting unions consists predominantly of males and represents at present about 55 per cent. of the total trade union membership, and between 25 and 30 per cent. of all wage and salary earners. Unemployment returns are not collected from unions whose members are predominantly in permanent employment (Governmental, etc.) or casual employment (wharf labourers, etc.). Very few of the unions pay unemployment benefit, but the majority of the larger organizations have permanent secretaries and organizers who are in touch with the members and with the state of trade within their particular industries. In some cases unemployment registers are kept, and provision is made in the rules for payment of reduced subscriptions by members out of work. Seasonal fluctuations in unemployment have been provided for by collecting returns quarterly since 1st January, 1913. The quarterly figures relate to persons who were out of work for three days or more during a specified week in each quarter: they include persons out of work through sickness but exclude persons out of work through strikes and lock-outs, except those outside the industry who are indirectly affected. The yearly figures quoted represent the average of the four quarters.

(ii) *Summary for Australia, 1939 to 1952.* The following table gives a summary for Australia for the years 1939 and 1948 to 1952 and quarterly for the year 1952. Particulars of unemployment percentages at intervals since 1911 will be found on page 324 :—

**UNEMPLOYMENT IN REPORTING TRADE UNIONS : AUSTRALIA.**

Period.	Unions Reporting.	Number of Members.	Members Unemployed.	
			Number.	Proportion of Membership.
1939 (Average for year)	396	476,918	45,967	9.7
1948	380	761,104	6,533	0.9
1949	377	790,630	(a) 15,342	(a) 2.0
1950	375	827,256	6,659	0.8
1951	374	860,525	5,776	0.7
1952	366	856,126	24,247	2.9
1952 March Quarter	366	862,607	9,078	1.1
June	366	857,126	19,023	2.2
September	366	844,848	33,907	4.0
December	366	859,925	34,920	4.1

(a) Includes all members of reporting unions indirectly affected by the dispute in the coal-mining industry ; those directly affected are, however, excluded.

NOTE.—Similar figures for each of the four quarters of the years since 1912 will be found in the *Labour Report*.

The highest percentage of unemployed (30.0) was recorded in the quarter ended June, 1932.

(iii) *Australia, Industrial Groups, 1951 and 1952.* Below are shown the percentages unemployed in industrial groups. Industries or occupations in which employment is stable, such as railways, and those which are subject to exceptional fluctuations, such as wharf labour, agricultural, pastoral, etc., are not included. Other occupations—domestic, hotel employees, etc.—are included in the "Other and Miscellaneous" group, as their returns are not sufficiently representative. The figures are averages of four quarters for the years stated :—

**UNEMPLOYMENT IN REPORTING TRADE UNIONS IN INDUSTRIAL GROUPS : AUSTRALIA.**

Industrial Group.	Unions Reporting.				Unemployed.			
	Number.		Members.		Number.		Proportion of members.	
	1951.	1952.	1951.	1952.	1951.	1952.	1951.	1952.
<b>Manufacturing—</b>							%	%
I. Wood, Furniture, etc.	16	16	28,486	28,464	98	885	0.3	3.2
II. Engineering, Metal Works, etc.	57	57	234,027	241,674	601	3,922	0.3	1.6
III. Food, Drink, Tobacco, etc.	53	53	51,496	50,544	613	2,261	1.2	4.5
IV. Clothing, Textiles, etc.	17	11	68,938	39,376	393	1,017	0.6	2.6
V. Books, Printing, etc.	10	10	30,514	32,056	48	277	0.2	0.9
VI. Other Manufacturing	60	59	67,438	63,904	1,088	4,964	1.6	7.9
VII. Building	51	51	102,416	109,383	1,003	3,501	1.0	3.2
VIII. Mining, Quarrying, etc.	16	15	24,391	23,838	691	680	2.8	2.9
X. Land Transport other than Railway and Tramway Services	20	20	54,611	57,573	366	2,785	0.7	4.8
IX., XI., XII., XIII., and XIV. Other and Miscellaneous	74	74	198,208	209,314	875	3,955	0.4	1.9
<b>All Groups</b>	<b>374</b>	<b>366</b>	<b>860,525</b>	<b>856,126</b>	<b>5,776</b>	<b>24,247</b>	<b>0.7</b>	<b>2.9</b>

(iv) *States, 1951 and 1952.* In making interstate comparisons of unemployment percentages, allowance must be made for the circumstances that the industries included in the returns from trade unions are not quite identical in the various States, and that for some States the returns are more representative than for others. The State percentages shown below, therefore, should not be read as indicating the relative degree of unemployment amongst unionists in the individual States but as an indication of the trend of unemployment within each State as estimated or recorded by secretaries of those trade unions which supply returns.

#### UNEMPLOYMENT IN REPORTING TRADE UNIONS.

State.	Unions Reporting.				Unemployed.			
	Number.		Members.		Number.		Proportion of members.	
	1951.	1952.	1951.	1952.	1951.	1952.	1951.	1952.
New South Wales	101	99	354,408	352,245	2,714	11,382	0.8	0.8
Victoria	76	75	240,643	236,767	1,410	7,285	0.6	0.6
Queensland	51	50	110,659	114,354	470	2,079	0.4	0.4
South Australia	54	53	80,222	79,130	605	1,949	0.8	0.8
Western Australia	60	58	53,532	53,368	385	796	0.7	0.7
Tasmania	32	31	21,061	20,262	192	756	0.9	0.9
Australia	374	366	860,525	856,126	5,776	24,247	0.7	0.7

(v) *States, 1939, 1948 to 1952.* The following table gives the percentages in each State for 1939 and from 1948 to 1952 :—

#### UNEMPLOYMENT IN REPORTING TRADE UNIONS : PROPORTION UNEMPLOYED. (Per cent.)

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1939 Year	11.0	10.4	5.9	9.3	7.1	8.1	9.7
1948 "	1.0	0.8	0.4	1.1	0.9	0.7	0.9
1949(a) "	3.2	0.7	0.9	2.3	0.9	0.6	2.0
1950 "	1.0	0.7	0.4	0.9	1.1	0.6	0.8
1951 "	0.8	0.6	0.4	0.8	0.7	0.9	0.7
1952 "	3.2	3.1	1.8	2.5	1.5	3.7	2.9
1952 March Quarter	1.2	1.0	1.1	0.9	0.5	1.1	1.1
June "	2.8	1.6	1.8	2.0	1.6	3.4	2.2
Sept. "	4.2	4.9	2.5	3.8	2.4	5.2	4.0
Dec. "	4.8	4.8	1.8	3.2	1.5	5.2	4.1

(a) See note (a) to table on page 307.

3. **Commonwealth Unemployment and Sickness Benefits.**—Details of conditions governing the payment of unemployment and sickness benefits under the Social Services Consolidation Act 1947-1952, and tables showing numbers on benefit and payments made, may be found in Chapter XIV.—Welfare Services.

### § 3. Commonwealth Employment Service.

The Commonwealth Employment Service was established under Section 47 of the Re-establishment and Employment Act 1945, and under the Social Services Legislation Declaratory Act 1947.

The principal function of this Service, as set out in Section 48 of the first-mentioned Act, is to provide services and facilities in relation to employment for the benefit of persons seeking to change employment, or to engage labour, and to provide facilities

to assist in bringing about and maintaining a high and stable level of employment throughout the Commonwealth. The Act also gives the Service a number of specific functions in relation to the re-establishment of ex-servicemen.

The Service also assists in the administration of the Unemployment and Sickness Benefits, provided under the Social Services Consolidation Act 1947-1952, as well as the Re-employment Allowance, provided under the Re-establishment and Employment Act for certain classes of discharged members of the Forces. All persons who wish to claim unemployment benefits or re-employment allowances must register with their residential Employment Office which is responsible for checking their claim and for certifying whether or not suitable employment can be offered to them.

In addition to giving advice on employment problems through a network of District Employment Offices, the Service provides free vocational guidance in each State other than New South Wales by means of a staff of qualified psychologists. (In New South Wales a similar service is provided by officers of the New South Wales Department of Labour and Industry and Social Welfare who act as agents for the Service in this regard.) While vocational guidance is available to any individual, it is provided particularly for juveniles entering employment for the first time, for ex-servicemen and for physically and mentally handicapped persons. Invalid pensioners being considered by the Department of Social Services for training under the provisions of the Social Services Consolidation Act 1947-1952 are examined by the Vocational Guidance Branch before training is provided. During the twelve months ended June, 1952, the Service provided vocational guidance for 9,840 individuals.

Under the scheme operated by the International Refugee Organization for the resettlement of Displaced Persons from Europe following the 1939-45 War, the Commonwealth Employment Service is responsible for placing the workers amongst these people in employment where their services will be of most use in increasing production. Up to 30th June, 1952, a total of 101,913 Displaced Persons had been so placed.

Towards the middle of 1950 the Service assumed a new responsibility, that of placing migrants from Great Britain under the Commonwealth-Nominated Migration Scheme. Following the agreements entered into with the Dutch, West German and Italian Governments for the entry of selected European workers into the country, the Commonwealth Employment Service has undertaken the initial placement of such persons.

Since early in 1951, the Commonwealth Employment Service has been responsible for the registration, medical examination, interview and call-up of young men for training in the Armed Forces under the National Service Acts 1951, which are administered by the Department of Labour and National Service. The Service is also responsible for administering the provisions of the Act relating to the protection of the rights of National Service trainees in relation to their civil employment.

In association with its placement activities, the Commonwealth Employment Service carries out regular surveys of the labour market in all areas and supplies detailed information on the employment situation to Government Departments and instrumentalities and to the public. In order to assist in making effective placements, job analysis studies of Australian occupations are also made.

The Service operates within the Employment Division of the Department of Labour and National Service, and is under the control of the Permanent Head of that Department. It functions on a decentralized basis. The Central Office is in Melbourne, and there is a Head Office in the capital city of each State, with 118 District Employment Offices and Branches in suburban and the larger provincial centres, and with 246 agents in the smaller country centres who are responsible to the various District Employment Offices. The District Offices and Branches are distributed as follows:—New South Wales, 46; Victoria, 29; Queensland, 19; South Australia, 9 (including Darwin); Western Australia, 11; Tasmania, 4.

The Service completed its sixth year of operation in May, 1952, and statistics of the principal items of business transacted during the year ended June, 1952, were as follows:—applicants for employment—new registrations 500,178, referred to employers 381,991, placed in employment 271,125; vacancies—new notifications 387,888, unfilled at end of year 37,930; persons receiving advice or information 567,017.

With the setting up of the Commonwealth Employment Service most of the State Labour Exchange Organizations existing previously were superseded. Details of the organization and administration of these exchanges in the several States were given in *Labour Report* No. 30, page 133.

### § 4. Industrial Disputes.

1. **General.**—Information with regard to the collection of particulars and the methods of tabulation of industrial disputes involving stoppage of work are given in previous issues of the Official Year Book, and also in the annual *Labour Report*.

In annual tabulations particulars are included of all disputes which either commenced or were current during the year under review. As regards "number of disputes", "establishments involved", and "workpeople involved", therefore, duplication will take place in respect of those disputes which started in and were unsettled at the end of a preceding year; the number involved will, however, be indicated in a footnote, to permit of due allowance being made in any calculations made from the tables.

2. **Industrial Disputes involving Stoppage of Work, Classified in Industrial Groups, 1951 and 1952.**—The following table gives for Australia as a whole particulars of industrial disputes which either commenced or were current during 1951 and 1952, classified according to industrial groups. Figures for States and Territories on a comparable basis may be found in the issues of the *Labour Report* for these years.

#### INDUSTRIAL DISPUTES IN INDUSTRIAL GROUPS: AUSTRALIA, 1951 AND 1952.

Class.	Industrial Group.	Number.	Establishments Involved.	Workpeople Involved.			Working Days Lost.	Estimated Loss in Wages (£.)
				Directly.	In-directly. (a)	Total		
1951.(b)								
I.	Wood, Furniture, etc.	1	2	105	..	105	420	800
II.	Engineering, Metal Works, etc.	87	3,297	49,425	3,190	52,615	197,466	480,459
III.	Food, Drink, etc.	19	44	11,808	43	11,851	67,636	151,932
IV.	Clothing, Textiles, etc.	2	2	248	..	248	974	1,758
V.	Books, Printing, etc.	2	4	139	..	139	943	1,929
VI.	Other Manufacturing	31	33	4,109	2,539	6,648	39,734	115,441
VII.	Building	25	38	3,558	109	3,667	23,750	59,961
VIII.	(i) Coal-mining	912	1,745	157,828	14,904	172,732	330,447	863,928
	(ii) Other Mining, Quarries, etc.	4	6	2,170	673	2,843	36,255	189,200
IX.	Railway and Tramway Services	25	36	15,689	4,171	19,860	15,055	34,611
X.	Other Land Transport	13	13	10,003	2,457	12,460	15,101	38,911
XI.	Shipping, Wharf Labour, etc.	204	1,412	124,203	85	124,288	135,281	308,913
XIII.	Domestic, Hotels, etc.	1	1	10	..	10	40	80
XIV.	Miscellaneous	18	43	1,126	..	1,126	3,872	8,105
	<b>Total</b>	<b>1,344</b>	<b>6,676</b>	<b>380,421</b>	<b>28,171</b>	<b>408,592</b>	<b>872,974</b>	<b>2,256,028</b>
1952.(b)								
I.	Wood, Furniture, etc.	2	6	117	..	117	1,026	2,965
II.	Engineering, Metal Works, etc.	112	3,960	129,561	7,368	136,929	458,760	1,282,634
III.	Food, Drink, etc.	24	59	7,147	2,975	10,122	43,314	143,857
V.	Books, Printing, etc.	3	3	829	75	904	5,554	13,079
VI.	Other Manufacturing	23	25	5,903	3,895	9,798	63,515	151,347
VII.	Building	27	46	1,620	242	1,862	20,079	56,034
VIII.	(i) Coal-mining	1,219	1,898	192,248	818	193,066	286,749	932,480
	(ii) Other Mining, Quarries, etc.	7	10	2,888	1,881	4,769	19,743	94,743
IX.	Railway and Tramway Services	21	24	10,601	27	10,628	92,357	260,878
X.	Other Land Transport	8	8	2,248	..	2,248	7,436	18,745
XI.	Shipping, Wharf Labour, etc. (c)	173	1,324	131,882	275	132,157	161,316	472,501
XIII.	Domestic, Hotels, etc.	1	1	40	..	40	80	247
XIV.	Miscellaneous	7	7	3,094	..	3,094	3,575	10,320
	<b>Total (c)</b>	<b>1,627</b>	<b>7,371</b>	<b>488,178</b>	<b>17,556</b>	<b>503,734</b>	<b>1,163,504</b>	<b>3,439,850</b>

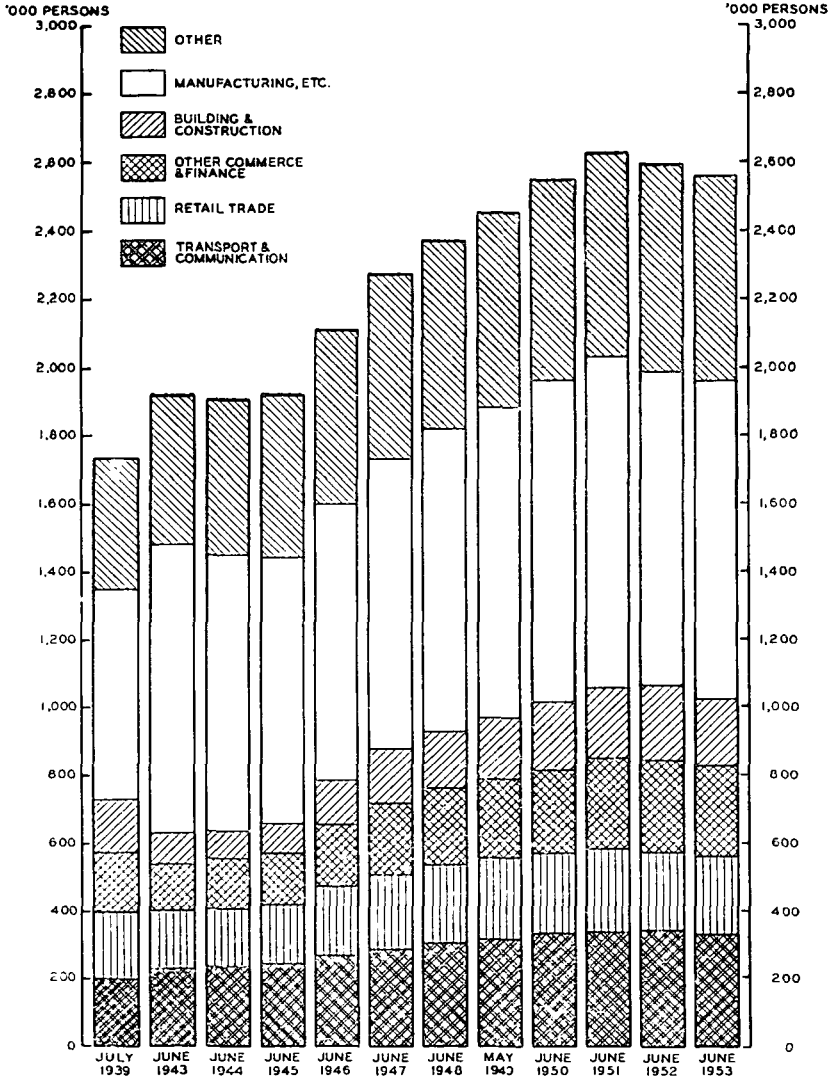
(a) Persons thrown out of work at the establishments where the stoppages occurred but not themselves parties to the dispute. (b) Three disputes in Queensland and one in Tasmania involving respectively five and one establishments and 357 and twenty workpeople commenced in 1950 and were uncompleted in that year. Particulars of these disputes have been included in statistics of disputes for both 1950 and 1951. Particulars of three disputes involving three establishments and 271 workpeople (directly), have been included in the statistics of both 1951 and 1952. These disputes occurred in New South Wales. (c) These figures exclude approximately 85,000 working days lost in all States as a result of the ban on overtime in the stevedoring industry during April, May and June, 1952.

3. **Industrial Disputes, States and Territories, 1939 and 1948 to 1952.**—The following table gives particulars of the number of industrial disputes in each State and Territory,

# WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT: AUSTRALIA 1939 AND 1943 TO 1953

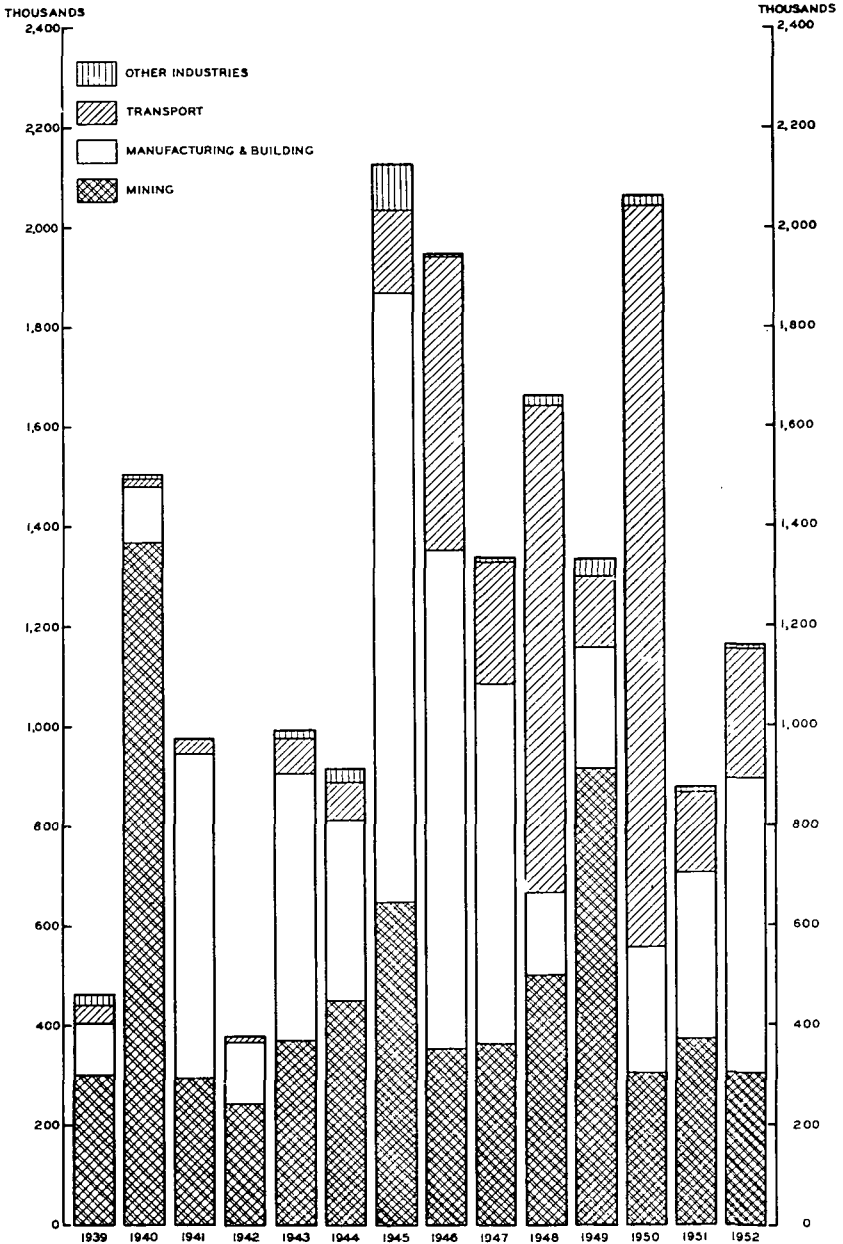
BY MAIN INDUSTRIAL GROUPS

(EXCLUDING RURAL AND PRIVATE DOMESTIC WORKERS)



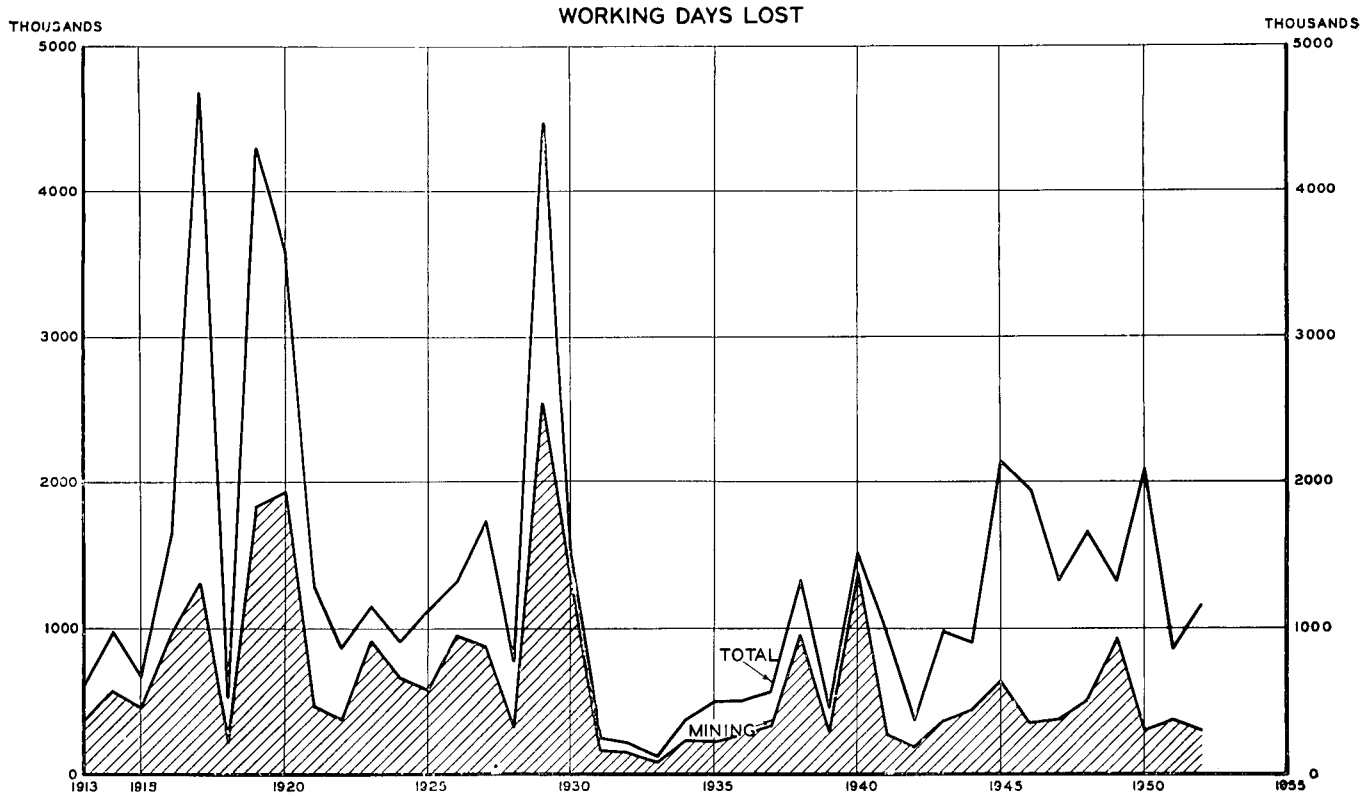
# INDUSTRIAL DISPUTES: AUSTRALIA, 1939 to 1952

## WORKING DAYS LOST - INDUSTRIAL GROUPS





# INDUSTRIAL DISPUTES: AUSTRALIA, 1913 TO 1952





together with the number of workpeople involved, and the losses in working days and wages caused by disputes which either commenced or were current during each of the years 1939 and 1948 to 1952.

## INDUSTRIAL DISPUTES : STATES AND TERRITORIES.

State or Territory.	Year.	Number.	Establishments Involved.	Workpeople Involved.			Working Days Lost.	Estimated Loss in Wages. (£.)
				Directly.	Indirectly. (a)	Total.		
New South Wales ..	1939	386	460	139,301	9,230	148,531	410,183	419,330
	1948	1,071	1,832	235,473	7,036	242,509	644,961	1,155,940
	1949	739	3,428	197,367	3,526	200,893	1,005,285	1,981,769
	1950	1,030	7,365	289,269	22,498	311,767	639,305	1,333,938
	1951	1,052	5,414	279,823	23,738	303,561	682,418	1,803,947
1952b	1,316	4,433	333,990	13,106	347,096	763,860	2,279,619	
Victoria ..	1939	10	10	1,989	180	2,169	27,313	19,946
	1948	21	82	41,734	155	41,889	159,903	240,634
	1949	20	193	22,018	..	22,018	60,112	115,883
	1950	33	1,142	59,161	14,826	73,987	1,208,365	2,395,691
	1951	41	220	27,219	..	27,219	42,210	104,038
1952b	33	1,441	60,753	1,167	61,920	116,339	339,109	
Queensland ..	1939	5	6	373	2	375	1,870	1,753
	1948	12	27	13,734	7,797	21,531	815,107	833,269
	1949	38	234	26,184	87	26,271	183,333	351,985
	1950	147	285	24,157	2,483	26,640	74,007	142,721
	1951	191	751	51,685	4,412	56,097	96,307	218,454
1952b	195	571	39,298	1,624	40,922	76,286	235,914	
South Australia ..	1939	2	2	170	5	175	1,880	1,416
	1948	21	28	5,891	1,136	7,027	30,264	47,138
	1949	18	45	5,845	147	5,992	28,318	51,541
	1950	29	251	13,766	402	14,168	126,538	264,704
	1951	27	188	12,713	21	12,734	34,057	88,286
1952b	32	494	24,408	1,623	26,031	64,738	175,043	
Western Australia ..	1939	7	7	1,108	145	1,253	14,100	9,578
	1948	9	26	2,356	..	2,356	7,836	15,296
	1949	16	33	5,564	97	5,661	26,287	52,421
	1950	15	31	1,952	..	1,952	5,728	11,491
	1951	10	40	4,179	..	4,179	5,101	12,394
1952b	21	271	19,154	2	19,156	127,826	369,658	
Tasmania ..	1939	4	4	53	..	53	166	93
	1948	4	5	468	..	468	950	1,473
	1949	15	48	3,503	..	3,503	29,316	55,319
	1950	19	45	3,089	11	3,100	8,447	16,296
	1951	21	56	4,644	..	4,644	10,401	23,949
1952b	26	157	10,298	34	10,332	14,143	39,640	
Northern Territory	1939	2	16	234	40	274	3,642	3,600
	1948	3	82	1,369	..	1,369	3,665	5,364
	1949	2	2	200	..	200	1,261	2,522
	1950	1	1	43	..	43	430	1,450
	1951	1	1	48	..	48	60	120
1952b	3	3	257	..	257	272	762	
Australian Capital Territory	1939	..	..	..	..	..	..	..
	1948	..	..	..	..	..	..	..
	1949	1	1	39	..	39	78	96
	1950	2	2	44	..	44	68	127
	1951	6	6	110	..	110	2,420	4,840
1952b	1	1	20	..	20	40	105	
Australia ..	1939	416	505	143,228	9,602	152,830	459,154	455,716
	1948	1,141	2,082	301,025	16,124	317,149	1,662,686	2,299,114
	1949	849	3,984	260,720	3,857	264,577	1,333,990	2,611,536
	1950	1,276	9,122	391,481	40,220	431,701	2,062,888	4,166,418
	1951	1,344	6,676	380,421	28,171	408,592	872,974	2,256,028
1952b	1,627	7,371	488,178	17,556	505,734	1,163,504	3,439,850	

(a) Persons thrown out of work at the establishments where the stoppages occurred but not themselves parties to the dispute. (b) See note (c) on page 310.

Detailed information in regard to the disputes during the above-mentioned and previous years is given in the *Labour Report*.

4. Duration of Industrial Disputes, 1952.—The following table gives particulars of industrial disputes during 1952 according to certain adopted limits of duration. A table giving details for 1951 may be found in *Labour Report*, 1951, No. 40, page 134.

## DURATION OF INDUSTRIAL DISPUTES : AUSTRALIA, 1952.

Limits of Duration.	Number.	Workpeople Involved.			Working Days Lost.	Estimated Loss in Wages. (£.)
		Directly.	Indirectly. (a)	Total.		
1 day and less .. .. .	1,064	345,076	4,369	349,445	330,392	966,835
2 days and more than 1 day	242	78,735	1,665	80,400	125,510	393,737
3 " " " 2 days	100	20,289	377	20,666	55,177	168,541
Over 3 days and less than 1 week .. .. .	54	13,124	1,855	14,979	53,470	178,187
1 week and less than 2 weeks	86	16,979	3,455	20,434	124,761	357,836
2 weeks " " 4 weeks	46	6,362	3,844	10,206	123,475	329,810
4 " " " 8 weeks	18	2,290	1,637	3,927	91,805	290,768
8 weeks and over .. .. .	17	5,323	354	5,677	258,914	754,136
Total .. .. .	1,627	488,178	17,556	505,734	1,163,504	3,439,850

(a) Persons thrown out of work at the establishments where the stoppages occurred but not themselves parties to the dispute.

5. Causes of Industrial Disputes.—(i) *General*. In previous issues of the Official Year Book the causes of industrial disputes were classified in some detail for all industries combined. Commencing with this issue a new classification has been introduced and stoppages in industries other than "coal-mining" and "stevedoring" have been analysed separately. This segregation has been made because in these two industries the pattern of the disputes differs significantly from that in other industries.

Under the new classification, causes are grouped under four main headings:—(1) Wages, Hours and Leave; (2) Physical Working Conditions and Questions of Managerial Policy; (3) Trade Unionism; (4) Other Causes. The first group is restricted to disputes involving general principles relating to wages, hours and leave, minor questions regarding the claims to pay or leave by individual employees being included under managerial policy. The second group comprises disputes regarding physical working conditions and general questions of managerial policy, which term covers those arising from disciplinary action, the promotion of employees, the employment of particular individuals, personal disagreements between employees and supervisory staff and disputes arising from the computations of wages, leave, etc., in individual cases. The third group, Trade Unionism, includes only stoppages against employment of non-unionists, inter-union and intra-union disputes, and sympathy stoppages in support of employees in another industry. The last group comprises disputes by way of protest against situations not arising from the usual relationship of employer and employee, e.g., political matters, and cases (mainly occurring in the coal-mining industry) where the cause of the stoppage is not officially made known to the management.

As the items included under these headings differ somewhat from those included under the similar headings used for classifying causes of disputes in years prior to 1950 the figures for the years 1950 to 1952 are not strictly comparable with those for earlier years.

(ii) *Causes of Disputes, Australia*. The following table gives particulars of industrial disputes according to causes for the years 1939 and 1948 to 1952.

## CAUSES OF INDUSTRIAL DISPUTES : AUSTRALIA.

Cause of Dispute.	1939.	1948.	1949.	1950.(a)	1951.(a)	1952.(a)
NUMBER OF DISPUTES.						
Wages, Hours and Leave .. .. .	96	196	187	128	186	161
Physical Working Conditions and Managerial Policy .. .. .	197	541	328	894	803	967
Trade Unionism .. .. .	50	76	84	114	159	204
Other .. .. .	73	328	250	140	196	295
Total .. .. .	416	1,141	849	1,276	1,344	1,627

CAUSES OF INDUSTRIAL DISPUTES : AUSTRALIA—*continued.*

Cause of Dispute.	1939.	1948.	1949.	1950.(a)	1951.(a)	1952.(a)
<b>WORKPEOPLE INVOLVED.</b>						
Wages, Hours and Leave ..	29,290	81,430	67,821	104,075	117,409	201,274
Physical Working Conditions and Managerial Policy ..	56,783	110,945	48,962	173,705	151,655	183,123
Trade Unionism ..	18,651	26,251	14,234	15,651	27,684	51,819
Other ..	48,106	98,523	133,560	138,270	111,844	69,518
<b>Total .. ..</b>	<b>152,830</b>	<b>317,149</b>	<b>264,577</b>	<b>431,701</b>	<b>408,592</b>	<b>505,734</b>
<b>WORKING DAYS LOST.</b>						
Wages, Hours and Leave ..	128,525	1,015,041	1,019,757	1,448,462	338,026	545,017
Physical Working Conditions and Managerial Policy ..	189,510	360,611	118,755	443,493	359,383	444,286
Trade Unionism ..	54,749	144,377	37,154	37,580	67,280	93,133
Other ..	86,370	142,657	158,324	133,353	108,285	81,068
<b>Total .. ..</b>	<b>459,154</b>	<b>1,662,686</b>	<b>1,333,990</b>	<b>2,062,888</b>	<b>872,974</b>	<b>1,163,504</b>

(a) Owing to the use of a new classification, figures for 1950 to 1952 are not strictly comparable with those for earlier years.

The following table shows the causes of industrial disputes during 1951 and 1952 in two broad groups of industries:—(i) Coal-mining and stevedoring, (ii) all other industries. These figures are not available for earlier years.

## CAUSES OF INDUSTRIAL DISPUTES : AUSTRALIA.

Cause of Dispute.	Coal-mining and Stevedoring.		Other Industries.		All Industries.	
	1951.	1952.	1951.	1952.	1951.	1952.
<b>NUMBER OF DISPUTES.</b>						
Wages, Hours and Leave ..	110	90	76	71	186	161
Physical Working Conditions and Managerial Policy ..	668	831	135	136	803	967
Trade Unionism ..	142	174	17	30	159	204
Other ..	189	278	7	17	196	295
<b>Total .. ..</b>	<b>1,109</b>	<b>1,373</b>	<b>235</b>	<b>254</b>	<b>1,344</b>	<b>1,627</b>
<b>WORKPEOPLE INVOLVED.</b>						
Wages, Hours and Leave ..	72,974	72,817	44,435	128,457	117,409	201,274
Physical Working Conditions and Managerial Policy ..	114,301	141,466	37,354	41,657	151,655	183,123
Trade Unionism ..	19,321	45,437	8,163	6,382	27,684	51,819
Other ..	89,896	62,764	21,948	6,754	111,844	69,518
<b>Total .. ..</b>	<b>296,692</b>	<b>322,484</b>	<b>111,900</b>	<b>183,250</b>	<b>408,592</b>	<b>505,734</b>
<b>WORKING DAYS LOST.</b>						
Wages, Hours and Leave ..	159,702	66,111	178,324	478,906	338,026	545,017
Physical Working Conditions and Managerial Policy ..	194,274	242,028	165,109	202,258	359,383	444,286
Trade Unionism ..	26,222	66,556	41,058	26,577	67,280	93,133
Other ..	90,255	68,326	18,030	12,742	108,285	81,068
<b>Total .. ..</b>	<b>470,453</b>	<b>443,021</b>	<b>402,521</b>	<b>720,483</b>	<b>872,974</b>	<b>1,163,504</b>

6. Results of Industrial Disputes.—In previous issues of the Official Year Book, tables were included showing analyses of the results of industrial disputes over a period of years. Under a new method of collection of the basic data, the information on which these analyses were based is no longer available for the majority of disputes and the compilation has therefore been discontinued.

7. Methods of Settlement.—In the following table industrial disputes for the years 1939, 1951 and 1952 have been classified according to method of settlement. As disputes occurring in the coal-mining and stevedoring industries constitute the majority of all disputes, separate tabulations have been made for such disputes for the years 1951 and 1952 and these are shown in the table:—

INDUSTRIAL DISPUTES : METHODS OF SETTLEMENT, AUSTRALIA.(a)

Method of Settlement.	1939.	1951.			1952.		
		Coal-mining and Stevedoring.	Other Industries.	All Industries.	Coal-mining and Stevedoring.	Other Industries.	All Industries.
NUMBER OF DISPUTES.							
By Private Negotiation	294	193	78	271	282	86	368
Under State Industrial Legislation	7	6	42	48	8	41	49
Under Commonwealth Industrial Legislation	6	111	64	175	126	43	169
By Filling Places of Workpeople on Strike or Locked out	1	..	..	..	..	..	..
By Closing Down Establishment permanently	2	1	..	1	..	1	1
By Other Methods	106	798	48	846	957	79	1,036
Total	416	1,109	232	1,341	1,373	250	1,623
WORKPEOPLE INVOLVED.							
By Private Negotiation	82,684	24,707	20,984	45,691	25,196	23,093	48,289
Under State Industrial Legislation	5,354	819	20,967	21,786	1,199	11,186	12,385
Under Commonwealth Industrial Legislation	3,268	35,200	15,242	50,442	34,535	8,415	42,950
By Filling Places of Workpeople on Strike or Locked out	20	..	..	..	..	..	..
By Closing Down Establishment permanently	178	29	..	29	..	353	353
By Other Methods	61,326	235,937	54,436	290,373	261,554	138,630	400,184
Total	152,830	296,692	111,629	408,321	322,484	181,677	504,161
WORKING DAYS LOST.							
By Private Negotiation	298,652	42,628	84,164	126,792	43,420	228,245	271,665
Under State Industrial Legislation	39,013	2,761	131,143	133,904	1,705	97,233	98,938
Under Commonwealth Industrial Legislation	46,450	88,854	112,055	200,909	82,260	111,734	193,994
By Filling Places of Workpeople on Strike or Locked out	20	..	..	..	..	..	..
By Closing Down Establishment permanently	3,892	203	..	203	..	6,001	6,001
By Other Methods	71,127	336,007	54,710	390,717	315,636	269,408	585,044
Total	459,154	470,453	382,072	852,525	443,021	712,621	1,155,642

(a) As there are usually unfinalized disputes at the end of each year, totals in the above table will not necessarily agree with those shown in preceding tables.

Prior to 1947 the majority of disputes were settled by private negotiation, the proportion so settled since 1913 ranging between 59 per cent. in 1942 and 81 per cent. in 1937. In 1947 and subsequent years, however, the majority of disputes have been settled by "other methods". The percentage settled by private negotiation was 20 in 1951 and 22 in 1952. The proportion of dislocations settled under State or Commonwealth industrial legislation has varied considerably during the period under review, ranging between 3 per cent. in 1915 and 22 per cent. in 1913. The proportion was 17 per cent. in 1951 and 13 per cent. in 1952. In connexion with the comparatively large number of disputes which are classified as having been settled by "other methods", many stoppages of work occur each year, principally at collieries, the cause of which is not officially known to the employers or their representatives. Such stoppages usually last for one day, and work is resumed without negotiations for a settlement of the trouble. In 1951 the percentage of disputes settled by "other methods" rose to 63 while the percentage in 1952 was 65.

## F. LABOUR ORGANIZATIONS.

### § 1. Labour Organizations in Australia.

1. **Registration.**—(i) *Under Trade Union Acts.* In previous issues of the Official Year Book (see No. 39, page 448) reference was made to the registration of trade unions under the Trade Union Acts. In general the available information under this heading is regarded as inadequate for statistical purposes.

(ii) *Under State Industrial Legislation.* Information with regard to registrations of employers' associations and trade unions under the various State Industrial Arbitration Acts will be found in previous issues of the Official Year Book (see No. 39, page 448).

(iii) *Under the (Commonwealth) Conciliation and Arbitration Act.* Under Part VI. of the Conciliation and Arbitration Act any employer or association of employers in any industry who has employed not less than 100 employees during the six months preceding application for registration, or any association of not less than 100 employees in any industry may be registered.\* Registered unions include both interstate associations and associations operating within one State only. Registration under Commonwealth legislation began in 1906. In that and the four years following, there was but one union of employers; another was registered in 1911. The unions of employees registered in 1906 were 20, with 41,413 members. At the end of 1952 the number of employers' organizations registered under the provisions of the Commonwealth Conciliation and Arbitration Act was 53. The number of unions of employees registered at the end of 1952 was 151, with a membership of approximately 1,344,950 representing 82 per cent. of the total membership of all trade unions in Australia.

2. **Particulars regarding Trade Unions.**—(i) *Types.* The trade unions in Australia are very diverse in character, and range from the small independent association to the large interstate organization, which, in its turn, may be a branch of an international body. Broadly speaking, there are four distinct classes of labour organizations:—(i) the local independent; (ii) the State; (iii) the interstate; and (iv) the Australasian or international; but a number of variations occur from each of these classes. The schemes of organization of interstate or federated unions vary greatly in character. In some unions the State organizations are bound together under a system of unification with centralized control, while in others the State units are practically independent and self-governing, the federal bond being loose and existing only for one or two specified purposes. The leading characteristics of each of these types were briefly outlined in *Labour Report* No. 2 (pp. 7-9) issued by this Bureau.

\* Under the Arbitration (Public Service) Act an association of less than 100 employees may be registered as an organization, provided that its members comprise at least three-fifths of all persons engaged in that industry in the Service. Such organizations are included in the figures shown below.

(ii) *Number and Membership.* As already stated, the figures for trade unions registered under the Acts do not represent the position of unionism in Australia. In 1912 the Labour and Industrial Branch of the Commonwealth Bureau of Census and Statistics was established and with the cordial co-operation of the officials of the labour organizations comprehensive figures relating to the development of organized labour are now available. The following table shows the position at the end of 1939, 1951 and 1952 :—

**TRADE UNIONS : NUMBER AND MEMBERSHIP.**

State or Territory.	Number of Separate Unions.			Number of Members.			Percentage Increase in Membership.(a)		
	1939.	1951.	1952.	1939.	1951.	1952.	1939.	1951.	1952.
New South Wales	200	225	223	358,391	678,338	649,163	3.4	5.6	- 4.3
Victoria ..	149	156	159	216,803	433,407	416,349	0.8	6.7	- 3.9
Queensland ..	114	128	129	180,653	277,037	274,908	6.5	5.5	- 0.8
South Australia ..	117	137	139	67,282	140,067	137,495	8.7	1.9	- 1.8
Western Australia	141	152	151	67,833	105,507	105,462	0.1	1.9	- 0.0
Tasmania ..	79	101	98	22,062	47,413	46,948	4.8	5.3	- 1.0
Northern Territory	4	17	15	761	2,764	2,340	5.6	13.4	-15.3
Australian Capital Territory ..	15	29	31	1,685	5,738	4,877	9.6	0.2	-15.0
Australia ..	(b) 380	(b) 359	(b) 360	915,470	1,690,271	1,637,542	3.4	5.3	- 3.1

(a) On preceding year. (b) Without interstate duplication. See letterpress below.

NOTE.—Minus sign (—) denotes decrease.

In the table just given, under the heading "Number of Separate Unions", a union with members in a State is counted as one union within that State. The figures by States do not add to the Australian total (shown in the last line) because a union represented in more than one State is included in the figure for each State in which it is represented, but is counted only once in the Australian total.

Because of the difficulties involved, the collection of statistics relating to the "Number of Branches" of Trade Unions appearing in issues of the Official Year Book prior to No. 39 has now been discontinued.

(iii) *Classification in Industrial Groups.* The following table shows the number of unions and members thereof in Australia at the end of each of the years 1939, 1951 and 1952. Compared with 1939, membership in 1952 had increased by 79 per cent.

**TRADE UNIONS : INDUSTRIAL GROUPS, AUSTRALIA.**

Industrial Group.	1939.		1951.		1952.	
	No. of Unions.(a)	No. of Members.	No. of Unions.(a)	No. of Members.	No. of Unions.(a)	No. of Members.
<b>Manufacturing—</b>						
I. Wood, Furniture, etc. ..	4	27,990	6	42,180	6	42,439
II. Engineering, Metal Works, etc. ..	22	99,731	15	242,800	15	245,831
III. Food, Drink, Tobacco, etc. ..	35	80,328	35	104,605	35	93,847
IV. Clothing, Textiles, etc. ..	12	68,847	6	131,873	6	100,056
V. Books, Printing, etc. ..	8	22,303	6	35,211	6	34,494
VI. Other Manufacturing ..	37	52,074	37	80,581	37	75,019
VII. Building ..	28	45,651	26	134,198	26	115,837
VIII. Mining, Quarrying, etc. ..	13	48,812	12	48,646	12	49,991
IX. Railway and Tramway Services	29	105,938	25	139,405	25	144,710
X. Other Land Transport ..	6	19,488	9	58,918	9	60,111
XI. Shipping, etc. ..	21	28,760	13	45,972	13	42,703
XII. Pastoral, Agricultural, etc. ..	5	40,276	4	59,911	3	59,055
XIII. Domestic, Hotels, etc. ..	18	13,177	14	34,485	14	37,749
XIV. Miscellaneous—						
(i) Banking, Insurance and Clerical ..	20	39,013	17	104,162	17	104,486
(ii) Public Service ..	50	89,848	58	183,541	60	187,255
(iii) Retail and Wholesale ..	8	36,290	12	60,847	12	58,917
(iv) Municipal, Sewerage and Labouring ..	11	46,552	12	75,926	12	72,858
(v) Other Miscellaneous ..	53	50,392	52	107,010	52	111,584
<b>Total ..</b>	<b>380</b>	<b>915,470</b>	<b>359</b>	<b>1,690,271</b>	<b>360</b>	<b>1,637,542</b>

(a) Without interstate duplication. See letterpress above.



(iv) *Trade Unions : Numbers of Male and Female Members and Ratio to Wage and Salary Earners, Australia.* The following table shows the estimated percentages of wage and salary earners in employment who are members of trade unions. As current estimates of wage and salary earners in employment do not include employees engaged in rural industry or females in private domestic service the percentages have been calculated on figures obtained by adding to the end of year estimates (see page 303 above) the number of employees in rural industry and females in private domestic service recorded at the Census of June, 1947. For this reason, and also because the membership of trade unions includes some persons not in employment, the percentages shown in the table must be regarded as approximations.

**TRADE UNIONS : NUMBER OF MALE AND FEMALE MEMBERS AND RATIO TO TOTAL WAGE AND SALARY EARNERS(a), AUSTRALIA.**

Particulars.	1939.	1948.	1949.	1950.	1951.	1952.
<b>MALES.</b>						
Number of Members of Unions ..	778,336	1,172,676	1,226,818	1,301,868	1,368,694	1,354,248
Estimated ratio of Members to Number of Wage and Salary Earners in Employment .. .. %	52	62	63	65	66	67
<b>FEMALES.</b>						
Number of Members of Unions ..	137,134	283,132	294,096	303,476	321,577	283,294
Estimated ratio of Members to Number of Wage and Salary Earners in Employment .. .. %	24	40	41	40	42	40
<b>PERSONS.</b>						
Number of Members of Unions ..	915,470	1,455,808	1,520,914	1,605,344	1,690,271	1,637,542
Estimated ratio of Members to Number of Wage and Salary Earners in Employment .. .. %	44	56	57	58	60	60

(a) Includes allowance for unemployed.

(v) *Interstate or Federated Trade Unions.* The following table gives particulars of the number and membership of interstate or federated unions in 1952 :-

**INTERSTATE OR FEDERATED TRADE UNIONS : AUSTRALIA(a), 1952.**

Particulars.	Unions Operating in—					Total.
	2 States.	3 States.	4 States.	5 States.	6 States.	
Number of Unions ..	14	14	17	38	59	142
„ „ Members ..	34,878	46,061	121,121	420,240	827,331	1,449,631

(a) Certain unions in this group have, in addition to branches in the States, branches in the Northern Territory and in the Australian Capital Territory.

The number of organizations operating in two or more States increased from 72 in 1912 to 142 in 1952, and the ratio of the membership of such organizations to the total membership of all organizations rose from 65 to 89 per cent. during the same period.

3. **Central Labour Organizations.**—In each of the capital cities and in a number of industrial centres elsewhere, delegate organizations, consisting of representatives from a group of trade unions, have been established. Their revenue is raised by means of a per capita tax on the members of each affiliated union. In most of the towns where such central organizations exist, the majority of the local unions are affiliated with the central organization, which is usually known as the Labour or the Trades Hall Council, or the Labour Federation. In Western Australia a unified system of organization extends over the industrial centres throughout the State. In this State there is a provincial branch of the Australian Labour Party, having a central council and executive, and metropolitan and branch district councils, to which the local bodies are affiliated. The central council, on which all district councils are represented, meets periodically. In the other five States, however, the organization is not so close, and, while provision usually exists in the rules of the central council at the capital city of each State for the organization of district councils or for the representation of the central council on the local councils in the smaller industrial centres of the State, the councils in each State are, as a matter of fact, independent bodies.

The table below shows the number of metropolitan and district or local labour councils, together with the number of unions and branches of unions affiliated therewith in each State at the end of the year 1952 :—

**CENTRAL LABOUR ORGANIZATIONS : NUMBER, AND UNIONS AND BRANCH UNIONS AFFILIATED, 1952.**

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Total.
Number of Councils . .	11	9	12	6	10	5	1	1	55
Number of Unions and Branch Unions affiliated . . . . .	272	283	141	130	395	104	3	19	1,347

The figures given in the preceding table concerning the number of unions do not necessarily represent separate unions, since the branches of a large union may be affiliated with the local trades councils in the several towns in which they are represented.

A Central Labour Organization, called the Australasian Council of Trade Unions, came into being during 1927. The Council was created to function on behalf of the Trade Unions of Australia, and was founded at an All-Australian Trade Union Congress held in Melbourne in May, 1927. The Australasian Council is based on the Metropolitan Trades and Labour Councils in each State, such bodies having the right to appoint two representatives to act on the Executive of the Council. The Metropolitan Trades and Labour Councils are the branches of the Australasian Council. In addition to the representatives

from the Metropolitan Councils, the Executive consists of four officers—the President, two Vice-Presidents, and a Secretary, who are elected by and from the All-Australian Trade Union Congress.

The objective of the Council is the socialization of industry, i.e., production, distribution and exchange. The methods to be adopted are:—(a) The closer organization of the workers by the transformation of the Australasian Trade Union Movement from the craft to an industrial basis by the establishment of one Union in each industry; (b) the consolidation of the Australasian Labour Movement with the object of unified control, administration and action; (c) the centralized control of industrial disputes; and (d) educational propaganda among unions. The Australasian Council of Trade Unions is the first interstate body in Australia with authority to deal with industrial matters of an interstate character affecting the Trade Union movement generally. It is also the body responsible for submitting to the Commonwealth Government the names of persons suitable for selection as the Australian workers' delegate to the Annual International Labour Conference.

Between the trade union and the central organization of unions may be classed certain State or district councils organized on trade lines, and composed of delegates from separate unions whose members' interests are closely connected because of their occupations. Delegate councils of bakers, bread carters and mill employees, or of unions connected directly or indirectly with the iron, steel, or brass trades, or with the building trades, may be so classed.

## § 2. International Labour Organization.

The International Labour Organization originated in the Peace Treaty of 1919 which made provision for the holding of International Labour Conferences and the institution of the International Labour Office. In the inter-war period, the International Labour Organization was an autonomous associate of the League of Nations, and in 1946 became the first of the specialized agencies of the United Nations. Under the terms of agreement, the United Nations recognizes the International Labour Organization as a specialized agency having responsibility in the field defined by its Constitution which embraces labour conditions, industrial relations, employment organization, social security, and other aspects of social policy. The Organization has three basic parts. These are the International Labour Conference, its highest authority, which, as a rule, meets annually; the Governing Body, its executive council which usually meets four times a year; and the International Labour Office which provides the secretariat of the Organization. The Conference is composed of national delegations comprising two government delegates and one delegate each of employers and workers, together with their advisers. The Governing Body comprises the representatives of sixteen governments, eight worker members and eight employer members. Particulars are given in the *Labour Report* of the proceedings at International Labour Conferences up to the 35th Session, which opened in Geneva on 4th June, 1952.

### G. COMPARATIVE INDEX-NUMBERS.

In order to show the relative movements of certain price and related data, the following table of annual and quarterly index-numbers for the six capital cities combined has been compiled with a common base 1911 = 1,000.

## COMPARATIVE INDEX-NUMBERS FOR THE SIX CAPITAL CITIES COMBINED.

(Base of each Group : Weighted Average of Six Capital Cities 1911 = 1,000 (a).)

Period.	Retail Price Index-numbers.						Nominal Wages, Adult Males.	Real Wages. (c)	Proportion of Trade Unionists Unemployed.
	Food and Groceries.	Housing (4 and 5 Rooms). (b)	Food, Housing (4 and 5 Rooms) ("B" Series).	Clothing.	Miscellaneous.	Total "C" Series Index.			
Year—									%
1911 ..	1,000	1,000	1,000	(d)1,000	(d)1,000	(d)1,000	1,000	1,000	4.7
1914 ..	1,144	1,082	1,121	1,140	1,140	1,140	1,081	948	8.3
1921 ..	1,902	1,410	1,717	1,883	1,537	1,680	1,826	1,087	11.2
1928 ..	1,761	1,743	1,755	1,507	1,537	1,675	1,963	1,172	10.8
1932 ..	1,425	1,336	1,390	1,215	1,458	1,377	1,639	1,190	29.0
1938 ..	1,584	1,540	1,568	1,253	1,463	1,488	1,799	1,209	8.7
1939 ..	1,657	1,577	1,626	1,271	1,465	1,526	1,846	1,210	9.7
1945 ..	1,849	1,595	1,746	2,155	1,767	1,868	2,339	1,252	1.2
1946 ..	1,852	1,596	1,748	2,276	1,776	1,900	2,400	1,263	1.4
1947 ..	1,967	1,597	1,816	2,367	1,825	1,971	2,598	1,318	1.2
1948 ..	2,245	1,601	1,982	2,637	1,913	2,148	2,914	1,357	0.9
1949 ..	2,492	1,605	2,128	3,019	2,037	2,349	3,210	1,367	(e) 2.0
1950 ..	2,800	1,613	2,313	3,455	2,184	2,589	3,596	1,389	0.8
1951 ..	3,649	1,649	2,827	4,156	2,555	3,124	4,495	1,439	0.7
1952 ..	4,516	1,728	3,370	4,657	2,980	3,645	5,241	1,438	2.9
Quarter—									
1952.									
March ..	4,298	1,672	3,219	4,523	2,783	3,481	5,036	1,447	1.1
June ..	4,589	1,702	3,402	4,685	2,967	3,661	5,156	1,408	2.2
September ..	4,633	1,750	3,448	4,709	3,072	3,714	5,345	1,439	4.0
December ..	4,544	1,789	3,411	4,712	3,098	3,722	5,428	1,458	4.1

(a) The index-numbers given in the separate columns of the table cannot be compared with each other in order to show, for example, the relative cost of housing and food and groceries, since the cost in 1911 in each group or combination of groups is made equal to 1,000. (b) See footnote (b) on page 265.

(c) Index of nominal weekly wage rates for adult males divided by "C" Series Retail Prices Index-number.

(d) Taken back from true base (November, 1914 = 1,000) by means of the "A" Series Index (Food and Rent of all Houses).

(e) Includes all members of reporting unions indirectly affected by the industrial disturbance in the coal-mining industry; those directly affected are, however, excluded.

## CHAPTER IX. POPULATION.

### § 1. Population Statistics.

Population statistics relating to Australia or to the component States and Territories as at specific dates are of two types—

- (i) *Those ascertained by census enumeration.* These results attain a very high degree of accuracy and may generally be accepted without reservation.
- (ii) *Estimates derived by the application of vital and migration statistics to census data.* In general, three estimates are made for any specific date :
  - (a) Original estimates for dates subsequent to a census made before another census is taken.
  - (b) Two-stage revision of the original estimates for each newly completed intercensal period to adjust for the difference between the new census result and the comparable estimate. This is to bring intercensal estimates into line with the two census populations. The first revision is reconciled with preliminary census results and the second revision with final census results.

Final revised figures become the permanent population estimates. For purposes requiring a mean population for any twelve-monthly period such mean is calculated as described in § 4. As populations at specific dates are used in these calculations consequential revisions are made in mean populations when the estimates for specific dates are revised as described above.

In accordance with this policy all population statistics shown in this Year Book for dates up to 30th June, 1947, and all mean populations for calendar years up to 1946 and financial years up to 1946-47 are final. Population statistics for dates or years subsequent to these are subject to revision when another census is taken.

Since the establishment of the Commonwealth Bureau of Census and Statistics the populations of the States and Territories have been estimated in a comparable manner and attention has been given to the improvement of the basic demographic data from which the estimates are compiled. The principal source of error in early estimates lay in the migration records, both oversea and interstate, and efforts were directed towards their improvement. The 1911 Census disclosed an error in the precensal estimates equivalent to a proportion of 14.5 per cent. and 10.0 per cent., respectively, of recorded male and female oversea departures from Australia. These proportions were used as adjusting factors to recorded oversea departures during the intercensal period 1911-21. These adjusting factors were reduced after the 1921 Census to 1 per cent. for males and 4.5 per cent. for females and were discontinued altogether after the 1933 Census. From the results of the 1947 Census it would again appear that the accuracy of the records of oversea migration is such that in future little adjustment to recorded figures will be necessary for Australia as a whole.

It is improbable that the same degree of accuracy as has been attained in the record of oversea migration can be reached in the case of interstate movements. Records are made of interstate passengers by sea, rail and air, but it is impracticable, with occasional important exceptions, to record the movements by road.

### § 2. The Census.

1. *Census-taking.*—Although "musters" of the population were carried out at least annually from 1788 to 1825, the first regular Census in Australia was not taken until 1828 when a count of the population of the Colony of New South Wales was made. Subsequent Censuses were taken sporadically in the various colonies until 1881, when a Census was taken on the same date throughout Australia.

In 1891 and 1901 Census-taking was still in the hands of the Government Statisticians of the States, but, in 1911, under the provisions of the Commonwealth Census and Statistics Act, which provides for the enumeration to be made from one centre instead of by each State as formerly, the Commonwealth Statistician undertook the first Census

for the Commonwealth of Australia. The second was taken in 1921 and the third should have been taken in 1931, but, because of restrictions on Governmental expenditure at that time, was deferred until 30th June, 1933.

Owing to the 1939-45 War, the fourth Commonwealth Census, due to be taken in 1941, was deferred until June, 1947, the Census for the whole of Australia being taken as on the night between 29th and 30th June, 1947. The next Commonwealth Census will be taken in 1954.

2. Population recorded at Censuses.—State and Territorial totals recorded at the Censuses taken over the period 1828 to 1947 are shown in the following table. The figures relate to the political boundaries of the several States (or Colonies) as they existed at the date of each Census except that Northern Territory has been shown separately from South Australia for three censuses prior to its transfer from that State. The years of formation of the separate Colonies and transfer of the Territories are shown in Chapter I, § 3. and § 4.

## POPULATION : AUSTRALIAN CENSUSES, 1828 TO 1947.

Census Year.	Population Enumerated (Excluding Full-blood Aborigines).								Australia.
	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Nor. Terr.	Aust. Cap. Terr.	
1828..	(Nov.) 36,598	..	..	..	..	..	..	..	..
1833..	(2nd Sept.) 60,794	..	..	..	..	..	..	..	..
1836..	(2nd Mar.) 77,096	..	..	..	..	..	..	..	..
1841..	128,669	..	..	..	..	(27th Sept.) 50,216	..	..	..
1844..	..	..	..	(26th Feb.) 17,366	..	..	..	..	..
1846..	(2nd Mar.) 189,609	..	..	(26th Feb.) 22,390	..	..	..	..	..
1847..	..	..	..	..	..	(31st Dec.) 70,164	..	..	..
1848..	..	..	..	..	(10th Oct.) 4,622	..	..	..	..
1851..	(1st Mar.) 268,344	..	..	(1st Jan.) 63,700	..	(1st Mar.) 70,130	..	..	..
1854..	..	(26th April) (a)234,928	..	..	(30th Sept.) 11,743	..	..	..	..
1855..	..	..	..	(31st Mar.) 85,821	..	..	..	..	..
1856..	(1st Mar.) 269,722	..	..	..	..	..	..	..	..
1857..	..	(29th Mar.) 408,998	..	..	..	(31st Mar.) 81,492	..	..	..
1859..	..	..	..	..	(31st Dec.) 14,837	..	..	..	..
1861..	(7th April) 350,860	(7th April) 538,628	(7th April) (a) 30,059	(7th April) 126,830	..	(7th April) 89,977	..	..	..
1864..	..	..	61,467	..	..	..	..	..	..
1866..	..	..	..	(26th Mar.) 163,452	..	..	..	..	..
1868..	..	..	99,901	..	..	..	..	..	..
1870..	..	..	..	..	(31st Mar.) 24,785	(7th Feb.) 99,328	..	..	..
1871..	(2nd April) 502,998	(2nd April) 730,198	(1st Sept.) 120,102	(2nd April) 185,626	..	..	..	..	..
1876..	..	..	(1st May) 173,283	(26th Mar.) 213,271	..	..	..	..	..
1881(b)	749,825	861,566	213,525	276,474	29,708	115,705	(c)3,451	..	2,250,194
1886..	..	..	(1st May) 322,853	..	..	..	..	..	..
1891(d)	1,127,137	1,140,088	393,718	315,533	49,782	146,667	4,898	..	3,177,823
1901(e)	1,354,846	1,201,070	498,129	358,346	184,124	172,475	4,811	..	3,773,801
1911(b)	1,646,734	1,315,551	605,813	408,558	282,114	191,211	3,310	(a)1,714	4,455,005
1921(f)	2,100,371	1,531,280	753,972	495,160	332,732	213,780	3,867	..	5,435,734
1933(g)	2,600,847	1,820,261	947,534	580,949	438,852	227,599	4,850	8,947	6,629,839
1947(g)	2,984,838	2,054,701	1,106,415	646,073	502,480	257,078	10,868	16,905	7,579,358

(a) Previously included with New South Wales. (b) 3rd April. (c) Previously included with South Australia. Actually Northern Territory was not transferred to the Commonwealth until 1st January, 1911. (d) 5th April. (e) 31st March. (f) 4th April. (g) 30th June.

For the last two Censuses the population of each sex in each State and Territory was as follows :—

**POPULATION OF STATES AND TERRITORIES : 1933 AND 1947 CENSUSES.**

(EXCLUDING FULL-BLOOD ABORIGINALS.)

State or Territory.	30th June, 1933.			30th June, 1947.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
New South Wales ..	1,318,471	1,282,376	2,600,847	1,492,211	1,492,627	2,984,838
Victoria ..	903,244	917,017	1,820,261	1,013,867	1,040,834	2,054,701
Queensland ..	497,217	459,317	947,534	567,471	538,944	1,106,415
South Australia ..	290,962	289,987	580,949	320,031	326,042	646,073
Western Australia ..	233,937	204,915	438,852	258,076	244,404	502,480
Tasmania ..	115,097	112,502	227,599	129,244	127,834	257,078
Northern Territory ..	3,378	1,472	4,850	7,378	3,490	10,868
Australian Capital Territory ..	4,805	4,142	8,947	9,092	7,813	16,905
<b>Australia ..</b>	<b>3,367,111</b>	<b>3,262,728</b>	<b>6,629,839</b>	<b>3,797,370</b>	<b>3,781,988</b>	<b>7,579,358</b>

The results of the 1947 Census of the Australian External Territories will be found in § 12 of this chapter.

The population of each sex enumerated in Australia as a whole at each Census since 1881 was as follows :—

**POPULATION OF AUSTRALIA AT EACH CENSUS, 1881 TO 1947.**

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Date.	Males.	Females.	Persons.
3rd April, 1881 ..	1,214,913	1,035,281	2,250,194
5th April, 1891 ..	1,705,835	1,471,988	3,177,823
31st March, 1901 ..	1,977,928	1,795,873	3,773,801
3rd April, 1911 ..	2,313,035	2,141,970	4,455,005
4th April, 1921 ..	2,762,870	2,672,864	5,435,734
30th June, 1933 ..	3,367,111	3,262,728	6,629,839
30th June, 1947 ..	3,797,370	3,781,988	7,579,358

3. Increase since 1881 Census.—The increases in the populations of the several States and Territories and of Australia as a whole during the last six intercensal periods were as shown in the following table, which distinguishes the numerical increases, the proportional increases (which do not allow for the differences in the length of the intercensal periods) and the average annual rates of increase.

## POPULATION : INTERCENSAL INCREASES.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

State or Territory.	1881-1891 (10 years).	1891-1901 (10 years).	1901-1911 (10 years).	1911-1921 (10 years).	1921-1933 (12½ years).	1933-1947 (14 years).
NUMERICAL INCREASE.						
New South Wales ..	(a)377,312	(a)227,709	(a)293,602	453,637	500,476	383,991
Victoria ..	278,522	60,982	114,481	215,729	288,981	234,440
Queensland ..	180,193	104,411	107,684	150,159	191,562	158,881
South Australia ..	39,119	42,813	50,212	86,602	85,789	65,124
Western Australia ..	20,074	134,342	97,990	50,618	106,120	63,628
Tasmania ..	30,962	25,808	18,736	22,569	13,819	29,479
Northern Territory ..	1,447	-87	-1,501	557	983	6,018
Aust. Cap. Territory ..	(b)	(b)	(b)	858	6,375	7,958
Australia ..	927,629	595,978	681,204	980,729	1,194,105	949,519

## PROPORTIONAL INCREASE—PER CENT.

New South Wales ..	50.32	20.20	21.67	27.55	23.83	14.76
Victoria ..	32.33	5.35	9.53	16.40	18.87	12.88
Queensland ..	84.39	26.52	21.62	24.79	25.34	16.77
South Australia ..	14.15	13.57	14.01	21.20	17.33	11.21
Western Australia ..	67.57	269.86	53.22	17.94	31.89	14.50
Tasmania ..	26.76	17.60	10.86	11.80	6.46	12.95
Northern Territory ..	41.93	-1.78	-31.20	16.83	25.42	124.08
Aust. Cap. Territory ..	(b)	(b)	(b)	50.06	247.86	88.95
Australia ..	41.22	18.75	18.05	22.01	21.97	14.32

## AVERAGE ANNUAL RATE OF INCREASE—PER CENT.

New South Wales ..	4.16	1.86	1.97	2.46	1.76	0.99
Victoria ..	2.84	0.52	0.91	1.53	1.42	0.87
Queensland ..	6.31	2.38	1.98	2.24	1.86	1.11
South Australia ..	1.33	1.28	1.32	1.94	1.31	0.76
Western Australia ..	5.30	13.97	4.36	1.66	2.29	0.97
Tasmania ..	2.40	1.63	1.04	1.12	0.51	0.87
Northern Territory ..	3.56	-0.18	-3.67	1.57	1.87	5.93
Aust. Cap. Territory ..	(b)	(b)	(b)	4.14	10.71	4.65
Australia ..	3.51	1.73	1.67	2.01	1.63	0.96

(a) Includes Australian Capital Territory. (b) Part of New South Wales prior to 1911.  
NOTE.—Minus sign (-) denotes decrease.

The numerical increase during the period 1933-47 (14 years) was less by 244,586 than that for the period 1921-33 (12½ years) and the proportional increase declined from 21.97 per cent. for 1921-33 to 14.32 per cent. for 1933-47. During the earlier period the increase corresponds to 1.63 per cent. per annum, and in the latter to 0.96 per cent. per annum.

## § 3. Growth and Distribution of Population.

1. Growth of Population.—The table which follows shows the growth in the population of each sex in the various States and Territories as measured by the estimated population



at 31st December in 1788 and thereafter at decennial intervals from 1790 to 1950. Each year from 1947 to 1952 is included in order to show recent fluctuations in greater detail.

## ESTIMATED POPULATION : 1788 TO 1952.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

As at 31st Dec.—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Australia.
<b>MALES.</b>									
1788	(a)	..	..	..	..	..	..	..	(a)
1790	(a)	..	..	..	..	..	..	..	(a)
1800	3,780	..	..	..	..	..	..	..	3,780
1810	6,611	..	..	..	..	974	..	..	7,585
1820	19,626	..	..	..	..	4,158	..	..	23,784
1830	33,900	..	..	..	877	18,108	..	..	52,885
1840	85,560	..	..	8,272	1,434	32,040	..	..	127,306
1850	154,976	..	..	35,902	3,576	44,229	..	..	238,683
1860	197,851	(b) 330,302	(b) 16,817	64,340	9,597	49,653	..	..	668,560
1870	272,121	397,230	69,221	94,894	15,511	53,517	..	..	902,494
1880	404,952	450,558	124,013	147,438	16,985	60,568	..	..	1,204,514
1890	602,704	595,519	223,252	166,049	28,854	76,453	..	..	1,692,831
1900	716,047	601,773	274,684	180,349	110,088	89,763	(c) 4,288	..	1,976,992
1910	858,181	646,482	325,513	206,557	157,971	98,866	2,738	..	2,296,308
1920	1,067,945	753,803	396,555	245,300	176,895	107,259	2,911	(b) 1,062	2,751,730
1930	1,294,419	892,422	481,559	288,618	232,868	113,505	3,599	4,732	3,311,722
1940d	1,402,297	947,037	536,712	297,885	248,734	123,650	6,337	7,856	3,570,508
1947	1,504,350	1,016,950	569,480	324,055	261,689	135,674	7,493	(e) 9,270	3,828,871
1948	1,531,990	1,040,640	580,030	331,058	268,384	140,286	8,065	(e) 9,598	3,910,051
1949	1,594,724	1,073,298	594,154	342,937	280,457	145,838	8,728	e 10,409	4,050,545
1950	1,649,479	1,116,962	609,666	355,887	295,102	150,471	9,521	e 10,651	4,196,639
1951	1,692,368	1,152,772	623,003	363,191	304,866	158,053	9,507	13,942	4,317,702
1952	1,725,522	1,192,644	635,676	373,778	317,208	163,002	9,642	16,339	4,433,811
<b>FEMALES.</b>									
1788	(a)	..	..	..	..	..	..	..	(a)
1790	(a)	..	..	..	..	..	..	..	(a)
1800	1,437	..	..	..	..	..	..	..	1,437
1810	3,485	..	..	..	..	496	..	..	3,981
1820	8,398	..	..	..	..	1,361	..	..	9,759
1830	10,688	..	..	..	295	6,171	..	..	17,154
1840	41,908	..	..	6,358	877	13,959	..	..	63,102
1850	111,924	..	..	27,798	2,310	24,641	..	..	166,673
1860	150,695	(b) 207,932	(b) 11,239	61,242	5,749	40,168	..	..	477,025
1870	225,871	326,695	46,051	89,652	9,624	47,369	..	..	745,262
1880	303,190	408,047	127,027	128,955	12,576	54,222	..	..	1,027,017
1890	510,571	538,209	168,864	152,898	19,648	68,334	..	..	1,458,524
1900	644,248	594,440	219,163	176,901	69,879	83,137	(c) 569	..	1,788,347
1910	785,674	654,926	273,503	200,311	118,861	94,937	563	..	2,128,775
1920	1,023,777	774,106	354,069	245,706	154,428	105,493	1,078	(b) 910	2,659,567
1930	1,251,934	900,183	435,177	285,849	198,742	111,792	1,365	3,987	3,189,029
1940d	1,388,651	967,881	494,740	301,171	225,342	120,352	2,637	6,304	3,507,078
1947	1,503,232	1,044,739	541,341	329,010	247,192	132,841	3,588	(e) 7,814	3,809,757
1948	1,530,354	1,065,675	552,535	334,869	253,946	134,856	4,429	(e) 8,165	3,884,829
1949	1,581,211	1,091,933	566,146	344,936	264,358	138,407	5,122	(e) 9,124	4,000,337
1950	1,628,547	1,114,294	581,579	356,623	278,569	143,926	5,611	e 10,003	4,119,152
1951	1,666,392	1,138,582	596,602	366,645	286,736	148,961	6,020	11,094	4,221,932
1952	1,696,246	1,164,179	612,214	377,757	297,275	152,953	6,242	12,142	4,319,008

(a) Details as to sex not available.

(b) Previously included with New South Wales.

(c) Previously included with South Australia in which Northern Territory was incorporated prior to 1911.

(d) See note (c) on next page.

(e) Revised estimates based on the results of the Census of Canberra on 14th-16th September, 1951, are as follows:—1947, M. 9,714, F. 7,874; 1948, M. 10,943, F. 8,369; 1949, M. 12,577, F. 9,536; and 1950, M. 13,049, F. 10,580.

ESTIMATED POPULATION: 1788 TO 1952—*continued.*

As at 31st Dec.—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Australia.
PERSONS.									
1788	859	..	..	..	..	..	..	..	859
1790	2,056	..	..	..	..	..	..	..	2,056
1800	5,217	..	..	..	..	..	..	..	5,217
1810	10,096	..	..	..	..	1,470	..	..	11,566
1820	28,024	..	..	..	..	5,519	..	..	33,543
1830	44,588	..	..	..	1,172	24,279	..	..	70,039
1840	127,468	..	..	14,630	2,311	45,999	..	..	190,408
1850	266,900	..	..	63,700	5,886	68,870	..	..	405,356
1860	348,546	(a)538,234	(a)28,056	125,582	15,346	89,821	..	..	1,145,585
1870	497,992	723,925	115,272	184,546	25,135	100,886	..	..	1,647,756
1880	741,142	858,605	211,040	276,393	29,561	114,790	..	..	2,231,531
1890	1,113,275	1,133,728	392,116	318,947	48,502	144,787	..	..	3,151,355
1900	1,360,305	1,196,213	493,847	357,250	179,967	172,900	(b)4,857	..	3,765,339
1910	1,643,855	1,301,408	599,016	406,868	276,832	193,803	3,301	..	4,425,083
1920	2,091,722	1,527,909	750,624	491,006	331,323	212,752	3,989	(a)1,972	5,411,297
1930	2,546,353	1,792,605	916,736	574,467	431,610	225,297	4,964	8,719	6,500,751
1940c	2,790,948	1,914,918	1,031,452	599,056	474,076	244,002	8,974	14,160	7,077,586
1947	3,007,582	2,061,689	1,110,821	653,065	508,881	268,515	10,991	d 17,084	7,638,628
1948	3,062,344	2,106,315	1,132,565	665,927	522,330	275,142	12,494	d 17,763	7,794,880
1949	3,175,935	2,164,331	1,160,300	687,873	544,815	284,245	13,589	d 19,533	8,050,882
1950	3,278,026	2,231,256	1,191,245	712,010	573,671	294,397	15,132	d 20,054	8,315,791
1951	3,358,760	2,291,354	1,219,605	729,836	591,602	307,014	15,527	25,036	8,538,734
1952	3,421,768	2,356,823	1,247,890	751,535	614,483	315,955	15,884	28,481	8,752,819

(a) Previously included with New South Wales. (b) Previously included with South Australia in which Northern Territory was incorporated prior to 1911. (c) Includes all defence personnel enlisted in Australia irrespective of movements subsequent to enlistment. (d) Revised estimates based on the results of the Census of Canberra on 14th-16th September, 1951, are as follows:—1947, 17,588; 1948, 19,312; 1949, 22,113; and 1950, 23,629.

Estimates of population for intercensal years are obtained in the manner outlined in § 1. Figures for interstate migration are liable to error owing to the impracticability of tracing movements of motor traffic. The estimates of populations of the Australian Capital Territory and the Northern Territory are particularly affected by this difficulty. In view of the uncertainty of war-time records of interstate migration, the populations of the States subsequent to 30th June, 1943, and until the 1947 Census, were estimated on the basis of natural increase, deaths of defence personnel and overseas migration.

The estimated population as at 31st December each year from 1788 to 1951 on the same basis as in the last table is shown in Demography Bulletin No. 69, 1951. A graph illustrating the growth of the population of Australia and of each State and Territory thereof appears on page 347.

2. Present Numbers.—The population of Australia on 31st December, 1952, was estimated at 8,752,819 persons of whom 4,433,811, or 50.66 per cent., were males and 4,319,008, or 49.34 per cent., were females. The increase during 1952 was 214,085, equal to 2.51 per cent., males having increased by 116,109 or 2.69 per cent., and females by 97,976 or 2.32 per cent. This increase was due to an excess of births over deaths, of 120,053, together with a net gain by migration of 94,032 persons.

3. Proportion of Area and Population, Density and Masculinity.—A previous table shows the estimated number of persons in each of the States and Territories on 31st December, 1952. In the following table the proportions of the total area and of the total population represented by each State or Territory are given, together with the density and the masculinity of population :—

## DENSITY AND MASCULINITY OF POPULATION, 1952.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

State or Territory.	Proportion of Total Area.	Proportion of Estimated Population, 31st December, 1952.			Density. (a)	Masculinity.(b)
		Males.	Females.	Persons.		
	%	%	%	%		
New South Wales .. ..	10.40	38.92	39.27	39.09	11.06	101.73
Victoria .. ..	2.96	26.90	26.96	26.93	26.82	102.45
Queensland .. ..	22.54	14.34	14.18	14.26	1.86	103.83
South Australia .. ..	12.78	8.43	8.75	8.59	1.98	98.95
Western Australia .. ..	32.81	7.15	6.88	7.02	0.63	106.71
Tasmania .. ..	0.88	3.67	3.54	3.61	12.05	106.57
Northern Territory .. ..	17.60	0.22	0.14	0.18	0.03	154.47
Australian Capital Territory..	0.03	0.37	0.28	0.32	30.33	134.57
Australia .. ..	100.00	100.00	100.00	100.00	2.94	102.66

(a) Average number of persons per square mile.

(b) Number of males per 100 females.

Additional information regarding density and masculinity of population appears in later sections of this chapter.

4. Urban and Rural Distribution.—Particulars of the distribution of the population amongst metropolitan, provincial urban and rural areas in each State and Territory at the 1947 Census were shown in Official Year Book No. 39, pages 521-524.

For Australia, the number of persons and the proportion of the total population in each division were :—metropolitan 3,843,959, 50.72 per cent. ; provincial 1,362,548, 17.98 per cent. ; rural 2,354,248, 31.06 per cent. Migratory population (18,603) accounted for the remaining 0.24 per cent.

At 31st December, 1952, the Metropolitan Divisions contained 50.11 per cent. of the total population of Australia. South Australia had the largest proportion of population residing in the metropolitan area (61.07 per cent.) but was closely followed in this respect by Victoria (59.10 per cent.). Percentages for the other States were :—New South Wales, 47.37 ; Queensland, 37.58 ; Western Australia, 56.31 ; and Tasmania, 30.18.

A feature of the metropolitan population is its high femininity. In 1933, 52.5 per cent. of the metropolitan population was composed of females; in 1947, the proportion had fallen slightly to 51.9 per cent., being highest in Tasmania at 52.3 per cent.

5. **Metropolitan Population : Australia and Other Countries.**—In Australia there is an abnormal concentration of population in the capital cities, which are the only cities of outstanding importance in the various States. A comparison with the capitals of the more important countries is given in the following table :—

**METROPOLITAN POPULATION : AUSTRALIA AND OTHER COUNTRIES.**

State or Country.	Metropolis.	Year.	Metropolitan Population.
New South Wales .. ..	Sydney .. ..	1952	(a) 1,621,040
Victoria .. ..	Melbourne .. ..	1952	(a) 1,393,000
Queensland .. ..	Brisbane .. ..	1952	(a) 469,000
South Australia .. ..	Adelaide .. ..	1952	(a) 459,000
Western Australia .. ..	Perth .. ..	1952	(a) 346,000
Tasmania .. ..	Hobart .. ..	1952	91,180
England .. ..	London(b) .. ..	1951	8,350,380
Scotland .. ..	Edinburgh .. ..	1952	465,000
Northern Ireland .. ..	Belfast .. ..	1951	448,606
Ireland, Republic of .. ..	Dublin .. ..	1951	521,322
Canada .. ..	Montreal(c)(d) .. ..	1951	1,370,044
New Zealand .. ..	Wellington .. ..	1952	135,300
Union of South Africa .. ..	Capetown .. ..	1951	575,719
Argentina .. ..	Buenos Aires .. ..	1947	3,000,371
Belgium .. ..	Brussels .. ..	1950	966,482
Brazil .. ..	Rio de Janeiro .. ..	1951	2,490,000*
Czechoslovakia .. ..	Prague .. ..	1949	933,000
Denmark .. ..	Copenhagen .. ..	1950	974,901
Egypt .. ..	Cairo .. ..	1951	2,373,000
France .. ..	Paris .. ..	1951	2,910,000
Germany .. ..	Berlin .. ..	1951	3,340,000
Greece .. ..	Athens(e) .. ..	1951	1,368,142
Hungary .. ..	Budapest .. ..	1948	1,058,288
Italy .. ..	Rome .. ..	1952	1,697,000
Japan .. ..	Tokyo(f) .. ..	1950	6,277,500
Netherlands .. ..	Amsterdam .. ..	1952	851,000
Norway .. ..	Oslo .. ..	1952	437,000
Poland .. ..	Warsaw .. ..	1950	600,767
Portugal .. ..	Lisbon .. ..	1952	795,000
Spain .. ..	Madrid .. ..	1952	1,718,000
Sweden .. ..	Stockholm .. ..	1952	752,193
U.S.A. .. ..	New York(d) .. ..	1952	8,053,000

(a) Exclusive of full-blood aboriginals. (b) Greater London. (c) Greater Montreal.  
 (d) Principal City. (e) Greater Athens, including Piraeus. (f) Greater Tokyo.

6. **Principal Urban Areas.**—The following table shows the population of the principal urban incorporated areas (population 5,000 or more) in each State and Territory of Australia in 1952 compared with the 1947 Census population adjusted to current boundaries.

## POPULATION OF PRINCIPAL URBAN INCORPORATED AREAS: AUSTRALIA.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

City or Town.	Population at Census, 30th June, 1947.	Estimated Population 1952.(a)	City or Town.	Population at Census, 30th June, 1947.	Estimated Population 1952.(a)
<b>New South Wales—</b>			<b>Victoria—continued.</b>		
Sydney and Suburbs .. ..	1,484,004	1,621,040	Castlemaine .. ..	5,809	6,350
Newcastle .. ..	127,138	137,590	Sale .. ..	5,119	6,100
Greater Wollongong .. ..	62,960	83,870	Benalla .. ..	4,391	5,800
Fairfield .. ..	26,953	44,000	Stawell .. ..	4,840	5,300
Broken Hill .. ..	27,034	33,300	Echuca .. ..	4,490	5,200
Blue Mountains .. ..	21,326	24,080			
Liverpool .. ..	15,491	22,060	<b>Queensland—</b>		
Maitland .. ..	19,151	21,520	Brisbane and Suburbs .. ..	402,030	469,000
Goulburn .. ..	15,997	20,060	Toowoomba .. ..	33,290	40,000
Wagga Wagga .. ..	15,340	19,070	Rockhampton .. ..	34,988	38,500
Orange .. ..	15,300	18,340	Townsville .. ..	34,109	37,700
Lismore .. ..	15,274	17,390	Ipswich .. ..	26,218	35,900
Albury .. ..	14,412	17,090	Cairns .. ..	16,644	19,000
Penrith .. ..	12,138	16,960	Bundaberg .. ..	15,926	18,500
Lithgow .. ..	14,461	16,560	South Coast .. ..	13,888	17,100
Cessnock .. ..	13,020	14,300	Maryborough .. ..	14,395	17,000
Tamworth .. ..	12,071	14,000	Mackay .. ..	13,486	14,900
Grafton and South Grafton .. ..	12,025	13,760	Redcliffe .. ..	8,871	11,300
Bathurst .. ..	11,871	13,670	Gympie .. ..	8,413	9,200
Dubbo .. ..	9,545	11,130	Warwick .. ..	7,129	8,250
Windsor .. ..	7,263	10,370	Charters Towers .. ..	7,561	7,650
Campbelltown .. ..	6,995	8,840	Gladstone .. ..	5,244	6,500
Armidale .. ..	7,809	8,470	Dalby .. ..	4,385	5,200
Parkes .. ..	6,807	7,970			
Casino .. ..	6,668	7,670	<b>South Australia—</b>		
Taree .. ..	5,423	7,550	Adelaide and Suburbs .. ..	382,454	459,000
Kempsey .. ..	6,330	7,350	Port Pirle .. ..	12,019	(e)
Inverell .. ..	6,530	7,200	Whyalla .. ..	7,845	(e)
Queanbeyan .. ..	5,033	7,020	Mount Gambier .. ..	6,771	(e)
Forbes .. ..	5,949	6,660			
Cowra .. ..	5,473	6,060	<b>Western Australia—</b>		
Cootamundra .. ..	5,250	6,040	Perth and Suburbs .. ..	f 272,528	f 346,000
Glen Innes .. ..	5,453	5,790	Kalgoorlie and Suburbs .. ..	22,376	23,700
Moree .. ..	5,106	5,650	Bunbury .. ..	6,240	9,500
Young .. ..	4,656	5,140	Albany .. ..	4,759	7,000
			Geraldton .. ..	5,972	6,900
			Northam .. ..	4,652	5,600
<b>Victoria—</b>					
Melbourne and Suburbs .. ..	1,226,409	1,393,000	<b>Tasmania—</b>		
Geelong (b) .. ..	44,561	49,050	Hobart and Suburbs .. ..	76,534	91,180
Ballaarat (c) .. ..	40,181	43,150	Launceston and Suburbs .. ..	40,442	49,750
Bendigo (d) .. ..	30,779	32,850	Burnie .. ..	7,235	(e)
Mildura .. ..	9,527	11,100	Devonport .. ..	7,497	(e)
Warrnambool .. ..	9,993	11,000			
Shepparton .. ..	7,914	10,500	<b>Northern Territory—</b>		
Wangaratta .. ..	6,670	9,500	Darwin .. ..	3,252	(g) 7,836
Hamilton .. ..	7,180	8,200			
Colac .. ..	6,381	7,600	<b>Australian Capital Territory—</b>		
Horsham .. ..	6,388	7,400	Canberra .. ..	15,156	26,732
Ararat .. ..	5,957	7,150			
Maryborough .. ..	6,198	6,900			

(a) All figures are as at 31st December except those for cities and towns in Queensland (other than Brisbane), Tasmania and Western Australia (other than Perth) which are as at 30th June. (b) Comprises municipalities of Geelong, Geelong West, and Newtown and Chilwell. (c) Comprises municipalities of Ballaarat and Sebastopol. (d) Comprises municipalities of Bendigo and Eaglehawk. (e) Not available. (f) Includes Fremantle and suburbs. (g) Area enlarged since 1947 Census.

7. Provincial Urban Areas.—The proportion of the total population of each State which was located in incorporated urban provincial areas at the 1933 and 1947 Censuses is shown in Official Year Book No. 39, pages 522-3. The following table shows the aggregate population at the 1947 Census of all cities and towns outside the metropolitan area of each State with 2,000 or more and 3,000 or more inhabitants, irrespective of whether such centres are incorporated separately or not. In addition, the proportion of the aggregate population of these cities and towns to the total population of the State is shown.

**AGGREGATE POPULATION OF CITIES AND TOWNS OF SPECIFIED SIZE :  
1947 CENSUS.**

(EXCLUDING FULL-BLOOD ABORIGINALS.)

State or Territory.	Cities and Towns outside Metropolitan Area with Population of—					
	2,000 and over.			3,000 and over.		
	Number.	Population.	Proportion of Total Population.	Number.	Population.	Proportion of Total Population.
			%			%
New South Wales ..	122	763,562	25.58	76	652,986	21.88
Victoria ..	62	334,199	16.26	37	272,454	13.26
Queensland ..	34	297,909	26.93	26	279,317	25.25
South Australia ..	11	52,812	8.17	7	43,084	6.67
Western Australia ..	10	51,987	10.35	7	44,493	8.85
Tasmania ..	6	62,413	24.29	5	59,479	23.14
Northern Territory ..	1	2,538	23.35	..	..	..
Australian Capital Territory ..	1	15,156	89.66	1	15,156	89.66
<b>Total ..</b>	<b>247</b>	<b>1,580,576</b>	<b>20.85</b>	<b>159</b>	<b>1,366,969</b>	<b>18.03</b>

8. Principal Cities in the World.—The following table shows the population of the world's largest cities at the latest available date :—

**POPULATION OF THE WORLD'S LARGEST CITIES.**  
(Cities in the British Commonwealth are printed in italics.)

Country.	City.	Year.	City Population ('000).	Country.	City.	Year.	City Population ('000).
England	<i>London(a)</i>	1951	8,350	Scotland	<i>Glasgow</i>	1952	1,087
U.S.A.	New York	1952	8,053	Hungary	Budapest	1948	1,058
Japan	Tokyo(b)	1950	6,277	China	Dairen	1950	1,054
China	Shanghai	1950	5,407	Egypt	Alexandria	1951	1,041
U.S.S.R.	Moscow	1939	4,137	Japan	Nagoya	1950	1,031
U.S.A.	Chicago	1950	3,606	Italy	Naples	1951	1,028
Germany	Berlin	1951	3,340	China	Nanking	1950	1,020
U.S.S.R.	Leningrad	1939	3,191	Pakistan	Karachi	1951	1,005
India	<i>Calcutta(c)</i>	1951	3,086	Turkey	Istanbul	1950	1,000
Argentina	Buenos Aires	1947	3,000	India	<i>Madras</i>	1949	998
France	Paris	1951	2,910	Rumania	Bucharest	1945	985
Brazil	Rio de Janeiro	1951	2,490	Denmark	Copenhagen	1950	975
Egypt	Cairo	1951	2,373	Siam	Bangkok	1952	971
Brazil	Sao Paulo	1950	2,228	Belgium	Brussels	1950	966
Japan	Osaka	1952	2,115	Chile	Santiago	1940	952
Mexico	Mexico City	1950	2,113	Japan	Yokohama	1950	951
U.S.A.	Philadelphia	1950	2,065	U.S.A.	Baltimore	1950	940
China	Peking	1950	2,031	Singapore	<i>Singapore</i>	1947	938
U.S.A.	Los Angeles	1950	1,958	Czechoslovakia	Prague	1949	933
U.S.A.	Detroit	1950	1,839	U.S.A.	Cleveland	1950	906
India	<i>Bombay</i>	1951	1,829	South Africa	<i>Johannesburg</i>	1951	851
China	Tientsin	1950	1,795	U.S.A.	St. Louis	1950	853
Spain	Madrid	1952	1,718	Netherlands	Amsterdam	1952	851
Italy	Rome	1952	1,697	Pakistan	<i>Lahore</i>	1961	849
Germany	Hamburg	1952	1,660	U.S.S.R.	Kiev	1939	846
Australia	<i>Sydney</i>	1952	1,621	U.S.S.R.	Kharkov	1939	833
China	Mukden	1950	1,551	Germany	Munich	1950	832
Austria	Vienna	1947	1,548	U.S.S.R.	Baku	1939	809
China	Canton	1950	1,496	Uruguay	Montevideo	1952	807
Australia	<i>Melbourne</i>	1952	1,393	U.S.A.	Washington	1950	798
Canada	<i>Montreal(d)</i>	1951	1,370	Portugal	Lisbon	1952	795
Greece	Athens(e)	1951	1,368	U.S.A.	Boston	1950	791
Spain	Barcelona	1952	1,318	England	<i>Liverpool</i>	1951	785
Italy	Milan	1951	1,293	China	Hankow	1931	778
China	Wuhan	1950	1,200	Japan	Kobe	1950	765
Korea	Seoul	1946	1,142	U.S.A.	San Francisco	1950	761
Philippines	Manila	1952	1,132	China	Tsingtao	1946	756
England	<i>Birmingham</i>	1951	1,111	Sweden	Stockholm	1952	752
Canada	<i>Toronto(f)</i>	1951	1,108	India	<i>Hyderabad</i>	1941	739
Japan	Kyoto	1950	1,102	Italy	Turin	1951	720
China	Chungking	1950	1,100	England	<i>Manchester</i>	1951	700

(a) Greater London. (b) Greater Tokyo. (c) Includes Howrah. (d) Greater Montreal. (e) Includes Piraeus. (f) Greater Toronto.

§ 4. Mean Population.

1. **General.**—Mean populations are calculated for twelve-monthly periods to provide a satisfactory average basis for calculations requiring allowance for the continuous change in population figures during such periods.

2. **Method of Calculation.**—From 1901 onwards the mean population for any year has been calculated by the formula :—

$$\text{Mean Population} = \frac{a + 4b + 2c + 4d + e}{12}$$

where *a*, *b*, *c*, *d* and *e*, respectively, are the populations at the end of the quarter immediately preceding the year and at the end of each of the four succeeding quarters, e.g., in the case of a calendar year, 31st December of the preceding year and 31st March, 30th June, 30th September and 31st December of the year under consideration. This formula gives a close approximation to the mean of a theoretical population progressing smoothly through the five values *a*, *b*, *c*, *d*, *e*. Section V. of Population and Vital Statistics Bulletin No. 1, 1907 sets out in some detail the principles underlying the adoption of the formula.

3. **Results.**—(i) *Calendar Years.* The following table shows the mean population of each State and Territory for the calendar years 1942 to 1952 :—

MEAN POPULATION : CALENDAR YEARS.  
(EXCLUDING FULL-BLOOD ABORIGINALS.)

Year ended 31st Dec.—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Australia.
1942(a)	2,831,080	1,959,496	1,036,016	609,172	476,619	241,087	8,946	14,223	7,176,639
1943(a)	2,857,547	1,973,533	1,047,421	613,327	476,745	242,860	9,574	13,644	7,234,651
1944(a)	2,886,204	1,989,870	1,061,467	619,409	481,498	245,618	10,440	14,200	7,308,706
1945(a)	2,917,415	2,006,649	1,076,610	627,102	487,510	248,596	10,512	15,012	7,389,406
1946(a)	2,945,220	2,025,475	1,090,238	635,127	492,771	252,192	10,568	15,883	7,467,474
1947 ..	2,985,073	2,053,648	1,105,360	646,294	502,978	257,781	10,891	b 16,903	7,578,928
1948 ..	3,029,573	2,089,999	1,123,416	658,239	514,843	264,604	12,188	b 18,172	7,711,034
1949 ..	3,113,977	2,138,761	1,147,523	674,056	533,083	272,649	13,476	b 19,113	7,912,638
1950 ..	3,224,892	2,203,786	1,178,851	700,184	558,709	282,269	14,921	b 20,506	8,184,118
1951 ..	3,318,800	2,269,025	1,207,235	720,144	581,459	292,939	15,992	24,395	8,429,989
1952 ..	3,390,474	2,334,590	1,234,828	739,549	602,026	304,172	16,101	26,995	8,648,735

(a) Includes all defence personnel enlisted in Australia irrespective of movements subsequent to enlistment. (b) Revised estimates based on the results of the Census of Canberra on 14th–16th September, 1951 are as follows :—1947, 17,031; 1948, 19,197; 1949, 21,191; and 1950, 23,588.

(ii) *Financial Years.* The following table shows the mean population of each State and Territory for the years ended 30th June, 1942 to 1952 :—

MEAN POPULATION : FINANCIAL YEARS.  
(EXCLUDING FULL-BLOOD ABORIGINALS.)

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Australia.
1942(a)	2,813,385	1,948,710	1,036,690	605,952	474,833	240,358	9,878	14,334	7,144,140
1943(a)	2,845,805	1,965,473	1,040,433	610,925	476,989	241,704	8,723	14,017	7,204,069
1944(a)	2,871,452	1,983,997	1,054,810	616,151	478,271	244,178	10,408	13,798	7,271,065
1945(a)	2,901,459	1,998,202	1,068,630	623,104	484,720	246,971	10,477	14,607	7,348,170
1946(a)	2,932,366	2,015,197	1,084,125	630,921	489,982	250,309	10,537	15,431	7,428,868
1947(a)	2,963,056	2,039,348	1,097,303	640,352	497,006	254,553	10,676	16,381	7,518,675
1948 ..	3,006,481	2,069,167	1,112,722	652,285	508,866	261,781	11,310	b 17,596	7,640,202
1949 ..	3,063,973	2,113,286	1,134,738	665,139	522,184	268,259	12,847	b 18,434	7,798,860
1950 ..	3,171,940	2,170,289	1,163,084	686,825	545,786	277,395	14,247	b 20,025	8,049,591
1951 ..	3,274,107	2,236,708	1,192,906	711,007	571,349	287,590	15,540	b 22,096	8,311,303
1952 ..	3,355,988	2,301,542	1,221,104	729,304	591,158	298,567	16,045	25,699	8,539,467

(a) Includes all defence personnel enlisted in Australia irrespective of movements subsequent to enlistment. (b) Revised estimates based on the results of the Census of Canberra on 14th–16th September, 1951 are as follows :—Year ended 30th June—1948, 18,105; 1949, 19,988; 1950, 22,607; and 1951, 24,063.

## § 5. Elements of Increase.

1. *Natural Increase.*—(i) *General.* The two factors which contribute to the growth of a population are the “natural increase,” i.e., the excess of births over deaths, and the “net migration,” i.e., the excess of arrivals over departures. In earlier issues of the Official Year Book particulars of the natural increase from 1861 are given for each sex and for each State and Territory (*see* No. 22, page 899).

During the present century the rate of natural increase grew until it reached the maximum rate of 17.44 per thousand of population in 1914, but it steadily declined after that year to 7.07 in 1934. There was little change until 1939, but during the war and in the post-war period the rate rose sharply, reaching the level of 14.37 in 1947, and has since remained at between 13 and 14 per 1,000 of population.

In the following table particulars of the natural increase in each State and Territory are given for each sex for each quinquennium from 1901 to 1950 and for the six years 1947 to 1952. For the purposes of this analysis the natural increase for the period from September, 1939 until June, 1947 has been taken as excess of births over civilian deaths, i.e., no account is taken of deaths of defence personnel.

## POPULATION : NATURAL INCREASE (EXCESS OF BIRTHS OVER DEATHS).

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust.
MALES.									
1901-05..	51,179	34,332	16,628	12,149	8,283	7,955	-223	(a)	130,303
1906-10..	64,127	38,948	21,415	14,500	10,762	8,703	-264	(a)	158,191
1911-15..	77,070	46,160	27,497	18,673	12,730	9,386	-201	78	191,393
1916-20..	72,030	41,388	26,894	16,413	9,787	8,673	-125	75	175,135
1921-25..	80,860	49,254	28,941	16,721	10,284	8,543	-68	37	194,572
1926-30..	72,430	43,756	25,645	14,583	11,245	7,001	-131	175	174,704
1931-35..	51,566	25,286	20,627	8,686	8,576	5,810	-93	270	120,728
1936-40(b)	49,092	26,141	23,145	9,187	9,409	6,040	39	397	123,450
1941-45(b)	68,071	42,650	31,871	15,563	12,391	7,234	15	740	178,535
1946-50(b)	93,564	63,984	41,580	24,206	19,367	11,356	412	1,583	256,052
1947(b) ..	19,743	13,130	8,661	5,048	3,802	2,314	86	265	53,049
1948 ..	17,453	12,017	8,255	4,559	3,867	2,129	77	299	48,656
1949 ..	18,498	12,224	8,262	4,817	3,933	2,314	108	395	50,551
1950 ..	19,218	13,773	8,720	5,159	4,271	2,434	121	414	54,110
1951 ..	18,907	13,357	8,666	4,995	4,598	2,392	117	416	53,448
1952 ..	19,939	14,882	9,327	5,333	4,749	2,699	149	452	57,530

(a) Part of New South Wales prior to 1911.  
September, 1939 to June, 1947.

(b) Excess of births over civilian deaths from

NOTE.—Minus sign (—) denotes excess of deaths over births.



POPULATION: NATURAL INCREASE (EXCESS OF BIRTHS OVER DEATHS)—  
*continued.*

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust.
FEMALES.									
1901-05..	59,163	39,831	22,910	12,701	11,468	8,027	28	(a)	154,128
1906-10..	71,297	42,629	26,048	14,754	13,354	8,522	33	(a)	176,637
1911-15..	87,074	50,258	33,463	19,318	16,262	9,604	62	78	216,119
1916-20..	81,799	42,886	32,273	16,825	13,185	8,821	135	72	195,996
1921-25..	89,438	49,685	34,289	17,595	13,839	8,837	127	82	213,892
1926-30..	80,733	44,417	31,128	15,407	14,406	6,893	126	203	193,313
1931-35..	60,300	28,216	26,036	9,228	12,352	5,953	156	280	142,521
1936-40(b)	60,628	28,464	28,991	10,057	13,626	6,574	220	437	148,997
1941-45(b)	75,809	42,538	36,709	15,654	16,029	7,420	232	826	195,217
1946-50(b)	102,959	63,744	46,650	24,605	22,273	11,667	652	1,574	274,124
1947(b) ..	21,206	12,794	9,581	5,054	4,349	2,463	125	295	55,867
1948 ..	19,378	12,257	9,141	4,563	4,379	2,322	130	311	52,481
1949 ..	20,950	12,658	9,325	4,852	4,788	2,407	146	324	55,450
1950 ..	21,409	13,716	9,909	5,407	4,899	2,342	194	418	58,294
1951 ..	21,230	13,750	9,881	5,284	4,908	2,398	173	438	58,062
1952 ..	22,219	15,534	10,455	5,501	5,455	2,638	210	511	62,523

## PERSONS.

1901-05..	110,342	74,163	39,538	24,850	19,751	15,982	-195	(a)	284,431
1906-10..	135,424	81,577	47,463	29,254	24,116	17,225	-231	(a)	334,828
1911-15..	164,144	96,418	60,960	37,991	28,992	18,990	-139	156	407,512
1916-20..	153,829	84,274	59,167	33,238	22,972	17,494	10	147	371,131
1921-25..	170,298	98,939	63,230	34,316	24,123	17,380	59	119	408,464
1926-30..	153,163	88,173	56,773	29,990	25,651	13,894	-5	378	368,017
1931-35..	111,866	53,502	46,663	17,914	20,928	11,763	63	550	263,249
1936-40(b)	109,720	54,605	52,136	19,244	23,035	12,614	259	834	272,447
1941-45(b)	143,880	85,188	68,580	31,217	28,420	14,654	247	1,566	373,752
1946-50(b)	196,523	127,728	88,230	48,811	41,640	23,023	1,064	3,157	530,176
1947(b) ..	40,949	25,924	18,242	10,102	8,151	4,777	211	560	108,916
1948 ..	36,831	24,274	17,396	9,122	8,246	4,451	207	610	101,137
1949 ..	39,448	24,882	17,587	9,669	8,721	4,721	254	719	106,001
1950 ..	40,627	27,489	18,629	10,566	9,170	4,776	315	832	112,404
1951 ..	40,137	27,107	18,547	10,279	9,506	4,790	290	854	111,510
1952 ..	42,158	30,416	19,782	10,834	10,204	5,337	359	963	120,053

(a) Part of New South Wales prior to 1911.  
September, 1939 to June, 1947.

(b) Excess of births over civilian deaths from

NOTE.—Minus sign (-) denotes excess of deaths over births.

POPULATION : NATURAL INCREASE (EXCESS OF BIRTHS OVER DEATHS)—  
*continued.*

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust.
RATE OF NATURAL INCREASE(a)—PERSONS.									
1901-05..	15.59	12.31	15.34	13.92	18.07	17.85	- 8.85	(b)	14.60
1906-10..	17.25	13.11	16.99	15.44	18.52	18.37	-12.56	(b)	15.93
1911-15..	18.27	13.91	18.61	17.55	18.76	19.63	- 7.61	13.71	17.05
1916-20..	15.69	11.65	16.74	14.51	14.56	17.46	0.43	12.23	14.57
1921-25..	15.47	12.32	15.87	13.28	13.69	16.14	3.13	6.84	14.34
1926-30..	12.51	10.10	12.84	10.58	12.63	12.85	- 0.22	9.60	11.72
1931-35..	8.61	5.89	9.88	6.17	9.54	10.33	2.54	11.96	7.95
1936-40(c)	8.06	5.84	10.40	6.48	9.94	10.66	8.27	14.14	7.89
1941-45(c)	10.05	8.64	13.04	10.17	11.86	12.02	4.97	21.85	10.32
1946-50(c)	12.84	12.15	15.63	14.73	16.00	17.31	17.15	34.86	13.65
1947(c) ..	13.72	12.62	16.50	15.63	16.21	18.53	19.37	33.13	14.37
1948 ..	12.16	11.61	15.48	13.86	16.02	16.82	16.98	33.57	13.12
1949 ..	12.67	11.64	15.33	14.35	16.36	17.32	18.85	37.62	13.40
1950 ..	12.60	12.47	15.80	15.09	16.41	16.92	21.05	40.57	13.74
1951 ..	12.09	11.95	15.36	14.27	16.35	16.35	18.13	35.01	13.23
1952 ..	12.43	13.03	16.02	14.65	16.95	17.54	22.29	35.67	13.89

(a) Excess of births over deaths per 1,000 of mean population. (b) Part of New South Wales prior to 1911. (c) Excess of births over civilian deaths per 1,000 of mean population from September, 1939 to June, 1947.

NOTE.—Minus sign (-) denotes excess of deaths over births.

The table above shows the decline which has taken place in the rate of natural increase since the beginning of the century. The decline is evident notwithstanding the stepping-up of the rate occasioned by increased births since the commencement of the 1939-45 War and the overstatement due to the omission of deaths of defence personnel. During the first five years of the present century the average increment to the population of Australia by this means was 56,886 persons per annum. The increment rose to 81,695 persons per annum in 1921-25, but thereafter fell to 52,650 persons per annum in the quinquennium 1931-35, increasing during 1936-40 to 54,489. During 1941-45 the average annual excess of births over civilian deaths was 74,750, while during 1946-50 the annual excess of births over deaths was a record high average of 106,035. In the year 1952 the excess was 120,053.

(ii) *Comparison with other Countries.* Notwithstanding its low birth-rate, Australia has a higher rate of natural increase than most European countries, owing to the fact that its death-rate is very low. The following table gives a comparison between the rates of natural increase in 1950 and 1951 for the several States of Australia and for the Dominion of New Zealand, and those of some of the principal countries for which such information is available. Corresponding average annual rates for the period 1909-13 have also been appended.

## NATURAL INCREASE OF POPULATION : VARIOUS COUNTRIES.

INCREASE PER ANNUM PER 1,000 OF MEAN POPULATION.

State or Country.	1909-13.	1950.	1951.	Country.	1909-13.	1950.	1951.
Australasia—				Europe— <i>continued.</i>			
Tasmania(a)	18.8	16.9	16.4	Sweden .. .. .	10.4	6.4	5.7
Western Australia(a) ..	18.1	16.4	16.4	Scotland .. .. .	10.7	5.4	4.8
Queensland(a) .. .. .	17.9	15.8	15.4	Belgium .. .. .	7.8	4.4	3.8
New Zealand(b) .. .. .	17.1	15.3	14.8	England and Wales ..	10.7	4.1	3.0
South Australia(a) .. .	16.8	15.1	14.3	Austria .. .. .	(c) 6.1	3.2	2.2
Australia(a) .. .. .	16.7	13.7	13.2	Asia—			
New South Wales(a) .. .	18.0	12.6	12.1	Japan .. .. .	13.1	17.3	15.6
Victoria (a) .. .. .	13.6	12.5	12.0	Africa—			
Europe—				Union of South Africa	(d)	16.4	16.3
Netherlands .. .. .	15.1	15.1	14.8	(whites only)			
Norway .. .. .	12.4	10.0	10.2	America—			
Denmark .. .. .	13.9	9.4	9.0	Canada .. .. .	(d)	18.1	18.2
Spain .. .. .	9.3	9.3	8.5	United States .. .	(d)	13.8	14.8
Northern Ireland .. .	6.3	9.4	7.9				
Italy .. .. .	12.8	9.5	7.8				
Ireland, Republic of ..	6.3	8.6	6.9				
Switzerland .. .. .	9.3	8.0	6.7				
France .. .. .	0.8	7.9	6.2				

(a) Excludes full-blood aboriginals. (b) Excludes Maoris. (c) 1911-13. (d) Not available.

2. Net Migration.\*—The other factor of increase in the population, namely, the excess of arrivals over departures, known as "net migration," is, from its nature, much more subject to variation than is "natural increase".

Particulars of the increase by net migration are given below for quinquennial periods from 1901 to 1950 and annually for the six years 1947-52. Disturbances in war-time migration records were caused by interstate troop movements, which prevented accurate count of civilians travelling interstate. Interstate passenger traffic was, for this reason, excluded from migration records from 30th June, 1943 to the date of the Census, 30th June, 1947.

## POPULATION : INCREASE BY NET MIGRATION.

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust.
MALES.									
1901-05..	15,671	37,971	495	11,031	28,127	1,771	697	(a)	7,177
1906-10..	11,157	9,400	12,291	10,590	711	5,784	366	(a)	37,999
1911-15..	38,483	1,568	13,037	4,263	189	9,599	1,050	90	49,375
1916-20..	23,150	18,205	3,614	7,920	3,782	67	551	30	48,519
1921-25..	35,660	37,760	18,834	14,244	15,375	5,630	17	1,199	117,459
1926-30..	37,524	7,849	11,584	2,230	19,069	3,668	870	2,259	73,257
1931-35..	1,046	5,951	6,195	3,654	4,215	1,384	24	3	10,676
1936-40(b)	7,847	12,096	5,249	4,988	2,501	793	2,787	1,176	20,873
1941-45 bc	6,614	17,502	6,487	2,202	9,261	4,312	889	1,822	5,325
1946-50 bc	91,100	58,773	11,300	18,531	23,299	13,178	1,852	305	217,728
1947(b)(c)	3,820	2,442	2,206	1,736	2,278	5,316	52	22	8,576
1948 ..	10,187	11,673	2,295	2,444	2,828	2,483	585	29	32,524
1949 ..	44,236	20,434	5,862	7,062	8,140	3,238	555	416	89,943
1950 ..	35,537	29,891	6,792	7,291	10,374	2,199	672	772	91,984
1951 ..	23,982	22,453	4,671	2,809	5,166	5,190	131	(d) 3,475	67,615
1952 ..	13,215	24,990	3,346	5,254	7,593	2,250	14	1,945	58,579

(a) Part of New South Wales prior to 1911. (b) Excludes troop movements from September, 1939 to June, 1947. (c) Excludes interstate migration from July, 1943 to June, 1947. (d) From 1st July, 1947 to 31st December, 1950, no allowance was made for a large unrecorded net inward movement by road into the Australian Capital Territory. From 1st January, 1951, allowance has been made for this movement and the net migration for the year ended 31st December, 1951, includes an adjustment retrospective to 1st July, 1947.

NOTE.—Minus sign (—) indicates excess of departures over arrivals.

\* The subject of migration is dealt with at some length later in this chapter.

POPULATION : INCREASE BY NET MIGRATION—*continued.*

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust.
FEMALES.									
1901-05..	1,566	-21,984	-2,398	-8,448	22,293	-726	81	(a)	-9,616
1906-10..	9,390	10	7,780	4,403	1,867	-4,023	148	(a)	19,279
1911-15..	48,612	25,051	12,054	5,389	10,650	-5,658	271	118	96,487
1916-20..	21,294	985	2,776	3,863	-4,530	-2,211	47	34	22,190
1921-25..	24,660	19,443	12,154	7,482	6,706	-5,138	244	744	65,807
1926-30..	33,326	12,532	3,537	-341	9,363	-4,293	278	2,048	56,450
1931-35..	1,093	2,943	1,125	-2,284	-578	-2,644	88	47	210
1936-40(b)	14,414	9,409	1,509	-2,608	32	-1,872	715	656	22,255
1941-45 b c	3,648	10,745	-4,759	786	-3,654	-3,701	357	938	2,484
1946-50 b c	57,189	30,315	6,495	13,464	17,552	7,708	1,643	990	135,356
1947(b)(c)	197	-1,412	-2,219	683	1,085	3,771	76	146	2,035
1948 ..	7,744	8,679	2,053	1,296	2,375	-307	711	40	22,591
1949 ..	29,907	12,700	4,286	5,215	5,624	1,144	547	635	60,058
1950 ..	25,927	9,545	5,524	6,280	9,312	3,177	295	461	60,521
1951 ..	16,615	10,538	5,142	4,738	3,259	2,637	236	(d)	43,818
1952 ..	7,635	10,063	5,157	5,611	5,084	1,354	12	537	35,453
PERSONS.									
1901-05..	17,237	-59,955	-1,903	-19,479	50,420	-2,497	616	(a)	-16,793
1906-10..	20,547	9,410	20,071	14,993	2,578	-9,807	514	(a)	57,278
1911-15..	87,095	26,619	25,091	1,126	10,839	-15,257	1,321	28	136,862
1916-20..	44,444	19,190	6,390	11,783	-8,312	-2,278	504	4	70,709
1921-25..	60,320	57,203	30,988	21,726	22,081	-10,768	227	1,943	183,266
1926-30..	70,850	20,381	15,121	-2,571	28,432	-7,961	1,148	4,307	129,707
1931-35..	553	-3,008	7,320	-5,938	-4,793	-4,028	64	50	10,886
1936-40(b)	22,261	21,505	6,758	-7,506	-2,469	-2,665	3,502	1,832	43,128
1941-45 b c	10,262	28,247	-11,246	2,988	-12,915	-8,013	1,246	-2,760	7,809
1946-50 b c	148,289	89,088	17,795	31,995	40,851	20,886	3,495	685	353,084
1947(b)(c)	4,017	-3,854	-4,425	2,419	3,363	9,087	128	124	10,611
1948 ..	17,931	20,352	4,348	3,740	5,203	2,176	1,296	69	55,115
1949 ..	74,143	33,134	10,148	12,277	13,764	4,382	1,102	1,051	150,001
1950 ..	61,464	39,436	12,316	13,571	19,686	5,376	967	311	152,505
1951 ..	40,597	32,991	9,813	7,547	8,425	7,827	105	(d)	111,433
1952 ..	20,850	35,053	8,503	10,865	12,677	3,604	2	2,482	94,032

(a) Part of New South Wales prior to 1911. (b) Excludes troop movements from September, 1939 to June, 1947. (c) Excludes interstate migration from July, 1943 to June, 1947. (d) From 1st July, 1947 to 31st December, 1950, no allowance was made for a large unrecorded net inward movement by road into the Australian Capital Territory. From 1st January, 1951, allowance has been made for this movement and the net migration for the year ended 31st December, 1951, includes an adjustment retrospective to 1st July, 1947.

NOTE.—Minus sign (-) indicates excess of departures over arrivals.

There was a loss of population by migration in the first five years of the present century; in the next five quinquennial periods there were varying gains which averaged about 115,000 per quinquennium.

In the five years ended 1935 there was a net emigration of 10,886 and in the five years ended 1940 a net immigration of 43,128. During the war period 1941-45 net immigration fell to 7,809 persons. In 1946 there was a net loss by migration of 15,148

persons due mainly to the departure of refugees and evacuees, and also fiancées, wives and children of British and Allied servicemen but, with increasing transport facilities and the resumption of assisted migration, there was a net gain of 10,611 in 1947, increasing rapidly to 55,115 in 1948, 150,001 in 1949 and 152,505 in 1950. This large net gain was due in great measure to the arrival of successive contingents from Australia's quota of 176,000 former European displaced persons, of whom 156,491 had arrived by the end of 1950. As this flow diminished it was partly offset by new schemes for assisted migrants but nevertheless the total net gain from all sources in 1951 was lower at 111,433 and in 1952 again lower at 94,032. The net gains in each of the last four years were the highest recorded for individual years with the exception of 1919 which included troops returning from the 1914-18 War.

3. **Total Increase.**—The total increase of the population is obtained by combining the natural increase with the increase by net migration. For the period September, 1939 to June, 1947, deaths of defence personnel have been deducted from the total increase so derived. The results of the 1947 Census disclosed some unrecorded movement of population during the intercensal period July, 1933 to June, 1947, and particulars of total increase, after taking into account deaths of defence personnel, have been adjusted for this discrepancy. No separate adjustment has, however, been applied to individual elements of increase during this period, although intercensal discrepancies disclosed by previous Censuses were adjusted on recorded overseas departures.

The annual increments to the population for the last six years are shown below, together with quinquennial figures from 1901 to 1950. For the reasons stated in the previous paragraph, the figures for the period 1933 to 1947 differ from the totals of figures for natural increase and net migration shown in preceding tables by an amount equal to the net total of deaths of defence personnel and unrecorded movement of population.

## POPULATION : TOTAL INCREASE.

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust.
<b>MALES.</b>									
1901-05..	66,850	— 3,639	17,123	1,118	36,410	6,184	— 920	(a)	123,126
1906-10..	75,284	48,348	33,706	25,090	11,473	2,919	— 630	(a)	196,190
1911-15..	115,553	47,728	40,534	14,410	12,919	— 213	849	— 12	231,768
1916-20..	95,180	59,593	30,508	24,333	6,005	8,606	— 676	105	223,654
1921-25..	116,520	87,014	47,775	30,965	25,659	2,913	— 51	1,236	312,031
1926-30..	109,954	51,605	37,229	12,353	30,314	3,333	— 739	2,434	247,961
1931-35..	50,277	18,318	26,789	5,049	5,871	4,619	— 109	502	111,316
1936-40(b)	57,601	36,297	28,364	4,218	9,995	5,526	2,847	2,622	147,470
1941-45bc	62,389	47,747	20,117	14,703	2,856	2,204	915	427	151,358
1946-50bc	184,793	122,179	52,837	42,799	43,512	24,617	2,269	1,768	474,774
1947(b)(c)	23,706	10,555	6,467	6,817	6,379	7,667	— 140	451	62,182
1948 ..	27,640	23,690	10,550	7,003	6,695	4,612	— 662	328	81,180
1949 ..	62,734	32,658	14,124	11,879	12,073	5,552	— 663	811	140,494
1950 ..	54,755	43,664	15,512	12,450	14,645	4,633	— 793	358	146,094
1951 ..	42,889	35,810	13,337	7,804	9,764	7,582	— 14	(d) 3,891	121,063
1952 ..	33,154	39,872	12,673	10,587	12,342	4,949	— 135	2,397	116,109

(a) Part of New South Wales prior to 1911. (b) Includes recorded deaths of defence personnel, whether inside or outside Australia, from September, 1939 to June, 1947. (c) Excludes interstate migration from July, 1943 to June, 1947. (d) From 1st July, 1947 to 31st December, 1950, no allowance was made for a large unrecorded net inward movement by road into the Australian Capital Territory. From 1st January, 1951, allowance has been made for this movement and the net migration for the year ended 31st December, 1951, includes an adjustment retrospective to 1st July, 1947.

NOTE.—Minus sign (—) denotes decrease.

POPULATION: TOTAL INCREASE—*continued.*

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust. Terr.
FEMALES.									
1901-05..	60,729	17,847	20,512	4,253	33,761	7,301	109	(a)	144,512
1906-10..	80,687	42,639	33,828	19,157	15,221	4,499	- 115	(a)	195,916
1911-15..	135,686	75,309	45,517	24,707	26,912	3,946	333	196	312,606
1916-20..	103,093	43,871	35,049	20,688	8,655	6,610	182	38	218,186
1921-25..	114,098	69,128	46,443	25,077	20,545	3,699	- 117	826	279,699
1926-30..	114,059	56,949	34,665	15,066	23,769	2,600	404	2,251	249,763
1931-35..	61,442	30,672	27,772	7,246	12,142	3,507	275	539	143,595
1936-40(b)	75,275	37,026	31,791	8,076	14,458	5,053	997	1,778	174,454
1941-45bc	79,661	52,442	33,295	17,123	13,156	4,074	657	845	201,253
1946-50bc	160,235	93,970	53,544	38,329	40,071	19,500	2,317	2,854	410,820
1947(b)(c)	21,484	11,365	7,523	5,830	5,529	6,278	209	247	58,465
1948 ..	27,122	20,936	11,194	5,859	6,754	2,015	841	351	75,072
1949 ..	50,857	25,358	13,611	10,067	10,412	3,551	693	959	115,508
1950 ..	47,336	23,261	15,433	11,687	14,211	5,519	489	879	118,815
1951 ..	37,845	24,288	15,023	10,022	8,167	5,035	409	(d)1,091	101,880
1952 ..	29,854	25,597	15,612	11,112	10,539	3,992	222	1,048	97,976
PERSONS.									
1901-05..	127,579	14,208	37,635	5,371	70,171	13,485	- 811	(a)	267,638
1906-10..	155,971	90,987	67,534	44,247	26,694	7,418	- 745	(a)	392,106
1911-15..	251,239	123,037	86,051	39,117	39,831	3,733	1,182	184	544,374
1916-20..	198,273	103,464	65,557	45,021	14,660	15,216	- 494	143	441,840
1921-25..	230,618	156,142	94,218	56,042	46,204	6,612	- 168	2,062	591,730
1926-30..	224,013	108,554	71,894	27,419	54,083	5,933	1,143	4,685	497,724
1931-35..	111,719	48,990	54,561	12,295	18,013	8,126	166	1,041	254,911
1936-40(b)	132,876	73,323	60,155	12,294	24,453	10,579	3,844	4,400	321,924
1941-45bc	142,050	100,189	53,412	31,826	16,012	6,278	1,572	1,272	352,611
1946-50bc	345,028	216,149	106,381	81,128	83,583	44,117	4,586	4,622	885,594
1947(b)(c)	45,190	21,920	13,990	12,647	11,908	13,945	349	698	120,647
1948 ..	54,762	44,626	21,744	12,862	13,449	6,627	1,503	679	156,252
1949 ..	113,591	58,016	27,735	21,946	22,485	9,103	1,356	1,770	256,002
1950 ..	102,091	66,925	30,945	24,137	28,856	10,152	1,282	521	264,909
1951 ..	80,734	60,098	28,360	17,826	17,931	12,617	395	(d)4,982	222,943
1952 ..	63,008	65,469	28,285	21,699	22,881	8,941	357	3,445	214,085

(a) Part of New South Wales prior to 1911. (b) Includes recorded deaths of defence personnel, whether inside or outside Australia, from September, 1930 to June, 1947. (c) Excludes interstate migration from July, 1943 to June, 1947. (d) From 1st July, 1947, to 31st December, 1950, no allowance was made for a large unrecorded net inward movement by road into the Australian Capital Territory. From 1st January, 1951, allowance has been made for this movement and the net migration for the year ended 31st December, 1951, includes an adjustment retrospective to 1st July, 1947.

NOTE.—Minus sign (-) denotes decrease.

4. Rates of Increase.—(i) *Australia.* The annual rates of increase per cent. of population in Australia during each of the years 1942 to 1952 were as follows:—1942, 0.80; 1943, 0.95; 1944, 1.06; 1945, 1.13; 1946, 1.18; 1947, 1.61; 1948, 2.05; 1949, 3.28; 1950, 3.29; 1951, 2.68; and 1952, 2.51.

The annual rate of increase of the population during the present century has averaged 1.64 per cent., but the results from year to year have deviated widely from this figure. In the following table the period 31st December, 1900 to 31st December, 1952 has been arranged into certain defined groups of years according to the occurrence of influences markedly affecting the growth of population :—

## POPULATION : PERIODICAL RATES OF INCREASE.

Period.	Interval. (Years.)	Total Increase. ('000.)	Average Annual Numerical Increase. ('000.)	Average Annual Rate of Increase. (Per cent.)		
				Natural Increase.	Net Migration.	Total.
1901 to 1913 ..	13	1,128	87	1.59	0.53	2.04
1914 to 1923 ..	10	862	86	1.50	0.15	1.64
1924 to 1929 ..	6	630	113	1.28	0.64	1.88
1930 to 1939(a) ..	10	569	57	0.82	0.03	0.85
1940 to 1946(a) ..	7	513	73	0.98	0.03	1.01
1947 to 1952(a) ..	6	1,235	206	1.41	1.23	2.57

(a) Population figures include Australian defence forces overseas from September, 1939 to June, 1947.

Up to 1913 the rate of natural increase was rising, and this factor, coupled with the impetus given to immigration from 1911 onwards by increased governmental assistance, was responsible for the comparatively high annual rate of 2.04 per cent. during this period. The 1914-18 War was a dominating influence in the decade 1914-23, and its effects can be seen in the reduction of the rate from 2.04 to 1.64 per cent. In the next span, 1924-29, a more settled and prosperous era was experienced; encouraged migration was resumed on a large scale and, despite a further decline in the rate of natural increase owing to the persistent fall in the birth-rate, the annual rate of growth rose to 1.88 per cent. After 1929 came the economic depression, and immigration ceased—in fact Australia actually lost people through an excess of departures over arrivals in 1930, 1931, 1932 and 1935. The rate of natural increase also fell, and the rate of growth of the population receded to 0.85 per cent. per annum. With the outbreak of war in 1939, Australia entered a new phase in her demographic history, the full effects of which will not be seen for some time to come. The immediate effect of the war was to increase the number of marriages and to reverse the downward trend in fertility. The number of births increased each war year from 1940 to 1945, and these increases more than offset the rise in deaths due to war casualties and higher civilian death rates. As might be expected, migration over these years was negligible. The post-war period 1947 to 1952 was marked by a continued high natural increase and a resumption of immigration, the latter resulting in record net gains in each of the four years 1949 to 1952. The annual rate of growth for the period was 2.57 per cent.

Rates of increase from 1881 to 1951 may be found for each State and Territory of Australia in *Demography Bulletin* No. 69, 1951.

(ii) *Various Countries.* The table hereunder gives approximate rates of increase of the population of Australia and its component States, in comparison with those for other countries :—

POPULATION : RATES OF INCREASE IN VARIOUS COUNTRIES.

State or Country.	Average Annual Rate of Increase per cent. of Population.									
	1901-06.	1906-11.	1911-16.	1916-21.	1921-26.	1926-31.	1931-36.	1936-41.	1941-46.	1946-51.
<b>AUSTRALASIA—</b>										
Australia .. .. .	1.38	2.04	1.87	2.07	2.11	1.50	0.76	0.96	0.98	2.58
New South Wales(a) .. .	1.99	2.05	2.61	2.19	2.20	1.74	0.87	1.00	1.03	2.58
Victoria .. .	0.17	1.70	1.38	1.68	2.00	1.18	0.50	0.94	0.93	2.35
Queensland .. .	1.55	2.77	2.18	2.17	2.38	1.53	1.15	1.13	0.97	2.14
South Australia(b) .. .	0.27	2.48	1.47	2.33	2.17	0.81	0.42	0.58	1.12	2.74
Western Australia .. .	6.22	2.42	1.77	1.31	2.66	2.56	0.92	0.97	0.74	3.55
Tasmania .. .	1.33	0.63	0.43	1.90	0.04	1.01	0.54	0.82	1.01	3.82
New Zealand .. .	2.81	2.43	1.56	2.13	2.06	1.38	0.79	(e) 0.58	1.81	2.04
<b>EUROPE—</b>										
England and Wales .. .	1.04	1.02	-0.84	1.81	0.64	0.44	0.42	0.44	0.45	0.61
Scotland .. .	0.55	0.56	0.31	0.24	0.09	-0.21	0.59	0.64	0.03	-0.08
Ireland, Republic of .. .	-0.22	-0.06	0.21	0.58	-0.60	-0.12	0.28	0.18	-0.20	-0.01
Belgium .. .	1.26	0.69	0.53	-0.55	1.03	0.71	0.42	-0.10	0.22	0.73
Denmark .. .	1.12	1.26	1.20	2.13	1.01	0.67	0.84	0.74	1.20	0.97
France .. .	0.15	0.06	-0.72	0.55	0.76	0.53	0.02	-1.48	0.51	1.10
Germany .. .	1.46	1.33	0.71	-1.60	0.37	0.55	0.58	(d)	(d)	0.92
Italy .. .	0.52	0.80	1.16	0.22	0.31	0.31	0.63	(e) 0.55	(f) 0.49	0.70
Netherlands .. .	1.53	1.22	1.72	1.16	1.53	1.06	1.26	1.12	1.00	1.72
Norway .. .	0.51	0.73	1.10	1.14	0.65	0.42	0.46	0.52	0.90	1.25
Spain .. .	0.52	0.87	0.66	0.82	0.65	0.89	1.46	0.91	0.94	0.61
Sweden .. .	0.61	0.84	0.70	0.64	0.40	0.29	0.34	0.45	1.01	1.03
Switzerland .. .	1.28	1.17	0.81	0.01	0.38	0.62	1.44	0.43	0.98	1.24
<b>ASIA—</b>										
Ceylon .. .	1.62	1.20	1.71	1.28	2.30	1.18	1.34	1.40	2.15	2.95
Japan .. .	1.29	1.08	1.42	0.37	1.42	1.48	0.77	1.06	0.92	2.05
<b>AMERICA—</b>										
Canada .. .	2.99	2.99	2.20	1.81	1.33	1.97	1.23	0.85	1.35	2.62
United States .. .	2.00	1.82	1.67	1.21	1.67	1.27	0.69	0.79	1.18	1.79

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

(c) Excludes

armed forces overseas at 31st December, 1941.

(d) Not available.

(e) Excludes war losses.

(f) Territory defined by 1947 peace treaty.

NOTE.—Minus sign (—) denotes decrease.

## § 6. Density.

1. **General.**—From certain aspects population may be less significant in respect of its absolute amount than in its relation to the area of the country. Australia, with an area of 2,974,581 square miles, and an estimated population on 31st December, 1952 of 8,752,819, excluding about 47,000 full-blood aboriginals, has a density of only 2.94 persons to the square mile, and is, therefore, the most sparsely populated of the civilized countries of the world. For the other continents and sub-continents the densities are approximately as follows :—Europe (excluding U.S.S.R.), 206; Asia (excluding U.S.S.R.), 123; U.S.S.R., 22; Africa, 17; North and Central America, 23; and South America, 16. The population of Australia has thus about one-sixth of the density of South America and of Africa; about one-eighth of that of U.S.S.R. and of North and Central America; about one-forty-second of that of Asia (excluding U.S.S.R.); and about one-seventieth of that of Europe (excluding U.S.S.R.).

On account of the very large area of Australia and the unsuitability for settlement of much of the country, the density of population must necessarily increase slowly. In Australia as a whole the figure has increased from 1.29 per square mile in 1901 to 2.94 in 1952. Victoria's density, however, has grown from 13.77 to 26.82 and that of New South Wales from 4.43 to 11.06 in the same period.

A map showing the density of population throughout Australia at the 1947 Census appears on pages 349–50. When comparing the density of population of the several States consideration should be given to the average annual rainfall distribution in each State as an indication of the climatic influence upon probable population numbers. The



area of Australia receiving less than 10 inches of rainfall is 38 per cent.; that of the various States is:—New South Wales, 20 per cent.; Victoria, nil; Queensland, 13 per cent.; South Australia, 83 per cent.; Western Australia, 58 per cent.; and Tasmania, nil.

2. Main Countries of the World.—Number and density of population of the most important countries of the world at 30th June, 1950, are shown in the following table. In some instances, more particularly in the cases of Asia and Africa, the numbers must be considered as rough approximations only.

POPULATION OF THE MAIN COUNTRIES OF THE WORLD :  
NUMBER AND DENSITY, 1950.

Country.	Popu- lation. (‘000.)	Density. (a)	Country.	Popu- lation. (‘000.)	Density. (a)
<b>EUROPE.</b>			<b>AFRICA.</b>		
Germany .. .. .	69,000	505.6	Nigeria .. .. .	24,000	70.9
United Kingdom .. .. .	50,616	537.3	Egypt .. .. .	20,439	52.9
Italy .. .. .	46,272	398.1	French West Africa(b) .. .. .	16,535	9.3
France .. .. .	41,934	197.1	Ethiopia .. .. .	15,000	36.7
Spain .. .. .	28,287	145.6	Union of South Africa .. .. .	12,320	26.1
Poland .. .. .	24,977	207.5	Belgian Congo .. .. .	11,259	12.4
Yugoslavia .. .. .	16,250	163.8	Algeria .. .. .	8,830	10.4
Rumania .. .. .	16,094	175.6	French Morocco .. .. .	8,410	54.5
Czechoslovakia .. .. .	12,340	250.0	Anglo-Egyptian Sudan .. .. .	8,350	8.6
Netherlands .. .. .	10,114	808.7	Tanganyika Territory .. .. .	7,707	21.3
Hungary .. .. .	9,313	259.3	Mozambique .. .. .	5,698	19.1
Belgium .. .. .	8,639	733.4	Other .. .. .	59,050	..
Portugal(b) .. .. .	8,490	239.7	Total Africa .. .. .	197,598	17.0
Greece (b)(c) .. .. .	7,960	155.5			
Bulgaria .. .. .	7,235	169.1	<b>NORTH AND CENTRAL AMERICA.</b>		
Sweden .. .. .	7,017	40.5	United States of America .. .. .	151,689	50.2
Austria .. .. .	6,906	213.3	Mexico .. .. .	25,368	33.4
Switzerland .. .. .	4,694	294.4	Canada .. .. .	13,845	3.6
Denmark .. .. .	4,271	257.7	Cuba .. .. .	5,348	120.9
Finland .. .. .	4,064	31.2	Other .. .. .	20,093	..
Norway .. .. .	3,265	26.1	Total North and Central America .. .. .	216,343	23.1
Ireland, Republic of .. .. .	3,006	110.8			
Other .. .. .	3,463	..	<b>SOUTH AMERICA.</b>		
Total Europe .. .. .	394,207	206.1	Brazil .. .. .	52,124	15.9
			Argentina .. .. .	17,196	15.9
<b>ASIA.</b>			Columbia .. .. .	11,260	25.6
China(b) .. .. .	463,500	123.3	Peru .. .. .	8,405	17.4
India .. .. .	358,000	293.2	Chile .. .. .	5,809	20.3
Japan .. .. .	82,900	582.5	Other .. .. .	15,446	..
Pakistan .. .. .	75,040	205.1	Total South America .. .. .	110,240	16.1
Indonesia .. .. .	73,500	127.6			
Korea .. .. .	29,500	346.1	<b>OCEANIA, ETC.</b>		
French Indo-China(b) .. .. .	27,460	100.8	Australia(g) .. .. .	8,233	2.8
Turkey(d) .. .. .	20,935	70.7	New Zealand and Depen- dencies .. .. .	1,920	18.6
Philippine Islands .. .. .	19,557	169.2	Territory of New Guinea .. .. .	1,071	11.5
Iran .. .. .	18,772	29.8	Hawaii .. .. .	497	77.3
Burma .. .. .	18,489	70.7	Papua .. .. .	369	4.1
Siam .. .. .	18,313	92.4	Fiji .. .. .	289	41.1
Afghanistan(b) .. .. .	12,000	47.8	Other .. .. .	590	..
Ceylon .. .. .	7,550	298.0	Total Oceania, etc. .. .. .	12,969	3.9
Nepal .. .. .	7,000	129.5			
Saudi Arabia(b) .. .. .	6,000	(e)	<b>SUMMARY.</b>		
Yemen(b) .. .. .	4,500	59.8	Europe .. .. .	394,207	206.1
Other .. .. .	29,000	..	Asia .. .. .	1,272,016	122.7
Total Asia .. .. .	1,272,016	122.7	U.S.S.R. .. .. .	193,000	22.4
			Africa .. .. .	197,598	17.0
U.S.S.R. (Europe and Asia) (f) 193,000		22.4	America, North and Central America, South .. .. .	216,343	23.1
			Oceania, etc. .. .. .	110,240	16.1
			Other .. .. .	12,969	3.9
			Total .. .. .	2,396,373	46.0

(a) Number of persons per square mile.

(b) Includes European Territory.

(c) Includes 47,000 full-blood aboriginals.

(d) Population 1949.

(e) Not available.

(f) Population 1946.

The populations shown in the above table are, in the main, in accordance with figures published in the *Demographic Year Book*, 1951, published by the United Nations, and the countries have been arranged in accordance with the continental groups used therein.

## § 7. General Characteristics.

1. Sex Distribution.—(i) *States.* The number of males to each hundred females has been adopted as a measure of the "masculinity" of the population. On pp. 163-5 in the second issue of the Official Year Book a table was included showing the masculinity of the population of each of the States for each year from 1796 to 1907. In the fifth issue, on p. 123, the figures in this table for the years 1901 to 1907 were modified in accordance with the results of the 1911 Census.

With the exception of some dislocation arising from the two World Wars, there has been a continuous diminution of the masculinity of the population. In 1900 the masculinity was 110.55; in 1910, 107.87 and in 1920, 103.47. After 1921, however, the masculinity tended to rise until 1927 (104.54), gradually fell to 100.36 in 1945 but rose again to 102.66 in 1952.

The general reduction in masculinity has resulted from the increasing proportion of the population in the higher age groups, in which females preponderate owing to their greater longevity, and the general long-term fall in the birth-rate. At the 1947 Census the numbers of the sexes were practically equal, but there has since been an increase in masculinity owing to the higher birth rate and to the increase in the number of immigrants, the majority of whom are males.

The following table shows the masculinity of the population at quinquennial intervals from 1901 to 1945 and for each of the years 1947 to 1952:—

## POPULATION : MASCULINITY, 1901 TO 1952.

(NUMBER OF MALES PER 100 FEMALES.)

As at 31st December—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust.
1901 .. .. .	110.12	101.16	125.78	102.71	155.69	107.90	593.32	(a)	110.15
1905 .. .. .	111.05	97.60	121.75	101.65	141.35	106.09	496.76	(a)	108.65
1910 .. .. .	109.23	98.71	119.02	103.12	132.90	104.14	486.32	(a)	107.87
1915 .. .. .	105.66	95.07	114.74	98.26	117.23	99.77	400.33	109.75	103.55
1920 .. .. .	104.31	97.38	112.00	99.83	114.55	101.67	270.04	116.70	103.47
1925 .. .. .	104.09	99.71	110.94	102.02	115.76	100.90	297.61	132.37	104.24
1930 .. .. .	103.39	99.14	110.66	100.97	117.17	101.53	263.66	118.69	103.85
1935 .. .. .	102.38	97.84	109.81	100.20	113.21	102.45	212.80	115.64	102.71
1940 .. .. .	100.98	97.85	108.48	98.91	110.38	102.74	240.31	124.62	101.81
1945 .. .. .	99.75	97.50	105.45	98.21	105.49	101.15	220.76	115.86	100.36
1947 .. .. .	100.07	97.34	105.20	98.49	105.86	102.13	206.33	123.37	100.50
1948 .. .. .	100.11	97.65	104.98	98.86	105.69	104.03	182.10	130.76	100.65
1949 .. .. .	100.85	98.37	104.95	99.42	106.09	105.37	170.40	131.89	101.26
1950 .. .. .	101.29	100.24	104.83	99.65	105.93	104.55	169.67	123.34	101.88
1951 .. .. .	101.56	101.25	104.43	99.06	106.32	106.10	157.92	125.67	102.29
1952 .. .. .	101.73	102.45	103.83	98.95	106.71	106.57	154.47	134.57	102.66

(a) Part of New South Wales prior to 1911.

(ii) *Various Countries.* The difference between young and old countries in the masculinity of their population is clearly illustrated by the comparisons furnished in the following table.

## POPULATION : MASCULINITY IN VARIOUS COUNTRIES.

Country.	Year.	Number of Males to each 100 Females.	Country.	Year.	Number of Males to each 100 Females.
Ireland, Republic of ..	1951	103.7	Belgium .. .. .	1950	97.0
Canada .. .. .	1950	103.5	Japan .. .. .	1950	96.2
Australia(a) .. .. .	1952	102.7	Italy .. .. .	1949	95.2
New Zealand(b) .. .. .	1952	100.9	Northern Ireland ..	1951	95.0
Union of South Africa(c)	1951	100.3	Spain .. .. .	1949	93.9
Netherlands .. .. .	1950	99.4	France .. .. .	1950	92.9
Sweden .. .. .	1948	99.2	England and Wales ..	1951	92.5
United States of America	1950	98.8	Scotland .. .. .	1951	91.5
Denmark .. .. .	1949	98.4	Poland .. .. .	1950	91.2
Greece .. .. .	1949	98.0	Germany(d) .. .. .	1950	89.6
Norway .. .. .	1949	97.5			

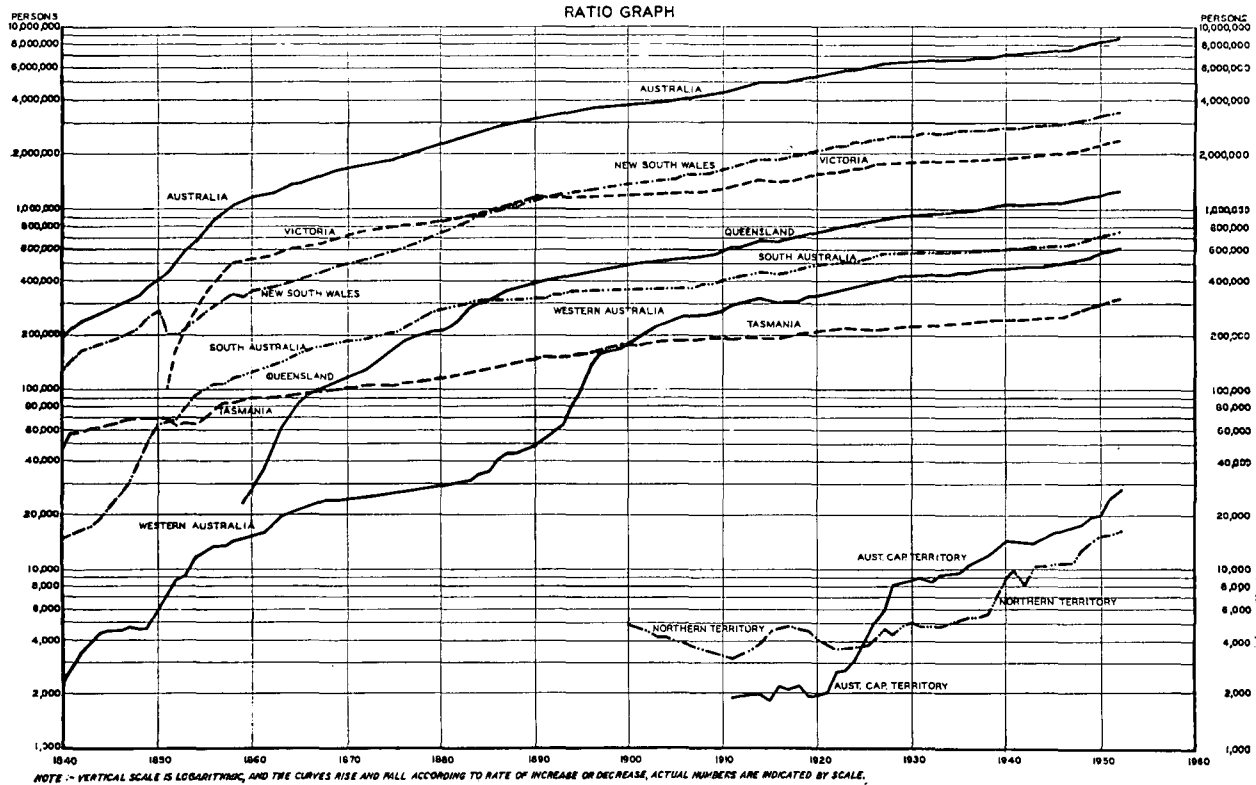
(a) Excludes full-blood aboriginals.

(b) Excludes Maoris.

(c) White population only.

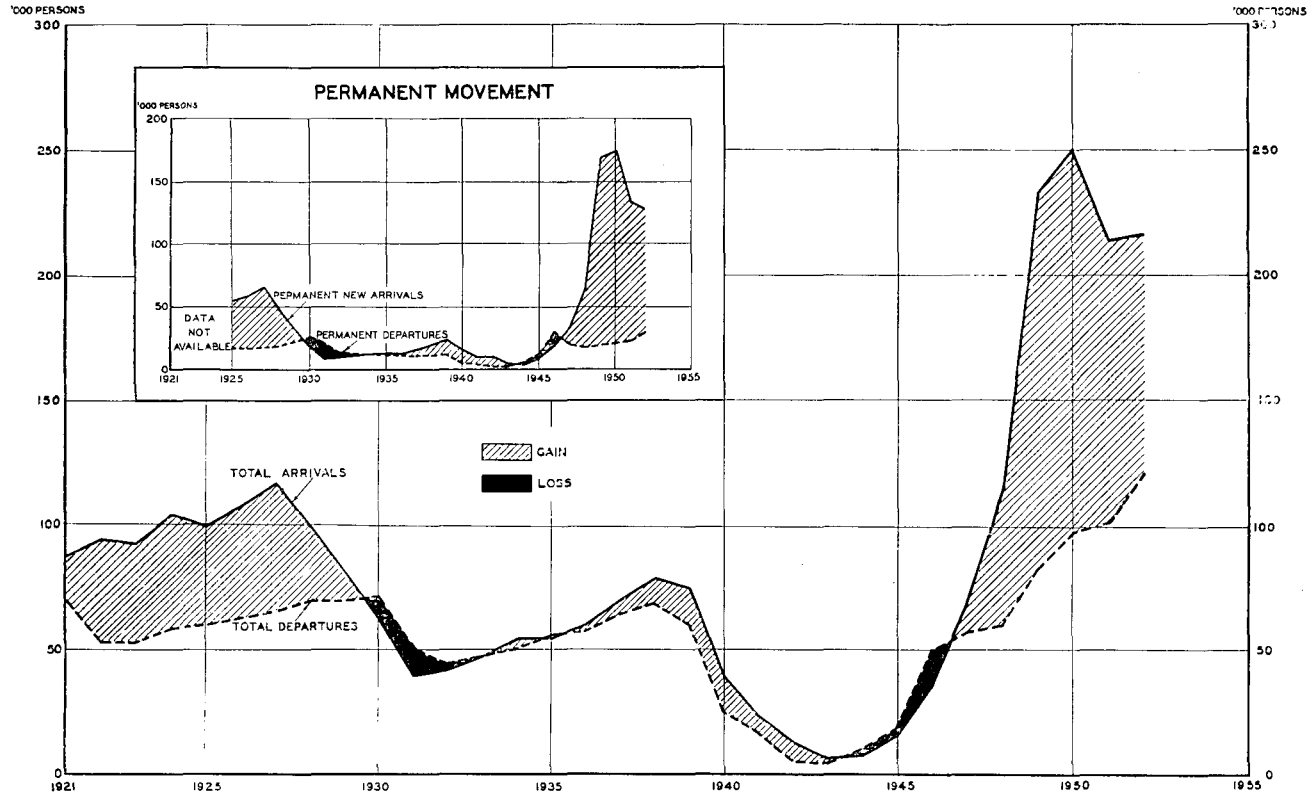
(d) German Federal Republic.

# POPULATION OF AUSTRALIA, 1840 TO 1952



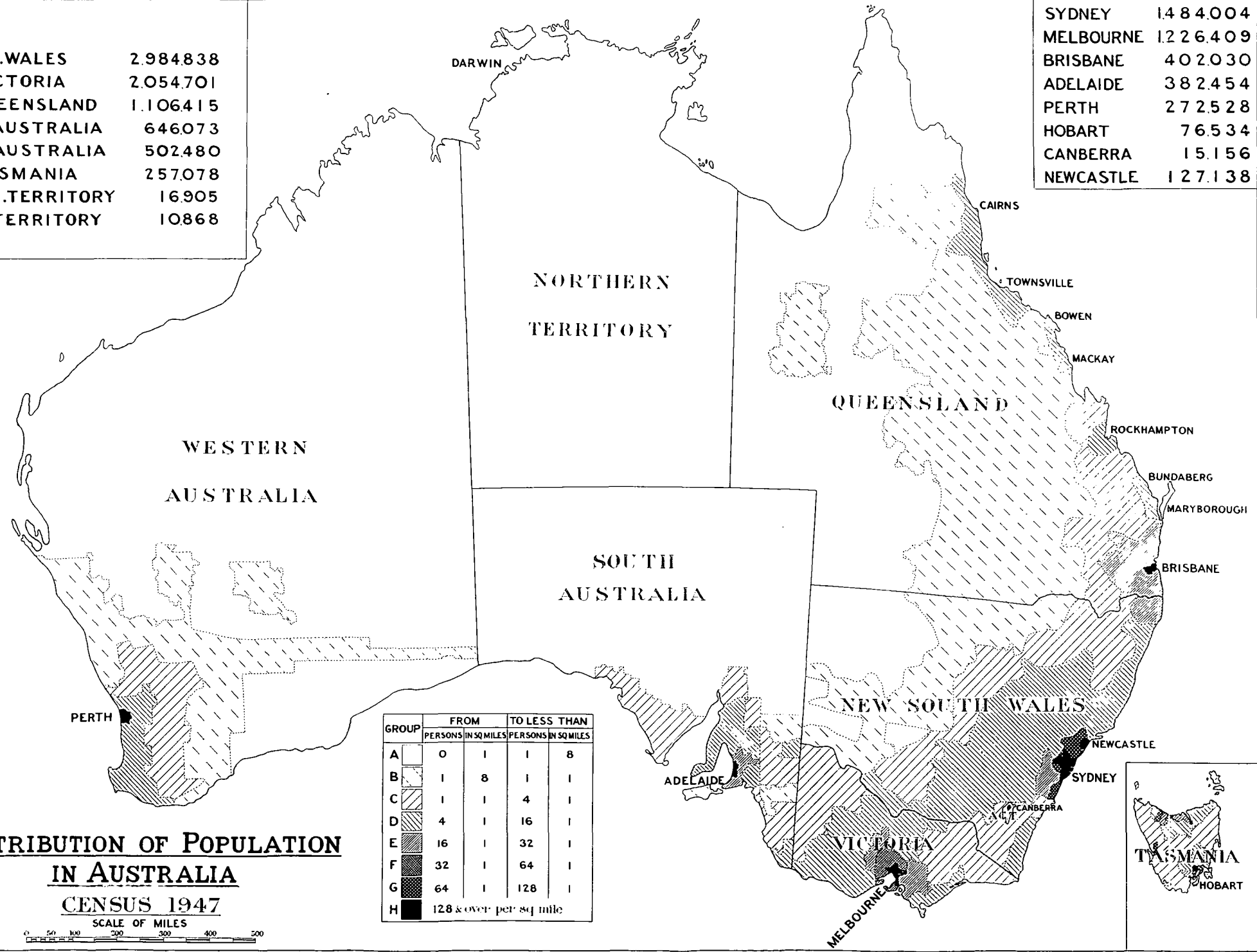
(See page 330.)

# OVERSEA MIGRATION: AUSTRALIA, 1921 to 1952



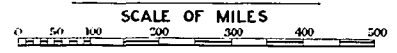
N.S.WALES	2.984838
VICTORIA	2.054701
QUEENSLAND	1.106415
S.AUSTRALIA	646073
W.AUSTRALIA	502480
TASMANIA	257078
A.C.TERRITORY	16905
N.TERRITORY	10868

SYDNEY	1484004
MELBOURNE	1226409
BRISBANE	402030
ADELAIDE	382454
PERTH	272528
HOBART	76534
CANBERRA	15156
NEWCASTLE	127138



GROUP	FROM		TO LESS THAN	
	PERSONS IN SQ MILES	PERSONS IN SQ MILES	PERSONS IN SQ MILES	PERSONS IN SQ MILES
A	0	1	1	8
B	1	8	1	1
C	1	1	4	1
D	4	1	16	1
E	16	1	32	1
F	32	1	64	1
G	64	1	128	1
H	128 & over per sq mile			

**DISTRIBUTION OF POPULATION  
IN AUSTRALIA  
CENSUS 1947**





2. Age Distribution.—At each Census the age distribution of the population is recorded by enumeration of individuals. An examination of these recorded age statistics will be found in the *Statistician's Report* on each Census. The numbers recorded in each five-yearly age group (adjusted for ages not stated) at the Censuses of 1933 and 1947 will be found in Official Year Book No. 38, page 547. For each year subsequent to a Census estimates are made to show the population at each age as at 30th June. The current series of estimates is based on the adjusted age distribution at the Census of 30th June, 1947, and on births, recorded ages at death and recorded ages of migrants from 1st July, 1947 to 30th June, 1952.

Particulars of the estimates for single years of age are published in the annual *Demography Bulletin*. Summarized in five-yearly age groups the estimates for the years 1951 and 1952 are as follows:—

**POPULATION : AGE DISTRIBUTION, AUSTRALIA, 1951 AND 1952.**  
(EXCLUDING FULL-BLOOD ABORIGINALS.)

Age Group (Years).	Estimated, 30th June, 1951.			Estimated, 30th June, 1952.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
0-4 ..	475,861	454,537	930,398	480,226	458,098	938,324
5-9 ..	379,024	363,924	742,948	410,977	394,074	805,051
10-14 ..	309,709	297,985	607,694	323,707	310,712	634,419
15-19 ..	283,357	270,266	553,623	288,990	274,653	563,643
20-24 ..	331,423	310,674	642,097	332,953	304,938	637,891
25-29 ..	361,401	337,584	698,985	370,130	337,597	707,727
30-34 ..	326,477	316,510	642,987	340,162	324,430	664,592
35-39 ..	323,437	310,700	634,137	330,605	317,768	648,373
40-44 ..	301,415	280,021	581,436	309,626	288,414	598,040
45-49 ..	257,456	234,988	492,444	267,786	244,044	511,830
50-54 ..	228,408	230,369	458,777	233,389	229,501	462,890
55-59 ..	193,491	205,913	399,404	196,369	211,986	408,355
60-64 ..	180,907	189,433	370,340	179,561	188,544	368,105
65-69 ..	130,374	143,206	273,580	134,470	150,431	284,901
70-74 ..	87,022	104,932	191,954	90,305	108,550	198,855
75 and over ..	89,994	120,592	210,586	90,917	124,626	215,543
Total ..	4,259,756	4,171,634	8,431,390	4,380,173	4,268,366	8,648,539
Under 21 ..	1,510,377	1,446,041	2,956,418	1,564,875	1,493,586	3,058,461
21 and over ..	2,749,379	2,725,593	5,474,972	2,815,298	2,774,780	5,590,078
Total ..	4,259,756	4,171,634	8,431,390	4,380,173	4,268,366	8,648,539

The next table shows the change which has been taking place in the age composition of the population of Australia since 1871. Each successive Census except 1921 has revealed a larger proportion of the population 15 years of age and over than was recorded at the previous Census. Since the 1947 Census, however, available information on which estimates of the age distribution are based indicates that there has been a reversal of this tendency.

**POPULATION : PROPORTIONAL AGE DISTRIBUTION, AUSTRALIA, 1871 TO 1952.**  
(Per Cent.)

Census.	Males.				Females.				Persons.			
	Under 15 years.	15 and under 65 years.	65 years and over.	Total.	Under 15 years.	15 and under 65 years.	65 years and over.	Total.	Under 15 years.	15 and under 65 years.	65 years and over.	Total.
1871	38.84	59.11	2.05	100	46.02	52.60	1.38	100	42.09	56.17	1.74	100
1881	36.36	60.81	2.83	100	41.86	56.03	2.11	100	38.89	58.61	2.50	100
1891	34.80	62.00	3.20	100	39.38	58.09	2.53	100	36.92	60.19	2.89	100
1901	33.89	61.80	4.31	100	36.51	59.88	3.61	100	35.14	60.88	3.98	100
1911	30.84	64.82	4.34	100	32.52	63.28	4.20	100	31.65	64.08	4.27	100
1921	31.64	63.88	4.48	100	31.79	63.83	4.38	100	31.71	63.86	4.43	100
1933	27.53	66.09	6.38	100	27.42	65.99	6.59	100	27.48	66.04	6.48	100
1947	25.49	67.08	7.43	100	24.63	66.71	8.66	100	25.05	66.90	8.05	100
1952a	27.74	65.05	7.21	100	27.24	63.77	8.99	100	27.49	64.42	8.09	100

(a) Latest estimate, 30th June.

3. **Conjugal Condition.**—Of the total population of Australia at the 1947 Census, 47.3 per cent. had never married; 46.4 per cent. were married; 5.6 per cent. were widowed; and 0.7 per cent. were divorced. Of all persons 15 years of age and over, who stated their conjugal condition, 62.0 per cent. were married.

The number of widowed females recorded in Australia in 1947 was 309,383, or nearly three times as many as the number of widowed males. This disparity is the result of two influences. The first is the greater longevity of females coupled with the usually younger age at marriage; and the second is that a larger proportion of males cancel their widowhood by remarriage.

The numbers of divorced males and females at 30th June, 1933 and 1947 in the following table differ slightly from those shown in § 4 of Chapter XII.—Public Justice where the conjugal conditions of those for whom particulars were not given at the Census have been distributed proportionately among the various groups.

**POPULATION : CONJUGAL CONDITION, AUSTRALIA, 1933 AND 1947.**  
(EXCLUDING FULL-BLOOD ABORIGINALS.)

Conjugal Condition.	Census, 30th June, 1933.			Census, 30th June, 1947.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
<b>Never Married—</b>						
Under 15 years of age ..	926,924	894,643	1,821,567	967,759	931,294	1,899,053
15 years of age and over ..	1,018,587	825,448	1,844,035	929,212	748,414	1,677,626
<b>Total .. ..</b>	<b>1,945,511</b>	<b>1,720,091</b>	<b>3,665,602</b>	<b>1,896,971</b>	<b>1,679,708</b>	<b>3,576,679</b>
<b>Married(a) .. ..</b>	<b>1,299,693</b>	<b>1,293,922</b>	<b>2,593,615</b>	<b>1,751,635</b>	<b>1,754,775</b>	<b>3,506,410</b>
<b>Widowed .. ..</b>	<b>97,775</b>	<b>230,180</b>	<b>327,955</b>	<b>111,680</b>	<b>309,383</b>	<b>421,063</b>
<b>Divorced .. ..</b>	<b>10,251</b>	<b>10,862</b>	<b>21,113</b>	<b>24,952</b>	<b>27,441</b>	<b>52,393</b>
<b>Not Stated .. ..</b>	<b>13,881</b>	<b>7,673</b>	<b>21,554</b>	<b>12,132</b>	<b>10,681</b>	<b>22,813</b>
<b>Total .. ..</b>	<b>3,367,111</b>	<b>3,262,728</b>	<b>6,629,839</b>	<b>3,797,370</b>	<b>3,781,988</b>	<b>7,579,358</b>

(a) Includes persons permanently separated (legally or otherwise).

4. **Dependent Children under 16 years of Age.**—At the 1947 Census 927,453 males and 66,418 females stated they had children under 16 years of age dependent on them at 30th June, 1947, the total number of dependent children under age 16 claimed being 1,962,791, of whom 1,853,314 or 94.4 per cent. were dependent on males and 109,477 or 5.6 per cent. were dependent on females. This represented an average of 2.00 for each male with dependent children and 1.65 for each female with dependent children.

Further information concerning dependent children may be found in Official Year Book No. 38, page 549.

5. **Birthplace.**—At 30th June, 1947, the number of Australian-born was 6,835,171 persons, representing 90.2 per cent. of the population, and the number of oversea-born was 744,187. Of the latter, 56 per cent. were males and 44 per cent. females. Australian residents born in England, Wales, Scotland and Ireland numbered 541,267 while those born in other European countries numbered 110,339, and there were 43,610 of New Zealand birth.

The numbers of persons of Asiatic, African or American birthplace at 30th June, 1947 were respectively 24,096 (British India and Ceylon, 8,160, China 6,404), 7,537 (Union of South Africa, 5,866), and 11,630 (Canada, 4,009, United States of America, 6,232).

For a table showing the number of persons in Australia at each of the last two census dates, classified according to birthplace, reference should be made to Official Year Book No. 38, page 550.



6. **Period of Residence in Australia.**—At the 1947 Census, of persons born outside Australia who stated their period of residence, 5.7 per cent. had resided in Australia for a period of less than 5 years, 11.2 per cent. for less than 10 years, and 14.8 per cent. for less than 15 years. A table showing, for each of the last two Census dates, the number of completed years of residence of persons born outside Australia may be found on page 551 of Official Year Book No. 38.

7. **Nationality.**—At the 1947 Census, 7,540,705 persons, or 99.5 per cent. of the population, were of British nationality. The number of persons in Australia who were born in countries outside the British Commonwealth totalled approximately 128,000, and of this number 38,653, or 30 per cent., were of foreign nationality at 30th June, 1947, the remainder being British subjects mainly by naturalization. The principal foreign nationals in Australia were Italian, 7,172; Chinese, 4,858; Greek, 4,504; United States of America, 3,351; German, 2,361; Yugoslav, 2,096; and Dutch, 2,001. A table showing the nationality of Australian residents at 30th June, 1933 and 30th June, 1947 may be found in Official Year Book No. 38, page 552.

8. **Race.**—The people of Australia may be classified into two groups with respect to racial characteristics, namely, non-indigenous and indigenous. The former group comprises the European and other races who have migrated to Australia and their descendants born in Australia, while the latter group consists of the full-blood aboriginal natives of Australia, whose estimated number at 30th June, 1947, was about 47,000, but who are not included in the general population figures of Australia. The non-indigenous population of Australia is fundamentally British in race and nationality.

At 30th June, 1947, 7,524,129 persons or 99.3 per cent. of the population were of full-blood European race and 0.7 per cent. of non-European and half-caste. Full-blood non-Europeans numbered 21,495 and half-castes 33,734. The principal full-blood non-Europeans in Australia were Chinese, 9,144; Polynesian, 5,332; Natives of India, 2,480; and Syrian, 1,675. There were 27,179 half-caste Australian aboriginals, representing 80.6 per cent. of the total half-caste population. A table showing the comparative numbers of each sex at each of the last two Census dates, classified according to race, may be found in Official Year Book No. 38, page 553.

9. **Religion.**—At the 1947 Census, when the public was informed there was no legal obligation to answer this question, 824,824 or 10.9 per cent. gave no reply. Of males 11.7 per cent. and of females 10.0 per cent. did not state their religion. The number of stated adherents at 30th June, 1947 was greatest for the Church of England, at 2,957,032; then followed Roman Catholic and Catholic combined (1,569,726), Methodist (871,425), Presbyterian (743,540), and Baptist (113,527). In all, 6,672,936, or 99 per cent., professed the Christian faith, 36,562 stated they were of non-Christian religion, 18,708 were classified as indefinite, while 26,328 professed no religion. Further information relative to the religions of the population may be found in a table on page 554 of Official Year Book No. 38.

10. **Industry.**—In the following table the male and female populations of Australia are classified according to the industry in which they are usually engaged. At the Census of 30th June, 1947, 124,439 persons failed to answer the question relating to industry, and the replies of 108,095 persons did not give an entirely satisfactory description of their industry. For practically all of these persons occupation particulars were recorded, and in the table below it has been possible to allocate them to their appropriate industries on the basis of occupational representation in those industries which were adequately described on the Census schedules.

The term "in the work force" includes persons of all ages who are employers, self-employed or working on their own account, wage and salary earners, unpaid helpers engaged in industry, and those who usually work for their living but who have lost their jobs. Persons who do not earn their living by doing work for monetary reward, such as children, housewives, full-time students, retired persons, pensioners, and permanent inmates of institutions, are regarded as not being in the work force. Also persons working regularly but for considerably less than normal working hours were instructed to exclude themselves from the work force unless they looked to their earnings from such work for their main livelihood. On the average, 65 in every 100 males and 19 in every 100 females were in the work force, equivalent to 3½ males to every female in the work force.

**POPULATION CLASSIFIED ACCORDING TO INDUSTRY(a) : AUSTRALIA, 1947.**  
(EXCLUDING FULL-BLOOD ABORIGINALS.)

Industry Group.	Census, 30th June, 1947.		
	Males.	Females.	Persons.
<b>Primary Production—</b>			
Fishing, Hunting and Trapping .. .. .	16,547	88	16,635
<b>Agriculture, Grazing and Dairying—</b>			
Agriculture and Mixed Farming .. .. .	235,455	8,030	243,485
Grazing .. .. .	90,676	5,044	95,720
Dairying .. .. .	97,005	10,049	107,054
Other .. .. .	17,020	1,416	18,436
<b>Total, Agriculture, etc.</b> .. .. .	<b>440,156</b>	<b>24,539</b>	<b>464,695</b>
Forestry .. .. .	24,653	50	24,703
<b>Total</b> .. .. .	<b>481,356</b>	<b>24,677</b>	<b>506,033</b>
<b>Mining and Quarrying</b> .. .. .	<b>56,944</b>	<b>630</b>	<b>57,574</b>
<b>Manufacturing—</b>			
Inadequately Defined .. .. .	6,638	3,369	10,007
Founding, Engineering and Metalworking (including Shipbuilding) .. .. .	211,228	20,809	232,037
Manufacture of Clothing .. .. .	21,214	75,062	96,276
Manufacture of Food and Drink .. .. .	104,752	21,707	126,459
Paper, Printing, Bookbinding and Photography .. .. .	45,791	17,268	63,059
Other .. .. .	322,663	67,227	389,890
<b>Total</b> .. .. .	<b>712,286</b>	<b>205,442</b>	<b>917,728</b>
<b>Building and Construction—</b>			
Inadequately Defined .. .. .	147	..	147
Construction and Repair of Buildings .. .. .	139,998	1,048	141,046
Construction Works and Maintenance (other than Buildings) .. .. .	125,004	451	125,455
<b>Total</b> .. .. .	<b>265,149</b>	<b>1,499</b>	<b>266,648</b>
<b>Transport and Storage—</b>			
Transport, undefined .. .. .	4,613	366	4,979
Road Transport and Storage .. .. .	118,731	5,526	124,257
Shipping and Loading and Discharging Vessels .. .. .	50,557	1,909	52,466
Rail and Air Transport .. .. .	80,600	7,891	88,491
<b>Total</b> .. .. .	<b>254,501</b>	<b>15,692</b>	<b>270,193</b>
<b>Communication</b> .. .. .	<b>36,461</b>	<b>16,391</b>	<b>52,852</b>
<b>Finance and Property</b> .. .. .	<b>55,535</b>	<b>24,353</b>	<b>79,888</b>
<b>Commerce</b> .. .. .	<b>296,689</b>	<b>140,842</b>	<b>437,531</b>
<b>Public Authority (n.e.i.) and Professional Activities</b> .. .. .	<b>217,583</b>	<b>149,140</b>	<b>366,723</b>
<b>Amusement, Hotels, Cafés, Personal Service, etc.</b> .. .. .	<b>102,712</b>	<b>138,464</b>	<b>241,176</b>
<b>Other Industries</b> .. .. .	<b>53</b>	<b>32</b>	<b>85</b>
<b>Persons in the Work Force</b> .. .. .	<b>2,479,269</b>	<b>(b) 717,162</b>	<b>63,196,431</b>
<b>Persons not in the Work Force</b> .. .. .	<b>1,318,101</b>	<b>3,064,826</b>	<b>4,382,927</b>
<b>Total Population</b> .. .. .	<b>3,797,370</b>	<b>3,781,988</b>	<b>7,579,358</b>

(a) The numbers of persons whose industry was either not specified or inadequately described have been distributed (see letterpress above). (b) Excludes approximately 40,000 female part-time workers believed to be unrecorded in the work force at the Census.

11. **Occupational Status.**—The term “occupational status” has been substituted for “grade of occupation” formerly in use, and it relates to the capacity in which persons

are engaged in the various branches of industry. At the Census of 30th June, 1947, 29,013 persons gave no answer to the question regarding occupational status, but subsequent tabulations disclosed that all of these persons belonged to the work force.

In 1933, wage-earners who were employed part-time were asked to indicate that fact on the Census Schedule in answer to the question regarding occupational status, and all those who so described themselves are included in the work force for that year. In 1947, however, persons working regularly, but for considerably less than normal working hours, were instructed on the Census Schedule to exclude themselves from the work force, unless their earnings from such work formed their principal means of livelihood.

**POPULATION : OCCUPATIONAL STATUS, AUSTRALIA, 1933 AND 1947.**  
(EXCLUDING FULL-BLOOD ABORIGINALS.)

Occupational Status.	Census, 30th June, 1933.			Census, 30th June, 1947.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
<b>In Work Force—</b>						
<b>At Work—</b>						
Employer .. .. .	186,849	20,831	207,680	196,932	24,357	221,289
Self-employed .. .. .	318,951	50,424	369,375	342,650	44,487	387,137
Employee (on wage or salary) .. .. .	1,184,002	434,502	1,618,504	1,827,072	620,421	2,447,493
Helper (not on wage or salary) .. .. .	40,754	5,262	46,016	24,227	4,498	28,725
<b>Total at Work .. .. .</b>	<b>1,730,556</b>	<b>511,019</b>	<b>2,241,575</b>	<b>2,390,881</b>	<b>693,763</b>	<b>3,084,644</b>
<b>Not at Work (a) .. .. .</b>	<b>405,269</b>	<b>75,775</b>	<b>481,044</b>	<b>66,009</b>	<b>16,765</b>	<b>82,774</b>
<b>Not Stated .. .. .</b>	<b>4,480</b>	<b>1,178</b>	<b>5,658</b>	<b>22,379</b>	<b>6,634</b>	<b>29,013</b>
<b>Total in Work Force .. .. .</b>	<b>2,140,305</b>	<b>587,972</b>	<b>2,728,277</b>	<b>2,479,269</b>	<b>(b) 717,162</b>	<b>b3,196,431</b>
<b>Not in Work Force (c) .. .. .</b>	<b>1,226,806</b>	<b>2,674,756</b>	<b>3,901,562</b>	<b>1,318,101</b>	<b>3,064,826</b>	<b>4,382,927</b>
<b>Grand Total .. .. .</b>	<b>3,367,111</b>	<b>3,262,728</b>	<b>6,629,839</b>	<b>3,797,370</b>	<b>3,781,988</b>	<b>7,579,358</b>

(a) Includes persons who were (1) unable to secure employment; (2) temporarily laid off from their jobs; or (3) not actively seeking work at the time of the Census on account of sickness or accident, industrial dispute, resting between jobs or for any other reason. (b) Excludes approximately 40,000 female part-time workers believed to be unrecorded in the work force at the Census. (c) See last preceding paragraph.

12. **Persons not at Work.**—The number of persons who were usually engaged in industry, business, trade or service but were out of a job on 30th June, 1947 was 82,774, consisting of 66,009 males and 16,765 females, or 3.5 per cent. of the males and 2.6 per cent. of the females in the wage-earning group, including those not at work. Only 41 per cent. of unemployment was due to scarcity of work. The balance consisted of those who stated that they were not actively seeking work at the time of the Census, and these in turn consisted almost entirely, and in approximately equal proportions, of those who were indisposed through sickness or accident, and those who were resting between jobs.

Tables showing persons not at work at 30th June, 1947, classified according to cause and duration, may be found in Official Year Book No. 38 (see pp. 1303 and 1304).

13. **Other General Characteristics.**—Questions regarding orphanhood, and the ability to read and write a foreign language (of persons who could not read and write English), were not asked on the schedules of the 1947 Census. Consequently, the latest Census data available concerning these questions are those of the 1933 Census, as published in previous issues of the Official Year Book (see No. 36, pp. 482 and 487).

## § 8. Dwellings.

1. **General.**—In addition to the questions relating to the personal particulars of the individual members of the household there were a number of important questions on the Census Schedule designed to elicit information concerning the dwellings in which the population was housed at the date of the Census. From the replies to these questions much valuable information was tabulated concerning housing conditions and a comprehensive summary was published in Official Year Book No. 38, pp. 557 to 571. For

the purpose of a Census a "dwelling" is defined as a room or a collection of rooms occupied by a household group living together as a "family unit" whether comprising the whole or only part of a house or other building (including temporary structures). Included in this definition are private houses, flats, tenements, hotels, boarding houses, hospitals, institutions, and any other structure used for the purpose of human habitation.

2. **Number of Dwellings.**—The number of dwellings enumerated at the Census in 1947 is shown in the following table.

**DWELLINGS : STATES, CENSUS, 30th JUNE, 1947.**

(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

State or Territory.	Number of Dwellings.				Proportion of Total Dwellings.
	Occupied.	Unoccupied.	Being Built.	Total.	
					%
New South Wales ..	746,343	17,392	12,981	776,716	39.03
Victoria ..	527,406	11,412	11,328	550,146	27.65
Queensland ..	272,045	9,647	4,175	285,867	14.37
South Australia ..	168,538	3,547	2,794	174,879	8.79
Western Australia ..	124,767	2,606	1,535	128,908	6.48
Tasmania ..	62,484	2,351	1,607	66,442	3.34
Northern Territory ..	2,697	34	22	2,753	0.14
Australian Capital Territory	3,615	52	316	3,983	0.20
<b>Australia ..</b>	<b>1,907,895</b>	<b>47,041</b>	<b>34,758</b>	<b>1,989,694</b>	<b>100.00</b>

Particulars relating to houses and flats constructed in Australia since the Census in 1947 will be found in Chapter XXIX.—Miscellaneous.

3. **Class of Occupied Dwelling, etc., and Inmates.**—As previously indicated, the dwellings in which the people are housed comprise private houses, tenements, flats, hotels, boarding-houses, charitable institutions, etc. It is desirable when considering the question of housing to exclude those forms of accommodation which do not represent the normal housing conditions associated with family life, and the statistics which follow relate mainly to private dwellings only, i.e., private houses, shares of private houses, tenements and flats.

For Census purposes a "flat" is defined as part of a house or other building ordinarily intended for occupation by a separate family group, and is a self-contained dwelling unit with both cooking and bathing facilities. A "tenement" is part of a house or other building ordinarily intended for occupation by a separate family group but is not a self-contained unit, and consists in the main of a room or rooms with cooking facilities.

Owing to the shortage of houses in Australia in 1947, information was sought at the Census as to the extent of house-sharing, and particulars as recorded are shown separately for 1947 in the following tables. In a number of cases where private houses were shared by more than one family unit, however, only one Householder's Schedule was returned for the whole of the house, instead of separate schedules for each portion occupied separately. These are shown in the tables as "Private Houses (Shared by Two or More Families)" and represent not "occupied dwellings" as defined for Census purposes, but "houses" occupied by more than one family.

In the case of the remaining private houses shared by more than one family, separate schedules were furnished for each portion occupied separately and these portions are shown in the tables as separate dwellings under the heading "Share of Private House".

In the next table, occupied dwellings are distributed according to class and the total numbers of persons in Australia are distributed according to the dwellings in which they were recorded on Census night.

CLASS OF OCCUPIED DWELLING, ETC. AND INMATES : AUSTRALIA, CENSUS, 30th JUNE, 1947.

(EXCLUDING FULL-BLOOD ABORIGINALS AND DWELLINGS OCCUPIED SOLELY BY THEM.)

Particulars.	Number of Occupied Dwellings.				Inmates.(a)			
	Urban.		Rural.	Total.	Urban.		Rural.	Total.
	Metro-politan.	Pro-vincial.			Metro-politan.	Pro-vincial.		
Private House (One Family) ..	739,870	284,133	561,250	1,585,253	2,892,194	1,107,052	2,139,086	6,138,332
Private House (Shared by Two or More Families)(b)	20,808	5,765	6,226	32,799	116,235	33,085	35,969	185,289
Share of Private House(c)	72,724	19,627	13,660	106,011	203,390	58,651	41,955	303,996
Flat (including Share of Flat) ..	94,822	12,697	3,880	111,399	265,259	38,823	12,033	316,115
Tenement ..	33,263	3,855	1,043	38,161	70,594	9,579	2,855	83,028
Total Occupied Private Dwellings ..	961,487	326,077	586,059	1,873,623	3,547,672	1,247,190	2,231,898	7,026,760
Total Other Occupied Dwellings ..	19,933	6,466	7,873	34,272	293,819	112,945	113,440	520,204
Total Occupied Dwellings ..	981,420	332,543	593,932	1,907,895	3,841,491	1,360,135	2,345,338	7,546,964
Wagon, Van, etc. (including Campers-out) ..	847	1,029	3,997	5,873	2,468	2,413	8,910	13,791
Total Population ..	..	..	..	..	3,843,959	1,362,548	2,354,248	7,579,358 (d)

(a) Includes all persons sleeping out on verandahs or in sleep-outs. (b) Private house shared by two or more family units or household groups in respect of which only one Householder's Schedule was furnished. (c) Portions of shared private houses in respect of which portions separate Householders' Schedules were furnished. (d) Includes 18,603 migratory population (shipping, railway and air travellers).

4. Occupied Private Dwellings.—(i) *Material of Outer Walls.* In the following table occupied private dwellings are classified according to the material of which the outer walls were built.

OCCUPIED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO MATERIAL OF OUTER WALLS : AUSTRALIA, 1933 AND 1947.

(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

Material of Outer Walls.	Number of Occupied Private Dwellings.							
	Census, 30th June, 1933.				Census, 30th June, 1947.			
	Urban.		Rural.	Total, Australia.	Urban.		Rural.	Total, Australia.
Metro-politan.	Pro-vincial.	Metro-politan.			Pro-vincial.			
Brick ..	393,528	45,320	29,071	467,919	551,618	60,215	38,179	650,012
Stone ..	30,149	11,588	38,466	80,203	36,714	13,409	37,573	87,696
Concrete ..	5,908	2,912	8,705	17,525	10,442	5,411	13,283	29,136
Wood ..	266,528	166,990	353,753	787,271	315,567	204,863	364,221	884,651
Iron, Tin ..	4,918	13,527	53,767	72,212	6,087	14,498	45,347	65,932
Fibro Cement ..	5,847	3,773	14,076	23,696	31,924	23,586	62,121	117,631
Calico, Canvas, Hessian ..	873	3,554	33,428	37,855	656	1,539	13,255	15,450
Other Materials ..	3,164	1,221	12,924	17,309	4,430	1,774	9,902	16,106
Not Stated ..	1,991	726	2,964	5,681	4,049	782	2,178	7,009
Total Private Dwellings	712,906	249,611	547,154	1,509,671	961,487	326,077	586,059	1,873,623

(ii) *Number of Rooms.* For Census purposes, the kitchen and any permanently enclosed sleep-out or portion of a verandah were included in the number of rooms in the dwelling, but the bathroom, pantry, laundry and storehouse were excluded unless generally used for sleeping.

The following table shows, for Australia as a whole, the number of occupied dwellings of each class at the last two Censuses classified according to number of rooms.

**OCCUPIED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO NUMBER OF ROOMS : AUSTRALIA, 1933 AND 1947.**

(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

Number of Rooms per Dwelling (a)	Number of Occupied Private Dwellings.								
	Census, 30th June, 1933.			Census, 30th June, 1947.					
	Private House.	Tenement and Flat.	Total Private Dwellings.	Private House (One Family).	Private House (Shared by Two or More Families). (b)	Share of Private House. (c)	Flat (including Share of Flat).	Tenement.	Total Private Dwellings.
1 .. .. .	57,522	6,773	64,295	30,453	56	13,305	1,173	12,379	57,366
2 .. .. .	42,731	14,856	57,587	32,146	303	25,427	7,076	14,745	79,697
3 .. .. .	74,935	16,642	91,577	75,544	1,174	26,944	24,838	6,723	135,223
4 .. .. .	306,696	16,702	323,398	344,929	4,965	20,778	43,430	2,495	416,597
5 .. .. .	423,143	9,004	432,147	532,555	9,949	11,493	23,689	631	578,317
6 .. .. .	303,820	3,451	307,271	374,616	9,170	4,982	8,016	252	397,036
7 .. .. .	122,184	1,022	123,206	118,862	4,018	1,539	1,817	40	126,276
8 .. .. .	49,175	373	49,548	41,351	1,816	457	567	9	44,200
9 .. .. .	19,860	151	20,011	14,510	625	152	173	1	15,461
10 and over	21,744	97	21,841	13,916	548	88	100	..	14,652
Not Stated ..	12,709	6,081	18,790	6,371	175	846	520	886	8,798
Total Private Dwellings ..	1,434,519	75,152	1,509,671	1,585,253	32,799	106,011	111,399	38,161	1,873,623
Average Number of Rooms ..	5.07	3.35	4.99	5.11	5.61	3.16	4.06	2.07	4.88

(a) Includes kitchen and enclosed sleep-out or portion of a verandah that has been permanently enclosed but does not include bathroom, pantry, laundry or storehouse, unless generally used for sleeping. (b) Private house shared by two or more family units or household groups in respect of which only one Householder's Schedule was furnished. (c) Portions of shared private houses in respect of which portions separate Householders' Schedules were furnished.

(iii) *Number of Inmates.* A classification of occupied private dwellings according to the number of inmates is shown in the following table.

**OCCUPIED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO NUMBER OF INMATES : AUSTRALIA, 1933 AND 1947.**

(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

Number of Inmates per Dwelling (a)	Number of Occupied Private Dwellings.								
	Census, 30th June, 1933.			Census, 30th June, 1947.					
	Private House.	Tenement and Flat.	Total Private Dwellings.	Private House (One Family).	Private House (Shared by Two or More Families). (b)	Share of Private House. (c)	Flat (including Share of Flat).	Tenement.	Total Private Dwellings.
1 .. .. .	116,501	12,284	128,785	108,055	..	16,870	13,744	13,360	152,029
2 .. .. .	222,700	25,187	247,887	293,351	1,480	34,039	38,337	13,020	380,227
3 .. .. .	271,825	19,086	290,911	338,886	3,508	26,198	30,024	6,843	405,459
4 .. .. .	275,501	10,587	286,088	348,987	5,948	15,378	17,838	2,944	383,095
5 .. .. .	213,557	4,716	218,273	232,622	6,469	7,180	7,168	1,224	254,663
6 .. .. .	142,153	1,937	144,090	132,245	5,637	3,409	2,612	424	144,327
7 .. .. .	87,939	824	87,863	69,894	3,901	1,645	1,035	201	76,676
8 .. .. .	53,755	360	54,115	37,931	2,636	862	424	96	41,949
9 .. .. .	24,570	112	24,682	15,307	1,357	244	122	27	17,057
10 and over	26,918	59	26,977	15,975	1,863	186	95	22	18,141
Total Private Dwellings ..	1,434,519	75,152	1,509,671	1,585,253	32,799	106,011	111,399	38,161	1,873,623
Total Inmates (a)	5,956,922	207,787	6,164,709	6,138,332	185,289	303,996	316,115	83,028	7,026,760
Average Number of Inmates ..	4.15	2.76	4.08	3.87	5.65	2.87	2.84	2.18	3.75

(a) Includes all persons sleeping out on verandahs or in sleep-outs. (b) Private house shared by two or more family units or household groups in respect of which only one Householder's Schedule was furnished. (c) Portions of shared private houses in respect of which portions separate Householders' Schedules were furnished.

(iv) *Nature of Occupancy.* In the following table occupied private dwellings at 30th June, 1933 and 1947 have been classified, for Australia as a whole, according to nature of occupancy.

**OCCUPIED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO NATURE OF OCCUPANCY : AUSTRALIA, 1933 AND 1947.**

(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

Nature of Occupancy.	Number of Occupied Private Dwellings.								
	Census, 30th June, 1933.			Census, 30th June, 1947.					
	Private House.	Tenement and Flat.	Total Private Dwellings.	Private House (One Family).	Private House (Shared by Two or More Families) (a).	Share of Private House. (b)	Flat (including Share of Flat).	Tenement.	Total Private Dwellings.
Owner ..	600,148	4,265	604,413	792,637	12,765	21,133	10,680	810	838,025
Purchaser by Instalments ..	189,035	592	189,627	141,204	2,390	3,472	503	108	147,677
Tenant ..	549,275	66,137	615,412	581,845	16,728	79,025	98,708	36,444	812,750
Caretaker ..	39,815	948	40,763	25,145	418	721	776	286	27,346
Other Methods of Occupancy ..	24,669	453	25,122	20,350	221	371	360	219	21,521
Not Stated ..	31,577	2,757	34,334	24,072	277	1,289	372	294	26,304
<b>Total Private Dwellings ..</b>	<b>1,434,519</b>	<b>75,152</b>	<b>1,509,671</b>	<b>1,585,253</b>	<b>32,799</b>	<b>106,011</b>	<b>111,399</b>	<b>38,161</b>	<b>1,873,623</b>

(a) Private house shared by two or more family units or household groups in respect of which only one Householder's Schedule was furnished. (b) Portions of shared private houses in respect of which portions separate Householders' Schedules were furnished.

(v) *Rent per Week of Private Houses of Three to Six Rooms.* Special tabulations of rents were undertaken for tenanted private houses of three to six rooms with walls of wood or of brick or stone. The particulars for this group of private dwellings, which represented about 80 per cent. of all tenanted private houses in Australia, provide a very convenient summary of average rents ruling at the time of the Census.

Rents were summarized for 468,536 tenanted private houses (occupied by one family) in this group. Forty-nine per cent. had walls of brick or stone and 51 per cent. of wood, compared with proportions of 46 and 54 per cent. respectively for all rented private houses in a similar tabulation in 1933. During the intercensal period there was little variation in the numbers of rented houses of three, four and six rooms, but the number of rented houses of five rooms increased by nearly 13 per cent. Brick dwellings were largely responsible for this increase.

The average rent of 25s. per week for all private houses, three to six rooms, of wood, brick or stone in the metropolitan areas at the 1947 Census was 6s. 7d. or 35.7 per cent., higher than the corresponding average in 1933. In the urban provincial sections the average rent was 21s. 3d. per week, or 36.4 per cent. higher than in 1933, while in the rural areas the average rent of 15s. 7d. was 35.5 per cent. higher than that at the 1933 Census.

The following table shows, for metropolitan, urban provincial and rural areas, the average weekly rent (unfurnished) of tenanted private houses of three to six rooms with walls of wood, brick or stone, at the Censuses of 1933 and 1947.

**AVERAGE WEEKLY RENT (UNFURNISHED)(a) OF TENANTED PRIVATE HOUSES (ONE FAMILY), THREE TO SIX ROOMS, WITH WALLS OF WOOD, BRICK OR STONE : AUSTRALIA, 1933 AND 1947.**

(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

Particulars.	Average Weekly Rent (Unfurnished).															
	Census, 30th June, 1933.				Census, 30th June, 1947.											
	Urban.		Rural.	Total, Australia.	Urban.		Rural.	Total, Australia.								
	Metro-politan.	Pro-vincial.			Metro-politan.	Pro-vincial.										
Private Houses (One Family) with Walls of—	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>								
Wood—																
3 rooms .. .. .	11	1	10	6	8	0	9	9	15	4	15	2	11	5	13	9
4 " .. .. .	14	3	13	2	10	3	12	7	19	11	18	4	13	9	17	4
5 " .. .. .	17	3	15	7	12	5	15	5	23	9	21	1	16	1	20	8
6 " .. .. .	19	10	17	6	13	7	17	6	26	3	23	1	17	6	22	10
3 to 6 rooms .. .. .	16	5	15	0	11	4	14	5	22	7	20	5	15	2	19	7
Brick or Stone—																
3 rooms .. .. .	12	1	11	2	7	6	11	8	16	8	16	10	13	2	16	6
4 " .. .. .	16	9	14	5	10	3	16	1	23	1	20	0	14	9	22	4
5 " .. .. .	20	5	17	8	13	4	19	8	27	5	23	7	18	5	26	5
6 " .. .. .	24	3	20	4	15	3	23	3	31	9	27	0	20	10	30	4
3 to 6 rooms .. .. .	19	8	17	2	12	5	18	11	26	3	23	3	17	8	25	5
Wood, Brick or Stone—																
3 rooms .. .. .	11	8	10	8	7	11	10	8	16	3	15	8	11	8	15	2
4 " .. .. .	15	9	13	6	10	3	14	2	22	1	18	9	13	10	19	10
5 " .. .. .	19	3	16	1	12	6	17	5	26	3	21	10	16	6	23	7
6 " .. .. .	22	9	18	4	13	11	20	6	29	11	24	5	18	3	26	10
3 to 6 rooms .. .. .	18	5	15	7	11	6	16	7	25	0	21	3	15	7	22	6

(a) Rents relate to all tenanted private houses in 1933 and to tenanted private houses (one family) in 1947.

(vi) *Facilities.* At the 1947 Census, householders were asked for the first time to state whether their dwellings were supplied with electricity, gas and running water, and whether they had such facilities as a bathroom, flush toilet, laundry and cooking facilities. In addition they were asked to indicate the means of cooking mostly used. Statistics of these facilities are given on page 571 of Official Year Book No. 38.

## § 9. Oversea Migration.

1. *Oversea Migration during Present Century.*—Earlier issues of the Official Year Book contain in summary form tables showing the increase of population by net migration from 1861 to the latest date, while the *Demography Bulletin* issued by this Bureau gives this information for individual years. The following table shows, for Australia, arrivals and departures and net migration since 1901. A graph showing oversea migration from 1921 to 1952 appears on p. 348.



## OVERSEA MIGRATION : AUSTRALIA.

Period.	Arrivals.			Departures.			Net Migration.		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.
1901-05..	196,993	84,167	281,160	204,170	93,783	297,953	- 7,177	- 9,616	- 16,793
1906-10..	251,482	119,552	371,034	213,483	100,273	313,756	37,999	19,279	57,278
1911-15(a)	422,927	209,893	632,820	382,552	113,406	495,958	40,375	96,487	136,862
1916-20(a)	438,721	100,764	539,485	390,202	78,574	468,776	48,519	22,190	70,709
1921-25..	289,695	188,357	478,052	172,236	122,550	294,786	117,459	65,807	183,266
1926-30..	266,593	203,887	470,480	193,336	147,437	340,773	73,257	- 56,450	129,707
1931-35..	124,207	115,116	239,323	134,883	115,326	250,209	- 10,676	- 210	- 10,886
1936-40(b)	161,774	159,538	321,312	140,901	137,283	278,184	20,873	22,255	43,128
1941-45(b)	35,422	28,503	63,925	30,097	26,019	56,116	5,325	2,484	7,809
1946-50(b)	398,507	303,413	701,920	180,779	168,057	348,836	217,728	135,356	353,084
1947(b) ..	39,865	27,903	67,768	31,289	25,868	57,157	8,576	2,035	10,611
1948(a) ..	66,321	49,402	115,723	33,797	26,811	60,608	32,524	22,591	55,115
1949(a) ..	132,648	100,487	233,135	42,705	40,429	83,134	89,943	60,058	150,001
1950(a) ..	141,891	108,513	250,404	49,907	47,992	97,899	91,984	60,521	152,505
1951(a) ..	122,136	91,504	213,640	54,521	47,686	102,207	67,615	43,818	111,433
1952(a) ..	127,516	88,323	215,839	68,937	52,870	121,807	58,579	35,453	94,032

(a) Includes movements of defence personnel. (b) Excludes movements of defence personnel from September, 1939 to June, 1947.

NOTE.—Minus sign (-) indicates excess of departures over arrivals.

As the encouragement of immigration by Governmental assistance has been a feature of Australian immigration policy, a clear indication of the significance of migration movements is obtained when "assisted" and "unassisted" movements are distinguished. This has been done, broadly, in the following table.

## "ASSISTED" AND "UNASSISTED" MIGRATION : AUSTRALIA.

Period.	Arrivals.			Departures.	Excess of "Un-assisted" Arrivals over All Departures.		
	Nominated and Selected ("Assisted").	Other ("Un-assisted").	Total.				
1901-05..	..	..	3,867	277,293	281,160	297,953	- 20,660
1906-10..	..	..	39,744	331,290	371,034	313,756	17,534
1911-15..	..	..	150,554	(a)482,266	(a)632,820	(a)495,958	-(a)13,692
1916-20..	..	..	11,631	(a)527,854	(a)539,485	(a)468,776	(a)59,078
1921-25..	..	..	115,448	362,604	478,052	294,786	67,818
1926-30..	..	..	99,403	371,077	470,480	340,773	30,304
1931-35..	..	..	781	238,542	239,323	250,209	- 11,667
1936-40(b)	..	..	3,828	317,484	321,312	278,184	39,300
1941-45(b)	..	..	..	63,925	63,925	56,116	7,809
1946-50(b)	..	..	273,195	428,725	701,920	348,836	79,889
1947(b) ..	..	..	6,303	61,465	67,768	57,157	4,308
1948 ..	..	..	28,943	(a) 86,780	(a)115,723	(a) 60,608	(a)26,172
1949 ..	..	..	118,840	(a)114,295	(a)233,135	(a) 83,134	(a)31,161
1950 ..	..	..	119,109	(a)131,295	(a)250,404	(a) 97,899	(a)33,396
1951 ..	..	..	66,674	(a)146,966	(a)213,640	(a)102,207	(a)44,759
1952 ..	..	..	60,531	(a)155,308	(a)215,839	(a)121,807	(a)33,501

(a) Includes movements of defence personnel. (b) Excludes movements of defence personnel from September, 1939 to June, 1947.

NOTE.—Minus sign (-) indicates excess of departures over "unassisted" arrivals.

It is not possible in the statistics of departures to distinguish the return movement of persons who came to Australia as "assisted" migrants and consequently the separate net migration of "assisted" and "non-assisted" persons cannot be ascertained. Nevertheless the basis on which the above table has been compiled is sufficient to throw into relief the major trends in Australian migration statistics.

During the 1914-18 War, 331,781 members of the Australian Imperial Forces embarked for service overseas and have been included in the departures. The arrivals likewise include the surviving members who returned, so that the net migration of the years affected by such movements understates the true position by the equivalent of war losses (approximately 60,000 all told). During the 1939-45 War and up to 30th June, 1947, Australian defence personnel overseas were included as Australian population irrespective of their whereabouts, and their movements have not been recorded in the migration statistics.

In the fifty-two years 1901-1952 a gross number of 825,656 persons entered Australia in four distinct phases of its encouraged migration programme. The number of these who returned overseas is not known precisely but indications are that it would be relatively small. In the same period the excess of non-assisted arrivals over all departures was only 333,973. Thus it may be seen that during this period the net number of "assisted" migrants was about twice the number of "unassisted", making allowance for war losses and those assisted migrants who did not, in the end, remain in Australia.

As the depression years with which the century opened gave way to a period of more stable economic conditions assisted migration was resumed about 1906. Immigration gained impetus during the years 1910 to 1912, but this movement was interrupted by war in 1914. After the war the resumption of assisted migration was accompanied by a flow of unassisted migrants greater than for many decades, but this movement was interrupted by depression and when encouraged migration was resumed in 1939 it was almost immediately stopped by the outbreak of war in September. In the immediate post-war years encouraged migration was again resumed and the numbers brought to Australia by such means were far greater than for any other comparable period. Included in this number were 170,254 persons from Australia's quota in the re-settlement of former European displaced persons. This special intake invalidates any long-term comparison of the ratio between "assisted" and "unassisted" migrants but, if it is excluded, it is evident that the net gain of "unassisted" migrants in the six years 1947 to 1952 has been higher relative to "assisted" migrants than for any time in the last thirty years.

A detailed review of assisted migration into Australia in recent years is given in § 10.

2. **Classes of Arrivals and Departures.**—(i) *General.* Since 1st July, 1924, all oversea travellers have been classified according to their declared intention in regard to residence made at the time of arrival or departure. For various reasons the intentions of travellers are subject to subsequent modification and the classification headings used must therefore be accepted as indicating intention only. The numbers so classified since 1st January, 1926 are as follows.

MIGRANTS CLASSIFIED ACCORDING TO INTENDED RESIDENCE : AUSTRALIA.  
ARRIVALS.

Period.	Permanent New Arrivals.	Australian Residents Returning from Abroad.	Temporary Visitors.	Total.
1926-30 .. .. .	224,010	121,395	125,029	(a) 470,480
1931-35 .. .. .	54,444	84,554	100,325	239,323
1936-40 .. .. .	(b) 88,712	104,870	127,730	321,312
1941-45 .. .. .	(b) 32,624	11,150	20,151	63,925
1946-50 .. .. .	457,988	(c) 108,736	135,196	(c) 701,920
1947 .. .. .	31,765	(c) 18,305	17,698	(c) 67,768
1948 .. .. .	65,739	(c) 23,813	26,171	(c) 115,723
1949 .. .. .	167,727	(c) 28,116	37,292	(c) 233,135
1950 .. .. .	174,540	(c) 32,172	43,692	(c) 250,404
1951 .. .. .	132,542	(c) 36,116	44,982	(c) 213,640
1952 .. .. .	127,824	(c) 40,317	47,698	(c) 215,839

## DEPARTURES.

Period.	Australian Residents Departing Permanently.	Australian Residents Departing Temporarily.	Temporary Visitors.	Total.
1926-30 .. .. .	103,209	111,714	125,772	(d) 340,773
1931-35 .. .. .	71,670	79,426	99,108	(e) 250,209
1936-40 .. .. .	51,006	94,650	132,528	278,184
1941-45 .. .. .	22,399	9,163	24,554	56,116
1946-50 .. .. .	105,968	(c) 101,787	141,081	(c) 348,836
1947 .. .. .	19,579	(c) 18,764	18,814	(c) 57,157
1948 .. .. .	17,271	(c) 19,557	23,780	(c) 60,608
1949 .. .. .	18,457	(c) 25,351	39,326	(c) 83,134
1950 .. .. .	20,855	(c) 31,413	45,631	(c) 97,899
1951 .. .. .	22,180	(c) 34,532	45,495	(c) 102,207
1952 .. .. .	30,370	(c) 40,619	50,818	(c) 121,807

(a) Includes 46 arrivals whose period of intended residence was not stated. (b) Includes evacuees arriving in Australia during the war years as follows:—1936-40, 4,543; 1941-45, 12,586. (c) Includes defence personnel from July, 1947 onwards. (d) Includes 78 departures whose length of intended stay abroad was not stated. (e) Includes 5 departures whose length of intended stay abroad was not stated.

(ii) *Permanent Movement.* In the table above "permanent" residence means residence for a year or longer, in Australia in the case of arrivals or overseas in the case of departures.

Although the number of permanent new arrivals increased during each of the eight years prior to 1939 the number in the latter year was considerably below the annual average for the quinquennium 1926-1930. The war caused a large drop from 1940, but after the war the number rose progressively, reaching 174,540 in 1950, the highest on record.

Permanent departures were far more numerous in the years 1928 to 1931 than in earlier years but they declined during each of the six years ended 1937, the number in the latter year being the lowest recorded until the outbreak of war in 1939. As in the case of arrivals, although not to the same extent, the number of Australian residents departing permanently rose rapidly after the war.

Up to and including 1929 there was a considerable net gain of permanent residents, but during 1930 and 1931 there was a heavy net loss. The loss was very much reduced in 1932, 1933 and 1934, whilst during the five years up to and including 1939 there was a net gain in permanent residents of more than 28,000. Except for the arrival of evacuees,

little movement took place during the war period, but in 1946 a net permanent loss of 11,589 persons occurred, owing in large measure to the departure for the United States of America of Australian wives and children of American servicemen, and, when conditions permitted after the war, the departure of Australians to Papua and New Guinea and of large numbers of war evacuees who were returned to their home countries. Subsequently large net gains were recorded, amounting to 48,468 in 1948, 149,270 in 1949, 153,685 in 1950, 110,362 in 1951, and 97,454 in 1952.

(iii) *Temporary Movement.* Temporary movement refers to persons intending residence for periods shorter than one year and includes Australian residents and visitors from overseas. Since 1st July, 1947, it also includes Australian defence personnel irrespective of length of intended residence. Although considerable in number, the temporary movement is of little significance from the point of view of population growth, as it represents principally the movement of business people and tourists.

3. *Extent of Journey.*—(i) *General.* Since 1st January, 1945, the journeys undertaken by passengers have been recorded for Australian overseas migration statistics in two ways: (a) according to country of embarkation or disembarkation and (b) according to country of last or future permanent residence. In the case of a complete journey in a single stage to or from Australia there is no difference in result between the two methods. With multiple-stage journeys to or from an Australian port, however, one method distinguishes only the first stage of outward journeys or the last stage of inward journeys, whilst the second method records the complete journey.

Detailed statistics of overseas journeys are published in the annual *Demography Bulletin* (see Bulletins No. 68, 1950 and No. 69, 1951). In addition, from January, 1951 onwards, statistics distinguishing State of residence have been compiled for special purposes. The following brief explanations indicate the principles followed in the compilation of migration statistics generally.

(ii) *Arrivals.* (a) *Country of Embarkation*—refers to the country in which the passenger embarked on the particular ship or aircraft which brought the passenger to Australia. Therefore in multiple-stage journeys to Australia these statistics refer only to the last booked stage.

(b) *State of Disembarkation*—refers to the State in which the passenger actually disembarked, irrespective of the State to which originally booked or of State of ultimate destination. Passengers embarking on fresh journeys from one Australian port to another State are recorded as interstate migration.

(c) *Country of Last Permanent Residence*—This is taken from the passenger's own statement and is not necessarily the country from which the single-stage or multiple-stage journey to Australia commenced. Permanent residence means residence for one year or longer.

(d) *State of Intended Future Permanent Residence*—In the administration of the encouraged migration schemes large numbers of migrants are disembarked in States other than the State for which they are destined, and their subsequent movements in Australia to State of ultimate destination are recorded as interstate migration in which distinction between individuals is not practicable. The classification by State of intended future permanent residence was introduced to permit compilation of statistics which show the true effect of overseas arrivals on the populations of individual States.

(iii) *Departures.* (a) *State of Embarkation*—refers to the State in which the passenger actually embarked on the ship or aircraft to leave Australia. The interstate travel of any such passengers prior to embarking is recorded as interstate migration.

(b) *Country of Disembarkation*—refers to the intended country of disembarkation from the particular ship or aircraft which takes the passenger from Australia. In multiple-stage journeys from Australia these statistics refer only to the first booked stage and changes in this, subsequent to departure, are not recorded.

(c) *Country of Intended Future Permanent Residence*—refers to the ultimate destination, after a complete single-stage or multiple-stage journey, of the passenger, as intended at the time of embarkation.

(d) *State of Last Permanent Residence*—refers to the State in which the passenger was last resident for a period of 12 months or longer, irrespective of the State in which actual embarkation on an overseas ship or aircraft took place. In the case of temporary visitors leaving Australia who have not resided for at least twelve months in any one State, the State of embarkation is regarded as the State of last permanent residence.

4. **Racial Origin.**—Up to 30th June, 1948, the system of classifying racial origin was a compromise based partly on nationality and partly on racial origin (see para. 5). From 1st July, 1948, this system was superseded by one in which the passenger's statement as to race is restricted to either "European", "Asian", "African" or "Polynesian", only. Statistics based on this system are shown for the years 1950 to 1952 in the following table. Under this system nationality is recorded independently, as indicated in the next paragraph.

#### RACIAL ORIGIN OF ARRIVALS AND DEPARTURES : AUSTRALIA.

Racial Origin.	Arrivals.			Departures.			Net Migration.		
	1950.	1951.	1952.	1950.	1951.	1952.	1950.	1951.	1952.
European ..	247,321	209,533	210,559	95,995	100,170	117,870	151,326	109,363	92,689
Asian ..	2,922	3,889	4,699	1,735	1,944	3,332	1,187	1,945	1,367
African ..	12	13	49	20	5	47	-8	8	2
Polynesian ..	149	205	532	149	88	558	..	117	-26
<b>Total ..</b>	<b>250,404</b>	<b>213,640</b>	<b>215,839</b>	<b>97,899</b>	<b>102,207</b>	<b>121,807</b>	<b>152,505</b>	<b>111,433</b>	<b>94,032</b>

NOTE.—Minus sign (—) indicates excess of departures over arrivals.

5. **Nationality.**—From 1st July, 1924 to 30th June, 1948, nationality of oversea passengers was recorded as "British" or "Alien" only. Racial origin was also recorded and as the particulars of racial origin stated by passengers closely reflected their nationalities and made it possible to present much more detail of "nationality" than was possible on the total "Alien" basis, published statistics were mostly confined to those compiled on the detailed basis according to a composite classification of "nationality or race".

This method was superseded on 1st July, 1948, by one in which each passenger's race was recorded as indicated in paragraph 4 above, and nationality, as shown on each passenger's passport, was recorded independently of race. The principal nationalities recorded on this basis for the years 1950 to 1952 are as follows :—

#### NATIONALITY OF ARRIVALS AND DEPARTURES : AUSTRALIA.

Nationality.	Arrivals.			Departures.			Net Migration.		
	1950.	1951.	1952.	1950.	1951.	1952.	1950.	1951.	1952.
British(a) ..	138,826	146,358	143,433	90,078	91,732	107,754	48,748	54,626	35,679
American (U.S.) ..	2,978	3,501	3,756	2,613	3,016	3,893	365	485	-137
Austrian ..	391	983	583	49	67	130	342	916	453
Chinese ..	1,326	1,055	1,256	736	554	648	590	501	608
Czechoslovak ..	5,069	1,139	536	54	102	158	5,015	1,037	378
Dutch ..	12,352	15,113	16,769	1,260	2,352	1,950	11,092	12,761	14,819
Estonian ..	1,221	258	101	14	40	33	1,207	218	68
French ..	1,665	2,043	2,058	1,113	1,340	1,447	552	703	611
German ..	1,601	4,562	7,270	155	291	492	1,446	4,271	6,778
Greek ..	1,780	2,634	2,467	158	130	457	1,622	2,504	2,010
Hungarian ..	5,410	1,506	511	46	78	81	5,364	1,428	431
Italian ..	13,149	16,744	28,213	351	534	1,561	12,798	16,210	26,652
Latvian ..	5,419	829	231	32	106	98	5,387	723	133
Lithuanian ..	1,558	184	72	19	32	53	1,539	152	19
Polish(b) ..	31,976	3,986	1,033	103	153	177	31,873	3,833	856
Russian(c) ..	1,769	1,267	682	88	108	117	1,681	1,159	565
Ukranian ..	5,220	508	65	9	18	27	5,211	490	38
Yugoslav ..	10,706	3,554	1,238	36	101	145	10,670	3,453	1,093
Stateless (so described) ..	3,464	2,679	1,738	96	150	289	3,368	2,529	1,449
Stateless (other)(d) ..	252	25	20	12	6	7	240	19	13
Other ..	4,272	4,712	3,807	877	1,297	2,290	3,395	3,415	1,517
<b>Total ..</b>	<b>250,404</b>	<b>213,640</b>	<b>215,839</b>	<b>97,899</b>	<b>102,207</b>	<b>121,807</b>	<b>152,505</b>	<b>111,433</b>	<b>94,032</b>

(a) Includes Irish. (b) Includes Stateless Pole. (c) Includes Stateless Russian. (d) Excludes Stateless Pole, Stateless Russian and Stateless (so described).

NOTE.—Minus sign (—) indicates excess of departures over arrivals.

6. **Age Distribution.**—The annual *Demography Bulletin* shows particulars of total arrivals and departures of oversea travellers classified according to intention as to

residence (*see para. 2 above*) and dissected into five-yearly age groups (*see Demography Bulletin No. 69 for 1951 figures*). A summary of the age distribution of permanent arrivals and departures during 1951 and 1952 is as follows:—

**AGE DISTRIBUTION OF PERMANENT ARRIVALS AND DEPARTURES : AUSTRALIA, 1951 AND 1952.**

Age Group (Years).	Permanent New Arrivals.			Permanent Departures.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
1951.						
0-14 .. ..	17,664	15,844	33,508	1,474	1,406	2,880
15-44 .. ..	53,691	31,434	85,125	7,477	6,993	14,470
45-64 .. ..	5,954	5,925	11,879	1,648	2,113	3,761
65 and over .. ..	824	1,206	2,030	432	637	1,069
Total .. ..	78,133	54,409	132,542	11,031	11,149	22,180
1952.						
0-14 .. ..	14,830	13,358	28,188	2,202	2,084	4,286
15-44 .. ..	56,939	28,752	85,691	11,231	8,731	19,962
45-64 .. ..	5,569	6,278	11,847	2,249	2,567	4,816
65 and over .. ..	812	1,286	2,098	570	736	1,306
Total .. ..	78,150	49,674	127,824	16,252	14,118	30,370

7. **Conjugal Condition.**—Particulars of the overseas arrivals and departures classified according to intention as to residence (*see para. 2 above*) are also dissected to show conjugal condition. Particulars of each classification by conjugal condition for 1951 are shown in *Demography Bulletin No. 69*. Details for the permanent movement during 1951 and 1952 are as follows:—

**CONJUGAL CONDITION OF PERMANENT ARRIVALS AND DEPARTURES : AUSTRALIA, 1951 AND 1952.**

Conjugal Condition.	Permanent New Arrivals.			Permanent Departures.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
1951.						
Never Married .. ..	46,989	25,334	72,323	6,582	5,845	12,427
Married .. ..	30,209	26,209	56,508	4,157	4,097	8,254
Widowed .. ..	534	2,293	2,827	219	1,008	1,227
Divorced .. ..	401	483	884	73	199	272
Total .. ..	78,133	54,409	132,542	11,031	11,149	22,180
1952.						
Never Married .. ..	51,530	23,648	75,178	9,577	7,087	16,664
Married .. ..	25,785	23,189	48,974	6,289	5,626	11,915
Widowed .. ..	492	2,329	2,821	276	1,165	1,441
Divorced .. ..	343	508	851	110	240	350
Total .. ..	78,150	49,674	127,824	16,252	14,118	30,370

8. **Occupation.**—A classification of the occupations of males who arrived or departed permanently during 1951 is published in *Demography Bulletin* No. 69. A summary for 1951 and 1952 for the main occupational groups is as follows :—

**OCCUPATIONS OF PERMANENT MALE ARRIVALS AND DEPARTURES :  
AUSTRALIA, 1951 AND 1952.**

Occupational Group.	1951.		1952.	
	Permanent New Arrivals.	Permanent Departures.	Permanent New Arrivals.	Permanent Departures.
Rural, Fishing and Hunting ..	8,677	403	10,118	694
Professional and Semi-professional ..	2,422	1,320	2,017	1,641
Administrative .. ..	1,395	472	1,291	652
Commercial and Clerical ..	4,766	1,782	4,420	2,200
Domestic and Protective Service ..	3,300	528	3,307	552
Craftsmen .. ..	19,448	2,536	15,122	3,816
Operatives .. ..	8,024	1,002	7,842	1,521
Labourers .. ..	6,977	547	14,304	1,712
Indefinite or Not Stated .. ..	2,990	286	2,412	327
Not Gainfully Occupied—				
Children not attending school ..	10,052	943	7,663	1,365
Full-time Students .. ..	9,418	822	8,960	1,293
Pensioners and others .. ..	664	390	694	479
<b>Total .. ..</b>	<b>78,133</b>	<b>11,031</b>	<b>78,150</b>	<b>16,252</b>

## § 10. Immigration.

### (A) Assisted Migration into Australia.

1. **Joint Commonwealth and States' Scheme.**—Details of the joint scheme of assisted immigration arrived at by agreement between the Commonwealth and State Governments which operated from 1920 to 1939 may be found in previous issues of the Official Year Book (*see* No. 38, page 576).

2. **Suspension of Assisted Passage Scheme during the 1939-45 War.**—After the outbreak of hostilities in 1939 it was decided to discontinue the grant of assisted passages for the duration of the war.

3. **United Kingdom Free and Assisted Passage Agreement, March, 1946.**—(i) *General.* Resumption of migration was the subject of negotiations between the Commonwealth and United Kingdom Governments towards the end of 1945, and an agreement was signed in March, 1946, for free and assisted passages for British residents desirous of settling in Australia. This agreement, which came into operation on 31st March, 1947, continued until 31st March, 1949, when it was renewed for a further two years. It was revived from 1st April, 1951, for a term of three years, but under changed financial arrangements. For the year ended 31st March, 1952, the United Kingdom Government contributed £500,000 sterling towards the scheme, and for the two following years agreed to pay a maximum amount of £150,000 sterling per annum.

The Free and Assisted Passage Agreement has covered three main groups of migrants, *viz.*, *Personal nominees*, who are migrants sponsored by residents of Australia able to provide suitable accommodation for them; *Group nominees*, who are recruited on a trade-qualification basis to meet applications lodged by employers, who guarantee to provide employment and accommodation for those selected; *Commonwealth nominees*,

who comprise workers selected against known and assessed employment demands in Australia, and their families. Migrants in the latter group live in hostels established by the Commonwealth Government until such time as they are able to obtain private accommodation. The Commonwealth nominee scheme was introduced in 1950 in order to reinforce the personal and group nomination schemes, but towards the end of 1952 it was greatly curtailed and selection now is confined to workers in a limited group of essential skilled trades.

Any adult resident of Australia may nominate friends or relatives in the United Kingdom who are eligible to be considered for free or assisted passages under this agreement.

(ii) *Free Passages.* This part of the scheme is financed by the United Kingdom Government as part of its resettlement programme. Persons eligible for consideration are British ex-service men and women, together with their dependants, provided they were resident in the British Isles or were in the United Kingdom forces overseas on 1st September, 1938, and subsequently served in a full-time capacity in the armed forces or the merchant navy of the United Kingdom during any period after 25th May, 1939.

Applications for passages had to be lodged within certain time limits and the final closing date was 31st December, 1950. Those received prior to that date are still valid, and the persons concerned, if otherwise eligible, are entitled to receive free passages.

(iii) *Assisted Passages.* Assisted passages are granted under the Empire Settlement Acts of the United Kingdom to suitable British subjects normally resident in the United Kingdom who do not come within the scope of (ii) above. Although the Commonwealth is not generally prepared to accept single persons or married persons without children if they have reached their forty-sixth birthday before the date of sailing, the parents or close relatives of intending migrants or of persons established in Australia may, if otherwise acceptable under the scheme, be granted passages irrespective of age. Each migrant of 19 years of age and over is required to contribute £10 sterling towards the cost of his or her passage, while juveniles of 14 years and up to the eve of their 19th birthday have to pay £5 sterling. Children under 14 years travel free. Apart from these contributions and that made annually by the United Kingdom Government, the cost of the passages is borne by the Commonwealth Government.

(iv) *Numbers Arrived.* The numbers of British migrants who came to Australia under the Free and Assisted Passage Agreement during the years 1947 to 1952 are given in the following table :—

UNITED KINGDOM FREE AND ASSISTED PASSAGE AGREEMENT : NUMBER OF MIGRANTS.

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	C'wealth Nominees.	Total.
1947-49 ..	19,100	16,071	7,470	5,417	7,626	2,434	1,358	..	59,476
1950 ..	8,884	11,591	5,505	3,047	3,480	1,397	363	4,062	38,329
1951 ..	6,386	10,727	4,097	1,617	2,691	1,176	255	17,058	44,007
1952 ..	7,386	10,596	4,104	2,326	2,804	1,235	382	6,247	35,080
Total, 1947-52	41,756	48,985	21,176	12,407	16,601	6,242	2,358	27,367	176,892

4. *Child Migration from the United Kingdom.*—(i) *General.* Since the commencement of the assisted passage schemes in 1947, the immigration of unaccompanied children and youths from the United Kingdom has been encouraged under the auspices of approved voluntary organizations. The organizations at present introducing child migrants include the Fairbridge Farm Schools of New South Wales and Western Australia, Dr. Barnardo's Homes, the Big Brother Movements of New South Wales and Tasmania, and the Northcote Children's Emigration Fund. All the principal religious denominations are also participating in the scheme. At the present time 46 institutions are caring for child migrants.



(ii) *Financial Assistance.* The United Kingdom Government contributes 12s. 6d., and the Commonwealth Government 10s. per week to approved organizations in respect of each child under 16 years of age, while the State Government concerned pays a minimum of 4s. 3d. per week for each child up to the age of 14. In addition, the Commonwealth Government and the State Government concerned each contribute one-third of the approved capital expenditure on accommodation for child migrants brought in by these organizations.

(iii) *Numbers Arrived.* From the beginning of 1947 to the end of 1952, a total of 2,793 British children and youths arrived under the sponsorship of voluntary organizations, and of this number 519 came in 1951 and 628 came in 1952. New South Wales took 1,408, Western Australia 706, Victoria 314, and the other three States 268. These children were brought to Australia under the United Kingdom Free and Assisted Passage Scheme and are included in the figures shown in the table on page 368.

5. *Assisted Passage Scheme, Eire.*—In November, 1948, the Commonwealth Government decided to grant limited financial assistance to natural-born citizens of Eire normally residing in the British Isles, and to natural-born British citizens residing in Eire, who wish to emigrate to Australia and who are duly selected. This scheme applies only to prospective settlers and their dependants who are not eligible for free or assisted passages under the agreement with the United Kingdom Government (*see* para. 3 above). The maximum amount granted towards an adult passage is £30 sterling, with varying amounts for children according to age.

It is not essential for an applicant for a passage to be nominated by a friend or relative in Australia before the question of granting financial assistance is considered. Single men or women who are eligible under the scheme are readily accepted. Families, on the other hand, are accepted only if they can produce evidence of having secured accommodation in Australia, or, in the case of nominated migrants, a guarantee of accommodation by their sponsors. Up to the end of 1952, 1,565 migrants had arrived under this scheme (*see* table on p. 371).

6. *Maltese Migration.*—On 31st May, 1948, the Commonwealth Government and the Government of Malta entered into an agreement under which the two governments jointly grant financial assistance towards the cost of the passages of Maltese selected to migrate to Australia. In the case of an adult the maximum contribution of the Commonwealth is £30 sterling, and the payment of this is subject to the Government of Malta contributing not less than a like amount.

Any person already established in Australia may nominate individual Maltese under the scheme, while an employer or firm or a voluntary or other organization may nominate a group. In all cases the nominator must undertake to provide accommodation and, so far as groups of migrants are concerned, employment. The Commonwealth retains the right of final selection of both personal and group nominees. The Government of Malta attends to their after-care in Australia.

At 31st December, 1952, a total of 12,229 Maltese had arrived under this scheme since its inception (*see* table on p. 371). The arrivals in 1951 and 1952 were largely dependants of those who had earlier migrated to Australia. To the end of 1952, 65 Maltese children had been brought out to approved institutions in Western Australia. These are included in the number shown above.

7. *Empire and Allied Ex-Servicemen's Scheme.*—With the object principally of giving ex-servicemen of Empire and Allied countries who had served in Australia during the 1939–45 War an opportunity to return for permanent settlement, the Commonwealth Government, on 26th May, 1947, initiated a scheme of financial assistance towards the cost of the passages of eligible Empire ex-servicemen not covered by the Free and Assisted Passage Agreement with the United Kingdom (*see* para. 3 above) and of ex-servicemen of the United States of America, and their dependants. This was later extended to cover ex-servicemen and former members of the resistance movements of

the Netherlands, Norway, Belgium, France and Denmark, and their dependants. The maximum amount granted towards an adult passage is £30 sterling, with varying amounts for children according to age.

Since its inception, 17,877 migrants have come to Australia under this scheme (see table on p. 371), the number of each nationality being: Dutch, 13,321; American, 2,868; French, 948; British, 499; Belgian, 111; Danish, 58; Norwegian, 71; Polish, 1.

8. **Displaced Persons Scheme.**—On 21st July, 1947, the Commonwealth Government entered into an agreement with the International Refugee Organization to resettle in Australia European displaced persons who were under the protection of that body. In the first two years, limitation of shipping restricted the departure of these migrants, with the result that only 840 arrived in 1947 and 9,953 in 1948, but in the next two years the numbers rose to 75,486 and 70,212 respectively. When the International Refugee Organization wound up its activities in 1951, the Commonwealth agreed to receive those displaced persons already accepted for migration whose passages had still to be arranged. During that year 11,708 reached Australia and in 1952 another 2,055, bringing the total number of arrivals under the scheme to 170,254.

9. **Netherlands Migration.**—A migration agreement concluded between the Commonwealth and the Netherlands Governments in February, 1951, came into operation on 1st April of that year. This superseded an earlier agreement between the Commonwealth Government and the Netherlands Emigration Foundation which was made in December, 1946 (see Official Year Book No. 39, p. 567). The initial selection of the migrants is carried out by the Netherlands authorities in accordance with requisitions furnished from time to time by the Commonwealth, the responsibility for final selection resting with Australian migration officers stationed in that country.

The migrant contributes the maximum amount he can afford towards the cost of his passage, but in no case is this less than £10 sterling. The balance of the fare is made up by the Netherlands Government, which is later reimbursed by the Commonwealth to the extent of £37 10s. sterling or half the amount contributed by the Netherlands Government, whichever is the less, in respect of every Dutch adult arriving in Australia under the agreement, with *pro rata* rates for children.

The provision of the shipping is the responsibility of the Netherlands Government. The Commonwealth undertakes the arrangements for the reception of the migrants and their after-care, and assists in the securing of employment. Those unable to secure private accommodation in advance of their arrival are housed in "reception" centres controlled by the Department of Immigration, and if, when he obtains employment, the worker of the family cannot find accommodation for his dependants, they are moved to one of the department's "holding" centres. Here they remain until the family is able to arrange to live together privately again.

Under the 1946 agreement 584 persons arrived between 1948 and May, 1951 and, up to the end of 1952, 8,552 migrants had come to Australia under the 1951 agreement.

10. **Italian Migration.**—On 29th March, 1951, the Commonwealth and Italian Governments entered into a migration agreement on lines similar to those of the Commonwealth-Netherlands agreement. Under the terms of this agreement, which came into force on 1st August, 1951, the maximum amount payable by the Commonwealth towards the fares of selected Italian migrants is £25 sterling for each adult, with amounts in proportion for children according to the passage rates. During 1951 and 1952, 9,970 migrants arrived under this scheme.

11. **German Migration.**—On 29th August, 1952, a migration agreement was signed by representatives of Australia and the Federal Republic of Germany. Except in regard to financial and shipping arrangements, this agreement operates in a manner similar to those concluded with the Netherlands and Italy.

On the financial side, the Commonwealth and the West German Governments each contribute a sum up to a maximum of \$60 towards the fare of each adult selected, the payment of the balance being a matter of arrangement between the migrant and the Inter-Governmental Committee for European Migration. The ships to carry the migrants are provided by the Committee.

The number of Germans who had arrived under this scheme to the end of 1952 was 1,007.

12. **Austrian and Greek Migration.**—Late in 1952 agreement was reached between the Inter-Governmental Committee for European Migration and the Commonwealth for the migration to Australia of a limited number of selected rural workers and their families from Austria and Greece. The passages of these migrants will be arranged by the Inter-Governmental Committee for European Migration which also will bear the cost of the fares, while the Commonwealth has agreed to attend to their reception, temporary accommodation on arrival, and after-care, and to assist in the placing of the workers in suitable employment.

13. **Summary of Arrivals of Assisted Migrants.**—The following table shows, for each of the years 1947 to 1952, the number of assisted migrants who arrived in Australia under the various schemes introduced since 1946. The first assisted migrants in this post-war period arrived in 1947.

ASSISTED MIGRATION SCHEMES : NUMBER OF MIGRANTS.

Assisted Migration Scheme.	1947.	1948.	1949.	1950.	1951.	1952.	Total, 1947-52
United Kingdom Free and Assisted Passage Agreement 1946 (Including Royal Navy Personnel)	4,747	16,243	38,486	38,329	44,007	35,080	176,892
Empire and Allied Ex-Servicemen's Scheme, 1947	269	1,170	1,412	6,444	5,557	3,025	17,877
Displaced Persons Scheme, 1947	840	9,953	75,486	70,212	11,708	2,055	170,254
Polish Migrants from United Kingdom	447	1,010	..	..	..	..	1,457
Maltese Assisted Migration Agreement, 1948	..	527	3,260	3,226	3,313	1,903	12,229
Eire Assisted Migration Agreement, 1948	..	..	109	457	426	573	1,565
Netherlands Foundation Agreement, 1946	..	40	87	441	16	..	584
Netherlands Agreement, 1951	..	..	..	..	1,588	6,964	8,552
Italian Assisted Migration Agreement, 1951	..	..	..	..	59	9,911	9,970
German Assisted Migration Agreement, 1952	..	..	..	..	..	1,007	1,007
I.C.E.M. Agreement, 1952—	..	..	..	..	..	..	..
Austrians	..	..	..	..	..	13	13
Greeks	..	..	..	..	..	..	..
Total Assisted Migrants	6,303	28,943	118,840	119,109	66,674	60,531	400,100

From the earliest years of assisted migration to the end of 1952 a total of 1,468,670 assisted migrants arrived in Australia. Up to the end of 1940, 1,068,311 had arrived of whom 347,705 were destined for New South Wales, 256,090 for Victoria, 236,413 for Queensland, 115,994 for South Australia, 87,015 for Western Australia, 25,022 for Tasmania and 72 for the Australian Capital Territory. None arrived in the years 1941 to 1946. Under the schemes which have operated since 1947 it is not possible to show for each year the number of arrivals destined for the various States because of the system of accommodating certain categories of migrants in Immigrant Reception and Holding Camps and subsequently allocating them to another State or Territory.

**(B) The Regulation of Immigration into Australia.**

1. **Powers and Legislation of the Commonwealth.**—(i) *Constitutional.* Under Section 51, xxvii. and xxviii. of the Commonwealth Constitution, the Parliament of the Commonwealth is empowered to make laws with respect to immigration and emigration and the influx of criminals.

(ii) *Legislation.* Immigration into the Commonwealth is regulated by the Immigration Act 1901–1949, which specifies the persons whose immigration is prohibited and provides for their deportation if they enter contrary to the Act. Provision is also made for the deportation of persons who have entered lawfully but who contravene the provisions of the Act after they have entered. Power is given to the Minister for Immigration to admit prohibited immigrants for a specified period under Certificate of Exemption from the provisions of the Act relating to entry or stay in the Commonwealth.

The amending Act of 1948 provided for the registration of immigration agents, and made it unlawful for unregistered persons to charge fees in respect of applications by intending immigrants for admission to Australia, or to arrange or secure passages to Australia for such immigrants. In addition, the Minister for Immigration has power to fix the fees which registered agents may charge for these services.

The Aliens Deportation Act 1948 repealed the Aliens Deportation Act 1946 and empowers the Minister for Immigration to order the deportation of an alien who after investigation by a Commissioner is reported as not being a fit and proper person to be allowed to remain in Australia.

The War-time Refugees Removal Act 1949 enables the Minister for Immigration to effect the repatriation to their own countries of persons given refuge in Australia during the 1939–45 War. Deportation is limited to persons in respect of whom orders for deportation were issued prior to 12th July, 1950.

The Immigration (Guardianship of Children) Act 1946–1952 provides that the Minister for Immigration becomes the legal guardian of every person under the age of 21 years who enters Australia other than in the charge of, or for the purpose of living in the care of, a parent or adult relative. It is primarily administered through the child welfare authorities in each State who, as the Minister's delegates under the Act, supervise the welfare of each "immigrant child".

The Aliens Act 1947–1952 provides that a register of aliens shall be maintained for every State and Territory of the Commonwealth. Unless exempted, aliens 16 years of age and over are required to register with the Department of Immigration, and to notify the department of any change of address, occupation or employment, and of their marriage. The Act also provides that consent must be obtained before an alien may change his surname.

2. **Conditions of Immigration into Australia.**—(i) *Immigration of Non-Europeans.* In pursuance of the established policy, the general practice is not to permit Asiatics or other coloured persons to enter Australia for the purpose of settling permanently.

Special arrangements were made with India, China, and other Eastern countries under which facilities are afforded for their nationals who are bona fide merchants, students, or tourists to enter and remain in Australia under exemption while they retain their status. Permission is also given for the entry of nationals of these countries as assistants or substitutes for local traders domiciled in Australia. Such persons are allowed to remain so long as they retain their status.

(ii) *Immigration of White Aliens.* White aliens desiring to settle permanently in Australia are required to obtain authority for admission from the Department of Immigration. Their admission under the present policy is subject to their compliance with the Commonwealth's requirements in regard to health, character, freedom from security risk, and general suitability as settlers.

(iii) *General Information.* General information as to conditions of entry into Australia may be obtained from the following officers:—

- (a) In Australia—The Secretary, Department of Immigration, Canberra, A.C.T., and Commonwealth Migration Officers in the capital cities of the various States; (b) in Great Britain—the Chief Migration Officer, High Commissioner's Office, Australia House, Strand, London; (c) in other British Dominions—the High Commissioner for Australia; (d) in other countries where Australia is represented—the Secretary, Australian Embassy, Legation or Consulate.

For details of the Australian representatives in the British Dominions and other countries, see the section entitled "Diplomatic and other Representatives Overseas and in Australia" in Chapter XXIX.

3. *Nationality and Race of Persons Arriving.*—For details of the nationality and racial origin of persons who arrived in Australia during the years 1950 to 1952 see § 9, paras. 4 and 5.

### (C) Passports.

Provision is made in the Immigration Act 1901–1949 for the production of a passport by each immigrant over 16 years of age who desires to enter Australia. Under the Passports Act 1920, it was compulsory also for each person over 16 years of age to be in possession of a passport or other document authorizing his departure. This Act has now been superseded by the Passports Act 1938, which repealed the compulsory provisions. The Act also applies to the Territories of Australia, including Papua, Norfolk Island and the Trust Territory of New Guinea.

Although it is not compulsory for Australians to obtain a passport when leaving Australia, it is desirable in their own interests that they should have one in order to establish their identity and nationality overseas. A passport is necessary for admission into most countries, and the holder of an Australian passport also has no difficulty in landing on return to Australia. The charge for an Australian passport is £1.

As a result of the Nationality and Citizenship Act 1948 (see § 11 below) and the enactment of similar citizenship legislation in other British Commonwealth countries it is now the general rule that Australian passports are issued only to Australian citizens. Citizens of other British Commonwealth countries secure passports from their own High Commissioners in Australia. Australian citizens abroad may secure passports only from Australian representatives.

Diplomatic and official passports are issued to members of the Australian diplomatic service and other Government officials proceeding abroad on official business.

Applicants for passports are required to produce evidence of their identity and nationality (e.g., birth certificates).

## § 11. Citizenship and Naturalization.

1. *Commonwealth Legislation.*—The Nationality and Citizenship Act 1948 commenced on Australia Day (26th January), 1949, and repealed all previous Commonwealth legislation on this subject. The most significant effect of the Act was the creation for the first time of the status of "Australian Citizen". In this respect the Act was complementary to citizenship legislation passed or about to be passed by other countries of the British Commonwealth. All Australian citizens, and the citizens of other countries of the British Commonwealth, are declared to be British subjects. Australian citizenship was automatically acquired as from 26th January, 1949, by persons who were British

subjects at that date and who either (a) were born in Australia or New Guinea; or (b) were naturalized in Australia; or (c) had been residing in Australia during the five years immediately preceding 26th January, 1949; or (d) were born outside Australia of fathers to whom (a) or (b) above applied (provided the persons concerned had entered Australia without being placed under any immigration restriction); or (e) were women who had been married to men who became Australian citizens under the above headings (provided that the women concerned had entered Australia without being placed under immigration restriction). For the purposes of the Act, "Australia" includes Norfolk Island and the Territory of Papua, and by an amendment of the Act in 1950 it was further provided that Nauru shall be treated in the same manner as New Guinea.

After the Act's commencement citizenship may be acquired in the following ways :— (a) by birth in Australia; (b) by birth outside Australia, of a father who is an Australian citizen, provided that the birth is registered at an Australian Consulate; (c) by registration—Certificates of Registration as Australian citizens may be granted by the Minister to British subjects or Irish citizens who make application and satisfy the Minister that they can comply with specified requirements as to residence in Australia, good character and intention to reside permanently in Australia; (d) by naturalization—Certificates of Naturalization as Australian citizens may be granted by the Minister to aliens who make application and can comply with requirements somewhat similar to those previously required under the Nationality Act 1920–1946. New requirements for naturalization are—(i) a Declaration of Intention to apply must be lodged usually at least two years before the final application, but the Minister may waive this requirement in special circumstances; (ii) as a rule five years residence in Australia is required, but residence in other British countries or service under a British government may be accepted (special concessions in the matter of residence qualifications in respect of persons who have voluntarily enlisted in the armed forces were made by an amending Act of 1952); (iii) the applicants must have an adequate knowledge of the responsibilities and privileges of citizenship; (iv) Certificates do not take effect until the applicant takes the Oath of Allegiance. The Oath is now taken in open Court, where the Judge or Magistrate addresses the applicant upon the responsibilities and privileges of citizenship before the Oath is administered and the Certificate of Naturalization delivered to the applicant.

Under the Act, the independence of married women in nationality matters is recognized, and British nationality is restored to those women who had lost it through marriage to aliens. In future, marriage will not affect a woman's nationality. Alien women who marry Australian citizens may, however, be naturalized under somewhat easier conditions than those which apply to other aliens.

2. *Certificates Granted.*—(i) *Australia.* The following figures relate to certificates issued under the Nationality and Citizenship Act 1948–1952 during the years 1951 and 1952 :—

**NATURALIZATION : CERTIFICATES GRANTED, AUSTRALIA.**  
PREVIOUS NATIONALITIES OF RECIPIENTS.

Nationality.	Certificates Granted.		Nationality.	Certificates Granted.		Nationality.	Certificates Granted.	
	1951.	1952.		1951.	1952.		1951.	1952.
Albanian ..	26	7	French ..	18	13	Rumanian ..	1	11
American, U.S. ..	16	23	German ..	153	142	Spanish ..	8	2
Argentinian ..	1	..	Greek ..	223	83	Swedish ..	7	5
Austrian ..	47	149	Hungarian ..	6	124	Swiss ..	12	2
Belgian ..	3	..	Iranian ..	4	..	Syrian ..	3	1
Bulgarian ..	5	..	Iraqian ..	2	2	Thailander ..	2	..
Burmese ..	..	1	Israeli ..	..	3	Turkish ..	1	2
Chinese ..	..	1	Italian ..	468	147	Ukrainian ..	3	9
Czechoslovak ..	80	109	Latvian ..	13	12	U.S.S.R. Citizens	2	8
Danish ..	16	10	Lebanese ..	11	6	Yugoslav ..	79	55
Dutch ..	117	137	Lithuanian ..	2	5	Stateless ..	100	270
Egyptian ..	..	3	Luxembourgish ..	1	..			
Estonian ..	15	25	Norwegian ..	31	17			
Finnish ..	19	2	Polish ..	202	351	Total ..	1,697	1,681

NATURALIZATION : CERTIFICATES GRANTED, AUSTRALIA—*continued*.  
COUNTRIES IN WHICH RECIPIENTS ORDINARILY RESIDED IMMEDIATELY BEFORE  
ENTERING AUSTRALIA OR NEW GUINEA.

Country.	Certificates Granted.		Country.	Certificates Granted.		Country.	Certificates Granted.	
	1951.	1952.		1951.	1952.		1951.	1952.
Africa ..	2	2	Greece ..	211	81	Persia ..	6	6
Albania ..	23	6	Holland ..	54	69	Philippines ..	16	24
Argentina ..	5	5	Hong Kong ..	3	5	Poland ..	43	58
Austria ..	30	56	Hungary ..	9	67	Rumania ..	1	4
Belgian Congo ..	1	1	India ..	9	10	Singapore ..	3	3
Belgium ..	8	28	Indonesia ..	52	62	South Africa ..	1	4
Bolivia ..	1	2	Iran ..	12	1	South America ..	1	2
Brazil ..	1	1	Iraq ..	1	3	Spain ..	4	1
Bulgaria ..	3	3	Israel ..	59	60	Sweden ..	8	13
Burma ..	1	1	Italy ..	449	170	Switzerland ..	17	20
Canada ..	7	2	Japan ..	4	7	Syria ..	4	2
Ceylon ..	2	3	Latvia ..	1	1	Tahiti ..	1	1
Chile ..	1	1	Lebanon ..	13	8	Thailand ..	2	2
China ..	24	251	Lithuania ..	1	1	Turkey ..	2	3
Cuba ..	1	2	Luxembourg ..	1	1	Uganda ..	1	1
Czechoslovakia ..	50	44	Malaya ..	1	1	United Kingdom ..	174	141
Dalmatia ..	1	1	Mexico ..	1	1	U.S. of America ..	35	43
Denmark ..	11	7	Middle East ..	1	3	Uruguay ..	1	3
Dodecanese Islands ..	14	13	New Caledonia ..	8	3	U.S.S.R. (Russia) ..	8	7
Egypt ..	30	35	New Guinea ..	1	6	West Indies ..	1	1
Estonia ..	6	2	New Hebrides ..	1	1	Yugoslavia ..	61	23
Finland ..	16	1	New Zealand ..	4	2			
France ..	27	90	Norway ..	25	17			
Germany ..	132	184	Pakistan ..	1	1	Total ..	1,697	1,681

(ii) *States*. The certificates of naturalization granted in 1952 (1951 figures in parentheses) were issued in respect of residents of the various States and Territories as follows:—New South Wales, 568 (502); Victoria, 672 (554); Queensland, 176 (238); South Australia, 85 (131); Western Australia, 101 (196); Tasmania, 23 (23); Northern Territory, 4 (19); Australian Capital Territory, 6 (10); and New Guinea, 46 (24); Total, 1,681 (1,697).

## § 12. Population of Territories.

At the Census of 30th June, 1947, arrangements were made to obtain complete information concerning not only the two internal territories of Australia—Northern Territory and Australian Capital Territory—but also the external territories under the control of Australia, namely:—Norfolk Island; Papua; Trust Territory of New Guinea; and Trust Territory of Nauru. Figures respecting population and number of dwellings in each Territory at the Census of 1947 are summarized in the following table:—

POPULATION AND DWELLINGS : TERRITORIES, CENSUS, 30th JUNE, 1947.  
(EXCLUDING INDIGENOUS POPULATION.)

Territory.	Population.			Dwellings.			Total.
	Males.	Females.	Persons.	Occu- pied.	Unoccu- pied.	Being BUILT.	
Northern Territory ..	7,378	3,490	10,868	2,697	34	22	2,753
Australian Capital Territory ..	9,092	7,813	16,905	3,615	52	316	3,983
Norfolk Island ..	505	433	938	279	43	5	327
Papua ..	2,057	1,182	3,239	(a) 769	(b)	(b)	(b)
Trust Territory of New Guinea ..	4,369	1,831	6,200	(a) 1,391	(b)	(b)	(b)
Trust Territory of Nauru ..	1,413	63	1,476	54	9	10	73

(a) Includes temporary dwellings constructed of iron, sisalcraft, native materials, canvas, etc., in war-devastated areas. (b) Not available.

The population of the internal and external territories at 31st December, 1952 and 30th June, 1952, respectively, will be found in Chapter VII.—The Territories of Australia. Particulars concerning the indigenous populations of these territories are also included therein.

### § 13. The Aboriginal Population of Australia.

In Official Year Book No. 17, pp. 951-61, a brief account is given of the Australian aboriginal population, its origin, its numbers as estimated from time to time, and the steps taken for its protection. On pp. 914-6 of Official Year Book No. 22, particulars are shown for each of the States and Territories of Australia at successive periods, while a special article dealing with the estimated number and distribution of the native population at the date of first settlement of the white race in the continent appears on pp. 687-96 of Official Year Book No. 23.

The aboriginals are scattered over the whole of the mainland but the majority are concentrated in Western Australia, Queensland and the Northern Territory. Details of the number in each State at the June, 1947 Census are shown in the following table. Full-blood aboriginals in employment or living in proximity to settlements were enumerated at the Census, while estimates of the total numbers, including those living in the wild state, were furnished by the Protectors of Aboriginals. Half-caste aboriginals are included in the numbers of the population and are of course enumerated at the Census. The figures shown for Queensland are exclusive of 5,000 Torres Strait Islanders.

ABORIGINAL POPULATION, 30th JUNE, 1947.

State or Territory.	Full-blood.			Estimate of Total Numbers.(b)	Half-caste. (Enumerated at the Census.)			Total, Full-blood and Half-caste.	
	In Employment or Living in Proximity to Settlements.(a)				Persons.	Males.	Females.		Persons.
	Males.	Females.	Persons.						
New South Wales ..	546	407	953	(c) 953	5,498	5,109	10,607	11,560	
Victoria ..	100	108	208	(c) 208	537	532	1,069	1,277	
Queensland ..	3,504	2,822	6,326	9,100	3,684	3,527	7,211	16,311	
South Australia ..	259	205	464	2,139	1,103	1,054	(d)2,157	d 4,296	
Western Australia ..	2,664	2,269	4,933	20,338	2,359	2,215	(d)4,574	d 24,912	
Tasmania ..	..	..	..	..	127	87	214	214	
Northern Territory ..	5,615	5,370	10,985	13,900	660	587	1,247	15,147	
Aust. Capital Territory ..	..	..	..	..	58	42	100	100	
<b>Total ..</b>	<b>12,688</b>	<b>11,181</b>	<b>23,869</b>	<b>46,638</b>	<b>14,026</b>	<b>13,153</b>	<b>27,179</b>	<b>73,817</b>	

(a) Enumerated at the Census. (b) Furnished by the Protectors of Aboriginals. (c) Census totals. (d) In addition to these totals, the Protectors of Aboriginals estimated that there were 826 half-caste and mixed bloods in South Australia and 1,322 in Western Australia, presumably living in the nomadic state.

According to the Annual Reports of the Protectors of Aboriginals, there has been little change in the numbers of aboriginals in most States since 1947. In Western Australia, however, the estimate for the total number of full-blood and half-caste aboriginals at 30th June, 1952 was 21,051.



## CHAPTER X. VITAL STATISTICS.

NOTE.—1. In the Vital Statistics chapter of Official Year Book No. 38, tables covered 1948 and, where possible, 1947. In issue No. 39 these tables covered 1950 and where possible, 1949. In the present issue totals and rates have been shown for births, deaths, marriages and infant deaths for the year 1952, but in most cases an analysis of the figures has not been carried beyond 1951. More detailed figures will be found in *Demography Bulletin* No. 69 unless otherwise specifically indicated.

2. Figures for Australia throughout are exclusive of full-blood aboriginals.

### § 1. Marriages.

1. Number of Marriages.—The number of marriages registered in Australia during the year ended 31st December, 1952 was 74,172 giving a rate of 8.58 per 1,000 of the mean population for the year. A summary of the number of marriages registered in each State and Territory since 1901 is given in the following table. Annual averages for each five-yearly period from 1861 will be found in Official Year Book No. 39, page 575.

#### MARRIAGES.

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
ANNUAL AVERAGES.									
1901-1905 ..	10,435	8,294	3,154	2,412	2,024	1,342	7	..	27,668
1906-1910 ..	12,742	9,502	4,203	3,159	2,098	1,446	10	(a)	33,160
1911-1915 ..	16,741	11,762	5,696	4,032	2,552	1,549	16	4	42,352
1916-1920 ..	15,744	11,321	5,397	3,756	2,145	1,443	27	5	39,838
1921-1925 ..	18,041	13,293	6,072	4,200	2,564	1,594	14	4	45,782
1926-1930 ..	19,253	12,955	6,279	4,036	3,167	1,506	23	30	47,249
1931-1935 ..	18,742	12,773	6,950	3,967	3,328	1,638	29	53	47,480
1936-1940 ..	25,295	17,784	8,982	5,726	4,399	2,187	83	85	64,541
1941-1945 ..	28,506	19,450	10,563	6,517	4,668	2,097	71	109	71,981
1946-1950 ..	30,162	20,453	10,666	6,581	5,205	2,529	114	181	75,891
YEARLY TOTALS.									
1947 .. ..	30,172	20,437	10,999	6,668	5,282	2,584	124	191	76,457
1948 .. ..	30,164	20,035	10,125	6,704	5,186	2,428	110	150	74,902
1949 .. ..	28,757	20,066	10,234	6,247	4,951	2,422	130	192	72,999
1950 .. ..	30,036	20,320	10,304	6,585	5,434	2,560	144	216	75,599
1951 .. ..	30,341	21,117	10,814	6,646	5,390	2,607	143	240	77,298
1952 .. ..	29,351	20,220	10,056	6,241	5,389	2,553	137	225	74,172

(a) Part of New South Wales prior to 1911.

2. Crude Marriage-rates.—The crude marriage-rates for each State and Territory for a series of years are given hereunder:—

#### CRUDE MARRIAGE-RATES.(a)

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
AVERAGE ANNUAL RATES.									
1901-1905 ..	7.37	6.88	6.12	6.75	9.26	7.49	1.68	..	7.10
1906-1910 ..	8.11	7.63	7.52	8.34	8.06	7.71	2.61	(b)	7.89
1911-1915 ..	9.32	8.48	8.09	9.31	8.26	8.01	4.33	1.93	8.86
1916-1920 ..	8.03	7.82	7.64	8.20	6.80	7.20	5.74	1.91	7.82
1921-1925 ..	8.20	8.28	7.62	8.13	7.27	7.40	3.82	1.21	8.04
1926-1930 ..	7.86	7.42	7.10	7.12	7.80	6.97	5.11	3.86	7.52
1931-1935 ..	7.20	7.02	7.35	6.83	7.58	7.19	5.92	5.74	7.16
1936-1940 ..	9.29	9.52	8.80	9.65	9.49	9.25	13.28	7.22	9.35
1941-1945 ..	9.97	9.86	10.04	10.61	9.74	8.61	7.18	7.57	9.94
1946-1950 ..	9.86	9.73	9.45	9.93	10.00	9.51	9.20	10.00(c)	9.77

(a) Number of marriages per 1,000 of mean population. (b) Part of New South Wales prior to 1911.

(c) Rate based on revised mean population estimates shown on p. 335 is 9.35.

## CRUDE MARRIAGE-RATES—continued.

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
YEARLY RATES.									
1947 .. ..	10.11	9.95	9.95	10.32	10.50	10.02	11.39	(a) 11.30	10.09
1948 .. ..	9.96	9.59	9.01	10.18	10.07	9.18	9.03	8.25	9.71
1949 .. ..	9.23	9.38	8.92	9.27	9.29	8.88	9.65	10.05	9.23
1950 .. ..	9.31	9.22	8.74	9.40	9.73	9.07	9.65	10.53	9.24
1951 .. ..	9.14	9.31	8.96	9.23	9.27	8.90	8.94	9.84	9.17
1952 .. ..	8.66	8.66	8.14	8.44	8.95	8.39	8.51	8.33	8.58

(a) Rates based on revised mean population estimates shown on p. 335 are as follows:—1947, 11.21; 1948, 7.81; 1949, 9.06; 1950, 9.16.

3. **Marriage-rates based on Marriageable Population.**—As the marriage-rates in some international tabulations are based on the unmarried population aged 15 years and over, the corresponding rates have been calculated for Australia for the last seven census periods. The period in each case comprises the census year with the year immediately preceding and the year immediately following, and the figures are as follows:—

## PERSONS MARRYING PER 1,000 OF UNMARRIED POPULATION: AUSTRALIA.

Period.	Rate.(a)	Period.	Rate.(a)
1880-82 .. ..	48.98	1920-22 .. ..	56.22
1890-92 .. ..	45.74	1932-34 .. ..	42.88
1900-02 .. ..	42.14	1946-48 .. ..	71.24
1910-12 .. ..	50.44		

(a) Average annual number of persons who married per 1,000 unmarried persons, including widowed and divorced, aged 15 years and over.

4. **Crude Marriage-rates of Various Countries.**—The following table gives the crude marriage-rates for Australia in comparison with the rates for various other countries.

## CRUDE MARRIAGE-RATES(a) : VARIOUS COUNTRIES.

Country.	1908-13.	1921-25.	1926-30.	1931-35.	1951.
United States of America .. ..	(b)	10.6	9.9	9.2	10.6
Yugoslavia .. ..	(b)	10.6	9.5	7.8	10.3
Union of South Africa(c) .. ..	(b)	8.0	9.3	9.4	(d) 9.9
<b>Australia(e)</b> .. ..	<b>8.4</b>	<b>8.0</b>	<b>7.5</b>	<b>7.2</b>	<b>9.2</b>
Canada .. ..	(b)	7.3	7.3	6.4	9.2
Austria .. ..	(b)	9.6	7.5	6.8	9.1
Netherlands .. ..	7.5	8.2	7.7	7.2	8.8
New Zealand(f) .. ..	8.5	8.0	7.7	7.3	8.7
Norway .. ..	6.2	6.3	6.1	6.5	8.3
United Kingdom .. ..	7.3	7.7	7.5	7.9	8.2
Denmark .. ..	7.3	7.9	7.8	8.7	8.1
Belgium .. ..	7.9	10.6	9.1	7.8	8.1
Japan .. ..	9.3	8.8	8.0	7.6	8.0
Finland .. ..	6.1	7.1	7.2	7.2	8.0
Argentina .. ..	6.8	7.2	7.4	6.5	8.0
Switzerland .. ..	7.3	7.7	7.5	7.7	7.9
Chile .. ..	(b)	6.9	9.3	6.9	7.8
Portugal .. ..	6.9	7.9	6.9	6.6	7.7
Sweden .. ..	6.0	6.3	6.7	7.3	7.6
France .. ..	7.9	9.5	8.2	7.4	7.5
Spain .. ..	7.0	7.3	7.3	6.5	7.5
Italy .. ..	7.7	9.0	7.3	6.8	6.9
Mexico .. ..	(b)	(b)	(b)	6.1	6.1
Ireland, Republic of .. ..	5.2	4.9	4.6	4.6	5.4

(a) Number of marriages per 1,000 of mean population. (b) Not available. (c) White population only. (d) 1950. (e) Excludes full-blood aboriginals. (f) Excludes Maoris.

5. *Age and Conjugal Condition at Marriage.*—(i) *General.* Age at marriage in single years of age and previous conjugal condition of bridegrooms and brides in 1951 will be found in *Demography Bulletin* No. 69. A summary in age groups is given hereunder. There were 5,268 males aged less than twenty-one years married during 1951 while the corresponding number of females was 22,262. At the other extreme there were 83 bachelors and 50 spinsters in the age group 65 years and over.

AGE AND CONJUGAL CONDITION OF BRIDEGROOMS AND BRIDES : AUSTRALIA, 1951.

Age at Marriage (Years).	Bridegrooms.				Brides.			
	Bachelors.	Widowers.	Divorced.	Total.	Spinsters.	Widows.	Divorced.	Total.
Under 20 ..	2,318	..	..	2,318	14,555	4	2	14,561
20-24 ..	31,473	25	53	31,551	35,190	93	329	35,612
25-29 ..	21,091	126	660	21,886	11,065	300	1,255	12,620
30-34 ..	6,892	190	1,142	8,224	3,426	528	1,325	5,279
35-39 ..	3,241	317	1,162	4,720	1,776	590	1,125	3,491
40-44 ..	1,626	363	911	2,900	884	539	732	2,155
45-49 ..	863	430	620	1,913	503	597	389	1,399
50-54 ..	471	503	398	1,372	286	458	183	927
55-59 ..	234	558	202	994	162	357	80	599
60-64 ..	111	431	91	633	83	258	45	386
65 and over	83	654	50	787	50	205	14	269
Total ..	68,403	3,597	5,298	77,298	67,980	3,839	5,479	77,298

(ii) *Proportional Distribution.* In the following table the proportional distribution of bridegrooms and brides according to previous conjugal condition is shown in five-yearly periods from 1911 to 1950 and for each year 1949 to 1951 :—

CONJUGAL CONDITION OF BRIDEGROOMS AND BRIDES : PROPORTIONAL DISTRIBUTION, AUSTRALIA.

(Per Cent.)

Period.	Bridegrooms.				Brides.			
	Bachelors.	Widowers.	Divorced.	Total.	Spinsters.	Widows.	Divorced.	Total.
1911-15 ..	93.92	5.51	0.57	100.00	94.62	4.62	0.76	100.00
1916-20 ..	92.82	6.33	0.85	100.00	93.44	5.59	0.97	100.00
1921-25 ..	92.18	6.38	1.44	100.00	92.99	5.49	1.52	100.00
1926-30 ..	92.31	5.93	1.76	100.00	93.46	4.55	1.99	100.00
1931-35 ..	92.63	5.39	1.98	100.00	94.37	3.53	2.10	100.00
1936-40 ..	92.59	4.82	2.59	100.00	93.94	3.38	2.68	100.00
1941-45 ..	91.44	4.77	3.79	100.00	92.11	3.93	3.96	100.00
1946-50 ..	88.82	4.74	6.44	100.00	88.71	4.74	6.55	100.00
1949 ..	88.61	4.92	6.47	100.00	88.49	4.74	6.77	100.00
1950 ..	88.34	4.82	6.84	100.00	87.98	4.92	7.10	100.00
1951 ..	88.49	4.65	6.86	100.00	87.94	4.97	7.09	100.00

(iii) *Relative Ages of Bridegrooms and Brides.* The relative ages of bridegrooms and brides in 1951 are shown in single years in *Demography Bulletin* No. 69. A summary in age groups of five years is given below.

## RELATIVE AGES OF BRIDEGROOMS AND BRIDES : AUSTRALIA, 1951.

Age of Bridegroom (Years).	Total Bridegrooms.	Age of Bride (Years).							
		Under 15.	15-19.	20-24.	25-29.	30-34.	35-39.	40-44.	45 and over.
Under 20..	2,318	6	1,745	537	25	3	2	..	..
20-24 ..	31,551	15	9,420	19,529	2,279	243	48	13	4
25-29 ..	21,886	5	2,777	11,999	5,585	1,153	299	57	11
30-34 ..	8,224	..	436	2,537	2,801	1,581	666	158	45
35-39 ..	4,720	2	107	736	1,242	1,173	961	349	150
40-44 ..	2,900	..	35	174	460	674	719	557	281
45-49 ..	1,913	..	8	67	146	285	441	441	525
50-54 ..	1,372	..	2	25	55	109	212	297	672
55-59 ..	994	..	1	4	17	39	92	160	681
60-64 ..	633	..	1	3	7	13	31	78	500
65 and over	787	..	1	1	3	6	20	45	711
Total									
Brides	77,298	28	14,533	35,612	12,620	5,279	3,491	2,155	3,580

(iv) *Average Ages of Bridegrooms and Brides.* The age at marriage of brides has remained fairly constant during recent years at an average of about 25½ years, although in the period 1937-39 the average rose to almost 26 years. The average ages, in years, of brides for the past six years were:—1946, 25.51; 1947, 25.60; 1948, 25.57; 1949, 25.65; 1950, 25.73; and 1951, 25.71. For the following five-yearly periods the average ages in years were:—1911-15, 25.76; 1916-20, 26.05; 1921-25, 25.76; 1926-30, 25.57; 1931-35, 25.50; 1936-40, 25.72; 1941-45, 25.68; and 1946-50, 25.61. The average ages, in years, of bridegrooms were 28.73 in 1946, 28.93 in 1947, 28.88 in 1948, 28.91 in 1949, 28.99 in 1950 and 28.92 in 1951. It follows, therefore, that brides are, generally speaking, a little more than three years younger than bridegrooms. The average age of brides and bridegrooms for the years 1940-46 showed the effects of war-time conditions. The proportion of young persons marrying during those years increased, thereby causing decreases in the average ages of both brides and bridegrooms. The difference in age between brides and bridegrooms was 3.22 years in 1946, 3.33 in 1947, 3.31 in 1948, 3.26 in 1949, 3.26 in 1950 and 3.21 in 1951.

6. *Previous Conjugal Condition.*—The number of bachelors and spinsters, widowed and divorced persons who married during 1951 is shown in the table on page 379. The following table shows the relative conjugal condition of the contracting parties.

## CONJUGAL CONDITION OF BRIDEGROOMS AND BRIDES : AUSTRALIA, 1951.

Conjugal Condition of Bridegrooms.	Total Bridegrooms.	Conjugal Condition of Brides.		
		Spinsters.	Widows.	Divorced.
Bachelors .. .. .	68,403	63,215	1,839	3,349
Widowers .. .. .	3,597	1,581	1,330	686
Divorced .. .. .	5,298	3,184	670	1,444
Total Brides	77,298	67,980	3,839	5,479

7. *Birthplace of Persons Marrying.*—A table showing the relative birthplaces of bridegrooms and brides married in each year will be found in the *Demography Bulletin*.

8. *Occupation of Bridegrooms.*—The distribution of the 77,298 bridegrooms for 1951 amongst classes of occupations was as follows:—Craftsmen, 20,417; Operatives, 14,096; Commercial and Clerical, 13,345; Rural, Fishing and Hunting, 9,382; Labourers, 7,073; Domestic and Protective Service, 4,581; Professional and Semi-Professional, 3,659; Administrative, 2,612; and Not Gainfully Occupied and Not Stated, 2,133.

9. *Celebration of Marriages.*—In all the States marriages may be celebrated either by ministers of religion who are registered for that purpose with the Registrar-General, or by certain civil officers—in most cases district registrars—but most of the marriages are celebrated by ministers of religion. The registered ministers in 1951 belonged to

more than forty different denominations, some of which, however, have only very few adherents. A number of these have been bracketed under the heading "Other Christian". The figures for 1951 are shown in the following table.

MARRIAGES IN EACH DENOMINATION, 1951.

Denomination.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia.	
									No.	Proportion of Total.
Church of England	11,310	6,072	2,963	1,485	1,688	970	23	101	24,612	31.84
Roman Catholic ..	6,442	4,376	2,513	977	984	463	39	58	15,852	20.51
Methodist ..	3,180	2,995	1,904	1,847	808	433	16	10	11,193	14.48
Presbyterian ..	3,763	4,119	2,042	380	453	151	19	20	10,947	14.16
Baptist ..	429	376	210	195	70	78	..	2	1,360	1.76
Congregational ..	310	345	136	266	126	49	..	3	1,235	1.60
Church of Christ ..	108	358	85	166	51	20	..	..	788	1.02
Lutheran ..	121	209	230	331	39	1	..	1	932	1.21
Salvation Army ..	98	95	115	50	19	14	..	5	396	0.51
Greek Orthodox ..	139	86	42	30	51	..	..	1	349	0.45
Seventh-Day Ad-ventist ..	85	24	30	16	14	8	..	..	177	0.23
Other Christian ..	185	176	139	47	60	28	1	..	636	0.82
Hebrew ..	146	232	10	6	11	..	..	..	405	0.52
Total ..	26,316	19,463	10,419	5,796	4,374	2,215	103	196	68,882	89.11
Civil Officers ..	4,025	1,654	395	850	1,016	392	40	44	8,416	10.89
Grand Total ..	30,341	21,117	10,814	6,646	5,390	2,607	143	240	77,298	100.00

PROPORTION OF TOTAL.  
(Per cent.)

Denominational ..	86.73	92.17	96.35	87.21	81.15	84.96	72.03	81.67	89.11
Civil ..	13.27	7.83	3.65	12.79	18.85	15.04	27.97	18.33	10.89

10. Divorces.—Chapter XII.—Public Justice shows details of the number of marriages dissolved annually by divorce, nullity of marriage and judicial separation. The number dissolved by decrees for divorce and nullity of marriage made absolute and by judicial separation in 1951 was 7,327 or 9.5 per cent. of the number of marriages celebrated during the year. Detailed tables relating to divorce statistics for 1951 and summary tables for earlier years are shown also in *Demography Bulletin* No. 69, 1951.

In 1952, 7,106 or 9.6 per cent. of the marriages celebrated during the year were dissolved by decrees for divorce and nullity of marriage made absolute and by judicial separation.

§ 2. Fertility and Reproduction.

1. Introductory.—Of the two elements of increase in the population, namely, natural increase and net migration, the former has been by far the more important over the past few decades. The level of natural increase depends on the excess of births over deaths and the relation between fertility and mortality determines the rate of reproduction or replacement of the population.

2. Number of Live Births.—(i) Year 1951. There are various methods of measuring the fertility of the population by relating the number of births to the numbers in the population. In each the basic data are, of course, the numbers of live births.

The number of live births registered in Australia during 1951 is shown in the table below. The table shows also the number of confinements resulting in one or more live births. The figures exclude cases where the births were of still-born children only.

## LIVE BIRTHS AND CONFINEMENTS, 1951.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W.A.	Tas.	N.T.	A.C.T.	Australia.
<b>LIVE BIRTHS.</b>									
Single births	70,445	49,342	29,069	17,085	14,425	7,165	404	972	188,907
Twins ..	1,606	1,192	574	378	361	192	3	31	4,337
Triplets ..	18	15	9	..	8	..	..	..	50
Quadruplets ..	..	4	..	..	..	..	..	..	4
Males ..	36,999	26,019	15,207	8,964	7,684	3,804	210	515	99,401
Females ..	35,070	24,534	14,445	8,499	7,110	3,553	197	488	93,897
Total ..	72,069	50,553	29,652	17,463	14,794	7,357	407	1,003	193,298
<b>STILLBIRTHS ASSOCIATED WITH MULTIPLE BIRTHS INCLUDED ABOVE.</b>									
Twins ..	62	20	18	..	13	8	1	1	123
Triplets ..	..	..	..	..	1	..	..	..	1
<b>CONFINEMENTS RESULTING IN ABOVE BIRTHS.</b>									
Nuptial ..	68,321	48,297	27,948	16,772	14,009	6,999	364	962	183,672
Ex-nuptial ..	2,964	1,657	1,420	502	606	266	42	26	7,483
Total ..	71,285	49,954	29,368	17,274	14,615	7,265	406	988	191,155

NOTE.—In Victoria, Queensland and Tasmania the registration of stillbirths is not compulsory and it is possible that in some cases where one child only of a multiple pregnancy is live-born the confinement has been treated as a single birth. This applies particularly to South Australia; where registration practice for twins, when one is live-born and one still-born, is to treat each child as a single birth, and for triplets with one still-born, to treat the two live-born as twins, and so on.

(ii) *Years 1901 to 1952.* The average annual number of live births in each State and Territory for each five-yearly period from 1901 to 1950 and the total number of live births in each State and Territory for each year 1947 to 1952 are given in the following table. Corresponding figures for each five-yearly period from 1861 will be found in Official Year Book No. 39, page 583.

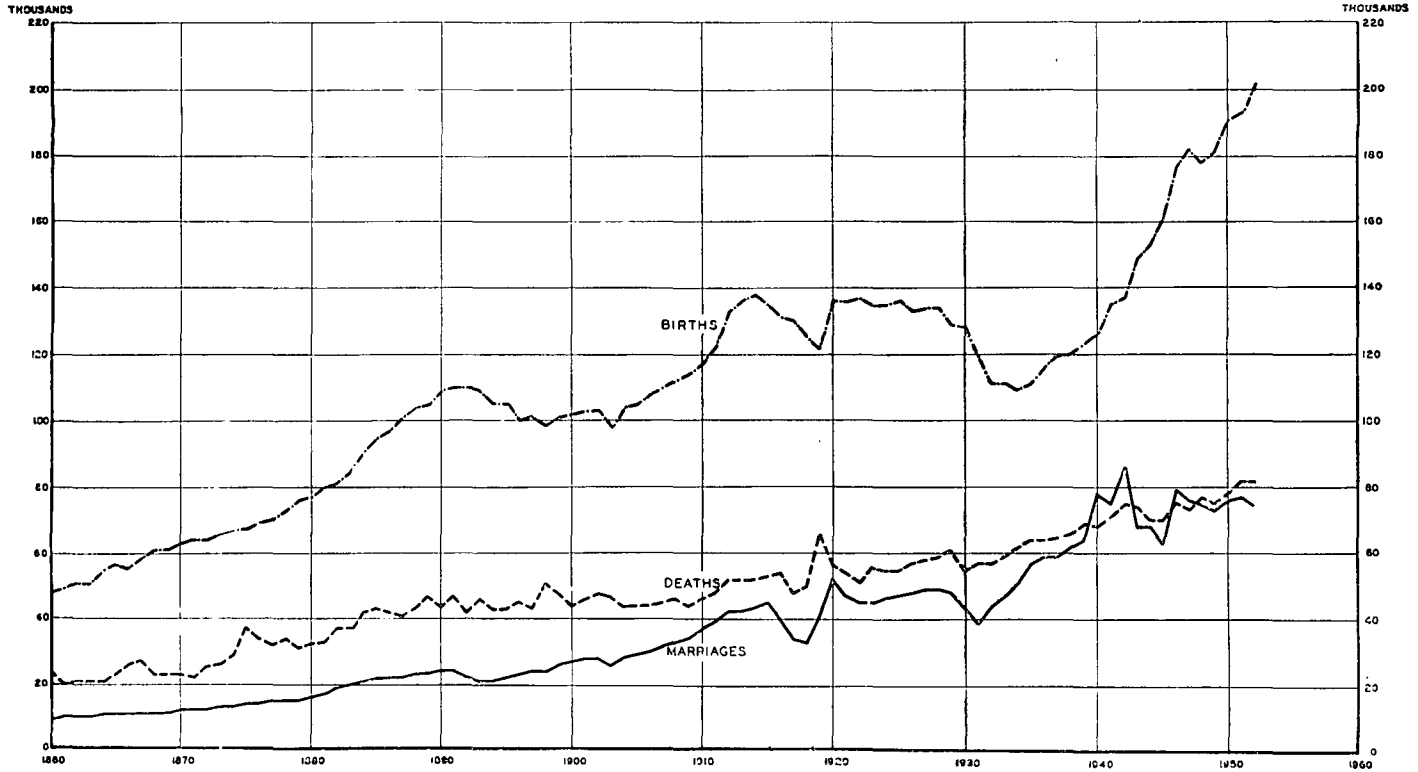
## LIVE BIRTHS.

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
<b>ANNUAL AVERAGES.</b>									
1901-1905 ..	37,968	30,182	13,770	8,883	6,682	5,128	31	..	102,644
1906-1910 ..	42,967	31,257	15,022	9,699	7,690	5,465	31	(a)	112,131
1911-1915 ..	51,631	35,205	19,100	12,092	8,844	5,807	47	43	132,769
1916-1920 ..	51,543	33,339	19,438	11,526	7,728	5,469	83	40	129,166
1921-1925 ..	54,439	35,964	20,058	11,744	8,055	5,566	68	33	135,927
1926-1930 ..	53,308	34,333	19,361	11,006	8,748	4,819	70	118	131,763
1931-1935 ..	44,964	28,380	17,480	8,646	8,061	4,547	79	145	112,302
1936-1940 ..	47,679	30,282	19,534	9,388	8,877	4,866	125	221	120,972
1941-1945 ..	56,583	38,002	23,431	12,546	10,409	5,418	113	384	146,886
1946-1950 ..	68,856	47,372	28,003	16,270	13,130	7,064	289	734	181,718
<b>YEARLY TOTALS.</b>									
1947 ..	69,398	47,366	28,358	16,317	12,874	7,140	276	655	182,384
1948 ..	67,234	46,099	27,858	15,870	12,931	6,979	280	725	177,976
1949 ..	68,812	46,873	27,748	16,042	13,511	7,110	346	819	181,261
1950 ..	71,592	49,830	29,028	17,306	14,228	7,242	411	954	190,591
1951 ..	72,069	50,553	29,652	17,463	14,794	7,357	407	1,003	193,298
1952 ..	74,196	53,738	30,953	17,884	15,413	7,916	448	1,102	201,650

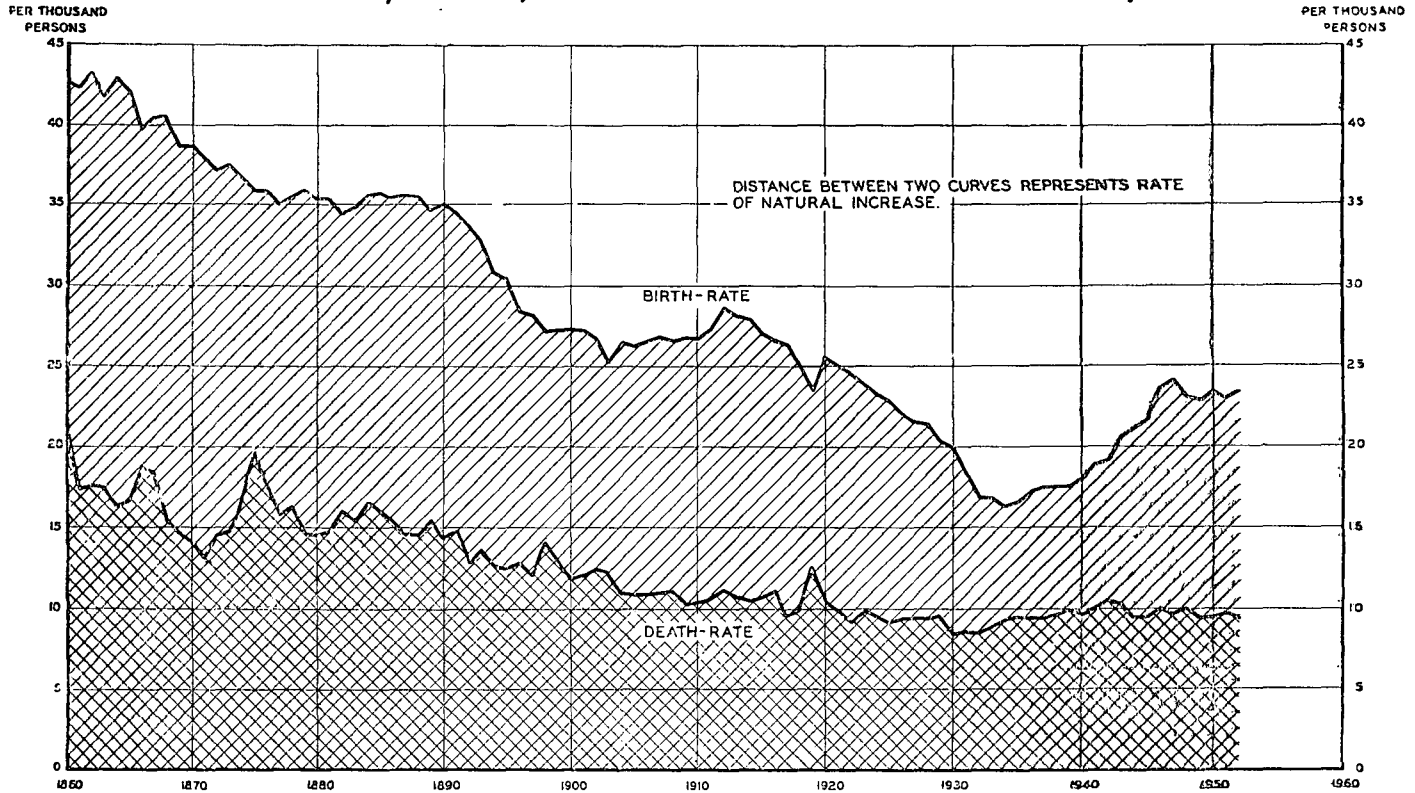
(a) Part of New South Wales prior to 1911.

3. **Crude Birth-rates.**—The oldest and most popular method of measuring fertility is to relate the number of births to the total population, thus obtaining the crude birth-rate. The crude birth-rate measures the rate per thousand persons (irrespective of age or sex) at which the population had added to its numbers by way of births during a given period.

# BIRTHS, DEATHS, AND MARRIAGES: AUSTRALIA, 1860 to 1952



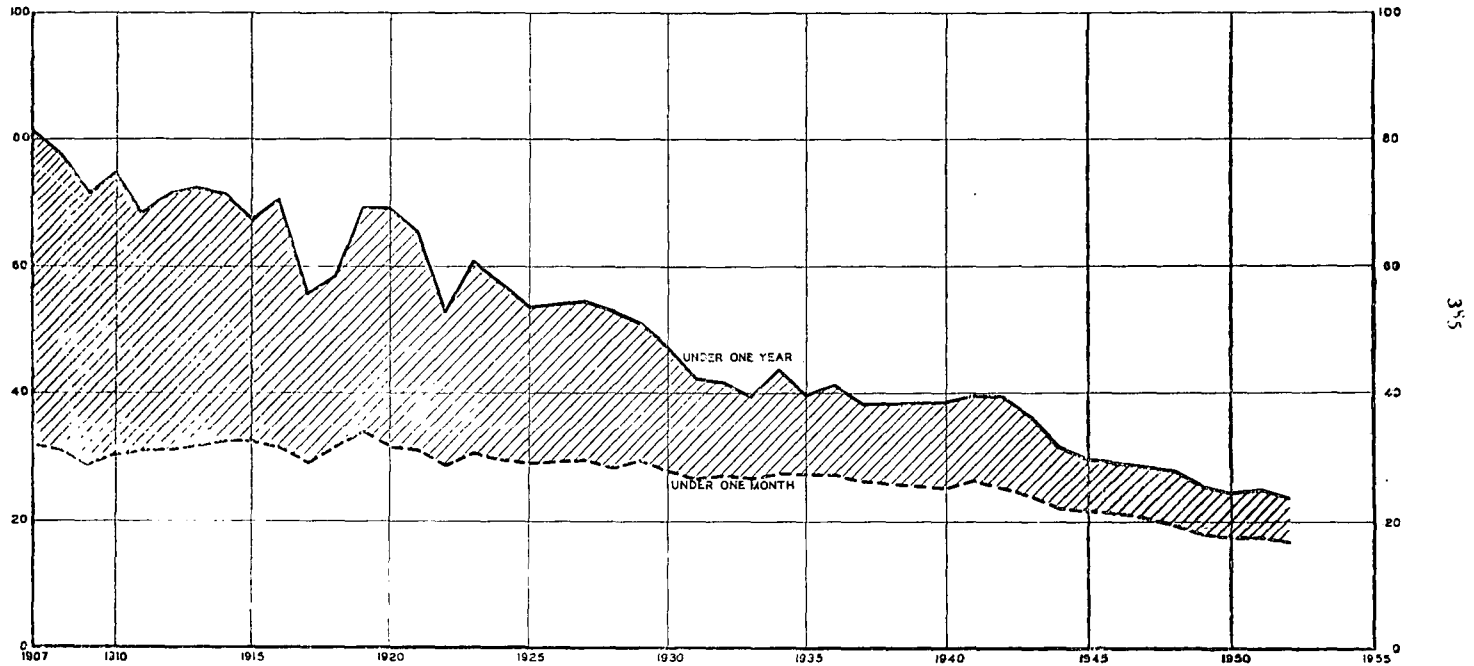
# RATES OF BIRTHS, DEATHS, AND NATURAL INCREASE: AUSTRALIA, 1860 TO 1952





# INFANT MORTALITY RATES: AUSTRALIA, 1907 to 1952

(INFANT DEATHS PER 1000 LIVE BIRTHS)



**EXPLANATION.**—This graph shows the marked improvement in infantile mortality rates over the past 45 years. The improvement has been confined mainly to children over one month, considerably less having occurred in the first month of life (see page 404).

Crude birth-rates for each five-yearly period from 1901 to 1950 and for each year from 1947 to 1952 for each State and Territory are set out below:—

CRUDE BIRTH-RATES.(a)

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
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AVERAGE ANNUAL RATES.

1901-1905..	26.82	25.05	26.72	24.87	30.56	28.63	6.99	..	26.35
1906-1910..	27.36	25.11	26.88	25.59	29.53	29.14	8.32	(b)	26.67
1911-1915..	28.74	25.39	29.15	27.94	28.62	30.01	12.87	18.89	27.78
1916-1920..	26.28	23.04	27.50	25.17	24.49	27.29	17.86	16.48	25.35
1921-1925..	24.73	22.40	25.17	22.72	22.85	25.84	18.20	9.54	23.86
1926-1930..	21.76	19.65	21.90	19.41	21.54	22.29	15.60	14.96	20.98
1931-1935..	17.28	15.60	18.48	14.89	18.36	19.95	15.99	15.77	16.94
1936-1940..	17.51	16.20	19.48	15.82	19.16	20.58	19.96	18.68	17.52
1941-1945..	19.79	19.27	22.28	20.43	21.72	22.23	11.40	26.82	20.28
1946-1950..	22.50	22.53	24.80	24.55	25.23	26.56	23.29	(c)40.53	23.38

YEARLY RATES.

								(c)	
1947 .. ..	23.25	23.06	25.65	25.25	25.60	27.70	25.34	38.75	24.06
1948 .. ..	22.19	22.06	24.80	24.11	25.12	26.38	22.97	39.90	23.08
1949 .. ..	22.10	21.92	24.18	23.80	25.35	26.08	25.68	42.85	22.91
1950 .. ..	22.20	22.61	24.62	24.72	25.47	25.66	27.55	46.52	23.29
1951 .. ..	21.72	22.28	24.56	24.25	25.44	25.11	25.45	41.11	22.93
1952 .. ..	21.88	23.02	25.07	24.18	25.60	26.02	27.82	40.82	23.32

(a) Number of births per 1,000 of mean population. (b) Part of New South Wales prior to 1911. (c) Rates based on revised mean population estimates shown on p. 335 are as follows:—1946-50, 37.89; 1947, 38.46; 1948, 37.77; 1949, 38.65; 1950, 40.44.

NOTE.—The birth-rates in the table above are based on live births registered in the respective States and Territories. Some years ago a large proportion of births in respect of which the mother's usual residence was the Australian Capital Territory took place in Queanbeyan, just over the New South Wales border, but with improved hospital facilities in the Territory the movement to outside hospitals rapidly diminished and has been reversed since 1939. The following rates, based on births in respect of which the mother's usual residence is the Australian Capital Territory and on revised population figures, are a truer measure of birth-rates in the Australian Capital Territory:—

Annual Average.		Year.	
1926-1930 .. ..	.. ..	1948 .. ..	.. 25.99
1931-1935 .. ..	.. ..	1949 .. ..	.. 27.28
1936-1940 .. ..	.. ..	1950 .. ..	.. 29.63
1941-1945 .. ..	.. ..	1951 .. ..	.. 28.47
1946-1950 .. ..	.. ..	1952 .. ..	.. 30.60

The variations similarly caused in the birth-rates for the States and Northern Territory by referring the birth registrations to the State or Territory in which the mother was usually resident are shown by the following corrected rates for 1952:—New South Wales, 21.90; Victoria, 23.08, Queensland, 25.74; South Australia, 24.13; Western Australia, 25.64; Tasmania, 26.06; and Northern Territory, 27.32.

In the earlier years of the present century the crude birth-rate fluctuated somewhat but from 1912, when 28.60 was recorded, there was an almost continuous decline to the very low figure of 16.39 in 1934. The decline in the depression years was to some extent occasioned by the postponement of marriages, and with subsequent improvement in economic conditions the rate rose. Since 1940 the rate has increased quite appreciably owing to a continued improvement in the economic welfare of the community and the war-time boom in marriages. The latter resulted in an abnormal number of first births but investigation indicates that rates for births other than first were generally slightly higher than might have been expected from pre-war experience. The improvement in the birth-rate has been maintained since the end of the war despite some falling off in marriage rates.

4. Crude Birth-rates of Various Countries.—The following table gives the crude birth-rates for Australia in comparison with the rates for various other countries.

CRUDE BIRTH-RATES<sup>(a)</sup> : VARIOUS COUNTRIES.

Country.	1908-13.	1921-25.	1926-30.	1931-35.	1951.
Egypt .. .. .	43.6	43.0	44.3	42.9	(b) 48.8
Mexico .. .. .	(c)	(d) 31.9	30.7	43.1	44.2
Ceylon .. .. .	36.9	39.2	40.4	36.9	37.3
Chile .. .. .	(e) 39.9	39.4	41.6	33.6	32.4
Canada .. .. .	(c)	27.4	24.1	21.4	27.2
Yugoslavia .. .. .	(c)	35.0	34.2	31.8	27.0
Greece .. .. .	(c)	23.0	30.2	29.5	(f) 26.1
Japan .. .. .	32.9	34.6	33.5	31.6	25.6
Union of South Africa (g) .. .. .	(e) 31.9	27.1	25.9	24.1	25.5
Argentina .. .. .	37.1	32.4	30.1	26.4	24.9
United States of America .. .. .	(h) 25.1	22.5	19.7	(i) 16.9	24.5
New Zealand (j) .. .. .	26.5	22.2	19.7	17.0	24.4
Portugal .. .. .	34.6	33.2	31.2	29.0	24.2
Finland .. .. .	29.5	24.7	22.5	19.5	23.0
<b>Australia (k)</b> .. .. .	<b>27.4</b>	<b>23.9</b>	<b>21.0</b>	<b>16.9</b>	<b>22.9</b>
Czechoslovakia .. .. .	31.1	27.1	23.2	19.6	(b) 22.9
Netherlands .. .. .	29.1	25.7	23.2	21.2	22.3
Ireland, Republic of .. .. .	23.1	20.3	20.1	19.4	21.2
Spain .. .. .	32.1	29.8	28.5	27.1	20.1
France .. .. .	19.5	19.3	18.2	16.5	19.4
Norway .. .. .	26.0	22.2	18.0	15.2	18.5
Italy .. .. .	32.4	29.8	26.8	23.8	18.1
Denmark .. .. .	27.1	22.3	19.4	17.7	17.8
Switzerland .. .. .	24.7	19.5	17.6	16.4	17.2
Belgium .. .. .	23.4	20.4	18.6	16.8	16.4
United Kingdom .. .. .	24.6	20.4	17.2	15.5	15.9
Sweden .. .. .	24.4	19.1	15.9	14.1	15.6
Austria .. .. .	(e) 24.9	22.2	17.6	14.4	14.9

(a) Number of births per 1,000 of mean population. (b) 1950. (c) Not available.  
 (d) 1922-25. (e) 1911-13. (f) 1949. (g) White population only. (h) 1915.  
 (i) 1933-35. (j) Excludes Maoris. (k) Excludes full-blood aborigines.

5. Fertility-rates.—The principal demographic factors affecting the level of crude birth-rates are the proportion of women of child-bearing age in the population and the proportion of such women who are married. These factors may vary considerably at different periods and for different countries, and a population with a high proportion of married women of child-bearing age will have a much higher crude birth-rate than one with a low proportion, although the fertilities of the two populations may be identical.

In order to compare fertilities, births are sometimes related to the number of women of child-bearing age or, alternatively, nuptial births are related to the number of married women of child-bearing age. Thus births are related to potential mothers, giving the fertility-rate.

The following table sets out for certain periods, commencing with 1880-82, the number of births per thousand of mean population, the number of births per thousand women of child-bearing age and the number of nuptial births per thousand married women of child-bearing age. For purposes of this table the child-bearing age has been taken to be 15-44 years inclusive, but births to mothers who were stated to be under 15 or over 44 years have been included in the compilations.

CRUDE BIRTH-RATES AND FERTILITY-RATES : AUSTRALIA.

Period.	Average Annual Rates.			Index Nos. (Base : 1880-82 = 100).		
	Crude Birth-rate.(a)	Fertility-rates.		Crude Birth-rate.(a)	Fertility-rates.	
		Births per 1,000 Women aged 15-44 Years.	Nuptial Births per 1,000 Married Women aged 15-44 Years.		Births per 1,000 Women aged 15-44 Years.	Nuptial Births per 1,000 Married Women aged 15-44 Years.
1880-82 ..	35.3	170	321	100	100	100
1890-92 ..	34.5	159	332	98	94	103
1900-02 ..	27.2	117	235	77	69	73
1910-12 ..	27.2	117	236	77	69	74
1920-22 ..	25.0	107	197	71	63	61
1932-34 ..	16.7	71	131	47	42	41
1946-48 ..	23.6	104	167	67	61	52

(a) Number of births per 1,000 of mean population.

The table above shows how increasing proportions both of women of child-bearing age and of married women of child-bearing age inflate the crude birth-rate. Thus while the nuptial birth-rate for married women increased by only 27 per cent. over the period 1932-34 to 1946-48 the crude birth-rate rose by 41 per cent. owing principally to the greatly increased number of marriages during that period.

6. Age-specific Fertility-rates for Females.—So long as customary ages at marriage do not change drastically, the main demographic factor affecting the number of births is the age composition of the potential mothers in the population. Within the child-bearing group the fertility of women of different ages varies considerably and a clearer view of the fertility of the population can be obtained from an examination of what are known as its age-specific fertility-rates, that is, the number of births to women of specified ages per thousand women of those particular ages.

Age-specific fertility-rates are frequently expressed in age groups as well as in single ages. The following table sets out age-specific fertility-rates for Australia over the period 1921 to 1952 in five-yearly age groups.

AGE-SPECIFIC FERTILITY-RATES(a) : AUSTRALIA.

Age Group (Years).	1921.	1926.	1931.	1936.	1941.	1946.	1949.	1950.	1951.	1952.
15-19..	12.83	14.02	13.08	12.18	11.90	12.63	17.41	18.11	18.59	19.07
20-24..	65.45	60.23	53.08	50.33	59.42	73.52	82.11	84.32	85.84	90.93
25-29..	82.24	76.82	62.47	62.02	70.78	89.51	88.13	90.53	90.24	94.52
30-34..	68.50	61.90	51.25	46.33	49.72	65.03	59.30	60.34	59.16	61.51
35-39..	49.48	43.55	33.23	28.89	28.69	37.43	33.32	33.89	32.29	32.61
40-44..	21.66	17.03	13.61	10.19	9.52	11.87	10.24	10.35	9.97	9.95
45-49..	2.10	1.90	1.45	1.11	0.80	1.03	0.80	0.73	0.80	0.84

(a) Number of female births per 1,000 women in each age group.

The table above indicates that the most fertile age group is 25-29 years. The decline in fertility between 1921 and 1936 was general but was more pronounced in the older age groups. During the period 1936 to 1952 a rise in fertility occurred in all age groups below 40.

7. Gross and Net Reproduction Rates for Females.—A single measure of reproduction known as the gross reproduction rate is obtained by adding together the specific fertility-rates for each age in the child-bearing group. This measure indicates the number of female children who would be born on the average to women living right through the child-bearing period, if the conditions on which the rate is based continue. The rate is unaffected by the age composition of the potential mothers, and consequently it shows more clearly than the crude birth rate the reproductive propensity of the population. It is, however, an imperfect measure of reproduction because it does not take into account the females who fail to live from birth to the end of the reproductive period. A more accurate measure of this nature is obtained by multiplying the specific fertility-rates by the number of females in the corresponding age group of the stationary or life table population and summing the products. Allowance is thus made for the effect of mortality

and the result is known as the net reproduction rate. The net reproduction rate indicates the average number of female children who would be born to women during their lifetime if they were subject at each age to the fertility and mortality rates on which the calculation is based. A constant net reproduction rate of unity indicates that the population will ultimately become stationary. If it continues greater than unity, the population will ultimately increase; if less than unity, it will ultimately decrease. The following table should be read in the light of the comment which follows it and of the index of fertility in paragraph 9 hereof.

**GROSS AND NET REPRODUCTION RATES : AUSTRALIA.**

Year.	Gross Reproduction Rate.	Net Reproduction Rate.	Year.	Gross Reproduction Rate.	Net Reproduction Rate.	
					(f)	(g)
1881 (a)	2.65	(b) 1.88	1945	1.337	1.220	1.267
1891 (a)	2.30	(b) 1.73	1946	1.455	1.328	1.379
1901 (a)	1.74	(c) 1.39	1947	1.493	1.364	1.416
1911 ..	1.705	(d) 1.421	1948	1.451	..	1.376
1921 ..	1.511	(e) 1.313	1949	1.457	..	1.382
1931 ..	1.141	(f) 1.039	1950	1.491	..	1.415
1941 ..	1.154	(f) 1.053	1951	1.485	..	1.409

(a) Approximate only. (b) 1881-1890 mortality experience used. (c) 1891-1900 mortality experience used. (d) 1901-1910 mortality experience used. (e) 1920-1922 mortality experience used. (f) 1932-1934 mortality experience used. (g) 1946-48 mortality experience used.

NOTE.—It is not strictly correct to assume, as above, that a particular age-specific fertility rate can be applied to a hypothetical group of women reaching that age, without taking account of previous fertility and marriage experiences. Reproduction rates are, therefore, somewhat unreliable when birth and marriage rates have been changing. The indexes of marriage fertility shown on the next page are also of doubtful reliability in similar circumstances.

Since 1881 there has been a substantial downward trend in both rates, but the gross rate has fallen considerably more than the net, showing that the decline in fertility has been offset to some extent by a decline in mortality. The net reproduction rate was below unity over the period 1932 to 1939, and if the low level of those years were to continue, ultimate population decline would be certain. The progressive rise in both gross and net reproduction rates from 1939 to 1947 was due largely to higher marriage rates during the war and early post-war years than had been experienced in the immediate pre-war years. Such fluctuations in marriage rates affect both gross and net reproduction rates substantially. When fluctuations in marriage rates are transient, reproduction rates calculated as above are not valid as indicators of relative fertility nor of the extent to which population will replace itself. Owing to various influences the number of marriages in each year since 1948 has remained at a relatively high level and the net reproduction rates have been steady at about 1.4. The fertility of marriages is measured in paragraph 9 below.

8. **Gross and Net Reproduction Rates of Various Countries.**—In the following table a comparison is given of the gross and net reproduction rates recorded for various countries in the period 1947 to 1949. These have been taken mainly from the United Nations *Demographic Year Book*, 1949-50 and represent the latest available international comparison. More recent Australian rates are shown in the table above.

**GROSS AND NET REPRODUCTION RATES : VARIOUS COUNTRIES.**

Country.	Period.	Reproduction Rate.		Country.	Period.	Reproduction Rate.	
		Gross.	Net.			Gross.	Net.
Canada	1948	1.67	(a)	France	1947	1.46	1.31
New Zealand(b)	1949	1.62	1.51	Denmark	1947	1.40	1.27
United States of America(c)	1948	1.54	1.46	Switzerland	1946	1.29	1.16
Netherlands	1949	1.56	1.43	Sweden	1947	1.21	1.13
Finland	1948	1.67	1.40	Portugal	1949	1.55	1.13
Ireland, Republic of	1945-47	1.63	1.38	Norway	1948	1.23	1.13
Australia(d)	1949	1.46	1.38	England and Wales	1948	1.16	1.07
Scotland	1947	1.50	1.35	Belgium	1948	1.19	1.00

(a) Not available full-blood aboriginal.

(b) Excludes Maoris.

(c) White population only.

(d) Excludes

In comparing the reproduction rates of the countries shown above allowance should be made for any differences in years as the rates for any one country from year to year are affected by variations in the incidence of marriage.

9. **Fertility of Marriages.**—In issues of the Official Year Book prior to No. 36 estimates of the fertility of marriages were published. These were calculated by relating the births of one five-yearly period to the marriages in the preceding five years (see Official Year Book No. 35, p. 329). Since the publication of that issue, an improved method has been formulated for measuring current marriage fertility by relating nuptial confinements in each year to the marriages from which they could have resulted. Confinements of women of a certain number of years duration of marriage are related to the number of marriages taking place that number of years previously. The table below sets out this index of current fertility per marriage in respect of confinements in the individual years shown.

FERTILITY OF MARRIAGES : AUSTRALIA.

Year.	Nuptial Confinements per Marriage.	Year.	Nuptial Confinements per Marriage.	Year.	Nuptial Confinements per Marriage.
1936 .. ..	2.28	1941 .. ..	2.19	1946 .. ..	2.55
1937 .. ..	2.27	1942 .. ..	2.12	1947 .. ..	2.55
1938 .. ..	2.22	1943 .. ..	2.21	1948 .. ..	2.44
1939 .. ..	2.20	1944 .. ..	2.28	1949 .. ..	2.45
1940 .. ..	2.18	1945 .. ..	2.36	1950 .. ..	2.56
				1951 .. ..	2.55

NOTE.—See NOTE to table at top of p. 390.

The figure for a particular year gives the estimated number of children which a marriage would produce according to the fertility conditions of that year. It will be noted that there was an almost continuous decline to 1942, but a pronounced increase from 1943 to 1946. Comparing this index with the net reproduction rate it is evident that the rise in the latter since 1935 has been caused by a rise in the marriage rate, due firstly to the postponed depression marriages, and secondly to war-time marriages, and only in the last six years to any increase in the fertility of marriages. The figures for 1949 and subsequent years present a somewhat inflated index as many of the births which have been used to calculate the index relate to marriages of immigrants which took place overseas and are consequently not included in Australian marriage records. Partial investigation suggests that this factor may overstate the 1951 index by as much as 6 per cent. and that a truer figure based on births from marriages contracted in Australia would be about 2.40.

10. **Masculinity of Live Births.**—The masculinity of live births, i.e., the number of males born for every 100 female births, has remained fairly stable for Australia at about 105. But when the number of births for which masculinity is being calculated is small (for example, State totals), considerable variation is shown. For 1952 the figures ranged from 97.36 in the Northern Territory to 108.87 in Tasmania. The averages for the ten years 1941-50 were as follows:—New South Wales, 105.49; Victoria, 105.47; Queensland, 105.49; South Australia, 105.78; Western Australia, 104.27; Tasmania, 104.45; Australia, 105.38. The following table shows the figures for Australia for each ten-yearly period from 1901 to 1950 and for each year 1949 to 1952:—

MASCULINITY(a) OF LIVE BIRTHS REGISTERED : AUSTRALIA.

Particulars.	1901-10.	1911-20.	1921-30.	1931-40.	1941-50.	1949.	1950.	1951.	1952.
Total Births .. ..	105.22	105.27	105.55	105.12	105.38	104.78	105.46	105.86	105.20
Ex-nuptial Births ..	104.08	105.25	105.16	105.36	105.34	101.20	105.38	105.30	99.57

(a) Number of males born for every 100 female births.

11. **Ex-nuptial Live Births.**—(i) *General.* Since 1901 the highest proportion of ex-nuptial births recorded in any one year was in 1905 when there were 6,545 ex-nuptial births representing 6.24 per cent. of total births. Since then the proportion has declined

steadily. The largest number of ex-nuptial births was recorded in 1946 when 7,613 were registered, but this number represented only 4.32 per cent. of total births. The lowest proportion was 3.78 per cent. in 1940.

The variations in the proportions of ex-nuptial births as between the individual States and Territories for 1952 are shown below. Corresponding figures for 1951 may be obtained from *Demography Bulletin* No. 69.

#### EX-NUPTIAL LIVE BIRTHS : NUMBER AND PROPORTION, 1952.

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Number ..	2,959	1,808	1,580	498	634	289	55	19	7,842
Proportion of Total Births%	3.99	3.36	5.10	2.78	4.11	3.65	12.28	1.72	3.89

The number and proportion of ex-nuptial births at intervals from 1901 to 1952 are as follows :—

#### EX-NUPTIAL LIVE BIRTHS : NUMBER AND PROPORTION, AUSTRALIA.

Particulars.	Annual Average.					1949.	1950.	1951.	1952.
	1901-10.	1911-20.	1921-30.	1931-40.	1941-50.				
Number ..	6,498	6,836	6,238	5,133	6,780	7,372	7,324	7,555	7,842
Proportion of Total Births .. %	6.05	5.22	4.66	4.40	4.13	4.07	3.84	3.91	3.89

It is, of course, possible that the number of ex-nuptial births is somewhat understated owing to diffidence in proclaiming the fact of ex-nuptiality.

(ii) *Rate of Ex-nuptiality.* A further comparison is obtained by calculating the number of ex-nuptial births per thousand of the single, widowed and divorced female population between the ages of 15 and 45 years. On this basis the number of ex-nuptial births per 1,000 unmarried women of ages 15 to 45 has been found to be as follows :— 1880-82, 14.49; 1890-92, 15.93; 1900-02, 13.30; 1910-12, 12.53; 1920-22, 10.50; 1932-34, 6.91; and 1946-48, 11.45.

(iii) *Comparison of Rates.* The following table, showing the relative proportions of ex-nuptial and nuptial births to the total population, discloses a much greater proportional reduction in the ex-nuptial birth-rate than in the nuptial rate :—

#### CRUDE EX-NUPTIAL, NUPTIAL, AND TOTAL BIRTH-RATES(a) : AUSTRALIA.

Birth-rate.	Annual Average.					1949.	1950.	1951.	1952.
	1901-10.	1911-20.	1921-30.	1931-40.	1941-50.				
Ex-nuptial	1.60	1.39	1.04	0.76	0.90	0.93	0.90	0.90	0.91
Nuptial ..	24.91	25.18	21.40	16.47	20.98	21.98	22.39	22.03	22.41
Total ..	26.51	26.57	22.44	17.23	21.88	22.91	23.29	22.93	23.32

(a) Number of births per 1,000 of mean population.

12. *Legitimations.*—In the several States Acts have been passed to legitimize children born before the marriage of their parents, provided that no legal impediment to the marriage existed at the time of birth. On registration in accordance with the provisions of the Legitimation Acts, any child who comes within the scope of their purposes, born before or after the passing thereof, is deemed to be legitimate from birth by the post-natal union of its parents, and entitled to the status of offspring born in wedlock. During 1951 and 1952 the numbers of children legitimized in Australia were 1,014 and 998 respectively, compared with 883 in 1939.

13. **Multiple Births.**—Because the current Australian birth statistics are based only on those confinements which resulted in a live-born child the number of confinements for multiple births for Australia is understated—firstly, because in cases where all children of a multiple birth are still-born the confinement is excluded, and secondly, because of differences in registration practice where still-births are involved, from which it is evident, in recent years, that in Victoria and Queensland, some, and in South Australia, all, cases of multiple births in which only one child was live-born have been registered as single births. It is estimated that the deficiency due to this second cause is about 50 cases per annum. During 1951 multiple births recorded on the above basis comprised 2,230 cases of twins, 17 cases of triplets and one case of quadruplets, the resultant numbers of live-born and still-born children being respectively 4,337 and 123 for twins and 50 and 1 for triplets. The four quadruplet children were live-born. This represents an average of 11.67 recorded cases of twins and 0.09 recorded cases of triplets per 1,000 confinements or, alternatively, mothers of twins represented one in every 86 mothers and mothers of triplets one in every 11,244. Total cases of multiple births represented 11.76 per 1,000 confinements or one in every 85 mothers.

The proportion of mothers of multiple births to total mothers does not vary greatly from year to year on the present basis of compilation.

Detailed statistics of multiple births will be found in the *Demography Bulletin*.

14. **Ages of Parents.**—The relative ages of the parents of children registered in 1951 have been tabulated separately for male and female births, multiple births being distinguished from single births. For total births and for multiple births the relative ages of parents are shown in *Demography Bulletin* No. 69. In the present work the exigencies of space allow only the insertion of a table showing, in respect of all confinements, the relative ages of parents in groups of five years.

CONFINEMENTS : RELATIVE AGES OF PARENTS, AUSTRALIA, 1951.

Age of Father (Years), and Type of Birth.	Total.	Age of Mother (Years).								Not Stated.
		Under 15.	15-19.	20-24.	25-29.	30-34.	35-39.	40-44.	45 and over.	
Under 20 .. .. .	1,077	..	792	273	8	3	1	..	..	..
20-24 .. .. .	26,783	5	5,409	18,221	2,890	222	31	5	..	..
25-29 .. .. .	58,558	3	1,912	24,827	27,550	3,866	365	34	1	..
30-34 .. .. .	45,497	..	343	6,670	20,493	15,492	2,336	163	..	..
35-39 .. .. .	29,327	1	99	1,679	6,222	11,873	8,103	835	15	..
40-44 .. .. .	14,569	..	25	441	1,832	4,109	5,846	2,256	60	..
45-49 .. .. .	5,485	..	11	128	509	1,143	2,089	1,448	157	..
50-54 .. .. .	1,708	..	1	49	147	369	558	504	80	..
55-59 .. .. .	424	..	1	3	44	67	135	143	31	..
60-64 .. .. .	181	..	..	1	17	31	59	61	12	..
65 and over ..	63	..	1	1	5	15	23	16	2	..
Not Stated ..	..	..	..	..	..	..	..	..	..	..
Mothers of Nuptial Children {	181,499	9	8,533	51,813	59,522	36,669	19,201	5,396	356	..
Twins .. .. .	2,157	..	61	478	686	518	343	69	2	..
Triplets .. ..	15	..	..	2	8	3	2	..	..	..
Quadruplets ..	1	..	..	..	1	..	..	..	..	..
Total .. .. .	183,672	9	8,594	52,293	60,217	37,190	19,546	5,465	358	..
Mothers of Extra-nuptial Children {	7,408	24	1,652	2,425	1,541	970	574	197	18	7
Twins .. .. .	73	..	9	16	28	7	9	4	..	..
Triplets .. ..	2	..	..	2	..	..	..	..	..	..
Total .. .. .	7,483	24	1,661	2,443	1,569	977	583	201	18	7
Total Mothers {	188,907	33	10,185	54,238	61,063	37,639	19,775	5,593	374	7
Twins .. .. .	2,230	..	70	494	714	525	352	73	2	..
Triplets .. ..	17	..	..	4	8	3	2	..	..	..
Quadruplets ..	1	..	..	..	1	..	..	..	..	..
Total .. .. .	191,155	33	10,255	54,736	61,786	38,167	20,129	5,666	376	7



15. **Birthplaces of Parents.**—A table showing birthplaces of parents of children whose births were registered during 1951 appears in *Demography Bulletin* No. 69.

16. **Occupation of Fathers.**—A table showing occupations of the fathers of all nuptial children registered in 1951 appears in *Demography Bulletin* No. 69.

17. **Age, Duration of Marriage and Issue of Mothers.**—(i) *General.* The total number of nuptial confinements resulting in live births in 1951 was 183,672, comprising 181,499 single births, 2,157 cases of twins, 15 cases of triplets and 1 case of quadruplets. The tables relating to previous issue exclude the issue of former marriages and still-born children. On the other hand, they include children by the same father which were born to the mother prior to the marriage. Children born at the present confinement are included in the total issue shown.

The tables below are shown in summarized form, more complete details for 1951 being given in *Demography Bulletin* No. 69.

(ii) *Duration of Marriage and Issue of Mothers.* The following table shows that in 1951 the duration of marriage of mothers of nuptial children ranged from less than one year to over 25 years, and that the average family increased fairly regularly with the duration of marriage. The average issue of married mothers who bore children in 1951 was 2.40 compared with 2.39 in 1950, 2.37 in 1949, 2.35 in 1948 and 2.31 in 1947.

#### NUPTIAL CONFINEMENTS : DURATION OF MARRIAGE AND ISSUE OF MOTHERS, AUSTRALIA, 1951.

Duration of Marriage (Years).	Total Married Mothers.	Total Issue.	Average Issue.	Duration of Marriage (Years).	Total Married Mothers.	Total Issue.	Average Issue.
0-1	24,044	24,438	1.02	14-15	2,330	11,064	4.75
1-2	23,593	28,252	1.20	15-16	1,960	9,968	5.09
2-3	21,318	35,680	1.67	16-17	1,487	7,903	5.31
3-4	19,726	39,600	2.01	17-18	1,153	6,537	5.67
4-5	17,921	41,375	2.31	18-19	872	5,364	6.15
5-6	14,069	35,937	2.55	19-20	691	4,303	6.23
6-7	10,249	28,590	2.79	20-21	525	3,544	6.75
7-8	8,773	26,443	3.01	21-22	422	3,053	7.23
8-9	8,513	26,944	3.17	22-23	306	2,192	7.16
9-10	7,747	26,204	3.38	23-24	208	1,625	7.81
10-11	6,046	22,111	3.66	24-25	142	1,205	8.49
11-12	4,961	19,559	3.94	25 and over	181	1,550	8.56
12-13	3,547	14,962	4.22				
13-14	2,888	12,996	4.50	Total	183,672	441,396	2.40

(iii) *Age and Average Issue of Mothers.* The following table shows the average number of children born to mothers of different ages. In the younger ages there is, naturally, little difference in the average number of children to each mother from year to year, but with the increase of the age of the mother the number of issue has fallen in comparison with past years. The average issue of mothers of all ages recorded for 1951 (namely, 2.40) is 26.5 per cent. below the average of 3.25 for the years 1911-20.

#### AGE AND AVERAGE ISSUE OF MOTHERS : AUSTRALIA.

Period.	Age of Mother (Years).							All Ages.
	Under 20.	20-24.	25-29.	30-34.	35-39.	40-44.	45 and over.	
1911-20	1.21	1.75	2.61	3.74	5.11	6.69	8.16	3.25
1921-30	1.20	1.71	2.46	3.48	4.80	6.27	7.74	3.04
1931-40	1.20	1.68	2.30	3.19	4.41	5.89	7.40	2.71
1941-50	1.17	1.56	2.15	2.85	3.67	4.79	6.19	2.37
1951	1.20	1.65	2.27	2.94	3.69	4.54	5.98	2.40

(iv) *Previous Issue of Mothers, Various Ages.* A classification of mothers by age group and previous issue is given for 1951 in the following table. Complete detailed figures appear in *Demography Bulletin* No. 69.

**NUPTIAL CONFINEMENTS : AGE OF MOTHER AND PREVIOUS ISSUE, AUSTRALIA, 1951.**

Previous Issue.	Age of Mother (Years).							Total Married Mothers.
	Under 20.	20-24.	25-29.	30-34.	35-39.	40-44.	45 and over.	
0 ..	7,075	28,252	17,161	6,335	2,585	636	34	62,078
1 ..	1,373	16,851	22,471	10,574	3,894	791	35	55,989
2 ..	143	5,498	12,866	9,659	4,295	938	35	33,434
3 ..	12	1,361	4,938	5,502	3,446	815	44	16,118
4 ..	..	277	1,761	2,560	2,127	671	43	7,439
5 ..	..	41	687	1,309	1,238	467	30	3,772
6 ..	..	13	234	633	752	341	17	1,990
7 ..	..	..	70	333	458	257	31	1,149
8 ..	..	..	15	173	318	186	20	712
9 ..	..	..	9	73	193	138	22	435
10 and over	..	..	5	39	240	225	47	556
Total Married Mothers	8,603	52,293	60,217	37,190	19,546	5,465	358	183,672

(v) *Previous Issue of Mothers of Twins, Triplets and Quadruplets.* Figures regarding the previous issue of married mothers of twins in 1951 show that 586 mothers had no previous issue either living or deceased, 646 had one child previously, 405 had two previous issue, 225 three, 136 four, 62 five, 30 six, 22 seven, 16 eight, 10 nine, 2 ten, 4 eleven, 4 twelve, 2 thirteen and 1 seventeen.

Of the 15 cases of nuptial triplets registered during 1951, 2 mothers had no previous issue, 5 had one, 6 had two, 1 had three, and 1 had six previous issue. The mother of quadruplets had one previous child.

18. *Nuptial First Births.*—(i) *Duration of Marriage.* The following table shows the interval between marriage and first birth for 1911-20, 1921-30, 1931-40, 1941-50, 1949, 1950 and 1951. In cases of multiple births, the first live-born child only is enumerated. A more extensive presentation of duration of marriage for the periods, other than 1951, shown in this table is given in Official Year Book No. 39, page 594. Greater detail for each year will be found in the relevant *Demography Bulletin*.

**FIRST BIRTHS : DURATION OF MARRIAGE, AUSTRALIA.**

Duration of Marriage.	Annual Average.				1949.	1950.	1951.
	1911-20.	1921-30.	1931-40.	1941-50.			
<b>NUMBER OF FIRST BIRTHS.</b>							
Under 8 months ..	9,312	10,351	10,677	8,822	9,813	10,022	10,046
8 months ..	1,562	1,530	1,417	2,104	2,087	2,165	2,092
9 " ..	3,517	3,253	2,668	4,298	4,677	4,509	4,542
10 " ..	2,877	2,907	2,202	3,447	3,902	3,811	3,915
11 " ..	2,018	2,152	1,836	2,896	3,255	3,240	3,321
Total under 1 year	19,286	20,193	18,800	21,567	23,734	23,747	23,916
1-2 years ..	8,563	10,133	10,595	17,762	19,425	19,302	19,249
2-3 " ..	2,626	3,369	4,319	8,028	7,750	8,271	8,197
3-4 " ..	1,230	1,743	2,214	4,361	3,448	4,198	4,230
4-5 " ..	700	941	1,205	2,569	1,885	2,132	2,301
5-10 " ..	980	1,446	1,766	3,936	3,991	3,676	3,480
10-15 " ..	168	240	289	501	601	643	602
15 years and over ..	42	55	55	94	93	112	103
Total ..	33,595	38,120	39,243	58,818	60,927	62,081	62,078

FIRST BIRTHS: DURATION OF MARRIAGE, AUSTRALIA—*continued.*

Duration of Marriage.	Annual Average.				1949.	1950.	1951.
	1911-20.	1921-30.	1931-40.	1941-50.			
PROPORTION OF TOTAL FIRST BIRTHS. (Per Cent.)							
Under 8 months ..	27.72	27.15	27.21	15.00	16.11	16.14	16.18
8 months ..	4.65	4.01	3.61	3.58	3.42	3.49	3.37
9 ..	10.47	8.53	6.80	7.31	7.68	7.26	7.32
10 ..	8.56	7.63	5.61	5.86	6.40	6.14	6.31
11 ..	6.01	5.65	4.68	4.92	5.34	5.22	5.35
Total under 1 year ..	57.41	52.97	47.91	36.67	38.95	38.25	38.53
1-2 years ..	25.49	26.58	27.00	30.20	31.88	31.09	31.01
2-3 ..	7.82	8.84	11.01	13.65	12.72	13.32	13.20
3-4 ..	3.66	4.57	5.64	7.41	5.66	6.76	6.81
4-5 ..	2.08	2.47	3.07	4.37	3.09	3.44	3.71
5-10 ..	2.92	3.79	4.50	6.69	6.55	5.92	5.60
10-15 ..	0.50	0.63	0.73	0.85	0.99	1.04	0.97
15 years and over ..	0.12	0.15	0.14	0.16	0.16	0.18	0.17
Total ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00

The masculinity of nuptial first births in 1951 was 105.68 compared with 105.86 for total births.

(ii) *Age of Mother and Duration of Marriage.* A tabulation showing the individual ages of mothers of nuptial first-born children in conjunction with full detail of duration of marriage is given in *Demography Bulletin* No. 69 for 1951. A summary showing grouped ages and grouped durations is given in the following table.

## FIRST BIRTHS: AGE OF MOTHER AND DURATION OF MARRIAGE, AUSTRALIA, 1951.

Duration of Marriage.	Age Group of Mother (Years).							Total.
	Under 20.	20-24.	25-29.	30-34.	35-39.	40-44.	45 and over.	
Under 8 months ..	3,954	4,276	1,096	448	210	60	2	10,046
8 months ..	335	1,116	444	146	41	10	..	2,092
9 ..	551	2,520	1,014	322	119	15	1	4,542
10 ..	443	2,235	870	269	85	13	..	3,915
11 ..	341	1,904	724	248	90	14	..	3,321
Total under 1 year ..	5,624	12,051	4,148	1,433	545	112	3	23,916
1-2 years ..	1,301	10,577	4,986	1,582	633	164	6	19,249
2-3 ..	125	3,703	3,080	861	339	83	6	8,197
3-4 ..	22	1,303	2,022	596	226	60	1	4,230
4-5 ..	2	412	1,254	446	149	35	3	2,301
5-10 ..	1	205	1,617	1,144	475	91	7	3,480
10-15 ..	..	1	54	261	226	55	5	602
15 years and over ..	..	..	..	12	52	36	3	103
Total ..	7,075	28,252	17,161	6,335	2,585	636	34	62,078

(iii) *First Births and Subsequent Births.* The following table provides a comparison between the numbers of nuptial first births and subsequent births in periods since 1911 and shows also the proportion of first to total nuptial confinements.

**NUPTIAL FIRST BIRTHS AND SUBSEQUENT BIRTHS : AUSTRALIA.**

Period.	Nuptial Confinements.			Proportion of First to Total Nuptial Confinements (Per Cent.).
	First Births.	Other Births.	Total.	
<b>ANNUAL AVERAGES.</b>				
1911-20 .. .. .	33,595	88,997	122,592	27.40
1921-30 .. .. .	38,120	88,086	126,206	30.20
1931-40 .. .. .	39,243	71,136	110,379	35.55
1941-50 .. .. .	58,818	96,994	155,812	37.75
<b>YEARLY TOTALS.</b>				
1946 .. .. .	63,145	103,727	166,872	37.84
1947 .. .. .	69,112	104,128	173,240	39.89
1948 .. .. .	61,799	107,183	168,982	36.57
1949 .. .. .	60,927	111,080	172,007	35.42
1950 .. .. .	62,081	119,101	181,182	34.26
1951 .. .. .	62,078	121,594	183,672	33.80

19. *Stillbirths.*—Registration of stillbirths is not compulsory in all Australian States. It has been compulsory in Western Australia since 14th January, 1908 ; in the Australian Capital Territory since 1st January, 1930 ; in New South Wales since 1st April, 1935 ; in South Australia since 1st May, 1937 ; and in Victoria from 1st January, 1953. In Victoria, independently of compulsory registration, and in Queensland and Tasmania where registration is not enforced, some information is obtained by notification of stillbirths for various purposes. Because registration is not compulsory in all States detailed statistics of stillbirths for Australia as a whole have not been compiled.

The number of stillbirths in each State and Territory, as recorded by the means outlined above since 1936, is shown in the following table :—

**STILLBIRTHS.**

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
<b>ANNUAL AVERAGES.</b>									
1936-40 ..	1,409	854	(a)	(b) 274	234	144	(a)	5	(a)
1941-45 ..	1,478	966	(c) 657	324	248	143	(a)	9	de3,825
1946-50 ..	1,405	949	626	368	274	161	(a)	12	(e)3,795
<b>YEARLY TOTALS.</b>									
1947 ..	1,466	951	667	387	304	187	(a)	10	(e)3,972
1948 ..	1,326	902	617	374	266	179	(a)	17	(e)3,681
1949 ..	1,279	907	581	338	268	159	8	14	3,554
1950 ..	1,406	963	607	325	240	138	6	11	3,696
1951 ..	1,291	929	651	316	297	166	5	15	3,670
1952 ..	1,195	919	596	320	283	154	13	10	3,490

(a) Not available. Queensland for 1941.

(b) Three years 1938-40.

(c) Excludes Queensland for 1941. (e) Excludes Northern Territory.

(d) Excludes Queensland for 1941. (e) Four years 1942-45.

(d) Excludes Queensland for 1941.

The incidence of stillbirth in each State and Territory as measured by the rate per 1,000 all births, both live and still, is as follows:—

**PROPORTION OF STILLBIRTHS.(a)**

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
<b>AVERAGE ANNUAL RATES.</b>									
1936-40 ..	28.71	27.43	(b)	27.49	25.70	28.75	(b)	22.18	(b)
1941-45 ..	25.46	24.79	d26.76	25.17	23.29	25.68	(b)	22.87	ef 25.25
1946-50 ..	19.99	19.64	21.87	22.12	20.46	22.26	(b)	16.35	(f)20.46
<b>YEARLY RATES.</b>									
1947 ..	20.69	19.68	22.98	23.17	23.07	25.52	(b)	15.04	(f)21.31
1948 ..	19.34	19.19	22.15	23.02	20.16	25.01	(b)	22.91	(f)20.26
1949 ..	18.23	18.98	20.94	20.63	19.45	21.87	22.60	16.81	19.23
1950 ..	19.26	18.96	20.48	18.43	16.59	18.70	14.39	11.40	19.02
1951 ..	17.60	18.05	21.48	17.77	19.68	22.07	12.14	14.73	18.63
1952 ..	15.85	16.81	18.89	17.58	18.03	19.08	28.20	8.99	17.01

(a) Number of stillbirths per 1,000 of all births (live and still). (b) Not available. (c) Three years 1938-40. (d) Four years 1942-45. (e) Excludes Queensland for 1941. (f) Excludes Northern Territory.

### § 3. Mortality.

1. Number of Deaths.—(i) Year 1952. The following table shows the number of deaths, male and female, registered in each State during the year. Stillbirths, although registered as both births and deaths in some States, are excluded from the death statistics published herein.

#### DEATHS, 1952.

Sex.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Males ..	18,194	12,590	6,588	3,808	3,077	1,427	72	95	45,851
Females ..	13,844	10,732	4,583	3,242	2,132	1,152	17	44	35,746
Persons ..	32,038	23,322	11,171	7,050	5,209	2,579	89	139	81,597

(ii) Years 1901 to 1952. A summary of the total number of deaths in each State and Territory since 1901 is given in the following table. Annual averages for each five-yearly period from 1861 will be found in Official Year Book No. 39, page 597.

#### DEATHS.

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
<b>ANNUAL AVERAGES.</b>									
1901-1905	15,900	15,349	5,862	3,913	2,731	1,932	70	..	45,757
1906-1910	15,882	14,942	5,529	3,848	2,867	2,020	77	(a)	45,165
1911-1915	18,802	15,921	6,907	4,495	3,045	2,010	75	12	51,267
1916-1920	20,776	16,485	7,605	4,878	3,133	1,971	81	10	54,939
1921-1925	20,379	16,176	7,412	4,880	3,231	2,090	57	9	54,234
1926-1930	22,677	16,698	8,007	5,008	3,617	2,040	71	42	58,160
1931-1935	22,591	17,680	8,147	5,063	3,876	2,194	67	35	59,653
1936-1940b	25,735	19,361	9,107	5,540	4,270	2,342	73	54	66,482
1941-1945b	27,807	20,964	9,715	6,303	4,724	2,488	64	71	72,136
1946-1950b	29,552	21,827	10,357	6,507	4,802	2,459	76	103	75,683

(a) Part of New South Wales prior to 1911. (b) Excludes deaths of defence personnel and of internees and prisoners of war from overseas for the period September, 1939 to June, 1947.

DEATHS—*continued.*

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
YEARLY TOTALS.									
1947(a) ..	28,449	21,442	10,116	6,215	4,723	2,363	65	95	73,468
1948 ..	30,403	21,825	10,462	6,748	4,685	2,528	73	115	70,839
1949 ..	29,364	21,991	10,161	6,373	4,790	2,389	92	100	75,200
1950 ..	30,965	22,341	10,399	6,740	5,058	2,466	96	122	78,187
1951 ..	31,932	23,446	11,105	7,184	5,288	2,567	117	149	81,788
1952 ..	32,038	23,322	11,171	7,050	5,209	2,579	89	139	81,597

(a) Excludes deaths of defence personnel and of internees and prisoners of war from overseas for the period January to June, 1947.

2. **Crude Death-rates.**—The commonest method of measuring the mortality rate is to relate the number of deaths for a given period to the mean population for that period, thus obtaining the crude death-rate. This rate for a given period measures the numbers per thousand of population by which the population is depleted through deaths during that period. Crude death-rates for each State and Territory from 1901 to 1952 are shown in the following table.

## CRUDE DEATH-RATES.(a)

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
AVERAGE ANNUAL RATES.									
1901-1905	11.25	12.74	11.38	10.96	12.58	10.79	15.69	..	11.76
1906-1910	10.11	12.01	9.90	10.16	11.03	10.77	20.99	(b)	10.75
1911-1915	10.47	11.49	10.55	10.37	9.87	10.39	20.38	5.21	10.73
1916-1920	10.58	11.38	10.75	10.65	9.91	9.83	17.41	4.26	10.77
1921-1925	9.26	10.08	9.31	9.45	9.19	9.70	15.00	2.61	9.53
1926-1930	9.26	9.56	9.06	8.83	8.90	9.44	15.84	5.49	9.26
1931-1935	8.68	9.72	8.61	8.72	8.82	9.62	13.45	3.81	9.00
1936-1940(c)	9.45	10.36	9.08	9.33	9.21	9.91	11.76	4.50	9.62
1941-1945(c)	9.73	10.63	9.24	10.27	9.86	10.21	6.51	4.98	9.96
1946-1950(c)	9.66	10.38	9.17	9.82	9.23	9.25	6.14	d 5.67	9.74

## YEARLY RATES.

1947(c) ..	9.53	10.44	9.15	9.62	9.39	9.17	5.97	d 5.62	9.69
1948 ..	10.04	10.44	9.31	10.25	9.10	9.55	5.99	d 6.33	9.96
1949 ..	9.43	10.28	8.85	9.45	8.99	8.76	6.83	d 5.23	9.51
1950 ..	9.60	10.14	8.82	9.63	9.05	8.74	6.43	d 5.95	9.55
1951 ..	9.62	10.33	9.20	9.98	9.09	8.76	7.32	6.11	9.70
1952—									
Males ..	10.64	10.68	10.46	10.35	9.91	9.10	7.29	6.19	10.47
Females	8.24	9.29	7.58	8.73	7.31	7.82	2.73	3.78	8.37
Persons	9.45	9.99	9.05	9.53	8.65	8.48	5.53	5.15	9.43

(a) Number of deaths per 1,000 of mean population.

(b) Part of New South Wales prior to 1911.

(c) Excludes deaths of defence personnel from September, 1939 to June, 1947.

(d) Rates based on revised mean population estimates shown on page 335 are as follows:—1946-50, 5.30; 1947, 5.58; 1948, 5.99; 1949, 4.72; 1950, 5.17.

3. **Standardized Death-rates.**—(i) *General.* The death-rates quoted above are crude rates, i.e., they simply show the number of deaths per thousand of mean population without taking into consideration differences in the sex and age composition of the population. Other conditions being equal, however, the crude death-rate of a community will be low if it contains a large percentage of young people (not infants), and conversely it will be relatively high if the population includes a large proportion of elderly people.

The foregoing table of crude death-rates, therefore, does not indicate comparative incidence of mortality either as between States in the same year or in any one State over a period of years. In order to obtain a comparison of mortality rates on a uniform basis as far as sex and age constitution are concerned, "standardized" death-rates may be computed. These are computed by selecting a particular distribution of age and sex as a standard, and then calculating what would have been the general death-rate if the death-rates for each sex and in each age group were as recorded, but the age and sex distribution were the same as in the standard population. For the standardized rates which follow, the standard population compiled by the International Institute of Statistics has been used. This standard is based upon the age distribution according to sex of nineteen European countries at their Censuses nearest to the year 1900. Full details of the "Standard Population" are given in Official Year Book No. 22, p. 962.

(ii) *Death-rates in Age Groups.* An examination of the age distribution of deaths and the resultant age-specific mortality rates is made in paragraph 9.

(iii) *Comparison of Crude and Standardized Death-rates.* The relative incidence of mortality as between individual States and as between the years 1921, 1933, and 1947 is illustrated in the following statement of crude and "standardized" death-rates. These years have been chosen for comparison because the Census data give essential information as to sexes and ages of the State populations. Crude death-rates are shown to indicate the degree to which they disguise the true position.

#### CRUDE AND STANDARDIZED DEATH-RATES.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
<b>Crude Death-rate(a)—</b>							
1921 .. .. .	9.50	10.52	9.37	10.02	10.42	10.30	9.91
1933 .. .. .	8.58	9.59	8.84	8.44	8.64	9.60	8.92
1947 .. .. .	9.53	10.44	9.15	9.62	9.39	9.17	9.69
<b>Standardized Death-rate(b)—</b>							
1921 .. .. .	10.35	10.79	10.24	10.38	11.88	10.83	10.58
1933 .. .. .	8.52	8.74	9.10	7.66	8.74	8.86	8.62
1947 .. .. .	7.44	7.31	7.47	6.77	7.28	7.21	7.34

(a) Total deaths per 1,000 of mean population.  
in para. 3 (l) above.

(b) See explanation of standardized death-rates

The comparisons above relate to individual years in which a census of population was taken and should not be used as the basis for general conclusions as to changes in incidence of mortality for other than those years.

(iv) *Standardized Death rates, Australia, 1947 to 1951.* The standardized death-rates for Australia for 1947 and later years were as follows:—1947, 7.34; 1948, 7.41; 1949, 7.18; 1950, 7.23; and 1951, 7.45.

4. *True Death-rates.*—The main objections to standardized death-rates are that the choice of a standard population is arbitrary and that the standardized rates have little value except for comparative purposes, and even then variation of the standard population may make appreciable differences. A correct measurement of the mortality of the population can be obtained, however, from life tables. A life table represents the number of survivors at each age from a selected group of newly-born children who are subject to given mortality conditions, and from such a table the complete expectation of life at birth can be calculated. The reciprocal of this figure is known as the true death-rate, since, if the complete expectation of life of a person at birth is 50 years, say, then each person will on the average die 50 years after birth, so that in the standard population one person in 50 or 20 per thousand will die each year. The true death-rate for a given period is unaffected by the particular age distribution of that period and is determined solely by the mortality experience of the period as manifested in the rate of survivorship from each year of age to the next. The table below sets out complete expectation of life at birth and true death-rates for the periods covered by Australian life tables.

**COMPLETE EXPECTATION OF LIFE AT BIRTH AND TRUE DEATH-RATES :  
AUSTRALIA.**

Period.	Complete Expectation of Life at Birth (Years).		True Death-rate.	
	Males.	Females.	Males.(a)	Females.(b)
1881-1890.. .. .	47.20	50.84	21.19	19.67
1891-1900.. .. .	51.08	54.76	19.58	18.26
1901-1910.. .. .	55.20	58.84	18.12	17.00
1920-1922.. .. .	59.15	63.31	16.91	15.80
1932-1934.. .. .	63.48	67.14	15.75	14.89
1946-1948.. .. .	66.07	70.63	15.14	14.16

(a) Number of deaths per 1,000 males in life table or stationary population. (b) Number of deaths per 1,000 females in life table or stationary population.

5. Crude Death-rates of Various Countries.—The following table gives the crude death-rates for Australia in comparison with the rates for various other countries.

**CRUDE DEATH-RATES(a) : VARIOUS COUNTRIES.**

Country.	1908-13.	1921-25.	1926-30.	1931-35.	1951.
Netherlands .. .. .	13.9	10.4	9.9	8.9	7.5
Norway .. .. .	13.6	11.5	11.0	10.4	8.3
Argentina .. .. .	17.5	14.4	13.3	12.1	8.7
Denmark .. .. .	13.2	11.3	11.1	10.9	8.8
Canada .. .. .	(b)	11.2	11.1	9.7	9.0
Union of South Africa(c)	(d) 10.3	9.7	9.7	9.8	9.2
New Zealand(e)	9.3	8.6	8.6	8.2	9.6
United States of America	(d) 14.1	11.8	11.8	(f) 10.9	9.7
<b>Australia (g)</b> .. .. .	<b>10.7</b>	<b>9.5</b>	<b>9.3</b>	<b>9.0</b>	<b>9.7</b>
Sweden .. .. .	14.0	12.1	12.1	11.6	9.9
Finland .. .. .	16.4	15.1	14.8	13.3	10.0
Japan .. .. .	20.5	21.8	19.3	17.9	10.0
Italy .. .. .	20.4	17.4	16.0	14.1	10.3
Switzerland .. .. .	15.2	12.5	12.1	11.8	10.5
Greece .. .. .	(b)	16.5	16.6	16.5	(h) 10.7
Hungary .. .. .	(d) 22.9	19.9	17.0	15.8	(i) 11.2
Czechoslovakia .. .. .	21.0	16.1	15.3	13.8	(j) 11.4
Spain .. .. .	22.8	20.2	17.9	16.4	11.6
Ceylon .. .. .	31.4	27.8	25.1	24.7	11.6
Portugal .. .. .	(d) 20.9	20.4	18.4	16.9	12.3
United Kingdom .. .. .	14.5	12.4	12.3	12.2	12.6
Belgium .. .. .	15.7	13.4	13.7	12.9	12.7
Austria .. .. .	(d) 18.8	15.8	14.4	13.5	12.7
France .. .. .	18.6	17.2	16.8	15.7	13.2
Ireland, Republic of .. .. .	16.9	14.6	14.4	14.0	14.3
Yugoslavia .. .. .	(b)	20.2	20.0	17.9	15.4
Chile .. .. .	(d) 31.0	30.3	25.8	24.4	15.7
Mexico .. .. .	(b)	(k) 25.5	25.6	24.8	17.2
Egypt .. .. .	25.8	25.4	26.2	27.4	(j) 22.1

(a) Number of deaths per 1,000 of mean population. (b) Not available. (c) White population only. (d) 1911-13. (e) Excluding Maoris. (f) 1933-35. (g) Excluding full-blood aborigines. (h) 1949. (i) 1948. (j) 1950. (k) 1922-25.



6. True Death-rates of Various Countries.—The following table gives the true death-rates for Australia in comparison with the rates for various other countries :—

TRUE DEATH-RATES : VARIOUS COUNTRIES.

Country.	Period.	True Death-rate.		Country.	Period.	True Death-rate.	
		Males. (a)	Females. (b)			Males. (a)	Females. (b)
Netherlands ..	1947-49	14.4	14.0	Switzerland ..	1939-44	16.0	14.9
Norway ..	1945-48	14.7	13.9	Belgium ..	1946-49	16.1	14.9
Denmark ..	1946-50	14.7	14.3	France ..	1946-49	16.2	14.8
Sweden ..	1941-45	14.9	14.3	Ireland, Re- public of ..	1940-42	16.9	16.4
England and Wales ..	1950	15.0	14.0	Germany(f) ..	1946-47	17.3	15.8
Australia(c) ..	1946-48	15.1	14.2	Northern Ire- land ..	1936-38	17.3	16.9
United States of America—				Japan ..	1949-50	17.8	16.8
Whites ..	1949	15.2	14.0	Poland ..	1948	18.0	16.0
Others ..	1949	17.1	15.9	Hungary ..	1941	18.2	17.2
Canada ..	1947	15.3	14.5	Finland ..	1941-45	18.3	16.4
New Zealand(d)	1934-38	15.3	14.6	Austria ..	1930-33	18.3	17.1
Scotland ..	1951	15.6	14.6	Italy ..	1930-32	18.6	17.9
Union of South Africa(e) ..	1945-47	15.7	14.6	Czechoslovakia	1929-32	19.3	18.1
				Greece ..	1926-30	20.4	19.7

(a) Number of deaths per 1,000 males in life table or stationary population (see explanation on page 400). (b) Number of deaths per 1,000 females in life table or stationary population (see explanation on page 400). (c) Excludes full-blood aboriginals. (d) Excludes Maoris. (e) White population only. (f) Federal Republic (Western Germany).

7. Australian Life Tables.—(i) *Life Tables prior to 1947.* It has been the practice at each Census from 1911 onwards to prepare Life Tables representative of the mortality experience of Australia. In 1911 the mortality of the Australian population for the thirty years from 1881 to 1910 inclusive was investigated by the Commonwealth Statistician. Tables were compiled for each State and for Australia as a whole in respect of each sex for each of the decennial periods 1881-1890, 1891-1900 and 1901-1910. These compilations furnished a comprehensive view of Australian mortality in respect of sex, of time, and of geographical distribution, and practically superseded all Life Tables prepared in Australia prior to 1911. In addition, monetary tables based on the experience for the whole of Australia for the decennium 1901-1910 were prepared and published.

At the Census of 1921 Life Tables were prepared by the Commonwealth Statistician from the population recorded and the deaths in the three years 1920-22. Similarly in 1933 the Life Tables, which were prepared by Mr. F. W. Barford, M.A., A.I.A., were based on the Census population and the deaths in the calendar years 1932-34.

(ii) *Life Tables of Census of 1947.* On the occasion of the 1947 Census, Life Tables representing the sixth in the series were compiled by the Commonwealth Actuary, Mr. W. C. Balmford, O.B.E., F.I.A. These were based on the population recorded, in conjunction with the deaths during 1946, 1947 and 1948, as it was considered undesirable to take into account deaths occurring prior to 1946 owing to the possible effects on the civilian population of conditions arising from the 1939-45 War. Full particulars of the data used, the methods of construction and the tabulations of these Life Tables will be found in the report of the Commonwealth Actuary which was published by the Commonwealth Statistician in 1950. This report also appeared in Volume III. of the Census of the Commonwealth of Australia, 1947. Monetary tables for both single and joint lives have also been prepared by the Commonwealth Actuary and are in the course of printing.

Comparative tables showing the number of survivors ( $l_x$ ) out of 100,000 births, rates of mortality ( $q_x$ ) and probability of surviving ten years ( ${}_{10}p_x$ ), at selected ages, in respect of the Australian Life Tables of 1920-22, 1932-34 and 1946-48, together with

a summary of the main characteristics of the tables, were published in Official Year Book No. 39, pages 602-3. The expectation of life at selected ages taken from these three Life Tables is as follows:—

**AUSTRALIAN LIFE TABLES : COMPLETE EXPECTATION OF LIFE ( $e_x$ ) AT SELECTED AGES.**

Age (x).	Males.			Females.		
	1920-22.	1932-34.	1946-48.	1920-22.	1932-34.	1946-48.
0 .. ..	59.15	63.48	66.07	63.31	67.14	70.63
10 .. ..	56.01	58.02	59.04	59.20	61.02	63.11
20 .. ..	46.99	48.81	49.64	50.03	51.67	53.47
30 .. ..	38.44	39.90	40.40	41.48	42.77	44.08
40 .. ..	30.05	31.11	31.23	33.14	34.04	34.91
50 .. ..	22.20	22.83	22.67	24.90	25.58	26.14
60 .. ..	15.08	15.57	15.36	17.17	17.74	18.11
70 .. ..	9.26	9.60	9.55	10.41	10.98	11.14

8. Infant Deaths and Death-rates.—(i) *Australia*, 1901 to 1952. The universal experience that during the first few years of life the higher death-rate of male infants tends to counteract the excess of male births is confirmed by the fact that out of 484,669 male infants born from 1948 to 1952, 13,664 (28.19 per 1,000) died during the first year of life, while of 460,107 female infants only 10,206 (22.18 per 1,000) died during the first year. Stillbirths are not included in any of the tables relating to deaths.

**INFANT DEATHS AND DEATH-RATES : AUSTRALIA.**

Period.	Number of deaths under one year.			Rate of Infant Mortality.(a)		
	Males.	Females.	Total.	Males.	Females.	Total.
<b>ANNUAL AVERAGES.</b>						
1901-05 ..	5,500	4,447	9,947	104.25	88.83	96.91
1906-10 ..	4,880	3,821	8,701	84.78	70.02	77.61
1911-15 ..	5,274	4,063	9,337	77.65	62.65	70.32
1916-20 ..	4,757	3,597	8,354	71.63	57.31	64.67
1921-25 ..	4,474	3,394	7,868	64.23	51.21	57.88
1926-30 ..	3,909	2,942	6,851	57.66	45.99	51.99
1931-35 ..	2,649	1,986	4,635	46.00	36.29	41.27
1936-40 ..	2,679	2,016	4,695	43.23	34.16	38.81
1941-45 ..	2,921	2,215	5,136	39.11	31.18	35.24
1946-50 ..	2,808	2,094	4,902	30.09	23.70	26.98
<b>YEARLY TOTALS.</b>						
1947 .. ..	2,977	2,225	5,202	31.73	25.12	28.52
1948 .. ..	2,856	2,086	4,942	31.28	24.07	27.77
1949 .. ..	2,624	1,963	4,587	28.29	22.18	25.31
1950 .. ..	2,661	2,004	4,665	27.20	21.60	24.47
1951 .. ..	2,749	2,129	4,878	27.66	22.67	25.24
1952 .. ..	2,774	2,024	4,798	26.83	20.60	23.79

(a) Number of deaths under one year per 1,000 live births registered.

(ii) *States, 1901 to 1952.* For each State and Territory the rates of infant mortality during the period 1901 to 1952 were as follows:—

**INFANT MORTALITY RATES(a) : UNDER ONE YEAR.**

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
<b>AVERAGE ANNUAL RATES.</b>									
1901-05 ..	97.02	95.91	94.35	86.70	124.79	90.00	149.35	(b)	96.91
1906-10 ..	77.30	79.90	71.27	68.38	89.80	83.18	143.79	(b)	77.61
1911-15 ..	71.05	72.23	65.68	67.26	72.43	70.91	85.11	32.56	70.32
1916-20 ..	64.82	67.18	63.04	61.93	61.73	63.84	67.15	40.40	64.67
1921-25 ..	58.11	61.93	50.99	54.19	59.14	60.44	40.82	60.24	57.88
1926-30 ..	54.74	52.34	47.41	46.95	49.27	53.37	66.09	71.31	51.99
1931-35 ..	41.92	42.76	39.46	35.12	40.81	44.47	80.60	34.48	41.27
1936-40 ..	41.18	37.63	36.75	33.08	39.70	41.23	44.80	21.78	38.81
1941-45 ..	36.29	34.73	34.55	33.20	33.37	39.54	55.97	18.75	35.24
1946-50 ..	28.91	23.82	27.49	26.50	28.15	26.53	37.37	19.89	26.98

**YEARLY RATES.**

1947 ..	29.81	26.28	30.82	24.27	30.92	27.31	43.48	19.85	28.52
1948 ..	30.30	23.93	27.96	29.74	25.60	27.65	35.71	23.45	27.77
1949 ..	27.29	21.89	24.72	27.68	26.42	23.91	37.57	15.87	25.31
1950 ..	27.04	20.09	24.77	24.04	27.13	23.75	36.50	20.96	24.47
1951 ..	26.29	22.61	25.66	24.51	28.73	26.64	44.23	11.96	25.24
1952 ..	24.50	22.29	24.94	23.09	24.91	21.73	31.25	23.59	23.79

(a) Number of deaths under one year per 1,000 live births registered.

(b) Part of New South Wales prior to 1911.

**INFANT MORTALITY RATES(a) : UNDER ONE MONTH.**

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
<b>AVERAGE ANNUAL RATES.</b>									
1901-05 ..	33.11	34.49	32.13	30.73	37.09	33.54	(b)	(c)	33.46
1906-10 ..	31.47	32.45	30.87	26.83	30.74	29.17	(b)	(c)	31.10
1911-15 ..	31.75	33.07	30.73	29.07	30.87	32.68	38.30	23.26	31.69
1916-20 ..	32.12	33.57	29.62	29.43	29.43	31.48	40.77	35.35	31.70
1921-25 ..	29.97	32.19	27.44	27.83	27.56	31.73	11.66	18.07	29.91
1926-30 ..	29.63	29.75	27.66	26.84	25.10	33.12	14.37	28.86	28.96
1931-35 ..	27.62	27.78	27.91	22.99	25.11	30.09	35.26	23.45	27.27
1936-40 ..	27.63	25.94	26.15	21.62	22.62	29.56	28.80	16.33	26.19
1941-45 ..	24.52	24.40	24.41	20.86	20.60	27.24	33.57	12.54	23.97
1946-50 ..	20.53	17.55	19.95	18.38	19.53	19.34	21.45	15.80	19.34

**YEARLY RATES.**

1947 ..	21.46	19.59	21.44	17.90	19.96	20.73	25.36	16.79	20.51
1948 ..	21.33	17.14	20.21	19.28	19.10	20.06	10.71	17.93	19.64
1949 ..	19.24	16.28	17.44	18.39	19.24	17.02	26.01	12.21	18.02
1950 ..	18.77	14.71	18.43	17.57	18.41	16.02	19.46	16.77	17.41
1951 ..	18.01	16.04	18.21	16.38	20.08	18.35	14.74	8.97	17.50
1952 ..	16.56	16.39	17.96	15.04	17.97	14.65	17.86	17.24	16.64

(a) Number of deaths of children aged under one month per 1,000 live births registered.

(b) Not available.

(c) Part of New South Wales prior to 1911.

## INFANT MORTALITY RATES(a) : ONE MONTH AND UNDER ONE YEAR.

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
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## AVERAGE ANNUAL RATES.

1901-05 ..	63.91	61.42	62.22	55.97	87.70	56.46	(b)	(c)	63.45
1906-10 ..	45.83	47.45	40.40	41.55	59.06	54.01	(b)	(c)	46.51
1911-15 ..	39.30	39.16	34.95	38.19	41.56	38.23	46.81	9.30	38.63
1916-20 ..	32.70	33.61	33.42	32.50	32.30	32.36	26.38	5.05	32.97
1921-25 ..	28.14	29.74	23.55	26.36	31.58	28.71	29.16	42.17	27.97
1926-30 ..	25.11	22.59	19.75	20.11	24.17	20.25	51.72	42.45	23.03
1931-35 ..	14.30	14.98	11.55	12.13	15.70	14.38	45.34	11.03	14.00
1936-40 ..	13.55	11.69	10.60	11.46	17.08	11.67	16.00	5.45	12.62
1941-45 ..	11.77	10.33	10.14	12.34	12.77	12.30	22.40	6.21	11.27
1946-50 ..	8.38	6.27	7.54	8.12	8.62	7.19	15.92	4.09	7.64

## YEARLY RATES.

1947 ..	8.35	6.69	9.38	6.37	10.96	6.58	18.12	3.06	8.01
1948 ..	8.97	6.79	7.75	10.46	6.50	7.59	25.00	5.52	8.13
1949 ..	8.05	5.61	7.28	9.29	7.18	6.89	11.56	3.66	7.29
1950 ..	8.27	5.38	6.34	6.47	8.72	7.73	17.04	4.19	7.06
1951 ..	8.28	6.57	7.45	8.13	8.65	8.29	29.49	2.99	7.74
1952 ..	7.94	5.90	6.98	8.05	6.94	7.08	13.39	6.35	7.15

(a) Number of deaths of children aged one month and under one year per 1,000 live births registered.

(b) Not available.

(c) Part of New South Wales prior to 1911.

These tables indicate the striking decrease in infant mortality in Australia since the beginning of the century, the mortality rate of children aged under one year per 1,000 live births for 1952 being slightly less than one-fourth of the average rate for 1901-05. The tables above reveal the fact that this improvement was due almost entirely to the decrease in deaths from preventable causes, the mortality rate for children aged one month but under one year declining by 89 per cent. while that for children aged under one month declined by only 50 per cent.

(iii) *Statistical Divisions.* The total numbers of births and of deaths of children under one year of age for 1951 are shown in *Demography Bulletin* No. 69 for each of the sixty-five statistical divisions for which vital statistics have been tabulated.

(iv) *Various Countries and Cities.* Compared with other countries Australia occupies a very favorable position in respect of infant mortality. In 1951 only New Zealand and Sweden recorded a lower rate than Australia.

A study of the respective rates shows that a high birth-rate is often, though not invariably, accompanied by a high infant death-rate.

## INFANT MORTALITY RATES : VARIOUS COUNTRIES.

Country.	Infant Mortality Rate.(a)						Crude Birth-rate (b) 1951.
	1906-15.	1921-25.	1926-30.	1931-35.	1936-40.	1951.	
Sweden .. .. .	74	60	58	50	42	21	15.6
New Zealand (c) .. .. .	61	43	37	32	32	23	24.4
<b>Australia (d) .. .. .</b>	<b>74</b>	<b>58</b>	<b>52</b>	<b>41</b>	<b>39</b>	<b>25</b>	<b>22.9</b>
Netherlands .. .. .	115	64	56	45	37	27	22.3
Norway .. .. .	(e)	52	49	45	(f) 40	(g) 28	18.5
United States of America .. .. .	(e)	74	68	59	51	29	24.5
Denmark .. .. .	103	82	82	71	60	29	17.8
Switzerland .. .. .	108	65	54	48	45	30	17.2
United Kingdom .. .. .	(e)	78	70	65	59	31	15.9
Union of South Africa (h) .. .. .	(i) 91	73	67	63	53	34	25.5
Finland .. .. .	(i) 112	96	88	72	72	35	23.0
Canada .. .. .	(e)	98	93	75	64	(g) 41	27.2
Ireland, Republic of .. .. .	92	69	70	68	69	45	21.2
France .. .. .	122	95	89	73	70	(g) 52	19.4
Japan .. .. .	151	159	137	120	(j) 112	57	25.6
Austria .. .. .	(e)	136	117	99	81	62	14.9
Belgium .. .. .	139	100	95	82	77	65	16.4
Italy .. .. .	144	127	119	105	103	67	18.1
Spain .. .. .	156	143	124	113	121	68	20.1
Argentina .. .. .	(e)	116	113	97	96	(k) 70	24.9
Czechoslovakia .. .. .	(e)	155	147	130	(j) 122	(l) 82	(g) 22.9
Ceylon .. .. .	(i) 207	190	175	182	160	88	37.3
Portugal .. .. .	(e)	146	146	146	135	89	24.2
Mexico .. .. .	(e)	(m) 223	173	134	127	100	44.2
Hungary .. .. .	(i) 198	187	172	157	131	(k) 100	(k) 19.1
Egypt .. .. .	(e)	144	152	165	163	(l) 135	(g) 48.8
Yugoslavia .. .. .	(e)	(e)	151	153	(j) 141	140	27.0
Chile .. .. .	(i) 301	265	229	248	234	149	32.4
Rumania .. .. .	(i) 195	201	192	182	180	(n) 199	(n) 23.4

(a) Number of deaths under 1 year per 1,000 live births registered. (b) Number of live births per 1,000 of mean population. (c) Excludes Maoris. (d) Excludes full-blood aboriginals. (e) Not available. (f) 1935-39. (g) 1950. (h) White population only. (i) 1911-13. (j) 1935-38. (k) 1948. (l) 1949. (m) 1922-25. (n) 1947.

In 1950 the Australian cities, Melbourne, Hobart, Perth, Sydney and Adelaide were among the ten cities having the lowest rates in the following list. The list is headed by Stockholm (18), Melbourne (19), Christchurch (19), and Oslo (21), the next six cities being Hobart, Auckland, Wellington, Perth, Sydney and Adelaide. Of the cities listed, Cairo had the highest rate, 179.

## INFANT MORTALITY RATES : VARIOUS CITIES, 1950.

City.	Infant Mortality Rate.(a)	City.	Infant Mortality Rate.(a)	City.	Infant Mortality Rate.(a)
Stockholm .. .. .	18	Copenhagen .. .. .	27	Rome .. .. .	42
Melbourne(b) .. .. .	19	Chicago .. .. .	(e) 28	Hamburg .. .. .	44
Christchurch(c) .. .. .	(d) 19	Toronto .. .. .	28	Glasgow .. .. .	44
Oslo .. .. .	21	Aberdeen .. .. .	29	Liverpool .. .. .	(d) 44
Hobart .. .. .	23	Edinburgh .. .. .	29	Dublin .. .. .	47
Auckland(c) .. .. .	(d) 23	Geneva .. .. .	29	Belfast .. .. .	50
Wellington(c) .. .. .	(d) 24	Leeds .. .. .	(d) 30	Montreal .. .. .	52
Perth(b) .. .. .	25	Brisbane(b) .. .. .	32	Munich .. .. .	58
Sydney(b) .. .. .	25	Johannesburg(f) .. .. .	32	Berlin .. .. .	64
Adelaide(b) .. .. .	25	Cape Town(f) .. .. .	(e) 33	Cologne .. .. .	76
New York City .. .. .	25	Sheffield .. .. .	(d) 35	Lisbon .. .. .	(d) 96
Amsterdam .. .. .	25	Paris .. .. .	36	Bombay .. .. .	152
London .. .. .	26	Manchester .. .. .	(d) 38	Cairo .. .. .	179
Detroit .. .. .	27	Birmingham .. .. .	38		

(a) Number of deaths under 1 year per 1,000 live births registered. (b) Excludes full-blood aboriginals. (c) Excludes Maoris. (d) 1949. (e) 1948. (f) White population only.

(v) *Causes of Death: Children under one Year.* Causes of deaths of children under one year of age should be considered in relation to age at death, because the emphasis on various causes changes rapidly as age at death varies. In 1951, 2,867 (97.82 per cent.) of the deaths occurring during the first week of life were caused by congenital malformations (10.64 per cent.) and certain diseases of early infancy (87.18 per cent.). Of the latter, more than three-fifths were associated with immaturity (*see table below*). At ages one week and under four weeks the proportions were 29.05 per cent. and 61.42 per cent. respectively. Of deaths of children over four weeks and under one year of age, 19.32 per cent. were caused by congenital malformations and only 6.55 per cent. by diseases of early infancy, the emphasis having shifted to respiratory and digestive diseases (44.12 per cent.), infective and parasitic diseases (8.69 per cent.), diseases of the nervous system (7.55 per cent.) and accidents and violence (7.22 per cent.). A summary for 1951 of the deaths of children under one year of age, classified according to principal causes of death and age at death, is given in the following table.

Deaths from each cause in the detailed list of titles adopted for publication, classified according to age at death, will be found in *Demography Bulletin* No. 69. Causes of infant deaths in each State and Territory in 1951 will also be found therein.

CAUSES OF DEATH: CHILDREN UNDER ONE YEAR OF AGE, AUSTRALIA, 1951.

Cause of Death.	Age at Death.											Under One Year.				
	Weeks.			Months.												
	Under 1.	1.	2.	3.	1. (a)	2.	3.	4.	5.	6.	7.		8.	9.	10.	11.
Tuberculosis .. .. .	..	..	..	..	..	..	1	..	..	1	3	4	3	3	1	16
Septicæmia and pyæmia .. .. .	..	..	1	..	..	5	..	1	..	1	..	..	..	1	2	11
Diphtheria .. .. .	..	..	..	..	..	..	..	..	1	..	..	..	..	2	5	8
Whooping Cough .. .. .	..	..	..	..	1	2	2	3	3	2	2	1	5	1	..	22
Meningococcal infections .. .. .	..	..	1	1	3	2	..	1	5	3	6	5	4	2	5	38
Measles .. .. .	..	..	..	..	..	..	..	1	1	3	2	2	1	3	2	15
Other infective and parasitic diseases .. .. .	2	2	1	1	4	2	3	1	3	1	..	1	3	3	2	29
Neoplasms .. .. .	3	1	1	..	..	2	1	1	..	1	2	1	3	3	3	22
Allergic, endocrine system, etc., diseases .. .. .	4	1	1	..	1	4	4	2	2	2	1	..	..	1	3	26
Diseases of the blood .. .. .	..	..	..	..	..	1	1	1	..	1	..	1	..	..	..	6
Mental, etc., disorders .. .. .	6	..	..	..	1	3	1	1	..	..	..	1	1	..	..	14
Meningitis .. .. .	3	3	1	1	5	3	4	2	9	2	6	4	3	..	5	51
Encephalitis .. .. .	..	1	..	..	2	..	2	..	1	1	2	2	4	..	..	15
Erythroedema polynurica .. .. .	..	..	..	..	..	..	..	..	1	..	2	2	3	4	8	20
Otitis media and mastoiditis .. .. .	1	..	1	..	1	..	2	1	1	1	3	1	1	..	1	13
Other diseases of the nervous system, etc. .. .. .	1	..	..	1	2	2	3	5	3	3	1	1	2	1	2	27
Diseases of the circulatory system .. .. .	1	..	1	1	..	2	..	..	1	1	1	1	1	..	..	9
Pneumonia, age four weeks and over .. .. .	..	..	..	..	52	33	32	47	38	32	33	21	17	8	20	333
Bronchitis .. .. .	1	..	..	..	4	8	5	1	6	4	3	4	2	6	1	45
Other diseases of the respiratory system .. .. .	..	..	2	2	2	3	3	1	2	3	3	3	2	..	2	28
Hernia and intestinal obstruction .. .. .	16	1	1	1	4	2	1	12	2	2	2	2	2	1	4	53
Gastro-enteritis and colitis, age four weeks and over .. .. .	..	..	..	..	26	13	17	20	20	11	19	13	14	9	19	181
Other diseases of the digestive system .. .. .	3	1	2	..	7	2	5	4	3	4	8	2	6	..	3	50
Diseases of the genito-urinary system .. .. .	..	1	..	..	1	3	2	1	1	..	..	2	..	2	3	16
Diseases of the skin and cellular tissue .. .. .	..	..	2	..	..	1	1	1	..	2	1	2	..	..	..	10
Diseases of the bones and organs of movement .. .. .	..	..	..	..	..	..	..	1	1	1	2	..	2	..	..	7
Congenital malformations .. .. .	312	62	36	33	76	43	40	32	24	22	14	10	8	11	9	732
Certain diseases of early infancy(b)—																
Without mention of immaturity(b)	941	91	44	33	28	10	10	7	5	1	1	2	..	1	..	1,176
With immaturity(b)	1,614	76	24	9	20	5	3	1	..	..	1	1	1	..	..	1,754
Symptoms and ill-defined conditions .. .. .	5	1	..	..	..	..	2	..	3	2	..	..	..	..	2	17
Accidents, poisoning and violence .. .. .	18	2	3	3	12	16	15	11	12	6	4	8	10	7	7	134
All Causes .. .. .	2,931	243	122	86	252	167	158	160	143	115	123	97	102	69	110	4,878

(a) Age 4 weeks and under 2 months.

(b) For further detail of this group of causes *see* next table.

The individual categories representing the causes of death which come within Class XV.—Certain Diseases of Early Infancy are designed to show the effect of immaturity in such causes of infant death. In 1951, 63 per cent. of deaths during the first week of life and 23 per cent. of those in the next three weeks of life were due, directly or indirectly, to immaturity. The relationship between immaturity and each of the individual categories of Class XV. is shown for the year 1951 in the following table:—

**DEATHS FROM CERTAIN DISEASES OF EARLY INFANCY: AUSTRALIA, 1951.**

Category No.	Cause of Death.	Without Mention of Immaturity.			With Immaturity.			Total.		
		Males.	Fe-males.	Per-sons.	Males.	Fe-males.	Per-sons.	Males.	Fe-males.	Per-sons.
760	Intracranial and spinal injury at birth ..	196	139	335	61	28	89	257	167	424
761	Other birth injury ..	67	35	102	74	46	120	141	81	222
762	Post-natal asphyxia and atelectasis ..	153	99	252	124	105	229	277	204	481
763	Pneumonia of the newborn ..	73	66	139	22	26	48	95	92	187
764	Diarrhoea of the newborn ..	10	8	18	..	..	..	10	8	18
765	Ophthalmia neonatorum ..	..	..	..	..	..	..	..	..	..
766	Pemphigus neonatorum ..	..	2	2	..	..	..	..	2	2
767	Umbilical sepsis ..	2	3	5	..	1	1	2	4	6
768	Other sepsis of newborn ..	3	1	4	1	..	1	4	1	5
769	Neonatal disorders arising from maternal toxæmia ..	22	14	36	55	46	101	77	60	137
770	Hæmolytic disease of newborn (erythroblastosis) ..	83	52	135	17	8	25	100	60	160
771	Hæmorrhagic disease of newborn ..	21	21	42	8	2	10	29	23	52
772	Nutritional maladjustment ..	12	12	24	1	2	3	13	14	27
773	Ill-defined diseases peculiar to early infancy ..	47	35	82	40	27	67	87	62	149
774	Immaturity with mention of any other subsidiary condition ..	..	..	..	19	7	26	19	7	26
775	Immaturity subsidiary to some other cause ..	..	..	..	..	..	..	..	..	..
776	Immaturity unqualified ..	..	..	..	561	473	1,034	561	473	1,034
	Total, Class XV. ..	689	487	1,176	983	771	1,754	1,672	1,258	2,930

(vi) *Deaths of Ex-nuptial Children under one Year of Age.* Distinction between nuptial and ex-nuptial children in death statistics for Australia as a whole has been made only since 1925. Results show that death-rates during infancy are generally much higher for ex-nuptial children than for nuptial children, but the disparity has become smaller in recent years. The following table shows the number of deaths under one year and the infant mortality rates for nuptial, ex-nuptial children and all children in five-yearly periods since 1926 and for each year from 1946 to 1951.

**DEATHS UNDER ONE YEAR OF AGE: NUPTIAL AND EX-NUPTIAL, AUSTRALIA.**

Period.	Nuptial Children.		Ex-Nuptial Children.			All Children.	
	Number of Deaths.	Infant Mortality Rate.(a)	Number of Deaths.	Infant Mortality Rate.(b)		Number of Deaths.	Infant Mortality Rate.(c)
				Actual.	Ratio to Nuptial Rate. (Per Cent.)		
1926-30 ..	31,367	49.96	2,888	93.38	187	34,255	51.99
1931-35 ..	21,460	40.09	1,713	65.37	163	23,173	41.27
1936-40 ..	21,792	37.59	1,680	66.87	178	23,472	38.81
1941-45 ..	24,053	34.20	1,627	52.39	153	25,680	34.97
1946-50 ..	23,139	26.54	1,373	37.37	141	24,512	26.98
1946 ..	4,814	28.52	302	39.67	139	5,116	29.01
1947 ..	4,874	27.83	328	45.16	162	5,202	28.52
1948 ..	4,674	27.36	268	37.36	137	4,942	27.77
1949 ..	4,333	24.92	254	34.45	138	4,587	25.31
1950 ..	4,444	24.25	221	30.17	124	4,665	24.47
1951 ..	4,687	25.23	191	25.28	100	4,878	25.24

(a) Number of deaths under one year of age per 1,000 nuptial live births registered. (b) Number of deaths under one year of age per 1,000 ex-nuptial live births registered. (c) Number of deaths under one year of age per 1,000 total live births registered.

The ex-nuptial rates are higher at all ages under one year but the difference is greatest several months after birth. For the five years 1947-51 the ratio of the ex-nuptial to the nuptial rate at various ages was as follows:—Under one month, 127 per cent.; one month, 158 per cent.; 2 months, 160 per cent.; 3 months, 136 per cent.; 4 months, 132 per cent.; 5 months, 186 per cent.; under one year, 133 per cent.

Full particulars of the causes of deaths of ex-nuptial children who died in 1951, aged under four weeks and under one year, are given for each State and Territory in *Demography Bulletin* No. 69. Detailed information for Australia as to the age at which ex-nuptial children died from each cause of death will also be found therein. It is difficult to assess the real significance of the differences between the numbers of nuptial and ex-nuptial deaths from each individual cause because of the small number of ex-nuptial deaths involved in each case.

9. Age Distribution.—(i) *Number of Deaths.* Age at death is recorded for statistical purposes in days for the first week of life, in weeks for the first four weeks, in months for the first two years and in completed years of life thereafter. Owing to exigencies of space these ages are usually combined in groups for publication, the most common grouping being in weeks for the first four weeks, in months or groups of months for the first year, in single years of age for the first five years and thereafter in the five-year groups 5-9 years, 10-14 years, etc. A summary in this form for Australia is given in the following table for the year 1951.

## AGE AT DEATH : AUSTRALIA, 1951.

Age at Death.	Males.	Fe- males.	Per- sons.	Age at Death.	Males.	Fe- males.	Per- sons.
Under 1 week .. .. .	1,683	1,248	2,931	Total 5-9 years .. .. .	314	198	512
1 week and under 2 weeks ..	128	115	243	.. 10-14 .. .. .	237	149	386
2 weeks and under 3 weeks ..	64	58	122	.. 15-19 .. .. .	479	171	650
3 weeks and under 28 days ..	47	39	86	.. 20-24 .. .. .	736	270	1,006
				.. 25-29 .. .. .	653	358	1,011
Total under 28 days ..	1,922	1,460	3,382	.. 30-34 .. .. .	626	480	1,106
				.. 35-39 .. .. .	879	616	1,495
28 days and under 3 months	226	193	419	.. 40-44 .. .. .	1,182	788	1,970
3 months and under 6 ..	277	184	461	.. 45-49 .. .. .	1,696	1,074	2,770
6 months and under 12 ..	324	292	616	.. 50-54 .. .. .	2,506	1,593	4,099
				.. 55-59 .. .. .	3,638	2,111	5,749
Total under 1 year ..	2,749	2,129	4,878	.. 60-64 .. .. .	5,124	2,930	8,054
				.. 65-69 .. .. .	5,682	3,682	9,364
1 year .. .. .	315	261	576	.. 70-74 .. .. .	5,708	4,563	10,271
2 years .. .. .	166	150	316	.. 75-79 .. .. .	5,302	4,973	10,275
3 .. .. .	123	88	211	.. 80-84 .. .. .	4,254	4,639	8,893
4 .. .. .	106	74	180	.. 85-89 .. .. .	2,500	3,112	5,612
				.. 90-94 .. .. .	825	1,160	1,985
				.. 95-99 .. .. .	130	231	361
				.. 100 and over .. .. .	8	24	32
				Age not stated .. .. .	15	11	26
Total under 5 years ..	3,459	2,702	6,161	Total, All Ages .. .. .	45,953	35,835	81,788

The number of deaths in 1951 at each year of life is shown in *Demography Bulletin* No. 69.

There is a differential mortality at various stages of life and the actual number of deaths in any period depends upon the impact of these rates on the numbers living at the respective stages. Changes in the number of deaths from one period to another are caused by changes in the rate of mortality in the various age groups and by the changed proportions of persons living in the different groups.

In Australia during the last fifty years there has been a steady improvement in the rate of mortality at all ages, thus tending to reduce the number of deaths. This has been most pronounced at ages under one year. The increased length of life due to this factor, coupled with the long-term decline in the birth-rate and the effects of past and present migration, has been a significant cause in changing the age distribution of the population and consequently the age distribution of deaths, thus obscuring the effects of improved mortality rates.



The combined effect of these various influences can be seen from the following table, which shows the proportion of deaths in various age groups in periods of ten years from 1901 to 1950 and for the years 1951 and 1952.

PROPORTION OF DEATHS IN EACH AGE GROUP : AUSTRALIA.  
(Per Cent.)

Period.	Age Group (Years).								Total.
	Under 1.	1-4.	5-19.	20-39.	40-59.	60-64.	65 and over.	Unspecified.	
1901-10 ..	20.51	6.45	6.37	14.99	17.99	5.31	28.26	0.12	100.00
1911-20 ..	16.66	6.09	5.49	14.44	20.32	6.19	30.68	0.13	100.00
1921-30 ..	13.10	4.51	4.85	12.12	20.55	8.26	36.53	0.08	100.00
1931-40 ..	7.40	2.56	3.83	9.36	20.54	8.36	47.92	0.03	100.00
1941-50 ..	6.79	1.71	2.26	6.01	19.04	9.33	54.84	0.02	100.00
1951 ..	5.96	1.57	1.89	5.65	17.84	9.85	57.21	0.03	100.00
1952—Males ..	6.05	1.43	2.05	6.19	19.74	11.21	53.30	0.03	100.00
Females ..	5.66	1.53	1.48	4.50	15.70	8.35	62.77	0.01	100.00
Persons ..	5.88	1.47	1.80	5.45	17.97	9.96	57.45	0.02	100.00

A table showing these proportions for males and females separately for the period 1901 to 1950 will be found in Official Year Book No. 39, page 614.

(ii) *Age-specific Death-rates.* In previous issues of the Official Year Book average annual age-specific death-rates were given for each State and for Australia for the years 1932-34 and 1946-48 (see No. 37, p. 778 and No. 39 pp. 615-6). A table showing the rates in the age groups used for calculating the standardized death-rate for each State for the year 1947 appeared in Official Year Book No. 39, p. 599. Estimates of the age distribution of the population in each State are not available to enable a similar comparison to be made for later years.

Estimates of the age distribution of the population of Australia as a whole, shown on page 351, and similar estimates for 1950, have been used to calculate the following age-specific death-rates.

AGE-SPECIFIC DEATH RATES<sup>(a)</sup> : AUSTRALIA.

Age Group (Years).	1950.	1951.	1952.	Age Group (Years).	1950.	1951.	1952.
0-4 ..	6.56	6.62	6.39	50-54 ..	8.89	8.93	8.91
5-9 ..	0.75	0.69	0.64	55-59 ..	13.63	14.39	13.87
10-14 ..	0.65	0.64	0.55	60-64 ..	21.61	21.75	22.07
15-19 ..	1.06	1.17	1.08	65-69 ..	33.05	34.23	33.98
20-24 ..	1.50	1.57	1.40	70-74 ..	53.83	53.51	51.45
25-29 ..	1.34	1.45	1.42	75-79 ..	83.55	88.88	84.93
30-34 ..	1.59	1.72	1.61	80-84 ..	139.45	136.79	136.23
35-39 ..	2.28	2.36	2.28	85-89 ..	221.66	241.46	232.25
40-44 ..	3.56	3.39	3.34	90 and over ..	336.63	353.50	352.43
45-49 ..	5.52	5.63	5.62				

(a) Average number of deaths per 1,000 of population in each age group.

10. *Birthplaces of Persons who Died.*—A table showing the birthplaces of persons whose deaths were registered in each year will be found in the *Demography Bulletin*. Tabulations were discontinued for the years 1941 to 1945 inclusive, but were revived for 1946. Details for 1951 appear in *Demography Bulletin* No. 69.

11. **Occupation of Males who Died.**—A table showing occupations of males who died during 1951 appears in *Demography Bulletin* No. 69.

12. **Causes of Death.**—The classification of causes of death adopted for Australia by the Commonwealth Bureau of Census and Statistics at the inception of its mortality statistics in 1907 was that introduced by the International Institute of Statistics in 1893, reviewed by that Institute in 1899 and revised by an International Commission in 1900. This classification became known as the International List of Causes of Death and further revisions by International Commissions in 1909 (Second), 1920 (Third), 1929 (Fourth) and 1938 (Fifth) were successively adapted for use in Australian statistics.

Proposals for the Fourth and Fifth revisions were drafted by a "Mixed Commission" of representatives of the International Statistical Institute and the Health Organization of the League of Nations and the final revision was carried out by the International Conference for the Revision of the International List of Causes of Death. Preparatory work in connexion with the Sixth Revision was entrusted by the International Health Conference in 1946 to the Interim Commission of the World Health Organization. As a result of this arrangement the World Health Organization compiled the International Statistical Classification of Diseases, Injuries and Causes of Death, which in its final stages was unanimously approved by the International Conference for the Sixth Revision of the International Lists of Diseases and Causes of Death in April, 1948. This classification was adopted by the First World Health Assembly, which also issued Regulations to guide member states in its application. Australia adopted the classification, together with the rules for using it, for use commencing with the year 1950.

For the first time in connexion with the International List, international rules for a uniform method of selecting the main cause to be tabulated, if more than one cause is stated on the death certificate, have been laid down, as well as the new classifications of causes of death. Prior to 1950 the rules adopted in Australia for the selection of the cause of death to be tabulated were those laid down in the United States Manual of Joint Causes of Death, first published in 1914 and revised to conform with successive revisions of the International List.

The adoption of the new method marked a fundamental change in Australian cause of death statistics, with emphasis now placed on the underlying cause of death as indicated by the certifying practitioner. The introduction of this method required the adoption by all States of a form of medical certificate substantially identical with the International Form of Medical Certificate of Cause of Death as laid down in Article 9 of the World Health Organization Regulations No. 1. By 1950 all States had adopted satisfactory forms of certificate and it was possible to apply the new principles uniformly to all State cause of death records.

This change in principle affects the comparability of the statistics for 1950 and subsequent years with those of earlier years. For convenience in assessing the extent of the change and in accordance with a recommendation of the Sixth Decennial Revision Conference, causes of death for Australia for 1950 were also classified according to the detailed classification of the Fifth Revision, 1938, on the joint cause rules current for that revision. A complete detailed classification according to both the Fifth and Sixth Revisions is shown in *Demography Bulletin* No. 68. Commencing with 1951 the classification is according to the Sixth Revision only and detailed figures on this basis for 1951 are shown in *Demography Bulletin* No. 69.

In order to facilitate the limited presentation of cause of death statistics the present International Classification provides two special lists of causes for tabulation—the Intermediate List of 150 causes and the Abbreviated List of 50 causes. The latter has been used for the cause of death tabulations A to D which follow. Tables A, B and C show deaths of males, females and persons, respectively, for 1951 and Table D shows the numbers of persons who died and the death rates for the years 1950 and 1951. Tables corresponding to Tables A, B and C for the year 1950 in the Intermediate form of the Fifth Revision, and numbers of deaths and death-rates for various periods in the Abridged form, will be found in *Official Year Book* No. 39, pp. 618-625.

## A.—CAUSES OF DEATH : MALES, 1951.

## ABBREVIATED LIST OF 50 CAUSES (BASED ON THE SIXTH REVISION OF THE INTERNATIONAL LIST).

Cause of Death.	Detailed List Numbers.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A. C. T.	Aust.
B 1 Tuberculosis of respiratory system	001-008	420	259	175	68	60	26	2	4	1,014
B 2 Tuberculosis, other forms	010-019	19	25	3	6	7	6			66
B 3 Syphilis and its sequelæ	020-029	59	53	35	17	10	4	1		179
B 4 Typhoid fever	040	1		1	1					3
B 5 Cholera	043									
B 6 Dysentery, all forms	045-048	3	7	3	4	2				19
B 7 Scarlet fever and streptococcal sore throat	050, 051	7		1	1					9
B 8 Diphtheria	055	10	5	6	1	4				26
B 9 Whooping cough	056	5	4	1	2	1	1			14
B 10 Meningococcal infections	057	20	24	7	2	2	2			57
B 11 Plague	058									
B 12 Acute poliomyelitis	080	82	13	65	39	3	4	1	2	209
B 13 Smallpox	084									
B 14 Measles	085	8	8	4	4	2	1	1		28
B 15 Typhus and other rickettsial diseases	100-108			1						1
B 16 Malaria	110-117	2								2
B 17 All other diseases classified as infective and parasitic	(a)	61	41	41	21	11	4	2		181
B 18 Malignant neoplasms, including neoplasms of lymphatic and hæmatopoietic tissues	140-205	2,122	1,595	785	468	347	182	3	13	5,515
B 19 Benign and unspecified neoplasms	210-239	97	31	32	10	7	4	2	1	184
B 20 Diabetes mellitus	200	132	123	44	26	25	14	1		365
B 21 Anæmias	290-293	54	37	16	8	10	3	1		129
B 22 Vascular lesions affecting central nervous system	330-334	1,791	1,147	585	400	244	117	6	10	4,300
B 23 Non-meningococcal meningitis	340	52	26	10	6	3	3	2		102
B 24 Rheumatic fever	400-402	21	43	23	10	2	1			102
B 25 Chronic rheumatic heart disease	410-416	139	82	44	34	17	16		1	333
B 26 Arteriosclerotic and degenerative heart disease	420-422	5,260	3,623	1,540	1,175	891	337	12	26	12,864
B 27 Other diseases of heart	430-434	620	269	149	94	28	24	2	3	1,189
B 28 Hypertension with heart disease	440-443	474	316	234	58	135	42		1	1,260
B 29 Hypertension without mention of heart	444-447	279	175	102	54	43	20		2	675
B 30 Influenza	480-483	45	67	29	14	10	9			174
B 31 Pneumonia	490-493	610	495	209	143	114	70	5	1	1,647
B 32 Bronchitis	500-502	288	216	82	52	42	20	1	1	702
B 33 Ulcer of stomach and duodenum	540, 541	173	157	80	37	38	12	1		498
B 34 Appendicitis	550-553	41	27	33	11	10	3			125
B 35 Intestinal obstruction and hernia	560, 561, 570	125	63	43	31	12	7	1		282
B 36 Gastritis, duodenitis, enteritis and colitis, except diarrhœa of the new born	543, 571, 572	108	72	60	25	25	8			298
B 37 Cirrhosis of liver	581	103	95	30	24	14	7	1		274
B 38 Nephritis and nephrosis	590-594	357	276	182	88	42	31	1	2	979
B 39 Hyperplasia of prostate	610	191	222	127	53	61	42			696
B 41 Congenital malformations	750-759	192	161	79	44	40	14	1	1	532
B 42 Birth injuries, post-natal asphyxia and atelectasis	760-762	223	195	111	50	58	33	2	3	675
B 43 Infections of the new born	763-768	35	30	20	10	12	3	1		111
B 44 Other diseases peculiar to early infancy, and immaturity unqualified	769-776	363	172	142	84	82	40	2	1	886
B 45 Senility without mention of psychosis, ill-defined and unknown causes	780-795	544	241	120	69	14	12	10	3	1,013
B 46 All other diseases	Residual	1,316	1,194	590	327	288	145	12	6	3,878
BE 47 Motor vehicle accidents	E810-E835	602	512	235	173	147	58	11	5	1,743
BE 48 All other accidents	E800-E802 E840-E962	756	412	354	174	153	70	6	5	1,930
BE 49 Suicide and self-inflicted injury	E963 E970-E979	258	124	97	44	64	14	2	5	608
BE 50 Homicide and operations of war	E964, E965 E980-E999	24	25	11	6	6	3	1		76
All Causes		18,092	12,662	6,541	3,968	3,086	1,412	93	99	45,953

(a) 030-039, 041, 042, 044, 049, 052-054, 059-074, 081-083, 086-096, 120-138.

## B.—CAUSES OF DEATH : FEMALES, 1951.

ABBREVIATED LIST OF 50 CAUSES (BASED ON THE SIXTH REVISION OF THE INTERNATIONAL LIST).

Cause of Death.	Detailed List Numbers.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A. C. T.	Aust.
B 1 Tuberculosis of respiratory system	001-008	176	100	46	30	13	27	2	3	397
B 2 Tuberculosis, other forms	010-019	15	23	3	7	3	9	..	1	61
B 3 Syphilis and its sequelæ	020-029	27	13	7	2	3	3	..	..	55
B 4 Typhoid fever	040	..	..	..	..	..	..	..	..	..
B 5 Cholera	043	..	..	..	..	..	..	..	..	..
B 6 Dysentery, all forms	045-048	3	7	3	..	..	..	..	..	13
B 7 Scarlet fever and streptococcal sore throat	050, 051	4	..	2	2	..	..	..	..	8
B 8 Diphtheria	055	11	2	6	3	7	..	..	..	29
B 9 Whooping cough	056	6	7	4	..	1	1	..	..	19
B10 Meningococcal infections	057	16	22	6	1	1	2	..	..	48
B11 Plague	058	..	..	..	..	..	..	..	..	..
B12 Acute poliomyelitis	080	52	17	35	22	1	7	1	2	137
B13 Smallpox	084	..	..	..	..	..	..	..	..	..
B14 Measles	085	5	4	5	..	2	4	..	..	20
B15 Typhus and other rickettsial diseases	100-108	..	..	..	..	1	..	..	..	1
B16 Malaria	110-117	..	..	1	..	..	..	..	..	1
B17 All other diseases classified as infective and parasitic	(a)	54	32	22	11	5	3	..	..	127
B18 Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues	140-205	1,942	1,574	618	443	339	180	2	6	5,104
B19 Benign and unspecified neoplasms	210-239	83	36	39	11	11	1	..	1	182
B20 Diabetes mellitus	260	271	230	81	57	33	22	..	..	694
B21 Anæmia	290-293	85	75	24	15	6	3	..	..	208
B22 Vascular lesions affecting central nervous system	330-334	2,281	1,712	701	555	350	170	3	9	5,781
B23 Non-meningococcal meningitis	340	25	10	5	7	4	..	..	..	51
B24 Rheumatic fever	400-402	20	54	24	9	7	8	..	..	122
B25 Chronic rheumatic heart disease	410-416	150	94	43	34	19	16	1	1	358
B26 Arteriosclerotic and degenerative heart disease	420-422	3,364	2,604	802	832	534	246	3	5	8,390
B27 Other diseases of heart	430-434	358	262	120	59	13	14	..	3	829
B28 Hypertension with heart disease	440-443	407	381	203	89	79	45	..	2	1,206
B29 Hypertension without mention of heart	444-447	239	185	119	42	45	28	1	..	659
B30 Influenza	480-483	46	64	18	7	14	7	..	..	156
B31 Pneumonia	490-493	508	475	184	113	74	51	1	2	1,408
B32 Bronchitis	500-502	111	91	42	27	4	11	..	1	287
B33 Ulcer of stomach and duodenum	540, 541	46	50	19	5	8	1	..	..	129
B34 Appendicitis	550-553	10	22	10	9	4	5	..	..	60
B35 Intestinal obstruction and hernia	560, 561, 570	97	51	43	30	12	7	1	..	241
B36 Gastritis, duodenitis, enteritis and colitis, except diarrhœa of the new born	543, 571, 572	105	96	55	18	41	8	1	..	324
B37 Cirrhosis of liver	581	62	51	6	10	15	6	..	..	150
B38 Nephritis and nephrosis	590-594	269	239	194	64	46	18	..	..	830
B39 Hyperplasia of prostate	610	..	..	..	..	..	..	..	..	..
B40 Complications of pregnancy, childbirth and the puerperium	640-652, 670-689	73	50	35	26	16	2	1	..	203
B41 Congenital malformations	750-759	160	115	62	42	35	11	..	5	430
B42 Birth injuries, post-natal asphyxia and atelectasis	760-762	157	130	77	26	42	20	..	..	452
B43 Infections of the new born	763-768	46	21	17	8	7	8	..	..	107
B44 Other diseases peculiar to early infancy, and immaturity unqualified	769-776	313	124	107	65	63	24	2	2	700
B45 Senility without mention of psychosis, ill-defined and unknown causes	780-795	514	294	110	100	15	20	2	1	1,056
B46 All other diseases	Residual	1,105	1,114	419	290	222	113	1	2	3,266
BE47 Motor vehicle accidents	E810-E835	129	118	44	37	27	12	2	..	369
BE48 All other accidents	E800-E802, E840-E962	399	164	175	86	61	37	..	3	925
BE49 Suicide and self-inflicted injury	E963, E970-E979	80	56	23	17	17	3	..	1	197
BE50 Homicide and operations of war	E964-E965, E980-E999	16	15	5	5	2	2	..	..	45
All Causes	..	13,840	10,784	4,564	3,216	2,202	1,155	24	50	35,835

(a) 030-039, 041, 042, 044, 049, 052-054, 059-074, 081-083, 086-096, 120-138.

## C.—CAUSES OF DEATH : PERSONS, 1951.

ABBREVIATED LIST OF 50 CAUSES (BASED ON THE SIXTH REVISION OF THE INTERNATIONAL LIST).

Cause of Death.	Detailed List Numbers.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A. C. T.	Aust.
B 1 Tuberculosis of respiratory system	001-008	596	359	221	98	73	53	4	7	1,411
B 2 Tuberculosis, other forms	010-019	34	48	6	13	10	15		1	127
B 3 Syphilis and its sequelæ	020-029	86	66	42	19	13	7	1		234
B 4 Typhoid fever	040	1		1	1					3
B 5 Cholera	043									
B 6 Dysentery, all forms	045-048	6	14	6	4	2				32
B 7 Scarlet fever and streptococcal sore throat	050, 051	11		3	3					17
B 8 Diphtheria	055	21	7	12	4	11				55
B 9 Whooping cough	056	11	11	5	2	2	2			33
BR0 Meningococcal infections	057	36	46	13	3	3	4			105
BR1 Plague	058									
BR2 Acute poliomyelitis	080	134	30	100	61	4	11	2	4	346
BR3 Smallpox	084									
BR4 Measles	085	13	12	9	4	4	5	1		48
BR5 Typhus and other rickettsial diseases	100-108			1		1				2
BR6 Malaria	110-117	2		1						3
BR7 All other diseases classified as infective and parasitic	(a)	115	73	63	32	16	7	2		308
BR8 Malignant neoplasms, including neoplasms of lymphatic and hæmatopoietic tissues	140-205	4,064	3,169	1,403	911	686	362	5	19	10,619
BR9 Benign and unspecified neoplasms	210-239	180	67	71	21	18	5	2	2	366
B20 Diabetes mellitus	260	403	353	125	83	58	36	1		1,059
B21 Anæmia	290-293	139	112	40	23	16	6	1		337
B22 Vascular lesions affecting central nervous system	330-334	4,072	2,859	1,286	955	594	287	9	19	10,081
B23 Non-meningococcal meningitis	340	77	36	15	13	7	3	2		153
B24 Rheumatic fever	400-402	41	97	47	19	9	9		2	224
B25 Chronic rheumatic heart disease	410-416	289	176	87	68	36	32	1	2	691
B26 Arteriosclerotic and degenerative heart disease	420-422	8,624	6,227	2,342	2,017	1,425	583	15	31	21,254
B27 Other diseases of heart	430-434	978	531	269	143	41	38		6	2,018
B28 Hypertension with heart disease	440-443	881	697	437	147	214	87		3	2,466
B29 Hypertension without mention of heart	444-447	518	360	221	96	88	48	1	2	1,334
B30 Influenza	480-483	91	131	47	21	24	16			330
B31 Pneumonia	490-493	1,118	970	393	250	188	121	6	3	3,055
B32 Bronchitis	500-502	399	307	124	79	46	31	1	2	989
B33 Ulcer of stomach and duodenum	540, 541	219	207	99	42	46	13		1	627
B34 Appendicitis	550-553	51	49	43	20	14	8			185
B35 Intestinal obstruction and hernia	560, 561, 570	222	114	86	61	24	14	2		523
B36 Gastritis, duodenitis, enteritis and colitis, except diarrhoea of the new born	543, 571, 572	213	168	115	43	66	16	1		622
B37 Cirrhosis of liver	581	165	146	36	34	29	13	1		424
B38 Nephritis and nephrosis	590-594	626	515	376	152	88	49	1	2	1,809
B39 Hyperplasia of prostate	610	191	222	127	53	61	42			696
B40 Complications of pregnancy, childbirth and the puerperium	640-652, 670-689	731	50	35	26	16	2	1		203
B41 Congenital malformations	750-759	352	276	141	86	75	25	1	6	962
B42 Birth injuries, post-natal asphyxia and atelectasis	760-762	380	325	188	76	100	53	2	3	1,127
B43 Infections of the new born	763-768	81	51	37	18	19	11	1		218
B44 Other diseases peculiar to early infancy, and immaturity unqualified	769-776	676	296	249	149	145	64	4	3	1,586
B45 Senility without mention of psychosis, ill-defined and unknown causes	780-795	1,058	535	230	169	29	32	12	4	2,069
BR46 All other diseases	Residual	2,421	2,308	1,009	617	510	258	13	8	7,144
BE47 Motor vehicle accidents	E810-E835	731	630	279	210	174	70	13	5	2,112
BR48 All other accidents	E800-E802 E840-E962	1,155	576	529	260	214	107	6	8	2,855
BE49 Suicide and self-inflicted injury	E963 E970-E979	338	180	120	61	81	17	2	6	805
BR50 Homicide and operations of war	E964, E965 E980-E999	40	40	16	11	8	5	1		121
All Causes		31,932	23,446	11,105	7,184	5,288	2,567	117	149	81,788

(a) 030-039, 041, 042, 044, 049, 052-054, 059-074, 081-083, 086-096, 120-138.

**D.—CAUSES OF DEATH : PERSONS, AUSTRALIA.**  
 ABBREVIATED LIST OF 50 CAUSES (BASED ON THE SIXTH REVISION OF THE  
 INTERNATIONAL LIST).

Cause of Death.	Detailed List Numbers.	Number of Deaths.		Rate per 1,000,000 of Mean Population.	
		1950.	1951.	1950.	1951.
B 1 Tuberculosis of respiratory system	001-008	1,560	1,411	191	167
B 2 Tuberculosis, other forms	010-019	115	127	14	15
B 3 Syphilis and its sequelæ	020-029	227	234	28	28
B 4 Typhoid fever	040	4	3	..	..
B 5 Cholera	043	..	..	..	..
B 6 Dysentery, all forms	045-048	37	32	5	4
B 7 Scarlet fever and streptococcal sore throat	050, 051	13	17	2	2
B 8 Diphtheria	055	53	55	6	7
B 9 Whooping cough	056	34	33	4	4
B10 Meningococcal infections	057	91	105	11	12
B11 Plague	058	..	..	..	..
B12 Acute poliomyelitis	080	113	346	14	41
B13 Smallpox	084	..	..	..	..
B14 Measles	085	60	48	7	6
B15 Typhus and other rickettsial diseases	100-108	3	2	..	..
B16 Malaria	110-117	5	3	1	..
B17 All other diseases classified as infective and parasitic	(a)	301	308	37	37
B18 Malignant neoplasms, including neoplasms of lymphatic and hæmatopoietic tissues	140-205	10,430	10,619	1,274	1,260
B19 Benign and unspecified neoplasms	210-239	377	366	47	43
B20 Diabetes mellitus	260	1,091	1,059	133	126
B21 Anæmia	290-293	327	337	40	40
B22 Vascular lesions affecting central nervous system	330-334	9,386	10,081	1,147	1,196
B23 Non-meningococcal meningitis	340	162	153	20	18
B24 Rheumatic fever	400-402	220	224	29	27
B25 Chronic rheumatic heart disease	410-416	639	691	78	82
B26 Arteriosclerotic and degenerative heart disease	420-422	19,997	21,254	2,443	2,521
B27 Other diseases of heart	430-434	2,153	2,018	263	239
B28 Hypertension with heart disease	440-443	2,154	2,466	263	293
B29 Hypertension without mention of heart	444-447	1,232	1,334	150	158
B30 Influenza	480-483	348	330	43	39
B31 Pneumonia	490-493	2,798	3,055	342	362
B32 Bronchitis	500-502	953	989	116	117
B33 Ulcer of stomach and duodenum	540, 541	545	627	67	74
B34 Appendicitis	550-553	185	185	23	22
B35 Intestinal obstruction and hernia	560, 561, 570	620	523	76	62
B36 Gastritis, duodenitis, enteritis and colitis, except diarrhoea of the new born	543, 571, 572	519	622	63	74
B37 Cirrhosis of liver	581	394	424	48	50
B38 Nephritis and nephrosis	590-594	1,870	1,809	228	215
B39 Hyperplasia of prostate	610	653	696	80	83
B40 Complications of pregnancy, childbirth and the puerperium	640-652 670-689	208	203	25	24
B41 Congenital malformations	750-759	871	962	106	114
B42 Birth injuries, post-natal asphyxia and atelectasis	760-762	1,045	1,127	128	134
B43 Infections of the new born	763-768	198	218	24	26
B44 Other diseases peculiar to early infancy, and immaturity unqualified	769-776	1,648	1,586	201	188
B45 Senility without mention of psychosis, ill-defined and unknown causes	780-795	2,323	2,069	284	245
B46 All other diseases	Residual	6,974	7,144	852	848
BE47 Motor vehicle accidents	E810-E835	1,786	2,112	218	251
BE48 All other accidents	E800-E802 E840-E962	2,600	2,855	318	339
BE49 Suicide and self-inflicted injury	E963 E970-E979	760	805	93	95
BE50 Homicide and operations of war	E964, E965 E980-E999	92	121	11	14
<b>All Causes</b>		<b>78,187</b>	<b>81,788</b>	<b>9,553</b>	<b>9,702</b>

(a) 030-039, 041, 042, 044, 049, 052-054, 059-074, 081-083, 086-096, 120-138.

13. **Deaths from Principal Causes.**—(i) *General.* In the preceding tables particulars have been given for each of the causes of death comprising the Abbreviated Classification according to the Sixth Revision of the International List. The more important of these causes are treated in detail hereunder. The Abbreviated Classification number used in tables A to D is indicated in parentheses for each cause or group of causes.

(ii) *All Forms of Tuberculosis (B1, B2).* (a) *General.* The total number of deaths classified to all forms of tuberculosis in 1951 in accordance with the methods used in conjunction with the Sixth Revision of the International List was 1,538, consisting of 1,080 males and 458 females, compared with 1,675 (1,172 males and 503 females) classified on the same basis in 1950. In comparing any of the figures for 1950 and 1951 with those for 1949 and earlier years consideration should be given to the effect of the change in basis from the Fifth to the Sixth Revision of the International List. This was discussed in Official Year Book No. 39, p. 626.

(b) *Age at Death.* The following table shows the age groups of males, females and persons who were classified under the Sixth Revision as dying from this disease in 1951, together with figures for 1921, 1931 and 1941, classified under former Revisions.

**TUBERCULOSIS (ALL FORMS) : DEATHS IN AGE GROUPS, AUSTRALIA.**

Age Group (Years).	1921.			1931.			1941.			1951		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.
Under 5 ..	90	76	166	57	47	104	42	28	70	17	29	46
5-9 ..	30	28	58	14	14	28	12	10	22	3	4	7
10-14 ..	23	24	47	19	20	39	9	16	25	3	2	5
15-19 ..	72	100	172	45	105	150	30	52	82	6	4	10
20-24 ..	173	194	367	113	183	296	69	91	160	15	28	43
25-29 ..	232	246	478	136	199	335	63	132	195	25	36	61
30-34 ..	237	195	432	191	164	355	125	129	254	29	46	75
35-39 ..	247	178	425	187	156	343	144	111	255	44	47	91
40-44 ..	234	141	375	207	102	309	159	79	238	62	49	111
45-49 ..	223	102	325	197	83	280	180	76	256	92	31	123
50-54 ..	179	69	248	185	62	247	216	64	280	146	40	186
55-59 ..	172	65	237	164	57	221	210	52	262	148	25	173
60-64 ..	118	42	160	128	50	178	187	59	246	184	30	214
65-69 ..	79	32	111	110	38	148	137	39	176	130	23	153
70-74 ..	35	10	45	52	31	83	74	41	115	97	29	126
75-79 ..	18	7	25	27	16	43	48	18	66	47	16	63
80 and over ..	6	7	13	4	4	8	20	12	32	32	18	50
Not Stated ..	3	..	3	..	..	..	..	..	..	..	1	1
<b>Total ..</b>	<b>2,171</b>	<b>1,516</b>	<b>3,687</b>	<b>1,836</b>	<b>1,331</b>	<b>3,167</b>	<b>1,725</b>	<b>1,009</b>	<b>2,734</b>	<b>1,080</b>	<b>458</b>	<b>1,538</b>

(c) *Occupation at Death, Males.* A summary of the main groups of occupations of males who died from tuberculosis during 1951 is given in *Demography Bulletin* No. 69.

(d) *Length of Residence in Australia.* The length of residence in Australia of persons who died from tuberculosis in 1951 is given in the next table. These figures are shown in relation to age at death in *Demography Bulletin* No. 69.

**LENGTH OF RESIDENCE IN AUSTRALIA OF PERSONS WHO DIED FROM TUBERCULOSIS (ALL FORMS), 1951.**

Length of Residence in Australia.	Males.	Females.	Persons.	Length of Residence in Australia.	Males.	Females.	Persons.
Born in Australia ..	845	391	1,236	Resident 10-14 years ..	5	2	7
Resident under 1 year ..	4	3	7	Resident 15-19 years ..	2	..	2
Resident 1 year ..	4	4	8	Resident 20 years and over ..	162	48	210
Resident 2 years ..	5	1	6	Length of residence not stated	49	5	54
Resident 3 years ..	1	2	3				
Resident 4 years ..	2	1	3				
Resident 5-9 years ..	1	1	2				
				<b>Total Deaths ..</b>	<b>1,080</b>	<b>458</b>	<b>1,538</b>

(e) *Death-rates.* In order to show the relative incidence of tuberculosis in each State and Territory and the improvement which has taken place in recent years, the death-rates from tubercular diseases for 1931, 1941 and 1951 are given in the following table. The rates for 1951 are based on the causes of death compiled according to the Sixth Revision.

## TUBERCULOSIS (ALL FORMS) : DEATH-RATES.(a)

State or Territory.	1931.			1941.			1951.		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.
New South Wales	53	37	45	47	24	36	26	12	19
Victoria ..	59	51	55	54	37	45	25	11	18
Queensland ..	45	28	37	40	20	30	29	8	19
South Australia ..	58	56	57	40	34	37	21	10	15
Western Australia	74	40	58	60	25	44	22	6	14
Tasmania ..	61	51	56	48	44	46	21	25	23
Northern Territory	69	..	44	27	35	29	20	33	25
Australian Capital Territory ..	21	25	23	..	15	7	30	37	33
Australia ..	55	42	49	48	29	38	25	11	18

(a) Number of deaths from tuberculosis per 100,000 of mean population.

(f) *Proportion of Total Deaths.* A table showing the number of deaths from tuberculosis per 10,000 deaths from all causes in each State and Territory during 1911-20, 1921-30, 1931-40 and 1941-50 was given in Official Year Book No. 39, p. 627.

(g) *Death-rates, Various Countries.* The following table shows the death-rates from tuberculosis for Australia in comparison with the rates for various other countries. The comparison is made on the latest figures available but as some countries have not yet adopted the Sixth Revision of the International List for their statistics it is not possible to present the figures consistently on that basis. Of the 21 countries shown, 12 use the Sixth Revision of the List, 6 use the Fifth, and one uses the Fourth, while 2 use independent classifications. The table indicates that Australia occupies a very favorable position as regards the death-rate from this disease.

## TUBERCULOSIS : DEATH-RATES(a), VARIOUS COUNTRIES.

Country.	Year.	Respiratory System.	All Forms.	Country.	Year.	Respiratory System.	All Forms.
Denmark ..	1950	12	14	Germany, Federal Republic ..	1950	33	40
Netherlands ..	1951	13	16	Belgium ..	1950	34	43
Australia(b)	1951	17	18	Italy ..	1950	33	43
Sweden ..	1950	19	22	Ceylon ..	1950	49	53
U.S. of America ..	1950	21	22	France ..	1950	47	58
New Zealand(c)	1950	19	23	Ireland, Republic of	1950	62	79
Union of South Africa(d)	1950	19	23	Finland ..	1950	78	92
Canada ..	1950	22	26	Spain ..	1950	82	104
Norway ..	1950	24	29	Portugal ..	1951	109	133
Switzerland ..	1950	28	35	Japan ..	1950	122	146
United Kingdom ..	1950	34	38				

(a) Number of deaths per 100,000 of mean population.

(b) Excludes full-blood aboriginals.

(c) Excludes Maoris.

(d) White population only.

(iii) *Malignant Neoplasms, including Neoplasms of Lymphatic and Haematopoietic Tissues (B18).* (a) *General.* It was shown in Official Year Book No. 39, p. 628 that deaths classified under this heading according to the Sixth Revision of the International List are not directly comparable in total with those on the Fifth Revision basis and



comparability ratios were given to enable comparison on an adjusted basis to be made. This change must be kept in mind in considering the comparisons between 1951, 1941, 1931 and 1921 which are shown in the following pages.

(b) *Type and Seat of Disease.* Tables showing the type and seat of disease, in conjunction with age and conjugal condition of the persons dying from malignant neoplasms in 1951 will be found in *Demography Bulletin* No. 69. A summary regarding type and seat of disease for 1951 (Sixth Revision basis) is given below. It may be pointed out that the significance of the number of deaths shown for the various types of neoplasms enumerated hereunder is doubtful, owing to the fact that, in the absence of a post-mortem, it is impracticable for the certifying doctor in the majority of cases to make an accurate diagnosis as to type in the detail required for the following classification.

**DEATHS FROM MALIGNANT NEOPLASMS AND NEOPLASMS OF LYMPHATIC AND HAEMATOPHOETIC TISSUES: TYPE AND SEAT OF DISEASE, AUSTRALIA, 1951.**

Type of Disease.	Males.	Females.	Persons.	Seat of Disease.	Males.	Females.	Persons.
<b>Malignant Neoplasms—</b>				<b>Malignant Neoplasms—</b>			
Cancer and Carcinoma (other than skin) ..	4,640	4,425	9,065	Buccal Cavity and Pharynx ..	185	61	246
Skin Cancer ..	62	48	110	Digestive Organs and Peritoneum—			
Sarcoma and Myeloid Sarcoma ..	81	94	175	Oesophagus ..	186	58	244
Myeloma ..				Stomach ..	1,154	730	1,884
Glioma ..	57	35	92	Small Intestine ..	17	26	43
Endothelioma ..				Large Intestine ..	600	743	1,343
Melanoma and Melanotic Sarcoma ..	74	54	128	Other ..	732	604	1,336
Hypernephroma ..	22	13	35	Respiratory System ..	794	188	982
Teratoma ..	8	1	9	Breast ..	8	949	957
Malignant Disease and Malignant Tumor n.o.s.	179	149	328	Uterus ..		564	564
				Other Female Genital Organs ..		344	344
<b>Total, Malignant Neoplasms ..</b>	<b>5,123</b>	<b>4,819</b>	<b>9,942</b>	Male Genital Organs ..	665		665
				Urinary Organs ..	276	135	411
				Skin ..	147	112	259
				Other and Unspecified Organs ..	359	305	664
<b>Neoplasms of Lymphatic and Haematopoietic Tissues—</b>				<b>Total, Malignant Neoplasms ..</b>	<b>5,123</b>	<b>4,819</b>	<b>9,942</b>
Lymphosarcoma and Reticulosarcoma ..	91	55	146				
Hodgkin's Disease ..	53	27	80	<b>Neoplasms of Lymphatic and Haematopoietic Tissues ..</b>	<b>392</b>	<b>285</b>	<b>677</b>
Other forms of Lymphoma (Reticulosis) ..	16	11	27				
Multiple Myeloma (Plasmocytoma) ..	23	22	45				
Leukaemia and Aleukaemia ..	208	168	376				
Mycosis Fungoides ..	1	2	3				
<b>Total, Neoplasms of Lymphatic, etc., Tissues ..</b>	<b>392</b>	<b>285</b>	<b>677</b>				
<b>Grand Total ..</b>	<b>5,515</b>	<b>5,104</b>	<b>10,619</b>	<b>Grand Total ..</b>	<b>5,515</b>	<b>5,104</b>	<b>10,619</b>

(c) *Age at Death.* The ages of persons who died from malignant neoplasms in 1921, 1931, 1941 and 1951 are given below. Inferences drawn from the great increase in the number of deaths from malignant neoplasms in 1951 compared with 1921 need qualification in view of the altered age constitution of the population since the earlier year. The number of people over 55 years of age, at which level cancer risks are greatest, more than doubled between 1921 and 1951, whilst those in the age-group 75 years and over more than trebled. It is only in this extreme old age-group from 75 onwards that the rate of mortality, as distinct from the number of deaths, has increased. For groups up to age 75 there has been no increase in mortality rates since 1921; indeed, in some age groups the rates have actually declined. It is also probable that a proportion of the increased number of deaths from cancer recorded in recent years has been due to more correct diagnosis and certification on the part of medical practitioners rather than to any actual increase in the disease itself.

## MALIGNANT NEOPLASMS : NUMBER OF DEATHS IN AGE GROUPS, AUSTRALIA.

Age Group (Years).	1921.			1931.			1941.			1951.		
	Males.	Fe- males.	Per- sons.	Males.	Fe- males.	Per- sons.	Males.	Fe- males.	Per- sons.	Males.	Fe- males.	Per- sons.
Under 15 ..	26	23	49	25	23	48	21	25	46	91	71	162
15-19 ..	8	11	19	12	11	23	10	10	20	28	14	42
20-24 ..	6	7	13	12	14	26	15	13	28	33	17	50
25-29 ..	15	19	34	19	13	32	24	22	46	42	45	87
30-34 ..	26	45	71	26	55	81	28	45	73	65	74	139
35-39 ..	56	81	137	59	98	157	56	106	162	96	122	218
40-44 ..	81	140	221	111	173	284	92	193	285	114	191	305
45-49 ..	147	207	354	149	261	410	149	282	431	210	274	484
50-54 ..	240	263	503	261	287	548	316	403	719	374	418	792
55-59 ..	358	308	666	349	344	693	425	435	860	541	538	1,079
60-64 ..	442	349	791	519	400	919	558	491	1,049	793	642	1,435
65-69 ..	380	285	665	662	478	1,140	670	558	1,228	904	663	1,567
70-74 ..	312	234	546	609	410	1,019	753	623	1,376	844	741	1,585
75-79 ..	212	215	427	397	294	691	676	512	1,188	700	604	1,304
80-84 ..	83	89	172	187	152	339	331	330	661	438	417	855
85 and over ..	45	52	97	87	92	179	131	175	306	242	273	515
Not Stated ..	3	..	3	..	..	..	..	..	..	..	..	..
Total ..	2,440	2,328	4,768	3,484	3,105	6,589	4,255	4,223	8,478	5,515	5,104	10,619

(d) *Occupation at Death, Males.* A table showing main groups of occupations of males who died from malignant neoplasms and neoplasms of lymphatic and haemato-poietic tissues during 1951 appears in *Demography Bulletin* No. 69.

(e) *Death-rates.* The following table shows the death-rates per 100,000 of mean population from malignant neoplasms in each State for 1931, 1941 and 1951. These rates are crude death-rates which do not take account of changes in the age constitution of the population, and to a substantial extent reflect the increasing age of the population rather than the true change in mortality from malignant neoplasms (see para. 13 (iii) (c) page 418).

## MALIGNANT NEOPLASMS : DEATH-RATES.(a)

State or Territory	1931.			1941.			1951.		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.
New South Wales	99	95	97	116	107	112	127	118	122
Victoria ..	111	106	109	132	145	138	140	139	140
Queensland ..	105	77	92	100	97	99	127	105	116
South Australia ..	112	124	118	112	140	126	130	123	127
Western Australia	110	81	97	135	110	123	116	120	118
Tasmania ..	100	100	100	125	127	126	121	126	124
Northern Territory	69	119	87	54	35	49	30	33	31
Australian Capital Territory ..	21	51	35	25	61	41	97	55	78
Australia ..	105	97	101	119	120	119	129	122	126

(a) Number of deaths from malignant neoplasms per 100,000 of mean population.

(f) *Proportion of Total Deaths.* A table showing the number of deaths from malignant neoplasms per 10,000 deaths from all causes in each State and Territory during 1911-20 1921-30, 1931-40 and 1941-50 was given in Official Year Book No. 39, p. 631.

(g) *Death-rates, Various Countries.* The following table shows the death-rates from malignant neoplasms for Australia in comparison with the rates for various other countries. Comparison between rates should not be made without due regard to the differences which exist between figures based on the Sixth Revision of the International List and those based on earlier revisions.

## MALIGNANT NEOPLASMS : DEATH-RATES(a), VARIOUS COUNTRIES.

Country.	Year.	Rate.(b)	Country.	Year.	Rate.(b)
Ceylon .. ..	1950	(6) 14	Ireland, Republic of ..	1950	(6) 140
Portugal .. ..	1951	(4) 62	Belgium .. ..	1950	(5) 146
Spain .. ..	1950	(5) 74	New Zealand(e) .. ..	1950	(6) 147
Japan .. ..	1950	(6) 77	France .. ..	1950	(6) 149
Italy .. ..	1950	(5) 107	Norway .. ..	1950	(5) 150
Union of South Africa(c)	1950	(6) 118	Netherlands .. ..	1951	(6) 152
Canada .. ..	1950	(6) 126	Denmark .. ..	1950	(5) 156
<b>Australia (d)</b> .. ..	<b>1951</b>	<b>(6) 126</b>	Switzerland .. ..	1950	163
Finland .. ..	1950	(6) 137	Germany, Federal		
U.S. of America .. ..	1950	(6) 139	Republic .. ..	1950	(5) 170
Sweden .. ..	1950	139	United Kingdom .. ..	1950	(6) 193

(a) Number of deaths per 100,000 of mean population. (b) Number in parentheses indicates Fourth, Fifth or Sixth Revision of the International List. In Sweden and Switzerland independent classifications are used. (c) European population only. (d) Excludes full-blood aboriginals. (e) Excludes Maoris.

(iv) *Diseases of the Heart (B25 to B28)*. The number of deaths classified to diseases of the heart in 1951 on the basis of the Sixth Revision of the International List of Causes of Death was 26,429 (15,646 males and 10,783 females). Details for each individual category within the group may be obtained from *Demography Bulletin* No. 69. This class is the largest among causes of death, the death-rate having increased from 1,019 per million in 1911-15 to 2,705 in 1939-43 and 3,135 in 1951. The increase in the number of deaths recorded from heart diseases has been particularly pronounced during the past sixteen years. The rapid increase in mortality is partly a reflection of the ageing of the population, but the figures have been influenced mainly by improved diagnosis and certification by medical practitioners. Many deaths of elderly people, formerly attributed to senility or other indefinite causes, are believed to be now more frequently certified as associated with some form of heart disease, usually myocardial degeneration. The improvement in diagnosis has been particularly evident in the case of diseases of the coronary arteries. When first listed in the heart disease group in 1931, there were 1,139 deaths from this cause and angina pectoris, but in 1950 the number on a comparable basis (Fifth Revision) was 9,027. The number of deaths classified under the Sixth Revision as due to diseases of the heart, together with death-rates and proportions per 10,000 deaths in 1951, are given in the following table.

## DISEASES OF THE HEART : DEATHS, DEATH-RATES AND PROPORTION PER 10,000 TOTAL DEATHS, 1951.

State or Territory.	Number of Deaths.			Death-rates.(a)			Proportion per 10,000 Total Deaths.		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.
New South Wales	6,493	4,279	10,772	389	260	325	3,589	3,092	3,373
Victoria .. ..	4,290	3,341	7,631	377	296	336	3,388	3,098	3,255
Queensland .. ..	1,967	1,168	3,135	319	198	260	3,007	2,559	2,823
South Australia ..	1,361	1,014	2,375	379	281	330	3,430	3,153	3,306
Western Australia	1,071	645	1,716	358	228	295	3,471	2,929	3,245
Tasmania .. ..	419	321	740	279	225	253	2,967	2,779	2,883
Northern Territory	14	4	18	141	66	113	1,505	1,667	1,538
Australian Capital Territory .. ..	31	11	42	230	101	172	3,131	2,200	2,819
<b>Australia .. ..</b>	<b>15,646</b>	<b>10,783</b>	<b>26,429</b>	<b>367</b>	<b>259</b>	<b>314</b>	<b>3,405</b>	<b>3,009</b>	<b>3,231</b>

(a) Number of deaths from diseases of the heart per 100,000 of mean population.

(v) *Diarrhoea and Enteritis (Children under two years of age)*. Figures published in Official Year Book No. 39, p. 634, show that deaths in this category declined from a rate of 22.8 per 1,000 children born for the period 1911-15 to 1.5 for the period 1946-50, from which it is evident that this cause of death is no longer the scourge that it was in earlier years.

Owing to changes in classification it is not possible to continue the tables in the same form for 1951.

(vi) *Puerperal Causes (B40)*. It was shown in Official Year Book No. 39, p. 634, that the changes introduced with the Sixth Revision of the International List did not significantly affect the comparability of the total number of deaths from puerperal causes. The death-rate from these causes (including criminal abortion) has fallen steadily during the past sixteen years and is now at a general level of about one per 1,000 live births as compared with a rate of six per 1,000 in 1936.

The 203 deaths in 1951 correspond to a death rate of 4.87 per 100,000 females, or 1.05 deaths per 1,000 live births. The death-rate may be expressed in other terms by stating that 1 of every 952 women giving birth to a live child in 1951 died from puerperal causes; the corresponding ratios for married women were 1 in every 983 and for single women 1 in every 540. More detailed information will be found in a series of tables in *Demography Bulletin* No. 69.

The following table shows the death-rate per 1,000 live births from puerperal causes in various countries. The rates are not stated uniformly on the basis of the Sixth Revision of the International List but Australian experience, referred to above, is that there is little difference from the former basis. However, for other reasons, care is needed in comparing the Australian rates with the figures for other countries.

#### CHILD-BIRTH : DEATHS PER 1,000 LIVE BIRTHS, VARICUS COUNTRIES.

Country.	Year.	Rate per 1,000 Live Births.	Country.	Year.	Rate per 1,000 Live Births.
Sweden .. ..	1950	0.62	Canada .. ..	1950	1.13
Denmark .. ..	1950	0.78	Switzerland .. ..	1950	1.38
Netherlands .. ..	1951	0.82	Finland .. ..	1950	1.47
U.S. of America .. ..	1950	0.83	Belgium .. ..	1950	1.51
France .. ..	1950	0.86	Italy .. ..	1950	1.53
New Zealand (a) .. ..	1950	0.90	Ireland, Republic of .. ..	1950	1.56
Union of South Africa(b)	1950	0.92	Portugal .. ..	1951	1.60
United Kingdom .. ..	1950	0.93	Japan .. ..	1950	1.75
Norway .. ..	1950	1.01	Germany, Federal		
Australia (c) .. ..	1951	1.05	Republic .. ..	1950	2.07
Spain .. ..	1950	1.08	Ceylon .. ..	1950	5.57

(a) Excludes Maoris.

(b) European population only.

(c) Excludes full-blood aboriginals.

A tabulation of puerperal causes for Australia according to age at death for married and single women separately will be found in *Demography Bulletin* No. 69.

The total number of children left by the 203 married mothers who died from puerperal causes in 1951 was 470, an average of 2.3 children per mother.

Nine of the mothers who died had been married less than one year, 25 between one and two years, and 13 between two and three years. The duration of marriage ranged up to 25 years. Tabulations distinguishing the ages at marriage and at death will be found in *Demography Bulletin* No. 69, which also includes a table showing in combination the duration of marriage and previous issue.

(vii) *Congenital Malformations and Diseases of Early Infancy (B41-B44)*. This combined group embraces two complete classes of the International List of Causes of death which relate more specifically to infant deaths and they have already been presented in detail in the section devoted to causes of infant death (see pp. 407 and 408).

(viii) *Accidents, Poisonings and Violence (BE 47 to BE 50)*. (a) *General*. Deaths in this class are classified according to external cause and not according to nature of injury. The classification provides sub-groups for accident, including adverse reactions to prophylactic inoculations, therapeutic misadventures and late effects of accidental injury; suicide; homicide and injuries purposely inflicted by other persons; and injury resulting from operations of war, including late effects. The number of deaths in 1951 for each of these sub-groups is shown on pp. 412-414. Full details for each individual category in this class will be found in *Demography Bulletin* No. 69.

The following table, showing the death-rates in the main sub-groups per 100,000 of mean population and the proportion of deaths caused by violence during the period 1921-51, indicates that the death-rate from violence is generally about three times as great for males as for females. It can be seen also that in 1951 the percentage of deaths caused by violence was 7.21, which was higher than in any year since 1939.

The low level of the rates and proportions for the years 1941-45 is attributable mainly to the fact that deaths of defence personnel have been excluded but the rates have been based on total mean population (including defence personnel). A contributing factor is the decrease during this period in the number of automobile accidents which resulted from the war-time restrictions on travel. From 1st July, 1947, deaths of defence personnel have again been included and the rates and proportions have since risen fairly steadily.

#### ACCIDENTS, POISONINGS AND VIOLENCE : DEATH-RATES.(a)

Period.	Death-rate from—												All Violence. Proportion per 10,000 Deaths.		
	Accident.(b)			Suicide.			Homicide.(c)			Total Violence.					
	M.	F.	P.	M.	F.	P.	M.	F.	P.	M.	F.	P.	M.	F.	P.
1921-25..	75	21	48	18	4	11	2	1	2	95	26	61	892	315	642
1926-30..	84	24	54	20	4	13	2	2	2	106	30	69	1,039	365	746
1931-35..	71	22	47	19	5	12	2	1	2	92	28	61	929	353	676
1936-40..	86	28	58	17	5	11	2	1	1	105	34	70	979	399	724
1941-45..	67	26	46	11	4	8	1	1	1	79	31	55	730	348	558
1946-50..	76	27	51	14	5	10	1	1	1	91	33	62	844	383	640
1946 ..	73	29	51	14	6	10	1	1	1	88	36	62	799	401	621
1947 ..	74	29	52	15	5	10	1	1	1	90	35	63	838	408	647
1948 ..	75	27	51	15	4	10	1	1	1	91	32	62	827	362	620
1949 ..	75	25	50	15	4	10	1	1	1	91	30	61	863	360	642
1950 ..	80	27	54	14	5	9	1	1	1	95	33	64	893	387	670
1951 ..	86	31	59	14	5	10	2	1	1	102	37	70	948	429	721

(a) Number of deaths per 100,000 of mean population.  
(c) Includes "war wounds".

(b) Includes "open verdict".

An analysis of special features of the deaths in the main sub-groups of this class is given in the following paragraphs.

(b) *Accident (BE 47, BE 48)*. In 1951 more than half of the accidental deaths were due to transport accidents. Railway accidents caused 2.98 per cent. of the total accidental deaths, motor vehicle traffic accidents 41.49 per cent., motor vehicle non-traffic accidents 1.03 per cent., other road vehicle accidents 3.20 per cent., water transport accidents 1.43 per cent. and aircraft accidents 0.54 per cent., a total of 50.67 per cent. Other important causes were accidental falls, 19.73 per cent. and accidental drowning, 8.66 per cent. A summary of the number of deaths caused by the various types of accident is given in the following table.

## DEATHS FROM ACCIDENT : AUSTRALIA, 1951.

Cause of Death.	Males.	Females.	Persons.
Railway accidents .. .. .	135	13	148
Motor vehicle traffic accidents .. .. .	1,701	360	2,061
Motor vehicle non-traffic accidents .. .. .	42	9	51
Other road vehicle accidents .. .. .	130	29	159
Water transport accidents .. .. .	66	5	71
Aircraft accidents .. .. .	23	4	27
Accidental poisoning by solid and liquid substances .. .. .	63	32	95
Accidental poisoning by gases and vapours .. .. .	20	14	34
Accidental falls .. .. .	450	530	980
Accident caused by machinery .. .. .	63	1	64
Accident caused by cutting and piercing instruments .. .. .	6	1	7
Accident caused by electric current .. .. .	33	15	48
Accident caused by fire and explosion of combustible material .. .. .	113	70	183
Accident caused by hot substance, corrosive liquid, steam and radiation .. .. .	33	20	53
Accident caused by firearms .. .. .	88	7	95
Accidental mechanical suffocation .. .. .	34	18	52
Lack of care of infants under one year of age .. .. .	1	7	8
Accidents caused by bites and stings of venomous animals .. .. .	6	2	8
Other accidents caused by animals .. .. .	23	5	28
Accidental drowning and submersion .. .. .	305	65	430
Excessive heat and insolation .. .. .	19	13	32
Excessive cold .. .. .	2		2
Hunger, thirst and exposure .. .. .	14	2	16
Cataclysm .. .. .	1	1	2
Lightning .. .. .	7	1	8
All other and unspecified accidents .. .. .	222	45	267
Complications due to non-therapeutic medical and surgical procedures .. .. .		2	2
Therapeutic misadventure and late complications of therapeutic procedures .. .. .	2	13	15
Late effects of accidental injury and poisoning .. .. .	11	10	21
<b>Total Deaths from Accident .. .. .</b>	<b>3,673</b>	<b>1,294</b>	<b>4,967</b>

(c) *Suicide (BE 49)*. (i) *Modes Adopted*. Deaths from suicide in 1950 and 1951 numbered 760 and 805 respectively, the modes adopted being as shown in the following table :—

## SUICIDE : MODES ADOPTED, AUSTRALIA.

Mode of Death.	Males.		Females.		Persons.	
	1950.	1951.	1950.	1951.	1950.	1951.
Poisoning .. .. .	101	96	61	56	162	152
Poisonous gas .. .. .	53	58	42	36	95	94
Hanging or strangulation .. .. .	126	118	28	28	154	146
Drowning .. .. .	37	41	30	26	67	67
Firearms and explosives .. .. .	176	200	12	10	188	219
Cutting or piercing instruments .. .. .	47	59	8	14	55	73
Jumping from high place .. .. .	9	15	8	9	17	24
Other modes .. .. .	18	21	4	9	22	30
<b>Total .. .. .</b>	<b>567</b>	<b>608</b>	<b>193</b>	<b>197</b>	<b>760</b>	<b>805</b>

(ii) *Death-rates*. The death-rates from suicide and the proportion per 10,000 total deaths in 1951 are given in the following table.

**SUICIDE : DEATHS, DEATH-RATES AND PROPORTION PER 10,000 TOTAL DEATHS, 1951.**

State or Territory.	Number of Deaths.			Death-rates.(a)			Proportion per 10,000 Total Deaths.		
	Males.	Fe- males.	Per- sons.	Males.	Fe- males.	Per- sons.	Males.	Fe- males.	Per- sons.
New South Wales ..	258	80	338	15	5	10	143	57	106
Victoria ..	124	56	180	11	5	8	98	52	77
Queensland ..	97	23	120	16	4	10	148	50	108
South Australia ..	44	17	61	12	5	8	111	53	85
Western Australia ..	64	17	81	21	6	14	207	77	153
Tasmania ..	14	3	17	9	2	6	99	26	66
Northern Territory ..	2	..	2	20	..	13	215	..	171
Aust. Cap. Territory	5	1	6	37	9	25	505	200	403
Australia ..	608	197	805	14	5	10	132	55	98

(a) Number of deaths from suicide per 100,000 of mean population.

The death-rates from suicide for Australia in five-year periods since 1921 and for each of the years 1946 to 1951 are shown on p. 422.

(iii) *Age at Death.* From the following table which shows the age of persons who committed suicide in 1951 it will be seen that both young and extremely old people took their lives during this year.

**AGE OF PERSONS WHO COMMITTED SUICIDE : AUSTRALIA, 1951.**

Age Group (Years).	Males.	Females.	Persons.	Age Group (Years).	Males.	Females.	Persons.
10-14 ..	3	..	3	55-59 ..	52	26	78
15-19 ..	22	3	25	60-64 ..	66	15	81
20-24 ..	38	14	52	65-69 ..	52	15	67
25-29 ..	41	11	52	70-74 ..	25	11	36
30-34 ..	37	13	50	75-79 ..	17	5	22
35-39 ..	55	27	82	80-84 ..	7	2	9
40-44 ..	63	17	80	85-89 ..	3	..	3
45-49 ..	75	25	100				
50-54 ..	52	13	65	Total Deaths	608	197	805

(iv) *Occupation at Death, Males.* A table showing main groups of occupations of males who committed suicide during 1951 appears in *Demography Bulletin* No. 69.

(v) *Death-rates, Various Countries.* The following table shows the death-rate from suicide for Australia in comparison with the rates for various other countries. The table indicates that Australia occupies a fairly favourable position as regards the death-rate from suicide.

**SUICIDE : DEATH-RATES(a), VARIOUS COUNTRIES.**

Country.	Year.	Rate.	Country.	Year.	Rate.
Ireland, Republic of ..	1950	2.5	Portugal ..	1951	10.2
Spain ..	1950	5.4	U.S. of America ..	1950	11.3
Netherlands ..	1951	6.1	Belgium ..	1950	12.9
Italy ..	1950	6.5	Sweden ..	1950	14.8
Ceylon ..	1950	6.6	France ..	1950	15.2
Norway ..	1950	7.4	Finland ..	1950	15.4
Canada ..	1950	7.7	Germany, Federal Republic ..	1950	19.2
New Zealand(b)	1950	9.2	Japan ..	1950	19.6
Union of South Africa(c)	1950	9.4	Denmark ..	1950	23.3
Australia(d) ..	1951	9.5	Switzerland ..	1950	23.5
United Kingdom ..	1950	9.5			

(a) Number of deaths per 100,000 of mean population.  
population only.

(d) Excludes full-blood aboriginals.

(b) Excludes Maoris.

(c) European

(d) *Homicide and Operations of War (BE 50).* In 1951 there were 114 deaths from homicide and injury purposely inflicted by other persons (not in war), of which non-accidental poisoning caused 5 deaths; assault by firearms and explosives, 37; assault by cutting and piercing instruments, 16; assault by other means, 51; injury by intervention of police, 2; and execution, 3. Deaths from injury resulting from the operations of war numbered 7, but all were deaths from late effects of such injuries.

14. *Causes of Deaths in Classes.*—The figures in the preceding sub-sections relate to principal individual causes of death, and are of greater value in medical statistics than a mere grouping under general headings. The classification under seventeen general headings used in the Sixth Revision of the International List of Causes of Death is, however, shown in the following table for 1951, together with the death-rates and proportions of total deaths pertaining to those classes. A similar table showing the death-rates for the eighteen classes used in former classifications and covering the three five-year periods from 1936 to 1950 appears in Official Year Book No. 39, p. 641.

### DEATHS, DEATH-RATES, ETC., IN CLASSES : AUSTRALIA, 1951.

(BASED ON THE SIXTH REVISION OF THE INTERNATIONAL LIST.)

Class.	Total Deaths.			Death-rates.(a)			Proportion per 10,000 Deaths.		
	M.	F.	Per-sons.	M.	F.	Per-sons.	M.	F.	Per-sons.
1. Infective and Parasitic Diseases	1,808	916	2,724	42	22	32	393	256	333
2. Neoplasms	5,699	5,286	10,985	134	127	130	1,240	1,475	1,343
3. Allergic, Endocrine System, Metabolic and Nutritional Diseases	740	1,034	1,774	17	25	21	161	288	217
4. Diseases of the Blood and Blood-forming Organs	160	245	405	4	6	5	35	68	50
5. Mental, Psychoneurotic and Personality Disorders	325	143	468	8	3	6	71	40	57
6. Diseases of the Nervous System and Sense Organs	4,957	6,291	11,248	116	151	133	1,079	1,755	1,375
7. Diseases of the Circulatory System	17,556	12,671	30,227	412	304	359	3,820	3,536	3,696
8. Diseases of the Respiratory System	3,164	2,162	5,326	74	52	63	688	603	651
9. Diseases of the Digestive System	1,813	1,318	3,131	43	31	37	395	368	383
10. Diseases of the Genito-urinary System	1,988	1,076	3,064	47	26	36	433	300	375
11. Deliveries and Complications of Pregnancy, Childbirth and the Puerperium	..	203	203	..	5	2	..	57	25
12. Diseases of the Skin and Cellular Tissue	61	71	132	1	2	2	13	20	16
13. Diseases of the Bones and Organs of Movement	108	138	246	3	3	3	24	39	30
14. Congenital Malformations	532	430	962	13	10	11	116	120	118
15. Certain Diseases of Early Infancy	1,672	1,259	2,931	39	30	35	364	351	358
16. Symptoms, Senility and Ill-defined Conditions	1,013	1,056	2,069	24	25	25	220	295	253
17. Accidents, Poisonings and Violence	4,357	1,536	5,893	102	37	70	948	429	720
Total .. .. .	45,953	35,835	81,788	1,079	839	970	10,000	10,000	10,000

(a) Number of deaths per 100,000 of mean population.

15. *Age at Death of Deceased Married Males and Females, and Issue.*—*Demography Bulletin* No. 69 contains a number of tables showing, in combination with the issue, the age at marriage, age at death and occupation of married persons who died in Australia in 1951. Deaths of married males in 1951 numbered 32,875, and of married females, 27,727. The tabulations which follow deal, however, with only 32,327 males and 27,443



females, the information regarding issue in the remaining 832 cases being incomplete. The total number of children in the families of the 32,327 males was 109,629, and of the 27,443 females, 101,012. The average number of children is shown for various age groups in the following table.

AGE AT DEATH AND AVERAGE ISSUE OF DECEASED MARRIED MALES AND FEMALES : AUSTRALIA.

Age Group (Years).	Average Issue.									
	Males.					Females.				
	1911.	1921.	1931.	1941.	1951.	1911.	1921.	1931.	1941.	1951.
Under 20 ..	0.33	..	0.75	..	0.43	0.94	0.77	0.66	0.79	0.83
20-24 ..	0.77	0.84	0.81	0.73	0.96	1.27	1.22	1.13	0.95	0.86
25-29 ..	1.25	1.29	1.33	1.12	1.29	1.82	1.86	1.81	1.45	1.61
30-34 ..	2.05	2.06	1.79	1.76	1.79	2.74	2.45	2.34	1.91	1.98
35-39 ..	2.80	2.58	2.13	2.11	2.12	3.64	3.29	2.89	2.30	2.49
40-44 ..	3.47	3.23	2.77	2.49	2.30	4.09	3.66	3.29	2.77	2.39
45-49 ..	4.09	3.48	3.10	2.68	2.51	4.54	3.76	3.55	2.93	2.59
50-54 ..	4.75	3.76	3.46	2.96	2.56	5.35	4.23	3.60	3.29	2.76
55-59 ..	5.44	4.41	3.69	3.28	2.71	5.86	4.69	4.01	3.55	3.03
60-64 ..	5.95	4.98	4.02	3.55	3.07	5.99	5.39	4.21	3.79	3.29
65-69 ..	6.23	5.50	4.41	3.73	3.25	6.50	5.86	4.82	4.01	3.63
70-74 ..	6.41	6.06	5.06	4.17	3.58	6.38	6.30	5.41	4.29	3.64
75-79 ..	6.75	6.66	5.65	4.56	3.83	6.72	6.56	6.02	4.85	3.96
80-84 ..	6.68	6.89	6.17	4.93	4.30	6.22	6.76	6.26	5.39	4.19
85-89 ..	6.67	7.18	6.59	5.70	4.63	5.97	6.93	6.57	5.85	4.68
90-94 ..	6.03	7.21	6.94	6.57	5.06	5.69	6.53	6.73	6.11	5.08
95-99 ..	7.30	6.97	6.69	7.04	5.78	5.05	6.05	7.10	6.34	5.76
100 and over	9.33	9.20	7.00	8.69	5.71	5.17	5.11	8.20	6.73	7.72
Age not stated	4.33	5.36	5.00	..	8.00	4.60	5.80	5.00	..	5.50
All Ages ..	5.42	4.97	4.44	3.91	3.39	5.35	5.05	4.72	4.22	3.68

The figures in the preceding table include the issue both living and dead, the proportion between them, taking the issue of deceased males and females together, being about five to one. The totals for 1951 are shown in the following table:—

ISSUE OF DECEASED MARRIED MALES AND FEMALES : AUSTRALIA, 1951.

Issue of Married Males.				Issue of Married Females.			
Issue.	Males.	Females.	Total.	Issue.	Males.	Females.	Total.
Living ..	47,919	46,974	94,893	Living ..	41,099	41,601	82,700
Dead ..	8,619	6,117	14,736	Dead ..	10,680	7,632	18,312
Total ..	56,538	53,091	109,629	Total ..	51,779	49,233	101,012

16. Age at Marriage of Deceased Males and Females, and Issue.—While the table giving the average issue of married males and females naturally shows an increase in the averages with advancing age at death, the following table which gives the average issue of males and females according to the age at marriage of the deceased parent shows a corresponding decrease in the averages as the age at marriage advances.

AGE AT MARRIAGE OF DECEASED MALES AND FEMALES, AND AVERAGE ISSUE : AUSTRALIA.

Age Group (Years).	Average Issue.									
	Males.					Females.				
	1911.	1921.	1931.	1941.	1951.	1911.	1921.	1931.	1941.	1951.
Under 15 ..	..	..	..	..	..	9.71	7.60	6.36	7.80	4.88
15-19 ..	6.97	6.32	6.15	5.40	4.63	7.10	6.97	6.79	6.10	5.41
20-24 ..	6.34	6.05	5.56	4.89	4.23	5.77	5.50	5.23	4.80	4.28
25-29 ..	5.70	5.17	4.70	4.21	3.65	4.27	4.09	3.79	3.51	3.14
30-34 ..	4.92	4.45	3.96	3.41	3.00	3.04	2.66	2.42	2.35	2.23
35-39 ..	4.05	3.90	3.14	2.80	2.45	1.68	1.61	1.40	1.26	1.16
40-44 ..	3.43	2.67	2.36	2.01	1.69	0.72	0.62	0.39	0.35	0.36
45-49 ..	2.59	2.20	1.96	1.52	1.33	0.26	0.03	0.12	0.01	0.07
50-54 ..	2.45	1.70	1.60	1.05	0.80	..	..	..	..	..
55-59 ..	1.66	1.30	0.95	0.79	0.49	..	..	..	..	..
60-64 ..	2.00	0.33	0.63	0.29	0.24	..	..	..	..	..
65 and over ..	1.00	0.25	0.18	0.01	0.29	..	..	..	..	..
Age not stated	5.40	4.93	3.64	2.95	2.81	5.23	5.41	3.06	2.45	3.17
All Ages ..	5.42	4.97	4.44	3.91	3.39	5.35	5.05	4.72	4.22	3.68

17. Occupation of Deceased Married Males, and Issue.—A summary of the main groups of occupations of married males who died during 1951, together with issue, appears in *Demography Bulletin* No. 69.

#### § 4. Registration of Births, Deaths and Marriages in the Australian Capital Territory.

To the end of 1929 the provisions of the Registration of Births, Deaths and Marriages Act 1899 and the Marriage Act 1899 of New South Wales applied to the Australian Capital Territory. Births, deaths and marriages occurring within the Territory were registered by the New South Wales District Registrars at Queanbeyan and Nowra, and were incorporated in the New South Wales registration records but excluded from New South Wales statistics.

In 1929, however, the Registration of Births, Deaths and Marriages Ordinances were enacted, providing for the assumption by the Commonwealth Government of the function of registration within the Territory as from 1st January, 1930. All registrations are made at the Registrar's Office, Civic Centre, Canberra.

Marriages within the Territory are celebrated in accordance with the provisions of the Marriage Ordinance 1929-1938. This Ordinance, which closely follows the provisions of the Marriage Act of New South Wales, which it supersedes as regards the Australian Capital Territory, came into operation on 1st January, 1930.

## CHAPTER XI.

### EDUCATION.

#### § 1. Introduction.

1. **General.**—The development of Australian educational systems was last dealt with in some detail in the Year Book in issue No. 22, 1929. Changes have occurred since that year, however, and in the following pages is presented a reasonably complete account of these changes and of the systems as they exist at the present time. This information has been obtained, in the main, from the Commonwealth Office of Education, but it has been found necessary, for publication in the Year Book, to abridge the material originally supplied. This regretted but unavoidable condensing does not, it is hoped, seriously impair the very comprehensive account supplied by the Commonwealth Office of Education.

2. **Evolution of Educational Systems in Australia.**—(i) *General.* An account of the development of the Australian schools up to 1929 is to be found in Year Books Nos. 1, 2, 17 and 22. Since that date there have been marked changes in the educational programme although the general pattern has not altered in any fundamental way. By 1929 free, compulsory and secular primary education had long been established in every State. Secondary schools had been set up and the foundations of technical education had been laid. Correspondence schools for outback children had been recently formed, and some special schools existed for physically and mentally handicapped children. School medical and dental services were in operation, and guidance and psychological services were in the process of being developed in three States.

One of the major features of Australian education during the past twenty years has been the extension of facilities to provide for an increasing number of pupils in an increasing variety of ways. This has brought about many changes in policy and practice, such as the preparation of suitable courses of study adapted to the needs of certain groups of children, the institution of the most efficient administrative structure to carry out the policy decided upon, and the evolution of adequate selection and examination techniques to ensure that the individual pupil is guided appropriately to that form of education most suitable for him. In fact, practically no child in Australia is beyond the reach of the education system.

(ii) *From 1929 to 1939.* The early years of this decade were marked by an acute economic crisis. During the most severe period the effect on education was that building programmes were restricted severely, teacher training was restricted, the numbers of teachers (and their salaries) were reduced, but the numbers of pupils increased.

During the last half of the decade school buses began to be used extensively to transport pupils to schools, thus making possible the closure of a number of small schools. Often the curriculum offered in the "consolidated" school took into account the needs of the particular locality, and courses with an agricultural bias made their appearance.

The crisis in primary production led to a policy of industrial expansion, which stimulated the training of technicians and skilled tradesmen. A technical vocational bias was developed in some post-primary schools, and senior technical education began a rapid and continued expansion. Senior technical class enrolments rose from 58,456 in 1931 to 67,377 in 1935 and to 90,401 in 1939.

(iii) *The War Years.* The immediate effect of the 1939-45 War on education programmes was very similar to the experience of the early 1930's. School building programmes were necessarily reduced because of the diversion of manpower and materials to defence needs and the number of teachers in training fell. In addition many teachers enlisted or undertook other work associated with the war effort.

To cope with the resulting shortage, many teachers deferred their retirement until after the war; others returned from retirement to active work; married women remained in the service or were re-engaged; some small schools were closed and the children were transported to nearby towns. As war factories expanded, the demand for technical training continued to grow, despite the absence of many young men at the war.

(iv) *The Post-war Years.* With the return of ex-servicemen teachers and allocation of large sums of money for educational activities, the post-war years have seen marked developments in Australian education. New curricula have appeared, aimed at increasing development of social skills, with emphasis on oral language, self-direction, health education and those activities generally included among the social studies. The time devoted to some of the more formal aspects of the curriculum has generally been reduced, and the age at which fundamental skills are formally taught has been raised.

A feature of the educational scene in the post-war period has been the steady rise in enrolments due to the rising birth-rate and heavy immigration. The greater number of children at school has demanded more teachers and more schools at a time when manpower and materials have been scarce.

## § 2. Government Schools.

1. *Administration.*—Education is the responsibility of the State Governments. The Commonwealth is, however, empowered to provide financial assistance to students and meets the full cost of education in Commonwealth territories, although this is largely provided by State education authorities.

Although there is a tendency towards regional administration, State educational administration is centralized. The permanent head of the Department of Education or Public Instruction in each State is responsible to the Minister for Education (or Public Instruction). Contact with the schools is maintained principally through Inspectors, called Superintendents in Western Australia and Tasmania. Departments are usually divided into primary, secondary and technical divisions. Some technical colleges are, however, in a large measure autonomous. Universities are independent foundations although much of their income is derived from State and Commonwealth grants.

Examination Boards, representative of the Universities, the Education Departments and non-government schools, control public examinations and syllabuses, and curriculum committees prepare primary and secondary curricula. State Ministers for Education meet periodically as the Australian Education Council, to discuss matters of common interest, and Directors of Education meet annually as a Standing Committee of this Council.

2. *The School System.*—(i) *Compulsion.* In all States, there is legislation for compulsory school attendance. The original Victorian Education Act was passed in 1872, followed by similar Acts in Queensland (1875), South Australia (1878), New South Wales (1880), and Tasmania and Western Australia (1893).

In 1952 the ages between which children were legally required to attend school were as follows:—New South Wales, 6 to 15 years; Victoria, 6 to 14 years; Queensland, 6 to 14 years; South Australia, 6 to 14 years (children may not leave school until the end of the term during which they reached the age of 14 years); Western Australia, 6 to 14 years; and Tasmania, 6 to 16 years.

In Victoria, South Australia and Western Australia amendments to the Acts have provided for the raising of the school leaving age to 15 years, but to date, this legislation has not been implemented.

Schooling may be given in government schools (including correspondence and special schools) or non-government schools and in a small minority of cases by private tuition.

The employment of children of school age is prohibited by law.

(ii) *Beyond Compulsion.* Since 1929 especially, the development of large-scale industry and scientific farming has demanded a diversity of skills, and a general raising of the educational level of the population. The raising of the school leaving age in two

States and the tendency everywhere for children to stay longer at school have been expressions of public realization of this. In 1951 less than half of all children left school when they reached the age limit for compulsory attendance. Indeed almost half now proceed to some form of further education beyond secondary school, either as full-time students, as part-time apprentices or trainees released during the day by their employers, or as part-time evening students.

In the early years of government provision of education, the main emphasis was on the primary school, which catered for children under compulsion and offered a course largely confined to the tool subjects, reading, writing and arithmetic. However, a process of extension and differentiation both at the bottom—infants' schools and kindergartens—and at the top—secondary schools—was well under way long before 1929.

3. **The Educational Ladder.**—(i) *Infants' Schools.* It is now customary, although not compulsory, for children to begin school when they are five years old. In larger primary schools they enter the infants' school, and in smaller schools "infants' classes", which occupy two or three years, the first year in some States being called "Kindergarten" or "Preparatory". The emphasis in the infants' classes is very much on general development on play activities and on the informal aspects of the educational processes. In some cases the first two grades of primary education, together with any "Preparatory" or "Kindergarten" classes, are to be found in separate infants' schools or departments. But whether in a separate establishment or as a part of a primary school, there is a gradual move towards formal instruction. At the end of the period most children are able to read with some fluency, carry out simple arithmetical operations founded on the basic number facts, and can write in pencil. In addition, they have acquired skills with art materials and the like. A good deal of the instruction is carried on through activity methods, involving, for example, dramatic work, puppetry, and school "shops". Children then pass at about the age of 8 or 9 to the more formal primary school, in which they normally spend four or five years.

(ii) *Primary Schools.* The main emphasis in the primary school as distinct from the infants' school still lies, as it always did, on the tool subjects (reading, writing and arithmetic) and, in more recent years, oral language. Since 1929, however, the methods of teaching have undergone considerable changes. Changes in the purpose and outlook of educationists, and the raising of the professional standards of teachers, have made for greater freedom for pupils and teachers, some departure from the methods of mass instruction, and the closer linking of the curriculum with the child's social environment.

In general, it is true to say that in 1951 there was less emphasis on results, and that basic skills are taught at a somewhat later stage. At the same time, the curriculum has been broadened. More individual instruction has led to a reduction of minimum standards of achievement for the less able and a stress on curriculum enrichment for the bright. Retardation, i.e., the repeating of grades, has been considerably reduced, the aim being for each child to remain with his age group. In all States "opportunity classes" exist for backward children, and in one State "opportunity classes" are provided for the especially bright.

(iii) *Secondary Schools.* At the age of 12 or 13 (in Queensland, 14) children transfer to a secondary school course. In the cities and larger country centres this is provided in a separate school, but in less densely populated areas secondary classes share the same buildings as primary classes. In rural areas secondary pupils may share teachers or classrooms with primary pupils, and even in one-teacher schools a few secondary students may carry out correspondence assignments under the supervision of the primary teacher-in-charge.

Secondary curricula have developed from the matriculation requirements of the universities. English grammar and literature, mathematics, including algebra, geometry and trigonometry were the core. Languages, chiefly Latin and French, or science, chiefly physics and chemistry, and history had an important place. Geography and drawing were often taken in the first two or three years.

The academic course for matriculation has undergone some change since 1929. Greater emphasis has been placed on oral language and written expression in the English course; Latin has waned in popularity and modern languages other than French and German are being taught in a few schools. A general science course has been introduced in some States, and social studies, a synthesis of history, geography and civics, is a subject to third-year level. More emphasis has been placed on art, music and physical education. Since 1929 the provision of a secondary type education for all has gained ground rapidly, although the entrance requirements of tertiary institutions are still provided for.

Consequently, alongside the academic course, other courses have grown up. In country areas they may be offered in the same school or the academic course may even be largely abandoned. In the city, it is usual to offer non-academic courses in separate schools. The academic schools and multi-lateral country schools are usually known as High Schools, while the other types are generally distinguished by such names as Junior Technical Schools and Home Science Schools.

Particular mention should be made of the recent development of the all-age consolidated school sometimes with an agricultural bias, found under various names in different States. Tasmania and South Australia adapted the idea of the English village area schools to Australian conditions and established "Area Schools", some of which have farms attached.

The courses followed in the non-academic schools are in general broader than in the academic schools. There is less concentration on establishing an academic discipline and method peculiar to each subject, but more attention to correlation between fields of knowledge, sometimes expressed by projects involving them all. Less time is generally devoted to mathematics and the formal sciences, more time to practical work and to art and musical appreciation. In English, oral language is emphasized rather more and grammar much less than in the academic schools.

(iv) *State Details.* Very brief particulars of the position in each of the States is given in the following paragraphs:—

(a) *New South Wales.* As in other States, a child commences school at the age of about five, spending the first seven years in the primary school and then passing on to some form of secondary education.

The trend in secondary education has been to provide particular types of courses in separate schools such as Academic High Schools, Home Science High Schools, Technical High Schools, Commercial Schools, Junior Technical Schools, Home Science Schools and Agricultural High Schools.

(b) *Victoria.* In Victoria, after six years of primary education, the child passes at the age of about twelve to secondary education. On the basis of head teachers' recommendations and the children's preferences special selection committees allot the children to High Schools, Girls' Secondary Schools or Technical Schools or the corresponding courses of multi-purpose country schools. Changes in secondary curricula in the last fifteen years have been in the direction of broader, less specialized courses.

(c) *Queensland.* In 1930 and 1952 the syllabus was substantially revised and changes were made in the school system. Pupils now complete their primary education (a preparatory grade and eight primary grades) at the age of about 14 and pass on to four years of secondary education. In country areas the secondary classes, known as secondary "tops", are attached to the primary school. Intermediate schools are composed of the two highest primary grades.

(d) *South Australia.* There has been a continuous development towards more liberty for teachers to experiment, both in the seven years' primary schooling and in secondary education. Secondary education is provided in High Schools, Technical Schools, and Area Schools, which, in country districts, provide education with an agricultural bias as well as academic courses leading to matriculation.

(e) *Western Australia.* Children enter primary school at the beginning of the year in which they turn six, and after one year's infants' class and six primary classes pass on to secondary education at the age of about twelve. This is provided through three-year

and five-year High Schools, which provide professional, commercial and technical courses. In country areas without High Schools large primary schools with post-primary classes, called Junior High Schools, provide similar education.

(f) *Tasmania*. Children at the age of six commence six years' primary education and at twelve are selected, on the result of ability and attainment tests, teachers' recommendations and school record, for four years' compulsory education in a High, Technical or Modern School. A fifth year is necessary for matriculation.

Curriculum committees aim to keep the curriculum abreast of modern developments. Modern classes are designed to foster the special aptitudes of children in the 12 to 16 age group who are unsuited to high or technical school education.

4. **Examinations and Accrediting.**—(i) *Examinations*. Before 1929 most States had three examinations for school children. The first came at the end of primary school and was variously known as the "Qualifying Certificate" or "Scholarship". These examinations were regarded as a qualification for secondary education. The third came at the end of the secondary course, at the age of sixteen to seventeen, and was known as the "Leaving" or "Senior Public" Examination, which qualified students for university matriculation. Between these came the "Intermediate Certificate" or "Junior Public Certificate", usually one or two years before the end of the full course of secondary schooling. A pass in this examination was a useful entrance qualification for clerical occupations, nursing, some Public Service positions, and other callings requiring academic training.

The entrance examination for secondary schools, as administered by the Education Departments, although students from private schools also sat for it. The two higher examinations were generally under the control of a board, on which universities, Education Departments and non-government schools were represented.

By 1950 the external examination for secondary school entrance had been abolished in every State except Queensland, where the age of transition is fourteen and the "Scholarship" Examination must be passed to entitle the student to free secondary education and, if necessary, boarding allowances. The external Intermediate Examination had declined in importance, some States substituting internal examinations in some, or all, schools, other States providing a variety of internal certificates from different types of schools. The Leaving Certificate in most States had not been supplanted, but had been modified to provide a greater variety of subjects and, as for example in mathematics, the opportunity of choosing several specialized courses or a broad course.

The length of the secondary course has been increased in two States from two to three years for the Intermediate Certificate and from a further one to a further two for the Leaving. South Australia has a further year beyond the Leaving Certificate for a separate examination known as "Leaving Honours". Only the "Leaving Certificate" is necessary for matriculation, but good results—credits as distinct from passes—in the Leaving Honours Examination may carry exemption from some subjects of the first year university course. In Victoria a similar system had operated, but the optional Leaving Honours year has been replaced by adding a further year after the Leaving Examination for a course leading to a special matriculation examination. Separate matriculation examinations also exist in New South Wales, Western Australia and Tasmania, but successful Leaving candidates are not required to sit.

(ii) *Accrediting*. The system of granting certificates, or credit for subjects passed, without external examination is a major development and now operates in four States. Credit is assessed mainly on the student's record of work for the year, although some internal examinations are generally given. Syllabuses can be less rigidly controlled and can be more freely adapted to local conditions, although standards are maintained by the supervision of the central authority.

(iii) *State Details*. (a) *New South Wales*. The trend in New South Wales over the past twenty years has been for the steady elimination of external competitive examinations. Experiments with the use of intelligence tests as the means of selection for high school entry gradually led to the adoption of this method for all country schools in 1938.



This was replaced in 1943 by small committees, which now make the selection for all schools, giving weight to teachers' estimates of achievement, intelligence test scores and parental wishes.

The Intermediate Certificate used to be an external examination taken after three years' secondary education. Since 1949, however, the Certificate has been awarded on the results of internal examinations in all government and most non-government schools. Children have now to reach a satisfactory standard in at least four subjects.

At the Leaving Certificate level examination is external, although there have been various modifications in the requirements for matriculation. The number of acceptable subjects has been extended, and matriculation is now allowed on four (instead of the usual five) subjects if three of these are at a higher level.

(b) *Victoria*. All public examinations have now been abolished at the primary level. At the secondary level there are now four examinations—the Proficiency, the Intermediate, the Leaving and the Matriculation.

The Proficiency is awarded on the basis of the child's school record during the third year of secondary education. The Intermediate and Leaving Certificates are public examinations conducted by the Schools Board of the University of Melbourne, and are taken after four and five years' secondary education respectively. Matriculation, for which the Leaving is a prerequisite, requires a further year and provides the normal channel of entry into the University.

(c) *Queensland*. The Scholarship Examination, which takes place at the end of primary schooling, has been changed from a competitive examination to a qualifying examination, in which all students are required to obtain 50 per cent. of total marks in English, arithmetic and social studies.

The Junior Public Examination is taken after two years' secondary schooling. Since 1951 each candidate has received a statement showing the subjects passed and the grade of pass in each instead of a Junior Certificate. The Senior Public Examination two years later is accepted by the University for matriculation.

A Board of Post-primary Studies and Examinations was set up in 1941 to advise the Government in these matters.

(d) *South Australia*. Progress Certificates are awarded at the end of primary schooling on the recommendation of the teacher and District Inspector, and this entitles pupils to special allowances for books, board and travelling.

The Intermediate, Leaving and Leaving Honours Certificates are obtained by external examination. Intermediate Technical, Leaving Technical, Area School Intermediate and Area School Leaving Certificates are awarded on school recommendation.

(e) *Western Australia*. The only external examination at the end of primary schooling is the scholarship examination for students wishing to proceed to a five-year high school. A preliminary qualifying examination is held three months earlier to eliminate candidates who have little chance of success.

At the secondary level the Junior Certificate examination (after three years) and Leaving Certificate examination (after five years) are conducted for the University by a Public Examinations Board which includes representatives from the University, the Education Department and non-departmental schools.

(f) *Tasmania*. Accrediting, based on ability and attainment tests, pupils' records and teachers' recommendations, is used to determine the most appropriate secondary education for pupils.

After four years' secondary education a certificate is granted either by accrediting or public examination. A fifth year is required to sit for the University's Matriculation Examination.

5. **Health Services to Schools.**—During the period under review, health services to schools have extended far beyond the routine medical and dental inspections which were the rule in 1929. Information relating to medical and dental school services is given in Chapter XIII.—Public Health and Related Institutions.

6. **Guidance.**—Each of the Australian States has now a comprehensive system of educational guidance administered by trained and experienced educational psychologists and backed by a system of school record cards. In general, the functions of these services are :—selection and differentiation for secondary education, diagnosis and guidance of atypical children, preliminary vocational guidance, and in some States, research. The weight given to each of these functions varies considerably from State to State, but since the early 1930's there has been a steady and continuous progress towards thorough educational guidance services for all children.

Before 1930 psychologists had been appointed in South Australia and Tasmania but their work was chiefly concerned with atypical children. In the early 1930's the beginnings of comprehensive record card systems arose in two or three other States, there were some attempts to administer psychological tests of ability and achievement with large groups of children, and in New South Wales segregation of the gifted at the primary level was commenced. This general movement progressed fairly slowly in the middle and late thirties, although by the beginning of the war New South Wales and Tasmania had developed the beginnings of comprehensive guidance services with school counsellors, record cards and systematic and regular testing of all children in certain age groups.

During the war the increased opportunities for the training of psychologists in the fighting services provided each State with a pool of trained and experienced guidance workers. Creation of new professorships of psychology and the expansion of existing schools in the universities has maintained a steady flow of new recruits. Mention should also be made here of the supplementary vocational guidance service provided by the Vocational Guidance Division of the Commonwealth Employment Service. This division co-operates with State Education Departments by giving post-school vocational guidance, using the data obtained and made available by the Education Departments during the school career of the children.

7. **Research.**—(i) *State Education Departments.* Since 1929 all State Education Departments have set up research branches which function as integral parts of head offices. In several States the officer who directs research is also responsible for the guidance service offered by his Department. The research undertaken is directed towards departmental activities and the findings of research are examined carefully in the determination of policy and procedures ; in addition, many problems of immediate importance are handled. In the majority of States, too, the Research Branch supervises the collation of statistics ; it also plays an important part in curriculum revision and modification of examinations.

The first full-time research officers were appointed in New South Wales in 1935, in Victoria in 1938, in South Australia in 1945, in Queensland in 1948, and in Western Australia in 1951. In Tasmania in 1934 the position of psychologist was changed to Psychologist and Supervisor of Research and in 1936 a Curriculum Officer was appointed. There was, of course, a good deal of research undertaken prior to the advent of these officers.

(ii) *Australian Council for Educational Research.* Research in education is also carried out by a non-governmental body called the Australian Council for Educational Research. It is engaged on educational research in a wide variety of fields, ranging from tertiary to pre-school education. It conducts surveys and enquiries, makes grants to approved educational investigators, serves as a centre to disseminate educational information, provides training for research workers, and standardizes and distributes educational and psychological tests for use in Australia. Although this Council is an autonomous body, the Commonwealth and State Governments contribute some financial support to it.

8. **Atypical Children.**—Since 1929 there has been a marked increase both in the range of special provision and in the number of schools or classes for pupils who, for one reason or another, cannot progress to their best advantage in an ordinary school. Among groups given special attention are the mentally backward, the gifted, the physically

handicapped, the blind, deaf and dumb, the epileptic, the cerebral palsied, the partially sighted, the hard of hearing and the delinquent. The number of pupils with certain of these handicaps in some States is so small or spread over so wide an area that special provision does not exist for all of these types of handicapped children in all States. However, the great majority of those listed above are catered for in every State. The provision of special schools and classes has involved the appointment of departmental specialists, special training courses and close liaison with school health services. In some States, special clinics attached to hospitals or functioning as an independent child welfare service handle cases of personality maladjustment; they work in co-operation with the psychological services of the Education Departments.

9. *Education of Migrant Children.*—From 1945 to 1951, the net increase in children at Australian schools through migration was about 75,000, or 6 per cent. of the total school age population, more than half being alien and non-English speaking on arrival. During this period the impact of the increased birth-rate of the Australian population in the mid 1940's also contributed to the heavy burden placed on State education resources.

It was generally considered desirable for migrant children to attend schools with Australian children, although some purely migrant schools were built, with Commonwealth assistance, in hostels, etc., and in some States, schools or classes exclusively for alien migrant children assisted the children until they could take their place in their age group classes in the normal schools. As was to be expected, alien children found little difficulty in learning the English language, which is the language of instruction in all schools in Australia. Non-government schools absorbed a significant proportion of migrant children.

The major problems were those of staffing and accommodation. The Commonwealth assisted by providing school buildings in migrant centres and in some residential hostels. Some States relieved the staffing position by employing suitably qualified English-speaking migrants as teachers in schools exclusively used by migrant children, although the policy of teaching migrant children in schools with Australian children was adhered to wherever possible. Where it was not possible, particularly in large migrant centres, parents were encouraged to move into Australian communities. In almost all cases children of secondary school age were accommodated in existing Australian secondary schools.

10. *Education of Native Children in Australia.*—(i) *General.* The Commonwealth Government is responsible for the education of full-blood native children in the Northern Territory. Each State has responsibility for the welfare and education of native children within its boundaries.

In June, 1951, the Prime Minister invited all State Premiers to a Conference on Native Welfare in Canberra, and the Minister in charge of Native Affairs in New South Wales, Queensland, and Western Australia, together with representatives of the Commonwealth and South Australia attended the inaugural meeting of the Council for Native Welfare in September, 1951. The Council was established on a permanent basis and will meet annually, to consider national policy with respect to the welfare of Australian aborigines.

(ii) *New South Wales.* Native children, excluding those living on stations and reserves, for whom separate facilities are provided, may be admitted to Government schools. In addition, there are 26 special schools on or near aboriginal reserves, nineteen of which are staffed by trained teachers employed by the Department of Education.

There are also eighteen aboriginal stations in New South Wales, maintained by the Aboriginal Welfare Board, which is responsible to the Chief Secretary's Department. Each station has a school, where the educational standard is below that reached by the normal white child in a Government school, and the emphasis is placed on handicrafts. The "teacher-managers", who give instruction and manage the affairs of the station also, are not necessarily trained teachers.

The Board wholly maintains two homes and subsidizes another which provides for the education and training of children admitted to its control.

(iii) *Victoria*. The laws of this State make no differentiation between the aborigines and the other members of the community so far as education is concerned. Aborigines and half-castes who wish to do so may avail themselves of the educational facilities provided at the Lake Tyers Aboriginal Station, where there is a government school staffed and conducted by the Education Department. The curriculum is similar to that in ordinary white schools, with a bias towards handicrafts.

(iv) *Queensland*. In 1939 the Aborigines' Preservation and Protection Act was passed to provide for the welfare of the native population, including education and manual training. To this end the Department of Health and Home Affairs established three aboriginal settlements, each of which has a school staffed by teachers on loan from the Department of Public Instruction. The syllabus comprises English, civics and morals, arithmetic, geography, nature knowledge, drawing, needlework, music and drill. On attaining school leaving age, children are given a constructive course in domestic science or manual training. At the eleven mission schools conducted by various denominations, and subsidized by the Government, the standard of education is similar to that of the government settlements.

(v) *South Australia*. The Aborigines' Protection Board maintains a school on each of its stations at Point McLeay and Point Pearce, staffed by teachers from the Education Department.

Numbers of native children also attend the six schools controlled by the United Aborigines' Mission, the schools at Koonibba Lutheran Mission, Umecwarra Mission and the Ernabella Presbyterian Mission School.

The curriculum at all these schools is similar to that in ordinary government schools, with the emphasis on manual training and handicrafts, such as sewing, dressmaking, basketmaking and woodturning.

(vi) *Western Australia*. Prior to 1936 the authority vested in the Department of Native Affairs for the custody, education and maintenance of the natives was exercised by a Chief Protector of Aborigines, and later by a Commissioner of Native Affairs.

In 1948, the Director of Education advised head teachers of State schools that they must admit native children, unless they could be excluded on hygienic grounds. Three years later the Education Department accepted responsibility for the education of natives and the Department of Native Affairs now acts in close co-operation with the Education Department in all matters relating to native children.

Some mission schools are staffed by teachers from the Education Department, and all may be inspected by officers of the Department to ensure that the standard of education provided is adequate. Missions are graded into Classes A, B and C and are subsidized by the Department of Native Affairs accordingly.

In the South-western Division of the State, native children study the ordinary State curriculum. The question of special curricula for half-castes, and full-bloods who live mainly in pastoral and marginal areas, is being considered.

(vii) *Tasmania*. The few native children in this State are educated at schools for white children.

(viii) *Northern Territory*. There have long been mission schools for aboriginal children operating under the general supervision of the Administration and some provision was made from time to time in several government schools. However, since 1950 a more systematic attempt has been made to provide for coloured children.

In December, 1951, 230 children were enrolled in Commonwealth schools staffed by fully trained teachers operating on aboriginal settlements and catering for children between the ages of five and fifteen years. Plans are under consideration to establish further schools. The education being provided for aboriginal children is designed to equip them to support themselves and their families in the European economic structure of the Northern Territory, to encourage the improvement of their environmental conditions, both domestic and communal, and to provide for the development of their talents and creative abilities. Dressmaking, woodwork and craftwork help to fulfil this aim and to stimulate the constructive use of leisure time.

To meet the special needs of native children, a provisional syllabus has been drawn up and a series of reading primers entitled "The Bush Books", featuring topics and situations familiar to the children, has been compiled.

In March, 1951 a Senior Education Officer was appointed to the Darwin Office of the Commonwealth Office of Education to act as liaison officer between the Administrator of the Northern Territory and the Director of the Office of Education on matters connected with the education of aboriginal children. His supervision of the work being done in native schools will be extended in 1952 to include that of the eighteen mission schools in the Northern Territory. The enrolment figures for the mission schools are as follows :—Roman Catholic Schools, 1,030; Church Missionary Society Schools, 158; Methodist Mission Schools, 271; Lutheran Mission School, 90; Others, 65;—Total, 1,614.

11. Provision for Rural Areas.—(i) *General.* The population of Australia is so scattered that there is a problem in providing primary, and more especially secondary, education for all eligible pupils.

One method of meeting this problem was the establishment of a wide network of one-teacher primary schools, staffed in the main with trained teachers.

The practice of sending itinerant teachers to outlying areas is still in force in the far north of Western Australia, and mobile railway cars are used for technical and agricultural education in New South Wales and domestic science in Queensland. However, in general, it has been the practice to bring the child to the educational facilities rather than vice versa.

(ii) *Subsidized Schools.* Where there is a group of children too few in number to warrant the establishment of a one-teacher school, a "subsidized school" may be opened. The Education Department pays part of the cost, and in some States appoints a teacher.

Some States also administer "provisional schools", which are completely financed by the Government, but which are not large enough, or sufficiently assured of adequate continued attendance of pupils, to warrant classification as permanent schools.

(iii) *Consolidation.* As early as 1904, the policy of transporting pupils to larger and more central schools began to come into operation. Trains, bicycles and horses were first employed, but the use of buses has led to a very great development of school transport systems, particularly since 1935. This policy, known as "consolidation", has been responsible for a substantial reduction in the number of small schools, and is one of the most striking developments of the past twenty years. Organized transport services for children attending country primary and secondary schools is extensive. In 1950 New South Wales had 426 services, Victoria 608 in 1951–52, Queensland 224 in 1949, South Australia 313 in 1951, Western Australia 388 in 1951 and Tasmania 267 in 1951.

The cost of transporting children to school for the last period available was as follows :—New South Wales, £528,121 in 1951; Victoria, £741,393 in 1951–52; Queensland, £122,649 in 1951–52; South Australia, £182,212 in 1951; Western Australia, £374,133 in 1950–51; Tasmania, £180,351 in 1951; and Australian Capital Territory, £26,831 in 1951–52.

The consolidated school is usually not merely a larger primary or secondary school; it generally provides a curriculum specially adapted to the needs of the rural area it serves.

The best known type of consolidated school is the area school, found in Tasmania and South Australia. The idea grew from a need to provide more than a primary education for country children as had been attempted in the British Village Area Schools. In 1936 an Experimental Area School was established in Tasmania. The success of the experiment led to the establishment of other area schools and by 1951 there were 27 such schools, providing for 7,366 pupils.

In South Australia, a "pilot" school established in 1938 proved successful and was followed by a similar development.

The small schools of the area are closed and the pupils are transported to the area school by bus or bicycle. Here, they undertake study based on the needs and interests of rural life. The curriculum, though still including the usual academic subjects, has a practical bias and introduces elements based on the activities of the area in which the school is situated, e.g., dairying, fruitgrowing. Education officers, teachers and parents co-operate in planning courses to fit the locality.

Other States have schools of a somewhat similar type such as Consolidated Schools, Group Schools and Rural Schools. Rural Schools in Queensland are located in country towns. Pupils from surrounding "one-teacher" schools come to the Rural School one day each week to avail themselves of the specialized facilities and specialist teachers at the school in such fields as manual training and domestic science.

The adaptation of courses to rural needs is not, however, confined to "consolidated" schools.

(iv) *Special Assistance.* Another way of bringing children and schools together has been the provision of financial assistance for children who have to live away from home in order to attend school. Most of these board in private homes but there are six government hostels and 56 private ones (excluding private boarding schools) which cater for more than 1,500 children of secondary school age and a small number of primary school children also. Special scholarships for country children, giving allowances for living away from home, and substantial fare concessions for vacation travel are provided by all States.

(v) *Correspondence.* For those who were still unable to attend school, correspondence tuition had been established in every State by 1929. These schools have grown in size and extended in scope since then, and Technical Correspondence Schools, which grew out of the Commonwealth scheme of technical training, were established in each State by 1942, and have grown under State administration since. An interesting development in 1947 was the appointment of a Liaison Officer for Correspondence School pupils in Tasmania. The activities have been made more effective by his personal contact with pupils and parents and his practical aid in supervision.

The number of correspondence pupils attached to correspondence schools in 1951 in each State was as follows:—New South Wales, 5,780; Victoria, 1,465; Queensland, (1950), 4,994; South Australia, 1,322; Western Australia, 1,882; and Tasmania, 239.

12. *School Broadcasting in Australia.*—As early as 1933, teachers were experimenting with the use of radio in the classroom. These experiments were encouraged by Education Departments and eventually led to an arrangement with the Australian Broadcasting Commission for the establishment of a series of broadcasts to children in the classroom, from which has sprung the present extensive school broadcasting system.

The organization of school broadcasting programmes remains a co-operative effort on the part of the A.B.C. and education authorities. Although the School and Youth Education Department of the A.B.C. is responsible for the broadcasting of the programmes, it draws freely on the advice and services of teachers and maintains permanent liaison officers with the Education Departments. The purchase of receivers for schools has been encouraged by Education Department subsidies to parents' organizations and in 1948 the Commonwealth Government waived its claim to listeners' licence fees from schools. More than two-thirds of Australian schools were equipped with radio receivers in 1951.

School broadcasts are presented as part of the regular A.B.C. programmes without separate stations or wave lengths. Special efforts are made, however, to relate the broadcasts to the actual work in the schools. Booklets are published giving in advance the yearly programme in all subjects; in subjects such as geography, nature study and art, the booklets are accompanied by picture sheets, work books and teacher's notes. In 1951, 300,000 radio booklets were distributed to schools embracing the following subjects:—Health and Hygiene, the World We Live In, French for Schools, Music through Movement, Singing, Literature, Social Studies and/or History/Geography, Nature Study, Music Appreciation.

Broadcasting has proved to be a most effective way of reaching the outback children of Australia. The "Kindergarten of the Air", begun in 1942 as a service to children unable to attend kindergarten, has proved popular in both town and country. Children are encouraged to take part in the programme in response to suggestions made by the broadcaster. Radio lessons have been designed to supplement those being done by means of correspondence. At Alice Springs the efficacy of a "School of the Air" for correspondence pupils in the Northern Territory is being further investigated. Pupils make use of the "pedal-wireless" equipment, installed on outlying stations for the Flying

Doctor Service, to make contact with their teachers. The present range of these broadcasts is 385,000 square miles. It is planned to extend these lessons from 3 to 5 half-hour sessions each week.

13. **Teacher Training and Recruitment.**—(i) *General.* The training of Government school teachers is carried out by the State Education Departments, but in most States persons who wish to train for teaching in private schools may attend government training colleges on payment of a fee. Many non-government school teachers have been drawn from the government teaching services; others have been recruited at the university graduate level. Private training institutions also provide some teachers.

An account of the early development of teacher training systems is to be found in Year Book No. 22. By 1929, the pupil-teacher system was universal except in one State. The student spent one or two years, or even longer, teaching in school under supervision, studying and receiving instruction from the headmaster in the art of teaching. In some States, at the end of that period he passed into a teachers' college. After emerging as a trained teacher, he often continued his studies to obtain a series of graded certificates which were necessary for promotion. The pupil-teacher system has been abandoned as the chief method of training teachers. Teacher students are now recruited at matriculation level and given a professional course of training at colleges controlled by Education Departments or by University Departments of Education. The raising of entrance standards and prolongation of training has led to a close association between the Education Departments and Universities. The trend has been towards placing teacher training on the same basis as other professional training.

The reduction in the teaching force due to economy measures in the depression years did not give rise to any shortage of staff; indeed classes were generally somewhat reduced in size during this period.

However, in 1942, due to the diversion of thousands of teachers into the Armed Services, a grave shortage had to be met by the re-employment of married women and retired ex-teachers. It was soon apparent that even with the return of servicemen from the war there would still be a shortage of teachers.

Measures were taken to meet this shortage. Training courses were made more attractive by increasing allowances for students. The amount of these allowances has been increased by as much as four times and now exceeds £200 per annum in some States. The co-operation of teachers and their organizations was sought to obtain more teachers and publicity drives were launched to attract recruits. Special recruiting officers were appointed in some States. Salaries of teachers too were increased substantially in each State and promotion systems were made more liberal.

In addition to the normal channels of recruitment and training, various methods of obtaining additional teachers were tried. Many more thousands of married trained women teachers and retired men and women teachers were re-employed, and in some cases the conditions of their re-employment were liberalized. Over 2,000 trainees also entered the profession through the Commonwealth Reconstruction Training Scheme. Several States set up emergency training schemes, although these were on a comparatively small scale. Some teachers were recruited in England and their passages to Australia paid, but these schemes have been discontinued. Departments accept suitable young alien migrants for training. In Victoria bursaries are awarded to pupils who undertake to enter the Government teaching service.

Despite increased training facilities and higher teachers' college enrolments in the post-war period, the supply of teachers throughout Australia has done little more than replace wastage, and has not kept pace with the rising enrolments. Difficulty is being experienced in staffing small schools in remote areas, while the shortage of secondary scientific and mathematics teachers is reported to be acute in some States.

(ii) *Training Colleges.* Every State maintains at least one teachers' training college. Most students are trained at colleges in the capital cities, although there has been a movement towards the establishment of colleges in the country. In 1951 there were in Australia fifteen Teachers' Colleges conducted by Departments of Education and professional training for teachers was provided by five universities.

The entrance standard is generally at the Leaving Certificate level at about the age of seventeen. In some States intending teachers can obtain a scholarship at the Intermediate Certificate level to enable them to complete teachers' college entrance requirements. In return they are required to enter a bond of service additional to that normally required of teachers' college trainees.

(iii) *Training of Primary Teachers.* In all States, except Tasmania, where teacher training is conducted by the university, teachers for government primary schools are trained in teachers' training colleges controlled and administered by the State Education Departments.

Colleges are conducted on a co-educational basis, and departmental trainees are given a monetary allowance while in training and are required to enter into a bond to serve for a specified period or to repay all or portion of the cost of training.

In South Australia, the academic side of teacher training courses, except the short course for those preparing for "one-teacher" schools, is provided at the university; students attend lectures in normal degree courses. In addition, they may attend lectures in some subjects of the course for the Diploma in Education. In this way during their full course they obtain credits towards the recently introduced Associateship in Arts and Education in South Australia, which may be completed by part-time study after taking up teaching. In New South Wales, Victoria, Queensland and Western Australia, on the other hand, the course of training for primary teachers does not require attendance at the University. In Tasmania the Education Department co-operates closely with the University in the training of teachers and departmental teachers and schools are used for demonstration work and practice teaching.

In general, the duration of courses is two years for primary teachers, including infants' teachers. Specialization for nursery and for infants' teaching normally occurs in the second year of training. Students are required to attend college for a period varying from 32 to 40 weeks annually. The time allocated for practical work and lectures varies from State to State, but, on the average, from one-quarter to one-third of the student's time is devoted to practice teaching, attendance at demonstration lessons and observation of normal classroom teaching. There is a variety of subject detail in training courses in the different States. The basic subjects taken in the various courses are principles, history and general methods of teaching, special methods of teaching primary school subjects and educational psychology. In addition, students undertake courses in physical education, art, music, school hygiene and handicrafts as well as lectures designed to widen their own cultural background.

(iv) *Training of Secondary Teachers.* Prospective secondary teachers are generally required to undertake a degree course, and then are required to undertake a course of professional training of one year's duration. This normally qualifies trainees for a Diploma in Education.

The year's professional training in education includes lectures and seminars on subjects associated with educational theory and practice, study of methods and techniques appropriate to secondary school subjects, periods of practice teaching and the observation of classroom techniques in the teaching of special subjects.

(v) *Training of Specialist Teachers.* Teachers of specialist subjects such as music, art, manual arts, physical education and domestic science receive from two to five years' training. Physical education courses are generally conducted at teachers' colleges or at a university; use is made of technical colleges and conservatoria of music for other specialist training. Teacher trainees attending the institutions, however, are regarded as being in attendance at a teachers' training college and are normally required to spend a portion of each week at the teachers' college.

(vi) *Training of Technical Teachers.* Teachers of general subjects in technical schools and colleges generally receive their training either as primary or as secondary teachers and after some experience in either or both fields are transferred to a technical institution.



Teachers of specialist subjects in technical schools are in the main recruited from the ranks of qualified tradesmen engaged in either industry or commerce. Upon appointment teachers of technical subjects usually receive instruction in classroom teaching techniques and procedures. A Technical Teachers' Training Centre has been established in Victoria.

(vii) *In-service Training.* As almost all teachers now enter the profession by way of Teachers' Training Colleges, where they receive basic professional training, in-service training in Australia is directed chiefly towards keeping teachers abreast of developments and adding to their basic training. Education Departments have always encouraged practising teachers to pursue university courses, which are free to approved applicants in some States, and facilities have been made available for teachers to obtain the academic qualifications for higher certificates where such exist.

Efforts are also made to keep teachers informed of new ways of meeting classroom problems. District Inspectors are usually responsible for the conduct of meetings where professional topics are discussed and for the arrangement of visits to other schools where special work is being done. Official publications of the Education Departments contain articles dealing with both educational theory and practice. In most States, the teachers' organizations publish magazines containing, among other material, articles dealing with educational theory. These reach the great majority of government teachers.

(viii) *State Details.* (a) *New South Wales.* The tendency in teacher training over the last twenty years has been to increase the number of specialized courses for teachers of various types of subjects, and to provide more teachers' colleges in country areas. In 1932 provision was made for teachers in manual arts to be chosen from Junior Technical School students who passed the Intermediate Certificate, and in 1935 special two-year courses for teachers of agriculture were introduced. Other developments were the provision of graduate courses at Armidale and special courses for prospective teachers of physical education.

In the post-war years several new colleges have been opened to accommodate the large number of new recruits. Country colleges concentrate on primary and lower primary training, and Sydney Teachers' College has become more and more an institution for the training as specialists, such as graduate teachers and teachers of art, music, physical education, etc.

Administration of teacher training is controlled by a board consisting of the principals of teachers' colleges, which, in conjunction with the Director-General or his deputy, co-ordinates all teacher training activities.

(b) *Victoria.* Up to 1951, recruits for primary teaching first served as junior teachers in schools and then received one year's training in a teachers' college. Five teachers' colleges were operating in 1950, and two have been opened since. In 1951 provision was made for direct recruitment of students into colleges at the age of seventeen, and the course was extended to two years.

A Secondary Teachers' Training Centre was set up in 1950 by the Education Department at the University to provide professional and scholastic guidance for students being trained for secondary school work.

(c) *Queensland.* The pupil-teacher recruitment method has now been abolished, and students who have passed the Senior Leaving Examination are selected for a two-year professional course in primary teaching at the Senior Teachers' College. Secondary school teachers are recruited either from graduates teaching in primary schools or from graduate students trained by the Senior Teachers' College in close co-operation with the Faculty of Education at the University.

Junior Teachers' Colleges, attached to high schools, offer preliminary training to intending teachers who have passed the Junior Public Examination.

(d) *South Australia.* Most teachers undergo a two-year course, which may be general or specialized in infant, commercial, art or manual training work. An additional year is provided for highly successful students, and a course leading to university graduation for intending secondary teachers. The Associateship of the University of Adelaide is a further qualification for teachers, involving less academic attainment than a degree and biased towards Education.

Teacher shortage is combated by such measures as increasing teacher training, and salaries, employment of married women, higher retiring ages, and encouragement to the immigration of British teachers.

(e) *Western Australia.* The Teachers' Training College offers a standard two-year course for non-graduates and a one-year course for graduates. Monitorship is no longer a prerequisite of training. There has been no special training course for secondary teachers although four and five year courses are now in operation.

Training is administered by a College Advisory Board comprising the Director of Education as Chairman, the Professor of Education, a Senior Inspector, the Principal of the College and a representative of the Teachers' Union.

(f) *Tasmania.* Since 1948, teacher training has been undertaken by the University, where matriculants undertake a four-year course including a degree and professional training. Holders of a Schools' Board Certificate undertake a three-year course of selected university subjects plus professional training.

A Student Teachers' College, administered by the Education Department, was set up at Launceston in 1948 as an emergency measure to train additional teachers and now provides two-year courses.

(ix) *Sex and Status of Teachers.* Although about one half of the teachers in State schools in Australia are men, the ratio varies considerably from State to State. There has been a continuous increase in the proportion of men since 1929, at first because of a government policy of male preference during the period of severe unemployment, and since then, the difficulty of recruiting females at a rate rapid enough to replace their greater "wastage" rate. Only women teachers are employed in the infant schools and generally in girls' departments. However, men predominate in the senior positions, both because of their greater preponderance amongst those with long service and because the higher promotion positions are generally reserved for men, except for some in infants' schools and girls' schools which are reserved for women.

Most teachers are permanent public servants. This status gives them security of tenure, compulsory contributory superannuation rights, and the right of appeal against being passed over for promotion. On the other hand, they are generally subject to transfer to any part of the State which they serve and are debarred from holding or seeking election to public offices. Female permanent teachers must resign if they wish to marry, although this is no longer the case in New South Wales and Tasmania.

14. *School Buildings and Grounds.*—In 1930, school building programmes were seriously cut because of the financial difficulties of the depression. The 1939-45 War intervened before school building could be resumed on a large scale. During the post-war period the building of schools was given a high official priority in order to obtain labour and materials. Most schools are therefore either quite new or more than 20 years old.

The large school in 1929 was normally of one or two stories, constructed of brick or stone, composed almost entirely of class rooms. Verandahs were usually provided for wet weather play and for cloak accommodation. "Portable" wooden rooms were used extensively as one-teacher country schools and to provide additional accommodation in large schools. Many of the older one-teacher schools were permanent brick or stone buildings. Secondary schools, until the post-war period, were often housed in former primary schools to which laboratory and workshop accommodation had sometimes been added. The shortage of buildings has been such that very few of the pre-1929 schools have been replaced, although many have been altered.

The post-war buildings also fall into two big groups, portable and permanent. In primary schools, in particular, some Education Departments favour a mixture of both kinds of classrooms, thus enabling them to cope with the changing age-composition of different areas. Prefabricated classrooms have been imported or locally produced in very large numbers—the Bristol aluminium dual units being especially popular. Generally, these have been used to extend existing schools, although in a few cases entire schools have been composed of them. To meet the very acute shortage all kinds of emergency

measures have been taken, including the hiring of halls, and the use of cloak-rooms, weather sheds and verandahs for class instruction. However, a considerable number of modern and imposing new secondary schools has been built and equipped with special facilities for the varied activities of the pupils.

The construction and maintenance of school buildings is not generally the direct responsibility of the Education Department. The work is usually done by the State Department responsible for all public buildings, the Education Department maintaining close liaison with the body responsible.

School grounds vary from small asphalted yards in some congested city areas to acres of playing fields and agricultural plots in the best country schools. In some States many country schools have forest plantations attached, while planting of ornamental trees and gardens is everywhere encouraged, a special day being set aside for tree planting.

Some application has been made of the "school base" concept, primary and secondary schools sharing the use of public recreation areas in some places, although the tendency has been to locate schools centrally for the child population rather than to locate them for access to green areas.

15. *Equipment.*—(i) *Text Books and Materials.* All equipment regarded as essential by the Education Department in each State is provided free of charge, except for text books for pupils. The cost of text books in the secondary schools, however, is frequently met by government assistance to some students. Some schools purchase sets of text books, which are paid for by charging the pupils a small fee annually. Text books have been extensively revised since 1929 in accordance with changes in the curriculum. The more widespread application in recent years of activity and play-way methods in the infant schools has been stimulated by the provision of a greater volume of free materials such as blocks, counters, peg-boards and modelling clay.

Equipment for manual training and home arts has long been provided free by the Education Departments. Sometimes a centre has been created to serve a number of schools and children are transported to it free. Other schools, especially the "consolidated" schools in the country, have their own workshops. Generally, manual training for boys consists of woodwork and sheetmetal work and the girls take sewing and home science. Secondary schools are almost always provided with laboratories, but these are not found in primary schools, with the exception of the larger all-age schools in the country.

Many schools still lack physical education equipment beyond common sports material, although this position is gradually being remedied.

(ii) *Furniture.* There has been considerable development since 1929 in this field. Originally most schools were equipped with long desks and benches, seating six to eight pupils. By 1929 nearly all of these had been replaced by the standard dual desk with tip-up seat, and in infant classes by individual chairs and small tables. No important change in furniture took place then until the post-war period, when considerable research was undertaken on posture and the physical measurement of children. The dual desk is now being replaced in some States by the individual table and chair, provided in a range of sizes suitable to each class. In some States tubular steel is used. The new type of furniture is more suitable for flexible arrangements of the class in line with modern educational practice.

(iii) *Visual Aids.* The period since 1929 has seen a remarkable growth in the use of the visual aids in education. There have been two distinct phases in this growth, the first being characterized by the importation of all films and equipment and the second by the efforts made by local producers to meet the requirements of Australian education.

During the first phase the acquirement and use of equipment were left to individuals, and some resourceful pioneering work was done in schools with film-strip projectors. The obvious advantages of this teaching aid were soon apparent to Departments of Education and between 1936 and 1939 they began the appointment of special committees and teacher demonstrators to guide the development of the new educational medium.

With the appointment of these specialists, the second phase of growth began, for they recognized immediately the need to produce film strips suitable for use in their own schools. Consequently five States set up film-strip production units for this purpose and these are now by far the largest producers in Australia. An Australian-produced film-strip projector has also been manufactured.

Since the 1939-45 War, the emphasis has moved from the strip projector to the 16mm. sound machine. In May 1945 the Commonwealth Government set up the National Film Board to promote the use of educational films, and the Government Film Production Unit attached to the Board rapidly became the main producer of educational films. Several film companies also began operations and their most recent interest has been the designing of films primarily for classroom use. Several manufacturers have produced 16mm. sound projectors.

The National Library is the main distributing centre for non-technical films in Australia and it has Advisory Committees to act as its agency in each State. The main borrowers are schools, film societies and parent and citizen organizations. Education Departments have set up their own film libraries to distribute films to schools under their control, while schools are encouraged to purchase projectors through subsidy schemes, and in some States mobile units are organized to cover schools where there is no equipment.

The present extent of the use of films is indicated by the following details:—In June, 1951, the Education Department libraries had 15,412 sound and 4,656 silent 16mm. films covering 5,258 and 1,695 separate titles respectively. There were 2,939 35mm. strip projectors, 509 16mm. silent projectors and 1,346 16mm. sound projectors in the Department's schools, whilst an additional 252 schools were served either fortnightly or monthly by mobile sound projectors. Most schools have their own libraries of film strips. Most Education Departments produce film strips and some also produce their own films. To June, 1951 their production totalled 1,083 film strips, 29 silent films and 66 sound films.

16. **Parent and Citizen Organizations.**—In Australia, where all Government schools are administered by central Departments, there is little opportunity for local administration of education. Public interest is expressed through Parent and Citizen Organizations. Although the names of these bodies differ in the various States they have similar aims which are:—to promote the interests of the school by bringing parents, pupils and teaching staff together; to help provide teaching aids not supplied by the Department; to provide recreational materials; to assist in the regular attendance of children at school; to help find accommodation for teachers.

In all States the Parent and Citizen Organizations have affiliated to become State-wide bodies. These, in turn, are the members of the Australia-wide body, the Australian Council of School Organizations.

17. **Statistics of Government Schools.**—(i) *General.* The Government schools shown in the following tables include primary, secondary, junior technical, correspondence and subsidized schools, but exclude senior technical colleges, evening schools and continuation classes.

Particulars relating to Senior Technical Colleges are given in § 5 following.

(ii) *Returns for Year 1951.* (a) *General.* The following table shows for 1951 the number of Government Schools, together with the teachers employed, teachers in training and the number of individual children enrolled.

## GOVERNMENT SCHOOLS(a), 1951.

State or Territory.	Schools open at end of year.	Teachers Employed (excluding Teachers in Training).	Teachers in Training.	Net Enrolment.
New South Wales(b)	2,525	13,602	2,623	432,747
Victoria	2,035	9,424	1,498	259,644
Queensland	1,565	5,976	566	171,107
South Australia	694	3,524	352	95,523
Western Australia	507	2,568	478	(c) 72,646
Tasmania	316	1,604	235	45,230
Northern Territory(d)	6	42	..	1,250
Australia—1951	7,648	36,740	5,752	1,078,147
1950	7,790	36,085	5,530	1,027,459

(a) Excludes Senior Technical Colleges. (b) Includes Australian Capital Territory. (c) Average weekly enrolment. (d) Year ended 30th June, 1952.

(b) *Average Enrolment and Attendance.* The methods of calculating enrolment are not identical throughout the States. The unit in South Australia is the daily enrolment, while New South Wales, Victoria, Western Australia and Tasmania employ the weekly enrolment. In Queensland no average enrolment is compiled, and the August census enrolment figure has been taken.

As with enrolments, there is not complete uniformity in arriving at the average attendance, but most of the States aggregate the attendances for the year and divide by the number of school sessions. New South Wales and Western Australia, however, employ averages of term averages. The matter of securing uniformity in these respects has been under consideration for some time, and was discussed at a meeting of Directors of Education at a conference held in Sydney in July, 1947. The average enrolment and attendance in each State and Territory during 1951 are shown below :—

## GOVERNMENT SCHOOLS(a) : AVERAGE ENROLMENT AND ATTENDANCE, 1951.

State or Territory.	Average Weekly Enrolment.	Average Daily Attendance.	Percentage of Attendance to Enrolment.
New South Wales(b)	398,899	349,766	87.64
Victoria	247,361	219,135	88.60
Queensland	(c) 159,767	142,705	89.30
South Australia	90,747	82,588	91.06
Western Australia	72,646	66,865	92.00
Tasmania	42,224	37,363	88.49
Northern Territory (d)	1,230	1,092	88.78
Australia—1951	1,012,874	899,514	88.80
1950	958,112	844,123	88.10

(a) Excludes Senior Technical Colleges. (b) Includes Australian Capital Territory. (c) Census enrolment at 1st August, 1951. (d) Year ended 30th June, 1952.

Recurring epidemics of contagious diseases, minor illnesses and bad weather are all serious factors which affect the full attendance of pupils at school.

The average attendance at Government Schools in Australia is shown below for the year 1891 and at varying intervals to 1951.

GOVERNMENT SCHOOLS(a) : AVERAGE ATTENDANCE, AUSTRALIA.

Year.	Total Population. (b)	Average Attendance.	Year.	Total Population. (b)	Average Attendance.
	'000.			'000.	
1891 .. ..	3,421	350,773	1941 .. ..	7,144	732,116
1901 .. ..	3,825	450,246	1947 .. ..	7,639	754,799
1911 .. ..	4,574	463,799	1948 .. ..	7,795	770,554
1921 .. ..	5,511	666,498	1949 .. ..	8,051	810,800
1931 .. ..	6,553	817,262	1950 .. ..	8,316	844,123
1933 .. ..	6,657	805,334	1951 .. ..	8,539	899,514
1939 .. ..	7,005	744,095			

(a) Excludes Senior Technical Colleges.

(b) At 31st December.

(c) *Schools in the Australian Capital Territory.* During 1951 nine Government Schools were in operation in the Australian Capital Territory; enrolment numbered 2,811; and average attendance was 2,434. By arrangement with the Commonwealth Government these schools are conducted by the New South Wales Education Department with provision for primary and secondary education, the Department being recouped for expenditure. The cost of the teaching staff in 1951-52 was £101,080, while the cost of general maintenance amounted to £57,319. The figures quoted exclude enrolment, etc., at the Canberra Technical College and the Evening Continuation School. For further particulars of education facilities in the Australian Capital Territory see Chapter VII.—The Territories of Australia, Australian Capital Territory, para. 8.

(iii) *Expenditure.* (a) *Maintenance—All Schools (excepting Senior Technical Colleges).* The net expenditure on maintenance in all grades of schools, excepting senior technical colleges and, in Victoria and (in 1939) Tasmania, junior technical schools, and the cost per head of average attendance for 1939 and the five years ended 1951 are shown in the following table. The figures do not include expenditure on buildings, which is shown separately in a subsequent table. In all expenditure tables the figures for Victoria, Queensland and Western Australia relate to the financial year ended six months later than the calendar year.

GOVERNMENT SCHOOLS(a) : NET EXPENDITURE ON MAINTENANCE.

Year.	N.S.W. (b)	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Total.
TOTAL (INCLUDING SECONDARY SCHOOLS). (£.)								
1939 .. ..	4,598,376	2,667,094	1,481,399	854,037	730,500	(c) 320,616	6,802	10,658,824
1947 .. ..	7,542,623	4,533,365	2,465,221	1,533,470	1,435,885	688,155	15,164	18,213,883
1948 .. ..	8,065,326	5,226,383	2,898,833	1,703,589	1,488,193	810,342	25,580	20,218,246
1949 .. ..	9,426,879	6,302,596	3,385,274	1,953,121	1,801,259	928,291	35,322	23,832,742
1950 .. ..	10,830,086	7,763,962	3,963,736	2,435,007	2,283,666	1,082,758	40,578	28,399,793
1951 .. ..	13,222,509	9,776,957	4,813,837	3,050,624	3,285,769	1,367,236	57,156	35,574,088

PER HEAD OF AVERAGE ATTENDANCE.  
(£ s. d.)

1939 .. ..	15 12 2	14 1 4	13 0 9	12 18 4	14 5 7	11 7 6	11 3 9	14 6 7
1947 .. ..	24 2 11	24 11 11	21 1 10	23 0 10	25 13 1	22 11 5	23 5 10	24 2 7
1948 .. ..	26 10 6	27 16 0	23 18 6	25 6 0	25 16 9	25 12 3	34 16 0	26 4 9
1949 .. ..	29 9 10	32 4 11	26 6 0	27 2 7	29 15 5	27 14 10	34 13 3	29 7 11
1950 .. ..	33 0 6	37 11 1	29 17 11	31 14 8	36 0 8	30 6 3	39 14 1	33 12 11
1951 .. ..	37 16 1	44 12 4	33 14 8	36 18 9	49 2 10	36 11 10	52 6 10	39 11 0

(a) Excludes Senior Technical Colleges.

(b) Gross figures, receipts not being available.

(c) Excludes Junior Technical Schools. See above.

(b) *Maintenance—Secondary Schools.* The figures shown in the preceding table refer to expenditure on maintenance of all Government primary and secondary schools, excluding senior technical colleges. It has been the practice of the State Education Departments to give separate information in regard to the cost of secondary education. The difficulty of making any satisfactory allocation of the kind, however, will be understood, when it is realized that both elementary and higher education are in some instances given in the same school and by the same teacher. Unfortunately, too, the term "secondary" has not the same meaning in all States. It might be mentioned here that similar difficulties arise in connexion with the apportionment amongst the various branches of expenditure on administration, inspection and the training of teachers. The figures quoted hereunder in regard to cost have been mainly extracted from the Reports of the State Education Departments, and are subject to the above qualifications.

**GOVERNMENT SECONDARY SCHOOLS(a) : EXPENDITURE ON MAINTENANCE.**

State.	1950.		1951.	
	Cost.	Cost per Head of Population.	Cost.	Cost per Head of Population.
	£	£ s. d.	£	£ s. d.
New South Wales .. .. .	3,275,898	1 0 4	3,975,808	1 4 0
Victoria .. .. .	1,930,655	0 17 3	2,515,400	1 1 10
Queensland .. .. .	438,865	0 7 4	513,834	0 8 5
South Australia .. .. .	583,949	0 16 8	740,728	1 0 7
Western Australia .. .. .	506,420	0 17 9	636,973	1 0 2
Tasmania(b) .. .. .	197,054	0 14 0	260,278	0 17 9

(a) Excludes Senior Technical Colleges.

(b) Includes High and Junior Technical Schools.

The figures in all cases exclude the cost of buildings. In Queensland, the figure quoted excludes the cost of the Agricultural High School and College, which amounted in 1950-51 to £126,412, and in 1951-52 to £184,838.

(c) *Buildings.* Expenditure on Government School buildings, excluding senior technical colleges, for the years 1939 and 1947 to 1951 was as follows:—

**GOVERNMENT SCHOOLS(a) : EXPENDITURE ON BUILDINGS.**

(Including Loan Fund Expenditure.)

(£.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Total.
1939 .. .. .	411,720	206,481	174,725	85,539	56,994	60,011	539	996,009
1947 .. .. .	747,294	540,036	275,153	231,967	203,926	92,462	2,261	2,093,099
1948 .. .. .	1,009,789	1,017,227	306,776	261,683	303,213	185,286	1,790	3,145,764
1949 .. .. .	1,277,015	2,015,972	442,753	355,494	454,207	288,057	12,522	4,846,020
1950 .. .. .	2,163,917	2,364,674	633,149	544,859	676,742	402,080	13,723	5,799,144
1951 .. .. .	3,531,351	3,118,637	854,761	911,036	916,515	721,740	96,729	10,150,769

(a) Excludes Senior Technical Colleges.

The totals for the various States in 1951 include the following amounts expended from loan and other funds; figures for 1950 are shown in brackets—New South Wales, £2,502,289 (£1,452,607); Victoria, £2,977,015 (£2,200,967); Queensland, £693,522 (£499,282); South Australia, £772,703 (£386,316); Western Australia, £716,858 (£499,521) and Tasmania, £625,888 (£328,061).

(d) *Net Total Cost.* The net total cost of education in Government Schools, including buildings, during the years 1939 and 1947 to 1951 was as follows :—

**GOVERNMENT SCHOOLS(a) : NET TOTAL COST.**

(£.)

Year.	N.S.W. (b)	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Total.
1939 .. ..	5,010,096	2,873,575	1,656,124	939,576	787,494	(c)380,627	7,341	11,654,833
1947 .. ..	8,289,917	5,073,401	2,740,374	1,765,437	1,639,811	780,617	17,425	20,306,982
1948 .. ..	9,135,115	6,243,610	3,205,609	1,965,272	1,791,406	995,628	27,370	23,364,010
1949 .. ..	10,703,894	8,318,568	3,828,027	2,308,615	2,255,466	1,216,348	47,844	28,678,762
1950 .. ..	12,994,003	10,128,636	4,596,885	2,979,866	2,960,408	1,484,838	54,301	35,198,937
1951 .. ..	16,753,860	12,895,594	5,668,598	3,961,660	4,202,284	2,088,976	153,885	45,724,857

(a) Excludes Senior Technical Colleges.

(b) Gross figures, receipts not being available.

(c) Excludes Junior Technical Schools.

The figures in this and the preceding tables refer to all grades of Government Schools with the exception of senior technical colleges, and in Victoria and (in 1939) Tasmania, junior technical schools. Including buildings, the net cost per scholar in average attendance for the whole of the schools in Australia amounted in 1950 to £41 14s., and in 1951 to £50 16s. 8d. as compared with £4 9s. 3d. in 1901.

(e) *School Banking.* Particulars of School Savings Banks are included in Chapter XVI.—Private Finance.

### § 3. Non-Government Schools.

1. **Public Authority and the Non-Government Schools.**—In all States education is compulsory for all children between certain ages. It must be received in a government school, unless the child is under "regular and efficient" instruction elsewhere. This may be at home, or in a non-government school. The provision for control over the regularity and efficiency of instruction in the non-government schools varies considerably from State to State. In Queensland and South Australia it is possible under the present regulations for schools to exist without inspection. In New South Wales and Western Australia provision is made for the initial inspection when a new school starts, and for inspections thereafter as the Minister requires, to ensure efficiency. In Victoria and Tasmania, registers are kept of teachers and schools, and both teachers and schools must satisfy the administering authority that they are efficient before registration is granted. Without such registration, neither a teacher nor a school can operate. Provision is made, too, for inspections at any time by the registering authority.

Public authority over schools or institutions having scholars above the compulsory ages is generally less direct. It is effected directly by the registration procedures in Victoria and Tasmania, and in all States there is a measure of indirect control through provisions governing the awards of State scholarships for secondary education, which can be taken only in government or in approved non-government schools.

The eight State-subsidized grammar schools in Queensland are the only non-government schools of Australia for which an annual inspection is prescribed by statute.

In all States, non-government schools are required, under the authority of either the Education Acts or Statistics Acts, to furnish certain returns. The form of these returns may be prescribed in the Acts or may be subject to alteration by the Minister's consent.



2. Numbers of Non-Government Schools, Teachers and Enrolments, 1951.—The numbers of non-government schools, teachers and enrolments for 1951 are shown in the following table:—

## NON-GOVERNMENT SCHOOLS, 1951.

Denomination.	N.S.W. (a)	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Total.
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## NUMBER OF SCHOOLS.

Church of England ..	45	36	16	14	9	5	..	125
Presbyterian ..	13	18	4	2	3	2	..	42
Methodist ..	5	4	(b) 6	3	2	1	..	21
Roman Catholic ..	601	354	210	100	128	40	2	1,435
Other Denominational ..	17	19	6	19	3	5	..	69
Undenominational ..	59	48	12	8	65	6	..	198
Total .. ..	740	479	254	146	210	59	2	1,890

## TEACHERS.

Church of England ..	713	586	245	175	108	79	..	1,906
Presbyterian ..	256	261	58	61	47	9	..	692
Methodist ..	147	183	(b) 109	68	23	28	..	558
Roman Catholic ..	4,229	1,835	1,309	485	548	197	11	8,614
Other Denominational ..	56	112	25	75	9	42	..	319
Undenominational ..	481	295	106	112	138	30	..	1,162
Total .. ..	5,882	3,272	1,852	976	873	385	11	13,251

## ENROLMENTS.

Church of England ..	9,625	11,382	3,782	3,011	2,055	1,329	..	31,184
Presbyterian ..	3,824	5,654	558	894	1,033	191	..	12,154
Methodist ..	2,250	3,112	(b) 1,642	1,187	708	343	..	9,242
Roman Catholic ..	108,024	68,850	37,070	12,810	15,926	5,699	370	248,749
Other Denominational ..	788	2,104	359	1,235	184	978	..	5,648
Undenominational ..	6,279	6,167	1,912	1,540	2,884	499	..	19,281
Total .. ..	130,790	97,269	45,323	20,677	22,790	9,039	370	326,258

(a) Includes Australian Capital Territory.

(b) Presbyterian and Methodist Schools' Association.

3. Growth of Non-Government Schools.—The enrolment and average attendance at non-government schools in 1891 and at varying intervals to 1951 were as follows:—

## NON-GOVERNMENT SCHOOLS : ENROLMENT AND ATTENDANCE.

Year.	Enrolment.	Average Attendance.	Year.	Enrolment.	Average Attendance.
1891 .. ..	124,485	99,588	1947 .. ..	280,543	257,430
1901 .. ..	148,659	120,742	1948 .. ..	281,354	251,092
1911 .. ..	160,794	132,588	1949 .. ..	293,306	264,104
1921 .. ..	198,688	164,073	1950 .. ..	309,673	275,562
1931 .. ..	221,387	189,665	1951 .. ..	326,258	293,429
1939 .. ..	247,482	219,171			

4. **The Organization of Roman Catholic Education.**—There is, in each State capital, an official who acts under the Archbishop as a Director of Catholic Education for the area. Each diocese within the area is, however, autonomous and manages its own educational affairs subject to the local episcopal authority. The State Director has, in addition to possible inspectorial functions within his own diocese, the duty of co-ordination of educational matters within his area, and of liaison with other educational authorities, particularly the State Education Department.

The system includes kindergartens, sub-primary, primary, academic secondary, home science, commercial, agricultural and technical schools, juniorates and minor seminaries, schools for the mentally and physically handicapped, orphanages and a variety of special schools of a charitable nature for under-privileged or socially handicapped children.

With the exception of a small number of permanent lay teachers and a number of visiting teachers—usually specialists in such matters as physical education, sport, speech, etc.—teaching is done by members of religious orders.

5. **The Organization of Other Non-Government Education.**—(i) *General.* Within each State, although the other non-Government schools may be organized into loose forms of association for purposes such as sports, conferences, uniform conditions, etc., there is no system corresponding in size, detail or organization with the Roman Catholic Schools.

(ii) *Church of England.* In certain schools under direct church control the appointment of a majority of Council members rests with the Synod. More frequently perhaps the appointment of such Council members lies in the hands of the diocese or even the parish. The ecclesiastical head of the area, the archbishop or bishop, is typically *ex-officio* chairman of the school Council. The church may appoint all members or on the other hand it may appoint a majority or only one or two. The other members are secured in many ways; some may be nominated by parents, some by "old boys" some by the "school association," some by co-option by the existing Council. Many combinations of these forms of membership occur.

(iii) *Other Denominations.* In general the pattern is similar to that described above, with appointments usually controlled by the State authority of the Church concerned, either alone or acting in conjunction with the local congregation. In Queensland there are six schools operated under the joint auspices of the Presbyterian and Methodist Churches.

(iv) *Undenominational.* There are three main groups of such schools; firstly, those partly controlled by State action, such as those Grammar schools for which some members of the controlling body are appointed under Act of Parliament; secondly, those operated under the auspices of corporate bodies, usually in the form of limited liability companies which may be affiliated with particular churches; and, thirdly, a number of privately-owned schools, many of which are small and restricted to kindergarten or primary schooling.

## § 4. Pre-school Education.

1. **Types of Pre-school Centres.**—Nursery-kindergartens under trained teachers provide daily sessions for children aged three to six, while play groups or play centres provide shorter periods for smaller groups. Day nurseries or crèches care for the children of mothers in employment and Lady Gowrie Child Centres are special centres set up in each State capital city by the Commonwealth Government to demonstrate a child development programme. There are also some private and denominational nursery schools which vary considerably in standard.

Free kindergartens were originally established and financed mainly in congested industrial areas, by voluntary effort, but over the years State Governments and some municipal councils have provided an increasing amount of financial assistance.

2. **The Training of Teachers.**—Since the development of this work depends on the availability of trained teachers, nearly all Kindergarten Unions now have teacher training colleges providing three-year courses. The minimum entrance age is seventeen, and the Leaving Certificate is usually required before admission.

The New South Wales Department of Education gives a two-years' course at the Teachers' College, covering such subjects as biology, physiology, child development, psychology, mental hygiene, child welfare, home science, English, world history, current affairs, sociology, art, crafts, physical education, music and early child development (which embraces principles and methods, play activities, children's literature, music for children, art and other creative experiences, and curriculum planning). A considerable amount of time is also spent in all colleges in practice teaching.

Financial help, such as free training, bursaries provided by the Government or voluntary bodies and living allowances, is provided for teachers, but there is a considerable shortage of trained pre-school teachers.

The six Kindergarten Unions in 1938 united to form the "Australian Association for Pre-School Child Development", a federal body whose aim is to promote the continuous advancement of the pre-school movement throughout Australia.

3. **Kindergarten of the Air.**—Daily kindergarten sessions of half an hour are now broadcast in all States by the Australian Broadcasting Commission in collaboration with Kindergarten Unions.

4. **Kindergarten Unions.**—The following information regarding kindergarten unions has been compiled from particulars supplied by the principals of the chief institutions or the organizing secretary in each State, except in the case of Western Australia where the details were furnished by the Education Department. It refers to kindergarten unions or associations, and excludes the kindergarten branches in the Government schools of the various States.

#### KINDERGARTEN UNIONS, 1952.

State.	No. of Schools.	Average Attendance.	Permanent Instructors.	Student Teachers.	Voluntary Assistants.
New South Wales	33	1,447	99	26	1
Victoria..	45	1,595	67	..	35
Queensland	6	226	14	..	..
South Australia(a)	76	2,225	185	..	8
Western Australia	35	938	61	..	..
Tasmania	5	209	17	..	..
Total—1952	200	6,640	443	26	44
1951	209	6,784	463	39	67

(a) Includes affiliated suburban and country centres.

Only 26 of these 200 kindergartens in 1952 were located outside metropolitan areas; these were as follows:—New South Wales—two at Newcastle; Victoria—two each at Geelong and Ballarat, one each at Bairnsdale, Castlemaine, Colac, Euroa, Horsham, Maryborough, Mildura and Red Cliffs; South Australia—one each at Angaston and Nuriootpa; Western Australia—two at Kalgoorlie and one each at Carnarvon, Geraldton, Kojonup, Merredin, Northam and Pearce; Tasmania—two at Launceston. In each capital city except Hobart there is a training college and the number of students in training during 1952 was 88 in Sydney, 123 in Melbourne, 30 in Brisbane, 42 in Adelaide, and 25 in Perth.

### § 5. Technical Education.

1. **General.**—In this section technical education refers to that branch of education which is concerned with the preparation for entry to skilled occupations, including trades and professions. In the main this education is vocational and is chiefly part-time, being carried out by the student while he is engaged in his occupation. The work of technical high schools, junior technical schools and other schools of this nature which provide courses with a bias towards technical handwork has been excluded, as they provide a form of education which is more properly regarded as secondary education.

The chief institutions for vocational training other than the universities are the senior technical colleges. These offer training not only in industrial skills, but also in commercial, agricultural and pastoral occupations, the plastic arts and homecrafts. There are, in addition, agricultural colleges and a substantial number of private business colleges.

Although, as in other branches of education, the main lines of technical education had been determined by 1929, expansion and development since then has, perhaps, been greater in this field than in any other. The following table gives some indication of the growth of technical education in the years 1935 to 1951.

#### TECHNICAL EDUCATION: AUSTRALIA.

Year.					No. of Colleges.	No. of Students.	No. of Teachers.(a)	Total Expenditure.
								£
1935	..	..	..	..	86	67,426	2,471	663,339
1939	..	..	..	..	94	89,215	3,276	1,359,800
1945	..	..	..	..	114	110,841	5,175	1,849,051
1947	..	..	..	..	119	144,882	6,239	2,685,896
1948	..	..	..	..	126	150,482	6,819	3,235,129
1949	..	..	..	..	131	153,602	6,530	4,081,331
1950	..	..	..	..	141	161,564	6,501	5,298,510
1951	..	..	..	..	146	159,310	6,784	6,617,049

(a) Includes both full-time and part-time teachers.

Technical education is the field most sensitive to changing material needs and has expanded to meet the requirements of new industries and techniques. The desire for the comparative economic security of skilled jobs during the period of economic depression and the increasing demand for skilled workers due to the development of more advanced techniques in industry stimulated public interest in all States. For example, consequent upon the Nangle Commission in Western Australia (1928) and the appointment of a commission in New South Wales in 1933, there was a move in both of these States to decentralize facilities and set up advisory councils to maintain better contact with industries served by the colleges. In 1938 a Royal Commission on Youth Employment and Apprenticeship examined in some detail matters related to technical education in Western Australia.

A characteristic feature of technical education since 1929 has been the close co-operation between the Commonwealth and the States. This is understandable as the technical colleges were able to play an important part in meeting two crises with

Australia-wide implications. During the years of the economic depression in the 1930's States sought means to provide technical training for the young unemployed and this led, in 1936, to the Youth Employment Scheme, in which the States and the Commonwealth participated. During the 1939-45 War the Commonwealth and the States worked together in the Commonwealth Technical Training Scheme to meet the wartime need for technicians; after the war this type of training was continued in the technical colleges in the States as a part of the Commonwealth Reconstruction Training Scheme. In addition, during the period 1940 to 1944 technical correspondence schools were founded in each State in conjunction with the Commonwealth and these have become an important part of the system of technical education in the Australian States.

The expansion of technical education in the last two decades has paralleled the growth of secondary production from predominantly scattered small-scale and light industry to more concentrated large-scale heavy industry utilizing advanced techniques. Technical colleges have always been linked with the industries from which they draw staff and students, but whereas formerly they produced skilled craftsmen they now also accept the responsibility of turning out persons capable of adapting themselves to swift technological changes and able to assume responsibilities of management and leadership. Furthermore, rapid changes in industrial methods call for a close connexion between college curricula and workshop practice in order that they may keep in step and so that applied research can make available to industry the results of pure research. The introduction of day training classes for apprentices is an indication of the development of this relationship between technical education and industry.

The history of the development of technical education since 1929 is one of increasing government support and control, increasing financial commitments by both State and Commonwealth Governments as well as considerable financial support and greater participation by industrial undertakings in the work of the colleges, increasing enrolments and facilities and the development of curricula and courses to meet new needs, and the growing realization of the need to recruit and train teaching staff in a systematic way.

2. **Teacher Training.**—Another important feature of technical education since 1929 relates to the training of teachers. Technical colleges at that time were staffed chiefly by men (and a few women) drawn from two sources. They were either trained teachers in the employment of the Education Department or technicians drawn from industry. Although some of the latter were highly qualified, the great majority had not been trained as teachers. In order to remedy this, there has been a move to develop schemes of training technical college teachers without breaking the important link provided by recruiting specialist tradesmen to teach in the colleges. For example, since the 1939-45 War, New South Wales has extended a system whereby tradesmen-instructors receive a course of teacher training in both general educational theory and teaching method. After appointment a teacher in a large centre attends classes for six hours each week during his first year of service and two hours weekly thereafter until he has completed the training course. Correspondence courses and itinerant teachers care for the newly appointed teacher-instructor in country colleges. Modifications of this aspect are in operation in other States. Many technical teachers, principally of academic, commercial and domestic science subjects, hold trained teachers' certificates from teachers' colleges.

3. Colleges, Teachers and Students.—The numbers of colleges, teachers and enrolments of individual students during the years 1939 and 1948 to 1951 are given in the following table :—

TECHNICAL EDUCATION : COLLEGES, TEACHERS AND ENROLMENTS.

State.	Colleges.	Teachers.			Individual Students Enrolled.		
		Full-time.	Part-time.	Total.	Males.	Females.	Total.
<b>New South Wales—</b>							
1939..	24	894	301	1,195	27,403	9,861	37,264
1948..	38	1,036	1,724	2,760	46,624	15,259	61,883
1949..	38	1,010	1,755	2,765	48,624	16,333	64,957
1950..	42	1,047	1,403	2,450	(a)48,310	(a)20,775	69,085
1951..	44	1,131	1,356	2,487	(a)44,940	(a)19,356	64,296
<b>Victoria—</b>							
1939..	30	817	456	1,273	21,158	7,686	28,844
1948..	33	1,140	1,263	2,403	32,222	9,961	42,183
1949..	35	1,161	1,054	2,215	30,898	10,597	41,495
1950..	36	1,238	1,030	2,268	30,879	11,152	42,031
1951..	36	1,280	1,071	2,351	29,229	12,217	41,446
<b>Queensland—</b>							
1939..	13	94	108	202	5,125	1,272	6,397
1948..	12	125	227	352	10,181	3,352	13,533
1949..	12	111	264	375	10,746	3,911	14,657
1950..	12	135	346	481	12,350	4,551	16,901
1951..	12	135	346	481	12,654	5,425	18,079
<b>South Australia—</b>							
1939..	17	104	212	316	6,390	3,331	9,721
1948..	24	155	442	597	9,885	7,406	17,291
1949..	25	167	460	627	9,700	7,531	17,231
1950..	27	173	447	620	10,270	6,829	17,099
1951..	28	195	482	677	10,512	6,893	17,405
<b>Western Australia—</b>							
1939..	5	36	119	155	3,843	1,830	5,673
1948..	11	148	275	423	8,056	3,010	11,066
1949..	12	117	222	339	7,695	2,718	10,413
1950..	15	131	264	395	7,424	3,925	11,349
1951..	17	145	325	470	8,101	4,703	12,804
<b>Tasmania—</b>							
1939..	5	41	94	135	936	380	1,316
1948..	8	32	252	284	2,828	1,698	4,526
1949..	9	35	174	209	2,777	2,072	4,849
1950..	9	25	262	287	2,960	2,139	5,099
1951..	9	34	284	318	3,356	1,924	5,280
<b>Total—</b>							
1939..	94	1,986	1,290	3,276	64,855	24,360	89,215
1948..	126	2,636	4,183	6,819	109,796	40,686	150,482
1949..	131	2,601	3,929	6,530	110,440	43,162	153,602
1950..	141	2,749	3,752	6,501	112,193	49,371	161,564
1951..	146	2,920	3,864	6,784	108,792	50,518	159,310

(a) Partly estimated.

4. Expenditure.—The expenditure on technical education in each State for 1951 is shown below :—

TECHNICAL EDUCATION : EXPENDITURE, 1951.

(Including Loan Fund Expenditure.)

(£.)

State.	Salaries and Maintenance.	Equipment.	Buildings.	Total Expenditure.	Receipts—Fees, etc.	Net Expenditure.
New South Wales	1,545,331	324,482	484,717	2,841,602	274,114	2,567,488
Victoria(a)	1,746,372	75,998	403,123	2,342,201	261,638	..
Queensland..	275,371	110,058	64,538	449,967	38,626	411,341
South Australia	311,520	9,194	87,999	409,531	50,284	359,247
Western Australia	363,147	(b)	17,626	442,838	17,724	425,114
Tasmania	81,046	7,923	39,465	130,910	787	130,123
Total 1951	4,322,787	527,655	1,097,468	6,617,049	643,173	..
1950	3,701,316	473,662	884,132	5,298,510	667,678	..

(a) Includes expenditure on Junior Technical Schools.

(b) Included with salaries and maintenance.

Fees and other receipts are paid into Consolidated Revenue in all States except Victoria, where they are retained and spent by the Technical School Councils. The expenditure on buildings is largely financed from loan moneys, the sums provided from this source in 1951 being (the expenditure in 1950 is shown in brackets) :—New South Wales, £417,708 (£229,728); Victoria, £351,986 (£374,691); Queensland, £58,971 (£40,000); South Australia, £74,078 (£64,853); Western Australia, £626 (£1,961); and Tasmania, £35,183 (£20,348).

The expenditure on maintenance (including salaries) for technical education in Australia in 1951 amounted to 13s. 1d. per head of the mean population, as compared with £4 3s. 11d. per head expended on maintenance (including salaries) for primary and secondary education.

### § 6. Commonwealth Activities.

Although the primary responsibility for education rests with the Australian States, the Commonwealth Government is committed to a number of educational activities related to its other functions. For example, it maintains officer training colleges and education services for each of its Defence Services, a School of Pacific Administration for training administrators for Papua-New Guinea and a School of Forestry. In each of the Australian Territories there is an education programme which provides for both the native and white children who live there. References to education in the Territories appear in Chapter VII.—The Territories of Australia.

The Commonwealth Office of Education, established in 1945, acts as the Commonwealth's educational adviser, undertakes research work as Commonwealth activities require, and is the channel for liaison between Commonwealth and State educational authorities. This Office has responsibilities with regard to the education of migrants, the education of natives in the Northern Territory, the provision of scholarships at the tertiary level under the Commonwealth Scholarship Scheme and the Reconstruction Training Scheme, international relations including the association of Australia with the aims and activities of the United Nations Educational, Scientific and Cultural Organization and the provision of scholarships and fellowships for selected students under the Commonwealth Technical Co-operation Scheme, the UNESCO Fellowship Scheme and the South-East Asian Scholarship Scheme.

The Australian Broadcasting Commission features school broadcasts and other educational broadcasts as part of its daily programmes. The Commonwealth Scientific and Industrial Research Organization undertakes research, the results of which are made available to educational institutions. In 1951 the Commonwealth Government introduced a free-milk scheme for school children. This extends a service which some State authorities were already providing for a proportion of the school population. Under the Commonwealth Reconstruction Training Scheme many ex-servicemen and women have received the training which has enabled them to enter many different trades and professions.

The Commonwealth also assists a number of other bodies concerned with education. Besides grants to organizations such as the Australian Council for Educational Research and the National Fitness Council, Australian Universities have received grants for specific purposes through the Universities Commission.

### § 7. Australia and International Relations in Education.

Despite its isolation, Australia has always been responsive to educational developments in oversea countries, particularly those in the United Kingdom, but it is only recently that it has begun to make any considerable impact on educational thought overseas.

In this connexion there have been important developments since the 1939–45 War. For instance there has been a remarkable increase in the volume of information on educational matters exchanged between Australia and South-East Asia, and Australia has participated in the Commonwealth Technical Co-operation Scheme and the United Nations Technical Assistance programme.

Perhaps the most important single factor behind the quickening of Australian interest in international cultural affairs has been membership of the United Nations Educational, Scientific, and Cultural Organization. Australia has been a member since 1946. Some eleven expert Committees in Australia are responsible for a wide and varied programme of activities on behalf of UNESCO. Their advice has helped to make Australia's contribution to UNESCO International Conferences and Seminars highly effective. Other work undertaken by these Committees has included the supervision of studies relating to community attitudes towards international affairs, and to the assimilation of migrants, the conducting of seminars in Australia, arranging for exhibitions and displays in Australia, and the publication of handbooks and brochures to assist teachers and other persons in meeting the problems involved in educating for international understanding.

The Australian National Advisory Committee for UNESCO, on which all the other Committees are represented, advises the Commonwealth Government and co-ordinates the work of the specialist Committees.

## § 8. Universities.

1. **General.**—The last quarter of a century has seen a marked increase in the number of students and staff, the establishment of two new Universities and three new University Colleges, and the provision in the older Universities of additional courses. In spite of difficulties due, in some measure, to the economic depression of the 1930's and a World War, the period since 1929 has been one of significant development.

2. **University Expansion.**—(i) *The Establishment of New Universities.* The two new Universities represent new departures in the Australian University tradition.

(a) *The Australian National University.* By the Australian National University Act 1946, provision was made for the establishment of a University in the Australian Capital Territory. The University is required by the Act to provide facilities for post-graduate research including:—The School of Medical Research to be known as "The John Curtin School of Medical Research"; The Research School of Physical Sciences; The Research School of Social Sciences; and The Research School of Pacific Studies.

The Act also provides for the incorporation of the Canberra University College. In the first instance the Council has decided to concentrate on the establishment of the four Research Schools mentioned in the Act.

The government of the University is vested in a Council consisting of two representatives each of the Senate and the House of Representatives, up to eight nominated by the Governor-General, up to nine elected by Convocation, two elected by the students, and three elected by the academic staff; up to three members may be co-opted and the Vice-Chancellor is an *ex officio* member.

The senior academic body in the University is the Board of Graduate Studies of which all professors are members. The Board deals with questions affecting education, learning and research in the University.

The Act provides for a statutory grant of £325,000 per annum and in addition a supplementary grant is made to meet the running costs. A separate vote is made for capital works.

An area of 204 acres at Acton has been vested in the University. University House, a residential College for single members of the staff and the student body, is to be opened in February, 1954. University House will also act as the social centre for the whole University community.

The laboratories for the Research School of Physical Sciences have been completed and the office block is under construction. The John Curtin School of Medical Research (with the exception of the Department of Medical Chemistry which is at present located in the Wellcome Foundation, London) is housed in temporary laboratories on the University site. The workshop wing of the permanent building has been commenced and it is expected that the laboratory wings will be completed within the next two years. The Research Schools of Social Sciences and Pacific Studies and the Library are housed in existing buildings on the site known as the "Old Hospital Buildings".



Sixteen professors and fifty-four other members of the academic staff have been appointed.

Each department of the Research Schools accepts a small number of graduate students. Each student is assigned to a Supervisor and pursues a course of research. Subject to certain conditions, the following degrees may be awarded by the University :— Master of Arts (M.A.); Master of Science (M.Sc.); Doctor of Philosophy (Ph.D.); Doctor of Letters (Litt.D.); Doctor of Science (D.Sc.); Doctor of Laws (LL.D.). The Right Honourable Viscount Bruce of Melbourne is Chancellor of the University and Mr. L. G. Melville was recently appointed Vice-Chancellor. Mr. R. A. Hohnen is the Registrar.

Each of the Research Schools will eventually be headed by a Director. Professor M. L. Oliphant, F.R.S., is Director of the Research School of Physical Sciences. But until further appointments can be made the following Deans have been appointed to act : Professor A. H. Ennor, Dean of the School of Medical Research; Professor S. F. Nadel, Dean of the School of Pacific Studies, and Professor G. Sawyer, Dean of the Research School of Social Sciences. In 1953 forty students were enrolled in the University (including eighteen new enrolments).

Further information concerning this University appeared in Official Year Book No. 39, pp. 226-7.

(b) *New South Wales University of Technology.* The other University to be established within the period under review was the New South Wales University of Technology, which came into being by Act of the New South Wales Parliament in 1947. This foundation was a new departure not only for Australia but also for the whole British Commonwealth. It attempted to do for Australia the task that has been carried out by institutions such as the well-known Eidgenossische Technische Hochschule in Zurich or the Massachusetts Institute of Technology in the United States. The official handbook of the new University explained its particular function as follows :—

“ In a traditional university the scientist is concerned with the original contributions to principles and conceptions in essentials and pure research ; in the technical university the technologist is concerned with the utilization of scientific knowledge and experience for the solution of immediate problems.”

Three degrees were established, viz., Applied Science (B.Sc.), Engineering (B.E.) and Architecture (B.Arch.) and by 1952 Chairs had been set up in Applied Chemistry, Applied Physics, Chemical Engineering, Electrical Engineering, Mechanical Engineering, Metallurgy, Mining and Applied Geology, Mathematics, Wool Technology, Architecture and Humanities.

Two features are emphasized in the planning of University of Technology undergraduate courses. The first is the incorporation in the syllabus of industrial experience to supplement the laboratory and lecture-room work at the University. In the Faculty of Engineering, for example, this practical work amounts to five months a year and is supervised and organized to suit the stage and syllabus of each course of study. The second is the compulsory study, in all faculties, of general subjects such as language and literature, history, economics and psychology. These courses are designed to broaden the experience and interests of the student.

The University is making use of the buildings and equipment of the Sydney Technical College until its own buildings have been completed in another part of Sydney. Administratively it is at present under the control of the New South Wales Minister for Education and the Public Service Board, although the Act provides that administration shall eventually pass to a Council.

Towards the end of 1951 a branch College of the New South Wales University of Technology was established in Newcastle.

(ii) *University Colleges.* Particulars are given in Official Year Book No. 39, pp. 227-8, concerning the Canberra University College, which was created in 1930 mainly to establish courses of lectures for degrees in co-operation with the University of Melbourne, and the New England University College, which was established in 1937 and is governed by the University of Sydney.

(iii) *Expansion within the Universities.* An important administrative development which occurred in all Universities during the period under review was the appointment of full-time salaried Vice-Chancellors or Principals, a move which gave much greater effectiveness to University administration.

Within the past twenty years the appearance of some of the Universities has altered to a striking extent. New permanent buildings and some temporary ones have been erected and new wings have been added. An impressive expansion has been that taking place in Queensland where, since 1937, building has been proceeding upon a new site at St. Lucia, and, beginning with the transfer of some of the Engineering School in 1947, the University is being gradually moved into its new quarters. The University of Technology is also preparing to move to its new site.

This very considerable building activity has been made necessary primarily by the vast expansion in student numbers that has taken place since 1929. In that year, in all Australian universities, there were some 9,000 students; by 1952 the number had risen to 29,641. This more than twofold increase had the following characteristics:—

- (a) There was a continued increase in University enrolments up to 1940, followed by only a slight recession during the war period. The lowest point reached, in 1942, was still above the 1935 level. In the closing year of the war enrolments had already risen beyond any previous figures, and in the following year (1946) the rapid post-war expansion became strikingly apparent with an increase of 64 per cent. over the 1945 figures. The peak of enrolments was reached in 1948, and thereafter a slow decline has set in, which, it is anticipated, will be checked by the mid-1950's. From that point on, numbers will probably again increase until 1960, by which time it is estimated that some 40,000 may be enrolled in Australian universities.
- (b) Enrolments in every one of the largest eight faculties declined during the war period, and then took a sharp upward trend towards the close of the war, maintaining this increase until 1948, when a slow decline commenced. By 1952 enrolments had fallen by 20 per cent.
- (c) During the war and post-war period, the size of most of the major faculties relative to one another remained approximately the same.

3. *Courses.*—The post-war period has seen a noticeable expansion in the ranges of courses offered, particularly in the younger and smaller Universities. New faculties of Education were established in Western Australia and Queensland. Two new faculties of Dentistry, two of Commerce (Economics), three of Architecture and one each of Medicine, Law, Veterinary Science, Applied Science, and Engineering also came into being.

Within existing faculties, many new departments were set up. In Engineering, specialist departments of Chemical and Aeronautical Engineering, Civil, Electrical, Mechanical, Mining and Metallurgical Engineering and Surveying have been instituted.

In Medicine the most notable development has been the establishment of specialist courses leading to graduate diplomas in Radiology, Anaesthesia, Clinical Pathology, Ophthalmology, Laryngology, Gynaecology, Tropical Medicine, Dermatology and Psychological Medicine at Melbourne and Sydney.

In Science the smaller Universities followed the development of Melbourne and Sydney by breaking up departments such as Biology into Zoology and Botany, etc., and adding new departments such as Bacteriology and Biochemistry. Melbourne and Sydney also introduced some new courses and a new degree in Forestry was introduced in each University.

In Arts the same processes can be observed. New departments in Semitic Studies, Fine Arts, Music and Statistics were opened in various universities, and other departments were divided or sub-divided. The most prominent addition was the rapid development of Psychology departments which, in the post-war period, expanded into one of the biggest of the Arts departments.

In the smaller faculties, similar innovations and expansions, reflecting an increasing demand for specialized study, have taken place. Examples are the development of departments of Physical Education, Social Studies, Town and Country Planning and Criminology.

In addition, however, there were several attempts to provide integrated general education courses within the faculties of Arts and Science.

4. **Research.**—A notable feature of student enrolments in recent years has been the steady increase in the number of higher degree students. It has long been a strong criticism of Australian universities that little provision was made in them for graduate students. Those students who wished to continue beyond their first degree would pursue work for a Master's degree or, more rarely, for a doctorate in tenuous contact with the University staff or would go abroad financed by private means or occasionally by scholarships. Exceptions to this practice were in some science departments which in the 'thirties organized regular fourth year work for a handful of promising graduates.

During the period under review five important factors came into operation which mark the increasing attention paid by universities to research and the training of graduate students.

The first resulted from the Commonwealth Government grant begun in 1936 for the prosecution of research and the training of research workers in Universities on projects that were connected with the Council for Scientific and Industrial Research. The later extension of this grant in 1941 to the Social Sciences gave that field also a welcome stimulus. A great impetus towards research came, secondly, from the work University staffs were called upon to do in the 1939-45 War. This was not confined to the more spectacular services rendered by research workers in Science, Technology and Medicine, but affected also in no small measure the Social Sciences and the Humanities where research into linguistics, teaching methods, psychological testing and social and anthropological problems was pursued at an increased rate. This activity was, in some cases, channelled through newly formed Research Departments. Some of these, such as the Waite Agricultural Research Institute in South Australia, existed before the War, but for the most part they were a development of the post-war period. Notable examples of these pure research schools are the Departments of Experimental Medicine, established in 1944, and Metallurgical Research (1946) in Melbourne. The same trend is shown on a larger scale by the establishment in 1946 of the Australian National University designed specifically for the encouragement of research and the training of graduate students in research. The fourth factor demonstrating an increasing emphasis upon graduate work was the institution in the post-war period of the Ph.D. degree, requiring two years of full-time graduate research. This degree was established in Melbourne (1945), Tasmania (1947), Sydney (1948), Queensland (1949), the New South Wales University of Technology (1949), Adelaide (1950), Western Australia (1950) and the Australian National University (1950). The fifth stimulus to advanced work was the development of four-year honours courses for the degrees of B.A. and B.Sc. Sydney had done this in Science in 1924, and in Arts in 1938, and most of the other universities followed in the post-war period. Almost without exception the additional year's work planned for these honours students includes an examination of the state of current research in the subject and some experience in the use of research techniques.

With the advancing interest in research, the nature of the research work has tended to change. Individual short-term projects undertaken by members of staff because of a special interest and often written up by them in short journal articles still constitute the bulk of the research done. But there appears to be an increasing trend towards long-term and also towards collaborative research.

Greater emphasis upon applied or service research has also become apparent. The problems on which University researchers have recently been working have tended to be those which have arisen from the practical application of their studies to the needs of the community. Attention has also been given more and more to matters characteristically Australian.

5. **Services.**—(i) *General.* The traditional division of the function of Universities into teaching and research seems no longer applicable. A third function has been added

in recent times, that of community service. The University has long been responsible for providing an important service to the community in the form of professional training in many fields and in a number of other intangible ways, but of recent years there has been a noticeable increase in the performance by university departments of direct and deliberate services to the community. This was most apparent in time of war when the Universities whole-heartedly accepted the role given them by the Minister for War Organization of Industry when he said in 1942 to a meeting of the Vice-Chancellors, "the Government requires of the Universities specific services, falling under two heads: (i) investigations and research into particular problems relating to the war effort; (ii) the training of personnel with special qualifications for the armed services, war production and other essential needs". The trend, however, was noticeable before the 1939-45 War and is still continuing. These services, which are of three main kinds, are dealt with hereunder.

(i) *Service Research.* This is a form of applied research in which a University department applies itself to the solution of a problem of immediate practical importance to the community. The development of producer-gas units for use on motor vehicles during the 1939-45 War, research on poliomyelitis, tropical food plants, bovine mastitis, and mosquito control are examples of work of this type recently undertaken in various University departments.

(ii) *Applied Research.* Closely associated with the kind of research just mentioned are the projects which are requested of the University by outside bodies and are usually in the field of applied research. Services of this kind are most frequently rendered by the engineering faculty. Testing work for government departments and private industry is carried out in almost every engineering department. In Melbourne, since 1934, 400 reports on problems associated with ores and concentrates submitted from all over Australia have been issued by the Department of Mining. Research on servomechanisms for the Department of Supply, aerals for the R.A.A.F., the stability of power systems for the Electrical Research Board and studies on the site, materials and design for the Warragamba Dam are some of other tasks that have been undertaken. Services of this kind, however, are by no means confined to the technological field. They have been rendered by almost all University departments and not least by workers in the Social Sciences who have been called upon to investigate matters such as colour-vision tests for the Civil Aviation Department, the teaching of English to foreign-born immigrants and anthropological problems encountered in the administration of New Guinea.

(iii) *Advisory Services.* Consultant and advisory services have come to occupy much of the time of the staff of many departments. There has been a long tradition of service in this field by members of the Departments of Agriculture and Medicine, and almost equally prominent have been the economists whose services were sought by governments and businesses in the depression period of the 1930's. The 1939-45 War saw an increase in demand for expert advice from University faculties and the seconding of personnel to government departments in considerable numbers. In the post-war period much of this demand has continued. Problems of land utilization have called for advice from agriculturalists, geographers and economists. Personnel and training problems in industry have required the services of psychologists and educationists. School broadcasts have been scripted by scientists, and lecturers in English history, modern languages and political science. University physicists, chemists and medical staff have played an important role in recent defence programmes. Developmental schemes have looked for advice to engineers, geologists and architects.

6. *The Commonwealth and the Universities.*—(i) *General.* Commonwealth financial support for university activities may be regarded as developing in three phases. Firstly, in the period up to 1939, Commonwealth interest in research projects carried out by or in collaboration with the Universities led to the granting of increasing sums for this purpose. Secondly, during and after the 1939-45 War the Commonwealth extended assistance to University students, at first with the object of increasing the number of highly qualified

people available for the war effort, then with the object of rehabilitating ex-servicemen, and finally as a social service of benefit to the community. Thirdly, in 1951, the Commonwealth initiated a policy of making special grants to the States for university purposes.

(ii) *Grants for Research.* The Commonwealth had given some support to research prior to 1926, chiefly through the Institute of Science and Industry, but the amount spent did not exceed £25,000 per annum. The provision of substantial Commonwealth contributions may be said to date from 1926. In that year the Institute was replaced by the Council for Scientific and Industrial Research (known since 1949 as the Commonwealth Scientific and Industrial Research Organization) with an annual appropriation of £250,000. It has ever since worked in close association with the Universities. Both kinds of research, fundamental and applied, have at times occupied the attention of both the Universities and the Commonwealth Scientific and Industrial Research Organization. In general, however, the preliminary training of graduates in research work has been left to the Universities.

In 1936 the Commonwealth Government decided to make a grant of £30,000 per annum for five years to Australian Universities for research in physical and biological sciences. In 1941 this grant was increased to £31,000 per annum for the next five years, and an additional £9,000 per annum was made available for research in Social Sciences. In 1946 the grants were £40,000 and £12,000 respectively. In 1947 the two grants were fused, an amount of £82,000 being provided—£52,000 for training of research workers and £30,000 for specific research projects. The allocations for each of the years 1948 and 1949 were £100,000 and for 1950 £110,000, the additional £10,000 being provided for the New South Wales University of Technology.

In 1951 the grant for research in the physical, biological and social sciences was absorbed in the larger general grant which was then made available by the Commonwealth to the States for Universities.

The research grants mentioned above, together with other Commonwealth payments for research purposes, totalled more than £3½ million in 1950-51, compared with less than £500,000 in 1939-40.

(iii) *Assistance to Students.* (a) *General.* There have been three stages in the provision by the Commonwealth Government of financial assistance to students (other than Commonwealth Reconstruction Training Scheme trainees) attending Universities and other institutions of similar standing.

(b) *Reservation during the 1939-45 War.* To ensure that the flow of trained professional personnel from Universities would be sufficient to meet the needs of the country during the war and post-war periods, the Commonwealth Government in 1942 set up the Universities Commission. This Commission, in co-operation with the Directorate of Manpower, administered a scheme of reservation of University students from the beginning of 1943. All these reserved students were eligible for supplementary assistance, subject to a means test, the maximum living allowance payable being £104 per annum for a student living with his parents, and £143 for a student living away from home.

(c) *The Interim Commonwealth Financial Assistance Scheme.* Financial assistance to students was continued under this Scheme for five years from the end of hostilities. The number of students assisted was fixed on the basis of the number of reserved students in 1945, and a minimum standard was prescribed below which a student would not be eligible for selection. The living allowance was increased by 5s. per week, from 1st July, 1947, and again from 1st January, 1949 to £130 per annum (£169 for a student living away from home). The maximum allowance was then reducible by £4 for every £10 by which the adjusted family income exceeded £150.

(d) *Commonwealth Scholarship Scheme.* This Scheme, which operated from 1st January, 1951, was based on a plan drawn up by the Universities Commission during the period of operation of the Interim Scheme. Under the new Scheme 3,000 scholarships are made available each year to boys and girls who have completed normal secondary courses. The scholarships are allocated to States on a population basis, two per cent. of them being reserved for students over the age of 25 years. The courses available

under the Scholarship Scheme include all first degree courses and certain under-graduate diploma courses at Universities; technical college and school of mines diploma courses at approved standards; and certain other professional courses.

The awards are made entirely on merit and no regard is had to the income of the students or their parents. All scholarship holders have their fees paid. In addition, subject to a means test, they are eligible for a living allowance. The maximum allowance is £169 per annum (£240 10s. for a student living away from home). A mature age scholar who is married may receive, in addition to this personal allowance, £1 11s. per week in respect of his wife, and 9s. per week in respect of the first dependent child under 16 years of age.

In 1951, 10,068 students applied for Commonwealth Scholarships, 7,142 being accepted. This number included 3,610 who had commenced courses before the Scheme came into operation, and 973 who continued from the Interim Scheme.

(e) *Commonwealth Reconstruction Training Scheme.* In addition to the above Schemes for assistance to civilian students, eligible ex-service personnel received training at Universities and similar institutions at Commonwealth expense under the Reconstruction Training Scheme. A general description of the Scheme is to be found on page 240 of Official Year Book No. 39.

A total of 53,466 ex-members of the Services applied to the Universities Commission for assistance under the Scheme, and 24,992 full-time and 19,237 part-time students have been selected for training. By the end of 1951 more than 18,000 of these had successfully completed their courses and only 4,662 remained in training.

In connexion with this Scheme the Commonwealth Government, in agreement with the States, made available to the training institutions concerned finance to the extent of approximately £1 million for buildings and £500,000 for equipment, and also paid all tuition fees and subsidies designed to meet the cost to the Universities of the Reconstruction Trainees.

(iv) *Direct Grants for General Purposes.* The Commonwealth Government in 1950, with the consent of the States, appointed a committee of inquiry with the following terms of reference:—“(1) To examine and report upon the finances of the Universities having regard to their facilities for teaching and research including staff, buildings and equipment; (2) To examine and report upon the requirements of Universities in relation to the work at present undertaken and to the need for their future development; and (3) To make recommendations as to whether any, and, if so, what, action should be taken.” Following a report submitted by that committee and with the agreement of the States, the States Grants (Universities) Act, No. 81 of 1951, was passed by the Commonwealth Parliament, enabling grants to be made to the States for their Universities.

The following grants were payable to the States for University purposes and for current expenditure only: (a) A special grant covering the six months' period ending 31st December, 1950 (payable to all States participating in the scheme); (b) A basic grant in each of the years 1951, 1952 and 1953 payable on condition that, for the University concerned, the total of State grants and fees received by the University in the year in question was at least equal to a stipulated “qualifying amount”; (c) An additional grant up to a stated maximum in each of the years 1951, 1952 and 1953 payable at the rate of £1 for every £3 by which, for the University concerned, the total of State grants and fees received by the University in that year exceeded the “qualifying amount”.

In each of the years 1951, 1952 and 1953 a further grant was also payable to the States to be applied towards the teaching and administrative costs of residential colleges, provided that the University concerned qualified for the basic grant referred to in (b) above. The following table indicates the size of the various Commonwealth grants for which the Universities could qualify.

## COMMONWEALTH GRANTS TO THE STATES FOR UNIVERSITY PURPOSES, 1951 TO 1953.

(£.)

University or College.	Special Grant for Six Months ended 31st December, 1950.	Basic Grant for each of the years 1951, 1952 and 1953.	"Qualifying Amount" of State Grants and Fees Necessary to Qualify for Basic Grant.	Second Level Grant for each of the years 1951, 1952 and 1953.	Annual Grant for Residential Colleges (Included in Basic Grant).
New South Wales—					
University of Sydney ..	117,920	270,023	783,369	101,070	8,900
N.S.W. University of Technology ..	7,280	16,373	86,521	6,240	274
New England University College ..	5,810	13,099	64,164	4,980	220
Victoria—					
University of Melbourne	96,250	220,414	655,159	82,500	7,265
Queensland—					
University of Queensland	40,700	93,226	309,269	34,890	3,073
South Australia—					
University of Adelaide ..	41,020	93,893	272,394	35,160	3,095
Western Australia—					
University of Western Australia ..	27,650	62,845	183,531	23,700	1,668
Tasmania—					
University of Tasmania ..	14,870	33,127	106,319	11,460	505
<b>Total .. ..</b>	<b>351,500</b>	<b>803,000</b>	<b>2,460,726</b>	<b>300,000</b>	<b>25,000</b>

NOTE.—Further details of Commonwealth grants will be found in the Appendix.

7. Teaching and Research Staff.—The following table shows the number of professors, readers, associate and assistant professors, lecturers in charge, lecturers including senior lecturers and assistant lecturers (full-time and part-time), demonstrators (full-time) and tutors (full-time and part-time), and honorary lecturers and demonstrators, on the teaching and research staffs of the Universities and University Colleges during the years 1950 to 1952. :—

## UNIVERSITIES : TEACHING AND RESEARCH STAFF, 1952.

University or College.	Professors.	Readers, Associate Professors, Assistant Professors, Lecturers in Charge.	Lecturers.(a)		Demonstrators and Tutors.		Honorary Lecturers and Demonstrators.	Total.
			Full-time.	Part-time.	Full-time.	Part-time.(b)		
Sydney .. ..	52	15	286	252	99	111	56	871
Melbourne .. ..	43	29	210	133	85	76	5	581
Queensland (Brisbane) ..	29	19	145	139	31	19	(c) 21	403
Adelaide .. ..	27	27	95	68	9	45	..	271
Western Australia (Perth)	16	12	65	35	12	..	..	140
Tasmania (Hobart) .. ..	15	4	44	11	8	..	..	82
N.S.W. University of Technology (Sydney) ..	10	5	204	311	10	..	..	540
New England University College (Armidale, N.S.W.) .. ..	..	16	27	5	2	..	15	65
Canberra University College .. ..	5	..	18	18	..	4	..	45
<b>Total 1952 .. ..</b>	<b>197</b>	<b>127</b>	<b>1,094</b>	<b>972</b>	<b>256</b>	<b>255</b>	<b>97</b>	<b>2,998</b>
1951 .. ..	188	108	1,015	1,219	233	232	87	3,082
1950 .. ..	184	99	780	869	233	148	75	2,388

(a) Includes Senior Lecturers and Assistant Lecturers.

(b) Excludes Part-time Demonstrators.

(c) Department of External Studies.

The Conservatorium of Music in Sydney is attached to the Education Department, but in Melbourne and in Adelaide the Conservatorium of Music is under the control of the University.

8. Students.—(i) *Total.* The number of students, including Commonwealth Reconstruction Training Scheme students, enrolled for courses at the Universities and University Colleges during the years 1950 to 1952 is shown in the following table:—

**UNIVERSITIES : TOTAL STUDENTS ENROLLED, 1952.**

University or College.	Degree Courses.	Diploma Courses.		Certificate Courses.	Miscellaneous Subjects.	Total.(a)
		Post-Graduate.	Sub-Graduate.			
Sydney .. .. .	6,361	115	771	..	182	7,380
Melbourne (b) .. .. .	6,412	28	278	138	464	7,320
Queensland (Brisbane) .. .. .	2,960	39	329	271	254	3,850
Adelaide .. .. .	2,303	89	868	..	918	4,178
Western Australia (Perth) .. .. .	1,586	25	..	..	73	1,684
Tasmania (Hobart) .. .. .	447	33	..	24	66	564
N.S.W. University of Technology (Sydney) .. .. .	561	..	3,240	78	295	4,170
New England University College (Armidale, N.S.W.) .. .. .	185	21	1	..	4	211
Canberra University College .. .. .	190	..	12	..	82	284
Total 1952 .. .. .	21,005	350	5,499	511	2,338	29,641
1951 .. .. .	22,341	309	5,768	546	2,778	31,671
1950 .. .. .	24,224	394	2,629	614	2,882	30,630

(a) Adjustment made for students enrolled for more than one course. (b) Includes 10 students enrolled but attending Canberra University College.

Of the total students in 1952, 23,798 were males and 5,843 females. Included in those enrolled for degrees were 96 enrolled for higher degree courses in Sydney, 201 in Melbourne, 57 in Queensland, 156 in Adelaide, 52 in Western Australia, 17 in Tasmania, 89 at the New South Wales University of Technology, and 13 at the Canberra University College.

(ii) *Commonwealth Reconstruction Training Scheme Students.* The number of Commonwealth Reconstruction Training Scheme students enrolled for courses at the Universities and University Colleges during 1950 to 1952 is shown in the following table:—

**UNIVERSITIES : COMMONWEALTH RECONSTRUCTION TRAINING SCHEME STUDENTS ENROLLED, 1952.**

University or College.	Degree Courses.	Diploma Courses.		Certificate Courses.	Miscellaneous Subjects.	Total.(a)
		Post-Graduate.	Sub-Graduate.			
Sydney .. .. .	535	15	17	..	5	572
Melbourne (b) .. .. .	663	6	19	20	15	723
Queensland (Brisbane) .. .. .	244	..	40	47	7	338
Adelaide .. .. .	186	3	72	..	14	275
Western Australia (Perth) .. .. .	128	..	..	..	2	130
Tasmania (Hobart) .. .. .	35	3	..	1	..	39
N.S.W. University of Technology (Sydney) .. .. .	9	..	160	2	21	192
New England University College (Armidale, N.S.W.) .. .. .	..	..	..	..	..	..
Canberra University College .. .. .	42	..	2	..	3	47
Total 1952 .. .. .	1,842	27	310	70	67	2,316
1951 .. .. .	3,691	71	588	161	152	4,662
1950 .. .. .	5,941	129	643	265	259	7,236

(a) Adjustment made for students enrolled for more than one course. (b) Includes 2 students enrolled but attending Canberra University College.



Of the total Commonwealth Reconstruction Training Scheme students in 1952, 2,287 were males and 29 females. Included in those enrolled for degrees were ten enrolled for higher degrees in Melbourne, one in Queensland, three in Adelaide, four in Western Australia and one at the Canberra University College.

(iii) *New Students Enrolled.* The number of new students, including Commonwealth Reconstruction Training Scheme students, enrolled for courses at the Universities and University Colleges during the years 1950 to 1952 is shown in the following table:—

**UNIVERSITIES : NEW STUDENTS ENROLLED, 1952.**

University or College.	Degree Courses.	Diploma Courses.		Certificate Courses.	Miscellaneous Subjects.	Total.(a)
		Post-Graduate.	Sub-Graduate.			
Sydney .. .. .	1,939	..	388	..	17	2,326
Melbourne (b) .. .	1,263	5	61	15	175	1,519
Queensland (Brisbane) .. .	613	9	107	57	106	892
Adelaide .. .	441	..	208	..	356	1,005
Western Australia (Perth) .. .	414	1	..	..	5	420
Tasmania (Hobart) .. .	130	2	..	6	23	161
N.S.W. University of Technology (Sydney) .. .	192	..	579	46	153	969
New England University College (Armidale, N.S.W.) .. .	85	..	1	..	..	86
Canberra University College .. .	57	..	2	..	47	106
Total 1952 .. .	5,134	17	1,346	124	882	7,484
1951 .. .	5,127	5	1,344	103	1,061	7,601
1950 .. .	5,228	2	806	81	949	7,034

(a) Adjustment made for students enrolled for more than one course.

(b) Includes 2 students enrolled but attending Canberra University College.

Of the total new students enrolled in 1952, 5,607 were males and 1,877 females. Included in those enrolled for degrees were sixteen enrolled for higher degree courses in Melbourne, nine in Queensland, five in Adelaide, two in Western Australia, three in Tasmania, 59 at the New South Wales University of Technology and seven at the Canberra University College.

(iv) *New Commonwealth Reconstruction Training Scheme Students.* The number of new Commonwealth Reconstruction Training Scheme students enrolled for courses at the Universities and University Colleges during the years 1950 to 1952 is shown in the following table:—

**UNIVERSITIES : NEW COMMONWEALTH RECONSTRUCTION TRAINING SCHEME STUDENTS ENROLLED, 1952.**

University or College.	Degree Courses.	Diploma Courses.		Certificate Courses.	Miscellaneous Subjects.	Total.
		Post-Graduate.	Sub-Graduate.			
Sydney .. .. .	10	..	8	..	..	18
Melbourne .. .	9	..	..	..	3	12
Queensland (Brisbane) .. .	2	..	2	1	..	5
Adelaide .. .	..	..	1	..	..	1
Western Australia (Perth) .. .	5	..	..	..	1	6
Tasmania (Hobart) .. .	2	1	..	1	..	4
N.S.W. University of Technology (Sydney) .. .	2	..	6	1	3	12
New England University College (Armidale, N.S.W.) .. .	..	..	..	..	..	..
Canberra University College .. .	2	..	..	..	1	3
Total 1952 .. .	32	1	17	3	8	61
1951 .. .	129	..	35	9	12	185
1950 .. .	341	..	87	3	43	474

Of the 61 new Commonwealth Reconstruction Training Scheme students 60 were males, including one male enrolled at the Canberra University College for a higher degree.

9. **University Receipts (or Income).**—The receipts (or income) of the Universities and University Colleges are derived principally from State and Commonwealth Government grants, students' fees, and income from private foundations, etc. From all sources other than new bequests the receipts during 1950 and 1951 for general university functions were as shown in the table below. In South Australia, Government grants and income from private foundations include amounts in respect of the Waite Agricultural Research Institute.

UNIVERSITIES : RECEIPTS (OR INCOME), GENERAL ACTIVITIES, 1951.  
(£.)

University or College.	Government Grants.(a)	Students' Fees.	Interest, Rent Dividends and Donations.	Other.	Total.
Sydney .. .. .	698,058	406,692	46,057	22,590	1,173,397
Melbourne .. .. .	832,197	259,663	60,025	44,753	1,196,638
Queensland (Brisbane) .. .. .	435,877	126,726	14,786	19,031	596,420
Adelaide .. .. .	315,758	64,121	48,977	27,119	455,975
Western Australia (Perth) .. .. .	338,751	11,921	2,196	14,932	367,800
Tasmania (Hobart) .. .. .	187,037	13,186	316	3,714	204,253
N.S.W. University of Technology (Sydney) .. .. .	556,580	26,346	..	1,432	584,358
New England University College (Armidale, N.S.W.) .. .. .	124,917	5,331	246	21,178	151,672
Canberra University College .. .. .	49,934	4,877	77	498	55,386
Total 1951 .. .. .	3,539,109	918,863	172,680	155,247	4,785,899
1950 .. .. .	1,967,625	696,546	144,923	135,356	2,944,450

(a) Includes income in respect of previous years.

The figures in the foregoing table do not include the value of new foundations received by the Universities, which, in 1951, were as follows:—Sydney, £52,894; Melbourne, £56,741; Queensland, £7,148; Adelaide, £57,651; Tasmania, £60,751; New South Wales University of Technology, £192,231; and New England University College, £21,488.

10. **Principal University Benefactions.**—In previous issues of the Official Year Book information is given in some detail in regard to the extent to which the Universities have benefited from private munificence. Space will permit of reference herein to the more important benefactions only.

The endowments to the Sydney University include the Challis Fund, £374,680; the G. H. Bosch Fund, £268,929; the P. N. Russell Fund, £100,457; the Oswald Watt Fund, £115,744; and the Fisher Estate, £43,386. In addition, the University receives a large annual revenue from the trustees of the McCaughey bequest. Excluding the principal of the latter, the credit balances of the private foundations amounted to £1,884,240 at 31st December, 1952.

The main benefactors to the Melbourne University for the endowment of trust funds or for the erection of buildings have been: Mr. Sidney Myer, £60,000; The Supreme Court Library Fund, £55,000; late Dr. F. Haley, £51,798; late Miss Helen Mackie, £50,000; Sir Russell Grimwade, £50,000; late Mr. E. E. Truby Williams, £48,137; late Sir Samuel Gillott, £38,569; W. L. Ballieu Trust, £30,322, (income of £20,444 has also been received, the total receipts are expected to be about £100,000); late Sir Samuel Wilson, £30,000; Mr. R. B. Ritchie, £30,000; The Melbourne Herald and Weekly Times Ltd., £30,000; Messrs. N., M. H., and M. L. Ballieu, £30,000; an anonymous donor, £30,000; late Sir John Higgins, £25,910; late Dr. James Stewart, £25,624; late Mr. W. P. Greene, £25,308; late Dr. Georgina Sweet, £22,500; late Mr. C. D. Lloyd, £22,407; late Miss Mary A. M. Lockie, £22,500, (the receipts are expected to reach £75,000); late Hon. Francis Ormond, £20,000; Edward Wilson (the Argus) Trust, £20,000; late Sir Thomas Lyle, £20,000; and Nicholas Pty. Ltd., £20,000.

Queensland University to 30th April, 1953 had received £289,411 from the McCaughey estate and £50,210 from the Walter and Eliza Hall Trust, while the Hon. T. C. Beirne gave £20,000 in 1935 for the endowment of a Chair of Law in Queensland. The permanent site for the University and other land valued at £62,000 were presented by Dr. and Miss Mayne. In 1937 the trustees of Mr. W. Robertson donated £19,400 for the Chair of Agriculture.

The chief benefactors to the Adelaide University have been Sir George Murray, and his sister Miss M. T. Murray, £134,000; Mr. Peter Waite and his daughter, Elizabeth Macmeikan, £120,000; Sir Thomas Elder, £100,000; Sir Langdon Bonython, £72,000; Mrs. R. F. Mortlock and her son, Mr. J. T. Mortlock, £71,600; Dr. F. Lucas Benham, £51,000; Mr. T. E. Barr Smith, £44,000; Mr. Hugh Hughes, £35,000; Mrs. A. M. Simpson and Miss A. F. Keith Sheridan, £31,000; Mrs. Jane Marks, £30,000; The Broken Hill Proprietary Co. Ltd., £30,000; Mr. Edward Neale, £28,000; family of Mr. John Darling, £25,000; Sir William Mitchell, £25,000; Sir Walter Hughes, £20,000; and Mr. R. Barr Smith and family, £20,000.

Under the will of Sir Winthrop Hackett the University of Western Australia received £425,000 for the erection and maintenance of University buildings and for studentships, scholarships, bursaries and other financial help for deserving students. In addition, an endowment of £18,000 was made in 1913 for the Hackett Chair of Agriculture. The late Robert Gledden bequeathed an estate valued at £60,000, particularly to provide travelling scholarships, and numbers of bequests, aggregating about £55,000, have been made to the University, mainly for the establishment of a medical school or research in connexion therewith.

The Tasmanian University in 1951 received a donation of £50,000 from the Electrolytic Zinc Co. of Australasia Ltd. and £10,000 from an anonymous donor towards the cost of erection of a Hall of Residence for students.

11. **University Payments (or Expenditure).**—The principal item of disbursements under the general University activities consists of the maintenance of the teaching and research staff, representing 67.4 per cent. of the total in 1951 compared with 69.4 per cent. in 1950.

The following table shows the payments (or expenditure) excluding capital expenditure on buildings, during the years 1950 and 1951:—

**UNIVERSITIES : PAYMENTS (OR EXPENDITURE), GENERAL ACTIVITIES, 1951.**  
(£.)

University or College.	Adminis- tration.	Maintenance of—			Other.	Total.
		Teaching Depart- ments.	Premises.	Libraries.		
Sydney .. .. .	120,921	753,662	133,654	35,613	65,397	1,109,247
Melbourne .. .. .	80,495	705,291	117,229	40,695	171,349	1,115,059
Queensland (Brisbane) .. .. .	33,626	402,038	57,889	19,056	76,647	589,256
Adelaide .. .. .	27,634	328,582	53,821	22,457	49,202	481,696
Western Australia (Perth) .. .. .	26,018	198,671	45,777	14,068	34,329	318,863
Tasmania (Hobart) .. .. .	18,941	120,040	9,221	14,900	15,340	178,442
N.S.W. University of Tech- nology (Sydney) .. .. .	49,717	474,838	38,248	12,707	8,848	584,358
New England University College (Armidale, N.S.W.) .. .. .	15,962	59,188	18,950	5,513	38,814	138,427
Canberra University College .. .. .	10,329	36,531	1,567	4,776	212	53,415
Total 1951 .. .. .	383,643	3,078,841	476,356	169,785	460,138	4,568,763
1950 .. .. .	248,823	2,105,904	327,037	114,837	236,820	3,033,421

12. **Extra-University Activities.**—(i) *General.* The tables shown in paragraphs 9 and 11 relate to the general University activities while those following show the financial position of all extra-University activities. The heterogeneous character of the items in

the statements for these activities varies to such extent between the Universities and University Colleges that comparisons of the totals are misleading, but they include all items excluded from the general statement and give useful information within limits.

(ii) *Receipts (or Income), Extra-University Activities.* The following table shows the main receipts (or income) for the years 1950 and 1951 :—

**UNIVERSITIES : RECEIPTS (OR INCOME), EXTRA ACTIVITIES, 1951.**

(£.)

University or College.	Government Grants.	Interest, Rent, and Dividends.	Candidates' Fees, Public Examinations.	Special Research Grants.	Other.	Total.
Sydney .. .. .	20,900	180,843	4,501	23,012	49,140	278,396
Melbourne .. .. .	1,400	72,005	43,849	97,369	112,852	327,475
Queensland (Brisbane) .. .. .	3,300	11,681	18,885	14,401	30,404	78,731
Adelaide .. .. .	7,048	10,821	11,836	22,628	8,822	61,155
Western Australia (Perth) .. .. .	1,850	38,268	17,346	9,992	(b) 57,949	125,405
Tasmania (Hobart) .. .. .	2,000	1,306	2,164	14,731	(c) 16,470	36,671
N.S.W. University of Technology (Sydney) .. .. .	..	..	..	6,150	(d) 16,100	22,250
New England University College (Armidale, N.S.W.) .. .. .	..	1,176	..	730	..	1,906
Canberra University College .. .. .	..	208	..	..	1,964	2,172
Total 1951 .. .. .	36,498	316,308	98,581	189,013	293,761	934,161
1950 .. .. .	35,841	299,076	84,682	209,670	183,259	812,528

(a) Includes receipts, Superannuation Fund, £34,936, University Press, £45,713 and £26,770 students' fees collected on behalf of allied Institutions. (b) Includes University Press, £26,724. (c) Includes Superannuation Fund, £16,369. (d) Includes £10,000 donation by Electricity Meter and Allied Industries Ltd. and £6,000 grant by Joint Coal Board.

(iii) *Payments (or Expenditure), Extra-University Activities.* The following table shows the main items of payments (or expenditure) for the years 1950 and 1951 :—

**UNIVERSITIES : PAYMENTS (OR EXPENDITURE), EXTRA ACTIVITIES, 1951.**

(£.)

University or College.	Salaries, Fees, etc.	Public Examination Expenses.	Adult Education and Extension.	Special Research Expenses.	Other.	Total.
Sydney .. .. .	35,037	..	12,085	104,390	18,273	169,785
Melbourne .. .. .	9,161	46,386	1,902	121,382	111,995	290,826
Queensland (Brisbane) .. .. .	..	32,864	3,277	30,859	(b) 33,289	100,289
Adelaide .. .. .	5,825	12,421	4,124	28,788	15,963	67,121
Western Australia (Perth) .. .. .	..	18,706	32,518	10,621	(c) 49,855	111,700
Tasmania (Hobart) .. .. .	..	2,300	..	18,876	16,039	37,215
N.S.W. University of Technology (Sydney) .. .. .	..	..	..	1,964	394	2,358
New England University College (Armidale, N.S.W.) .. .. .	..	..	..	730	(d) 135	865
Canberra University College .. .. .	..	..	..	..	(e) 3,499	3,499
Total 1951 .. .. .	50,023	112,677	53,906	317,610	249,442	783,658
1950 .. .. .	45,298	87,465	37,372	312,420	230,626	713,181

(a) Includes University Press, £43,282, Superannuation Fund, £29,188. (b) Includes University Press, £20,536. (c) Includes Scholarships, £25,204, and University Press, £24,277. (d) Scholarships. (e) Superannuation Fund, £1,964, Scholarships, £1,535.

13. Degrees Conferred, etc.—The following table shows the number of degrees conferred and diplomas and certificates granted for males and females separately, at each University during the year 1951 :—

UNIVERSITIES : DEGREES CONFERRED, AND DIPLOMAS AND CERTIFICATES GRANTED, 1951.

Particulars.	Sydney.		Mel-bourne.		Queens-land.		Ade-laide.		Western Australia.		Tas-manian.		Total.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Degrees—														
Arts .. .. .	245	158	205	131	56	38	51	29	58	31	17	18	632	405
Law .. .. .	175	3	76	4	14	..	24	..	5	..	10	..	304	7
Commerce or Economics ..	104	5	151	9	41	3	19	..	..	..	19	1	334	18
Education .. .. .	1	..	24	2	2	..	..	..	3	..	..	..	30	2
Science .. .. .	240	56	154	38	85	9	101	19	70	19	33	3	683	144
Medicine .. .. .	405	54	168	18	76	8	72	9	..	..	..	..	721	89
Engineering .. .. .	199	..	114	..	59	..	68	..	37	..	16	..	493	..
Agriculture .. .. .	43	3	25	1	8	..	..	..	26	2	..	..	122	6
Veterinary Science .. .. .	17	1	..	..	11	..	..	..	..	..	..	..	28	1
Dentistry .. .. .	187	7	57	1	57	4	29	..	7	1	..	..	337	13
Music .. .. .	..	..	9	19	..	..	..	..	..	..	..	..	9	19
Architecture .. .. .	49	6	39	3	..	..	..	..	..	..	..	..	88	9
Divinity .. .. .	4	..	..	..	..	..	..	..	..	..	..	..	4	..
Total .. .. .	1,669	293	1,022	226	409	62	384	57	206	53	95	22	3,785	713
Diplomas (Post-Graduate)—														
Arts .. .. .	118	59	48	12	5	2	15	5	11	5	13	4	210	87
Science .. .. .	..	..	..	1	..	..	..	..	..	..	..	..	..	1
Medicine .. .. .	34	3	12	..	..	..	..	..	..	..	..	..	46	3
Total .. .. .	152	62	60	13	5	2	15	5	11	5	13	4	256	91
Diplomas (Sub-Graduate) ..	22	24	53	20	64	33	112	53	..	..	2	5	253	135
Certificates .. .. .	..	..	..	..	65	7	1	..	..	..	..	..	66	7

### § 9. Further Education.

1. *General.*—Beyond the schools, colleges and universities there are agencies engaged in less direct educational work which cannot be readily assessed and described. Among them are the mass media of communications (press, film and radio) which are powerful educational forces—whether they are used specifically to disseminate information such as new agricultural techniques or preventive health measures, or on the other hand in a much more general way exert a powerful influence on the cultural level of the population. There are also bodies such as Adult Education Authorities, Libraries, Art Galleries and Museums which aim at catering for the educational requirements of particular groups.

2. *Adult Education.*—(i) *New South Wales.* University Department of Tutorial Classes. In 1914 the University Senate established a Department of Tutorial Classes to provide classes and study groups along the lines of similar work in England. The Department is supervised by a Joint Committee of the Senate, on which representation is provided for the Workers' Educational Association, and the Secretary of which is the Director of Tutorial Classes.

The Department has, in addition to the Director, a full-time academic staff of nine, and administrative and typing staff. It has establishments at Newcastle and Armidale as well as Sydney. Its work consists of the following :—

(a) *Tutorial Classes.* Each year the Department conducts tutorial classes in a variety of subjects, grouped under the broad headings of Social, Political and Economic Studies; History and International Affairs; Psychology; Philosophy; Literature and Drama; Foreign Languages; Child Study; Music and Art. Most of the classes in these subjects are organized by the Workers' Educational Association, and the Department supplies tutors from its full-time and part-time staff. In New England, however, the Department organizes its own classes. Courses range from 9 to 28 lectures, and some go on from first to second and sometimes fourth year. In 1952 the Department conducted 129 classes with a total enrolment of 3,581.

- (b) *Discussion Groups*. Since 1938 the Department has conducted a Discussion Group scheme, designed to provide country people in particular with opportunities for group study of the same type of subjects as are studied in its tutorial classes. Groups of five or more people are formed to discuss written lectures with the help of a corresponding tutor. In 1952, 120 groups were operating, taking in all 181 courses. Total enrolments were 1,950. This compares with nine groups and 114 enrolments in this scheme's first year of operation, 1938.
- (c) "*Kits*". In 1946, the Department embarked on a new venture for groups of people who were interested in activities such as play reading and performance, writing, public speaking, painting and music-making, rather than discussion. A number of "*Kits*" has been devised to provide programmes for such activities. In 1946, 16 groups were formed with a total enrolment of 179; by 1952 these figures had grown to 57 groups and 759 enrolments.

It will thus be seen that the Department enrolled 6,290 students for continuous work in classes and groups in 1952.

- (d) *Current Affairs Bulletin*. In November, 1951 the Senate of the University arranged for the Department to take over the fortnightly bulletin from the Commonwealth Office of Education as from the beginning of 1952. A Commonwealth Government grant was made available to assist in meeting costs of publication. Commencing publication in 1942 for the Services, this periodical was re-started as a Service and civilian bulletin in 1947 by the Commonwealth Office of Education, edited from the Department of Tutorial Classes. Twenty-five issues were published in 1952, and just over one million copies were distributed to educational bodies, groups, business organizations and individual subscribers in Australia and overseas.

Finance for the Department's activities comes from a University appropriation (£14,100 in 1952); from the Adult Education Expansion Grant, distributed on the advice of the Adult Education Advisory Board by the New South Wales Government (the Department's share in 1952 being £18,490); and, to a small extent, from Discussion and Kit Group fees. Half the fees for the Department's tutorial classes, except in New England, are allotted to the Workers' Educational Association for organizing purposes.

A library service is provided to all students in classes and groups by the Adult Education Section of the Public Library of New South Wales, a special section which is financed from the Adult Education Expansion Grant.

(ii) *Victoria*. The Council for Adult Education is a statutory body, with a basic annual grant of £25,000. Its expenditure was £74,000 in 1952-53. The Council organizes evening classes, summer and week-end schools, public lectures, sends drama and music to the country-centres through its Travelling Theatre and Music Tours, co-operates with the National Gallery of Victoria in the organization of a Travelling Art Exhibition, operates an extensive system of discussion groups in Victoria and provides service for country dramatic and music societies.

(iii) *Queensland*. The Adult Education service in Queensland has continued to expand. In 1952 a total of 140,709 attendances was recorded at 4,567 meetings held in Brisbane and 125 country centres. Students attending regular courses included 2,800 at the Brisbane centre and approximately 11,000 in the country. Subjects most in demand were English Literature, English Expression, Psychology, Appreciation of Music and Art, Home Handicrafts and Photography. In smaller centres study circles and groups have been formed. There were 127 of these operating in 1952, and many were regularly visited by members of the permanent staff located in five country towns.

The full cost of Adult Education is borne by the State and admission to all courses is free. The expenditure for the year 1951-52 was £31,468.

(iv) *South Australia.* Since 1917 the University of Adelaide, through the Joint Committee for Tutorial Classes, has provided each year in the metropolitan area series of tutorial classes, lecture classes and study circles on a wide range of subjects of cultural and current interest, for people who have no intention of proceeding to a degree or diploma and are unable to attend the ordinary University courses. The fee is £1 15s. a course and is paid to the Workers' Educational Association, which accepts the responsibility of organizing the classes. The enrolment for these classes in 1953 was 1,238. The Joint Committee extends its activities into the larger country centres by sending art exhibitions and plays on tour, lending boxes of books and arranging lectures and film screenings.

(v) *Western Australia.* In Western Australia the Extension Services of the University are handled by the Adult Education Board, the staff of which consists of a part-time Director and eleven full-time officers.

The objective and the revised policy of the Board in recent years has been defined in the following terms:—"To provide men and women of varying educational attainments in country districts as well as in the metropolitan area with facilities for the constructive use of leisure by use of head or hands and in such a way as to stimulate in the individual a sense of citizenship and to encourage community activities among groups".

Examples of the application of this policy in 1952 and preceding years include:—

*Music, Drama, Films and Ballet.* Artists of outstanding quality are being presented to the metropolitan public in programmes of a classical nature. A notable feature of the work of the Board was the sponsorship of foreign films in the open-air theatre at the university during the summer months, and in a city theatre during the winter. Total attendances at the Board's activities of this nature in metropolitan centres were 32,109.

*Country Drama and Ballet.* The year 1952 has seen a consolidation of the work done in previous years by the Board. The addition of a tutor-organizer to the staff enabled it to extend its activities and give more attention to the demands of the various local repertory clubs. Dramatic and ballet companies have frequently visited country towns, with total attendances of 15,082.

*Summer School.* In 1952 Summer School attracted 282 men and women of whom 115 were in residence. A series of open-air symphony concerts took place in the Somerville Auditorium, as well as screenings of foreign films, while in the Sunken Garden and Somerville Auditorium open-air dramatic productions took place.

*Metropolitan Lecture Classes.* Two series of Metropolitan Lecture Classes, each of ten meetings, are conducted each year. The average annual attendance at these classes totalled 800 in post-war years. With a few suburban exceptions, classes are held in the Adult Education rooms in Perth. The scheme was extended to Fremantle in September, 1951.

*Box Discussion Group Scheme.* The pre-war Box Discussion Group, which has been functioning in very reduced form in post-war years, is being revised and extended for use in country districts in 1953.

(vi) *Tasmania.* Although Tasmania was the last of the Australian States to set up a State Adult Education Organization, some form of Adult Education has existed since the formation in 1913 of a Workers' Education Association, which worked in conjunction with the University of Tasmania for a number of years, receiving a grant through the University, which had a Director of Tutorial Classes. Later, the grant

was paid direct to the Association by the Government and the University's Tutorial Department ceased to exist. In 1948 the Adult Education Act was passed providing for the formation of an Adult Education Board whose functions are to plan and develop adult education in Tasmania and to assist other bodies actively engaged in adult education. The definition of Adult Education under the Act is very wide—"cultural or educational pursuits and the encouragement of the arts and sciences".

The executive officer of the Board is the Director of Adult Education, at Hobart, under whose direction three Regional Officers organize Adult Education in areas each covering approximately one-third of the State, and a fourth is organizer for Hobart. Each Regional Officer is responsible, under general direction, for the development of adult education within his region. The system is efficient provided there is constant co-ordination by the Director. In larger centres the Board sets up classes of its own and enrolls students. In smaller centres it encourages voluntary groups to organize themselves, and provides them with study material or instructors. Frequently these groups are formed within existing organizations, such as the Country Women's Association. In several centres Committees have been formed. These occupy themselves with local arrangements and advise Regional Officers of their needs.

Regional Officers circulate among groups and classes and visit each as often as possible. Such visits are very important in maintaining group keenness, but as numbers increase, each officer finds the task increasingly difficult. They report their needs for tutors and instructors, and these are engaged on part-time instruction. The Board also brings to Tasmania as many musicians, actors, and other artists as it can afford to guarantee. Local Arts Committees have been formed in many centres to help the Board with local arrangements. In several cases these committees have developed further into nuclei of Community Centres, with plans to raise funds and erect buildings for community culture and recreation. A sub-committee of the Board, with a panel of architects, town-planners, health and legal experts, gives advice on long-range planning of Community Centres, and their design. The W.E.A. remains one of the voluntary organizations through which the Board will work, and the Board assists it by paying fees to its tutors, and rent of premises.

A link has been made between the University and the Board by the setting up of a Joint Committee to plan courses of serious study of a more academic nature. These are tutorial classes and are confined mostly to the cities.

In 1952 there were 167 courses in all subjects, with nearly 2,000 enrolled students. The State Government grant in 1952-53 was £20,000. Subjects most in demand are women's crafts such as dressmaking, then, in descending order of interest, drama, arts and crafts, public speaking, useful hobbies like photography, languages, psychology, science like marine biology, world affairs, economics, academic subjects.

**3. Workers' Educational Associations.**—In 1913, Workers' Educational Associations were formed in all the States of Australia, and later in New Zealand. The movement has for its object the bringing of the University into closer relationship with the masses of the people, and providing for the higher education of the workers in civic and cultural subjects.

In Victoria the Association has been superseded by the Council for Adult Education, a statutory body appointed by the Government. A Statutory Board has also been appointed in Queensland. Direct grants are made by the Governments of New South Wales and South Australia. Grants in 1952, for classes and discussion groups organized by the Association and serviced by their respective State Universities in these two States, were as follows:—New South Wales, £32,590, 110 tutorial classes, 120 discussion groups (taking 181 separate courses) and 57 Kit groups; South Australia, £5,000, 34 tutorial classes and extension lectures at country centres.

Grants from fees from the Tutorial Classes amounting to £10,850 were made to the Association in New South Wales for both organizing work and a teaching service. The teaching service in 1952 included 25 classes, 5 summer schools (two each of 10 days, one of 7 days, and 2 of 5 days), 24 week-end schools, 37 public lectures (mainly in short courses of 3 lectures), 63 lectures to various organizations, and 35 broadcast talks. In South Australia the Association receives a grant of £812 for general organizing purposes.



In Tasmania the Association received a grant of £1,000 from the Adult Education Board and 108 lectures were organized in 1952, mostly in short series from 3 to 12. The Association's primary interest has been in subjects related to social change such as Industrial History, Economics, Political Science and Sociology. In recent years, however, there has been a substantial increase in the number of classes studying Psychology, History, Literature, Music, Drama and Popular Science.

4. **The New Education Fellowship.**—The New Education Fellowship is a world organization of parents, educators, and other citizens interested in the development of new educational practices. It was founded in London in 1915 and spread to Australia at the time of a regional conference held here in 1937. There are now sections in each State.

One of its principal functions is the organization of periodic conferences, to which leading oversea educators are invited. Sessions are usually held in each of the capitals and in various country centres, thus enabling oversea leaders of educational thought to influence considerable numbers of Australian teachers and others. Conferences of this type were held in 1937, 1946, 1949 and 1951.

## § 10. Libraries.

1. **General.**—The Munn-Pitt Report of 1935 greatly stimulated interest in libraries and librarianship throughout Australia. This is seen in the rapid development of libraries in all States, all of which have now passed legislation to increase library services, and in the establishment in 1937 of the Australian Institute of Librarians to improve the standard of librarianship. This body was reconstituted in 1949 as the Library Association of Australia, its functions now including the promotion and improvement of libraries and library services. The Association conducts annual examinations for which students are prepared by courses of instruction in all States. Formal library schools exist in the National Library, Canberra, and the Public Libraries at Sydney and Melbourne.

2. **Commonwealth.**—(i) *Commonwealth National Library.* This library was created as the Commonwealth Parliamentary Library in 1901. The library of Congress was chosen in 1903 as the model upon which its collections and services should be developed and it has therefore assembled a great reference collection with special emphasis on Australian material and rendering services on a national basis.

While the provision of a reference service to members of Parliament and to Government Departments remains a primary responsibility, the National Library now offers research facilities to University institutions in the Australian Capital Territory and to students of Australian history and affairs, publishes basic bibliographies in the field of Australiana and serves as a free public library for residents of the Australian Capital Territory.

In 1952 it contained about 400,000 volumes, together with many tens of thousands of pamphlets, pictures, prints, maps, manuscripts and historical objects, scores of thousands of feet of microfilm, about two and a half million feet of moving picture films and 100,000 cubic feet of archives. It is particularly strong in the social sciences, in its holdings of Government publications, Australiana, and material relating to countries of the Pacific and adjacent regions.

The rapid growth of its Australiana, strengthened by the acquisition of the Petherick collection of 16,500 items in 1911, and the notable collection of Cook manuscripts in 1923, caused the Library Committee in the latter year to adopt the title of "Commonwealth National Library".

It has been enriched by several important gifts, notably the Gregory Mathews collection on Australian Ornithology in 1940, and the Ferguson collection of books, manuscripts and pictures relating to Australia and the South Seas in 1946. The great pictorial collection of Rex Nan Kivell in the same field was received on indefinite loan in 1947.

The National Library's activity in the field of Australiana was substantially advanced when, following the posting of a Liaison Officer to London in 1944, arrangements were concluded to microfilm, in association with the Public Library of New South Wales, original records relating to Australia in the Public Record Office and elsewhere. Acquisition of these microfilms will permit resumption at a later date of the *Historical Records of Australia* of which 34 volumes had been published by 1926.

The operation of the Commonwealth Publications Exchange Agency, established in 1947, brings substantial sets of official publications of oversea countries as well as those of research institutions and learned societies throughout the world. Under the Copyright Act 1912 the publisher of every book, pamphlet, etc., printed in Australia is required to deposit a copy in the Library.

In 1945, following the death of President Roosevelt, the Government established, as its memorial to him, a Roosevelt wing in the Library, housing a comprehensive and growing collection of material illustrating the growth and activity of the American people.

Following the appointment of the War Archives Committee in 1942, the National Library became an Archival Authority for the war-time records of all Commonwealth Departments and agencies other than the Service Departments, the latter being entrusted to the Australian War Memorial. In 1947 the activity was extended to cover all records created since 1901, and in 1952 the National Library became the authority for all Departments. Repositories have been established in Canberra, Melbourne, Sydney, Brisbane and Adelaide, and to date over 1,000,000 cubic feet of records have been surveyed, of which about 100,000 cubic feet of records have been transferred to the custody of the Library.

Following the establishment of the Australian National Film Board in 1945, the Library's existing activity in the collection of Australian historical films was expanded into a central library of documentary and educational films and made the non-theatrical distributing agency in Australia for the Board, on which the Library has been represented since its creation. Films are loaned direct to organizations in Commonwealth Territories and to Commonwealth Departments and agencies, and to State Education Departments and State film centres to supplement their individual resources. An information service is given on new and unusual films, and exchanges are conducted with a number of oversea governments. The film collection contains about 4,000 titles, together with Australian historical films and a great number of film strips.

Training in librarianship for Commonwealth Government Departments and for students from the States has been a function since 1938. A post-graduate library school is conducted in which students are prepared for the examinations of the Library Association of Australia.

The National Library is also responsible for providing and servicing the Australian reference libraries at all Commonwealth Government establishments overseas. These now number 36, those in London and New York being major collections under the direct control of officers of the National Library. The services to Commonwealth Territories began in 1936, when, with the assistance of a Carnegie grant of 7,500 dollars, free library services were established in association with the local Administrations. All of these were interrupted by the 1939-45 War, but have since been re-established on an extended basis in Papua-New Guinea and in the Northern Territory, as well as in Norfolk Island and Nauru. The National Library selects, purchases and catalogues the major part of the book stocks, assists in meeting reference needs, and provides from its staff the Chief Librarian in the Northern Territory. In Papua-New Guinea the central library is at Port Moresby, with regional libraries at Rabaul, Lae and Samarai, and several small branches. Parcels of books, carried free by the postal service, are sent to remote areas.

Since the transfer of the seat of Government to Canberra in 1927, the National Library has been accommodated in more than one building in Canberra. Plans are being drawn for further building on its permanent site to enable a consolidation of its collections and services.

A union catalogue of serials in the social sciences held by Australian libraries has been compiled and the following publications issued:—Historical Records of Australia—34 volumes, 12s. 6d. per volume (publication temporarily suspended in 1926); Parliamentary Handbook and record of elections—eleven issues, 10s. 6d. per volume; Annual Catalogue of Australian Publications—No. 1, 1936 to date, 2s. per volume; Books published in Australia, a list of books supplied under copyright—January–March, 1946 to date (monthly); Select List of Representative Works dealing with Australia (reprinted from the Official Year Book)—1933 to 1948 (annual); Australian Books (supersedes Select List)—1949 to date (annual); Australian Public Affairs Information Service (subject index to current literature)—July, 1945 to date (monthly); Catalogue of 16mm. films—1950, and supplements 1951 and 1952, 10s.

(ii) *Patent Office Library.* The library of the Commonwealth Patent Office, Canberra, contains over 56,000 volumes. Patent specifications of inventions are received from the principal countries of the world, and a wide range of technical literature and periodicals is available.

(iii) *The Australian War Memorial Library.* In the War Memorial library are housed the documentary and pictorial records of Australia's fighting Services, collected during and after both world wars. This mass of material is constantly being augmented by the addition of books, periodicals and other records covering contemporary trends and events in the field of military history and science, as well as records of earlier wars in which Australian troops participated.

The printed records section contains approximately 50,000 volumes, a large collection of military maps, newsclippings and newspapers, sound recordings of war leaders and personalities, war posters and postage stamps. Many personal collections by distinguished soldiers and historical documents relating to the wars have also been placed in the Memorial's custody.

Written records comprise correspondence files of head-quarters and units of both world wars, and the original war diaries compiled from day to day by each unit during its existence.

The collection of official war photographs covering 1914–18 and 1939–45 Wars numbers over 250,000, and a similar collection of official motion picture film depicting Australia at war totals about 4 million feet.

Facilities for public research are not yet fully developed, but all requests for information are met where practicable.

(iv) *Other Departmental Libraries.* The following Commonwealth authorities in Canberra have specialized collections in their own fields, and in addition draw largely on the National Library:—Attorney-General's Department, Commonwealth Bureau of Census and Statistics, Commonwealth Forestry and Timber Bureau, Department of Commerce and Agriculture, Department of External Affairs, Department of Territories, Department of Health, Department of National Development, Commonwealth Public Service Board, Department of Trade and Customs, Department of Works and Housing, and News and Information Bureau of the Department of the Interior.

The Department of Labour and National Service has its main library in Melbourne, and branch libraries in Sydney and Adelaide. Other departmental libraries in Melbourne are those of the Department of Air, Department of Defence, Department of Social Services and Postmaster-General's Department. The library of the Commonwealth Office of Education was established in Sydney during 1945.

(v) *Commonwealth Scientific and Industrial Research Organization.* The head office in East Melbourne maintains a library covering all branches of science except the medical sciences. In addition, each division and section of the Organization has its own library; together, these form a series of specialist libraries covering such subjects as food preservation, horticulture, fisheries, entomology, botany, agriculture, veterinary science, animal husbandry, building research, dairy products, etc. There are 22 such branches, each with its own staff varying in number from one to sixteen, and also smaller collections

under the care of research officers aided by visiting librarians. Ten of the branches are in Victoria, eight in New South Wales, two in South Australia, and one each in the Australian Capital Territory and Queensland.

The Head Office Library maintains a union catalogue of the holdings of all C.S.I.R.O. libraries, and smaller union catalogues are being developed among groups of branch libraries with similar interests.

The collections are particularly strong in the publications of oversea scientific and technical research institutions, with many of which exchange relations exist.

The general public may have access to these materials for reference purposes.

3. States.—(i) *Metropolitan Public Libraries.* In each of the capital cities there is a well-equipped Public Library, the institutions in Melbourne and Sydney especially comparing very favorably with similar institutions elsewhere in the world. The following statement gives the number of volumes in the Public Library of each capital city at 30th June, 1952 :—

METROPOLITAN PUBLIC LIBRARIES, 30th JUNE, 1952.

City.	Number of Volumes in—			Total.
	Reference Branch.	Ordinary Lending Branch.	Country Lending Branch.	
Canberra (a) .. ..	400,000	..	(b)	400,000
Sydney .. ..	(c) 472,426	(d)	134,279	606,705
Melbourne .. ..	600,182	78,720	36,090	714,992
Brisbane .. ..	105,568	..	18,123	123,691
Adelaide .. ..	184,695	31,970	(e) 55,415	272,080
Perth .. ..	189,413	..	2,838	192,251
Hobart .. ..	48,435	26,547	(f) 153,506	228,488

(a) Commonwealth National Library, including Parliamentary Section. (b) Books are lent to libraries or students throughout Australia whenever necessary for research work. (c) Includes 152,609 volumes in the Mitchell Library. (d) The maintenance and control of the ordinary lending branch of the Public Library at Sydney were transferred in 1908 to the Municipal Council. In 1951, books in this library numbered 122,043. (e) Includes 7,767 volumes in the Children's Branch. (f) Includes 109,116 volumes in the Children's Branch.

(ii) *New South Wales.* The Free Library Movement in New South Wales, founded for the establishment of a system of public libraries on the basis suggested in the Munn-Pitt Report of 1935, helped to pave the way for the Library Act 1939, which was fully proclaimed as from 1st January, 1944. The Library Board was fully constituted in 1944, and came into effective operation in September of that year. One hundred and sixteen local authorities have adopted the Library Act and during 1951-52 spent £182,002 on their libraries from rates, as well as £119,000 received in subsidy. There are 107 libraries, containing 690,500 volumes, being operated by 100 councils.

The Joint Coal Board made grants for library purposes to Councils in coal-mining areas, a grant of £5,000 having been made to the City of Greater Wollongong to help establish branch libraries and a mobile library service to mining centres, and a grant of £4,150 to the City of Greater Newcastle to meet part of the cost of establishing a library at Wallsend.

The State Library has been housed since 1942 in a new building, whose reading room provides seating accommodation for 500 persons, and has 50,000 volumes in open access. Within four years, however, the old building had to be reoccupied in part owing to lack of space caused by the Library's extended functions.

New South Wales departmental libraries are staffed by officers seconded from the State Library, which also provides a central book-buying and master cataloguing service for departmental libraries, and municipal and shire libraries constituted under the 1939 Act.

In 1943 the Banks Memorial Trust was set up to report on the best use of funds which had accumulated since 1905. The government has approved of a memorial at Kurnell, and of the publication of the Banks Papers.

The State Library has undertaken the management of the libraries of the University Tutorial Class and the Workers' Educational Association.

The Country Circulation Department forwards books on loan to State schools, to Schools of Arts and to individual students. During 1951-52, 103,424 books were lent to small State schools, 43,434 to Schools of Arts and small country libraries, 306 to the Far Western Division, and Special Loans lent for extended periods to shire and municipal libraries and to Lord Howe Island, while 25,019 reference works were lent to individual country students.

The Mitchell Library in Sydney of more than 60,000 volumes and pamphlets, and 300 paintings, principally relating to Australasia and the Southern Pacific, and valued at £100,000, was bequeathed to the trustees of the Public Library in 1905 by Mr. D. S. Mitchell, together with an endowment of £70,000. The testator stipulated that the regulations of the British Museum were to be adopted as far as possible, hence the library is the resort of specialists. There are now 152,609 volumes in the library, in addition to valuable manuscripts, collections of Australian postage and fiscal stamps, and various pictures, coins, etc.

In Newcastle, Dr. Roland Pope has given his collection, worth £10,000, which is being housed temporarily at the School of Arts.

Other important libraries in New South Wales are the Australian Museum, 33,363 volumes; Teachers' Colleges, 123,192; Technical Education Branch, 78,484; Public Schools, 1,104,899; Railways Institute, 140,619; Road Transport and Tramways Institute, 47,777; Cooper Library of the New South Wales Public School Teachers' Federation, 17,467; and the Library at the National Herbarium, 10,000 volumes. At 30th June, 1952 the Parliamentary Library contained 107,838 volumes.

(iii) *Victoria.* Until the establishment of the Free Library Service Board in 1947, the only public library facilities available in Victoria except from the State Public Library and one or two Metropolitan Municipal Libraries were those offered by about 200 out-moded Mechanics' Institute Libraries situated in country areas all over the State.

The Board's policy has been to substitute for these inadequate services an efficient system of adequately stocked, modern public libraries controlled by local Municipal Councils and subsidized by the Board.

Since the Board's inception 56 municipalities, comprising 934,000 of the State's population, have established libraries. Of these, 15 are in the city, serving 616,000 people, and 41 in the country, serving 318,000 people.

The amount of £96,000 was paid to the Councils in library subsidy for the year 1952-53 and a total of £173,435 was expended in Municipal Library Service for the same year. Since 1947-48, £334,000 has been expended by the Board as library subsidy.

There are 435,745 books available to the communities in which libraries are established and combined circulation figures were 2,794,600 as at 30th September, 1952.

(iv) *Queensland.* Prior to 1945 Queensland's library needs were met by the State Public Library, established in 1902 and administered by the Chief Secretary's Department, and by Schools of Arts or similar libraries in metropolitan and country districts supported by members' subscriptions. The Libraries Act 1943 constituted a Library Board "to attain efficient co-ordination and improvement of the library facilities of the State with the object of placing such facilities on a sound basis for the benefit and educational improvement of the citizens generally throughout the State".

The control and management of the Public Library has been entrusted to the Board, which had built up the book collection to 123,691 volumes in 1951-52. The Libraries Act Amendment Act of 1949 provides for the deposit in the Public Library of a copy of all books, pamphlets, maps and other printed material published in Queensland.

By means of subsidy to local bodies the Board, as in previous years, endeavoured to encourage the establishment of new library services and the extension of existing facilities.

During the year 1951-52 the Board granted subsidy on the following basis:—  
(a) Books—50 per cent. of the amount spent in the purchase of books; (b) 50 per cent. of the cost of library accommodation and equipment with an upper limit of £2,000 in respect of accommodation.

The Act empowers local authorities to establish library facilities. In 1952, 23 local authorities were conducting library services, several others have indicated that they will do so in the near future.

The Brisbane City Council has established seven libraries, of which five have separate children's collections, and hopes to increase the number to 28. The number of local bodies subsidized was 88 in 1951-52. The Board's policy is to subsidize not more than one local body in any area in providing library facilities.

A country extension service for people residing outside the metropolitan area is now operating on a limited scale. Its book collection numbered 18,117 in 1951-52.

The Oxley Memorial Library was established under the terms of a Declaration of Trust dated 26th August, 1926. Its object is the promotion of the study of Australian literature, literature relating to Australia and Queensland historical material. The library, housed in the Public Library since 1934, remained under separate administration until 1946, when its assets were transferred to the Library Board. Since that date it has been administered as a department of the Public Library, and the collection kept segregated. It is governed by a committee which has advisory powers only. During the year 1951-52 its holdings in volumes increased from 15,872 to 16,272. A valuable addition in 1950 was the L'Estrange collection of Queensland stamps.

The library of the Parliament of Queensland was established in 1860. It contained in 1952 approximately 80,000 volumes, consisting of official publications and books devoted largely to history and the social sciences. The cataloguing and reclassification of the library commenced in 1948. An amendment to the Act in 1949 entitles the library to a copy of every book published in Queensland.

(v) *South Australia.* Following the Price Report of 1937, which stressed the need for a free lending service for metropolitan and country readers, and suggested the establishment of a State Libraries Board, the Public Library of South Australia was separated from the Museum and Art Gallery early in 1940 and became a government department, administered by a Principal Librarian and a Libraries Board.

In the Reference department there are about 187,000 volumes and seating for 300 readers. Most of the books may be borrowed, and about 35,000 volumes are lent every year. Over 3,000 periodicals are filed, and the collection of newspapers includes every newspaper printed in South Australia.

The library of the Parliament of South Australia contains 65,000 volumes.

The Adelaide Lending department, which lends books to persons living in the metropolitan area, has 32,000 books, 27,000 registered borrowers, and an annual book issue of 262,000 volumes.

In the Country Lending Service there are 48,000 volumes, of which about half are suitable for children. In 1951-52 this service sent out 48,000 volumes to adults and 91,000 to children, including 21,000 volumes lent to schools.

The Research Service specializes in scientific and technical inquiries, and supplements the resources of the Public Library by borrowing from other libraries and by obtaining microfilm copies of material not available locally. It has an extensive collection of trade catalogues.

The Institutes Association in 1952 comprised 250 suburban and country libraries with 766,004 volumes.

(vi) *Western Australia.* At the end of 1951 the Library Board of Western Australia Act was passed. The Board, now appointed, consists of 13 members whose functions are to advise the Minister on matters of general policy, to approve of libraries to be registered as free libraries and to provide for their control, and to control and manage libraries and services and the training of librarians.

In 1945 an Archives Branch was established at the Public Library as a repository for the non-current records of the Government and other historical material relating to Western Australia, including the collection of the Western Australia Historical Society.

An Adult Education Library of 12,000 volumes of general reading and fiction provides for readers in metropolitan and country areas. The library is conducted by the Adult Education Board and requires no deposit from its readers. The Board pays outward freight for country readers.

(vii) *Tasmania.* Library service in Tasmania has expanded rapidly during the past few years. Under the Libraries Act 1943 the Tasmanian Library Board was constituted, and the State Library of Tasmania was established on 1st January, 1944. The Board, in addition to administering the State Library headquarters in Hobart, is responsible for the extension of library services throughout the State and for the control of State aid. Municipalities adopting the Act spend the proceeds of local rates on library premises, salaries and maintenance, and books for permanent retention. State aid is provided in the form of books of a value equal to the amount collected in rates, which are exchanged at intervals. In Launceston State aid is given in cash. In 1951-52 the Launceston City Council contributed £4,392, and £5,119 was received in State aid. During the year, book issues increased from 300,238 to 314,639.

Of the 49 municipalities in the State, 34 have adopted the Act and seven libraries have been established with the support of the Hydro-Electric Commission.

The State Library provides lending and reference services for the people of Hobart and operates a reference service for people throughout the State. In addition, it conducts screenings of documentary films, recitals of recorded music, summer schools, lectures, library weeks in country centres, puppetry demonstrations, etc.

The Parliamentary Library works in close collaboration with the State Library, which provides a reference officer to serve members during session, and undertakes to catalogue all new books added to the library as well as supplying recreational reading.

4. *University Libraries.*—The libraries of the Australian Universities provide material not only for the education of graduates and undergraduates, but also for scholars, research workers and practical investigators all over the continent. Much of the material they contain is not available elsewhere, for although in most cases smaller, they are in many directions more highly specialized than the public libraries. They lend to one another and to State and private institutions as well as to individual investigators. Each of them is governed by a librarian, who is responsible as a rule to an executive sub-committee and a committee which is practically co-extensive with the professional staff. In size, the Library of the University of Sydney is the fourth library in Australia, and the Libraries of the Universities of Melbourne and Adelaide are respectively seventh and eighth. The following table shows the sizes and rates of growth and expenditure of the Australian university libraries; it is impossible to give borrowing statistics, as they differ too widely to be comparable without much explanation.

## UNIVERSITY LIBRARIES, 1952.

University or College.	Volumes.	Accessions during year.	Expenditure.
	No.	No.	£
Sydney .. .. .	343,000	9,351	42,951
Melbourne .. .. .	184,447	9,403	53,162
Queensland .. .. .	108,141	5,767	25,794
Adelaide .. .. .	178,927	8,051	26,527
Western Australia .. .. .	109,167	6,441	18,374
Tasmania .. .. .	79,700	2,682	16,221
New South Wales University of Technology	31,940	3,940	28,660
New England University College .. .. .	22,881	1,999	7,588
Canberra University College .. .. .	13,177	1,887	5,170

The first books were bought for the Library of the University of Sydney as early as 1851; only since 1910, however, has it possessed a building of its own. It is named after the principal benefactor, Thomas Fisher, who bequeathed to it in 1885 the sum of £30,000. It contains an up-to-date bookstack of glass and steel and a fine reading room in which, since the beginning of 1941, about 18,000 volumes of the collection have been made available on open access shelves. In addition, members of the teaching staff and certain classes of undergraduates are admitted to the bookstacks; all readers are encouraged to borrow freely. The Library possesses a large number of periodicals, especially scientific, valuable collections of seventeenth-century pamphlets and Elizabethan translations from the classics, and an extensive collection of Australian literature. Besides medical and law branches, there are a number of departmental libraries.

Early in 1854 the University of Melbourne made its first allocation for books, but the Library was housed in temporary quarters for a number of years. In recent years the university authorities have treated the Library generously, and there have been some welcome benefactions, but accommodation is insufficient and a new library building is a pressing need of the University. The W. L. Baillieu Trust has made available the first instalments of a £100,000 gift for building purposes. All the books are accessible on open shelves, and though the Library is intended primarily for reference purposes, borrowing, except of text-books and certain valuable volumes, is made as easy as possible. The Library is administered from the centrally situated general library; there is a large medical branch library specially rich in periodicals, and smaller branch libraries in some of the science departments.

The Library of the University of Queensland, founded in 1911, began with £3,000 worth of books, £2,000 having been raised by public subscription and £1,000 granted by the Government. The main library is now in its own building in the new University at St. Lucia.

The Adelaide University Library bears the title of its original benefactor, Robert Barr Smith, who, with members of this family in and after 1892, gave the University about £50,000 for library purposes. Some 20,000 volumes are shelved in the reading room and are available to the ordinary student. Up-to-date steel bookstacks provide accommodation for about 100,000 volumes. Borrowing facilities are available to all matriculated students, to country students and to graduates. There are medical and law departmental libraries. The medical library has on permanent loan the collection of the Institute of Medical and Veterinary Science, and also incorporates the library of the British Medical Association (South Australian Branch).



In the University of Western Australia the first permanent library staff was not appointed until 1927. Provision of permanent library accommodation was not possible when the University moved to its present site, and space and facilities have consequently been inadequate. Extensions to the temporary quarters were made in 1946. The whole collection, consisting of about 109,000 volumes, is accessible on open shelves, and there are several departmental libraries. A special feature is the use made of students' co-operation.

The Library of the University of Tasmania was founded in 1893, but for many years it comprised little more than a collection of text-books. In 1913 a substantial increase of funds was allotted and important gifts were received. In 1919 it was organized for the first time in accordance with modern library practice. A full-time librarian was appointed for the first time at the end of 1945, and the staff has increased from two to ten. The Library is now providing a cataloguing service for the library of the Royal Society of Tasmania.

The New England University College Library was founded in 1938, and bears the name of its first benefactor, Sir William Dixon. At the end of 1952 it contained some 22,880 volumes mainly on open shelves.

The Canberra University College Library was established in 1938. At the end of 1952 it contained 13,177 volumes, which are on open shelves; reference books may be borrowed.

The library of the Australian National University is unique in that it is designed to serve the research staff of a wholly post-graduate institution. It specializes in the fields of the physical and medical sciences, excluding clinical materials. In the social sciences and Pacific studies consideration is given to the holdings of the Commonwealth National Library to avoid unnecessary duplication. The library was established in 1948 and operated in Melbourne until December, 1950, when it was transferred to Canberra. The collection comprises some 70,000 volumes, and in addition a special collection of 25,000 volumes in Oriental languages.

5. *Children's Libraries and School Libraries.*—(i) *General.* A survey conducted early in 1946 revealed that only a small proportion of children was being catered for by adequate library service. The effective use made of the few existing children's libraries is proof that the growing interest in this branch of library work will be well rewarded.

(ii) *New South Wales.* Children's libraries are being developed as departments of municipal and shire libraries. Three formerly independent children's libraries at Mosman, Wollongong and Moss Vale are now departments of municipal and shire libraries and have greatly increased budgets.

From 1937-38, school library work has been fostered by the State Library in co-operation with the Education Department. A "Model School Library" was established, and vacation classes for teacher librarians are held. In 1949 there were 63 district units under the central library scheme.

(iii) *Victoria.* Since 1943-44 children's libraries have shared a grant of £500 between them, the number participating in 1950 being 34.

The Education Department is making provision for libraries in new schools being erected. Where accommodation is available in existing schools, grants of up to £4 for £1 are provided to furnish and equip libraries. In addition, the Government subsidizes the purchase of approved books on the basis of £1 for £1, or £2 for £1, according to the size of the school, to a maximum grant of £60 per annum.

With the assistance of school committees and municipalities, subsidized by the Department, many country districts have established circulating group libraries. Boxes of books are circulated to all schools in the group, changes being made at the commencement of each school term.

Financed by a bequest from the late William Gillies, a scheme of circulating libraries for small schools, particularly in remote areas, has been operating for some years. At present 441 schools benefit from this scheme.

The Department has a Library Services Officer with a small staff to advise and assist schools in the organization of libraries. A number of Education Department teachers have been trained at the Library School of the Public Library of Victoria, and an increasing number of schools have well-equipped library rooms with trained teacher-librarians in charge.

(iv) *Queensland.* The purchase of books in State school libraries in Queensland is financed by school committees and parents' associations, with a subsidy from the Department of Public Instruction on a £1 for £1 basis. The subsidy was suspended from 1931 to 1943.

In 1937 a system of Circulating Supplementary Readers was commenced. Books are graded for age levels and are moved from school to school, sufficient copies of each book for a whole class being sent, and reading being done in school. There are 96,000 such books now in use, the distribution at present being confined to primary schools.

(v) *South Australia.* A Children's Library of 7,800 volumes is used by school classes and individual children living in the metropolitan area. Books of fiction are lent to children of fourteen years and over, while other books may be borrowed by children of any age.

(vi) *Western Australia.* For schools with more than two teachers, including high schools and technical schools, £1 for £1 subsidy up to £50 is granted each year. New primary schools are provided with a room for a library, while high schools and some technical schools have a teacher acting as librarian.

For schools with one or two teachers there are two services. Through the Small Schools Fixed Library Service reference books up to the value of £15 are supplied annually to be kept permanently in the school. The Charles Hadley Travelling Library provides recreational reading, and operates 250 boxes which can be exchanged every three months through a local school acting as distributing centre for a district. All boxes are returned to headquarters for repair and renewal at the end of the year. The Government grants £250 per annum for this service, and the participating schools contribute the commission received from the Commonwealth Bank for the teachers' services—about £200.

Children in isolated country areas are catered for by books sent out by the State Correspondence Schools Library. The children are kept in touch with the Library by means of radio talks and leaflets issued periodically. There is as yet no general scheme to serve children in the metropolitan area.

The Federation of Police and Citizens Boys' Clubs of Western Australia aims at establishing a system of circulating boxes of books at an estimated cost of £10,000. Books are in circulation to 44 centres, of which 15 are Police Boys' Clubs, 24 State Schools, and 5 Children's Libraries.

Western Australian Children's Book Council Inc. was incorporated in 1948 and receives a government grant to assist its work of interesting local authorities in establishing children's free libraries.

(vii) *Tasmania*. The Lady Clark Memorial Children's Libraries, with headquarters at the State Library, in Hobart, aim to serve all children in Tasmania with books. They work through the municipal authorities; at 30th June, 1952, children's libraries had been established in 55 municipalities, including Hobart, and five special Hydro-electric districts, children's books being provided on a population basis.

Practically all State secondary schools in Tasmania have libraries, with full-time librarians in four of them. The libraries of the Friends' School, Hobart, and the Hobart High School are among the foremost of their kind in Australia.

A Schools' Library Service assists with loans of curriculum books, 30 at a time, and provides advice and guidance in the use of books. In 1951 the number of schools receiving service was 64 and books issued was 3,678. The majority of primary schools have libraries; most area schools, in particular, have good ones.

The Education Department sends, each year, selected students or teachers to the Library School in Sydney.

6. **Special Libraries.**—Before the 1939-45 War the number of special libraries, apart from those maintained by government departments, was small, but during recent years many manufacturing, commercial, research and other firms, as well as statutory bodies, have found it necessary to establish special libraries to serve their specialist or other staff. These libraries, which are most numerous in Sydney and Melbourne, are being increasingly staffed by trained librarians.

7. **Microfilms.**—The following libraries supply microfilm or photostat copies of material, usually at a small charge (the letter "P" signifies photostat supplies and "M" microfilm supplied):—*Australian Capital Territory*—Australian War Memorial (P), Commonwealth National Library (PM), C.S.I.R.O. (M); *New South Wales*—Metropolitan Water Sewerage and Drainage Board (P), Public Library of New South Wales (M), Standards Association of Australia (P), School of Public Health and Tropical Medicine (M), Fisher Library, University of Sydney (PM); *Victoria*—Commonwealth Serum Laboratories (P), Technical Information Section, Munitions Supply Laboratories (PM), Public Library of Victoria (M), Standards Association of Australia (Melbourne Branch) (P), University of Melbourne (PM), C.S.I.R.O. (M); *Queensland*—Public Library (P); *South Australia*—Public Library of South Australia (PM), University of Adelaide (PM), Waite Agricultural Research Institute (P); and *Tasmania*—University of Tasmania (PM).

## § 11. Public Museums.

The Australian Museum in Sydney, founded in 1836, is the oldest institution of its kind in Australia. In addition to possessing fine collections of the usual objects found in kindred institutions, the Museum contains a very valuable and complete set of specimens of Australian fauna. The cost of construction of the building to 30th June, 1950 was £86,560. The number of visitors to the institution during 1951-52 was 247,104, and the average attendance on week-days 542, and on Sundays 1,487. The expenditure for 1951-52 amounted to £47,542. A valuable library containing 33,363 volumes is attached to the Museum. Courses of evening popular lectures are delivered and lecturers also visit distant suburbs and country districts, and afternoon lectures for school children are provided. Nature talks are also broadcast by radio. Representative collections illustrative of the natural wealth of the country are to be found in the Agricultural and Forestry Museum and the Mining and Geological Museum. The latter

institution prepares collections of specimens to be used as teaching aids to country schools. The "Nicholson" Museum of Antiquities, the "Macleay" Museum of Natural History and the Museum of Normal and Morbid Anatomy attached to the University, and the National Herbarium and Botanical Museum at the Sydney Botanic Gardens, are all accessible to the public. There is a Museum of Applied Arts and Sciences in Sydney with branches in four country centres. Expenditure during the year 1952 was £40,296. Valuable research work is being performed by the scientific staff in connexion with oil and other products of the eucalyptus and the gums, kinos, tanning materials, and other economic products of native vegetation generally.

The National Museum at Melbourne, devoted to natural history, geology and ethnology, is located in the eastern section of the Public Library Building. The National Art Gallery is situated in the same building. The Museum of Applied Science, also housed under the same roof, contained at 30th June, 1950, 23,320 exhibits which covered applied and economic aspects of all branches of science. There is a fine Museum of Botany and Plant Products in the Melbourne Botanic Gardens. In addition to the large collection in the geological museum attached to the Mines Department in Melbourne, well-equipped museums of mining and geological specimens are established in connexion with the School of Mines in the chief mining districts.

The Queensland Museum, founded in 1855, comprises exhibited and reference collections of zoology, geology and ethnology. It is entirely maintained by the State Government, and the cost of the building was £31,736. Expenditure for the year 1951-52 was £14,218. The collections are principally, but not exclusively, Australian; there is, for example, the excellent series of ethnological material formed by Sir William McGregor in New Guinea. The publication is *Memoirs of the Queensland Museum* which was preceded by the *Annals of the Queensland Museum*. The library is extensive and valuable, and of great assistance to research workers in the State. In 1952 during the schools vacation, special programmes were held, including brief talks, natural history films, and natural history questions and early in 1952 natural history lessons were given to eleven classes of school children to which the children supplied the answers by reading the explanatory labels in the cases.

The Queensland Geological Survey Museum has branches in Townsville, opened in 1886, and in Brisbane, opened in 1892.

The South Australian Museum has considerable collections of most branches of natural history and was attended by 150,000 visitors in 1951-52. Cost of construction of the Museum building was returned as £65,000. In 1951-52 expenditure was £30,800.

The latest available returns show that the Western Australian Museum and Art Gallery contains altogether 205,000 specimens, of an estimated value of £106,250. The Museum, Art Gallery, and Library are housed in one building, and the visitors to the combined institutions during the year reached 80,000. At 30th June, 1952, the structure was valued at £65,500.

There are two museums in Tasmania—the Tasmanian Museum at Hobart, and the Victoria Museum and Art Gallery at Launceston—both of which contain valuable collections of botanical, mineral, and miscellaneous products. The Museums received aid from the Government during 1951-52 to the extent of £10,000. The cost of construction in each case is included in that of Art Galleries given below.

## § 12. Public Art Galleries.

The National Art Gallery of New South Wales originated in the Academy of Art founded in 1871. Cost of construction of the present building amounted to about £96,000. At the end of 1951 its contents, which are valued at £261,000, comprised 1,104 oil paintings, 715 water colours, 1,915 black and white, 236 statuary and bronzes, and 1,057 ceramics, works in metal and miscellaneous. Since 1895, loan collections of pictures have been regularly forwarded for exhibition in important country towns.

The National Gallery at Melbourne at 30th June, 1950 contained 2,190 oil paintings, 7,792 objects of statuary, bronzes, ceramics, etc., and 22,033 water colour drawings, engravings and photographs. The Gallery is situated in the same building as the Museum and Public Library, the total cost of construction being £439,000. Cost of purchases during 1949-50 was £57,653. Several munificent bequests have been made to the institution. That of Mr. Alfred Felton, given in 1904, amounts to about £8,000 per annum. In 1913, Mr. John Connell presented his collection of art furniture, silver, pictures, etc., the whole being valued at £10,000. There are provincial art galleries at Ballarat, Bendigo, Geelong, Castlemaine and Warrnambool, and periodically pictures are sent on loan from the National Gallery.

The Queensland National Art Gallery, situated in the Executive Buildings, Brisbane, was founded in 1895, and contains a small but well-chosen collection of pictures. At the end of 1950 there were on view 279 oil paintings, 135 water colours, 243 black and white, and 44 pieces of statuary, together with 158 various prints, mosaics, and miniatures. Exclusive of exhibits on loan, the contents are valued at about £23,500. Visitors during the year averaged 925 on Sundays and 214 on week-days.

The Art Gallery at Adelaide dates from 1880, when the Government expended £2,000 in the purchase of pictures, which were exhibited in the Public Library Building in 1882. The liberality of private citizens caused the gallery rapidly to outgrow the accommodation provided for it in 1889 at the Exhibition Building, and on the receipt of a bequest of £25,000 from the late Sir Thomas Elder, the Government erected the present building, which was opened in April, 1900. The Gallery also received bequests of £16,500 in 1903 from the estate of Dr. Morgan Thomas, and valuable prints and £3,000 in 1907 from Mr. David Murray. In 1935 Mr. Alex Melrose gave £10,000 for the extension of the building. At 30th June, 1952 there were in the Gallery 1,481 paintings in oil and water colours, 565 drawings and black and white, and 91 items of statuary, the contents being valued at £95,900. The cost of construction of the Art Gallery amounted to £48,000. The expenditure during 1951-52 was £17,900.

The foundation stone of the present Art Gallery at Perth in Western Australia was laid in 1901, and the Public Library, Museum, and Art Gallery are all situated in the one structure. The collection comprises 225 oil paintings, 152 water colours, 371 black and white, 276 statuary, and 1,388 ceramic and other art objects, the whole being valued at £33,000. Cost of construction of the buildings amounted to £10,000.

In Tasmania, the Art Gallery at Hobart was opened in 1887. At June, 1952 the contents consisted of 119 oil paintings, 64 water colours, 7 black and white, 3 statuary and 103 etchings, engravings, etc. The cost of construction of the building was £4,500. Expenditure in 1951-52 was £9,932.

The Art Gallery at Launceston was erected in 1888 at a cost of £6,000, and opened on the 2nd April, 1891. Only a small proportion of the contents belongs to the gallery, the bulk of the pictures being obtained on loan. At June, 1952 there were on view 51 oil paintings, 23 water colours, 4 black and white, and 3 engravings and miscellaneous exhibits. Expenditure in 1951-52 was £7,891.

### § 13. Scientific Societies.

1. **Royal Societies.**—In previous issues of the Official Year Book an outline was given of the origin and progress of the Royal Society in each State (*see* No. 22, pp. 454-5). The accompanying table contains the latest available statistical information regarding these institutions, the headquarters of which are in the capital cities.

## ROYAL SOCIETIES 1952.

Particulars.	Sydney.	Mel- bourne.	Bris- bane.	Ade- laide.	Perth.	Hobart.	Can- berra.
Year of Foundation .. ..	1866	1854	1884	1880	1914	1843	1930
Number of members .. ..	382	261	243	201	193	448	89
Vols. of transactions issued ..	86	96	62	75	36	86	..
Number of books in library ..	30,400	20,780	44,900	40,000	4,500	29,684	..
Societies on exchange list ..	420	355	257	100	200	271	..
Income .. ..	£ 2,505	1,469	417	1,471	321	1,100	56
Expenditure .. ..	£ 2,293	678	413	1,128	244	1,181	38

2. **The Australian and New Zealand Association for the Advancement of Science.**—This Association was founded in 1887. Its headquarters are at Science House, Gloucester Street, Sydney, and meetings are usually held biennially within the various States and in the Dominion of New Zealand. The latest meeting was held in Canberra in January, 1954.

3. **Other Scientific Societies.**—The Linnean Society of New South Wales, with headquarters in Sydney, was founded in 1874. Sir William Macleay, who died in 1891, during his lifetime and by his will endowed the society to the amount of £67,000, which has been increased by investment to approximately £100,000. The Society maintains a research bacteriologist and offers annually to graduates of the University of Sydney, who are members of the Society and resident in New South Wales, research fellowships (Linnean Macleay Fellowships) in various branches of natural history. Two fellowships were awarded in 1952. The library comprises some 18,000 volumes, valued at about £9,000. Seventy-seven volumes of proceedings have been issued, and the Society exchanges with about 260 kindred institutions and Universities throughout the world. The membership at the end of 1952 was 233.

The British Astronomical Society has a branch in Sydney, and in each of the States the British Medical Association has a branch.

In addition to the societies enumerated above, there are various others in each State devoted to branches of scientific investigation.

## § 14. State Expenditure on Education, Science and Art.

The expenditure in each State on education, science and art during the years 1950–51 and 1951–52 is shown in the following table. Owing to the details not being available in all States, the figures exclude officers' pensions and superannuation, pay-roll tax, and interest and sinking fund on capital expended on buildings. The cost of the medical and dental inspection of school children is also excluded, as this service is more appropriately classified under Public Health, etc. :—

## STATE EXPENDITURE ON EDUCATION, SCIENCE AND ART.

(£.)

State.	Expenditure from—				Receipts.	Net Expenditure.
	Revenue.	Loan.	Other Funds.	Total.		
1950–51.						
New South Wales .. ..	16,143,253	2,636,302	..	18,779,555	476,731	18,302,824
Victoria .. ..	10,694,797	2,618,968	..	13,313,765 (a)	154,557	13,159,208
Queensland .. ..	5,058,620	645,261	236,708	5,940,589	58,310	5,882,279
South Australia .. ..	3,036,000	604,068	..	4,240,068	110,938	4,129,130
Western Australia .. ..	3,183,924	511,895	17,161	3,712,980	103,404	3,609,576
Tasmania .. ..	1,601,757	540,255	..	2,142,012	9,203	2,132,809
Total .. ..	40,318,351	7,556,749	253,869	48,128,969	913,143	47,215,826

(a) In addition, fees in respect of technical education amounting to £236,730 in 1950–51 and £252,926 in 1951–52 were received and spent by the School Councils.

STATE EXPENDITURE ON EDUCATION, SCIENCE AND ART—*continued.*  
(£.)

State.	Expenditure from—				Receipts.	Net Expenditure.
	Revenue.	Loan.	Other Funds.	Total.		
1951-52.						
New South Wales ..	20,950,039	4,432,517	..	25,382,556	643,262	24,739,294
Victoria ..	13,286,302	3,535,820	..	16,822,122	(a)161,543	16,660,579
Queensland ..	6,247,917	900,948	262,234	7,411,099	297,632	7,113,467
South Australia ..	4,577,797	1,534,762	..	6,112,559	252,798	5,859,761
Western Australia ..	4,304,534	749,490	10,510	5,064,534	88,809	4,975,725
Tasmania ..	2,116,010	639,739	..	2,755,749	9,764	2,745,985
<b>Total ..</b>	<b>51,482,599</b>	<b>11,793,276</b>	<b>272,744</b>	<b>63,548,619</b>	<b>1,453,808</b>	<b>62,094,811</b>

(a) In addition, fees in respect of technical education amounting to £236,730 in 1950-51 and £252,926 in 1951-52 were received and spent by the School Councils.

## CHAPTER XII.

### PUBLIC JUSTICE.

#### § 1. Introduction.

Each State has its own separate judicial system, the Commonwealth jurisdiction being confined to the High Court of Australia (largely a Court of Appeal intermediate to the Privy Council although it has also original jurisdiction), the Commonwealth Court of Conciliation and Arbitration and the Federal Court of Bankruptcy. Full particulars regarding the judicial power of the Commonwealth will be found in Chapter III. of the Commonwealth Constitution which appeared on page 18 of Official Year Book No. 39.

In considering the criminal returns of the various States, due allowance must be made for certain factors, such as the relative powers of the higher and lower courts. In the case of lower courts, the actual number of laws in each State whose breach renders a person liable to fine or imprisonment must be taken into account. Again, the attitude of the magistracy and police towards certain classes of offences is a factor, for in the case of liquor laws or laws connected with vagrancy or gaming, the views of the magistrates, and instructions issued to the police, may be responsible for considerable variations in the numbers. The strength and distribution of the police forces, and the age-constitution and distribution of the population of the States, also influence the results. Due weight should be given also to the prevalence of undetected crime, but information on this point is not available for all States.

#### § 2. Lower (Magistrates') Courts.

1. Powers of the Magistrates.—(i) *New South Wales*. There is no general limit to the powers of the magistrates in regard to offences punished summarily, their authority depending in each case on the statute which creates the offence and gives them jurisdiction. Except in the case of a very few statutes, and excluding cumulative sentences, the power of sentence is limited to twelve months. Imprisonment in default of fine is regulated by a scale limiting the maximum period according to the sum ordered to be paid, but in no case exceeding twelve months. Actions for debt and damage within certain limits also come within magisterial jurisdiction. In cases of liquidated debts and damages, whether liquidated or unliquidated, the amount is limited to £50 before a court constituted by a stipendiary magistrate. The amount in actions of debt before two or more Justices of the Peace is limited to £30 and in actions of damage to £10, but may extend to £30 with the consent of the defendant. Outside the Metropolitan Area of Sydney and certain other prescribed districts one justice of the peace may hear cases of debt, liquidated or unliquidated, or damage up to £5 and to £30 by consent of parties.

(ii) *Victoria*. The civil jurisdiction of magistrates is restricted to what may be designated ordinary debts, damages for assault, restitution of goods, etc., where the amount in dispute does not exceed £50, and to actions arising out of torts or contracts. No definite limit is fixed to the powers of the magistrates on the criminal side, and for some offences sentences up to two years may be imposed. The proportion of long sentences is, however, comparatively small.

(iii) *Queensland*. Generally speaking, the maximum term of imprisonment which justices can inflict is six months, but in certain exceptional cases, such as offences against sections 233, 344, and 445 of the Criminal Code (betting houses, aggravated assaults, and illegally using animals), sentences of twelve months may be imposed.

There is provision for applying cumulative sentences, but in practice, in general, not more than one sentence is made cumulative on a previous sentence.

Magistrates have no power to deal with habitual offenders, but there are such powers vested in the Supreme Court.



(iv) *South Australia.* In South Australia the power of special magistrates to impose fine and imprisonment is defined by the special act creating the offence and conferring jurisdiction. In the case of minor indictable offences, triable summarily, a maximum penalty of £100 fine or 2 years' imprisonment is fixed by the Justices Act 1921-1943. Magistrates also have power to hear certain civil actions in which the amount claimed is less than £750.

(v) *Western Australia.* The powers of magistrates and justices in regard to offences triable summarily are governed by the act creating the offence and giving them jurisdiction. Imprisonment in default of payment of a fine is regulated by a scale limiting the period according to the amount of the fine but not to exceed six months.

The civil jurisdiction of magistrates and courts is restricted in general to £250, but disputed actions, the subject matter of which exceeds £100, must be tried by a judge. By consent of the parties, any action that might be brought in the Supreme Court may be dealt with in a Local Court. Justices may act in the case of illness or absence of the magistrate.

Magistrates are coroners and justices may be appointed as acting coroners.

Magistrates have appellate jurisdiction under some statutes and in country districts act as Chairmen of the Courts of Session. They may be appointed as Commissioners of the Supreme Court.

On the goldfields, the magistrate is also the warden.

(vi) *Tasmania.* Magistrates may hear and determine in Courts of Petty Sessions all offences other than those punishable on indictment. Stealing and analogous crimes where the property involved does not exceed £10 in value may be dealt with by magistrates unless the defendant objects.

No general limit is fixed in respect of sentences, the statute creating the offence almost invariably laying down the penalty. Where this is not the case, the Contravention of Statutes Act 1889 provides that a fine of £50 may be imposed. Generally speaking, sentences which justices can inflict are limited to six months, although in several cases sentences of up to two years may be imposed. The aggregate term of cumulative sentences cannot exceed two years.

The civil jurisdiction of magistrates is divided into two categories. A Commissioner of the Court of Requests, who must be a legal practitioner, and is invariably a police magistrate, may hear actions for the recovery of debts and damages not exceeding £100. The jurisdiction of these courts may be increased by proclamation to £250, and this has been done in five instances. Courts of General Sessions, constituted by at least two justices, exercise similar powers, but the jurisdiction cannot exceed £50. Only one court has the maximum jurisdiction, the others being limited to £30.

2. *Cases Tried at Magistrates' Courts.*—The total number of arrest and summons cases tried at Magistrates' Courts in each State is given below for 1939 and for the years 1947 to 1951 :—

#### CASES TRIED AT MAGISTRATES' COURTS.

State or Territory.	1939.	1947.	1948.	1949.	1950.	1951.
New South Wales ..	144,848	180,835	198,456	205,817	214,894	242,165
Victoria ..	82,858	73,990	76,516	80,511	97,201	109,066
Queensland(a) ..	32,501	34,664	36,149	40,503	43,932	49,849
South Australia ..	22,776	(a)27,005	(a)25,376	(a)28,349	(a)31,964	(a)30,953
Western Australia ..	24,111	22,893	26,257	27,373	29,521	31,985
Tasmania ..	9,498	9,024	9,060	11,713	12,403	14,649
Northern Territory(a)	1,494	1,102	1,598	1,199	1,269	1,178
Aust. Cap. Territory ..	284	893	777	1,018	1,237	1,500
Total ..	318,370	350,406	374,189	396,483	432,421	481,345

(a) Year ended 30th June following.

Investigation of the returns shows that considerable variations in the figures for single States are occasioned by breaches of new Acts, or the more stringent enforcement of the provisions of existing Acts. Any deductions drawn from the total returns as to the increase or decrease of criminality should, therefore, be based upon a careful analysis of the detailed list of offences.

3. **Convictions at Magistrates' Courts.**—The figures given in the previous table include, of course, a number of people who were charged without sufficient reasons, and, statistically, are not of general importance. A classification of convictions of persons who appeared before the lower courts in each State during 1951 is given in the following table :—

CONVICTIONS AT MAGISTRATES' COURTS, 1951.

Class of Offence.	N.S.W.	Vic.	Qld.(a)	S.A.(a)	W.A.	Tas.	N.T.(a)	A.C.T.	Aust.
Against the Person . . .	2,787	1,205	399	276	349	151	74	50	5,291
Against Property . . .	12,769	5,290	2,642	1,647	2,765	678	65	121	25,977
Forgery and Offences against the Currency	76	..	..	3	1	..	5	..	85
Against Good Order . .	108,065	30,310	30,157	7,284	7,581	1,641	695	553	186,286
Other Miscellaneous . .	100,817	61,564	13,238	18,222	19,067	10,295	141	718	224,062
Total ..	224,514	98,369	45,435	27,432	29,763	12,765	980	1,442	441,701

(a) Year ended 30th June following.

The following table shows the number of convictions in 1939 and in each year from 1947 to 1951 :—

CONVICTIONS AT MAGISTRATES' COURTS.

State or Territory.	1939.	1947.	1948.	1949.	1950.	1951.
New South Wales ..	126,353	165,472	183,367	189,955	199,619	224,514
Victoria ..	72,186	66,086	68,243	72,416	87,873	98,369
Queensland(a) ..	28,920	31,315	33,469	38,691	41,492	46,436
South Australia ..	20,429	(a)24,164	(a)22,834	(a)25,496	(a)28,675	(a)27,432
Western Australia ..	22,539	21,095	24,360	25,388	27,315	29,763
Tasmania ..	8,722	7,312	7,701	10,206	10,961	12,765
Northern Territory(a)	1,394	1,058	1,516	1,127	1,145	980
Aust. Cap. Territory ..	260	729	714	917	1,151	1,442
Total ..	280,803	317,231	342,204	364,196	398,231	441,701

(a) Year ended 30th June following.

4. **Convictions for Serious Crime at Magistrates' Courts.**—(i) *General.* While the figures given in the preceding table refer to the entire body of convictions, the fact must not be overlooked that they include a large proportion of offences of a technical nature, many of them unwittingly committed, against various Acts of Parliament. Cases of drunkenness and minor breaches of good order, which, if they can be said to come within the category of crime at all, at least do so in a very different sense from some other offences, also help to swell the list. The following table has therefore been prepared for the purpose of showing the convictions at magistrates' courts, for what may be regarded as the more serious offences, i.e., against the person and property, either separately or conjointly, and forgery and offences against the currency. Owing to the smallness of the population, the rates for the Northern and the Australian Capital Territories are subject to considerable variation.

(ii) *Number and Rates, Years 1939 and 1947 to 1951.*—The following table shows the number and rates of convictions for serious crime at magistrates' courts for the years 1939 and 1947 to 1951 :—

**CONVICTIONS FOR SERIOUS CRIME AT MAGISTRATES' COURTS.**

State or Territory.	1939.	1947.	1948.	1949.	1950.	1951.
NUMBER.						
New South Wales ..	12,724	14,626	13,308	12,983	14,141	15,632
Victoria ..	5,727	5,028	4,964	4,675	5,204	6,495
Queensland(a) ..	2,402	2,241	2,434	2,481	2,699	3,041
South Australia ..	1,224	(a) 1,579	(a) 1,440	(a) 1,488	(a) 1,654	(a) 1,926
Western Australia ..	2,614	2,441	2,578	2,320	2,901	3,115
Tasmania ..	959	937	805	940	810	829
Northern Territory(a)	44	99	194	112	43	144
Aust. Cap. Territory ..	59	139	129	145	183	171
Total ..	25,753	27,090	25,852	25,144	27,635	31,353

**PER 10,000 OF POPULATION.**

New South Wales ..	46.26	49.00	43.92	41.69	43.85	47.10
Victoria ..	30.48	24.49	23.75	21.86	23.61	28.62
Queensland(a) ..	23.52	20.14	21.45	21.33	22.63	24.90
South Australia ..	20.50	(a) 24.22	(a) 21.65	(a) 21.66	(a) 23.26	(a) 26.41
Western Australia ..	55.63	48.52	50.07	43.52	51.92	53.57
Tasmania ..	40.15	36.35	30.42	34.48	28.70	28.30
Northern Territory(a)	60.58	87.53	151.08	78.61	27.67	89.75
Aust. Cap. Territory ..	47.18	81.62	67.20	68.43	77.60	70.10
Total ..	36.91	35.68	33.44	31.66	33.66	37.09

(a) Year ended 30th June following.

(iii) *Rate of Convictions, 1881 to 1951.* The rate of convictions at ten-yearly intervals over a period of seventy years is shown below; only the more serious offences particularized on the preceding page have been taken into consideration.

**RATE OF CONVICTIONS FOR SERIOUS CRIME AT MAGISTRATES' COURTS : AUSTRALIA.**

Year .. .. .	1881.	1891.	1901.	1911.	1921.	1931.	1941.	1951.
Convictions per 10,000 persons	69.3	44.8	29.1	24.6	29.2	37.1	33.6	37.1

5. *Committals to Higher Courts.*—(i) *General.* In a previous paragraph it has been pointed out that comparisons of criminality based on a consideration of the total returns from magistrates' courts are somewhat inadequate, inasmuch as the figures include numbers of cases which are merely technical breaches of laws having in some instances a purely local significance. The committals to higher courts give a better basis of comparison, although even in this connexion allowances must be made for the want of uniformity in jurisdiction. A classification of the offences for which persons appearing in the lower courts were committed to higher courts in each State and Territory for the year 1951 is shown in the following table :—

COMMITTALS TO HIGHER COURTS, 1951.

Class of Offence.	N.S.W.	Vic.	Qld.(a)	S.A.(a)	W.A.	Tas.	N.T.(a)	A.C.T.	Aust.
Against the Person ..	914	328	165	153	92	19	19	6	1,696
Against Property ..	2,622	1,148	257	279	107	161	3	18	4,595
Forgery and Offences against the Currency ..	67	102	2	20	1	6	2	..	200
Against Good Order ..	33	9	2	5	6	6	1	1	63
Other Miscellaneous ..	70	63	8	23	3	5	3	5	180
<b>Total .. ..</b>	<b>3,706</b>	<b>1,650</b>	<b>434</b>	<b>480</b>	<b>209</b>	<b>197</b>	<b>28</b>	<b>30</b>	<b>6,734</b>

(a) Year ended 30th June following.

The following table shows the number of committals in 1939 and in each year from 1947 to 1951, with the rate of such committals per 10,000 of population :—

COMMITTALS TO HIGHER COURTS.

State or Territory.	1939.	1947.	1948.	1949.	1950.	1951.
NUMBER.						
New South Wales .. ..	2,288	3,148	3,113	3,776	3,513	3,706
Victoria .. ..	1,777	1,783	1,996	1,751	1,638	1,650
Queensland(a) .. ..	359	433	330	414	521	434
South Australia .. ..	259	(a) 405	(a) 326	(a) 393	(a) 362	(a) 480
Western Australia .. ..	129	172	160	186	211	209
Tasmania .. ..	82	100	72	137	195	197
Northern Territory(a) ..	12	11	23	12	9	28
Australian Capital Territory	18	22	9	24	38	30
<b>Total .. ..</b>	<b>4,924</b>	<b>6,074</b>	<b>6,029</b>	<b>6,693</b>	<b>6,487</b>	<b>6,734</b>

PER 10,000 OF POPULATION.

New South Wales .. ..	8.3	10.6	10.3	12.1	10.9	11.2
Victoria .. ..	9.5	8.7	9.6	8.2	7.4	7.3
Queensland(a) .. ..	3.5	3.9	2.9	3.6	4.4	3.6
South Australia .. ..	4.3	(a) 6.2	(a) 4.9	(a) 5.7	(a) 5.1	(a) 6.6
Western Australia .. ..	2.8	3.4	3.1	3.5	3.8	3.6
Tasmania .. ..	3.4	3.9	2.7	5.0	6.9	6.7
Northern Territory(a) ..	16.5	9.7	17.9	8.4	5.8	17.5
Australian Capital Territory	14.4	12.9	4.7	11.3	16.1	12.3
<b>Total .. ..</b>	<b>7.1</b>	<b>8.0</b>	<b>7.8</b>	<b>8.4</b>	<b>7.9</b>	<b>8.0</b>

(a) Year ended 30th June following.

(ii) *Rate of Committals, 1881 to 1951.* The rate of committals for serious crime at ten-yearly intervals since 1881 is shown below :—

RATE OF COMMITTALS TO HIGHER COURTS : AUSTRALIA.

Year .. ..	1881.	1891.	1901.	1911.	1921.	1931.	1941.	1951.
Committals per 10,000 persons	12	11	8	6	7	8	5	8

6. Drunkenness.—(i) *Cases and Convictions.* The number of arrest and summons cases of drunkenness and the convictions recorded during the year 1939 and the years 1948 to 1951 are given in the following table :—

**DRUNKENNESS : CASES AND CONVICTIONS.**

State or Territory.	1939.		1948.		1949.		1950.		1951.	
	Cases.	Convictions.	Cases.	Convictions.	Cases.	Convictions.	Cases.	Convictions.	Cases.	Convictions.
New South Wales	32,472	32,405	82,900	82,625	78,401	78,206	78,727	78,477	83,178	82,837
Victoria	11,609	11,421	16,600	16,416	17,972	17,799	21,248	21,003	23,151	22,884
Queensland(a)	11,202	11,118	20,872	21,124	24,813	24,767	26,914	26,855	28,176	28,144
South Australia	2,607	2,597	(a)5,482	(a)5,458	(a)5,393	(a)5,360	(a)5,861	(a)5,846	(a)5,902	(a)5,890
Western Australia	2,681	2,658	4,437	4,367	5,424	5,383	6,113	6,046	6,035	5,974
Tasmania	411	407	519	501	724	705	653	639	718	693
Northern Terr.(a)	686	677	804	798	680	674	652	644	564	524
Aus. Cap. Terr.	114	114	427	414	437	435	430	426	477	476
<b>Total</b>	<b>61,782</b>	<b>61,397</b>	<b>132,041</b>	<b>131,703</b>	<b>133,844</b>	<b>133,329</b>	<b>140,600</b>	<b>139,936</b>	<b>148,201</b>	<b>147,422</b>

(a) Year ended 30th June following.

Under the heading "drunkenness" are included cases of ordinary drunkenness, drunkenness and disorderliness, and habitual drunkenness.

The number of convictions is, as might naturally be expected, almost identical with the number of cases.

(ii) *Convictions per 10,000 of Population.* The convictions for drunkenness per 10,000 of population during 1939 and each of the years from 1947 to 1951 are shown in the following table :—

**CONVICTIONS FOR DRUNKENNESS PER 10,000 OF POPULATION.**

State or Territory.	1939.	1947.	1948.	1949.	1950.	1951.
New South Wales ..	117.8	225.5	272.7	251.2	243.4	249.6
Victoria ..	60.8	72.3	78.5	83.2	95.3	100.9
Queensland(a) ..	108.9	155.1	186.2	212.9	225.1	230.5
South Australia ..	43.5	(a) 75.2	(a) 82.1	(a) 78.0	(a) 82.2	(a) 80.8
Western Australia ..	56.6	84.5	84.8	101.0	108.2	102.7
Tasmania ..	17.0	16.9	18.9	25.9	22.6	23.7
Australian Capital Territory	91.2	163.8	215.7	205.3	180.5	195.1
<b>Total</b> ..	<b>88.0</b>	<b>144.4</b>	<b>170.4</b>	<b>167.9</b>	<b>170.5</b>	<b>174.4</b>

(a) Year ended 30th June following.

In the twenties the convictions for drunkenness averaged approximately 100 per 10,000 of population, but the rate fell away considerably during the following years and was only 57.1 in 1931. With the improvement in the social condition of the people following that year, the average rose steadily to 84.1 in 1936. The annual average for the period 1936 to 1939 was 82.7 as compared with 90.8 for the years 1940 to 1945. Following an appreciable increase in the previous year the convictions per 10,000 rose very steeply in 1946 to 132.1 and increased to 170.5 in 1950 and to 174.4 in 1951. Figures for the consumption of beer have followed a somewhat similar course. The average consumption of beer per head, which in the twenties was slightly over eleven gallons, fell to 7.32 gallons in 1931-32. It rose to 10.34 in 1936-37, averaged 11.75 gallons for the years 1936-37 to 1939-40 and increased further to an average of 13.23 for the years 1940-41 to 1945-46. Consumption increased in 1945-46, and except for a slight decline in 1947-48 has continued to do so. In 1951-52 the average consumption per head was 20.46 gallons.

The convictions for drunkenness taken by themselves are not altogether a satisfactory test of the relative sobriety of the inhabitants of each State, inasmuch as several important factors must be taken into consideration. The age and sex constitution of the people, for example, are by no means identical in all the States. Another factor is the distribution of the population. Arrest or summons for drunkenness obviously is more likely in the regions densely populated than in those sparsely populated. In addition, allowance must be made for the attitude of the magistracy, the police and the general public in regard to the offence. Due account also must be taken of the effect of legislation dealing with the limitation of hours during which liquor may be sold in hotels.

(iii) *Consumption of Intoxicants.* The following table shows the consumption of spirits, wine and beer per head of population in Australia during the years 1938-39 and 1946-47 to 1951-52 :-

CONSUMPTION OF INTOXICANTS IN AUSTRALIA PER HEAD OF POPULATION.

Year.	Spirits.			Wine.			Beer.		
	Proof Gals.			Gals.			Gals.		
1938-39	..	..	..	0.22	0.65	12.13			
1946-47	..	..	..	0.29	1.09	15.90			
1947-48	..	..	..	0.31	1.37	15.47			
1948-49	..	..	..	0.33	1.38	17.87			
1949-50	..	..	..	0.32	1.50	18.23			
1950-51	..	..	..	0.38	1.61	19.72			
1951-52	..	..	..	0.32	1.62	20.46			

(iv) *Treatment of Drunkenness.* (a) *General.* Though the problem of the correct method of dealing with dipsomania is by no means an easy one, it seems fairly clear that the present plan of bringing offenders before magistrates, and subjecting them to the penalty of imprisonment or fine, has little deterrent effect, as the same offenders are constantly reappearing before the courts. The dangers of moral contamination in this way are appreciated, and a system of classification of prisoners has been adopted whereby the petty offender is as far as possible kept from association with those convicted of more serious offences.

(b) *Remedial.* Legislation has been passed in each State providing for the commitment of inebriates to special Government institutions. The laws in the various States are as follows :—New South Wales, Inebriates Act 1912; Victoria, Inebriates Act 1928; Queensland, Inebriate Institutions Act 1896; South Australia, Inebriates Act 1908-1934, Convicted Inebriates Act 1913-1934; Western Australia, Inebriates Act 1912-1919; Tasmania, Inebriates Act 1885, Inebriate Hospitals Act 1892. Curative work was first undertaken by the Government of New South Wales in 1907. In most cases the institutes are connected with the gaols, and, naturally, custodial measures are still a strong feature in their management; nevertheless, the results of remedial measures have been encouraging.

7. *First offenders.*—In all the States, statutes dealing with first offenders have been in force for many years. Existing legislation is as follows :—New South Wales, Crimes Act 1900 amended in 1924 and 1929, First Offenders (Women) Act 1919 as amended in 1929; Victoria, Crimes Act 1928; Queensland, Criminal Code Acts 1899 to 1945; South Australia, Offenders Probation Act of 1913-1951; Western Australia, Criminal Code Act 1913-1942; Tasmania, Probation of Offenders Act 1934. The method of procedure is practically the same in all cases, i.e., with regard to most first offenders convicted of a minor offence the magistrate or judge is empowered to allow the offender to go free on recognizances being entered into for his good behaviour for a certain period. In practice, this humane law has been found to work excellently, very few of those convicted under it having been found to relapse into crime.

8. *Children's Courts.*—Special courts for the trial of juvenile offenders have been established in New South Wales, Victoria, Queensland, Western Australia and Tasmania, while Children's Courts, although not under that title, are provided for by the Maintenance Act 1926-1950 in South Australia. The object of these courts is to avoid, as far as possible, the unpleasant surroundings of the ordinary police court.

## § 3. Higher Courts (Judges' Courts).

1. Convictions at Higher Courts.—The following table shows for each State and Territory during 1951 and in Australia as a whole in that and the previous year, the number of convictions at Higher Courts for each of the principal offences.

## CONVICTIONS AT HIGHER COURTS, 1951.

Offence.	N.S.W. (a)	Vic.	Qld. (a)	S.A.	W.A.	Tas.	N.T. (a)	A.C.T.	Australia.	
									1951.	1950.
<b>I. OFFENCES AGAINST THE PERSON.</b>										
Murder ..	10	2	1	2	1	1	3	..	20	26
Attempted Murder ..	3	2	..	..	..	..	..	..	5	7
Manslaughter ..	10	12	4	8	4	3	1	..	42	34
Rape ..	3	5	3	5	2	..	..	1	19	17
Other Offences against Females ..	117	79	35	53	11	17	5	..	317	267
Unnatural Offences ..	102	51	11	17	11	5	..	3	200	176
Abortion and Attempts to Procure Bigamy ..	3	..	..	3	..	..	..	..	6	6
Suicide, Attempted ..	32	24	12	4	4	4	..	..	80	87
Assault, Aggravated ..	83	27	28	6	11	5	9	..	165	166
Assault, Common ..	16	5	5	5	1	2	3	1	38	49
Other Offences against the Person ..	2	3	16	(b) 16	(c) 19	..	3	1	60	32
Total ..	381	212	115	119	64	38	24	7	960	876
<b>II. OFFENCES AGAINST PROPERTY.</b>										
Burglary and House-breaking ..	533	333	136	85	32	36	2	1	1,158	1,103
Robbery and Stealing from the Person ..	51	28	13	7	..	57	..	20	176	170
Horse-stealing ..	..	..	1	..	..	..	..	..	..	..
Cattle-stealing ..	3	3	2	1	..	..	..	..	13	13
Sheep-stealing ..	..	1	..	..	2	..	..	..	..	..
Embezzlement and Stealing by Servants ..	47	14	9	6	6	..	..	..	82	64
Larceny, Other ..	211	76	20	34	25	..	13	..	379	372
Unlawfully using Horses, Cattle and Vehicles ..	22	..	3	..	1	..	..	..	26	18
Receiving ..	38	36	9	7	1	5	..	1	97	89
Fraud and False Pretences ..	49	9	11	10	3	12	2	2	98	118
Arson ..	7	1	3	1	..	1	..	..	13	12
Malicious Damage ..	6	2	..	1	..	3	..	..	12	4
Other Offences against Property ..	..	12	..	..	..	..	..	2	..	11
Total ..	967	515	207	152	70	114	17	26	2,068	1,974
<b>III. FORGERY AND OFFENCES AGAINST THE CURRENCY.</b>										
Forgery and Uttering Forged Instruments ..	11	16	3	21	1	4	..	..	56	53
Offences in relation to the Currency ..	..	1	..	..	..	..	..	..	1	3
Total ..	11	17	3	21	1	4	..	..	57	56
<b>IV. OFFENCES AGAINST GOOD ORDER.</b>										
..	12	7	8	..	4	4	..	..	35	8
<b>V. OTHER MISCELLANEOUS.</b>										
Conspiracy ..	4	..	..	7	..	..	1	..	12	11
Perjury and Subornation ..	4	4	..	..	..	3	2	..	13	8
Other Offences ..	9	6	3	8	2	..	..	..	28	31
Total ..	17	10	3	15	2	3	3	..	53	50
Grand Total ..	1,388	761	336	307	141	163	44	33	3,173	2,964

(a) Year ended 30th June, 1952. (b) Includes 7 convictions for causing death by dangerous driving. (c) Includes 2 convictions for causing death by negligent driving.

2. **Convictions at Higher Courts, Years 1939 and 1947 to 1951.**—The number of convictions at higher courts and the rate per 10,000 of population for these years are given below. Owing to the smallness of the population and the particular conditions prevailing there the rates for the Territories naturally show considerable variation.

## CONVICTIONS AT HIGHER COURTS.

State or Territory.	1939.	1947.	1948.	1949.	1950.	1951.
NUMBER.						
New South Wales(a) ..	982	1,297	1,369	1,352	1,299	1,388
Victoria .. .. .	690	785	806	669	722	761
Queensland(a) .. ..	214	270	250	313	346	336
South Australia .. ..	179	246	185	205	207	307
Western Australia ..	71	102	107	110	149	141
Tasmania .. .. .	39	64	58	109	148	163
Northern Territory(a) ..	11	48	86	39	44	44
Australian Capital Territory	14	15	7	23	49	33
Total .. .. .	2,200	2,827	2,868	2,820	2,964	3,173
PER 10,000 OF POPULATION.						
New South Wales(a) ..	3.6	4.3	4.5	4.3	4.0	4.1
Victoria .. .. .	3.7	3.8	3.9	3.1	3.3	3.4
Queensland(a) .. ..	2.1	2.4	2.2	2.7	2.9	2.8
South Australia .. ..	3.0	3.8	2.8	3.0	3.0	4.3
Western Australia ..	1.5	2.0	2.1	2.1	2.7	2.4
Tasmania .. .. .	1.6	2.5	2.2	4.0	5.2	5.6
Northern Territory(a) ..	15.2	42.4	66.9	27.4	28.3	27.4
Australian Capital Territory	11.2	8.8	3.6	10.9	20.8	13.5
Total .. .. .	3.2	3.7	3.7	3.5	3.6	3.7

(a) Year ended 30th June following.

3. **Habitual Offenders.**—An account of the methods adopted in each State in connexion with habitual offenders is given in the following paragraphs.

(i) *New South Wales.* The Habitual Criminals Act of 1905 gives power to judges to declare as habitual criminals persons who have a certain scheduled number of previous convictions. Action may be taken either on the initiative of the judge in indictable matters, or on the recommendation of a stipendiary magistrate, when the matter becomes a special hearing before a judge. The result of the declaration is that the offender is kept for an indefinite period after the completion of his sentence, and is released only when he is considered to be fit to be at large. During the indeterminate stage of his sentence the conditions of detention are governed by regulations under the Act which are somewhat less restrictive than those under the Prisons Act 1899.

At 31st December, 1952 there were 72 prisoners detained in pursuance of the legislation.

(ii) *Victoria.* The Indeterminate Sentences Act came into force in Victoria in July, 1908, and up to the end of June, 1952, 6,151 individual prisoners had been detained under its provisions. Of the 5,370 who were released on parole or probation, 2,222 were



reconvicted or returned, 2,885 had completed probation or not offended again, so far as is known, and 234 were reporting on parole or probation. The report of the Indeterminate Sentences Board indicates that the successful results from all inmates approximates 59 per cent., while the results from the younger delinquents (up to 25 years of age) is over 66 per cent. The Indeterminate Sentences system was brought into operation with the object of more comprehensive control of prisoners, particularly after parole and probation, with the twofold object of the reform of the inmate and protection of society.

Committals to reformatory prison are generally by Supreme Court Judges or Chairmen of General Sessions pursuant to the provisions of Sections 514 and 515 of the Crimes Act and by Special Magistrates of Children's Courts pursuant to the provisions of Section 28 of the Children's Court Act. This latter provision is limited to children between the ages of fifteen and seventeen.

(iii) *Queensland.* Sections 659A to 659I of the Queensland Criminal Code deal with habitual criminals. Only the Supreme Court or a judge thereof may declare a person to be an habitual criminal. An habitual criminal is to be detained in a reformatory prison (Section 659D) and there employed (Section 659F).

Where the Supreme Court or a judge recommends the discharge of an habitual criminal, the Governor may direct his discharge and may order him so long as he remains in Queensland to report at intervals during any period not exceeding two years (Section 659G).

(iv) *South Australia.* The Criminal Law Consolidation Act 1935-1952 provides that persons convicted of a certain number of indictable offences shall be detained, upon further conviction, during the Governor's pleasure. Proof of previous conviction is always relevant to the question of penalty.

(v) *Western Australia.* Under the Criminal Code Amendment Act of 1918, power is given to sentence prisoners to be detained in a reformatory prison during the Governor's pleasure, where such prisoner is deemed to be an habitual criminal, or in other special circumstances where the Court considers such a sentence is fit.

The number under preventative detention on 30th June, 1952 was 17, and the total number dealt with since the passing of the Act was 130.

(vi) *Tasmania.* Since the Indeterminate Sentences Act came into operation in 1922, 65 persons have been confined under its provisions; at present five are in custody.

Of the 60 released on probation, 15 have been re-committed.

4. **Capital Punishment.**—There were eleven executions in Australia during the period 1939 to 1951. One took place in New South Wales (in 1939), six in Victoria (two in 1939, one in 1942 and three in 1951), three in South Australia (one in 1944, one in 1946 and one in 1950) and one in Tasmania (in 1946).

Under the Criminal Code Amendment Act 1922 capital punishment was abolished in Queensland.

In the early days of the history of Australia the penalty of death was attached to a large number of offences, many of which at the present time would be dealt with in the lower or magistrates' court. With the growth of settlement and the general amelioration in social and moral conditions, the list was, however, considerably curtailed, and the existing tendency is practically to restrict death sentences to cases of murder. It may be stated that in cases of rape, which is a capital offence in some of the Australian States, the penalty has been but sparingly inflicted during the last few years. Juries are reputed to be loath to convict on this charge, owing to the uncertainty whether sentence of death will be carried out.

The average annual number of executions in Australia from 1861 to 1880 was 9; from 1881 to 1900, 6; from 1901 to 1910, 4; from 1911 to 1920, 2; from 1921 to 1930, 2; from 1931 to 1940, 1; and from 1941 to 1950, 0.5.

§ 4. Civil Courts.

1. Lower Courts.—The total number of complaints entered and the amounts awarded to plaintiffs during the years 1950 and 1951 are shown in the following table. The figures represent the returns from the Small Debts Courts in New South Wales, Petty Session Courts in Victoria, Magistrates' Courts in Queensland, Local Courts of South Australia and Western Australia, Courts of Requests in Tasmania, Courts of Summary Jurisdiction in Northern Territory and Court of Petty Sessions in the Australian Capital Territory.

CIVIL CASES AT LOWER COURTS.

State.		1950.	1951.	State or Territory.		1950.	1951.
N.S.W.—				Tas.—			
Cases ..	No.	33,090	33,425	Cases ..	No.	11,394	11,908
Amount	£	168,891	155,766	Amount	£	51,714	57,203
Victoria—				Nor. Terr.(a)—			
Cases ..	No.	45,174	40,352	Cases	No.	346	292
Amount	£	365,257	352,269	Amount	£	(b)	9,687
Q'land.(a)—				A.C.T.—			
Cases ..	No.	3,948	4,049	Cases ..	No.	181	115
Amount	£	106,072	132,200	Amount	£	2,269	1,416
S. Aust.—				Total—			
Cases ..	No.	17,993	19,757	Cases ..	No.	127,243	125,049
Amount	£	133,845	215,611	Amount	£	6919,820	1,017,160
W. Aust.—							
Cases ..	No.	16,017	15,151				
Amount	£	91,772	93,008				

(a) Year ended 30th June following.

(b) Not available.

(c) Excluding Northern Territory.

2. Higher Courts.—The following table shows the transactions on the civil side in the Higher Courts during the years 1950 and 1951. The particulars given below include the number and amount of judgments entered by default or confession, or agreement, and differ from those in issues of the Official Year Book prior to No. 29, which related in most States only to causes actually tried during the year.

The New South Wales returns refer to judgments in the District Courts only, and exclude 1,778 judgments in 1950 and 1,897 judgments in 1951 signed in the Supreme Court.

CIVIL CAUSES AT HIGHER COURTS.

State.		1950.	1951.	State or Territory.		1950.	1951.
N.S.W.—				Tas.—			
Causes	No.	6,362	5,329	Causes	No.	509	561
Amount	£	(a)	(a)	Amount	£	66,504	83,069
Victoria—				Nor. Terr.(b)—			
Causes	No.	3,851	4,901	Causes ..	No.	13	6
Amount	£	438,938	581,743	Amount	£	8,471	14,534
Q'land.(b)—				A.C.T.—			
Causes	No.	1,173	1,014	Causes	No.	14	24
Amount	£	86,733	220,827	Amount	£	5,179	8,598
S. Aust.—				Total—			
Causes	No.	715	701	Causes	No.	12,819	12,737
Amount	£	45,215	30,118	Amount	£	(a)	(a)
W. Aust.(c)—							
Causes	No.	182	201				
Amount	£	99,527	113,908				

(a) Not available.

(b) Year ended 30th June following.

(c) Judgments signed and entered.

3. Divorces and Judicial Separations.—(i) *Number of Petitions and Divorces granted.* The following table shows the number of petitions for divorce, nullity of marriage and judicial separation filed in each State during 1952, and the number of divorce and nullity of marriage decrees made absolute and judicial separations granted during the year :—

PETITIONS FOR DIVORCE, ETC., AND DIVORCES, ETC. GRANTED, 1952.

State or Territory.	.Petitions for Divorce, Nullity of Marriage and Judicial Separation.			Decrees made Absolute for—		Judicial Separations Granted.
	By Husband.	By Wife.	Total.	Divorce.	Nullity of Marriage.	
New South Wales ..	1,791	2,507	4,298	3,335	27	7
Victoria ..	843	1,010	1,853	(a) 1,596	(a) 17	(a) 3
Queensland ..	305	409	714	705	6	..
South Australia ..	339	473	812	581	3	1
Western Australia ..	366	296	662	585	..	..
Tasmania ..	143	171	314	217	..	..
Northern Territory ..	6	6	12	6	..	..
Aust. Cap. Territory ..	19	17	36	17	..	..
Total 1952 ..	3,812	4,889	8,701	7,042	53	11
1951 ..	3,750	4,753	8,503	7,269	51	7

(a) Dissolution of marriage granted.

(ii) *Number of Divorces, etc., granted, Years 1939 and 1948 to 1952.* The number of divorces and judicial separations in each State and Territory for these years is shown in the following table. The figures refer, in the case of divorces, to decrees made absolute in each year and include decrees for nullity of marriage.

DIVORCES AND JUDICIAL SEPARATIONS : AUSTRALIA.

State or Territory.	1939.		1948.		1949.		1950.		1951.		1952.	
	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.
N.S.W. ..	1,545	8	3,300	8	2,655	5	3,450	6	3,328	4	3,362	7
Victoria(a) ..	801	4	1,679	2	1,778	2	1,602	2	1,729	1	1,613	3
Queensland ..	624	..	724	..	731	1	791	1	707	1	711	..
S. Australia ..	243	..	632	2	592	..	664	2	641	1	584	1
W. Australia ..	244	..	702	..	569	..	724	..	683	..	585	..
Tasmania ..	80	..	185	..	266	..	152	..	194	..	217	..
Nor. Territory ..	(b) 2	..	3	..	12	..	6	..	13	..	6	..
Aus. Cap. Ter.	6	1	18	..	19	..	25	..	25	..	17	..
Total ..	3,145	13	7,243	12	6,622	8	7,414	11	7,320	7	7,095	11

(a) Dissolution of marriage granted.

(b) Year ended 30th June following.

(iii) *Average Annual Number of Divorces granted, Years 1871 to 1950.* The average annual number of divorces and judicial separations in Australia for each decennial period from 1871 to 1950 was as follows:—

**DIVORCES AND JUDICIAL SEPARATIONS : AUSTRALIA.**

Year 1871-80.	1881-90.	1891-1900.	1901-10.	1911-20.	1921-30.	1931-40.	1941-50.
Average 29	70	358	399	744	1,699	2,521	6,192

(iv) *Grounds of Decree on which Divorce, etc., granted, Years 1951 and 1952.* The grounds on which divorces, including nullity of marriage, were made absolute and judicial separations granted during 1951 and 1952 in each State and Territory are shown in the following table:—

**DIVORCES AND JUDICIAL SEPARATIONS : GROUNDS ON WHICH GRANTED.**

Grounds on which Decrees were Granted.	N.S.W.		Vic.(a)		Qld.		S.A.		W.A.		Tas.		N.T.		A.C.T.		Aust.		
	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	
<b>1951.</b>																			
Adultery ..	652	2	420	..	173	..	234	1	250	..	46	..	3	..	6	..	1,784	3	
Adultery and Desertion ..	..	..	14	..	..	..	..	..	1	..	1	..	..	..	..	..	..	16	..
Bigamy ..	16	..	5	..	1	..	1	..	1	..	..	..	..	..	..	..	..	24	..
Cruelty ..	59	..	4	..	..	1	74	..	1	..	..	..	1	..	3	..	..	142	1
Cruelty and Drunkenness ..	71	..	15	..	..	..	..	..	4	..	1	..	..	..	..	..	..	91	..
Desertion ..	2,457	2	1,241	1	521	..	304	..	201	..	144	..	9	..	16	..	..	4,893	3
Drunkenness ..	48	..	7	..	..	..	9	..	1	..	..	..	..	..	..	..	..	65	..
Gaol for Crime ..	15	..	3	..	..	..	1	..	3	..	..	..	..	..	..	..	..	22	..
Impotency ..	8	..	10	..	..	..	3	..	1	..	..	..	..	..	..	..	..	22	..
Insanity ..	..	..	9	..	5	..	6	..	2	..	2	..	..	..	..	..	..	25	..
Maintenance ..	..	..	..	..	..	..	2	..	3	..	..	..	..	..	..	..	..	24	..
Non-Consumma- tion ..	..	..	..	..	5	..	..	..	..	..	..	..	..	..	..	..	..	5	..
Separation for over 5 years ..	..	..	..	..	..	..	7	..	194	..	..	..	..	..	..	..	..	201	..
Other ..	2	..	1	..	2	..	7	..	1	..	..	..	..	..	..	..	..	6	..
Total ..	3,328	4	1,729	1	707	1	641	1	683	..	194	..	13	..	25	..	..	7,320	7
<b>1952.</b>																			
Adultery ..	744	1	379	1	195	..	230	..	230	..	46	..	4	..	6	..	..	1,834	2
Adultery and Desertion ..	..	..	28	..	3	..	..	..	2	..	..	..	..	..	..	..	..	33	..
Bigamy ..	12	..	5	..	2	..	1	..	..	..	..	..	..	..	..	..	..	20	..
Cruelty ..	72	1	5	1	..	..	86	1	..	..	..	..	1	..	2	..	..	166	3
Cruelty and Drunkenness ..	86	2	24	..	..	..	..	..	1	..	1	..	..	..	..	..	..	111	2
Desertion ..	2,362	3	1,139	1	502	..	240	..	153	..	168	..	1	..	9	..	..	4,574	4
Drunkenness ..	55	..	10	..	..	..	8	..	1	..	1	..	..	..	..	..	..	75	..
Gaol for Crime ..	15	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	17	..
Impotency ..	14	..	12	..	5	..	2	..	..	..	..	..	..	..	..	..	..	33	..
Insanity ..	..	..	9	..	3	..	1	..	4	..	1	..	..	..	..	..	..	18	..
Maintenance ..	..	..	..	..	..	..	4	..	21	..	..	..	..	..	..	..	..	25	..
Non-Consumma- tion ..	..	..	..	..	1	..	..	..	3	..	..	..	..	..	..	..	..	4	..
Separation for over 5 years ..	..	..	..	..	..	..	12	..	169	..	..	..	..	..	..	..	..	181	..
Other ..	2	..	1	..	..	..	1	..	1	..	..	..	..	..	..	..	..	4	..
Total ..	3,362	7	1,613	3	711	..	584	1	585	..	217	..	6	..	17	..	..	7,095	11

(a) Dissolution of marriage granted.

(v) *Ages of Husband and Wife at Time of Divorce.* The following table shows, in each age group at the time when the divorce decree was made absolute, the number of husbands and wives who were divorced during 1952. In that year the incidence of divorce was highest in the vicinity of the group 30 to 34 years.

**DIVORCES : AGES OF PARTIES AT TIME OF DIVORCE, AUSTRALIA, 1952.**

(NOTE.—Excludes nullity of marriage.)

Ages of Husbands (Years).	Ages of Wives (Years).										Total Husbands.	
	Under 21.	21 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 to 49.	50 to 54.	55 to 59.	60 and over.		Not stated.
Under 21 ..	1	..	..	..	..	..	..	..	..	..	..	1
21 to 24 ..	20	84	25	3	3	..	..	..	..	..	..	135
25 to 29 ..	9	310	599	93	12	..	..	..	..	..	..	1,025
30 to 34 ..	4	61	684	704	194	23	5	..	..	..	..	1,675
35 to 39 ..	..	22	160	566	551	103	12	1	1	..	..	1,418
40 to 44 ..	2	4	40	145	356	372	80	9	2	1	3	1,014
45 to 49 ..	..	..	11	38	115	322	232	32	8	2	..	760
50 to 54 ..	..	..	2	7	42	102	161	118	20	5	..	457
55 to 59 ..	..	..	1	4	14	33	63	71	73	15	1	275
60 and over ..	..	..	2	4	3	11	27	58	53	78	..	236
Not stated ..	..	1	2	..	2	2	1	..	..	..	38	46
<b>Total Wives</b>	<b>36</b>	<b>482</b>	<b>1,526</b>	<b>1,564</b>	<b>1,292</b>	<b>968</b>	<b>581</b>	<b>289</b>	<b>157</b>	<b>101</b>	<b>46</b>	<b>7,042</b>

(vi) *Divorces Granted—Duration of Marriage and Issue of Persons Involved.* The following table shows the number of divorce decrees made absolute in 1952, classified according to the legal duration of the marriage (i.e., the period from the date of marriage to the date when the decree nisi was made absolute) and the issue involved. In respect of 40 per cent. of the divorces finalized in that year the marriages had been celebrated within the previous 10 years. Of the couples divorced, 34 per cent. had no children, 30 per cent. had one child, 21 per cent. had two children, 8 per cent. had three children and 7 per cent. had four or more children.

**DIVORCES : DURATION OF MARRIAGE AND ISSUE OF PARTIES, AUSTRALIA, 1952.**

(NOTE.—Excludes nullity of marriage.)

Duration of Marriage (Years).	Number of Children.												Total Divorces made absolute.	Total children.	
	0	1	2	3	4	5	6	7	8	9	10	Over 10			N.S.
Under 1 year	3	..	..	..	..	..	..	..	..	..	..	..	..	3	..
1 and under	17	3	..	..	..	..	..	..	..	..	..	..	..	20	3
2 ..	73	14	..	..	..	..	..	..	..	..	..	..	..	87	14
3 ..	96	48	3	..	1	..	..	..	..	..	..	..	..	148	58
4 ..	198	105	12	2	..	..	..	..	..	..	..	..	..	317	135
5 ..	248	158	33	5	..	..	..	..	..	..	..	..	..	444	239
6 ..	210	187	53	9	1	1	..	..	..	..	..	..	..	461	329
7 ..	194	186	69	16	1	..	..	..	..	..	..	..	..	466	376
8 ..	172	147	66	17	4	1	..	..	..	..	..	..	..	407	351
9 ..	166	172	115	27	6	1	..	..	..	..	..	..	..	487	512
10 ..	175	172	94	26	3	3	1	..	..	..	..	..	..	474	471
11 ..	129	132	110	30	12	2	..	1	..	..	..	..	..	416	507
12 ..	117	102	96	36	7	4	..	..	..	..	..	..	..	362	450
13 ..	81	90	80	31	12	3	..	..	..	..	..	..	..	297	406
14 ..	75	85	67	31	12	4	4	..	..	..	..	..	..	278	404
15 ..	58	67	69	39	10	7	1	..	..	..	..	..	..	251	403
16 ..	46	52	63	31	14	5	5	..	..	..	..	..	..	216	382
17 ..	42	61	61	32	11	5	3	..	1	..	..	..	..	216	374
18 ..	27	40	51	28	12	5	1	..	1	..	..	..	..	165	313
19 ..	24	44	45	26	11	5	1	1	1	..	..	..	..	158	302
20 ..	29	31	46	18	10	4	1	1	..	..	..	..	..	140	250
21 to 24 years	79	107	149	88	55	20	8	3	1	1	..	..	..	511	1,075
25 to 29 ..	66	68	114	62	39	17	5	7	2	3	4	1	..	388	896
30 to 34 ..	38	44	38	27	23	15	9	3	2	1	2	..	..	202	488
35 to 39 ..	16	13	20	13	7	5	5	2	..	4	2	1	..	88	258
40 to 44 ..	2	1	4	4	8	6	1	2	2	1	..	..	..	31	128
45 years and over	..	1	1	1	..	1	..	..	1	..	..	..	..	5	19
Not stated	2	2	..	..	..	..	..	..	..	..	..	..	..	4	2
<b>Total Divorces..</b>	<b>2,383</b>	<b>2,132</b>	<b>1,459</b>	<b>599</b>	<b>259</b>	<b>114</b>	<b>45</b>	<b>20</b>	<b>11</b>	<b>10</b>	<b>8</b>	<b>2</b>	..	<b>7,042</b>	..
<b>Total Children..</b>	..	<b>2,132</b>	<b>2,918</b>	<b>1,797</b>	<b>1,036</b>	<b>570</b>	<b>270</b>	<b>140</b>	<b>88</b>	<b>90</b>	<b>80</b>	<b>24</b>	..	..	<b>9,145</b>

(vii) *Number of Divorced Persons at Censuses 1891 to 1947.* The following table shows the number and proportions of divorced males and females in Australia at each Census from 1891 to 1947. A classification of these persons by age has appeared in previous

issues of the Official Year Book (see No. 39, page 269). Prior to 1911 no record was made of divorced persons in South Australia, so comparisons cannot be made to extend beyond that date.

**DIVORCED PERSONS AT CENSUS DATES : AGE DISTRIBUTION, AUSTRALIA.**

Sex.	Number.						Proportion per 10,000 of the Sex, 15 years of age and over.					
	1891. (a)	1901. (a)	1911.	1921.	1933.	1947.	1891. (a)	1901. (a)	1911.	1921.	1933.	1947.
Males ..	332	1,234	2,368	4,233	10,298	25,052	3	10	15	23	42	89
Females ..	228	1,149	2,140	4,304	10,888	27,516	3	10	15	24	46	96

(a) Excludes South Australia.

4. **Bankruptcies.**—Particulars relating to bankruptcy in each State up to the end of 1927 were incorporated under this heading in issues of the Official Year Book prior to No. 23. Under the terms of the Bankruptcy Act 1924-1950 jurisdiction in bankruptcy and insolvency was taken over by the Commonwealth from 1st August, 1928. The Act made provision for the declaration of districts, and each State (except Queensland) and Northern Territory have been declared bankruptcy districts. The bankruptcy district of New South Wales includes the Australian Capital Territory. Queensland has been divided into three districts corresponding to the three Supreme Court districts in that State. Operations under the Act for the year ended 31st July, 1952 are shown in the following table. For the purposes of comparison, the annual averages for periods between the years 1929 and 1948 are appended to the table.

**FEDERAL BANKRUPTCY ACT : OPERATIONS, 1951-52.**

Particulars.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aus-tralia.	
Sequestration Orders and Orders for Administration of Deceased Debtors' Estates	Number ..	155	67	74	37	23	26	382	
	Liabilities £	255,226	111,669	106,263	89,348	43,718	38,230	644,454	
	Assets .. £	213,270	35,043	88,678	77,071	38,823	21,399	474,284	
Compositions without Bankruptcy Part XI.	Number ..	2	2	..	15	18	..	37	
	Liabilities £	8,536	7,603	..	38,829	45,555	..	100,523	
	Assets .. £	719	10,985	..	29,686	33,977	..	75,367	
Deeds under Part XI.	Number ..	..	2	..	6	4	..	12	
	Liabilities £	..	12,480	..	25,835	15,744	..	54,059	
	Assets .. £	..	16,678	..	22,997	16,721	..	56,396	
Deeds of Arrangement, Part XII.	Number ..	25	17	9	..	..	1	52	
	Liabilities £	256,882	74,543	75,815	..	..	3,146	410,386	
	Assets .. £	319,087	54,488	65,377	..	..	373	439,325	
Total, 1951-52	Number ..	182	88	83	58	45	27	483	
	Liabilities £	520,644	206,295	182,078	154,012	105,017	41,376	1,209,422	
	Assets .. £	533,076	117,194	154,055	129,754	89,521	21,772	1,045,372	
Total, 1950-51	Number ..	139	72	60	47	39	20	380	
	Liabilities £	352,929	174,120	200,561	154,445	128,945	19,420	9,057	1,039,477
	Assets .. £	275,368	84,158	90,707	114,837	81,593	6,438	16,546	669,647
Average 5 years ended 1947-48	Number ..	95	50	25	33	17	7	227	
	Liabilities £	163,417	100,174	27,584	86,490	26,288	3,946	407,899	
	Assets .. £	80,911	40,000	22,857	56,634	12,530	1,215	214,147	
Average 5 years ended 1942-43	Number ..	430	296	133	355	81	44	1,339	
	Liabilities £	661,001	297,571	219,236	995,722	235,944	27,937	406	2,437,817
	Assets .. £	427,684	127,954	152,415	726,359	166,425	14,402	182	1,615,421
Average 5 years ended 1937-38	Number ..	490	380	183	543	108	57	1,761	
	Liabilities £	700,657	595,056	259,592	1,565,025	228,624	55,870	931	3,405,755
	Assets .. £	474,500	274,545	193,975	1,075,350	187,933	33,382	795	2,240,480
Average 5 years ended 1932-33	Number ..	960	689	304	631	343	94	3,021	
	Liabilities £	1,920,031	1,419,060	605,707	1,032,299	871,133	114,901	260	5,963,391
	Assets .. £	1,552,490	1,005,694	493,083	782,432	1,215,154	81,785	79	5,130,717

It is pointed out that the procedure in certain States has been influenced largely by the procedure in force prior to the passing of the Commonwealth Act, and that therefore, no particular significance attaches to the large number of compositions, etc., in South Australia and Western Australia.

The Bankruptcy Act 1930 created a Federal Court of Bankruptcy and provided for the appointment of a Judge or two Judges thereto. In 1930 a Commonwealth Judge in Bankruptcy was appointed, in addition to the State Judges, to deal with bankruptcy work in New South Wales and Victoria, as the Courts in these States were unable to cope with the business. All the bankruptcy cases in these States are now heard in the Federal Court which sits in Sydney and Melbourne alternately.

5. **High Court of Australia.**—Under the provisions of Section 71 of the Commonwealth Constitution, the judicial power of the Commonwealth is vested in a Supreme Court called the High Court of Australia, and in such other courts as the Parliament creates or invests with federal jurisdiction. The High Court of Australia possesses both original and appellate jurisdiction. The powers of the Court are defined in the Commonwealth Constitution, and in the Judiciary Act 1903–1950. The Court consists of a Chief Justice and six other judges. Sittings of the Court are held in the capitals of the various States as occasion may require. The High Court functions as a Court of Appeal for Australia. The following statement shows the transactions of the High Court for 1951 and 1952.

#### TRANSACTIONS OF THE HIGH COURT OF AUSTRALIA.

Original Jurisdiction.	1951.	1952.	Appellate Jurisdiction.	1951.	1952.
	Number of writs issued	127		151	Number of appeals set down for hearing ..
Number of causes entered for trial ..	42	39	Number allowed ..	31	40
Verdicts for plaintiffs ..	17	42	Number dismissed ..	42	63
Verdicts for defendants	6	15	Otherwise disposed of	2	10
Otherwise disposed of ..	47	18			
Amount of judgments	£85,642	£85,388			

During 1951 and 1952 respectively the High Court dealt also with the following : Appeals from Assessments under Taxation Assessment Act, 38, 53 ; Special cases stated for the opinion of the Full Court, 5, 16 ; Applications for Prohibitions, etc., 65, 37. The fees collected amounted to £1,431 in 1951 and £1,521 in 1952.

6. **Commonwealth Court of Conciliation and Arbitration.**—Information regarding this Court, which was established under the Conciliation and Arbitration Act 1904–1952, will be found in Chapter VIII.—Labour, Wages and Prices, of this volume and in the *Labour Report* issued by this Bureau.

### § 5. Police and Prisons.

1. **General.**—Early issues of the Official Year Book (*see* No. 4, p. 918) contain a *résumé* of the evolution of the police force in Australia up to the passing of the Police Act 1862 (25 Vic. No. 16) in New South Wales.

2. **Duties of the Police.**—In addition to the ordinary employment attaching to their office, the police are called upon to perform many duties which in other countries are carried out by various functionaries. Much of the time of the several forces is taken up in extraneous duties not connected with the protection of life and property, while the cash value of the services rendered to other Government departments is considerable.

3. **Strength of Police Force.**—(i) *General.* The strength of the police force including probationers, cadets, special constables and women police, in each State and Territory during 1939 and the years 1947 to 1951 is shown in the following table. It may be

mentioned that the police forces (with the exception of the small body of Commonwealth police maintained in the Northern Territory and in the Australian Capital Territory) are entirely under State control, but, by arrangement, the Commonwealth Government utilizes their services in various directions, such as acting as aliens registration officers, and policing the various regulations, etc.

## STRENGTH OF POLICE FORCES.

State or Territory.	Area of State in Sq. Miles.	No. of Police.					
		1939.	1947.	1948.	1949.	1950.	1951.
New South Wales	309,433	3,907	4,242	4,333	4,382	4,449	4,527
Victoria ..	87,884	2,333	2,268	2,385	2,597	2,751	2,879
Queensland(a) ..	670,500	1,460	1,796	1,982	2,040	2,220	2,455
S. Australia(a) ..	380,070	905	958	975	996	972	1,055
W. Australia(a) ..	975,920	600	673	730	759	787	877
Tasmania(a) ..	26,215	296	342	340	363	392	420
Nor. Territory(a) ..	523,620	48	53	65	58	61	48
Aust. Cap. Terr. ..	939	17	36	40	43	45	57
<b>Total ..</b>	<b>2,974,581</b>	<b>9,566</b>	<b>10,368</b>	<b>10,850</b>	<b>11,238</b>	<b>11,677</b>	<b>12,318</b>

(a) 30th June of year following.

The figures for New South Wales for 1951 exclude 12 "black trackers" (i.e., natives employed in detection of offenders chiefly in outlying districts) and 4 matrons, while the Victorian returns exclude one black tracker. For Queensland the figures exclude 28 black trackers, for South Australia 3 wardresses, for Western Australia 18 black trackers and 6 female searchers, and for the Northern Territory 29 black trackers. Women police are employed in all the States, the respective numbers for 1951 included in the table above being:—New South Wales 36, Victoria 25, Queensland 8, South Australia 16, Western Australia 9, Tasmania 6 and Australian Capital Territory 2. Their work is mainly preventive, relating particularly to females and neglected children. They also carry out escort duties in respect of female prisoners.

(ii) *Proportion of Population.* The average number of persons in the various States to each police officer during 1939 and the years 1947 to 1951 is shown in the following table. In considering these figures allowance must, of course, be made for the unequal area and unequal distribution of the population of the various States.

## POLICE FORCES IN RELATION TO POPULATION.

State or Territory.	Number of Persons per Sq. Mile, 1947 Census.	Persons to each Police Officer.					
		1939.	1947.	1948.	1949.	1950.	1951.
New South Wales ..	9.65	708	709	707	725	737	742
Victoria ..	23.38	807	909	883	833	811	796
Queensland(a) ..	1.65	704	628	581	581	546	504
South Australia(a) ..	1.70	662	688	690	703	741	701
Western Australia(a) ..	0.51	789	766	730	735	739	686
Tasmania(a) ..	9.81	812	767	792	770	742	719
Northern Territory(a) ..	0.02	167	235	212	264	269	343
Aust. Cap. Territory ..	18.00	767	489	483	514	525	439
<b>Total ..</b>	<b>2.55</b>	<b>733</b>	<b>739</b>	<b>721</b>	<b>720</b>	<b>715</b>	<b>696</b>

(a) 30th June of year following.



4. Prison Accommodation and Prisoners, 1950 and 1951.—The table below shows the number of prisons in each State, the accommodation therein, and the number of prisoners under sentence at the end of 1950 and 1951 :—

**PRISON ACCOMMODATION AND PRISONERS.**

State or Territory.	Number of Prisons.		Accommodation in—				Prisoners at End of Year.	
			Separate Cells.		Wards.		1950.	1951.
	1950.	1951.	1950.	1951.	1950.	1951.		
New South Wales(a) ..	15	15	2,285	2,285	..	..	1,885	2,070
Victoria .. .. .	9	9	1,267	1,221	339	341	981	1,048
Queensland(a) ..	7	7	593	593	134	134	454	472
South Australia ..	15	15	673	598	175	175	261	316
Western Australia(a) ..	21	19	504	504	207	207	342	362
Tasmania(a) .. .	2	2	154	154	1	1	114	142
Northern Territory(a) ..	2	2	12	12	19	19	52	34
<b>Total .. .. .</b>	<b>71</b>	<b>69</b>	<b>5,488</b>	<b>5,367</b>	<b>877</b>	<b>877</b>	<b>4,089</b>	<b>4,444</b>

(a) Year ended 30th June following.

The figures refer to prisoners under sentence and exclude aborigines and debtors. There are no gaols in the Australian Capital Territory, but there is a lock-up consisting of six cells attached to the police station at Canberra, and a similar lock-up at Jervis Bay, where offenders are held while awaiting trial or serving short sentences not exceeding one week imposed by the Magistrate's Court.

5. Prisoners in Gaol, 1939 and 1947 to 1951.—The number of prisoners in gaol at 31st December in each of the years 1939 and 1947 to 1951 and the proportion per 10,000 of the population are shown in the following table. The figures refer to prisoners under sentence and exclude aborigines and debtors.

**PRISONERS IN GAOL.**

State or Territory.	1939.	1947.	1948.	1949.	1950.	1951.
NUMBER.						
New South Wales(a) ..	1,355	1,587	1,715	1,853	1,885	2,070
Victoria .. .. .	1,144	915	912	993	981	1,048
Queensland .. .. .	261	359	(a) 376	(a) 406	(a) 454	(a) 472
South Australia .. .	199	267	230	234	261	316
Western Australia(a) ..	244	281	314	333	342	362
Tasmania(a) .. .	108	100	93	122	114	142
Northern Territory ..	23	(a) 32	(a) 40	(a) 41	(a) 52	(a) 34
<b>Total .. .. .</b>	<b>3,334</b>	<b>3,541</b>	<b>3,680</b>	<b>3,982</b>	<b>4,089</b>	<b>4,444</b>

PER 10,000 OF POPULATION.

New South Wales(a) ..	4.9	5.2	5.5	5.7	5.7	6.1
Victoria .. .. .	6.1	4.4	4.3	4.6	4.4	4.6
Queensland .. .. .	2.6	3.2	(a) 3.3	(a) 3.4	(a) 3.8	(a) 3.8
South Australia .. .	3.3	4.1	3.5	3.4	3.7	4.3
Western Australia(a) ..	5.2	5.5	5.9	6.0	5.9	6.0
Tasmania(a) .. .	4.5	3.8	3.5	4.4	3.9	4.7
<b>Total .. .. .</b>	<b>4.8</b>	<b>4.6</b>	<b>4.7</b>	<b>4.9</b>	<b>4.9</b>	<b>5.2</b>

(a) 30th June of year following.

In recent years the proportion of prisoners in gaol to the total population has remained about 5 per 10,000. This figure compares most favorably with that obtaining in 1891, when the proportion was as high as 16 per 10,000. Rates for the Northern Territory have not been included on account of the abnormal prevailing conditions.

§ 6. Cost of Administration of Justice.

1. Expenditure by the States.—The table below shows the expenditure from Consolidated Revenue during 1938-39 and 1950-51 and 1951-52 in connexion with the administration of justice in each of the States.

Net costs are shown instead of gross expenditure as it is difficult to obtain comparable figures of the total costs of the various services under this heading. It will be noted that in South Australia for each year and in Western Australia for the year 1938-39 the receipts for legal fees and registrations exceed the actual expenditure under "Justice".

NET EXPENDITURE ON ADMINISTRATION OF JUSTICE.

State.	Net Expenditure.			Per Head of Population.		
	Justice.	Police.	Prisons.	Justice.	Police.	Prisons.
	£	£	£	s. d.	s. d.	s. d.
1938-39.						
New South Wales ..	178,941	1,445,819	199,625	1 4	10 7	1 6
Victoria ..	104,903	796,626	103,202	1 1	8 6	1 1
Queensland ..	66,095	580,581	35,144	1 4	11 6	0 8
South Australia ..	-27,876	306,387	36,171	0 11	10 4	1 3
Western Australia ..	-28,962	251,311	28,466	1 3	10 9	1 3
Tasmania ..	22,780	118,478	15,071	1 11	10 0	1 3
Total ..	315,881	3,499,202	417,679	0 11	10 1	1 2
1950-51.						
New South Wales ..	532,865	3,241,229	565,997	3 3	19 9	3 6
Victoria ..	300,256	2,300,341	277,565	2 8	20 7	2 6
Queensland ..	124,910	2,037,107	109,542	2 1	34 1	1 10
South Australia ..	-45,407	781,287	84,091	1 3	22 0	2 4
Western Australia ..	7,846	684,504	98,530	0 3	23 11	3 5
Tasmania ..	58,793	317,110	41,727	4 1	22 1	2 11
Total ..	979,263	9,361,578	1,177,452	2 5	22 7	2 10
1951-52.						
New South Wales ..	849,567	4,198,943	722,235	5 1	25 0	4 4
Victoria ..	443,529	2,915,153	395,331	3 10	25 4	3 5
Queensland ..	203,428	2,579,197	150,272	3 4	42 3	2 6
South Australia ..	-24,704	987,555	122,155	0 8	27 1	3 4
Western Australia ..	33,541	919,014	122,108	1 2	31 1	4 2
Tasmania ..	93,748	411,898	49,761	6 3	27 7	3 4
Total ..	1,599,109	12,011,760	1,561,862	3 9	28 4	3 8

2. **Commonwealth Expenditure.**—The expenditure shown in the previous table is that incurred by the State Governments only, and does not include expenditure of the Commonwealth Attorney-General's Department which is shown hereunder for the years 1938-39 and 1947-48 to 1951-52.

**EXPENDITURE OF THE COMMONWEALTH ATTORNEY-GENERAL'S DEPARTMENT.**

(£.)

Year.	Gross Expenditure.	Receipts.	Net Expenditure.
1938-39 .. .. .	281,497	111,036	170,461
1947-48 .. .. .	688,572	178,591	509,981
1948-49 .. .. .	745,106	176,310	568,796
1949-50 .. .. .	820,560	183,398	637,162
1950-51 .. .. .	1,096,274	204,362	891,912
1951-52 .. .. .	1,348,721	238,676	1,110,045

The totals for each year include expenditure in connexion with patents and copyright which amounted in 1951-52 to £318,614. The Commonwealth took over jurisdiction in bankruptcy in August, 1928, and the expenditure thereon in 1951-52 amounted to £90,269. Revenue of the Attorney-General's Department for the year 1951-52 amounted to £238,676, comprising £142,972 for patents, copyright, trade marks and designs, £27,364 for bankruptcy and £68,340 miscellaneous, including fees and fines.

In addition to the foregoing, during 1951-52, £93,292 was expended in the Northern Territory for the upkeep of the police force and prison services.

Expenditure in connexion with the Australian Capital Territory police in 1951-52 amounted to £63,995.

## CHAPTER XIII.

### PUBLIC HEALTH AND RELATED INSTITUTIONS.

#### A. PUBLIC HEALTH.

##### § 1. State Public Health Legislation and Administration.

1. *New South Wales.*—The Department of Public Health comes under the jurisdiction of the Minister for Health, with an Under-Secretary as Permanent Head of the Department for administrative purposes.

There is also a Director-General of Public Health and Chief Medical Adviser to the Government, who is ex-officio President of the Board of Health and Chairman of the Nurses' Registration Board. He is assisted by a Deputy Director-General.

The Inspector-General of Mental Hospitals is responsible for the administration of that part of the Lunacy Act relating to the care and treatment of mental patients. There is also a Deputy Inspector-General.

The following statutory authorities are constituted under Acts administered by the Minister for Health:—Board of Health (Public Health Act), Hospitals Commission of N.S.W. (Public Hospitals Act), Milk Board (Milk Act), Dental Board (Dentists Act), Pharmacy Board (Pharmacy Act), Medical Board (Medical Practitioners Act), Board of Optometrical Registration (Opticians Act), Ambulance Transport Service Board (Ambulance Transport Service Act), Physiotherapists Registration Board (Physiotherapists Registration Act) and Nurses Registration Board (Nurses Registration Act).

The Department's activities extend over the whole of the State and embrace all matters relating to the public health and the greater part of the general medical work of the Government. These include the following:—(a) Supervision of the work of local authorities (municipal and shire councils) in relation to public health matters connected with the following Acts—Public Health Act, Noxious Trades Act and Pure Food Act; (b) Scientific Divisions (Government Analyst, Microbiological Laboratory, and Division of Industrial Hygiene); (c) Tuberculosis and Social Hygiene Divisions; (d) Medical Officers of Health at Sydney, Broken Hill, Newcastle, Wollongong, Bathurst and Lismore; (e) State Hospitals and Homes and State Sanatoria; (f) Mental Hospitals; (g) Public Hospitals (Hospitals Commission); (h) Maternal and Baby Welfare (Baby Health Centres); (i) School Medical and Dental Services; and (j) Publicity, Nutrition and Library Services.

2. *Victoria.*—The Ministry of Health Act 1943 made the Minister of Health responsible for all Acts administered up to that time by the Department of Public Health, the Hospitals and Charities Acts, the Mental Hygiene Acts, and all legislation and matters relating to the health and well-being of the people of the State.

The former Department of Public Health became the General Health Branch controlled by a Chief Health Officer. The latter also administers the Maternal and Child Hygiene Branch, and the Tuberculosis Branch. These three with the Mental Hygiene Branch make up the four branches of the Department of Health.

The Secretary of the Department of Health and a number of administrative officers assist the Minister with all matters relating to policy, legislation, etc.

The Mental Hygiene Authority Act 1950 provided for the establishment of an Authority of three members with a medical expert in mental illnesses at its head and established a pattern for the extension of the services of the Branch and for the

improvement of treatment and accommodation of mental patients throughout the State. The Authority is responsible for the administration of the Mental Hygiene Branch.

The constant fight against infectious disease is actively carried on in the General Health Branch by seven District Health Officers and their staffs, in collaboration with the local health authorities. Where any specific infection is unduly prevalent, immunization is concentrated and the success obtained over a period of years is illustrated in the comparison of the following figures in respect of diphtheria :—Year 1927—cases, 3,254 ; deaths, 93 : Year 1952—cases, 246 ; deaths, 10.

The control and treatment of venereal disease is undertaken by a special division of the General Health Branch, and clinics for prophylaxis and treatment are attached to all hospitals receiving Government aid throughout the State.

The Poliomyelitis Division, formed during the outbreak of the disease in 1949 and expanded since that time, supervises treatment and after-care of patients throughout the State. The Division is staffed by three medical officers, fifteen physiotherapists and two visiting nurses.

Determining the suitability of sewerage projects and ensuring the safety of public buildings are the responsibilities of the Engineering Division of the General Health Branch, and it acts in an advisory and supervisory capacity in municipal undertakings of this nature. In conjunction with the Hospitals and Charities Commission of Victoria, it examines plans and advises on all hospital construction throughout the State.

The Industrial Hygiene Division supervises the environmental conditions of the 300,000 persons employed in industry in Victoria and consists of three medical officers, three special scientific officers and a number of inspectors.

Under the direction of a medical director, the Tuberculosis Branch comprises State sanatoria, tuberculosis clinics, tuberculosis bureaux and the Mass X-ray Survey Division. The latter service has visited every large Victorian centre and many of the smaller townships, affording to the population throughout the State every facility in obtaining an X-ray. A relatively new project is the acquisition by the Government of suitable properties as hostels for the accommodation of ex-tuberculosis patients during their rehabilitation. In order to exercise better control over the spread of tuberculosis in this State, power has been given, by special legislation, to the Chief Health Officer to require any individual or any group of persons to undergo radiological examination of the chest. Should tubercular infection be suspected as a result of this examination, the Chief Health Officer may then require the patient to be further examined and, if necessary, treated until his condition is no longer dangerous to others.

As with the Tuberculosis Branch, a medical director supervises the activities of the Maternal and Child Hygiene Branch. This Branch embraces pre-natal hygiene, infant health, pre-school child hygiene and school medical and dental services. An extensive State-wide correspondence scheme for women during their pregnancy and early motherhood supplies these women with all the latest advice and information. The expansion of the School Dental Service, under the control of a dental director appointed to organize and develop the service, is proceeding steadily. By opening a new dental centre in the metropolitan area, putting into operation a number of new mobile dental surgeries and employing additional trained staff, the number of school children receiving regular dental treatment through the School Dental Services has been more than doubled. Further dental vans for country work are on order and more dentists will be employed as they can be absorbed into the service.

Legislation which comes within the purview of the Minister of Health includes the following :—Anti-Cancer Council Act, Births Notification Acts, Cancer Institute Act, Cemeteries Acts, Dietitians Registration Act, Part V. of the Goods Act, Hairdressers Registration Acts, Health Acts, Hospitals and Charities Acts, Infectious Diseases Hospital Acts, Masseurs Acts, Medical Acts, Mental Deficiency Act, Mental Hygiene Acts, Midwives Act, Nurses Acts, Opticians Registration Act, Poisons Acts and Venereal Diseases Act.

3. Queensland.—(i) *General*. The Health Acts 1937 to 1949 are administered by the Director-General of Health and Medical Services subject to the Minister for Health and Home Affairs. A Central Staff controls the following Divisions :—

(a) *Division of Public Health Supervision*. This Division is controlled by the Deputy Director-General of Health and Medical Services and comprises separate sections of environmental sanitation, food and drug control, enthetic (venereal) diseases, hookworm control and Hansen's disease control. Qualified whole-time officers are in charge of each section. Free treatment of venereal diseases is offered at the Department's male and female clinics in Brisbane, and at any public hospital. Two institutions (one at Peel Island in Moreton Bay for white patients and one at Fantome Island near Townsville for aboriginal patients) are maintained for the treatment of Hansen's disease. Modern therapy with sulphone drugs has caused a dramatic decline in numbers of patients at these institutions. Free immunization against diphtheria, whooping cough and tetanus is offered by most of the Local Authorities. A recent survey showed that 94 per cent. of school children in the Greater Brisbane area and 90 per cent. in the rest of the State had been immunized against diphtheria.

Wide powers for the control of environmental sanitation have been conferred on Local Authorities by the Health Acts and their work in this connexion is closely supervised by a staff of State health inspectors who visit all parts of the State. State-wide control of foods and drugs is carried out by the inspectors of this Division. High standards of purity are insisted on and particular care is taken to prevent excessive consumption of habit-forming narcotics. School children north of Ingham are regularly examined for evidence of hookworm infestation. Hookworm disease has markedly diminished in this high rainfall area during the last twenty years. Principal sufferers are now aboriginals.

(b) *Division of Tuberculosis*. The Director of Tuberculosis, assisted by medical officers and nurses, exercises control of patients with tuberculosis. A central chest clinic in Brisbane offers Mantoux tests, X-ray examinations, and inoculations of Mantoux negative reactors free of charge and this service is extensively used. A mobile X-ray unit is being established to tour country districts.

(c) *Division of Industrial Medicine*. This Division in charge of a Director exercises supervision over the health of workers in both primary and secondary industries, including control of leptospirosis (Weil's disease) and scrub typhus in the sugar-cane growing districts north of Ingham.

(d) *Division of Maternal and Child Welfare*. The Director of Maternal and Child Welfare, assisted by full-time and part-time health officers and a staff of qualified nurses, offers supervision and advice on the rearing of infants and pre-school children at baby health centres throughout the State. Outlying centres are visited by air or by special rail car. Homes for in-patient treatment of infants with feeding problems have been established at Brisbane, Toowoomba, Ipswich and Rockhampton.

(e) *Division of School Health Services*. This Division comprises the Chief Medical Officer, School Health Services, and a staff of medical officers, dentists and visiting school nurses. Every school child is examined regularly and defects are reported to parents. Free dental treatment is provided for school children by either dentists of the School Health Services or public dental clinics. Rail dental cars and portable equipment are used to provide the service for sparsely settled areas.

(f) *Division of Mental Hygiene*. The Director of Mental Hygiene is responsible for the care and treatment of mentally sick patients in the States' three mental hospitals, at Brisbane, Toowoomba and Ipswich. A new mental hospital is being erected at Charters Towers.

(g) *Division of Laboratory Services*. Two laboratories—the Laboratory of Microbiology and Pathology and the Government Chemical Laboratory—are maintained to ensure the purity of a wide range of foodstuffs and materials. The former also offers a service in clinical pathology to country hospitals and private medical practitioners.

(ii) *Hospitals.* All public hospitals operate under what is known as the district system, which provides for the constitution of Hospitals Districts and Hospitals Regions and a Hospitals Board for each district. The State is divided into 11 Hospitals Regions with a base hospital for each region which comprises a number of Hospitals Districts. The purpose of the regional scheme is to co-ordinate the public hospitals in the region with the base hospital. The administration of the hospitals services, including public dental services, in each Hospitals District is vested in the Hospitals Board which comprises not less than four members nor more than eight members appointed by the Governor-in-Council and one member elected by the component Local Authorities. There are 54 Hospitals Boards controlling 121 public hospitals.

The financial structure of the district system resolves itself into two parts, namely, capital expenditure and maintenance expenditure. Capital expenditure is provided by way of loan moneys. The State Government is responsible for the net annual cost of administration and maintenance of all hospitals controlled by Hospital Boards. All in-patient treatment in public wards and out-patient treatment at public hospitals is free of charge and no means test is applied in respect of such treatment, which includes X-ray, pathology and all other forms of treatment. The Commonwealth Government pays the State the hospital benefit of 8s. per day for each qualified in-patient and an additional benefit of 4s. per day for each pensioner in-patient who is enrolled in the Commonwealth Pensioner's Medical Service Scheme and who produces his or her entitlement card.

The Mater Misericordiae Hospital, Brisbane, and St. Vincent's Hospital, Toowoomba, operated by religious organizations, provide public as well as private accommodation. The State subsidizes these hospitals for public patients for whom free treatment is provided. There are 23 private hospitals in Brisbane and 40 in the country. These private hospitals are registered under the Health Acts. Two tuberculosis sanatoria are operating in the State, one at Westwood, via Rockhampton, and the other at Thursday Island. The latter is for natives. Another one is under construction in Brisbane.

4. *South Australia.*—The Department of Public Health embraces the activities of the Central Board of Health, the School Medical Services and the public health aspect of the control of tuberculosis, including the State X-ray Health Survey, under the control of the Director of Tuberculosis.

The Central Board of Health consists of five members, three of whom (including the chairman) are appointed by the Governor while one each is elected by metropolitan local boards and all other local boards. The Central Board of Health administers the Health, Food and Drugs, Dangerous Drugs, Noxious Trades, Bakehouses Registration and Early Notification of Birth Acts. The Board is also concerned to some degree with Acts relating to local government, abattoirs and cremation. Other legislation administered by the Department of Public Health relates to venereal diseases and vaccination.

The Health Act of 1935-1952 constitutes every municipal council and every district council a local board of health for its municipality or district. There are 143 of these local boards under the general control and supervision of the Central Board. Under the Food and Drugs Act every local board is constituted the local authority for its respective district, except in the metropolitan area, for which the Metropolitan County Board is the local authority.

The medical staff of the Department includes the Director of Tuberculosis, a Senior Medical Officer and the Principal Medical Officer for Schools, six full-time medical officers, one temporary medical officer and six part-time medical officers. Five dentists, four dental assistants and six nurses are engaged in connexion with the School Medical Services. There are six full-time and fourteen part-time inspectors directly responsible to the Board. There is also a nurse inspector employed to advise and assist local boards in connexion with infectious diseases. Three nurses are engaged in the State X-ray Health Survey and one in B.C.G. vaccination. The inspectors appointed under the Health and Food and Drugs Acts periodically visit the local districts and see, generally, that the local boards are performing their duties.

5. **Western Australia.**—The legislation in this State is the Health Act 1911–1952. This was consolidated and reprinted in 1948 and amended by Acts Nos. 25 of 1950 and 11 and 25 of 1952. The Central Authority is the Department of Public Health, controlled by a Commissioner, who must be a qualified medical practitioner. The State is covered by Local Authorities which are constituted as Municipalities or Road Boards.

It is provided that a Local Board of Health may be set up in lieu of a Road Board, but this method of control is no longer used. In any emergency the Commissioner may exercise all the powers of a Local Health Authority in any part of the State.

Interesting features of recent legislation are as follows :—(a) Act No. 70 of 1948 gave compulsory power to control sufferers from tuberculosis and established a Tuberculosis Control Branch; (b) Act No. 71 of 1948 provided that within areas declared for the purpose all still-born infants must be submitted for post-mortem examination and all stillbirths must be notified to the Commissioner by the attending medical practitioner; and (c) Act No. 11 of 1952 gave wide powers to regulate the sale and use of pesticides.

All the usual provisions for public health control are embodied in the Health Act. They include the medical and dental examination of school children, control of public buildings, inspection of food and the provision of standards thereof. The Nurses Registration Act now makes provision for the registration of nurses in each of the following branches of the nursing profession—general, midwifery, tuberculosis, infant health, mothercraft, mental, children's and nursing aides.

6. **Tasmania.**—The Department of Public Health is under the jurisdiction of the Minister for Health, and the administration of the various services is controlled by the permanent head of the Department, the Director-General of Medical Services, who is also responsible for the administration of the Hospital and Medical section. Associated with the permanent head are the Director of Public Health, the Director of Tuberculosis, and the Director of Mental Hygiene.

The Hospital and Medical Services section is responsible for administration of the laws relating to hospitals and nurses' registration, and the following services: Government Medical Service, Bush Nursing Service, Institutions for the Aged and Infirm at St. John's Park and Cosgrove Park.

Public Health functions comprise administration of laws relating to public health, food and drugs, places of public entertainment and cremation, and the following services: School Medical and Dental, Maternal and Child Welfare, Infectious and Venereal Disease control, Analytical Laboratory, and Mothercraft Home. The Tuberculosis section is responsible for administration of the laws relating to tuberculosis, and for the management of chest clinics and chest hospitals at New Town and Perth. The Mental Hygiene section is responsible for administration of the laws relating to mental hospitals and mental defectives, and for the management of Lachlan Park Hospital (Mental Hospital) and Millbrook Psychopathic Home.

## § 2. The National Health and Medical Research Council.

In 1926 the Commonwealth Government established a Federal Health Council, in accordance with a recommendation of the Royal Commission on Health (1925), "for the purpose of securing closer co-operation between Commonwealth and State Health Authorities". This Council held sessions each year except in 1932. In 1936 the Commonwealth Government decided to create a body with wider functions and representation, and the National Health and Medical Research Council was established with the following functions :—

To advise Commonwealth and State Governments on all matters of public health legislation and administration, on matters concerning the health of the public and on medical research.



- To advise the Commonwealth Government as to the expenditure of money specifically appropriated as money to be spent on the advice of this Council.
- To advise the Commonwealth Government as to the expenditure of money upon medical research and as to projects of medical research generally.
- To advise Commonwealth and State Governments upon the merits of reputed cures or method of treatment which are from time to time brought forward for recognition.

The Council consists of the Commonwealth Director-General of Health (as Chairman), two officers of his Department, the official head of the Health Department in each State, together with representatives of the Federal Council of the British Medical Association, the Royal Australasian College of Surgeons, the Royal Australasian College of Physicians, the Australian Regional Council of the Royal College of Obstetricians and Gynaecologists, the Australian Dental Association, and (jointly) the four Australian Universities having medical schools. A prominent layman and laywoman, appointed by the Commonwealth Government, also serve on the Council.

The first session of the National Health and Medical Research Council met at Hobart in February, 1937; the thirty-fourth session met at Canberra in November, 1952.

Under the Medical Research Endowment Act 1937, the Commonwealth Government has made an annual appropriation of funds to provide assistance :—(a) to Departments of the Commonwealth or of a State engaged in medical research; (b) to Universities for the purpose of medical research; (c) to institutions and persons engaged in medical research; and (d) in the training of persons in medical research.

Approved research institutions under this system now number 51. During 1952 grants numbered 56 in the following fields :—bacteriology, biochemistry, biophysics, clinical research, dentistry, epidemiology, haematology, medical chemistry, neurology, neuro-physiology, obstetrics, pathology, physiology and pharmacology, tuberculosis and virus diseases. In certain instances, equipment and apparatus have been made available by the Council; this has greatly facilitated some specialized lines of research. The wide scope of work being carried out is greatly assisted by the formation of committees which meet regularly and advise the Council in such subjects as industrial hygiene, public health, epidemiology, maternal and child welfare, radio-active isotopes, antibiotic distribution, tropical physiology and hygiene, tuberculosis and the latest developments in X-ray technology and application.

The research work being done under these grants is of a high standard, many of the individual investigators enjoying international reputation. Beyond this practical achievement, the original objectives of the Council are being attained in encouraging young graduates to take up research work and in securing a continuity and permanence of medical research in Australia.

An insurance benefit scheme for medical workers on the lines of the Federated Superannuation System for Universities is now in operation.

### § 3. The Commonwealth Department of Health.

1. *General.*—The Commonwealth Department of Health was created by an Order-in-Council of 3rd March, 1921. This Order specified various functions to be performed by the Department in addition to Quarantine. Prior to the 1946 amendment of the Commonwealth Constitution, Quarantine was the only constitutional power expressly relating to public health under which the Commonwealth Parliament could legislate. The amendment of 1946 gave the Commonwealth Parliament power to make laws with respect to, among other things, pharmaceutical, sickness and hospital benefits, medical and dental services (but not so as to authorize any form of civil conscription) and benefits to students. The Commonwealth is at present providing medical benefits, medical services to pensioners, medicines to pensioners, under the National Health Act 1948-1949;

pharmaceutical benefits under the Pharmaceutical Benefits Act 1947-1952; hospital benefits under the Hospital Benefits Act 1951; medical services in respect of tuberculosis by arrangement with State Governments and tuberculosis allowances, under the Tuberculosis Act 1948; and free milk for school children under the States Grants (Milk for School Children) Act 1950. In earlier issues of the Official Year Book reference has been made to the part played by the Commonwealth in the development of public health in Australia, including:—The Royal Commission on National Health, 1925 (*see* No. 22, pp. 509-10), the International Pacific Health Conferences (*see* No. 22, p. 510 and No. 29, p. 334), Industrial Hygiene (*see* No. 18, pp. 522-55), Tropical Hygiene (*see* No. 22, pp. 506-7, No. 25, pp. 415-7, and No. 32, p. 226), and the Commonwealth Advisory Council on Nutrition (*see* No. 32, pp. 222-23). Reference to quarantine is made below (*see* § 3. paras. 12 and 13 and § 4. para. 2).

**2. The Commonwealth Serum Laboratories.**—The laboratories were established in 1916 under the administration of the Quarantine Branch, Department of Trade and Customs (later the Commonwealth Department of Health, Order-in-Council, March, 1921). Work began in temporary quarters but new buildings were erected and occupied in 1918 at Royal Park, Melbourne, where the Commonwealth had acquired 23 acres. In 1936 a farm of 325 acres was purchased at Broadmeadows, 9 miles from Melbourne, for experimental and other purposes. The laboratories function as a Public Health Institute conducting research and training laboratory workers as well as producing a comprehensive range of biological products for use as human and animal therapeutics. Since their foundation 37 years ago, the laboratories have been greatly enlarged both physically and in the scope of the work undertaken.

The list of biological preparations produced by the laboratories has been extended, until at the present time almost the whole range of these products is manufactured and Australia is practically independent of other countries in thus producing its own requirements. Penicillin is being produced in increasingly large quantities, which it is anticipated will shortly suffice for total Australian requirements. Constant research is being conducted into every relevant aspect of bacteriology and immunology and new sera and prophylactic agents are being tested as the growth of medical knowledge opens up new avenues of treatment, prevention and diagnosis. Other original and applied research relating to all aspects of public health is maintained. The laboratories serve as the national centre for the maintenance in Australia of the international standards of the Permanent Commission on Biological Standards (World Health Organization Interim Commission). For the past 29 years the production of veterinary biological products has been a feature of the work of the laboratories. In recent years an extensive development has occurred in this direction and the products are being used in greatly increased amounts in all States for the prevention or treatment of diseases in domestic animals and stock.

**3. The Commonwealth Health Laboratories.**—The fifteen health laboratories of the Department are situated at strategic points throughout Australia. They are located at Darwin, Cairns, Townsville, Rockhampton, Toowoomba, Lismore, Bendigo, Launceston, Hobart, Port Pirie, Kalgoorlie, Broome, Tamworth, Wollongong and Albury. These laboratories were established as an essential part of the quarantine system but were also to undertake research into local health problems and to provide medical practitioners of each district with up-to-date facilities for laboratory investigation and diagnosis. It was realized that co-operation between the general practitioner with his clinical observations and knowledge of the environment of disease on the one hand, and the staff of a well-equipped laboratory on the other hand, is essential to the efficient investigation of disease and the effective operation of control measures.

From this standpoint, the laboratories have already proved their value in the determination of leptospirosis and endemic typhus in North Queensland, in the investigation of special local problems at Darwin, of undulant fever throughout Australia, of silicosis and tuberculosis at Kalgoorlie and of plumbism at Port Pirie. In these investigations close co-operation has existed with State and local health and hospital

services ; especially is this so in Queensland where collaboration has yielded exceptionally valuable results in differentiating the groups of fevers hitherto unclassified in that State. In this investigational work, as well as in more routine activities, the laboratories have at their disposal the full resources and technical and specialist facilities available at the Commonwealth Serum Laboratories and the Sydney School of Public Health and Tropical Medicine.

A major part of the work performed at the Kalgoorlie laboratory, since its establishment in 1925, has been the medical examination, on behalf of the State Department of Mines, of employees and applicants for employment in the metalliferous mines in Western Australia. These examinations are performed in accordance with the provisions of the State Mines Regulation Act and the Mine Workers' Relief Act, the objects of which are to provide a healthy body of men for the industry and to free the industry of serious pulmonary disease and to protect the interest of sufferers. The examinations include clinical, laboratory and radiographic investigation. By means of a mobile X-ray unit an annual tour is also made of outlying mining centres.

X-ray facilities are also provided at the Bendigo laboratory, as part of the campaign against tuberculosis, for the examination of miners and for other radiographic work in the district.

4. **Commonwealth Acoustic Laboratories.**—The Department of Health established the first of the series of Acoustic Laboratories in January, 1947, in Erskine House, York Street, Sydney. The laboratory continued and expanded the work of the Acoustic Research Laboratory which was sponsored by the National Health and Medical Research Council during the years 1942-1946 for the purpose of investigating problems of noise and difficulties of intercommunication in aircraft and tanks. After the 1939-45 War the Acoustic Research Laboratory directed its attention to the problem of deafness in children, particularly the group whose affliction was caused by the mothers contracting rubella in the early months of pregnancy.

The taking over of the Acoustic Research Laboratory by the Department of Health was influenced by the request from the Repatriation Commission for technical assistance in the matter of the supply of hearing aids to deafened ex-servicemen. Arrangements for this purpose were completed and branch laboratories were established in all other State Capital Cities.

During 1948 the Acoustic Laboratories Act was passed to allow the expansion of activities on the following lines :—(1) To carry out the requirements of the Repatriation Commission for deafened ex-Service personnel and to provide a similar service for the Commonwealth Department of Social Services in respect of deafened ex-Service personnel whose disability was not caused by war service ; (2) to assist the Education Departments of the States in measuring deafness, fitting aids, and maintaining hearing aid equipment for school children ; (3) to act on behalf of various State and other authorities who desire to have independent tests made before assisting financially in the purchase of hearing aids for people under their care ; and (4) the investigation of problems associated with noise in industry.

The laboratory in Sydney is responsible for the training of personnel for the whole Acoustic Service, the production of equipment, the calibration of hearing aids and audiometers and the technical administration of the branch laboratories.

5. **Commonwealth Bureau of Dental Standards.**—The National Health and Medical Research Council sponsored the Dental Materials Research Laboratory during the years 1939-1946, for the purpose of assisting the Defence Services, the Medical Equipment Central Committee and other Government Departments in the selection and purchase of suitable dental equipment and materials. Valuable assistance was also given to Australian manufacturers of dental materials in relation to improvement of their products and the development of new materials.

Much of the work was of a routine nature and after the 1939-45 War the National Health and Medical Research Council decided to cease its sponsorship, but recommended that the Department of Health should take over the laboratory as it was serving a good purpose. This was done in January, 1947, and the laboratory was renamed the Commonwealth Bureau of Dental Standards and is at present situated in the grounds of the University of Melbourne.

The functions of the Bureau are as follows :—(1) Original research into dental equipment, materials, techniques and processes ; (2) the development, through the Standards Association of Australia, in consultation with a representative committee of the Commonwealth Department of Health, of the Australian Dental Association and of manufacturers and distributors, of specifications for dental materials and equipment ; (3) regular systematic surveys of dental materials on sale to the profession in Australia, and the reporting of the results of such investigations in recognized Australian scientific journals ; and (4) the provision of a consultative service and testing facilities for local manufacturers and distributors of dental materials with the view to assisting them in the improvement of existing products and the development of new materials.

6. **The School of Public Health and Tropical Medicine.**—The Commonwealth Government, under an agreement with the University of Sydney, established a School of Public Health and Tropical Medicine at the University of Sydney as from 4th March, 1930, for the purpose of training medical graduates and students in the subjects of public health and tropical medicine. The organization of the Australian Institute of Tropical Medicine at Townsville was merged in the new school, and the staff, equipment and material were transferred to Sydney.

The work of the school comprises both teaching and investigation. Courses are held for the University post-graduate diploma of public health and the diploma of tropical medicine and hygiene. Lectures are given in public health and preventive medicine as prescribed for the fifth year of the medical curriculum. Other classes include students in architectural, social and school hygiene, and lay officers and nurses in the tropical services and missionaries. In addition to this work throughout the war, all the resources of the School were made available for the training of medical and hygiene officers and other ranks from all the Services of the Australian and Allied Forces.

Investigational work covers a wide field of public health and medical subjects, both in the laboratory and in the field. Field work has been carried out not only in Australia but in co-operation with the local administrations in Papua, New Guinea, Norfolk Island and Nauru. Sections of Child Health and Occupational Disease have been established and suitable staff selected.

7. **The Australian Institute of Anatomy.**—Information concerning the Australian Institute of Anatomy at Canberra is given in previous issues of the Official Year Book (*see* No. 32, pp. 919-21). In 1931 the Institute became an integral part of the Commonwealth Department of Health. The work of the Institute on general problems of comparative anatomy has now been concentrated on aspects of structure and function with special reference to the development of the growing child. Biochemical and biological research in this field is being developed in close association with the model kindergarten centres established by the Department in each capital city (*see* par. 10 below). Work in specialized aspects of nutrition has steadily increased. The Institute now plays an important part in research and the scientific application of nutritional knowledge under Australian conditions. The background of comparative anatomy and the museums of the Institute are maintained as part of the general plan of work. *See also* Chapter XXIX.—Miscellaneous.

8. **The Northern Territory Medical Service.**—As from 1st April, 1939, the Commonwealth Department of Health assumed administrative responsibility for the medical and health services of the Northern Territory, absorbing the Northern Territory Medical Service. With civilian evacuation during the 1939-45 War, military control of the

medical services operated in the years 1942 to 1945. Civilian control was resumed by the Department during the period November, 1945 to May, 1946, starting at Alice Springs and gradually extending north to Darwin. The hospitals at Alice Springs, Tennant Creek, Katherine and Darwin, and the Health Laboratory at Darwin were re-established as civilian institutions.

The Darwin Hospital, when the new ward is completed, will have 187 beds, Alice Springs Hospital will have 90, Katherine Hospital 25 and Tennant Creek Hospital 25. The existing leprosarium at Channel Island will be replaced by a new leprosarium on the mainland to accommodate 300 inmates. The new leprosarium is in course of construction. A pathologist has been appointed to the Health Laboratory. Dental services are available and two clinics have been established, one at Darwin and one at Alice Springs, whilst mobile road and aerial units serve the outback.

An aerial medical service, operated by the Department, is based on Darwin. De Havilland Drover and Dragon aircraft are used, the pilots being supplied by arrangement with Trans-Australia Airlines. Emergency and regular monthly routine visits and surveys are undertaken. At Alice Springs medical officers of the Northern Territory Medical Service provide free service for the Flying Doctor Service base.

The Commonwealth Department of Health maintains a Quarantine Station at Darwin which is a first port of entry for oversea aircraft. Public health services are provided at large centres and all other centres of population are visited periodically by the Senior Health Inspector.

9. **National Fitness.**—Health authorities in Australia have closely followed the world-wide movement for the advancement of physical fitness and in several States active work has been proceeding over some years. In 1938, following a recommendation of the National Health and Medical Research Council, the Commonwealth Government agreed to appoint a Commonwealth Council for National Fitness, under the Commonwealth Minister for Health, to effect collaboration of Commonwealth, State and local government authorities in the movement. Meetings of this Council are held at regular intervals, at least annually. Meanwhile, active State Councils have been formed in all States. As a result of the recommendations of the central Council, the Commonwealth Government agreed to make available an annual sum of £20,000 for five years and grants were allocated to each State for purposes of organization and to each of the six Australian universities to establish lectureships in physical education. In July, 1941 a National Fitness Act was passed by the Commonwealth Parliament to ensure greater permanence to the movement, and in June, 1942 the Commonwealth grant was increased to £72,500 to include grants to State Education Departments and for the work in the Australian Capital Territory. In 1951 the total grants were extended for a further period of three years. The movement continues to develop and to gain public interest and support throughout Australia.

10. **The Pre-school Child.**—Sessions of the National Health and Medical Research Council and the reports of the Commonwealth Advisory Council on Nutrition have called attention to the need for greater effort throughout Australia directed towards the care of the growing child, especially during the pre-school period. Movements for the care of the infant and the welfare of the school child are already developed by State authorities as recorded in §§ 7 and 8 below. The Commonwealth Government felt that more could be done for the child of pre-school age, and it was decided to give a lead by making it possible to demonstrate what could be done and the practical methods which could be applied.

The Commonwealth Government therefore decided to establish in each capital city a pre-school demonstration centre, known as the Lady Gowrie Child Centre, and in order to achieve the best results in association with those who have had experience in this field it has secured the co-operation of the Federal Organization of Kindergarten Unions which is operating under the title of "The Australian Association for Pre-school Child Development". A suitable site was secured in each capital city and the necessary school structure was built. Formerly the administration of these centres was under

the direction of the local Kindergarten Union and the employment of staff was made with the approval of the Commonwealth Department of Health. Recently the local Lady Gowrie Child Centre Committees were given a greater degree of autonomy, so that while the technical supervision still rests with the Australian Association for Pre-school Child Development, the management of each centre, including staffing, is in the hands of the local Committee. This development is associated with a change in the method of financial control. An annual grant is made to each Committee towards the cost of the centre, the disbursement of these funds being at the discretion of the local Committee, subject to the general supervision of the Australian Association for Pre-school Child Development. This applies in so far as the educational side is concerned, and in this field advantage is being taken of the opportunity to try new methods and to make systematic records of observations with the object of securing reliable knowledge of the educational technique of this pre-school period.

Along with this educational practice there proceeds also the study of physiological requirements of the child and of the interaction between physical and mental health under varying conditions. The children available at these centres provide a considerable mass of human material for control and study, which is of great value in view of the importance of the study of growth and of nutrition of their age-period. Not only are routine measurements made of height, weight and other bodily data, but problems of nutrition are studied in detail. The medical work at each State centre is conducted on a uniform basis, according to a scheme formulated at, and directed from, the Australian Institute of Anatomy, Canberra, where parallel investigations on the laboratory side are being undertaken.

**II. Organization for the Control of Cancer.**—The persistent increase in cancer mortality has led to the development in Australia of a national organization directed towards the control of this disease. The Commonwealth Department of Health has actively participated in this movement. Since 1928 the Australian Cancer Conferences, convened by the Department, have provided an opportunity each year for those actively engaged in the campaign against the disease to meet for the discussion of problems and the determination of lines of action and further development. The tenth conference in this series met in New Zealand in February, 1939, and so marked an association which has been maintained between Australia and the Dominion since the inception of the conferences.

A large amount of radium purchased in 1928 by the Commonwealth Government for use in treatment and research has been distributed on loan to treatment centres throughout Australia. Under the terms of this loan, treatment at well-equipped clinics is available to all requiring it, irrespective of ability to pay. This work is co-ordinated by the Department.

Close co-operation is maintained between research workers, physicists and biochemists and the medical men engaged in the clinical investigation and treatment of the disease, so that problems are mutually investigated and treatment is applied with the highest attainable degree of scientific accuracy.

Realizing the essential importance of accuracy in determining the quality of radiation used in the treatment of cancer and in measuring the dosage of this radiation actually delivered to the tumour, and the need for the investigation of physical problems in connexion with the utilization of X-rays and radium in the treatment of disease, the Commonwealth Department of Health in 1935 extended the work of the Commonwealth Radium Laboratory, established in 1929, to include the investigation of the physical problems of radiation therapy generally. This laboratory, known as the Commonwealth X-ray and Radium Laboratory, is situated by agreement with the University of Melbourne within the University grounds, and is maintained, controlled, and staffed by the Commonwealth Department of Health. It is accommodated in a building specially designed for work with X-rays and radium, and is amply provided with all necessary equipment for research work, including a 500,000 volt high tension generator.

The laboratory co-operates closely with the local physical services which have been developed in the other capital cities of Australia to provide local facilities for the production of radon, for the calibration of X-ray therapy equipment, and for the

measurement of radiation exposure of X-ray and radium workers. The laboratory has continued to repair radium containers. It also undertakes investigations into physical problems arising in the use of X-ray and radium in treatment.

During the year 1952, a total of 136,640 millicuries of radon was prepared and issued from the laboratory, while 35,260 millicuries were issued by the associated centres in Sydney, Adelaide and Brisbane. The corresponding figures for 1951 were 145,648 and 42,089 millicuries respectively. The issue of radon from a few centres to serve hospitals all over the continent is a unique Australian development, and enables a very efficient use to be made of the radium available.

The development of atomic energy programmes overseas has made available supplies of artificial radio-isotopes which can be used as an alternative to natural isotopes such as radium and radon. Supplies of radio-phosphorus and radio-iodine are now being distributed by the laboratory for medical work throughout Australia according to a policy developed by the National Health and Medical Research Council Standing Committee on X-rays. The use of radio-iodine has involved the laboratory in the development of a scheme of physical measurements which can readily be made in hospitals.

**12. Animal Quarantine.**—Animal quarantine is authorized by the provisions of the Quarantine Act 1908–1950 and has as its objective the prevention of the introduction or spread of diseases of animals. This legislation covers the importation of all animals, raw animal products, biological cultures, etc., associated with animal diseases and goods associated with animals.

Domesticated animals, i.e., horses, cattle, pigs, sheep, goats, dogs, cats and poultry, are admitted from a limited number of countries depending on diseases present in the country of origin. All must be accompanied by health certificates which include prescribed tests. On arrival in Australia they are subject to quarantine detention.

Zoological specimens are imported into registered zoos where they remain in permanent quarantine. Circuses are also registered if exotic species of animals are kept. In a somewhat similar manner, animals for scientific purposes are imported to approved laboratories. All of these premises are kept under constant surveillance. Raw animal products such as hair, special types of wool, skins, hides, etc., are subjected to special treatment under quarantine control, whilst such items as raw meat, sausage casings and eggs, which cannot be sterilized, are admitted from very few countries. Other items such as harness, fittings, fodder, ship's refuse, etc., are appropriately treated to destroy possible infection.

The Division of Veterinary Hygiene was created in 1926 to deal with the administration of animal quarantine; formerly the full responsibility of this aspect was carried by the Director of Quarantine. The organization of the Division provides an excellent example of Commonwealth and State co-operation. The Central Administration is situated within the Health Department at Canberra, with a Director, an Assistant Director and Veterinary Officers. By provision in the Quarantine Act and by arrangement with the States, the Principal Veterinary Officer of the Department of Agriculture in each State is appointed Chief Quarantine Officer (Animals) of the State and members of his staff Quarantine Officers (Animals). These State officers, acting in their Commonwealth capacity, implement quarantine policy as formulated by the Central Administration. Quarantine accommodation is provided at permanent animal quarantine stations at each Capital City.

The Division participates in world-wide international notification of the more serious contagious diseases of animals and maintains a census of such diseases throughout the world. Information regarding animal diseases and parasites in Australia is also collected and disseminated by means of service publications. Consultation on technical matters is maintained with various scientific institutions, notably the Commonwealth Scientific and Industrial Research Organization. In matters of policy and the implementation of quarantine control of imports there is a close liaison with the Department of Trade and Customs.

The Division collaborates with the "General" and "Plant" Divisions of the Quarantine Service. Many diseases of animals are communicable to man and for this

reason "Animal" and "General" quarantine administration are in some respects inseparable. Similarly the interests of "Animal" and "Plant" Divisions overlap, many items such as insects, fodder, straw, etc., being the subject of combined control.

13. **Plant Quarantine.**—Since 1st July, 1909, the importation into Australia of all plants or parts of plants, cuttings, seeds and fruits, whether living or dead, has been subject to an increasingly stringent quarantine with the object of preventing the introduction of insect pests, plant diseases and weeds not yet established in this country. Under the Quarantine Act 1908–1950 general powers are held by which the quarantine inspectors are required to examine all plant material at the first port of entry and to release only such material as is free from diseases and pests. Everyone reaching Australia is required to declare if he or she has any plant material in luggage or personal effects. Heavy penalties are laid down for those found deliberately evading the regulations. All plant material entering as cargo must also be declared.

When the Commonwealth became responsible for all plant quarantine, the State Governments agreed to co-operate by providing and maintaining inspection facilities and personnel for which they are reimbursed by the Commonwealth. In 1921 the administration of the regulations came under the newly-formed Department of Health, and in 1927 the Division of Plant Quarantine was created under a Director who is responsible for policy and legislation and for co-ordinating the work of the State Officers who carry out the detailed administration in their capacity as Commonwealth Officers.

Any plant material found carrying diseases or pests or suspected of doing so may be ordered into quarantine for remedial treatment, or if the treatment be impracticable, may be destroyed. Such treatments are paid for by the importer. Air transport has created many new problems in maintaining effective control. It is impossible in this summary to give details of regulations governing the different types of plants, but the following will indicate certain broad principles in them :—(a) The importation of plant diseases, insect pests, noxious fungi, certain weeds and poison plants, and soil likely to carry these things is prohibited; (b) Agricultural seed must conform to standards of purity; (c) Many commodities such as hops, cotton, peanuts in shell, nursery stock, potatoes, important crop seeds, vines and specified plants may only be imported by approved importers under special conditions; (d) Certain plant products, such as bulbs and timber (in logs or sawn), from specified areas may only be imported if accompanied by certificates showing that prescribed treatment has been given in the country of origin.

The regulations are constantly being amended in the light of experience, with the object of maintaining for Australia the freedom from a large number of serious diseases and pests of plants which ravage crops in other lands.

#### § 4. Control of Infectious and Contagious Diseases.

1. **General.**—The provisions of the various Acts in regard to the compulsory notification of infectious diseases and the precautions to be taken against the spread thereof may be conveniently dealt with under the headings—Quarantine; Notifiable Diseases, including Venereal Diseases; and Vaccination.

2. **Quarantine.**—The Quarantine Act is administered by the Commonwealth Department of Health, and has three sections of disease control, as follows :—(i) Human quarantine which controls the movements of persons arriving from overseas until it is apparent that they are free of quarantinable disease; (ii) Animal quarantine which controls the importation of animals and animal products from overseas and the security of other animals present on vessels in Australian ports, and (iii) Plant quarantine which regulates the conditions of importation of all plants and plant products with the object of excluding plant diseases, insect pests and weeds. (See § 3, paras. 12 and 13 above.)

In regard to interstate movements of animals and plants, the Act becomes operative only if the Governor-General be of opinion that Federal action is necessary for the protection of any State or States; in general, the administration of interstate movements of animals and plants is left in the hands of the States.

The Commonwealth controls stations in each State for the purposes of quarantine of humans, animals and plants.



3. Notifiable Diseases.—(i) *General. (a) Methods of Prevention and Control.* Provision exists in the Health Acts of all the States for the observance of precautions against the spread and for the compulsory notification of infectious disease. When any such disease occurs, the local authority must at once be notified, and in some States notification must be made also to the Health Department. The duty of making this notification is generally imposed, first, on the head of the house to which the patient belongs, failing whom on the nearest relative present, and, on his default, on the person in charge of or in attendance on the patient, and, on his default, on the occupier of the building. Any medical practitioner visiting the patient is also bound to give notice.

As a rule, the local authorities are required to report from time to time to the Central Board of Health in each State as to the health, cleanliness and general sanitary state of their several districts, and must report the appearance of certain diseases. Regulations are prescribed for the disinfection and cleansing of premises, and for the disinfection or destruction of bedding, clothing, or other articles which have been exposed to infection. Bacteriological examinations for the detection of plague, diphtheria, tuberculosis, typhoid and other infectious diseases within the meaning of the Health Acts are continually being carried out. Regulations are provided in most of the States for the treatment and custody of persons suffering from certain dangerous infectious diseases, such as small-pox and leprosy.

(b) *Diseases Notifiable and Cases Notified in each State and Territory.* The following table, which has been compiled by the Commonwealth Department of Health, shows for each State and Territory the diseases notifiable in 1952 and the number of cases notified. Diseases not notifiable in a State or Territory are indicated by an asterisk.

**DISEASES NOTIFIABLE IN EACH STATE AND TERRITORY AND NOTIFICATIONS FOR THE YEAR ENDED 31st DECEMBER, 1952.**

Disease.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Acute rheumatism††	24	35	*	*	9	*	I	..	69
Amoebiasis	..	38	7	2	5	..	..	..	52
Anchylostomiasis	..	2	127	..	7	..	6	..	142
Anthrax	..	..	..	..	..	..	..	..	..
Bilharziasis	..	..	..	..	..	..	..	..	..
Brucellosis	..	..	11	2	6	..	..	..	44
Chorea††	5	20	*	*	3	*	..	..	9
Dengue†	*	I	*	*	*	*	..	..	..
Diarrhoea, infantile††	33	31	443	*	15	14	56	..	502
Diphtheria	266	246	218	23	124	13	1	I	892
Dysentery, bacillary	..	103	278	106	72	..	2	29	590
Encephalitis	12	31	2	23	..	..	3	..	71
Flariasis†	*	..	..	..	..	..	..	..	..
Homologous serum jaundice†	*	2	*	*	..	*	..	..	2
Hydatid	..	23	*	*	..	14	..	..	37
Infective hepatitis	..	112	*	..	654	..	9	..	775
Lead poisoning	..	*	4	*	4	*	..	..	8
Leprosy	..	3	5	..	34	..	12	I	55
Leptospirosis	..	..	74	..	..	*	I	..	75
Malaria	..	2	27	..	8	..	7	..	44
Meningococcal infection	161	185	37	30	35	44	5	3	500
Ophthalmia	..	*	*	..	56	..	..	..	56
Ornithosis	..	I	*	..	..	*	..	..	I
Paratyphoid	2	I	..	2	3	..	..	..	8
Polioomyelitis	414	297	165	709	37	98	12	I	1,733
Puerperal fever	8	3	32	7	3	..	2	..	55
Rubella	..	1,833	18	*	147	I	I	33	2,033
Salmonella infection	..	..	*	*	22	*	2	..	24
Scarlet fever	923	1,373	372	197	124	273	..	13	3,275
Tetanus	..	12	40	..	13	..	2	..	67
Trachoma	..	*	*	..	I	*	..	..	I
Trichinosis	..	..	*	..	..	*	..	..	..
Tuberculosis	1,793	1,013	778	417	513	207	41	24	4,786
Typhoid fever	13	29	15	2	6	..	..	..	65
Typhus—flea, mite or tick borne	4	2	55	4	26	..	..	..	91

\* Not notifiable. † Acute rheumatism, chorea, dengue, infantile diarrhoea, filariasis and homologous serum jaundice were made notifiable in Victoria in June, 1952. ‡ Acute rheumatism, chorea and infantile diarrhoea have been notifiable in New South Wales since September, 1952.

NOTE.—No cases of cholera, plague, smallpox, epidemic typhus or yellow fever were notified.

(ii) *Veneral Diseases.* The prevention and control of venereal diseases are undertaken by the States. Each State has a Venereal Diseases Act, or provisions in the Health Act govern the working of the measures taken to combat these diseases. Under these Acts notification has been made compulsory in every State. Steps have been taken to ensure free treatment by medical practitioners or in subsidized hospitals and clinics. Registered pharmaceutical chemists are allowed to dispense prescriptions only when signed by medical practitioners. Clinics have been established and, in some cases, beds in public hospitals have been set aside for patients suffering from these diseases.

Penalties may be imposed on a patient who fails to continue under treatment. Clauses are inserted in the Acts which aim at preventing the marriage of any infected person and the employment of an infected person in the manufacture or distribution of foodstuffs.

4. *Vaccination.*—There is statutory provision for compulsory vaccination in all States except New South Wales. Jennerian vaccine for vaccination against smallpox is prepared at the Commonwealth Serum Laboratories in Melbourne. There has been a considerable increase in the demand for vaccination, especially by people about to travel overseas by air, so that they may conform with the quarantine requirements of countries to which they are travelling.

### § 5. Inspection and Sale of Food and Drugs.

Public Health legislation in force in all States provides for the inspection of foods and drugs with the object of ensuring that all those goods which are sold shall be wholesome, clean and free from contamination or adulteration; and that all receptacles, places and vehicles used for their manufacture, storage or carriage shall be clean. For further particulars in this connexion see § 1. State Public Health Legislation and Administration, pp. 509-13.

### § 6. Supervision of Dairies, Milk Supply, Etc.

1. *General.*—In earlier issues of the Official Year Book (see No. 22, p. 498) reference was made to the legislation in force in the various States to ensure the purity of the milk supply and of dairy produce generally.

2. *Number of Dairy Premises Registered, 1952.*—The following table shows, so far as the particulars are available, the number of dairy premises registered and the number of cows in milk thereon. In some States registration is compulsory within certain proclaimed areas only.

#### DAIRY PREMISES REGISTERED, AND COWS IN MILK THEREON, 1952.

Particulars.	N.S.W. (a)	Victoria.	Q'land.	S. Aust.	W. Aust. (b)	Tasmania. (a)
Premises registered ..	15,845	25,423	21,400	11,319	561	7,165
Cows in milk thereon	540,509	718,735	560,100	97,574	18,034	92,254

(a) March, 1952.  
table use.

(b) Dairies registered with the Milk Board for whole milk or sweet cream for

### § 7. Medical Inspection of School Children.

1. *General.*—Medical inspection of school children is carried out in all the States and the Australian Capital Territory. Medical staffs have been organized, and in some States travelling clinics have been established to deal with dental and ocular defects.

2. **New South Wales.**—The School Medical Service became a Division of the Department of Public Health in 1946, having previously been administered by the Department of Education since 1913-14, when it was founded. It provides a service of medical inspection of pupils of all schools administered by the Department of Education and the majority of other schools in the State. It is prepared to provide an equal service for all schools when requested. The primary object of the service is the medical examination of children to discover any departure from normal in the health of a child, either physical or mental, and to notify the parent or guardian in order that the child may be further investigated to determine the need for treatment. In many cases it is not possible to make a diagnosis of the conditions found at the time of the examination. This is due partly to the fact that only a limited time can be devoted to each individual examination, and also to lack of facilities within the service for further investigation. Treatment is accepted as the responsibility of the practising medical profession.

In the metropolitan, Newcastle and Wollongong areas and in a number of the larger towns in the State, each school—primary and secondary—is visited annually, and children in 1st and 5th classes and 1st and 5th years are fully examined. Children in other classes are reviewed, as necessary. In the remainder of the State it is the aim of the service to visit schools every three years, and all children are examined. Up till now it has not been possible to cover the State fully owing to shortage of medical staff.

The establishment for the School Medical Service consists of 32 medical officers (including a Director and a Deputy Director), a part-time medical officer, 4 psychiatrists, 22 nurses, 10 speech therapists, 4 psychologists, 6 social workers (5 full-time and one part-time), a part-time ear, nose and throat surgeon, 2 trainees in speech therapy, 14 clerical officers and a switchboard operator. Except for speech therapists, of whom only five have been appointed, the staff of the service is maintained at full strength.

Nurses are employed in the metropolitan, Newcastle and Wollongong areas to assist in the preparation of the schools prior to the visit of the medical officers, and to follow up cases where parents have not sought medical advice as recommended by medical officers.

In 1952 every school in the metropolitan, Newcastle and Wollongong areas was visited, and a number of schools in country areas. In the metropolitan area there were 202,653 children in primary schools and 59,069 children in secondary schools; in the remainder of the State there were 226,228 in primary schools and 58,395 in secondary schools. The number of full examinations of primary school children in the metropolitan areas was 57,408, and in secondary schools 19,855. The figures for the remainder of the State were 45,537 in primary schools and 14,848 in secondary schools—thus making a total of 137,648 full examinations carried out. The number of children who were reviewed was 30,730.

Notices covering conditions departing from the normal were sent by medical officers in 20.7 per cent. of the cases of full examination. This percentage is less than for previous years, owing to the fact that notices were sent regarding teeth only when the state of the mouth was particularly unhealthy, and not when minor defects were observed.

During the year two oculists visited the western areas of the State, and in addition to the examination of children refracted the eyes of those who showed loss of visual acuity.

There are four Child Guidance Clinics administered by the School Medical Service, and the clinics examine children referred by school medical officers, teachers, and Child Welfare Department and various outside bodies. Boy and girl delinquents are examined at the clinics at the request of the Children's Court.

A hearing clinic conducted by a part-time ear, nose and throat surgeon functioned throughout the year. The parent of any child found to have a defect of hearing at the time of the school medical examination was invited to bring the child to the clinic for a full investigation in order to determine the cause of the loss of hearing.

Recommendations with regard to children examined and found to have severe loss of hearing were made to the Education Department, as to the most suitable method of education. Through liaison with the Commonwealth Acoustic Laboratory a number of children were fitted with hearing aids free of charge.

Five full-time speech therapists were appointed at the beginning of the year and five clinics were established. There is a considerable field for work in speech therapy, and it is hoped that these clinics will be the forerunners of a number of others.

All students desirous of entering a Teachers' College were examined by the School Medical Service. The health of the students within the colleges is supervised by medical officers of this service, who in addition to this duty, also act as lecturers at the colleges in the subject of school health. The Department of Education referred a number of teachers for medical examination, covering sick leave cases, cases for retirement, etc.

The service provides a nurse at each of the two National Fitness Camps, whose duty is to provide first aid treatment for the children attending the camps and to advise on matters relating to their health.

Other duties of the School Medical Service include the supervision of the health of children attending departmental nursery schools, reporting on matters relating to school sanitation, and special examination of children, e.g. those attending the Far West Health Camp, immigrant children on arrival, children in attendance at Glenfield Special School, and special cases referred by the Child Welfare Department or the Education Department.

3. **Victoria.**—Medical inspection of school children was established in 1909. Regular medical examination every three years is carried out within the limits of staffing to ascertain defects, to ensure as far as possible suitable treatment and to refer children physically and mentally handicapped to special schools and classes available for their education.

At the routine inspection each child is weighed and measured, eyesight and hearing tested and defects of teeth, throat, skin and posture noted. The child is questioned and advised concerning general hygiene, cleanliness, etc., and is then undressed and examined as for life assurance. A school nurse assists each medical officer at the examination and is also responsible for the sending of defect notices to the parent. In many cases she also interviews the mother either at the school or in the home, thus acting as liaison between medical officer, parent and teacher. In cases where a serious defect is found the parent attends the school by appointment for a discussion with the medical officer. School nurses visit all metropolitan schools twice each term to carry out hygiene inspections, for pediculosis, cleanliness and infectious skin conditions. The cities of Ballarat, Bendigo, Geelong and Mildura are also visited.

Special classes of school : are provided by the Education Department for physically and mentally handicapped children, such as the partially sighted, partially deaf, undernourished, those with minor postural defects, speech handicaps, mentally retarded, etc. Children attending these classes are kept under regular medical supervision during their school career. Many children are given special appointments on account of behaviour problems, truancy, etc. These cases are also investigated by a school nurse, and, if necessary, sent on to the appropriate psychiatric clinic. Visits to state schools within the metropolitan area are maintained regularly. Extension of the service to children attending Roman Catholic primary schools in metropolitan districts and country areas as medical staff became available was agreed upon in April, 1950, and these schools are now included in the regular itineraries.

Country districts are gradually being included, and all schools in the regions of Glenelg, East Gippsland, Gippsland and Central Highlands are now under regular medical inspection every three years.

During the year ended 30th June, 1952, 89,883 children were examined by medical officers in schools and 108,199 by the School Nursing Staff. The cost of the School Medical Service for 1952 was £45,378.

The School Dental Service affords dental treatment to children attending primary schools and resident in institutions in certain parts of the State. The districts included are progressively extending as facilities and staff increase. Children from metropolitan

schools in industrial suburbs are transported to the School Dental Centre by contract bus service. Country schools are visited by mobile dental units. Three new dental vans and a two-surgery semi-trailer unit have been added to the mobile service, and all former country itineraries were resumed in 1952. This service now extends through the Mallee, Gippsland and East Gippsland regions, and parts of the Goulburn, Upper Goulburn and Port Phillip regions. As further mobile units are obtained, new regions will be added. The Dental Division has a staff of 31 dentists and 30 dental attendants. During 1952, 24,770 children attending 218 schools received dental examination and all necessary treatment, including 27,466 extractions, 31,347 fillings and 11,747 other treatments. The cost for the year 1952 was £82,500.

4. **Queensland.**—The School Health Services Branch, under the direction of the Chief Medical Officer, consists of three sections known as the Medical, Dental and Nursing Sections.

Medical inspection of schools and school children is carried out by two full-time and one part-time officer under the general direction of the Chief Medical Officer, School Health Services. These officers examine as thoroughly as possible all children who have recently entered school and those children referred to them by the school nurses.

The nurses now number 16. Each nurse is assigned a group of schools and in areas where Departmental medical officers are stationed, screens all children prior to the officer's visit. In other areas parents are notified direct of suspected defects found by the nurse who also reports on the sanitation, cleanliness and ventilation of the school, notifies the head teacher of all infectious or verminous children and advises regarding appropriate treatment. During 1951-52, school nurses examined 81,691 children. In the metropolitan area the nurses examine the teeth and report all eligible carious cases to the Dental Hospital for treatment.

The Department now has a staff of 23 dentists, and one part-time dental inspector. These officers are each assigned a district and visit schools in rotation. During 1951-52, 40,133 children were examined; 29,667 extractions were performed; and there were 68,740 fillings and 34,128 other treatments.

In order to give the same medical and dental facilities to the children of the back country as are obtainable by city dwellers, four Rail Dental Clinics equipped on the most modern lines have been constructed. A motor car is carried on a railway wagon attached to each clinic for use at each stopping place to visit the surrounding villages served by the rail centre.

Local practitioners in Western Queensland act as part-time ophthalmic officers.

The work of hookworm control (dealing with *anchylostoma duodenale* and *neecator americanus* infestation) throughout the State is under the control of the Director-General of Medical Services. This activity has resulted in a marked reduction of the incidence of this dangerous menace on the northern coastal belt. Two sisters of the School Health Services are seconded for hookworm duty. The personnel consists of a microscopist, a health inspector and two trained sisters.

This service cost £74,381 in 1951-52.

5. **South Australia.**—The system of medical inspection in operation requires the examination of all children attending both primary and secondary schools. As a rule they are examined three times during their primary course in Grades I, IV, and VII., and twice during their secondary course in the 2nd and 4th years. Country schools are not visited annually because of staff shortage, but approximately every three or four years. On these visits all the children are examined. Reports are furnished to the parents of any remediable defects found during these examinations. The medical inspectors meet the parents after the examination of the children and give an address on the prevention and treatment of the conditions which were found during the inspection. After these lectures the parents are given an opportunity to ask questions regarding their children. When there is an epidemic or a threatened epidemic in a district, similar lectures are given and special visits paid to all the schools in that locality. All students are examined before they enter the Teachers' College and before they begin teaching. Medical and physiological tests are conducted four times during the course (two years) on all candidates taking the Diploma of Physical Education. Courses of lectures in hygiene and in first aid are given to all College students and in home nursing to Domestic Arts students.

The medical staff consists of a principal medical officer, 4 full-time and a part-time medical officer and 5 trained nurses. Five dentists and 4 dental assistants are

attached to the Branch. On 1st July, 1951 the Medical Branch of the Education Department was transferred to the Department of Public Health. The Psychology Branch and Speech Therapist remain in the Education Department.

During 1952, 31,913 children were examined by medical officers and of these 2,217 required notices for defective vision, 642 for defective hearing, and 2,204 for tonsils and adenoids.

The Psychology Branch consists of a psychologist, 2 assistant psychologists, a senior guidance officer, 2 guidance officers, 2 social workers, an advisory teacher of opportunity classes, an advisory teacher of hard of hearing children, a half-time speech therapist and a part-time consultant psychiatrist. The work of the Branch may be divided into three sections—clinical, educational and vocational.

*Clinical.* The clinical work involves examining difficult children of many types, including those with such problems as backwardness, retardation, truancy, delinquency, etc. In addition, the parents of all children examined are always interviewed and their co-operation is sought.

*Educational.* In addition to supervising opportunity and special classes for children backward in school work, the Branch advises on questions of placement and types of education for ordinary children in schools.

*Vocational.* The guidance officers test and advise all children about to leave school. The guidance officers are also responsible for the supervision of record cards where used in primary schools.

The Branch also undertakes lectures to students of the Teachers' College as well as to other interested organizations such as mothers' clubs.

The cost of these services combined in 1950-51 was £15,020.

6. **Western Australia.**—Under the Public Health Act 1911-1952 the medical officers appointed by the local authorities became medical officers of schools and of school children. The principle aimed at is that every school child shall be examined once every two years.

In the Health Department there are five full-time medical officers for schools. During 1952, 40,407 children were examined (metropolitan 21,671, country 18,736), of whom 20,867 were boys and 19,540 girls. There were 209 schools visited, comprising metropolitan, 52 State schools and 21 convents and country, 168 State schools, 40 convents and one kindergarten. During 1952 the 12 full-time dental officers employed visited 18 metropolitan schools, and in dental vans visited 153 country schools; the number of children examined was 9,725 of whom 6,505 were treated with parents' consent. The cost of this service for 1951-52 was £16,370.

7. **Tasmania.**—During the year 1952 2 full-time and 3 part-time medical officers were employed in the examination of school children. The Government medical officers also performed routine examinations as part of their ordinary duties. One part-time and 12 full-time sisters visited homes and schools regularly. Of the 22,805 children examined by medical officers 12,521 were found to have defects.

There are now three dental clinics—one at Hobart, another at Launceston, and the third at Devonport—each with a full-time dental surgeon in charge. In addition, five mobile clinics operated in various parts of the State. There were 11,819 new visits paid to dental clinics and 14,757 repeat visits.

The cost of medical and dental services for the year ended June, 1952 was £36,628.

8. **Australian Capital Territory.**—By arrangement, education facilities are provided by the Education Department of New South Wales. In 1930 the Commonwealth Department of Health took over from the State the medical inspection of school children and carried out examinations of entrants and those leaving in that year. From 1943 to 1951, all primary pupils of Government schools in the Territory were medically examined annually.

During 1951, with the appointment of an Infant Welfare and Schools Medical Officer, a plan for triennial examinations of children in primary and secondary schools was introduced, more attention being paid to those children with defects who were marked for review. In 1951, 2,276 children were examined. (This figure includes 802 children attending private schools, which were brought into the scheme for the first time.)

In 1952, 1,438 children were given routine examinations, and an additional 514 children were given partial examinations when they had special conditions marked for

review. At Pre-School Play Centres and Nursery Schools all children were examined on entrance, and reviewed in their second year of attendance. In 1952, approximately 1,000 pre-school examinations were made.

Parents are notified of defects found. The commoner ones are those of hearing, eyesight, and nose and throat. Amongst children of school age, approximately 4 per cent. have defective sight and 5 per cent. have defective hearing.

### § 8. Supervision and Care of Infant Life.

1. **General.**—The number of infant deaths and the rate of infant mortality for the five years 1948 to 1952 are given in the following table, which shows that during this period 23,711 children died in Australia (excluding Territories) before reaching their first birthday. Further information regarding infant mortality will be found in Chapter X.—Vital Statistics:—

#### INFANT DEATHS AND DEATH RATES.

State.	Metropolitan.					Remainder of State.				
	1948.	1949.	1950.	1951.	1952.	1948.	1949.	1950.	1951.	1952.
<b>NUMBER OF INFANT DEATHS.</b>										
New South Wales	810	754	754	661	604	1,227	1,124	1,182	1,234	1,214
Victoria	605	518	511	549	610	498	508	490	594	588
Queensland	293	210	232	277	259	486	476	487	484	513
South Australia	256	233	235	218	210	216	211	181	210	203
Western Australia	150	149	180	185	179	181	208	206	240	205
Tasmania	46	53	52	56	50	147	117	120	140	122
Australia(a)	2,160	1,917	1,964	1,946	1,912	2,755	2,644	2,666	2,902	2,845
<b>RATE OF INFANT MORTALITY.(b)</b>										
New South Wales	26.96	25.19	25.44	22.89	20.71	33.00	28.91	28.18	28.57	26.96
Victoria	23.77	19.97	19.13	20.66	21.69	24.12	24.27	21.20	24.78	22.96
Queensland	29.94	21.38	31.98	26.83	23.73	28.47	26.55	22.37	25.04	25.60
South Australia	28.79	26.11	24.68	22.45	21.29	30.96	29.64	23.25	27.09	25.31
Western Australia	23.59	21.52	25.41	26.38	23.52	28.78	31.57	28.83	30.84	26.27
Tasmania	22.32	26.21	23.29	26.37	21.62	29.89	23.00	23.96	26.75	21.77
Australia(a)	26.06	22.94	23.82	23.00	21.73	29.60	27.39	24.97	27.06	25.38

(a) Excludes Territories.

(b) Number of deaths under one year of age per 1,000 live births registered.

During recent years greater attention has been paid to the fact that the health of the community depends largely on pre-natal, as well as after-care, in the case of mothers and infants. Government and private organizations, therefore, provide instruction and treatment for mothers before and after confinement, while the health and well-being of mother and child are looked after by the institution of baby health centres, baby clinics, crèches, visits by qualified midwifery nurses, and special attention to the milk supply, etc.

2. **Government Activities.**—In all the States acts have been passed with the object of supervising and ameliorating the conditions of infant life and reducing the rate of mortality. Departments control the boarding-out to suitable persons of the wards of the State, and wherever possible the child is boarded out to its mother or near female relative. Stringent conditions regulate the adoption, nursing and maintenance of children placed in foster-homes by private persons, while special attention is devoted to the welfare of ex-nuptial children. (See also in this connexion Chapter XIV.—Welfare Services.) Under the provisions of the Maternity Allowances, Part V. of the Social Services Consolidation Act 1947–1952, from 1st July, 1947 a sum of £15 is payable to the mother in respect of each confinement at which a living or viable child is born. Where there are one or two other children under 16 the amount payable is £16, and where there are three or more other children under 16 the amount payable is £17 10s. Where more than one child is born at a birth the amount of the allowance is increased by £5 in respect of each additional child born at that birth. Detailed particulars regarding Maternity Allowances are given in Chapter XIV.—Welfare Services.

3. **Nursing Activities.**—(i) *General.* In several of the States the Government maintains institutions which provide treatment for mothers and children, and, in addition, subsidies are granted to various associations engaged in welfare work.

(ii) *Details by States.* In earlier issues of the Official Year Book (see No. 22, pp. 515-6) information may be found concerning the activities of institutions in each State.

(iii) *Summary.* The following table gives particulars of the activities of Baby Health Centres and Bush Nursing Associations :—

**BABY HEALTH CENTRES AND BUSH NURSING ASSOCIATIONS, 1952.**

Heading.	N.S.W.	Vic.	Qld.(a)	S. Aust.	W. Aust.	Tas.	A.C.T. (a)	Total.
<b>Baby Health Centres—</b>								
Metropolitan .. No.	83	134	47	73	22	2	4	365
Urban-Provincial and Rural .. No.	212 (b)	321	162	156	23 (c)	91	..	965
Total .. No.	295	455	209	229	45	93	4	1,330
<b>Attendances at Centres</b>								
No.	1,061,371	1,052,117	363,557	223,924	197,207	138,925	17,700	3,054,801
<b>Visits paid by Nurses</b>								
No.	20,888	106,327	25,801	29,234	18,644	77,159	2,688	280,741
<b>Bush Nursing Associations</b>								
—Number of Centres ..	29	58	10	33	8	25	..	163

(a) Year ended 30th June, 1952.

(b) Includes eight mobile units.

(c) Includes seven mobile units.

In the last twenty years the number of attendances at the Baby Health Centres has more than trebled. The numbers of attendances, at five-yearly intervals, since 1930 were as follows :—1930, 919,893; 1935, 1,355,306; 1940, 2,035,299; 1945, 2,927,764; 1950, 3,049,375. During the year 1951 the number of attendances was 2,958,852.

### § 9. Hospital Benefits Act.

1. **General.**—Under the Hospital Benefits Act 1951, which repealed the Hospital Benefits Act 1945-1948, the Commonwealth has entered into agreements with the States to pay to the States hospital benefits at agreed rates for beds occupied by qualified patients in public hospitals; and has made regulations approving the payment of hospital benefits in respect of patients in private hospitals, the payment of additional benefits and the payment of hospital benefits in respect of persons temporarily absent from Australia.

2. **Hospital Benefits Agreements.**—These agreements provide that the agreements under the Hospital Benefits Act 1945-1948 shall be deemed to have ceased to be in force. The benefit rate is 12s. per day in relation to a qualified patient who is a pensioner as defined in the National Health (Medical Services to Pensioners) Regulations, or the dependant as so defined of a pensioner not being a qualified patient in a State Benevolent Home and who—(a) being eligible, has enrolled for benefit under the medical practitioners' service arranged by the Director-General of Health under the National Health Service Act 1948-1949; (b) produces to the proper hospital authority an entitlement card issued by the Commonwealth for the purposes of the medical services prescribed by the National Health (Medical Services to Pensioners) Regulations; and (c) is not a contributing patient as defined in the Hospital Benefits Regulations.

The benefit rate in relation to all other qualified patients is 8s. per day.

The agreements provide that the States shall ensure that the charges per day payable by qualified patients in respect of beds in public hospitals shall be reduced by the benefit rate.

3. **Hospital Benefits Regulations.**—Private hospitals are entitled to claim benefits for beds occupied by qualified patients. These hospitals must be approved by a joint committee of Commonwealth and State Health Authorities before payment of benefit is made. The hospitals are required to reduce each qualified patient's account by the amount of the benefit payable by the Commonwealth. The benefit rate for private hospitals is 8s. per day.

Hospital benefits are payable also to, or in respect of, any person ordinarily resident in Australia who, whilst temporarily absent from Australia, has been a qualified patient in a hospital in any country outside Australia. The benefit rate for these patients is



8s. (Australian currency) per day. Arrangements have been made for these benefits to be paid in several countries overseas where Commonwealth offices are established. Any claims not dealt with overseas receive attention in Australia.

An additional hospital benefit of 4s. per day is payable in respect of each qualified patient in an approved public hospital or an approved private hospital who is a contributor or a dependant of a contributor to the funds of a hospital benefit organization registered by the Commonwealth for the purposes of additional benefits. The additional benefit is not payable if the gross fees payable do not exceed 14s. per day. Where the gross fees exceed 14s. per day, but do not exceed 18s. per day, the rate of additional benefit payable is ascertained by deducting an amount of 14s. from the amount of those gross fees per day. The additional benefit is paid through the registered organization, either to the contributing patient or to the hospital concerned.

### § 10. Mental Institution Benefits Act.

The Mental Institution Benefits Act 1948 authorizes the execution on behalf of the Commonwealth of agreements with all or any of the States relating to the provision of mental institution benefits.

Agreements made with all States provide for the payment of benefits at a rate per patient-day determined separately in respect of each State and based on the amounts received by that State from the estates and relatives of patients during the year ended 30th June, 1948. Under the agreements the States are required to ensure that no means test is imposed on, and that no fees are charged to, or in respect of, qualified persons.

### § 11. Tuberculosis Act.

The main provisions of this Act, which was assented to on 25th November, 1948, are as follows:—(a) Section 5, which authorizes the Commonwealth to enter into an arrangement with the States for an effectual national campaign against tuberculosis; (b) Section 6, which empowers the Commonwealth to take over or provide specified facilities for the diagnosis, treatment and control of tuberculosis; (c) Section 8, which provides for the setting up of an Advisory Council to advise the Commonwealth Minister for Health on matters relating to the national campaign; and (d) Section 9, which authorizes the Commonwealth to pay allowances to sufferers from tuberculosis and their dependants to enable sufferers to give up work and undergo treatment, and thus minimize the spread of infection.

The Commonwealth has completed an arrangement with each State, whereby each State is required to conduct an effectual campaign against tuberculosis and to provide adequate facilities for that purpose. In consideration of this, the Commonwealth undertakes to reimburse the State for all approved capital expenditure in relation to tuberculosis on and after 1st July, 1948, and for net maintenance expenditure to the extent it is in excess of net maintenance expenditure for the base year 1947–48. Thus, the States are required to carry out the actual physical or field work of the national campaign with the Commonwealth acting in an advisory, co-ordinating and financial capacity. For this reason, the Commonwealth has not found it necessary to make much use of its powers under Section 6.

An Advisory Council, known as the National Tuberculosis Advisory Council, has been set up and has already had three meetings. There are eleven members under the chairmanship of the Commonwealth Director-General of Health. The members are the Commonwealth Director of Tuberculosis, the six State Directors of Tuberculosis, the Consultant (Chest Diseases) of the Department of Repatriation, two specialist private practitioners, and the Chief Administrative Officer of the Commonwealth Department of Health.

A system of tuberculosis allowances has been drawn up and is an important factor in the campaign against the disease. Payments under the scheme were commenced on 13th July, 1950. The rates of allowance from 29th October, 1953 were £9 2s. 6d. a week for a married sufferer with a dependent wife, £5 12s. 6d. a week for a sufferer without dependants (reducible to £3 10s. when maintained free of charge in an institution), and 10s. a week for each dependent child under the age of sixteen (which is additional to child endowment). There is a means test, generous to the sufferer, which has regard only to income and not to property.

### § 12. Pharmaceutical Benefits Act.

A Pharmaceutical Benefits Act was passed by the Commonwealth Parliament in March, 1944 and was amended in September, 1945. This Act was the subject of a High Court action, as a result of which the Government sought by means of a referendum of the people the constitutional power necessary to implement the Act. This power having been granted, a further Pharmaceutical Benefits Act, which repealed the Acts of 1944 and 1945, was assented to on 12th June, 1947. This Act embodied a scheme for providing pharmaceutical benefits to all persons ordinarily resident in Australia. The benefits provided were contained in a Commonwealth Pharmaceutical Formulary, which was subject to periodic revision by a Formulary Committee comprised of members of the medical and pharmaceutical professions. Benefits were supplied without cost to the person receiving the benefit, payment being made by the Commonwealth to authorized suppliers from the National Welfare Fund. Special arrangements existed for supplying benefits or their equivalent to persons residing in isolated areas. These pharmaceutical benefits were first made available to the public on 1st June, 1948. Further Pharmaceutical Benefits Acts were assented to on 25th March, 1949 and 7th July, 1949 respectively, but a clause in the former which sought to compel the use by doctors of official prescription forms when prescribing pharmaceutical benefits was held by the High Court to be invalid. In August, 1950 the Government amended the regulations under the Act, thereby limiting the range of benefits to a list of live-saving and disease-preventing drugs compiled on the recommendation of a special Medical Advisory Committee. These regulations came into force on 4th September, 1950. Subsequent amendments restrict the use of certain drugs to the treatment of specified diseases. By a Pharmaceutical Benefits Act assented to on 1st November, 1952, the number of committees to be established under the Act was to be determined at the discretion of the Minister.

### § 13. Pensioner Medical Service.

The Pensioner Medical Service which commenced on 21st February, 1951, was introduced under the authority of the National Health (Medical Services to Pensioners) Regulations in accordance with the provisions of the National Health Service Act 1948-1949.

Under this service medical treatment of a general practitioner nature, such as is usually rendered in the doctor's surgery or in the patient's home, is provided for eligible pensioners and their dependants, but it does not extend to specialist services. The service also includes the supply of medicines prescribed by medical practitioners under the National Health (Medicines for Pensioners) Regulations. Subject to certain terms and conditions, any registered medical practitioner may participate in the service, which is free to eligible pensioners and their dependants. However, a medical practitioner may charge a pensioner a small fee for "after hours" service or for travelling beyond a certain distance from his surgery. Medical practitioners participating in the service are remunerated on a concessional fee-for-service basis by the Commonwealth, and the pensioner has freedom of choice as to which participating doctor he will consult.

To be eligible for the benefits of the Pensioner Medical Service, a pensioner must be in receipt of an Australian age, invalid, widow's or service pension (but not a war pension) or a tuberculosis allowance, and he must have an entitlement card issued by the Commonwealth for the purposes of the service.

At 30th June, 1952, there were 3,502 medical practitioners enrolled in the Pensioner Medical Service to provide medical services to approximately 501,400 pensioners and dependants. More than 90 per cent. of eligible pensioners have been enrolled for the benefits of the service, and it is estimated that more than 80 per cent. of active general medical practitioners in Australia are participating.

During the year ended 30th June, 1952, participating medical practitioners were paid £1,034,902 from the National Welfare Fund. This was made up of £1,020,905 for 2,332,824 medical services to pensioners and their dependants (1,227,829 surgery consultations and 1,104,995 domiciliary visits), and £13,997 for approximately 140,000 miles travelled by participating medical practitioners, outside a radius of 3 miles from their surgeries, in visiting pensioners and their dependants. The number of medical services rendered by medical practitioners averaged 4.6 per enrolled pensioner and dependants for the year ended 30th June, 1952, but at the end of that year services were being rendered at the rate of 5.4 per eligible person per annum.

### § 14. Free Milk for School Children Scheme.

In 1950 the States Grants (Milk for School Children) Act was passed. The objective of this Act was to improve the diet of school children by the addition of a small quantity of milk each day. All children under the age of thirteen years attending public or primary schools, including nursery schools, kindergartens, crèches and aboriginal missions, are eligible to receive this issue. The Act provides that the cost of supplying the milk, which is given to the children in one-third of a pint bottles, wherever practicable, is reimbursable by the Commonwealth to the States plus half the capital or incidental costs, including administrative expenses incurred in administering the scheme. All States are now participants in the scheme, and at present approximately 700,000 children are receiving free milk.

In the more remote areas powdered milk is supplied where fresh milk is not available. Eventually it is expected that one million children will be covered by this scheme. In the years 1950-51 and 1951-52 the following amounts were reimbursed to the various States and Territories:—1950-51—New South Wales, £35,683; Australian Capital Territory, £92; Total, £35,775; 1951-52—New South Wales, £440,316; Victoria, £140,000; South Australia, £74,642; Western Australia, £67,480; Tasmania, £90,390; Northern Territory, £158; Australian Capital Territory, £3,989; Total, £816,975.

### § 15. Disposal of the Dead by Cremation.

The disposal of the dead by cremation has been in existence in Australia for many years, as the first crematorium was opened in South Australia in 1903. The number of crematoria in New South Wales is five; the first was opened in 1925. There are two crematoria in Victoria; the first crematorium opened in 1905, but was closed in 1926 and re-opened in 1936, while the other one was opened in 1927. There are two crematoria in Queensland, the first being opened in 1934. In South Australia there is one crematorium which opened in 1903. In Western Australia there is one crematorium which opened in 1939. In Tasmania there are two crematoria; the first was opened in 1936.

The following table shows the number of cremations in each State for the ten years 1943 to 1952:—

#### CREMATIONS.

Year.	N.S.W.	Vic.	Q'land.(a)	S. Aust.(a)	W. Aust.	Tas.	Aust.
1943 .. ..	6,312	2,198	1,344	142	376	272	10,644
1944 .. ..	6,132	2,394	1,432	145	389	333	10,875
1945 .. ..	6,418	2,604	1,481	167	479	325	11,474
1946 .. ..	7,054	2,950	1,593	155	504	328	12,584
1947 .. ..	7,443	3,162	1,742	176	527	355	13,405
1948 .. ..	8,273	3,642	1,925	214	627	434	15,115
1949 .. ..	8,591	4,157	2,010	231	610	406	16,005
1950 .. ..	9,170	4,425	2,155	225	726	421	17,122
1951 .. ..	9,815	4,808	2,377	280	874	485	18,639
1952 .. ..	10,165	5,338	2,671	347	929	532	19,982

(a) Year ended 30th June.

## B. INSTITUTIONS.

### § 1. General.

In Australia, institutions related to public health may be classified in three groups: (a) State; (b) public; and (c) private. To the first group belong those institutions wholly provided for by the State, such as the principal mental hospitals in the various States and the Government and leased hospitals in Western Australia. To the second group belong public institutions of two kinds, namely:—(i) those partially subsidized by the State or by State endowments for maintenance, but receiving also private aid, and (ii) those wholly dependent upon private aid. To the first of these two kinds belong such institutions as the principal metropolitan hospitals; in the second are included institutions established and endowed by individuals for the benefit of the needy generally. All institutions of a private character are included in the third group. A more or less accurate statistical account is possible in classes (a) and (b), but in regard to (c) general tabulation is, for obvious reasons, impossible. Owing to differences in the dates of collection and tabulation it is impossible to bring statistics of some charitable institutions to a common year.

## § 2. Public Hospitals (other than Mental Hospitals).

1. **General.**—All the State capitals have several large and well-equipped hospitals, and there is at least one in every important town. In large centres there are hospitals for infectious diseases, tubercular patients, women, children, incurables, etc.

The particulars given herein refer to public hospitals at the latest available date and include all institutions affording hospital relief, whether general or special, with the exception of mental hospitals, repatriation hospitals and private hospitals conducted commercially. The particulars for New South Wales in the following tables relate to public hospitals operating under the control of the Hospitals Commission.

2. **Principal Hospitals in each State.**—In earlier issues of the Official Year Book (see No. 22, pp. 481-2) particulars respecting staff, accommodation, etc., of each of the principal hospitals were given.

3. **Number, Staff and Accommodation, 1950-51.**—Details regarding the number of hospitals, staffs and accommodation for the year 1950-51 are given in the following table:—

### PUBLIC HOSPITALS : NUMBER, STAFF AND ACCOMMODATION, 1950-51.

Particulars.	N.S.W.	Vic.(a)	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
Number of Hospitals ..	255	98	131	60	94	25	1	664
Medical Staff—								
Honorary .. ..	2,756	1,156	151	351	230	106	19	4,769
Salaried .. ..	604	413	394	98	66	76	4	1,655
Total .. ..	3,360	1,569	545	449	296	182	23	6,424
Nursing Staff .. ..	9,065	5,186	4,356	1,762	1,781	834	71	23,055
Accommodation—								
Number of beds and cots	18,536	10,128	8,237	3,374	4,015	1,943	184	46,417

(a) Year ended 31st March, 1951.

The figures for accommodation shown in the table above include particulars, where available, of a considerable number of beds and cots for certain classes of cases in outdoor or verandah sleeping places.

4. **In-Patients (Cases) Treated.**—The following table furnishes particulars of in-patients treated (newborn are excluded).

### PUBLIC HOSPITALS : IN-PATIENTS (CASES) TREATED, 1950-51.

Particulars.	N.S.W.	Vic.(a)	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
Inmates at beginning of year—								
Males .. ..	5,863	2,916	2,914	993	1,258	481	58	14,483
Females .. ..	7,645	3,967	3,132	1,346	1,357	681	88	18,216
Total .. ..	13,508	6,883	6,046	2,339	2,615	1,162	146	32,699
Admissions and Re-admissions during year—								
Males .. ..	141,261	63,039	74,693	23,706	32,779	11,701	1,392	348,571
Females .. ..	207,896	100,632	87,673	31,356	36,698	19,736	2,460	486,451
Total .. ..	349,157	163,671	162,366	55,062	69,477	31,437	3,852	835,022
Total in-patients (Cases) treated—								
Males .. ..	147,124	65,955	77,607	24,699	34,037	12,182	1,450	363,054
Females .. ..	215,541	104,599	90,805	32,702	38,053	20,417	2,548	604,667
Total .. ..	362,665	170,554	168,412	57,401	72,092	32,599	3,998	967,721
Discharges—								
Males .. ..	134,802	59,152	71,440	22,225	31,549	11,206	1,330	331,704
Females .. ..	203,039	97,764	85,583	30,419	35,863	19,310	2,429	474,407
Total .. ..	337,841	156,916	157,023	52,644	67,412	30,516	3,759	806,111
Deaths—								
Males .. ..	6,461	3,885	3,096	1,421	1,280	504	48	16,695
Females .. ..	4,743	2,891	2,017	1,020	851	398	33	11,953
Total .. ..	11,204	6,776	5,113	2,441	2,131	902	81	28,648
Inmates at end of year—								
Males .. ..	5,861	2,918	3,071	1,053	1,208	472	72	14,655
Females .. ..	7,759	3,944	3,205	1,263	1,341	709	86	18,307
Total .. ..	13,620	6,862	6,276	2,316	2,549	1,181	158	32,962
Average Daily Number Resident .. ..	13,580	7,113	6,019	2,326	2,616	1,247	149	33,050

(a) Year ended 31st March, 1951.

In addition to those admitted to the hospitals there are large numbers of out-patients. During 1950-51 there were 991,710 out-patients (cases) treated in New South Wales, 415,495 in Victoria, 485,025 in Queensland, 113,352 in South Australia, 105,698 (estimated) in Western Australia, 84,427 in Tasmania and 10,792 in the Australian Capital Territory, making a total for Australia of 2,206,499.

5. **Revenue and Expenditure.**—Details of the revenue and expenditure for the year 1950-51 are shown in the next table. The revenue includes the Commonwealth Hospital Benefits Scheme which operated in Victoria, Queensland, Western Australia and Tasmania from 1st January, 1946, in South Australia from 1st February, 1946, and in New South Wales and the Australian Capital Territory from 1st July, 1946.

## PUBLIC HOSPITALS : REVENUE AND EXPENDITURE, 1950-51.

(£.)

Particulars.	N.S.W.(a)	Vic. (b)	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
<b>Revenue—</b>								
Government Aid ..	9,494,117	4,994,795	3,702,212	1,375,732	1,906,628	782,860	131,610	22,387,954
Commonwealth Hospital Benefits ..	(c) 847,175	1,097,000	895,367	320,305	324,703	198,604	25,376	3,708,530
Municipal Aid ..	(d)	76,582	..	85,291	567	..	..	162,440
Public Subscriptions, Legacies, etc. ..	128,341	893,431	3,233	92,393	35,572	6,832	16	1,159,818
Fees ..	1,594,651	1,010,285	325,364	242,698	170,813	81,901	6,785	3,432,497
Other ..	236,266	145,873	41,898	120,306	12,081	32,159	154	588,737
<b>Total</b> ..	<b>12,300,550</b>	<b>8,217,966</b>	<b>4,968,074</b>	<b>2,236,725</b>	<b>2,450,364</b>	<b>1,102,356</b>	<b>163,941</b>	<b>31,439,976</b>
<b>Expenditure—</b>								
Salaries and Wages	7,579,938	3,367,611	2,830,980	1,243,942	1,144,191	648,606	69,720	16,884,988
Upkeep and Repair of Buildings and Grounds ..	407,161	220,435	119,532	117,711	61,468	17,240	4,721	948,268
All Other Ordinary Capital(e) ..	4,214,249	2,670,172	2,043,798	759,558	810,990	430,244	51,830	10,980,841
	(f)	2,169,997	988,420	156,728	415,861	..	37,347	3,768,353
<b>Total</b> ..	<b>12,201,348</b>	<b>8,428,215</b>	<b>5,982,730</b>	<b>2,277,939</b>	<b>2,432,510</b>	<b>1,096,090</b>	<b>163,618</b>	<b>32,582,450</b>

(a) Excludes loan receipts and expenditure. (b) Year ended 31st March, 1951. (c) Portion only of amount allocated to public hospitals. (d) Included in "Other". (e) Includes such items as Purchases of Land, Cost of New Buildings and Additions to Buildings. (f) Not available. (g) Incomplete.

6. **Summary, 1938-39 and 1947-48 to 1950-51.**—A summary, for the years 1938-39 and 1947-48 to 1950-51, of the number of public hospitals in Australia, medical and nursing staffs, beds, admissions, in-patients treated, out-patients, deaths, average daily number resident, revenue, and expenditure is given in the following table. The figures relate to both general and special hospitals.

## PUBLIC HOSPITALS : AUSTRALIA.

Particulars.		1938-39.	1947-48.	1948-49.	1949-50.	1950-51.
Hospitals ..	No.	563	612	624	648	664
Medical Staff ..	"	4,059	5,336	5,476	5,917	6,424
Nursing Staff ..	"	13,582	20,153	21,360	22,235	23,055
Beds and cots ..	"	35,711	43,473	44,509	45,559	46,417
Admissions during year ..	"	527,055	691,453	700,321	792,699	835,022
Total indoor cases treated ..	"	552,051	719,956	730,009	823,395	867,721
Out-patients (cases) (a) ..	"	1,272,147	1,783,674	1,836,122	2,034,317	2,206,499
Deaths ..	"	23,372	25,046	24,699	27,057	28,648
Average daily resident ..	"	25,608	28,554	28,942	31,885	33,050
Revenue ..	£	7,106,642	17,392,541	19,465,458	24,943,591	31,439,976
Expenditure ..	£	6,351,055	17,805,479	20,661,275	26,205,194	32,582,450

(a) Partly estimated.

§ 3. Leper Hospitals.

Isolation hospitals for the care and treatment of lepers have been established in New South Wales (Little Bay); Queensland (Peel Island, near Brisbane, and Fantome Island, North Queensland); Western Australia (Derby); and the Northern Territory (Channel Island, near Darwin). At the end of 1952 there were 17 cases in residence at Little Bay, 33 at Peel Island, 70 at Fantome Island, 303 at Derby, 179 at Channel Island, and 5 cases at Wooroloo, Western Australia. Of the 607 cases, 499 were full-blood aborigines, 51 half-caste aborigines, 5 Asiatics and 54 Europeans.

§ 4. Mental Hospitals.

1. **General.**—The methods of compiling statistics of mental diseases are fairly uniform throughout the States, but there is an element of uncertainty about possible differences in diagnosis in the early stages of the disease. The figures for the States cannot be brought to a common year; consequently the following particulars relate to a combination of calendar and financial years. Licensed houses are included in all particulars excepting revenue and expenditure for New South Wales. The figures exclude those of reception houses and observation wards in gaols. In New South Wales the expenditure includes the cost of Broken Hill patients treated in South Australian mental hospitals.

2. **Hospitals, Staff, etc., 1950-51.**—Particulars regarding the number of hospitals, the medical and nursing staffs, and accommodation are given in the following table for the year 1950-51:—

MENTAL HOSPITALS : NUMBER, STAFF, ACCOMMODATION, 1950-51.(a)

Particulars.	N.S.W.	Vic.	Q'land. (b)	S. Aust.	W. Aust.	Tas.	Total.
Number of Hospitals .. .. .	13	9	4	2	4	1	33
Medical Staff—							
Males .. .. .	37	68	9	7	5	2	128
Females .. .. .	8	..	1	1	..	..	10
Total .. .. .	(c) 45	68	10	8	5	2	138
Nursing Staff and Attendants—							
Males .. .. .	951	721	474	197	172	92	2,607
Females .. .. .	958	587	332	190	76	76	2,219
Total .. .. .	1,909	1,308	806	387	248	168	4,826
Accommodation—							
Number of beds and cots ..	12,013	6,636	4,218	2,377	1,506	762	27,512

(a) The figures relate to years ended as follows:—New South Wales, Queensland, South Australia and Tasmania—30th June, 1951; Victoria and Western Australia—31st December, 1950. (b) Includes the Epileptic Home. (c) In addition there are 40 visiting specialists who are paid for their time.

3. **Patients, 1950-51.**—Information regarding patients treated, deaths, etc., for 1950-51 is given in the following table:—

MENTAL HOSPITALS : PATIENTS, DEATHS, ETC., 1950-51.(a)

Particulars.	N.S.W.	Vic.	Q'land. (b)	S. Aust.	W. Aust.	Tas.	Total.
Number of distinct persons treated during year(c)—							
Males .. .. .	6,982	3,884	2,628	1,363	1,040	465	16,362
Females .. .. .	7,268	4,525	2,455	1,399	704	534	16,885
Total .. .. .	14,250	8,409	5,083	2,762	1,744	999	33,247

(a) See footnote (a) to previous table.

(b) See footnote (b) to previous table.

(c) Excludes transfers to other institutions.

MENTAL HOSPITALS: PATIENTS, DEATHS, ETC., 1950-51(a)—*continued.*

Particulars.	N.S.W.	Vic.	Q'land. (b)	S. Aust.	W. Aust.	Tas.	Total.
Number of patients on books at beginning of year—							
Males .. .. .	5,898	3,304	2,162	1,140	933	321	13,758
Females .. .. .	6,125	3,899	1,991	1,170	614	365	14,164
Total .. .. .	12,023	7,203	4,153	2,310	1,547	686	27,922
Admissions and re-admissions (excluding absconders retaken and transfers from other hospitals)—							
Males .. .. .	1,084	580	466	223	107	144	2,604
Females .. .. .	1,143	626	464	229	90	169	2,721
Total .. .. .	2,227	1,206	930	452	197	313	5,325
Discharges (including absconders not retaken)—							
Males .. .. .	448	229	255	75	35	123	1,165
Females .. .. .	503	222	244	69	27	126	1,191
Total .. .. .	951	451	499	144	62	249	2,356
Deaths—							
Males .. .. .	396	235	152	105	65	27	980
Females .. .. .	398	251	137	102	50	41	979
Total .. .. .	794	486	289	207	115	68	1,959
Number of patients on books at end of year—							
Males .. .. .	6,138	3,420	2,221	1,183	940	315	14,217
Females .. .. .	6,367	4,052	2,074	1,228	627	367	14,715
Total .. .. .	12,505	7,472	4,295	2,411	1,567	682	28,932
Average daily number resident—							
Males .. .. .	5,509	2,951	2,134	1,150	904	311	12,959
Females .. .. .	5,531	3,459	1,930	1,162	586	369	13,037
Total .. .. .	11,040	6,410	4,064	2,312	1,490	680	25,996
Number of patients on books at end of year per 1,000 of population—							
Males .. .. .	3.68	3.06	3.58	3.30	3.19	2.11	3.38
Females .. .. .	3.86	3.64	3.50	3.40	2.25	2.59	3.56
Total .. .. .	3.77	3.35	3.55	3.35	2.73	2.34	3.46
Average number of patients resident in mental hospitals per 1,000 of population—							
Males .. .. .	3.34	2.68	3.49	3.24	3.15	2.11	3.13
Females .. .. .	3.40	3.13	3.31	3.26	2.16	2.63	3.20
Total .. .. .	3.37	2.91	3.41	3.25	2.67	2.36	3.16

(a) See footnote (a) to previous table.

(b) Includes the Epileptic Home.

Persons who are well advanced towards recovery are allowed to leave the hospitals and reside with their relatives or friends, but they are under supervision and their names are kept in the records.

4. **Revenue and Expenditure, 1950-51.**—The revenue of Government mental hospitals is small in comparison with their cost, and consists chiefly of patients' fees, and mental institution benefits. The proportion of expenditure borne by the State amounts to about 87 per cent. In New South Wales the expenditure includes the cost of Broken Hill patients treated in South Australian mental hospitals :—

MENTAL HOSPITALS : FINANCES, 1950-51.

(£.)

Particulars.	N.S.W.	Vic.	Q'land. (a)	S. Aust.	W. Aust.	Tas.	Total.
Revenue (excluding Government Grants)—							
Fees of Patients .. .. .	114,211	96,949	34,253	15,875	24,384	2,274	287,946
Mental Institution .. .. .							
Benefits .. .. .	198,165	146,728	..	33,369	12,869	9,177	400,308
Other .. .. .	73,308	17,185	1,587	25,522	5,528	111	123,241
Total .. .. .	385,684	260,862	35,840	74,766	42,781	11,562	811,495
Expenditure—							
Salaries and Wages .. .. .	1,325,637	825,246	505,998	274,641	206,559	119,558	3,257,639
Upkeep and Repair of Buildings, etc. .. .. .	40,711	107,242	8,723	33,691	20,856	5,907	217,130
All Other(b) .. .. .	1,269,476	941,769	370,742	202,408	111,869	78,829	2,975,093
Total .. .. .	2,635,824	1,874,257	885,463	510,740	339,284	204,294	6,449,862
Expenditure per Average Daily Resident .. .. .	£238/15/0	£292/7/11	£217/17/7	£220/18/2	£227/14/2	£300/8/8	£248/2/2

(a) Includes the Epileptic Home. (b) Includes the following amounts for capital expenditure on Purchases of Land, Cost of New Buildings, and Additions to Buildings: New South Wales, £298,564; Victoria, £222,907; Queensland, £21,661; South Australia, £25,341.

5. **Summary for Australia, 1938-39 and 1947-48 to 1950-51.**—The following table gives a summary relating to mental hospitals in Australia during 1938-39 and for each of the years 1947-48 to 1950-51 :—

MENTAL HOSPITALS : SUMMARY, AUSTRALIA.

Particulars.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.
Hospitals .. .. .	No. 35	34	33	33	33
Medical Staff .. .. .	92	108	116	128	138
Nursing Staff .. .. .	4,922	4,198	4,487	4,694	4,826
Beds .. .. .	25,654	27,219	27,272	27,397	27,512
Admissions .. .. .	3,757	4,061	4,289	4,587	5,325
Discharged as recovered, relieved, etc. .. .. .	1,800	1,969	2,089	2,202	2,356
Deaths .. .. .	1,632	1,923	1,991	1,886	1,959
Inmates at end of year .. .. .	26,509	27,214	27,425	27,922	28,932
Average daily resident .. .. .	24,063	24,936	24,973	25,319	25,996
Revenue (excluding Government Grants) .. .. .	£ 262,817	508,201	593,601	725,405	811,495
Expenditure—Total .. .. .	£ 1,903,817	3,575,676	4,484,879	5,390,526	6,449,862
" —Per Average daily resident .. .. .	£79/2/4	£143/7/11	£179/11/9	£212/18/1	£248/2/2



6. Number of Mental Patients, 1938-39 and 1947-48 to 1950-51.—The total number returned as under treatment shows slight increases during the period but the proportion to total population shows a slight decline. A more rational attitude towards the treatment of mental cases has resulted in a greater willingness in recent years to submit afflicted persons to treatment at an early stage, and an increase in the number of recorded cases, therefore, does not necessarily imply an actual increase in mental diseases.

## MENTAL PATIENTS IN HOSPITALS.

State.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.
NUMBER.					
New South Wales .. ..	11,678	11,836	11,825	12,023	12,505
Victoria .. ..	7,326	7,052	7,120	7,203	7,472
Queensland(a) .. ..	3,650	4,008	4,068	4,153	4,295
South Australia .. ..	1,747	2,165	2,213	2,310	2,411
Western Australia .. ..	1,477	1,505	1,537	1,547	1,567
Tasmania .. ..	631	648	662	686	682
Australia .. ..	26,509	27,214	27,425	27,922	28,932

## PER 1,000 OF POPULATION.

New South Wales .. ..	4.25	3.91	3.80	3.73	3.77
Victoria .. ..	3.92	3.42	3.38	3.33	3.35
Queensland(a) .. ..	3.59	3.55	3.54	3.51	3.55
South Australia .. ..	2.93	3.29	3.29	3.30	3.35
Western Australia .. ..	3.16	2.96	2.94	2.84	2.73
Tasmania .. ..	2.66	2.47	2.46	2.46	2.34
Australia .. ..	3.81	3.56	3.50	3.45	3.46

(a) Includes the Epileptic Home.

The difference between States in the number of mental patients in hospitals per 1,000 of population may to some extent be the result of differences in classification.

## CHAPTER XIV.

### WELFARE SERVICES.

#### A. COMMONWEALTH SOCIAL SERVICE BENEFITS.

##### § 1. Introduction.

Commonwealth social service benefits are provided under the Social Services Consolidation Act 1947-1952 which came into operation on 1st July, 1947. This Act provided for the repeal of the existing laws relating to age and invalid pensions, maternity allowances, child endowment, widows' pensions and unemployment and sickness benefits, and for the immediate re-enactment of the necessary provisions for the grant and payment of these benefits under a unified law. Its more important effects were the elimination of obsolete provisions, the removal of anomalies, the amalgamation of like provisions, and the modernizing and grouping of the legislation so that it presented a symmetrical part of a well-defined pattern of social security. The history of the variations in the rates and conditions of age and invalid pensions, maternity allowances, child endowment, widows' pensions and unemployment and sickness benefits prior to 1st July, 1947 is referred to in earlier issues of the Official Year Book.

##### § 2. Commonwealth Expenditure on Social and Health Services.

1. States, 1951-52.—The Commonwealth expenditure in each State on Social and Health Services for the year 1951-52 is shown in the following table:—

#### COMMONWEALTH EXPENDITURE ON SOCIAL AND HEALTH SERVICES, 1951-52. (£'000.)

Social and Health Services.	N.S.W. (a)	Vic.	Q'land.	S. Aust. (b)	W. Aust.	Tas.	Total.
Age and Invalid Pensions .. .. .	25,075	14,449	8,836	5,180	4,106	2,142	59,788
Funeral Benefits .. .. .	168	81	37	22	19	9	276
Maternity Allowances .. .. .	1,182	836	490	284	241	123	(c) 3,157
Child Endowment .. .. .	17,794	12,015	7,363	4,149	3,478	1,819	(d) 46,625
Widows' Pensions .. .. .	2,315	1,390	905	450	367	188	5,615
Unemployment and Sickness Benefits	351	239	253	77	59	29	1,008
Community Rehabilitation .. .. .	70	129	46	71	40	5	361
Hospital Benefits .. .. .	2,698	1,575	1,092	556	511	251	6,683
Tuberculosis Campaign(e) .. .. .	1,622	1,103	360	302	313	179	3,879
Pharmaceutical Benefits .. .. .	3,027	2,071	861	695	473	135	(f) 7,327
National Health Services—							
Medical Benefits to Pensioners ..	492	226	119	105	75	19	1,036
Pharmaceutical Benefits to Pensioners ..	187	61	40	33	30	7	358
Nutrition of Children .. .. .	443	140	75	67	90	10	815
Miscellaneous .. .. .	30	25	50	11	16	10	(g) 162
Mental Institution Benefits .. .. .	203	150	103	35	18	9	518
<b>Total .. .. .</b>	<b>55,597</b>	<b>34,490</b>	<b>20,555</b>	<b>12,045</b>	<b>9,813</b>	<b>5,015</b>	<b>137,608</b>

(a) Includes Australian Capital Territory. (b) Includes Northern Territory. (c) Includes payments overseas, £1,000. (d) Includes payments overseas, £7,000. (e) Includes allowances and reimbursements to the States. (f) Includes administration, £65,000. (g) Includes administration, £20,000.

2. Australia, 1938-39 and 1947-48 to 1951-52.—Commonwealth expenditure on Social and Health Services, excluding cost of administration, during the years 1938-39 and 1947-48 to 1951-52, for Australia, is shown in the following table :—

COMMONWEALTH EXPENDITURE ON SOCIAL AND HEALTH SERVICES.

(£'000.)

Social and Health Services.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Age and Invalid Pensions ..	15,992	36,526	41,694	44,557	49,520	59,788
Funeral Benefits ..		210	253	246	254	276
Maternity Allowances ..	436	2,854	2,829	3,008	3,057	3,157
Child Endowment ..		19,426	24,323	30,337	43,585	46,625
Widows' Pensions ..		3,904	4,389	4,421	4,828	5,615
Unemployment and Sickness Benefits ..		1,217	1,070	2,506	1,037	1,008
Community Rehabilitation ..			34	219	310	361
Hospital Benefits ..		4,448	5,880	6,320	6,536	6,683
Tuberculosis Campaign(a) ..		28	156	534	2,275	3,879
Pharmaceutical Benefits ..			149	305	2,930	7,327
National Health Services—						
Medical Benefits to Pensioners ..					75	1,036
Pharmaceutical Benefits to Pensioners ..						358
Nutrition of Children ..						815
Miscellaneous ..				94	131	162
Mental Institution Benefits ..				256	406	518
Rental Rebates under Housing Agreement ..				1	3	
Total ..	16,428	68,613	80,777	92,804	114,983	137,608

(a) Includes allowances and reimbursements to States.

### § 3. Age and Invalid Pensions.

1. **General.**—Age pensions are payable to men, 65 years of age and over, and women, 60 years of age and over, who have resided in Australia continuously for at least 20 years which need not be immediately prior to the date of claim for pension. Absence in a Territory of the Commonwealth does not break continuity of residence. Any periods of absence during which a person's home remained in Australia, and absences in certain other circumstances, and in the case of a claimant who has had at least 18 years' residence, occasional absences aggregating up to 2 years plus 6 months for every year of residence in excess of 18 years are counted as residence.

Invalid pensions are payable to persons, 16 years of age and over, who have resided in Australia for a continuous period of five years, and who are permanently incapacitated for work or permanently blind. For the purpose of the residential qualification, the position in regard to absences is the same as for age pensions. A person is deemed to be permanently incapacitated for work if the degree of his permanent incapacity is not less than 85 per cent. The claimant must have become permanently incapacitated or permanently blind while in Australia or during a temporary absence from Australia, but this condition is waived if he has resided in Australia for not less than 20 years (continuous or otherwise), which may be partly before or partly after the occurrence of the permanent incapacity or blindness.

2. **Blind Persons.**—All permanently blind persons qualified in other respects, are eligible for a pension of £3 a week free of the means test. Additional pension up to 10s. a week is payable subject to the means test.

Where a blind person receives income in excess of £10 per week the full pension of £3 10s. is reduced by the amount of the excess income, but not below £3 a week. Where both husband and wife are blind the full pension of £3 10s. is reduced by half the amount of any excess income of £10 a week but each pension cannot be reduced below £3 per week, and any blind pensioner who has a child under 16 years of age is entitled to receive a child's allowance of 11s. 6d. per week in addition to the pension.

3. **Persons Disqualified.**—A pension is not payable to :—an alien (except a woman who, prior to marriage, was a British subject); a person who has directly or indirectly deprived himself of property or income in order to qualify for a pension; a person in

receipt of income of £286 per annum (£572 per annum for a married couple); a person who owns property, apart from his permanent home and other exempt property, to the net value of more than £1,250 (£2,500 for married persons), a person who is not deserving of a pension; a person who is not of good character or who has deserted his wife (or her husband) or children for six months immediately preceding the date of the claim (age pension only).

4. **Aboriginal Natives.**—Pensions may be granted to aboriginal natives of Australia who have been granted exemption from State control laws, or who, in any State where exemption is not provided for, are considered suitable persons to receive pensions by virtue of character, standard of intelligence and social development.

5. **Pension Rate.**—The maximum rate of pension from 29th October, 1953, is £182 per annum.

6. **Effect of Income.**—Permissible income is £104 per annum. Any income in excess of this amount is deducted from the pension. The income of a married person is deemed to be half the total income of husband and wife except where they are legally separated or in certain other circumstances. A married couple where only one is a pensioner may have an income of £5 a week between them without reduction of the pension. "Income" does not include gifts or allowances from children or parents, benefits from friendly societies, payments in respect of illness, infirmity or old-age from any trade union, the value of State food relief, child endowment or other payments for or in respect of children, Commonwealth Hospital Benefits, Pharmaceutical Benefits and interest on Commonwealth war gratuities.

7. **Effect of Property.**—The rate of pension is reduced by £1 per annum for every complete £10 of the net value of property which exceeds £150 up to £450, and by £2 per annum for every complete £10 of the remainder (if any) of the net value of the property up to £1,250. The value of property of a married person is deemed to be half the total value of property of husband and wife.

The value of a home, furniture and personal effects, the surrender value (up to £750) of any life assurance policies, the capital value of any life interest, annuity or contingent interest, the value of any property from the estate of a deceased person which has not been received and the amount of any Commonwealth war gratuity are disregarded in the computation of property.

8. **Claimants Receiving War Pensions.**—A person receiving a war pension may be granted an age or invalid pension in addition to the war pension, but the total amount payable in respect of the two pensions must not exceed £253 10s. per annum. In the case of a married couple where husband and wife each receive a civil pension (age or invalid, or service pension), the total amount which may be received in respect of war pensions and civil pensions is £461 10s. per annum; in the case of a married couple (where husband receives a civil pension and wife receives a wife's allowance) the limit is £461 10s.; and in the case of a married person (whose husband does not receive a civil pension or whose wife does not receive a civil pension or a wife's allowance) the limit is £390. Where the war pension (or pensions) and the civil pension (or pensions) together exceed the appropriate limit, the civil pension (or pensions) is (or are) reduced by the amount of the excess, but the pensioner is permitted to have other income to bring the total war pension and civil pension payments, plus the other income, up to the appropriate limit of income plus pension, £253 10s. per annum for a single person or £507 per annum for a married couple, both qualified for pensions.

9. **Inmates of Institutions.**—A pensioner who is an inmate of a benevolent home is paid £63 14s. per annum of his pension and the balance of the pension is paid to the institution for his maintenance.

10. **Wife's Allowance.**—An allowance, not exceeding £91 per annum, may be granted to the wife of an invalid pensioner (or an age pensioner who is permanently incapacitated for work or permanently blind) if she is living with her husband and is not receiving an age or invalid pension or a service pension. The rate of the allowance is affected by income and property on the same basis as an age or invalid pension.

11. **Child's Allowance.**—An allowance of £29 18s. per annum in respect of one child under the age of 16 years may be granted to the wife of an invalid pensioner (or age pensioner who is permanently incapacitated for work or permanently blind) if she is living with her husband and is not receiving a service pension. This child's allowance is additional to the wife's allowance and may also be granted where the wife is ineligible

for a wife's allowance on account of income or property. The allowance may also be granted to any invalid pensioner who has the custody, care and control of a child under the age of 16 years, but where both husband and wife are invalid pensioners (living together) the child's allowance is payable only to the wife.

12. **Rehabilitation.**—(i) *General.* The rehabilitation service has been set up to help persons who are too disabled to work or who have had to give up their employment because of sickness or injury. It aims at restoring disabled men and women to a state of fitness where they can earn their living and lead useful lives. This is done by means of suitable treatment and training, the cases selected being those in which the person's disability is remediable and where there are reasonable prospects of his engaging in a suitable vocation within three years after the commencement of treatment or training.

The benefits are available to invalid pensioners, persons receiving unemployment or sickness benefits or tuberculosis allowances. The treatment of certain other disabled persons may also be approved by the Director-General of Social Services. During the treatment stage of rehabilitation the payment of pension or benefit is continued. If, however, vocational training is provided the pension or benefit is suspended and the trainee is paid instead a rehabilitation allowance equivalent to the amount of invalid pension for which he is qualified, or which would be payable if he were qualified, together with the amount of any wife's and child's allowances, where appropriate, plus a training allowance of £1 5s. per week.

Living-away-from-home allowances, where necessary, are paid by the Commonwealth. Fares and living expenses (including those of an attendant where required) incurred in connexion with treatment, training or attendance for an interview or for medical examination may also be paid. A person receiving treatment or training may be provided, free of charge, with necessary artificial replacements, surgical aids and appliances. He may also be provided with books, equipment and tools of trade, costing not more than £30. If these are retained by him, he is required to pay the cost, but payments may be made by small instalments after he has commenced employment.

If the treatment or vocational training does not result in the trainee being able to engage in employment, his right to the continuance of his pension or benefit is not prejudiced.

(ii) *Summary of Operations.* The number of persons receiving benefits who were examined, accepted, trained and placed in employment during the year 1951-52 are shown in the following table :—

**REHABILITATION SERVICE : OPERATIONS, AUSTRALIA, 1951-52.**

Type.	Examined.	Accepted.	Completed Training.	Placed in Employment.	
				After Training.	Without Training.
Invalid Pensioners .. .. .	11,343	475	171	134	240
Unemployment and Sickness Beneficiaries .. .. .	8,516	1,280	64	49	897
Recipients of Tuberculosis Allowances .. .. .	434	252	90	77	100

13. **Funeral Benefits.**—From 1st July, 1943 a funeral benefit of up to £10 has been payable to the person who has paid, or is liable to pay, the cost of the funeral of an age or invalid pensioner or of a claimant who, but for his death, would have been granted an age or invalid pension. This provision has been extended to include payment in respect of the death of a person who at the time of his death was receiving, or was a claimant for, a tuberculosis allowance, if he was otherwise qualified to receive an age or invalid pension. Where the cost of the funeral has been partly met by payment from a contributory funeral benefit fund of an organization other than a friendly society, funeral benefit is payable to the extent of the amount (not above £10) by which the cost of the funeral exceeded the amount paid from the fund. A funeral benefit is not payable to a person administering a contributory funeral benefit fund.

14. Rates of Pension Payable.—The following statement shows the rates of pension at 1st July, 1909 and the rates as they have been varied since that date:—

## MAXIMUM RATES OF PENSION PAYABLE.

Date from which Operative.	Maximum Pension Payable.		Limit of Income (including Pension) per Annum.	Date from which Operative.	Maximum Pension Payable.		Limit of Income (including Pension) per Annum.
	Per Week.	Per Annum.			Per Week.	Per Annum.	
1st July, 1909	10 0	26 0	52 0	2nd April, 1942(c)	25 0	65 0	97 10
12th October, 1916	12 6	32 10	58 10	1st October, 1942(b)	25 6	66 6	98 16
1st January, 1920	15 0	39 0	65 0	7th January, 1943(b)	26 0	67 12	100 2
13th September, 1923	17 6	45 10	78 0	1st April, 1943(d)	26 6	68 18	101 8
8th October, 1925	20 0	52 0	84 10	1st April, 1943(b)	27 0	70 4	102 14
23rd July, 1931	17 6	45 10	78 0	19th August, 1943(b)	26 6	68 18	101 8
23rd October, 1932(a)	15 0	39 0	71 10	23rd November, 1943(b)(d)	27 0	70 4	102 14
26th October, 1933	17 6	45 10	78 0	5th July, 1945	32 6	84 10	117 0
4th July, 1935(b)	18 0	46 16	79 6	13th August, 1946	32 6	84 10	116 10
24th September, 1936	19 0	49 8	81 18	3rd July, 1947	37 6	97 10	149 10
9th September, 1937	20 0	49 8	84 10	21st October, 1948	42 6	110 10	188 10
26th December, 1940	21 0	54 12	87 2	2nd November, 1950	50 0	130 0	208 0
3rd April, 1941(b)	21 6	55 18	88 8	1st November, 1951	60 0	156 0	234 0
11th December, 1941	23 6	61 2	93 12	2nd October, 1952	67 6	175 0	253 10
2nd April, 1942(b)	24 0	62 8	94 18	29th October, 1953	70 0	182 0	286 0

(a) Additional pension of £6 10s. per annum (2s. 6d. per week) was payable to a pensioner with no income. Pensioners with income of less than 2s. 6d. per week were paid additional pension of 2s. 6d. less the amount of income. (b) Variation according to rise in retail price index-number. (c) Increase paid on 9th July, 1942, retrospective to 2nd April, 1942. (d) Rate restored to £70 4s. per annum under National Security (Supplementary) Regulation 112A—Statutory Rule 315 of 1943.

NOTE.—Provision for variations according to retail price index-numbers was repealed on 6th April, 1944.

15. Age Pensions.—(i) *Number in force.* At 30th June, 1951, there were 342,806 age pensions in force. During 1951–52, 39,905 age pensions claims were granted and 2,802 pensioners were transferred from the invalid pension list, while 33,464 pensions expired through cancellations and deaths. The net increase for the year was 9,243 and the total in force at 30th June, 1952, was 352,049.

(ii) *Sexes of Age Pensioners—States.* Of the age pensioners at 30th June, 1952, 118,025 (or 34 per cent.) were males, and 234,024 (or 66 per cent.) were females. Details for each State are as follows:—

## AGE PENSIONS: SEXES OF PENSIONERS AT 30th JUNE, 1952.

State.	Males.	Females.	Total.	Masculinity. (a)
New South Wales(b)	50,876	94,181	145,057	54.02
Victoria	26,503	61,342	87,845	43.21
Queensland	17,739	32,979	50,718	53.79
South Australia(c)	9,759	22,172	31,931	44.01
Western Australia	9,124	15,658	24,782	58.27
Tasmania	4,024	7,692	11,716	52.31
Total	118,025	234,024	352,049	50.43

(a) Number of males to each 100 females.

(b) Includes Australian Capital Territory.

(iii) *Age and Conjugal Condition of Age Pensioners.* The recorded ages of the 39,905 pensioners (14,329 males and 25,576 females) to whom age pensions were granted during the year 1951–52 varied considerably, ranging from 6,881 at age 60 to one at age 97, but 28,969 were in the 60–70 group. The conjugal condition of these new pensioners was as follows:—Males—single, 1,840; married, 9,801; and widowed, 2,688; Females—single, 3,793; married, 11,365; and widowed, 10,418.

16. **Invalid Pensions.**—(i) *Number in force.* The number of invalid pensioners decreased from 68,918 in 1950-51 to 67,963 in 1951-52, a decrease of 955. Total pensions granted during the year were 8,160, while 6,313 pensions ceased through cancellations or deaths, and 2,802 were transferred to the age pension list.

(ii) *Sexes of Invalid Pensioners—States.* Of the 67,963 persons in receipt of invalid pensions at 30th June, 1952, 37,001 (or 54 per cent.) were males, and 30,962 (or 46 per cent.) were females. Details for each State are as follows:—

**INVALID PENSIONS : SEXES OF PENSIONERS AT 30th JUNE, 1952.**

State.	Males.	Females.	Total.	Masculinity. (a)
New South Wales(b)	17,986	14,410	32,396	124.82
Victoria .. .. .	7,562	6,411	13,973	117.95
Queensland .. .. .	5,815	4,756	10,571	122.27
South Australia(c) .. .. .	2,154	2,143	4,297	100.51
Western Australia .. .. .	2,131	1,833	3,964	116.26
Tasmania .. .. .	1,353	1,409	2,762	96.03
<b>Total .. .. .</b>	<b>37,001</b>	<b>30,962</b>	<b>67,963</b>	<b>119.50</b>

(a) Number of males to each 100 females.

(b) Includes Australian Capital Territory.

(c) Includes Northern Territory.

(iii) *Age and Conjugal Condition of Invalid Pensioners.* The recorded ages of the 8,160 persons (4,854 males and 3,306 females) to whom invalid pensions were granted during 1951-52 varied from 16 to 89, 4,031 or 49 per cent. being in the 45-59 years age-group.

The conjugal condition of persons to whom invalid pensions were granted during the year was as follows:—Males—single, 1,606; married, 2,877; and widowed, 371; Females—single, 1,535; married, 1,197; and widowed, 574.

17. **Age and Invalid Pensions : Payments and Annual Liability.**—Separate particulars of the payments to age and invalid pensioners are not available but the total payments in 1951-52 in each State, together with the annual liability of each class of pensioner at 30th June, 1952, are shown in the following table:—

**AGE AND INVALID PENSIONS : PAYMENTS AND ANNUAL LIABILITY, 1951-52.  
(£.)**

State.	Total Payments Age and Invalid Pensions, 1951-52.(a)	Annual Liability at 30th June, 1952.		
		Age Pensioners.	Invalid Pensions.	Total.
New South Wales(b)	25,075,215	21,304,272	4,900,251	26,204,523
Victoria .. .. .	14,448,996	13,162,583	2,096,969	15,259,552
Queensland .. .. .	8,835,443	7,621,092	1,617,046	9,238,138
South Australia(c) .. .. .	5,179,666	4,767,370	655,416	5,422,786
Western Australia .. .. .	4,106,291	3,671,597	593,306	4,264,903
Tasmania .. .. .	2,142,392	1,728,682	415,713	2,144,395
<b>Total .. .. .</b>	<b>59,788,003</b>	<b>52,255,596</b>	<b>10,278,701</b>	<b>62,534,297</b>

(a) Includes amounts paid to Benevolent Homes and Hospitals for the maintenance of 5,625 pensioners and 18,062 allowances to wives of invalid pensioners.

(b) Includes Australian Capital Territory.

(c) Includes Northern Territory.

The actual sum disbursed in age and invalid pensions in 1951-52, including the amount paid to homes and hospitals for the maintenance of pensioners and allowances to wives of invalid pensioners, was £7 per head of population as compared with £5 19s. 2d. in the previous year.

18. Summary.—The following table gives details of age and invalid pensions for the years 1938–39 and 1947–48 to 1951–52 :—

## AGE AND INVALID PENSIONS : SUMMARY, AUSTRALIA.

Year ended 30th June—	Pensioners at End of Year.				Amount Paid in Pensions.	Total Payment to Pensioners and Institutions.(b)	Average Fortnightly Pension as at 30th June.		
	Age.		Invalid.	Total.			Age	Invalid.	Total.
	No.	Rate per 1,000 persons eligible on age qualifi- cation. (a)							
			No.	No.	£	£	s. d.	s. d.	s. d.
1939 ..	232,836	376	88,812	321,648	15,798,038	15,991,782	(c)	(c)	38 5
1948 ..	302,854	381	73,073	375,927	36,376,104	36,526,395	71 8	72 9	71 11
1949 ..	321,327	392	76,056	397,383	41,535,907	41,693,680	81 2	82 6	81 5
1950 ..	334,923	395	73,494	408,417	44,354,253	44,557,161	80 10	82 0	81 1
1951 ..	342,806	395	68,918	411,724	49,307,690	49,520,285	95 5	96 8	95 7
1952 ..	352,049	397	67,963	420,012	59,512,514	59,788,003	114 2	116 4	114 6

(a) Based on an estimate of the aggregate of males aged 65 and over and females aged 60 and over at 30th June of each year. (b) Includes allowances to wives of invalid pensioners payable from the 8th July, 1943, but excludes funeral benefits in respect of deaths of pensioners, £209,588 in 1947–48; £252,479 in 1948–49; £243,822 in 1949–50; £243,058 in 1950–51; and £275,850 in 1951–52. (c) Not available.

## § 4. Maternity Allowances.

1. **General.**—A maternity allowance is payable to a woman who, at the date of giving birth to a child, is residing in Australia or is in Australia and intends to remain. The allowance is payable in respect of a birth which occurs in Australia or on board a ship proceeding from a port in Australia or a Territory of the Commonwealth to another port in Australia or a Territory of the Commonwealth. The allowance is also payable in respect of a birth which occurs on board a ship proceeding to Australia, provided the mother receives no maternity benefit in respect of the birth from the country from whence she came. Payment may be made in respect of the birth of a still-born child, or a child which lives for less than twelve hours, if the period of intra-uterine life of the child was at least 5½ calendar months. There is no means test.

2. **Alien Mothers.**—Payment may be made to an alien mother if she was a British subject prior to her marriage, or if she or her husband resided in Australia for at least twelve months immediately prior to the birth of the child. Payment in respect of a birth which occurs within twelve months of the mother's arrival in Australia may be made at the end of that twelve months, but may be made immediately if the mother is likely to remain in Australia.

3. **Aboriginal Natives.**—Maternity allowances may be paid only to those aboriginal natives of Australia who have been granted exemption from State control laws or who, in any State where exemption is not provided for, are considered suitable persons to receive the allowance by virtue of character, standard of intelligence and social development.

4. **Amount Payable.**—From 1st July, 1947, the amount of a maternity allowance has been £15 where there are no other children; £16 where there are one or two other children; and £17 10s. where there are three or more other children. "Other children" means children under the age of sixteen years who were in the custody, care and control of the claimant on the date of the birth in respect of which the claim is made. The amount payable is increased by £5 in respect of each additional child born at a birth. Payment of £5 on account of a maternity allowance may be made available, upon application, within a period of four weeks prior to the expected date of birth. The balance is payable immediately after the birth.



5. **Persons Temporarily Abroad.**—Maternity allowances may be paid, under certain conditions, to persons ordinarily resident in Australia who are temporarily abroad.

6. **Summary.**—The following table gives details of the maternity allowance claims paid and rejected and of the amount paid for the years 1938-39 and 1947-48 to 1951-52 and since the inception in 1912-13 :—

**MATERNITY ALLOWANCES : SUMMARY, AUSTRALIA.**

Particulars.		1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.	Aggregate 1912-13 to 1951-52.
Claims Paid ..	No.	80,916	177,566	177,955	189,733	191,587	195,722	4,977,624
Claims Rejected ..	"	6,272	247	235	283	306	180	111,289
Amount Paid ..	£	436,614	2,854,018	2,828,849	3,007,906	3,057,519	3,156,992	41,968,985

NOTE.—The means test was abolished from 1st July, 1943.

7. **Claims paid in each State.**—The following table shows the number of maternity allowance claims paid in each State during the years 1938-39 and 1947-48 to 1951-52 :—

**MATERNITY ALLOWANCES : NUMBER OF CLAIMS PAID IN EACH STATE.**

Year ended 30th June—	N.S.W. (a)	Vic.	Q'land.	S.A. (b)	W.A.	Tas.	Overseas.	Total.
1939 ..	30,860	20,819	12,880	7,204	5,213	3,940	..	80,916
1948 ..	68,116	46,027	27,920	15,856	12,553	7,074	20	177,566
1949 ..	67,534	46,309	27,570	16,381	13,107	6,984	70	177,955
1950 ..	73,566	49,035	28,652	17,273	13,759	7,408	40	189,733
1951 ..	72,003	50,210	29,155	17,864	14,986	7,250	119	191,587
1952 ..	72,688	52,144	30,737	17,380	15,074	7,626	73	195,722
Total, 1912-13 to 1951-52 ..	1,948,443	1,295,769	755,879	439,152	330,214	207,845	322	4,977,624

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

8. **Claims Paid at the Various Rates.**—The following table shows the number of claims paid in each State at the several rates of maternity allowances during the year 1951-52 :—

**MATERNITY ALLOWANCES : NUMBER OF CLAIMS PAID AT EACH RATE, 1951-52.**

State.	Single Births.			Multiple Births.						Total Claims Paid.
	£15.	£16.	£17 10s.	Twins.			Triplets.			
				£20.	£21.	£22 10s.	£25.	£26.	£27 10s.	
New South Wales(a) ..	25,355	34,726	11,759	237	414	190	1	2	4	72,688
Victoria ..	17,947	25,588	7,930	172	362	137	..	6	2	52,144
Queensland ..	9,547	14,524	6,304	92	165	103	..	1	1	30,737
South Australia(b) ..	5,670	8,880	2,639	57	85	49	..	..	..	17,380
Western Australia ..	4,661	7,573	2,649	31	103	54	1	1	1	15,074
Tasmania ..	2,450	3,431	1,651	23	40	30	..	1	..	7,626
Overseas ..	..	29	37	..	..	..	..	..	..	73
Total ..	65,659	94,759	32,939	612	1,169	563	2	11	8	195,722

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

**§ 5. Child Endowment.**

1. **General.**—Any person who is resident in Australia and has the custody, care and control of one or more children under the age of sixteen years, and an approved institution of which children are inmates shall be qualified to receive an endowment in respect of each child. There is a twelve months residential requirement in respect of a claimant and a child who were not born in Australia, but this is waived if the claimant and the

child are likely to remain permanently in Australia. A child born during the mother's temporary absence from Australia is deemed to have been born in Australia. There is no means test.

2. **Child of Alien Father.**—Endowment may be paid in respect of a child whose father is not a British subject if—the child was born in Australia; the mother is a British subject; and the child is likely to remain permanently in Australia.

3. **Aboriginal Natives.**—Endowment may be paid to aboriginal natives of Australia unless they are nomadic, or unless the child concerned is wholly or mainly dependent on the Commonwealth or a State.

4. **Rate of Payment.**—From 20th June, 1950, the rate of endowment payable has been (a) where the endowee has the custody of one child only—5s. per week; (b) where the endowee has the custody of two or more children—in respect of the elder or eldest child 5s. per week and in respect of each other child 10s. per week; and (c) in the case of an approved institution the rate is 10s. per week for each child inmate. From 1st July, 1941, the date of the inception of the scheme, the rate of endowment was 5s. per week for each child in excess of one in a family, and for each child under sixteen years in an approved institution. The rate was increased to 7s. 6d. per week from 25th June, 1945, and to 10s. per week from 9th November, 1948.

5. **Divided Families.**—There are provisions to meet cases of families divided by reason of divorce, separation, unemployment, death of a parent or other circumstances. In these cases endowment may be paid to the father, mother or other person.

6. **Australians Temporarily Overseas.**—Endowment may be paid, under certain conditions, to persons ordinarily resident in Australia who are temporarily overseas.

7. **Members of United Kingdom Defence Forces.**—Endowment will be paid for the children of members of the Naval, Military or Air Forces of the United Kingdom who are serving with the Australian Forces from the time of arrival of the children in Australia.

8. **Summary.**—During the year 1951-52, 93,866 claims were granted, cancellations amounted to 39,292 and the number of endowed family group claims in force at 30th June, 1952 was 1,205,421, an increase of 54,574 or 4.7 per cent. during the year. The large increase of 73.6 per cent. in 1950-51 was due mainly to the extension from 20th June, 1950, of endowment to the first or only child under sixteen years of age in a family. The following table shows particulars of the operations in each State and Australia during 1951-52 and in Australia for earlier years:—

## CHILD ENDOWMENT : SUMMARY, 1951-52.

State.	Family Groups.					Total Payments to Endowees and Institutions.
	Claims in force at end of year.	Endowed Children.		Annual Liability at 30th June, 1952.		
		Total.	Average per claim.	Total.	Average Liability per claim.	
No.	No.	No.	£	£	£	
New South Wales(a)	476,684	971,586	2.04	19,064,344	39.99	17,793,919
Victoria ..	317,591	642,693	2.02	12,581,335	39.61	12,015,367
Queensland ..	173,179	378,559	2.19	7,591,207	43.83	7,362,953
South Australia(b)..	109,284	222,127	2.03	4,354,610	39.85	4,148,751
Western Australia..	85,971	183,257	2.13	3,647,059	42.42	3,477,916
Tasmania ..	42,424	94,430	2.23	1,903,668	44.87	1,818,862
Overseas ..	288	594	2.06	11,700	40.63	7,284
<b>Total—1951-52 ..</b>	<b>1,205,421</b>	<b>2,493,246</b>	<b>2.07</b>	<b>49,153,923</b>	<b>40.78</b>	<b>46,625,052</b>
1950-51 ..	1,150,847	2,365,177	2.06	46,533,591	40.43	43,584,614
1949-50 ..	662,949	1,813,925	2.74	38,543,713	58.14	30,337,363
1948-49 ..	620,819	1,083,994	1.75	28,183,844	45.40	24,323,413
1947-48 ..	586,415	1,029,777	1.76	20,080,652	34.24	19,425,518

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

In addition to the children endowed in families, child endowment benefits were paid in respect of children in approved institutions during 1947-48 to 1951-52 as follows:—1947-48, 20,580; 1948-49, 21,305; 1949-50, 22,397; 1950-51, 23,753; and 1951-52, 24,623.

9. **Number of Children.**—The following table shows, as at 30th June, 1952, the number of claims in force and the number of endowed children classified according to the number of endowed children in the family:—

**CHILD ENDOWMENT: NUMBER OF CHILDREN(a), 30th JUNE, 1952.**

Size of Family.	Claims in force.	Number of endowed children.	Size of Family.	Claims in force.	Number of endowed children.
One child ..	465,698	465,698	Nine children ..	837	7,533
Two children ..	409,269	818,538	Ten children ..	317	3,170
Three children ..	198,866	596,598	Eleven children ..	66	726
Four children ..	80,033	320,132	Twelve children ..	25	300
Five children ..	30,864	154,320	Thirteen children ..	12	156
Six children ..	12,225	73,350	Fourteen children ..	2	28
Seven children ..	4,959	34,713			
Eight children ..	2,248	17,984	Total ..	1,205,421	2,493,246

(a) Under 16 years of age.

**§ 6. Widows' Pensions.**

1. **General.**—Widows' pensions and the rates in each class, as from 20th October, 1953, have been payable to the following classes of women:—

Class "A"—A widow who has the custody, care and control of one or more children under the age of 16 years. Rate £195 per annum.

Class "B"—A widow, not less than 50 years of age, who has no children under 16 years of age in her custody, care and control. Rate £149 10s. per annum.

Class "C"—A widow, under 50 years of age, who has no children under the age of 16 years in her custody, care and control, but is in necessitous circumstances within 26 weeks after the death of her husband. Rate £2 17s. 6d. per week for not more than 26 weeks. If at her husband's death, a widow is with child, this period will be extended until the birth of the child. She would then, of course, become eligible for an "A" class widow's pension.

Class "D"—A woman whose husband has been serving a term of imprisonment for at least six months, if she has the custody, care and control of one or more children under the age of 16 years or is not less than 50 years of age. Rate £149 10s. per annum.

The term "widow" includes:—a "dependent female" (i.e. a woman, who, for not less than three years immediately prior to the death of a man, was wholly or mainly maintained by him as his wife on a permanent and bona fide domestic basis); a deserted wife (i.e. a woman deserted by her husband for not less than six months); a divorcee (i.e. a woman whose marriage has been dissolved and who has not remarried); and a woman whose husband is an inmate of a mental hospital.

The residential qualification is five years' continuous residence in Australia immediately prior to the date of lodgment of the claim. This period is reduced to one year where the claimant and her husband were residing permanently in Australia when the husband died.

2. **Persons Disqualified.**—A widow's pension is not payable to:—a woman who is not a British subject unless she was a British subject before her marriage; a woman who is in receipt of an age or invalid pension, tuberculosis allowance, or a war widow's pension under the Repatriation Act in respect of the death of her husband; a woman who has deprived herself of property or income in order to qualify for a pension; a deserted wife or a divorcee who has not taken reasonable action to obtain maintenance from her husband or former husband; a woman who is not of good character, a woman who is not deserving of a pension; a woman in Class "A" in receipt of income of £299 per annum or more or owning property, apart from her permanent home and other

exempt property, to the net value of more than £1,500 or a woman in Classes "B" or "D" in receipt of income of £253 10s. per annum or more or owning property, apart from her permanent home and other exempt property, to the net value of more than £1,250.

3. **Aboriginal Natives.**—Widows' pensions may be granted to aboriginal native women of Australia under the same conditions as age pensions.

4. **Effect of Income.**—Permissible income is £104 per annum. Any income in excess of this amount is deducted from the pension. "Income" has the same meaning as for age pensions. Any amount in excess of 15s. per week received by a deserted wife, or a divorcee from her husband or former husband, for the maintenance of a child is taken into account in the claimant's income.

5. **Effect of Property.**—The rate of pension for women in Classes "B" and "D" is reduced by £1 per annum for every complete £10 of the net value of property which exceeds £150 but does not exceed £450, and by £1 per annum for every complete £7 of the net value above £450 up to £1,250. Property disregarded in determining eligibility for pension is the same as for age pensions.

6. **Claimants Receiving War Pension.**—A widow is not permitted to receive, in respect of the death of her husband, both a war widow's pension under the Repatriation Act and a civil widow's pension. A widow, however, may receive a civil widow's pension in addition to a war pension (as distinct from a war widows' pension) but the total amount payable in respect of the two pensions must not exceed £273 per annum in the case of a Class "A" widow or £227 10s. per annum in the case of a widow coming within Classes "B", "C" or "D". Where the war pension and the widow's pension together exceed the limit applicable, the widow's pension is reduced by the amount of the excess. The widow is permitted to have, in addition, other income to bring her total war pension and widow's pension payments up to the appropriate limit of income plus pension, £299 per annum for a Class "A" widow, £253 10s. for a Class "B" or "D" widow.

7. **Payment of Class "A" Pension for Children Continuing Education.**—The pension payable to a Class "A" widow may be continued after her child attains the age of 16 years if the child continues with full-time education at a school or university and is still dependent on the widow and is not in employment. These conditions apply until the child reaches the age of 18 years.

8. **Summary.**—The number of widows' pensions current at 30th June, 1952, was as follows:—Class "A" 17,424; Class "B", 23,095; Class "C", 99; Class "D", 140; total, 40,758. The amount paid in pensions during 1951-52 was £5,614,768. The following table shows details of widows' pensions paid in each State in the year 1951-52 and for Australia for each of the years 1947-48 to 1951-52:—

WIDOWS' PENSIONS AT 30th JUNE, 1952.(a)

State.	Pensions Current.(b)		Children for whom Pensions Payable.	Average Fort-nightly rate of Pension.	Amount paid in Pensions during 1951-52.	
	Number.	Per 10,000 of Population.			Amount.	Per head of Population.
			No.	£ s. d.	£	s. d.
New South Wales(d) ..	16,486	48	7,533	5 8 1	2,315,178	13 8
Victoria ..	10,222	44	3,696	5 6 11	1,390,109	12 1
Queensland ..	6,770	55	3,091	5 10 3	904,709	14 10
South Australia(e) ..	3,246	43	1,292	5 6 11	450,268	12 1
Western Australia ..	2,676	45	1,116	5 9 1	366,483	12 5
Tasmania ..	1,358	45	696	5 9 8	188,021	12 7
Total—1951-52 ..	40,758	47	17,424	5 8 2	5,614,768	13 2
1950-51 ..	41,962	50	17,717	4 10 10	4,828,086	11 7
1949-50 ..	42,894	52	17,760	3 19 3	4,420,566	11 0
1948-49 ..	43,251	55	17,891	3 19 8	4,388,468	11 3
1947-48 ..	43,025	56	17,732	3 8 11	3,904,086	10 3

(a) The Commonwealth Government commenced to pay widows' pensions from 1st July, 1942.

(b) Excludes eleven (1951-52), nine (1950-51), fourteen (1949-50), eleven (1948-49), six (1947-48), pensions in respect of pensioners in Benevolent Homes.

(c) Based on mean population for the financial year.

(d) Includes Australian Capital Territory.

(e) Includes Northern Territory.

### § 7. Unemployment and Sickness Benefits.

1. **General.**—From 1st July, 1945, men over 16 and under 65 years of age, and women over 16 and under 60 years of age and who were qualified in other respects, have been eligible to apply for an unemployment benefit or a sickness benefit. There is a twelve months' residential requirement but this is waived if the claimant is likely to remain permanently in Australia. A person in receipt of an age, invalid or widow's pension, or a service pension (as distinct from a war pension) under the Repatriation Act or a tuberculosis allowance is ineligible to receive a benefit.

2. **Unemployment Benefit.**—To qualify for an unemployment benefit a person must establish that he is unemployed and that his unemployment is not due to his being a direct participant in a strike; that he is capable and willing to undertake suitable work; and that he has taken reasonable steps to obtain such work. Registration with the local Commonwealth District Employment Officer is necessary.

3. **Sickness Benefit.**—To qualify for a sickness benefit a person must establish that he is temporarily incapacitated for work by reason of sickness or accident and that he has thereby suffered a loss of salary, wages or other income.

4. **Married Women.**—A married woman is not qualified to receive a sickness benefit if it is reasonably possible for her husband to maintain her. Where her husband is able to maintain her only partially, a benefit may be paid at such rate as is considered reasonable in the circumstances. In exceptional cases a married woman may qualify for an unemployment benefit in her own right.

5. **Aboriginal Natives.**—A benefit may be paid only to those aboriginal natives of Australia who are considered suitable, by reason of character, standard of intelligence and social development.

6. **Maximum Rates of Benefits and Income.**—The maximum weekly rates of benefit payable and permissible income from 27th September, 1952, are as follows:—

#### MAXIMUM RATES OF BENEFITS AND INCOME.

(s. d.)

Age and Conjugal Condition.	Maximum Weekly Benefit.				Permissible Weekly Income.
	Claimant.	Dependent Spouse.	Child.	Total.	
Unmarried—					
16 years and under 17 years ..	30 0	..	..	30 0	5 0
17 " " " 18 " ..	30 0	..	..	30 0	10 0
18 " " " 21 " ..	40 0	..	..	40 0	15 0
21 years and over ..	50 0	..	..	50 0	20 0
Married .. ..	50 0	40 0	5 0	95 0	20 0

Where an unmarried claimant has the custody, care and control of a child under the age of sixteen years, the total income may be increased by 5s. per week.

Additional benefit of up to £2 per week may be paid in respect of a claimant's housekeeper where no such benefit is payable in respect of his wife, provided there are one or more children under 16 years of age in the home and the woman is substantially dependent on the claimant but is not employed by him.

7. **Means Test.**—Any income in excess of the permissible income shown in the previous table is deducted from the rate of benefit. For unemployment benefit purposes, the incomes of the claimant and his spouse are taken into account, but where the claimant and his spouse are permanently separated any income received by the spouse may be disregarded. "Income" does not include child endowment, or other payments in respect of children, the Commonwealth hospital benefits and pharmaceutical benefits, or a tuberculosis allowance or an amount paid in reimbursement of medical, dental or similar expenses actually paid.

For sickness benefit purposes, there is disregarded £2 per week of any payment received from an approved friendly society or other similar approved body in respect of the incapacity for which sickness benefit is payable.

Where a person qualified for sickness benefit receives or is entitled to receive (in respect of the same period and the same incapacity for which sickness benefit is payable) any payment by way of compensation (including workers' compensation), damages, or otherwise under any law (except payments for which he has contributed), the amount of the compensation, etc., is not taken into account as income but is deducted from the rate of sickness benefit otherwise payable.

8. **Waiting Period.**—There is a waiting period of seven days in respect of which unemployment or sickness benefit is not payable.

9. **Special Benefit.**—A special benefit may be granted to a person not qualified for unemployment or sickness benefit who is not in receipt of an age, invalid or widow's pension or a service pension, if by reason of age, physical or mental disability or domestic circumstances, or for any other reason, he is unable to earn a sufficient livelihood for himself and his dependants.

10. **Rehabilitation.**—Unemployment and sickness beneficiaries are eligible to participate in the Commonwealth rehabilitation scheme under the same conditions as invalid pensioners. Payment of an unemployment or sickness benefit may be refused if the claimant or beneficiary, on being required, fails to undergo a medical examination or to receive treatment or undertake training or to do any suitable work. See Division A, § 3, para. 12, Rehabilitation.

11. **Statistics, 1951-52.**—(i) *Persons on Benefit.* At 30th June, 1952, 15,820 persons were paid benefits, comprising 8,294 unemployment, 6,378 sickness and 1,148 special benefits.

**PERSONS ON BENEFIT AT 30th JUNE, 1952.**

State.	Unemployment.		Sickness.		Special.(a)		Total.(a)		
	Males.	Fe-males.	Males.	Fe-males.	Males.	Fe-males.	Males.	Fe-males.	Per-sons.
New South Wales <sup>b</sup>	3,376	1,237	1,913	620	169	320	5,458	2,177	7,635
Victoria ..	875	258	1,207	371	75	220	2,157	849	3,006
Queensland ..	1,450	605	721	193	47	141	2,218	939	3,157
South Australia(c)	103	50	538	153	27	33	668	236	904
Western Australia	211	25	354	97	13	42	578	164	742
Tasmania ..	93	11	175	36	8	53	276	100	376
<b>Total ..</b>	<b>6,108</b>	<b>2,186</b>	<b>4,908</b>	<b>1,470</b>	<b>339</b>	<b>809</b>	<b>11,355</b>	<b>4,465</b>	<b>15,820</b>

(a) Excludes migrants receiving benefits. (b) Includes Australian Capital Territory. (c) Includes Northern Territory.

(ii) *Number of Persons admitted to Benefit in each State.* The following table shows the number of persons in each State admitted to benefit during the year 1951-52 :—

**PERSONS ADMITTED TO BENEFIT, 1951-52.**

State.	Unemployment.		Sickness.		Special.(a)		Total.(a)		
	Males.	Fe-males.	Males.	Fe-males.	Males.	Fe-males.	Males.	Fe-males.	Per-sons.
New South Wales <sup>b</sup>	7,680	3,258	14,904	4,648	710	342	23,294	8,248	31,542
Victoria ..	2,628	573	9,151	2,687	415	347	12,194	3,607	15,801
Queensland ..	9,973	2,169	6,915	1,485	423	97	17,311	3,751	21,062
South Australia(c)	227	83	3,986	928	202	49	4,415	1,060	5,475
Western Australia	591	132	3,540	853	89	26	4,220	1,021	5,241
Tasmania ..	152	20	1,631	305	51	35	1,834	360	2,194
<b>Total ..</b>	<b>21,251</b>	<b>6,235</b>	<b>40,127</b>	<b>10,916</b>	<b>1,890</b>	<b>896</b>	<b>63,268</b>	<b>18,047</b>	<b>81,315</b>

(a) Excludes benefits granted to migrants. (b) Includes Australian Capital Territory. (c) Includes Northern Territory.

(iii) *Benefits Paid.* The following table shows the benefits paid in respect of each class of benefit in each State during each of the years 1950-51 and 1951-52 :—

## BENEFITS PAID.

(£.)

State.	Unemployment.		Sickness.		Special.(a)		Total.(a)	
	1950-51.	1951-52.	1950-51.	1951-52.	1950-51	1951-52.	1950-51.	1951-52.
New South Wales(b)	25,324	55,135	296,418	262,244	50,303	33,502	372,045	350,881
Victoria	7,731	11,215	197,719	181,117	98,529	46,608	303,979	238,940
Queensland	22,485	114,226	96,540	123,075	9,232	15,214	128,257	252,515
South Australia(c)	350	1,025	70,770	70,482	5,558	5,967	76,678	77,474
Western Australia	5,360	4,374	53,911	48,691	61,507	5,781	120,778	58,846
Tasmania	1,194	1,036	30,358	24,278	3,924	3,687	35,476	29,001
Total	62,444	187,011	745,716	709,887	229,053	110,759	1,037,213	1,007,657

(a) Includes amounts paid in respect of migrants.  
(c) Includes Northern Territory.

(b) Includes Australian Capital Territory.

(iv) *Summary for Years 1947-48 to 1951-52.* The following table shows the number of persons who were admitted to benefit, the number receiving benefit at the end of the year and the amount paid for each benefit for Australia during the years 1947-48 to 1951-52 :—

## SUMMARY : AUSTRALIA.

Year	Number Admitted to Benefit.			Persons on Benefit at end of Year.			Amount Paid in Benefits.		
	Un-employment.	Sick-ness.	Special. (a)	Un-employment.	Sick-ness.	Special. (a)	Un-employment.	Sick-ness.	Special. (b)
1947-48	28,662	69,486	2,177	1,838	8,066	530	£ 360,629	£ 791,327	£ 56,518
1948-49	12,126	68,864	2,416	1,151	7,501	598	138,846	795,826	135,754
1949-50	161,101	63,842	4,660	1,226	7,491	908	1,266,072	816,014	424,339
1950-51	11,904	61,410	2,785	604	7,044	921	62,444	745,716	229,053
1951-52	27,486	51,043	2,786	8,294	6,378	1,148	187,011	709,887	110,759

(a) Excludes migrants.

(b) Includes payments to migrants.

## § 8. Reciprocal Agreements with Other Countries.

1. *New Zealand.*—An agreement between the Governments of Australia and New Zealand for reciprocity in social services came into operation on 1st July, 1949.

The reciprocal arrangements cover age and invalid pensions, widows' pensions, child endowment and unemployment and sickness benefits, and apply to both permanent and temporary change of residence.

Residence in one country counts as residence in the other country in relation to entitlement to benefits in which a residential qualification applies.

Persons from one country taking up permanent residence in the other country become eligible for any of the specified benefits of the new country under the same conditions (with one or two exceptions) as apply to citizens of that country.

Persons in receipt of any of the specified benefits in one country may continue to receive those benefits while temporarily absent in the other country. These payments are made on an agency basis by the appropriate authority of the country in which the person is temporarily resident.

2. **United Kingdom.**—The Governments of the United Kingdom and Australia signed a reciprocal agreement on social services in London on 8th June, 1953.

The agreement covers age and invalid pensions, widows' pensions, child endowment, and unemployment and sickness benefits. Under the agreement former residents of the United Kingdom over pension age—65 years for men and 60 years for women—and who were in the National Insurance Scheme when they left the United Kingdom will be eligible to receive Australian pensions without having to complete 20 years' residence in Australia.

Subject to the means test, these persons so entitled have any United Kingdom pensions they receive supplemented by Australia to bring the total payments in most cases to the maximum pension rate for Australians—at present £3 10s. od. per week.

Similar principles apply to widows' pensions. Australian residential requirements will be waived for these pensions, also for invalid pensions, child endowment and unemployment and sickness benefits.

With few exceptions, all these benefits will be payable to former residents of the United Kingdom at the same rates as are payable to Australian citizens.

Persons from Australia going to the United Kingdom for permanent residence will be treated in the United Kingdom as if they had been insured under the National Insurance Scheme while in Australia, so that they can qualify for various National Insurance benefits.

Families who go from one country to another will be able to qualify for child endowment, or family allowances, as soon as they arrive in their new country.

There is also provision for the safeguard of social service rights for Australians going to the United Kingdom for temporary residence, and vice versa.

The agreement came into operation in both countries on 7th January, 1954.

## B. OTHER SERVICES.

### § 1. Benevolent Homes.

1. **General.**—The public provisions for the care of indigent old people have been a feature of the social development of recent years in most countries. Numerous establishments exist in Australia for the housing and protection of persons no longer able to provide for themselves. These institutions are supported by Government and municipal aid, public subscriptions, bequests, etc.; while in many cases relatives of poor and afflicted persons contribute to their maintenance.

An entirely satisfactory statistical tabulation in regard to all forms of charitable aid is especially difficult in the case of benevolent institutions, because the services provided by these institutions are not always identical.

2. **Principal Institutions.**—Particulars respecting the accommodation and the number of inmates of the principal institutions were published in earlier issues of the Official Year Book (*see* No. 22, p. 485).

3. **Revenue and Expenditure.**—Details regarding revenue and expenditure for the year 1950-51 are given in the following table.



## BENEVOLENT HOMES : REVENUE AND EXPENDITURE, 1950-51.

(£.)

Particulars.	N.S.W.(a)	Vic.(b)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.					
<b>Revenue—</b>												
Government Aid	300,771	490,533	228,341	50,868	49,744	64,810	1,185,067					
Municipal Aid ..		939	..	..	..	..	939					
Public Subscriptions, Legacies	..	59,870	15,972	..	..	..	75,842					
Fees (c) ..	} 224,747	{ 75,574	103,265	20,279	56,561	38,174	554,008					
Other ..								10,104	22,136	2,351	65	752
<b>Total ..</b>	<b>525,518</b>	<b>637,020</b>	<b>369,714</b>	<b>73,498</b>	<b>106,370</b>	<b>103,736</b>	<b>1,815,856</b>					
<b>Expenditure—</b>												
Salaries and Wages ..	} 525,518	{ 268,387	159,127	41,945	65,681	83,015	1,917,492					
Upkeep and Repair of Buildings ..								20,623	14,123	7,739	1,309	1,249
All Other (d) ..								418,115	228,535	23,814	39,380	18,932
<b>Total ..</b>	<b>525,518</b>	<b>707,125</b>	<b>401,785</b>	<b>73,498</b>	<b>106,370</b>	<b>103,196</b>	<b>1,917,492</b>					

(a) These figures relate to the three State hospitals and homes only. (b) Year ended 31st March, 1951. (c) Includes Commonwealth Hospital Benefits and Age and Invalid Pension receipts. (d) Includes £270,729 in Victoria, £27,956 in Queensland, £4,615 in South Australia and £30 in Western Australia, covering such items as purchase of land, cost of new buildings and additions to buildings.

## § 2. Orphanages, Industrial Schools, etc.

1. **General.**—The methods of caring for orphans and neglected children differ extensively, inasmuch as some of the children are more or less segregated in orphanages and industrial schools, while others are boarded out with their mothers or female relatives or with approved foster-mothers. The children in orphanages and similar institutions may receive, in addition to primary education, some craft training. In all cases employment is found for the children on their discharge from the institution, and they remain for some time under the supervision of the proper authorities. The conditions under which orphans, neglected children and children boarded out live are subject to frequent departmental inspections.

2. **Principal Institutions.**—Particulars concerning the principal institutions in each State were published in earlier issues of the Official Year Book (see No. 22, p. 486).

3. **Transactions of State Departments.**—The following table summarizes the transactions of State Departments during 1950-51 in connexion with children under their control or supervision. In addition to neglected children, the figures include uncontrollable and convicted children who are wards of a Government authority, as well as poor children whose parents obtain assistance from the Government without giving up the legal right of custody.

CHILDREN UNDER GOVERNMENT AUTHORITY : SUMMARY, 1950-51.

Particulars.	N.S.W.	Vic.(a)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<i>A. Children maintained or subsidized by the State.</i>							
In State shelters, industrial schools, reformatories, etc.(b) ..	704	249	1,086	240	48	41	5,265
In licensed or approved institutions ..	704	1,480					
Boarded out—							
With own mothers ..	5,647	2,119	3,032	34	22	..	10,854
With licensed foster-mothers, guardians, relatives and friends	1,419	457	325	1,264	293	130	3,888
Total children maintained or subsidized by the State	8,474	4,305	4,443	1,584	816	385	20,007
<i>B. Children not maintained or subsidized by the State.</i>							
In licensed or approved institutions ..	1,460	..	..	46	734	..	2,240
Boarded out ..	246	..	..	1,321	286	..	1,853
On probation (from Institutions or Children's Courts) ..	2,306	848	163	285	110	..	3,712
In service or apprenticed	96	214	283	174	104	..	871
Adopted or otherwise placed ..	387	140	16	591	76	..	1,210
Total children not maintained or subsidized by the State ..	4,495	1,202	462	2,417	1,310	..	9,886
Total children under State control or supervision ..	12,969	5,507	4,905	4,001	2,126	385	29,893
<i>Gross cost of children's relief ..</i>	£ 676,547	£ 247,115	£ 207,460	£ 179,748	£ 56,593	£ 17,832	£ 1,385,295
<i>Receipts from parents' contributions, etc. ..</i>	49,164	24,203	17,361	32,441	10,789	2,183	136,141
<i>Net Cost to State ..</i>	627,383	222,912	190,099	147,307	45,804	15,649	1,249,154

(a) Year ended 31st December, 1950.

(b) Includes inmates of hospitals.

The total expenditure on children's relief in the foregoing table shows considerable variation amongst the States owing to the different methods of treating assistance to mothers with dependent children. In South Australia, Western Australia and Tasmania large amounts have been excluded from the total expenditure on this account owing to the difficulty of obtaining separate amounts for allowances made in respect of the dependent children only.

§ 3. Protection of Aborigines.

For the protection of the aboriginal Australian race there are institutions, under the supervision of Aborigines Boards, where these people are housed and encouraged to work, the children receiving elementary education. The work is usually carried on at mission stations, but many of the natives are nomadic, and receive food and

clothing when they call, whilst others but rarely come near the stations. The aboriginal native race is extinct in Tasmania. The expenditure from Consolidated Revenue in 1951-52 was as follows (figures in brackets are for year 1950-51):—New South Wales, £130,459 (£97,637); Victoria, £9,628 (£8,695); Queensland, £407,543 (£314,727); South Australia, £40,385 (£99,861); Western Australia, £164,338 (£148,035); Northern Territory, £213,260 (£125,485); Australian Capital Territory, £2,933 (£1,021); total for Australia, £969,046 (£795,461).

#### § 4. Royal Life Saving Society.

In each of the State capitals, "centres" of the Royal Life Saving Society have been established, and in some States sub-centres have also been established in the larger provincial districts. In 1934 an Australian Federal Council of this Society was formed with headquarters at Melbourne, and each State centre, or branch, as it is now called, is controlled by the new organization. Saving of life from drowning and other forms of asphyxiation is the object of the Society, and its immediate aims are (a) educative and (b) remedial. The encouragement of swimming and life-saving in schools, colleges, clubs, etc., will bring about a more widespread knowledge of these necessary matters, and there is increasing provision of life-belts, reels, lines, warning provisions, and other first-aid appliances on ocean beaches, wharves and other suitable places. Numerous certificates of proficiency in various grades are issued annually after examination throughout Australia, the number for the individual States for 1951-52 being:—New South Wales, 19,718; Victoria, 7,455; Queensland, 2,656; South Australia, 261; Western Australia, 1,347; and Tasmania, 1,650.

#### § 5. Royal Humane Society.

The Royal Humane Society of Australasia has as its main object the granting of awards to all who with bravery, skill and perseverance promptly risk their own lives in saving or attempting to save those of their fellow creatures. The classes of awards are (a) Gold Medal; (b) Silver Medal; (c) Bronze Medal; and (d) Certificate of Merit. The Clarke Medal is awarded for the outstanding case of the year, and the Rupert Wilks Trophy is awarded for the most outstanding bravery by a child under 13 years of age. About 75 awards are made annually.

#### § 6. Other Charitable Institutions.

Owing to the variety of name and function of other charitable institutions it has been found impracticable to give detailed results. The aid given in kind—food, clothing, tools of trade, etc.—is considerable, whilst the shelter and treatment afforded range from a bed for a night for casual callers in establishments ministering minor charity to indoor treatment over long periods in those that exist for the relief of the aged and the infirm. The institutions not so particularized include homes for the deaf, dumb and blind, infant homes, homes for the destitute and aged poor, industrial colonies, night shelters, crèches, rescue homes for females, free kindergartens, auxiliary medical charities, free dispensaries, benevolent societies and nursing systems, ambulance and health societies, boys' brigades, humane and animals' protection societies, prisoners' aid associations, shipwreck relief societies, bush fire, flood and mining accident relief funds, etc.

## CHAPTER XV.

## LOCAL GOVERNMENT.

## § 1. Introduction.

1. **General.**—The statistics on Local Government operations are not entirely satisfactory, as they are incomplete, and not sufficiently comparable and up to date. Those on Local Government financial operations were improved, prior to the 1939–45 War, through the use by the State Statisticians of standard forms in supplying information on their respective States to the Commonwealth Statistician. The presentation of the statistics thus made available was only being developed when the war made it necessary to discontinue the returns. However, since the war these returns have been recommenced, and efforts are being made, as opportunity and circumstances permit, to widen the range of information presented on local government activities beyond the purely, or primarily, financial.

2. **Local Government Authorities.**—In each State of the Commonwealth there exists a system of local government whose powers and responsibilities are in general similar, and which covers such matters as the upkeep and construction of roads, streets and bridges, water, sewerage and drainage systems and health and sanitary services, the supervision of building and the administration of regulations relating to items such as weights and measures, slaughtering, the registration of dogs, etc. In addition to these obligatory functions there are also a large number which may be performed by local government authority either with or without the consent of the ratepayers or the Governor-in-Council. These include transport facilities, electricity, gas and other business undertakings, hospitals, charitable institutions, recreation grounds, parks, baths, libraries, museums, etc.

The system is based on the principle of a grant of specific powers by the State legislatures to the local authorities, their autonomy, however, being more or less limited by the provision for general supervision by a department of the central government or by the Governor-in-Council. Otherwise, within the scope of the Acts under which they are constituted or which they have to administer, they are responsible only to the ratepayers.

While the broad pattern of local government throughout the States of Australia is similar, the range of activities, election of officers, methods of valuation and rating powers, etc., differ considerably.

The areas over which local government bodies exercise general control, numbering 915, are known in New South Wales as cities, municipalities and shires; in Victoria as cities, towns, boroughs and shires; in Queensland as cities, towns and shires; in South Australia as municipal corporation areas and district council areas; in Western Australia as municipalities and road districts; and in Tasmania as municipalities. In New South Wales some local government authorities in an area have combined to provide services such as electricity supply and water, sewerage and drainage—e.g., the county councils. Within shires there are also some municipal units known as urban areas. In Western Australia there are local health boards, whose personnel in most cases coincides with those of municipalities and road boards. Apart from the more thinly populated parts of New South Wales and South Australia and the Federal Territories, practically the whole of Australia comes within local government jurisdiction.

The financial statistics in § 2 following are classified under the headings of Ordinary Services and Business Undertakings. The former covers the obligatory and general functions referred to above. Business Undertakings include public utilities such as water supply, sewerage, electricity, gas, transport and hydraulic power undertakings, and other miscellaneous works such as abattoirs, quarries, ice works, cinemas, etc.

3. **Semi-Governmental Authorities.**—In addition to local government authorities, there is a large number of authorities set up to control specific activities, whose forms of activity are often identical with some of those performed by either, or both, of the other classes of public authority—central government and local government—and a complete picture of any field of activity for a State or Australia as a whole cannot be obtained without reference to each class operating in that particular field. These semi-governmental authorities differ primarily from local government authorities in that their operations are restricted to the specific activity for which they were constituted—e.g. roads and bridges, or water and sewerage, or electricity and irrigation, or harbours, or tramways, etc.—i.e. each dispenses a specific service throughout an area as distinct from the general services of the local authority.

Sections 4 to 7 following, dealing with roads and bridges, water supply and sewerage, harbours and fire brigades, include particulars of the more important of these authorities which operate within the range covered by this chapter.

4. **Roads, Bridges, etc.**—The construction and maintenance of roads, bridges and ferries are generally part of the functions of local authorities, but in each State there exists a central road authority or a Government department whose duties relate to the construction and maintenance of "main" and "developmental" roads, the distribution of funds to local bodies, and the supervision and co-ordination of road construction and policy throughout the State. Although roads and bridges constructed and maintained directly by the Government or by the central road authority do not properly come under the heading of "Local Government", they have been included in this chapter for the sake of convenience. Owing to difficulty in obtaining complete particulars of receipts and expenditure by the various local governing bodies in regard to roads under their control, the details of receipts and expenditure given in § 4 are those of the Government only, relating either to the supervisory board or commissioner in the State or to direct activities of a department. In § 2 some information is given of the revenue and expenditure of Local Government Authorities in respect of roads.

5. **Water Supply and Sewerage.**—In the cities of Sydney and Melbourne the control of water supply and sewerage is in the hands of special Boards, while in Adelaide and Perth these services are under the direct supervision of Government departments. In most of the other cities and towns, the municipal councils, or, in some cases, water trusts, are the controlling bodies which either construct the works out of their own resources or take them over after they have been constructed by the Government.

6. **Harbours.**—The majority of the harbours in Australia are managed by Boards, the members of which are either elected by persons interested, or are appointed by the Government. In a few instances, however, they are directly controlled by the Government.

7. **Fire Brigades.**—In all the States, the management of fire brigades is undertaken by Boards. These Boards usually comprise members elected by the councils of municipalities and insurance companies within the districts placed under their jurisdiction, and one or more members appointed by the Government. Occasionally volunteer or country fire brigades are represented.

8. **Other Local or Semi-Governmental Activity.**—The activities referred to above are not the only forms of local or semi-governmental undertakings. There are others, the most important being tramways and omnibus services and electricity and gas undertakings, which are not dealt with in this chapter, except to the extent that they are represented in the finances as shown in the following section. Chapter V.—Transport and Communication contains information on municipal transport services, and Chapter XXV.—Electric Power Generation and Distribution deals with the various types of electricity undertakings in each State. In addition, particulars of municipal electricity and gas undertakings, although not shown separately, are included in the relevant sections in Chapter XXIV.—Manufacturing Industry.

## § 2. Local Government Authorities.

1. **Area, Population, Dwellings and Value of Ratable Property.**—(i) *New South Wales.* For purposes of local government the whole of the Eastern and Central land divisions and a small portion of the sparsely populated Western division have been divided into cities, municipalities (most principal towns) and shires (mainly large rural areas, some of which embrace important towns). At the end of 1950 the area incorporated was 184,000 square miles, or nearly three-fifths of the total area of the State.

The Local Government (Areas) Act 1948 repealed the Sydney Corporation Act 1932 which had regulated the operations of the Capital City. It unites the City of Sydney and certain areas, constituting the united area as a city; unites certain other areas or areas and parts of areas, constituting them as municipalities; and reconstitutes the Sydney County Council. All local government authorities in the State are now subject to the general provisions of the Local Government Act.

Municipalities and shires may combine to form county councils for the establishment and conduct of services of joint benefit, e.g., electricity, water, sewerage. There were 33 county councils and the Grafton and South Grafton Water Board at 31st December, 1950.

The area, population, dwellings and value of ratable property in the incorporated areas for the year ended 31st December, 1950 are shown in the table below. The valuations relate to ratable property only and exclude Government and other non-ratable property, whose value is not inconsiderable in the aggregate. In this table, particulars of dwellings are in accordance with the definition used in the 1947 Census, and are the results of information collected on the Census Schedules. Occupied dwellings include individual private houses, flats and tenements, and dwellings other than private (boarding houses, hotels, caretakers' quarters, hospitals, educational establishments, etc.). Also included are portions of shared private houses in respect of which portions separate Householders' Schedules were furnished. Unoccupied dwellings include "week-end" and holiday dwellings and other dwellings temporarily unoccupied on the night of the Census. Dwellings being built are not included.

### LOCAL GOVERNMENT AUTHORITIES, NEW SOUTH WALES : AREA, POPULATION, DWELLINGS AND VALUE OF RATABLE PROPERTY, 1950.

Local Bodies.	Number.	Area.	Popu- lation.	Dwellings.(a)		Value of Ratable Property.		
				Occu- pied.	Unoccu- pied.	Unim- proved Capital Value.	Im- proved Capital Value.	Assessed Annual Value. (b)
		'000. acres.	'000.	No.	No.	£'000.	£'000.	£'000.
Metropolitan— Capital City	1	7	211	51,934	539	69,155	236,392	12,289
Other	26	148	1,357	324,120	2,229	124,626	440,532	32,344
Total	27	155	1,568	376,054	2,768	193,781	676,924	44,633
Outside Metropolitan Area	217	117,622	1,688	366,883	14,387	242,763	(c)	(c)
Grand Total	244	117,777	3,256	742,937	17,155	436,544	(c)	(c)

(a) As at Census, 30th June, 1947.

(b) Nine-tenths annual rental value of land with improvements thereon.

(c) Not available.

(ii) *Victoria.* Local Government is established throughout the State, the various divisions being termed cities, towns, boroughs, or shires. The only unincorporated areas are French Island (42,000 acres) in Westernport Bay, Julia Percy Island (650 acres) off Port Fairy, and Tower Hill (1,350 acres) adjacent to the Borough of Koroit. Melbourne and Geelong were incorporated under special statutes prior to the establishment of a

general system of local government, but are now subject to several provisions of the Local Government Act. The law relating to local government was consolidated by the Local Government Act 1946.

As from 1st January, 1947, the metropolitan area for statistical and health purposes was redefined by the inclusion of the cities of Nunawading and Sunshine, the borough of Ringwood, the Broadmeadows and Campbellfield ridings of the shire of Broadmeadows, the Doutta Galla riding of the shire of Keilor and the shire of Mulgrave.

The area, population, dwellings and estimated value of ratable property in the incorporated areas for the year ended 30th September, 1951 are shown below.

**LOCAL GOVERNMENT AUTHORITIES, VICTORIA : AREA, POPULATION, DWELLINGS AND VALUE OF RATABLE PROPERTY, 1950-51.**

Local Bodies.	Number.	Area.	Popu- lation.	Dwellings.(a)		Value of Ratable Property.	
				Occupied.	Un- occupied.	Improved Capital Value.	Net Annual Value.
		'000. acres.	'000.	No.	No.	£'000.	£'000.
Metropolitan— Capital City .. ..	1	8	101	24,105	4	113,151	5,658
Other(b) .. ..	33	333	1,267	326,505	2	477,147	24,543
Total .. ..	34	341	1,368	350,610	6	590,298	30,201
Outside Metropolitan Area(c)	164	55,852	912	245,274	108	450,494	22,632
Grand Total .. ..	198	56,193	2,280	595,884	114	1,040,792	52,833

(a) Particulars of occupied and unoccupied dwellings are based on returns furnished by municipalities. These figures refer to number of units in all habitable buildings. (b) Includes the whole of the cities of Heidelberg and Sunshine, the borough of Ringwood, and the whole of the shires of Broadmeadows, Keilor and Mulgrave, whose parts do not all lie within the Metropolitan Area. (c) Excludes Yallourn area under the jurisdiction of the State Electricity Commission of Victoria.

Particulars of the unimproved capital value are not available.

(iii) *Queensland.* The whole of the State (except certain islands along the coast, the Dawson Valley Irrigation Area and the Somerset Dam Area) is incorporated into cities, towns and shires under the Local Authorities Act 1902 and its amendments. In June, 1949, the State Government rearranged the boundaries of the local authorities to the south of Brisbane, reducing their number by ten. The towns of Coolangatta and Southport were absorbed by the new town of South Coast; two new shires were created and eleven were abolished, being absorbed by the new shires and existing cities, towns and shires. The following table shows particulars of the area, population, dwellings and value of ratable property in the incorporated areas for the year ended 30th June, 1951 :—

**LOCAL GOVERNMENT AUTHORITIES, QUEENSLAND : AREA, POPULATION, DWELLINGS AND VALUE OF RATABLE PROPERTY, 1950-51.**

Local Bodies.	Number.	Area.	Population. (a)	Dwellings.(a)		Un- improved Capital Value of Ratable Property.
				Occupied.	Un- occupied.	
		'000 acres.	'000.	No.	No.	£'000.
Capital City(b) .. ..	1	246	402	99,771	1,475	25,333
Outside Metropolitan Area .. ..	133	428,874	697	171,400	8,071	72,721
Total .. ..	134	429,120	1,099	271,171	9,546	98,054

(a) As at Census, 30th June, 1947. (b) City of Greater Brisbane.

Particulars of improved capital value and annual value are not available.

(iv) *South Australia.* The settled portion of South Australia is incorporated, being mostly under municipal corporations in the larger cities and towns, and district councils in the agricultural areas.

The following table shows the area, population, dwellings and value of ratable property in incorporated areas for the year ended 30th June, 1951.

**LOCAL GOVERNMENT AUTHORITIES, SOUTH AUSTRALIA : AREA, POPULATION, DWELLINGS AND VALUE OF RATABLE PROPERTY, 1950-51.**

Local Bodies.	Number.	Area.	Popu- lation.	Occu- pied Dwell- ings.	Value of Ratable Property.		
					Unim- proved Capital Value.	Im- proved Capital Value.	Annual Value.
		'000. acres.	'000.	No.	£'000.	£'000.	£'000.
Metropolitan— Capital City .. .. .	1	4	35	8,200	12,084	39,000	1,964
Other .. .. .	20	99	401	106,700	(a)	116,000	5,791
Total .. .. .	21	103	436	114,900	(a)	155,000	7,755
Outside Metropolitan Area .. .. .	122	34,402	268	70,390	(a)	128,000	6,377
Grand Total .. .. .	143	34,505	704	185,290	(a)	283,000	14,132

(a) Not available.

(v) *Western Australia.* In this State, Local Government is carried on by means of municipalities and district road boards. Certain functions are delegated to health boards, whose personnel, in most cases, coincides with those of the municipalities and district road boards. The following table shows particulars of the area, population, dwellings and value of ratable property in incorporated areas for the year ended 31st October, 1951 for municipalities, and the year ended 30th June, 1951 for district road boards.

**LOCAL GOVERNMENT AUTHORITIES, WESTERN AUSTRALIA : AREA, POPULATION, DWELLINGS AND VALUE OF RATABLE PROPERTY, 1950-51.**

Local Bodies.	Number.	Area.	Popu- lation.	Dwell- ings.(a)	Value of Ratable Property.		
					Unim- proved Capital Value.	Im- proved Capital Value.	Annual Value.
		'000. acres.	'000.	No.	£'000.	£'000.	£'000.
Municipalities— Metropolitan— Capital City .. .. .	1	14	106	25,037	(b)	46,250	1,958
Other .. .. .	8	12	77	19,272	(b)	17,352	927
Total .. .. .	9	26	183	44,309	(b)	63,602	2,885
Outside Metropolitan Area .. .. .	10	41	54	12,918	(b)	11,594	649
Total .. .. .	19	67	237	57,257	(b)	75,496	3,534
District Road Boards— Other Metropolitan(c) .. .. .	11	96	137	33,213	6,552	(b)	13
Outside Metropolitan Area .. .. .	117	624,427	197	51,898	21,352	(b)	589
Total .. .. .	128	624,523	334	85,111	27,904	(b)	602
All Authorities— Metropolitan— Capital City .. .. .	1	14	106	25,037	(b)	46,250	1,958
Other .. .. .	19	108	214	52,485	(b)	(b)	940
Total .. .. .	20	122	320	77,522	(b)	(b)	2,898
Outside Metropolitan Area .. .. .	127	624,468	251	64,846	(b)	(b)	1,238
Grand Total .. .. .	147	624,590	571	142,368	(b)	(b)	4,136

(a) Particulars of unoccupied dwellings are not available separately. (b) Not available.  
(c) Includes part only (8.064 acres) of Swan River District situated in Metropolitan Area.



The method of valuation is not identical in the case of all district road boards, as in some the assessment is based on the unimproved capital value and in others partly on the unimproved capital value and partly on the annual value. The amounts shown are the totals for the areas rated on each valuation, and are not a function of each other.

(vi) *Tasmania.* The whole State is divided into municipal districts, Hobart and Launceston being incorporated under separate Acts. The following table shows particulars of the area, population, dwellings and value of ratable property in incorporated areas for the year ended 30th June, 1951.

**LOCAL GOVERNMENT AUTHORITIES, TASMANIA : AREA, POPULATION,  
DWELLINGS AND VALUE OF RATABLE PROPERTY, 1950-51.**

Local Bodies.	Number.	Area.	Popu- lation.	Dwellings.(a)		Value of Ratable Property.		
				Occu- pied.	Unoccu- pied.	Unim- proved Capital Value.	Im- proved Capital Value.	Annual Value.
		'000. acres.	'000.	No.	No.	£'000.	£'000.	£'000.
Metropolitan— Capital City .. ..	1	18	59	13,597	56	5,611	18,555	1,325
Other(b) .. ..	2	99	27	4,560	331	2,435	9,299	538
<b>Total .. ..</b>	<b>3</b>	<b>117</b>	<b>86</b>	<b>18,157</b>	<b>387</b>	<b>8,046</b>	<b>27,854</b>	<b>1,863</b>
Outside Metropolitan Area	46	16,661	202	44,327	1,964	19,884	49,823	3,258
<b>Grand Total .. ..</b>	<b>49</b>	<b>16,778</b>	<b>288</b>	<b>62,484</b>	<b>2,351</b>	<b>27,930</b>	<b>77,677</b>	<b>5,121</b>

(a) As at Census, 30th June, 1947.

(b) Comprises the whole of the Municipalities of Clarence and Glenorchy.

2. *Finances.*—(i) *General.* The following tables show the latest available financial statistics for Local Government Authorities. The figures relate to the year 1950-51 except for New South Wales where they relate to the year 1950.

(ii) *Ordinary Services.* In the returns of revenue and expenditure for 1950-51 in the following table, the proceeds from loans and expenditure thereof have been excluded, as have the operations of business undertakings controlled by the various Local Government Authorities. The profits resulting from the working of these undertakings, where taken into general revenue, have been included.

LOCAL GOVERNMENT AUTHORITIES: ORDINARY SERVICES—REVENUE AND EXPENDITURE, 1950-51.

Particulars.	N.S.W. (a)	Vic. (b)	Q'land. (c)	S. Aust. (c)	W. Aust. (d)	Tas. (e)	Total.
Number of Local Government Authorities ..	244	198	134	143	147	49	915

REVENUE (EXCLUDING LOAN RECEIPTS). (£.)

Taxation—							
Rates (net) ..	10,969,905	7,698,269	5,824,968	1,879,260	1,293,133	737,296	28,491,760
Penalties ..	58,830	29,662					
Licences ..	259,002	67,047					
Total ..	11,287,737	7,794,978	5,880,715	1,914,752	1,325,992	747,446	28,951,620
Public Works and Services—							
Sanitary and Garbage Services ..	1,330,348	498,824	1,049,438	45,358	222,574	49,990	3,196,532
Council Properties ..	1,133,849	798,447	1,012,749	175,130	129,986	111,866	3,362,027
Street Construction ..	451,928	399,100	93,407	158,152	73,095	7,267	1,182,949
Other ..	1,955,574	(g) 772,213	51,400	61,885	315,986	32,743	2,289,801
Total ..	3,971,699	2,468,584	2,206,994	440,525	741,641	201,866	10,031,309
Government Grants—							
Roads ..	1,951,288	113,351	941,093	967,758	503,597	163,526	4,640,613
Other ..	1,381,076	272,491	(h) 537,726	13,501	111,027	11,430	2,327,251
Total ..	3,332,364	385,842	1,478,819	981,259	614,624	174,956	6,967,864
Profits from Business Undertakings ..	..	236,074	5,199	..	62,140	..	303,413
Fees and Fines ..	..	31,932	610,400	51,145	714,231	90,162	1,821,132
All Other ..	..	127,110	..	73,066	123,081	..	..
Total Revenue	18,591,800	11,044,520	10,182,127	3,460,747	3,581,714	1,214,436	48,075,338

EXPENDITURE (EXCLUDING LOAN EXPENDITURE). (£.)

General Administration ..	1,448,558	1,715,876	788,477	337,808	431,251	144,576	4,866,546
Debt Services (excluding Business Undertakings)—							
Interest ..	732,739	403,508	725,992	28,467	77,378	37,158	2,005,242
Redemption ..	1,455,932	593,864	1,108,694	205,078	190,488	72,909	3,626,965
Exchange ..	21,560	..	176,956	..	..	508	199,024
Other ..	..	7,582	7,380	..	..	..	14,962
Total ..	2,210,231	1,004,954	2,019,022	233,545	267,866	110,575	5,846,193
Public Works and Services—							
Roads, Streets and Bridges ..	8,189,215	3,905,436	3,865,158	2,043,458	1,129,062	542,809	19,675,138
Health Administration ..	373,332	433,191	151,392	75,164	96,019	32,401	1,161,499
Sanitary and Garbage Services ..	1,823,592	962,913	869,701	202,663	295,651	61,670	4,216,190
Street Lighting ..	525,634	258,028	148,444	86,139	61,325	39,474	1,119,044
Council Properties ..	2,760,616	1,739,241	1,192,813	304,865	576,970	149,884	6,724,389
Other ..	753,808	806,738	(l) 648,560	47,905	418,406	22,958	2,698,375
Total ..	14,426,197	8,105,547	6,876,068	2,760,194	2,577,433	849,196	35,594,635
Grants—							
Fire Brigades ..	134,741	177,339	93,908	55,837	39,872	21,455	523,152
Hospitals and Ambulances ..	..	..	1,498	92,580	4,209	315	..
Other Charities ..	52,298	65,647	1,017	5,720	6,939	3,128	233,351
Other ..	(j) 288,859	(k) 523,736	93,913	5,264	..	2,536	914,808
Total ..	475,898	766,722	190,336	159,901	51,020	27,434	1,671,311
All Other ..	473,691	65,786	121,673	..	97,274	105,336	863,760
Total Expenditure	19,034,575 less (l) 514,081	11,658,885	9,995,576	3,491,448	3,424,844	1,237,117	48,842,445 less 514,081
	18,520,494	11,658,885	9,995,576	3,491,448	3,424,844	1,237,117	48,328,364

(a) Figures for New South Wales relate to the year ended 31st December, 1950, and are on an income and expenditure basis as distinct from those of other States, which are on a cash basis. (b) Year ended 30th September, 1951. (c) Year ended 30th June, 1951. (d) Municipalities—Year ended 31st October, 1951; Road Districts—Year ended 30th June, 1951. (e) Includes £31,326 reimbursement from Highways Department for work done. (f) Includes interest from sinking fund investments for debt redemption, £164,232. (g) Includes £487,972 plant hire. (h) Includes £171,450 for sewerage and drainage. (i) Includes £223,872 for sewerage, mosquito control and drainage. (j) To Main Roads Department. (k) Includes £220,530 to Country Roads Board. (l) This deduction offsets duplications caused by the inclusion above of particulars of expenditure on (i) the purchase from revenue of assets and the depreciation of those assets, and (ii) the depreciation of assets purchased from loans and the repayment of those loans. The amount deducted cannot be apportioned according to the various headings.

The following table shows the revenue and expenditure (excluding loan) of local government authority ordinary services for the years 1938-39 and 1946-47 to 1950-51 :—

**LOCAL GOVERNMENT AUTHORITIES : ORDINARY SERVICES—REVENUE AND EXPENDITURE.**

(£.)

Year.	N.S.W.(a)	Victoria.(b)	Q'land.(c)	S. Aust.(e)	W. Aust.(d)	Tas.(c)	Total.
<b>REVENUE (EXCLUDING LOAN RECEIPTS).</b>							
1938-39 ..	10,657,409	6,070,551	4,177,632	1,578,688	1,447,154	518,755	24,450,189
1946-47 ..	10,562,205	6,476,264	5,480,877	1,835,326	1,720,290	680,549	26,755,511
1947-48 ..	11,537,287	7,270,196	6,399,888	2,162,229	2,066,424	766,819	30,252,843
1948-49 ..	13,524,992	8,190,347	7,035,155	2,526,530	2,436,790	895,920	34,609,734
1949-50 ..	16,293,311	9,454,755	8,291,960	2,917,606	2,858,147	1,050,939	40,866,718
1950-51 ..	18,591,800	11,044,520	10,182,127	3,460,747	3,581,714	1,214,430	48,075,338
<b>EXPENDITURE (EXCLUDING LOAN EXPENDITURE).</b>							
1938-39 ..	10,790,273	6,192,859	4,334,634	1,558,169	1,489,079	506,976	24,871,990
1946-47 ..	11,095,211	6,986,748	5,839,506	2,015,592	1,832,800	722,074	28,491,931
1947-48 ..	12,372,821	7,792,221	6,884,567	2,174,857	2,099,953	817,365	32,141,784
1948-49 ..	13,815,846	8,548,147	7,579,954	2,525,528	2,420,541	910,926	35,800,942
1949-50 ..	15,923,965	9,737,254	8,379,575	2,965,857	2,808,053	1,049,961	40,864,665
1950-51 ..	18,520,494	11,658,885	9,999,576	3,491,448	3,424,844	1,237,117	48,328,364

(a) Years ended previous 31st December. (b) Years ended 30th September. (c) Years ended 30th June. (d) Municipalities—Years ended 31st October; Road Districts—Years ended 30th June.

(iii) *Business Undertakings.* The table hereunder shows, for 1950-51, particulars of the revenue and expenditure, other than loan, of business undertakings under the control of local government authorities. These particulars are not included in the foregoing tables.

**LOCAL GOVERNMENT AUTHORITIES : BUSINESS UNDERTAKINGS—REVENUE AND EXPENDITURE, 1950-51.**

(£.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<b>REVENUE (EXCLUDING LOAN RECEIPTS).</b>							
Water Supply and Sewerage—							
Rates .. .. .	899,994	..	14,954	..	7,660	263,758	1,186,366
Charges for Services and Sales of Products .. .. .	229,094	60,023	1,833,967	1,176	2,842	68,658	2,195,760
Other (including Grants) .. .. .	(a) 256,327	56,551	584,116	..	..	21,735	918,729
Total .. .. .	1,385,415	116,574	2,433,037	1,176	10,502	354,151	4,300,855
Electricity and Gas—							
Rates .. .. .	117,106	..	9,350	608	..	..	127,064
Charges for Services and Sales of Products .. .. .	17,821,706	4,619,486	3,042,981	284,908	509,859	..	26,278,940
Other (including Grants) .. .. .	402,044	66,118	106,173	25,391	9,809	..	609,535
Total .. .. .	18,340,856	4,685,604	3,158,504	310,907	519,668	..	27,015,539
Railways, Tramways and Omnibuses—							
Rates .. .. .	..	..	..	..	..	35,190	35,190
Charges for Services and Sales of Products .. .. .	..	8,448	2,227,681	..	..	488,087	2,724,216
Other (including Grants) .. .. .	..	119	50,193	..	..	17,449	67,761
Total .. .. .	..	8,567	2,277,874	..	..	540,726	2,827,167
Other—	(b)	(c)	(d)	(e)	(f)	(g)	
Rates .. .. .	..	..	..	..	385	53	438
Charges for Services and Sales of Products .. .. .	1,042,465	272,467	39,661	15,298	19,983	31,489	1,421,363
Other (including Grants) .. .. .	4,958	10,915	14,588	1,459	..	838	32,758
Total .. .. .	1,047,423	283,382	54,249	16,757	20,368	32,380	1,454,559
Grand Total .. .. .	20,773,694	5,094,127	7,923,664	328,840	550,538	927,257	35,598,120

NOTE.—See next page for footnotes.

LOCAL GOVERNMENT AUTHORITIES: BUSINESS UNDERTAKINGS—  
REVENUE AND EXPENDITURE, 1950-51—*continued.*

( £. )

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<b>EXPENDITURE (EXCLUDING LOAN EXPENDITURE).</b>							
Water Supply and Sewerage—							
Working Expenses ..	681,936	71,103	910,327	1,168	8,242	145,426	1,818,202
Depreciation ..	(h)-40,035	..	..	..	..	..	-40,035
Debt Charges ..	503,600	11,470	892,067	8	6,518	157,717	1,571,380
Other (including Transfers to General Revenue and Construction) ..	..	58,963	579,983	..	..	49,894	688,840
<b>Total .. ..</b>	<b>1,145,501</b>	<b>141,536</b>	<b>2,382,377</b>	<b>1,176</b>	<b>14,760</b>	<b>353,037</b>	<b>4,038,387</b>
Electricity and Gas—							
Working Expenses ..	15,598,726	4,030,289	2,538,776	286,996	428,957	..	22,883,744
Depreciation ..	(h)918,692	206,917	..	..	29,340	..	1,154,949
Debt Charges ..	1,851,908	231,038	360,652	11,895	29,132	..	2,484,625
Other (including Transfers to General Revenue and Construction) ..	..	262,501	177,729	23,586	60,838	..	524,654
<b>Total .. ..</b>	<b>18,369,326</b>	<b>4,730,745</b>	<b>3,077,157</b>	<b>322,477</b>	<b>548,267</b>	<b>..</b>	<b>27,047,972</b>
Railways, Tramways and Omnibuses—							
Working Expenses ..	..	12,789	2,028,631	..	..	420,764	2,462,184
Depreciation ..	..	..	..	..	..	..	..
Debt Charges ..	..	252	337,775	..	..	77,843	415,870
Other (including Transfers to General Revenue and Construction) ..	..	..	40,788	..	..	44,213	85,001
<b>Total .. ..</b>	<b>..</b>	<b>13,041</b>	<b>2,407,194</b>	<b>..</b>	<b>..</b>	<b>542,820</b>	<b>2,963,055</b>
Other—	(b)	(c)	(d)	(e)	(f)	(g)	
Working Expenses ..	1,020,068	278,319	44,265	15,903	22,797	21,474	1,402,826
Depreciation ..	(h) 2,037	13,594	..	..	..	..	15,631
Debt Charges ..	20,049	29,882	1,004	..	114	5,735	56,784
Other (including Transfers to General Revenue and Construction) ..	..	12,844	5,052	..	..	3,270	21,166
<b>Total .. ..</b>	<b>1,042,154</b>	<b>334,639</b>	<b>50,321</b>	<b>15,903</b>	<b>22,911</b>	<b>30,479</b>	<b>1,496,407</b>
<b>Grand Total .. ..</b>	<b>20,556,981</b>	<b>5,219,961</b>	<b>7,917,049</b>	<b>339,556</b>	<b>585,938</b>	<b>926,336</b>	<b>35,545,821</b>

(a) Includes Government grant, £174,032, for part of cost of new works borne by Government.  
 (b) Abattoirs and ice-works. (c) Abattoirs and/or hydraulic power undertaking. (d) Municipal markets, ice-works, amusement parks, hostels, and cinemas. (e) Quarries. (f) Quarries, ice-works and abattoirs. (g) Abattoirs. (h) Net balance after deducting charge for debt redemption. The full amount of charge for debt redemption is included under debt charges.

NOTE.—For years to which particulars relate, *see* preceding table. Minus sign (–) indicates an excess of credits.

The next table shows the revenue and expenditure, other than loan, of local government business undertakings for the years 1938-39 and 1946-47 to 1950-51

**LOCAL GOVERNMENT AUTHORITIES : BUSINESS UNDERTAKINGS—REVENUE AND EXPENDITURE.**

( £. )

Year.	N.S.W.(a)	Victoria.(b)	Q'land.(c)	S. Aust.(c)	W. Aust.(d)	Tas.(c)	Total.
<b>REVENUE (EXCLUDING LOAN RECEIPTS).</b>							
1938-39 ..	6,405,010	1,813,796	3,373,966	113,132	962,470	528,461	13,196,835
1946-47 ..	10,328,170	2,797,375	4,310,666	196,279	1,382,813	621,597	19,636,930
1947-48 ..	11,929,432	3,270,875	4,604,268	207,830	1,495,123	663,411	22,260,939
1948-49 ..	14,294,306	3,667,200	5,658,198	229,896	(e) 733,538	750,963	25,334,191
1949-50 ..	16,337,869	4,520,756	6,608,609	272,369	523,654	795,929	29,059,186
1950-51 ..	20,773,694	5,094,127	7,923,664	328,840	550,538	927,257	35,598,120
<b>EXPENDITURE (EXCLUDING LOAN EXPENDITURE).</b>							
1938-39 ..	5,556,123	1,802,972	3,256,263	123,356	935,052	513,666	12,187,432
1946-47 ..	9,846,851	2,734,143	4,327,861	198,325	1,327,648	634,890	19,069,718
1947-48 ..	11,704,990	3,272,629	4,869,383	229,604	1,452,802	698,264	22,227,672
1948-49 ..	14,394,453	3,597,041	5,701,314	258,702	(e) 755,793	736,647	25,443,950
1949-50 ..	16,659,960	4,494,128	6,655,637	292,237	535,287	797,887	29,433,136
1950-51 ..	20,556,981	5,219,961	7,917,049	339,556	585,938	926,336	35,543,821

(a)-(d) See notes to corresponding table on Ordinary Services. (e) Electricity undertaking taken over by State Electricity Commission on 20th December, 1948. Includes trading from 1st November, 1948 to 19th December, 1948.

(iv) *Loan Expenditure.* The table below shows particulars for 1950-51 of loan expenditure on works connected with the ordinary services and the business undertakings of local government authorities.

**LOCAL GOVERNMENT AUTHORITIES : LOAN EXPENDITURE ON WORKS, 1950-51.**

( £. )

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<b>ORDINARY SERVICES.</b>							
Roads, Bridges, Streets, Footpaths, Drainage and Sewerage .. .. .	1,255,575	470,836	2,073,326	252,984	292,341	347,347	9,198,271
Council Properties .. .. .	1,070,514	213,355	431,212	26,373	60,166		
Parks, Gardens and Recrea- tional Reserves .. .. .	244,510	108,665		..	22,658		
Other .. .. .	(a) 672,075	401,867	1,041,899	1,347	211,221		
<b>Total .. .. .</b>	<b>3,242,674</b>	<b>1,194,723</b>	<b>3,546,437</b>	<b>280,704</b>	<b>586,386</b>	<b>347,347</b>	<b>9,198,271</b>
<b>BUSINESS UNDERTAKINGS.</b>							
Water Supply .. .. .	747,680	..	901,537	..	..	449,703	14,035,058
Sewerage .. .. .	247,838	..	428,309	..	..		
Electricity and Gas .. .. .	7,621,356	1,163,136	1,536,826	72,696	64,087		
Railways, Tramways and Omnibuses .. .. .	..	..	444,456	..	..		
Abattoirs .. .. .	333,185	21,986	..	..	..	449,703	14,035,058
Other .. .. .	..	..	95	2,168	..		
<b>Total .. .. .</b>	<b>8,950,059</b>	<b>1,185,122</b>	<b>3,311,223</b>	<b>74,864</b>	<b>64,087</b>	<b>449,703</b>	<b>14,035,058</b>
<b>Grand Total .. .. .</b>	<b>12,192,733</b>	<b>2,379,845</b>	<b>6,857,660</b>	<b>355,568</b>	<b>650,473</b>	<b>797,050</b>	<b>23,233,329</b>

(a) Includes advances for homes, £122,824.

NOTE.—For years to which particulars relate, see next table.

The following table shows the loan expenditure on works connected with local government ordinary services and business undertakings during the years 1938-39 and 1946-47 to 1950-51 :—

**LOCAL GOVERNMENT AUTHORITIES : LOAN EXPENDITURE ON WORKS.**  
(£.)

Year.	N.S.W.(a)	Victoria.(b)	Q'land.(c)	S. Aust.(e)	W. Aust.(d)	Tas.(e)	Total.
<b>ORDINARY SERVICES.</b>							
1938-39 ..	1,757,704	662,986	1,316,651	43,479	117,172	39,481	3,937,473
1946-47 ..	646,887	286,135	1,027,810	104,890	124,661	84,548	2,274,931
1947-48 ..	1,911,795	522,443	1,609,617	185,095	278,638	79,046	4,646,634
1948-49 ..	2,614,670	712,378	2,326,484	189,792	356,977	189,497	6,389,798
1949-50 ..	2,769,996	924,630	2,737,791	331,047	509,905	315,439	7,579,808
1950-51 ..	3,242,674	1,194,723	3,546,437	280,704	586,386	347,347	9,198,271
<b>BUSINESS UNDERTAKINGS.</b>							
1938-39 ..	1,481,484	452,374	941,911	9,542	76,280	232,687	3,194,278
1946-47 ..	961,005	228,263	974,396	..	47,050	117,815	2,328,529
1947-48 ..	1,842,304	418,186	1,327,630	..	58,782	95,664	3,742,566
1948-49 ..	4,038,922	654,619	2,109,248	16,900	36,794	196,499	7,052,982
1949-50 ..	6,356,107	680,481	2,811,709	8,044	71,005	396,297	10,323,643
1950-51 ..	8,950,059	1,185,122	3,311,223	74,864	64,087	449,703	14,035,053

(a) Years ended previous 31st December. (b) Years ended 30th September. (c) Years ended 30th June. (d) Municipalities—Years ended 31st October; Road Districts—Years ended 30th June.

### § 3. Local and Semi-Governmental Authorities' Debt.

1. **General.**—Statistics of Local and Semi-Governmental Debt for the years 1938-39 and 1947-48 to 1950-51 are given in the following paragraph. The information covers all Local Government authorities and those Semi-Governmental authorities responsible for the provision of the following services :—

*New South Wales.* Water Supply, Sewerage and Drainage, Electricity Supply, Fire Brigades, Banking, County Councils are included among these authorities.

*Victoria.* Water Supply and Sewerage, Irrigation and Drainage, Harbours, Tramways, Electricity Supply, Fire Brigades, Marketing (Buying and Selling), Grain Elevators, Banking, Housing.

*Queensland.* Water Supply and Sewerage, Irrigation and Drainage, Harbours, Electricity Supply, Roads and Bridges, Trading Activities, n.e.i., Fire Brigades, Universities, Hospitals and Ambulances, Marketing (Buying and Selling and Agency), Industry Improvement, Miscellaneous.

*South Australia.* Irrigation and Drainage, Tramways, Electricity Supply, Fire Brigades, Hospitals and Ambulances, Marketing (Agency), Industry Improvement, Banking, Housing, Miscellaneous.

*Western Australia.* Water Supply and Sewerage, Irrigation and Drainage, Harbours, Tramways, Electricity Supply, Fire Brigades, Hospitals and Ambulances, Marketing (Agency), Housing.

*Tasmania.* Harbours.

A detailed list of the authorities included is shown in *Finance Bulletin* No. 43, 1951-52.

2. **Local and Semi-Governmental Authorities' Debt.**—The following table provides a summary of new money loan raisings, provisions for the redemption of debt, debt outstanding and interest payable of local and semi-governmental authorities for the year ended 30th June, 1951. For greater detail see *Finance Bulletin* No. 43, 1951-52, published by this Bureau.

**LOCAL AND SEMI-GOVERNMENTAL AUTHORITIES : NEW MONEY LOAN  
RAISINGS, REDEMPTION, DEBT AND INTEREST PAYABLE, 1950-51.**

( £'000.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<b>LOCAL GOVERNMENT AUTHORITIES.</b>							
New Money Loan Raisings—							
From Government ..	326	43	1,344	223	34	..	1,970
From Public ..	6,447	2,113	6,249	165	598	930	16,502
Total ..	6,773	2,156	7,593	388	632	930	18,472
Funds Provided for Redemp- tion—							
Government Loans ..	26	29	536	149	1	7	748
Loans due to Public ..	1,977	793	1,432	61	226	288	4,777
Total ..	2,003	822	1,968	210	227	295	5,525
Accumulated Sinking Fund Balance ..	5,845	1,582	1,777	..	245	377	9,826
Debt—							
Due to Government ..	1,040	261	8,994	635	65	115	11,110
Due to Banks (Net Over- draft) ..	124	451	508	42	4	34	1,163
Due to Public Creditor (a) ..	38,998	14,607	36,086	657	2,534	4,156	97,038
Total(a) ..	40,162	15,319	45,588	1,334	2,603	4,305	109,311
Maturing Overseas(a)(b) ..	1,812	..	2,417	..	..	200	4,429
Annual Interest Payable (a) ..	(c)	555	1,616	31	96	153	(c)

**SEMI-GOVERNMENTAL AND OTHER PUBLIC AUTHORITIES.**

New Money Loan Raisings—							
From Government ..	18	9,057	1,818	8,196	4,116	..	23,205
From Public ..	13,902	37,259	2,679	5	27	268	54,140
Total ..	13,920	46,316	4,497	8,201	4,143	268	77,345
Funds Provided for Redemp- tion—							
Government Loans ..	259	287	363	217	204	12	1,342
Loans due to Public ..	2,285	2,403	523	135	44	25	5,415
Total ..	2,544	2,690	886	352	248	37	6,757
Accumulated Sinking Fund Balance ..	9,219	5,085	..	265	10	4	14,583
Debt—							
Due to Government ..	20,135	36,531	14,066	25,273	14,711	112	110,828
Due to Banks (Net Over- draft) ..	1,982	2,174	510	35	17	..	4,718
Due to Public Creditor(a) ..	106,298	120,951	13,025	11,218	375	1,302	253,169
Total(a) ..	128,415	159,656	27,601	36,526	15,103	1,414	368,715
Maturing Overseas(a)(b) ..	8,628	3,528	..	767	..	..	12,923
Annual Interest Payable(a) ..	(c)	5,227	974	1,199	553	51	(c)

(a) Includes debt or interest payable in London and New York. The former is expressed in United Kingdom currency, the latter is payable in dollars which have been converted at the rate of 4.8665 dollars to £1. (b) Included in debt figures above. (c) Not available.

In this and the following tables, debt includes all liabilities for which arrangements have been made for repayment over a period of one year or more, and net overdrafts. Interest capitalized and amounts due for the capital cost of assets or for services rendered which are to be repaid over a period of one year or more are included. Current liabilities, such as interest accrued (but not capitalized), trade creditors, amounts held in trust and other debts which are to be repaid in less than one year are not included. Net overdraft is the gross overdraft of all funds less all bank credit balances (including fixed deposits) which do not form part of a sinking fund to repay a loan. New loans raised during the year include new loan liabilities incurred during the year, loans raised to repay indebtedness to the Government, and interest capitalized. Loans raised and redeemed within the year, increases in overdrafts and loans raised for conversion or redemption

of existing debt are excluded. Funds provided for redemption include instalments of principal repaid and amounts credited to sinking funds established for the purpose of repaying the debt on maturity. Amounts provided for redemption from loans raised for that purpose are excluded.

In the following table a summary is given of new money loan raisings, provisions for the redemption of debt and debt outstanding of local and semi-governmental authorities for the years 1938-39 and 1947-48 to 1950-51.

**LOCAL AND SEMI-GOVERNMENTAL AUTHORITIES, AUSTRALIA: NEW MONEY LOAN RAISINGS, REDEMPTION AND DEBT.**

(£'000.)

Particulars.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.
<b>LOCAL GOVERNMENT AUTHORITIES.</b>					
New Money Loan Raisings—					
From Government .. .. .	371	680	841	1,498	1,970
From Public .. .. .	7,060	8,502	11,242	13,843	16,502
Total .. .. .	7,431	9,182	12,083	15,341	18,472
Funds provided for Redemption—					
Government Loans .. .. .	2,141	499	675	506	748
Loans due to Public .. .. .	2,995	3,514	3,749	4,163	4,777
Total .. .. .	5,136	4,013	4,424	4,669	5,525
Accumulated Sinking Fund Balance .. .. .	(a)	10,376	9,950	9,334	9,826
Debt—					
Due to Government .. .. .	13,207	9,029	9,051	10,032	11,110
Due to Banks (Net Overdraft) .. .. .	1,544	337	435	537	1,163
Due to Public Creditor(b) .. .. .	76,582	66,734	73,766	83,908	97,038
Total(b) .. .. .	91,333	76,100	83,252	94,477	109,311
Maturing Overseas(b)(c) .. .. .	17,893	7,326	6,775	4,838	4,429
<b>SEMI-GOVERNMENTAL AND OTHER PUBLIC AUTHORITIES.</b>					
New Money Loan Raisings—					
From Government .. .. .	1,524	8,084	10,740	15,749	23,205
From Public .. .. .	7,038	11,118	18,046	32,674	54,140
Total .. .. .	8,562	19,202	28,786	48,423	77,345
Funds provided for Redemption—					
Government Loans .. .. .	699	1,934	1,239	1,075	1,342
Loans due to Public .. .. .	1,146	2,437	5,101	5,466	5,415
Total .. .. .	1,845	3,471	6,340	6,571	6,757
Accumulated Sinking Fund Balance .. .. .	(a)	12,755	13,139	13,462	14,583
Debt—					
Due to Government .. .. .	(d)44,817	64,747	76,055	89,919	110,828
Due to Banks (Net Overdraft) .. .. .	2,006	1,495	2,793	3,423	4,718
Due to Public Creditor(b) .. .. .	118,506	159,895	173,768	203,199	253,169
Total(b) .. .. .	165,329	226,137	252,616	296,541	368,715
Maturing Overseas(b)(c) .. .. .	12,088	16,665	14,655	12,991	12,923

(a) Not available. (b) Includes debt in London and New York. The former is expressed in United Kingdom currency, the latter is payable in dollars which have been converted at the rate of 4.8665 dollars to £1. (c) Included in debt figures above. (d) Approximate only.



### § 4. Roads and Bridges.

1. **Commonwealth Government Grants.**—The following table shows particulars of allocations to the several States from the Commonwealth Consolidated Revenue Fund under the several Commonwealth Aid Roads and Works Acts, for road construction, maintenance, repair and other works connected with transport during the years 1938–39 and 1946–47 to 1951–52. Allocations for the construction and maintenance of strategic roads and for the promotion of road safety practices made in the years 1947–48 to 1951–52 are excluded. The aggregate amounts payable under the relevant Acts from 1922–23 to 1951–52 for the purposes outlined above are also shown. Further particulars of these grants appear in Chapter XVII.—Public Finance.

#### ROAD CONSTRUCTION, MAINTENANCE, ETC. : GRANTS BY COMMONWEALTH GOVERNMENT. (£'000.)

Year ended 30th June—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
1939 (a) .. .. .	1,199	747	815	474	819	213	4,267
1947 (a) .. .. .	1,350	841	918	533	923	240	4,805
1948 (b) .. .. .	2,017	998	1,102	631	1,102	287	6,137
1949 (b) .. .. .	2,003	1,236	1,303	781	1,363	355	7,101
1950 (b) .. .. .	2,472	1,526	1,683	965	1,683	438	8,767
1951 (c) .. .. .	3,819	2,357	2,600	1,490	2,600	677	13,543
1952 (c) .. .. .	4,131	2,549	2,812	1,611	2,812	732	14,647
Aggregate, years 1922–23 to 1951–52 .. .. .	30,291	18,994	20,615	12,025	20,751	5,404	108,080

(a) Under Federal Aid Roads and Works Act 1937. (b) Under Commonwealth Aid Roads and Works Act 1947–1949, except for £398,830 to New South Wales in 1947–48 under Federal Aid Roads and Works Act 1937, representing amounts not drawn by that State during 1943–44. (c) Under the Commonwealth Aid Roads Act 1950.

In addition to the foregoing amounts, financial assistance from loan fund has been granted by the Commonwealth Government to the States for road construction. Such assistance has not been granted in recent years. At 30th June, 1952 the aggregate amount was £249,686.

2. **New South Wales.**—(i) *General.* A central road authority was created by legislation early in 1925 for the purpose of providing improved and uniform standards of construction and maintenance of the principal roads, and to administer Governmental subsidies for work on those roads. This authority (now organized as the Department of Main Roads) exercises control over Governmental activities in connexion with road works, these activities embracing works on main and developmental roads throughout the State, all roads in the unincorporated portion of the Western Division, and proclaimed national works, principally bridges and vehicular ferries, constructed from Government funds. The department co-operates with the municipal and shire councils in the work of constructing and maintaining a well-organized system of main highways.

In the metropolitan district the whole cost of the construction and maintenance of main roads is paid from the funds of the Main Roads Department, while in the country districts assistance in respect of road works may be granted for any area through which a main road passes. The cost of constructing developmental roads and works is borne in full by the Main Roads Department, but local councils are required to maintain them in satisfactory condition. For other roads the cost of both construction and maintenance work is generally chargeable to the revenue of local authorities, although Governmental assistance is not infrequently granted for works of construction and re-construction. In the Western Division the full cost of all roads and bridges is met by the Department of Main Roads.

The New South Wales Transport and Highways Commission, which was constituted in 1950 and included the Commissioner for Main Roads as one of its members, was disbanded in September, 1952.

The general system of road communication throughout the State is made up of main roads classified into State highways, trunk roads and ordinary main roads. There are also secondary roads (metropolitan area) and developmental roads.

Public roads, except those within the City of Sydney, may be proclaimed as main roads on the recommendation of the Commissioner for Main Roads, who takes into consideration representations made by councils concerned, availability of funds for construction and maintenance purposes, and the value as connecting links between centres of population or business.

(ii) *Length of Roads.* (a) *Proclaimed Roads.* The following table shows lengths of proclaimed roads at 30th June, 1951, according to class of road :—

PROCLAIMED ROADS, NEW SOUTH WALES : LENGTHS, 30TH JUNE, 1951.  
(Miles.)

Division.	Main Roads.				Secondary Roads.	Developmental Roads.	Total.
	State Highways.	Trunk Roads.	Ordinary Main Roads.	Total.			
Eastern and Central	5,205	2,730	9,762	17,697	(a) 59	2,859	20,615
Western ..	1,328	1,359	2,936	5,623	..	..	(b) 5,623
Total ..	6,533	4,089	12,698	23,320	59	2,859	26,238

(a) Metropolitan area. (b) Excludes 2,705 miles of unclassified roads, the responsibility of the Department.

During 1950-51 the following roads were proclaimed or declared :—123 miles of new main roads and extensions of existing main roads, and 70 miles of new developmental roads.

The length of main and secondary roads maintained by the Department of Main Roads at 30th June, 1951 (excluding the Western Division) was 2,578 miles (15 per cent.), while the length maintained by Councils was 15,178 miles (85 per cent.). The proportions of the several classes of main roads maintained by the Department and Councils respectively were :—State highways, 38 per cent., 62 per cent.; trunk roads, 2 per cent., 98 per cent.; ordinary main roads, 6 per cent., 94 per cent. Secondary roads were wholly maintained by Councils. In the County of Cumberland (the metropolis and adjoining areas) the Department maintained 56 per cent. of the roads (504 miles).

(b) *Composition of Roads.* In 1951 the total length of all roads in New South Wales was estimated at 126,624 miles, including 7,911 miles in the Western Division. The lengths of roads, according to their composition or nature, were as follows :—cement concrete, 390 miles; asphaltic concrete, 197 miles; tar or bituminous macadam, 4,187 miles; surface water-bound macadam, 4,679 miles; water-bound macadam, 2,068 miles; gravel or crushed rock, 35,076 miles; formed only, 27,390 miles; cleared or natural surface only, 52,637 miles.

(iii) *Main Roads Department.* (a) *General.* Progress has continued with the implementation of the Main Roads Department plan for main road development in the metropolis and the balance of the County of Cumberland. This plan is now incorporated in the County of Cumberland Planning Scheme approved by Parliament under the Local Government (Amendment) Act 1951. Surveys and designs have been advanced, and the acquisition of land is proceeding, in connexion with the planned Newcastle and District Arterial Road System and Wollongong-Port Kembla District Main Roads System.

An investigation into the extent and classification of country main roads in the light of present and future traffic needs was completed during 1949-50.

In addition to its construction and maintenance work on roads, the Main Roads Department is engaged on a scheme for widening metropolitan roads. The acquisition of land required to implement approved schemes has been proceeding.

During 1950-51, 32 new bridges were completed on main roads by the Department and Councils. Piers and abutments have been constructed for the steel and concrete bridge over Iron Cove between Balmain and Drummoyne, Sydney (length 1,536 feet) while work on the reinforced concrete bridge over a division of Cook's River (length 566 feet) has been completed.

(b) *Receipts and Payments.* The funds of the Department of Main Roads are derived principally from taxation of motor vehicles, contributions by the Commonwealth Government under the Commonwealth Aid Roads and Works Acts (see Chapter XVII.—Public Finance, for some particulars of the basis and distribution of grants under these Acts and para. 1 of this section for particulars of the amounts paid in recent years), contributions by municipal and shire councils, and special (not statutory) assistance by the State Government by way of loan moneys or special grants from revenue funds. Receipts and payments for the four years 1947-48 to 1950-51 compared with the income and expenditure for 1938-39 are shown below.

DEPARTMENT OF MAIN ROADS, NEW SOUTH WALES: RECEIPTS AND PAYMENTS.

(£.)

Item.	1938-39. (a)	1947-48.	1948-49.	1949-50.	1950-51.
RECEIPTS.					
Motor Vehicle Taxation, and Registration and Licence Fees	2,018,556	2,266,351	2,516,423	2,744,617	3,586,260
Commonwealth Aid Roads and Works Acts .. .. .	1,176,039	1,851,324	1,445,245	1,777,500	2,560,447
Councils' Contributions .. .. .	250,679	249,674	237,598	285,478	328,983
Consolidated Revenue (State) .. .. .	..	..	10,000	..	350,000
Loans from State Government .. .. .	302,643	300,000	..	..	215,000
Grants and Contributions from State Government and Departments, etc. .. .. .	13,549	53,095	63,295	9,909	26,471
Commonwealth Funds for Special Works .. .. .	..	38,633	37,606	142,000	133,140
Hire of Plant and Motor Vehicles .. .. .	..	269,018	314,006	340,016	393,224
Suspense Accounts .. .. .	..	3,574	62,826	1,080	..
Other .. .. .	54,782	107,570	120,958	149,415	149,679
<b>Total .. .. .</b>	<b>3,816,248</b>	<b>5,139,239</b>	<b>4,808,047</b>	<b>6,545,015</b>	<b>7,743,204</b>
PAYMENTS.					
Roads and Bridges in New South Wales—					
Construction .. .. .	1,736,898	1,402,546	1,851,985	2,303,637	2,276,057
Maintenance .. .. .	1,519,929	2,483,366	2,371,632	2,856,508	3,787,059
Roads and Bridges outside New South Wales .. .. .	..	2,232	—57	..	..
Other Works .. .. .	..	14,708	13,087	9,134	..
Debt Charges—					
Interest, Exchange, etc. .. .. .	152,469	138,124	126,964	121,895	120,704
Sinking Fund and Repayments .. .. .	200,591	(d) 776,444	95,697	40,861	25,876
Repairs and Expenses, Plant and Motor Vehicles .. .. .	..	122,077	183,004	220,007	253,405
Purchase of Assets .. .. .	..	148,059	98,538	292,084	435,885
Suspense Accounts .. .. .	..	108,359	2	19,538	98,259
Administration, etc. .. .. .	100,583	185,179	220,939	246,226	279,622
Other .. .. .	914	38,670	37,613	97,600	97,177
<b>Total .. .. .</b>	<b>3,711,384</b>	<b>5,419,764</b>	<b>4,999,404</b>	<b>6,207,490</b>	<b>7,374,044</b>

(a) Income and expenditure. (b) Includes £398,830 not drawn by State during 1943-44. (c) Excludes £500,000 transferred from the County of Cumberland Main Roads Fund to the Country Main Roads Fund. (d) Includes £696,096 to liquidate certain outstanding liabilities before due dates.

The figures shown above represent the aggregate receipts and payments of three funds—the County of Cumberland Main Roads Fund, the Country Main Roads Fund and the Developmental Roads Fund. From 1st January, 1925 to 30th June, 1951

receipts amounted to £104,870,470 and payments to £102,993,086. Particulars of the individual funds are—County of Cumberland, receipts £28,677,717, payments £27,516,637, Country, £72,310,681, £71,888,857; Developmental, £3,882,072, £3,587,592.

The total expenditure on roads, streets and bridges in the State by all authorities during the years 1938–39 and 1947–48 to 1950–51 was, respectively, £8,894,099, £8,934,403, £10,479,716, £12,394,814 and £15,063,845. These figures are approximate and they include expenditure on construction, maintenance and direct administration, but not on debt charges. Expenditure on the Sydney Harbour Bridge is not included.

(c) *Sydney Harbour Bridge.* The Sydney Harbour Bridge was opened for traffic on 19th March, 1932. The main span is 1,650 feet and the clearance for shipping 170 feet from high water level. The deck, 160 feet wide, carries a roadway, two railway tracks and two tramway tracks, and there is also a footway on each side. The capital cost of the bridge to the 30th June, 1951, was £9,742,256, but this amount will be reduced by approximately £273,000 on the disposal of all surplus resumed property. The portion met from repayable loan funds, over £8,000,000, is to be repaid over a period of 53 years ending approximately in 1985. The accumulated balance of the Bridge Account to 30th June, 1951, showed a surplus of £104,831. Annual income, after a decline to less than £300,000 during the 1939–45 War, has risen from about £400,000 in 1938–39 to a little less than £700,000 in 1950–51; expenditure over the same period has remained around the £400,000 level. In 1950–51 income amounted to £697,022, and included road tolls £526,309, railway passenger tolls £129,678, and tram and omnibus passenger tolls £27,273. Expenditure amounted to £440,743, including interest, exchange, etc. £258,611, sinking fund £67,372 and maintenance and improvement £60,437. During 1950–51, 23,399,000 rail travellers, 24,873,000 tram and omnibus travellers, and 24,034,000 road travellers in 14,266,000 road vehicles crossed the bridge, contributing respectively, 19 per cent., 4 per cent., and 77 per cent. of the total toll revenue.

3. *Victoria.*—(i) *General.* With the object of improving the main roads of the State the Country Roads Board was established by legislation passed in 1912. The principal duties of the Board are to determine the main roads, State highways, tourists' roads, etc., to inquire into the State's resources in road materials and the most effective methods of road construction and maintenance, and to recommend deviations in existing roads or the construction of new roads in order to facilitate communication or to improve the conditions of traffic.

(ii) *Length of Roads.* (a) *Declared Roads.* The total length of declared roads in Victoria at 30th June, 1951, was 14,457 miles, classified as follows:—State highways, 3,850 miles; main roads, 9,800 miles; tourists' roads, 432 miles; forest roads, 375 miles. The total length of the surface treated (black) system included in the foregoing totals was 6,932 miles or 47.9 per cent.

(b) *Composition of Roads.* It is estimated that, in addition to the 14,457 miles of classified roads as above, there were 90,200 miles of unclassified roads at 30th June, 1951. The latest detailed estimate of the length of roads and streets in Victoria (as at 30th September, 1948) provides the following information:—Wood or stone, 62 miles; portland cement concrete, 150 miles; asphaltic concrete and sheet asphalt, 202 miles; tar or bitumen surface seal, 10,241 miles; water-bound macadam, gravel, sand and hard loam pavements, 28,418 miles; formed only, 23,901 miles; surveyed only, 38,437 miles; total 101,411 miles.

(iii) *Country Roads Board.* (a) *General.* During 1950–51 823 miles of declared roads under the Board's control were treated with bitumen. In addition, 121 miles of undeclared roads, for which the Board contributed funds, were similarly treated. Work for other authorities carried out by the Board's plant amounted to 65 miles. The total length of bitumen treatment carried out in 1950–51 was 1,009 miles. Of the work on the roads under the Board's control, 288 miles related to State highways.

During 1950–51, 153 bridge projects with a total value of £388,164 were initiated. Of these new projects, 40 with a total value of £232,147 were supervised by the Board and 113 with a total value of £156,017, were supervised by municipalities.

Despite delays occasioned by labour difficulties progress was maintained during the year on the Swan Street Bridge, Melbourne, for which the Country Roads Board is the constructing authority.

(b) *Receipts and Payments.* Funds created under the Act were the Country Roads Board Fund, the Loan Account and the Developmental Roads Loan Account. Particulars of the operations of these funds, together with those of the Commonwealth Aid Roads and Works Accounts, are given hereunder :—

*Country Roads Board Fund.* Fees and fines under the Motor Car Act, and all registration fees and fines for traction engines, less cost of collection of such fees and fines, are credited to this Fund. In 1949–50 drivers' licence fees, which were formerly paid into Consolidated Revenue Fund, were paid into the Country Roads Board Fund. In 1950–51, 68 per cent. of these fees was credited to the Country Roads Board Fund while 32 per cent. was credited to the Municipalities Assistance Fund. Particulars of receipts and payments connected with the Commonwealth Aid Roads and Works Acts, Commonwealth Defence Works and several other funds are not included therein (*see* next page for particulars). Receipts and payments for the years 1938–39 and 1947–48 to 1950–51 were as follows :—

COUNTRY ROADS BOARD FUND, VICTORIA : RECEIPTS AND PAYMENTS.

(£.)

Item.	1938-39.	1947-48.	1948-49.	1949-50. (a)	1950-51. (a)
<b>RECEIPTS.</b>					
Motor Vehicle Registration Fees	1,690,962	1,963,555	2,133,717	2,555,812	3,015,820
Drivers' Licence Fees .. ..	.. ..	.. ..	.. ..	131,678	143,291
Municipalities' Payments .. ..	318,878	302,905	336,470	189,788	187,109
Stores and Materials .. ..	233,104	598,080	376,696	.. ..	.. ..
Hire of Plant .. ..	53,724	230,982	230,976	.. ..	.. ..
Other .. ..	117,341	241,210	277,475	10,929	3,521
<b>Total .. ..</b>	<b>2,414,009</b>	<b>3,336,732</b>	<b>3,355,334</b>	<b>2,888,207</b>	<b>3,349,741</b>
<b>PAYMENTS.</b>					
Maintenance of Roads and Murray River Bridges and Punts .. ..	1,205,069	1,770,918	927,718	1,845,947	1,754,578
Relief to Municipalities .. ..	240,170	220,682	210,579	.. ..	.. ..
Interest, Sinking Fund, etc.— Recoup to Consolidated Revenue—					
Interest, etc. .. ..	282,484	296,076	296,964	} 531,213	} 526,845
Sinking Fund .. ..	25,794	25,262	24,489		
Municipalities' Repayments, etc.	119,167	104,295	103,290		
Plant, Stores and Materials .. ..	310,332	1,043,506	797,377	211,661	578,273
Other (including Administration)	230,125	520,811	598,539	495,577	721,559
<b>Total .. ..</b>	<b>2,413,141</b>	<b>3,981,550</b>	<b>2,958,946</b>	<b>2,994,398</b>	<b>3,581,255</b>

(a) Figures for 1949–50 and 1950–51 are not directly comparable with those of previous years owing to a change in the method of compilation adopted by the Country Roads Board.

*Country Roads Board Loan Account.* Loans have been authorized from time to time under the Country Roads Acts for permanent works on main roads and State highways. During the year ended 30th June, 1951, receipts amounted to £715,956 and payments to £790,956. The total expenditure to 30th June, 1951 was £6,614,495.

*Developmental Roads Loan Account.* This fund was created for the purpose of constructing and maintaining subsidiary or developmental roads. Loan moneys raised were exhausted at 30th June, 1937, the total expenditure at that date being £6,425,758.

*Commonwealth Aid Roads and Works Accounts.* Revenue and expenditure in respect of the Commonwealth Aid Roads and Works Accounts, particulars of which are not included above, were as follows:—

(£.)

Item.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.
Revenue .. .. .	716,019.	993,144.	1,201,971.	1,540,233.	2,004,080.
Expenditure(a) .. .	767,767.	1,338,301.	1,300,818.	994,400.	2,815,779.

(a) Excludes amounts spent on maintenance and repairs of public roads adjoining, or of approach to, Commonwealth properties in Victoria (see table following).

*Total Expenditure.* The total expenditure by the Board on road construction and maintenance during each of the five years 1938-39 and 1947-48 to 1950-51 was as follows:—

## COUNTRY ROADS BOARD, VICTORIA: EXPENDITURE ON ROADS.

(£.)

Item.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.
State Highways—Maintenance, etc.(a) .. .	453,708.	1,181,382.	894,600.	1,340,588.	2,077,175.
Main Roads—Construction(a) .. .	224,290.	75,743.	12,304.	5,801.	} 2,029,795.
Maintenance(a) .. .	802,920.	1,283,619.	1,087,120.	1,217,829.	
Tourists' Roads—Construction, etc.(a) .. .	77,694.	98,662.	117,477.	149,841.	212,398.
Forest Roads—Maintenance, etc. Developmental and other Roads—Maintenance, etc.(a) .. .	468,122.	436,467.	458,473.	378,179.	937,692.
Murray River Bridges and Punts—Maintenance .. .	4,067.	4,004.	5,946.	6,022.	11,641.
Roads adjoining Commonwealth Areas—Maintenance, etc. .. .	13,321.	3,407.	3,247.	735.	709.
Unemployment Relief Works .. .	54,662.	.. .	.. .	.. .	.. .
Swan Street Bridge .. .	.. .	15,178.	37,769.	41,867.	29,280.
Total .. .	2,098,784.	3,127,804.	2,639,086.	3,185,036.	5,362,023.

(a) Includes amounts contributed by the Commonwealth Government under the provisions of the Commonwealth Aid Roads and Works Acts.

4. Queensland.—(i) *General.* Under the Main Roads Act 1920 a Main Roads Board was constituted, consisting of three members appointed by the Governor-in-Council. In 1925 the Board was abolished and its powers conferred upon a single Commissioner. The duties of the Commissioner are to carry out surveys and investigations necessary to determine State highways, main, developmental, secondary, mining access, farmers' and tourist roads and tourist tracks, and the responsibility for building and maintaining these declared roads is largely that of the Commissioner. Roads of purely local importance are constructed and maintained by local authorities. In many cases construction is subsidized by the State Government by means of Treasury loans. Other roads are built by the Public Estate Improvement Branch of the Lands Department in order to open up areas of previously inaccessible or undeveloped country.

(ii) *Length of Roads.* (a) *Declared Roads.* The total length of declared roads in Queensland at 30th June, 1951 was 20,916 miles, comprising State highways, 7,781 miles; main roads, 10,973 miles; developmental roads, 245 miles; secondary roads, 627 miles; mining access roads, 697 miles; farmers' roads, 290 miles; tourist roads, 301 miles; tourist tracks, 2 miles. During 1950-51, 309 miles were added to the list. The length of roads improved in Queensland from the date of commencement of work under the Main Roads Acts 1920-1943 to 30th June, 1951 was 10,446 miles (50 per cent.). At that date, also, 1,152 miles of new road construction and 931 miles of stage construction work were proceeding.

(b) *Composition of Roads.* The total length of roads and streets in Queensland at 30th June, 1951 was:—Concrete, 83 miles; bitumen, 4,326 miles; macadam, 9,430 miles; other formed, 44,102 miles; unconstructed, 73,895 miles; total, 131,836 miles.

(iii) *Main Roads Commission.* (a) *General.* During 1950-51 the Commission completed 506 miles of roads including new construction and stage construction. Bridges of all types to a length of 1,964 linear feet were constructed, bringing the total

constructed by the Commission at 30th June, 1951 to 153,337 feet. In addition, at 30th June, 1951, 1,152 feet were under construction. These figures exclude particulars of the Fitzroy River and Burdekin River bridges which are special projects.

The first of these projects is a joint operation being carried out by the Main Roads Commission and the Rockhampton City Council. The design provides for a bridge 1,210 feet long, at an original estimated cost, including approaches, of approximately £426,000, one half being financed under the terms of the Main Roads Act. The total expenditure to 30th June, 1951 was £454,159. The second project is a combined road and rail bridge over the Burdekin River, with an overall length, including approaches, of 3,620 feet, estimated to cost about £1,900,000. During 1950-51, construction was again seriously impeded by heavy rains and floods; this affected costs which at the end of the financial year totalled approximately £918,000.

(b) *Receipts and Payments.* The funds of the Main Roads Commission are obtained chiefly from motor vehicle registration and collections, fees, etc., under the Transport Acts, contributions under the Commonwealth Aid Roads and Works Acts, and loans, grants and advances from the State Government. The total receipts and payments, including amounts for defence works, during each of the years 1938-39 and 1947-48 to 1950-51 are shown below:—

MAIN ROADS COMMISSION, QUEENSLAND : RECEIPTS AND PAYMENTS.

(£.)

Item.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.
<b>RECEIPTS.</b>					
Motor Vehicle Registration, Transport Acts Collections, Fees, etc.	938,227	967,817	1,056,813	1,165,888	1,936,656
Loans from State Government ..	392,225	300,000	600,000	700,000	587,500
Grants, Advances, Refunds, etc. from State Government ..	579,775	590,708	687,630	594,471	553,768
Commonwealth Aid Roads and Works Acts ..	806,218	1,088,756	1,331,863	1,693,567	2,458,763
Maintenance Repayments—Local Authorities ..	98,154	189,010	184,853	258,673	258,709
Hire, Rent, Sales of Plant, etc. ..	288,330	58,169	65,320	81,169	84,840
Other ..		114,317	96,657	125,469	130,999
<b>Total ..</b>	<b>3,102,929</b>	<b>3,308,777</b>	<b>4,023,136</b>	<b>4,619,237</b>	<b>6,011,235</b>
<b>PAYMENTS.</b>					
Permanent Road Works and Surveys ..	2,045,900	1,972,304	1,719,632	2,146,692	2,943,923
Maintenance of Roads ..	331,734	1,066,543	986,667	1,063,255	1,434,319
Port Development Works ..	..	4,885	..	..	..
Plant, Machinery, Buildings, etc. (including Plant Maintenance)	73,632	509,203	350,679	402,744	576,845
Loans—Interest ..	38,861	178,518	182,377	189,836	200,258
Redemption ..	78,153	165,553	169,447	183,406	201,151
Payments to State Consolidated Revenue ..	340,244	..	..	..	..
Payments to Local Authorities ..	27,418	..	1,807	1,769	1,625
Commonwealth and Allied Works and Services ..	..	16,943	32,930	12,313	..
Other Works and Services ..	..	654	19,516	4,000	22,293
Administration, etc. ..	149,950	342,768	417,733	458,730	505,544
Other ..	1,750	19,560	16,178	25,173	..
<b>Total ..</b>	<b>3,087,642</b>	<b>4,243,045</b>	<b>3,896,966</b>	<b>4,487,918</b>	<b>5,885,958</b>

5. **South Australia.**—(i) *General.* The Highways Act 1926–1949 created a Commissioner of Highways and provided for a Highways Fund. The Commissioner is virtually empowered to determine upon which main roads he will spend the moneys available; in doing which he has to take into account the availability of funds for main roads, the service the road is intended to render, and the present or future adequacy of railway facilities in the area through which it passes.

The Highways Fund is credited with the receipts from State motor taxation, fees, fines and licences, after deduction of the costs of collection, and all loans raised and appropriated for roads. All moneys received by the State from the Commonwealth under the Commonwealth Aid Roads and Works Acts are also expended by the Commissioner of Highways under the general provisions of the Highways Act.

(ii) *Length of Roads.* The total length of roads in use for general traffic at 30th June, 1948 (the latest date for which this information is available), was as follows:—Within District Council and Corporation Boundaries.—Blocks (wood or stone), 8 miles; bituminous concrete (asphalt and premix), 393 miles; cement concrete and cement penetration, 2 miles; penetration or surface dressed (bitumen or tar), 4,283 miles; metalled (gravelled or rubble), 13,429 miles; formed, but little or no metal, 8,742 miles; surveyed, used by traffic, but little or no improvement, 25,220 miles; total, 52,077 miles; Outside Districts (main roads only), 565 miles; Grand total, 52,642 miles. Lengths of main roads within district council and corporation boundaries aggregated 7,556 miles.

(iii) *State Highways and Local Government Department.* (a) *General.* The Department's programme for the acquisition of land for road improvement in the metropolitan and rural areas was continued during 1950–51 when approximately 23,000 linear feet of frontages in the metropolitan area were acquired and set back. This brought the total acquisition since the inception of the metropolitan widening scheme to 64,000 linear feet. In rural areas the policy of widening roads and improving the alignments was continued in order to provide for an expected future increase in the volume of traffic.

Construction and reconstruction works on main roads were carried out in the following areas:—Northern and Eyre Peninsula, Mid-Northern, Central, Metropolitan, Murray Lands, Upper South-Eastern and Lower South-Eastern. In other areas local authorities carried out the works under departmental supervision.

(b) *Receipts and Payments.* The following table shows particulars of receipts and payments, during the years 1938–39 and 1947–48 to 1950–51, of funds controlled by the Highways and Local Government Department. Wholly comparable figures for 1938–39 are not available.

**HIGHWAYS AND LOCAL GOVERNMENT DEPARTMENT, SOUTH AUSTRALIA :  
RECEIPTS AND PAYMENTS.**

(£.)

Item.	1938–39. (a)	1947–48.	1948–49.	1949–50.	1950–51.
<b>RECEIPTS.</b>					
Motor Vehicle Registration, Licences, Fees, Fines, etc. ..	690,849	718,951	1,010,539	1,144,454	1,286,677
Commonwealth Aid Roads and Works Acts .. .. .	479,922	637,520	769,807	1,009,574	1,448,845
Loans from State Government ..	200,000	100,000	..	..	100,000
Recoups—Local and Semi- governmental Authorities ..	1,531	19,779	11,642	4,646	33,398
Other .. .. .		32,434	68,261	115,386	149,013
<b>Total .. .. .</b>	<b>1,372,302</b>	<b>1,508,684</b>	<b>1,860,249</b>	<b>2,274,060</b>	<b>3,017,933</b>



HIGHWAYS AND LOCAL GOVERNMENT DEPARTMENT, SOUTH AUSTRALIA: RECEIPTS AND PAYMENTS—*continued.*

(£.)

Item.	1938-39. (a)	1947-48.	1948-49.	1949-50.	1950-51.
PAYMENTS.					
Construction and Reconstruction of Roads and Bridges	61,150,082	524,507	606,615	1,018,157	1,142,010
Maintenance .. .. .		168,003	221,730	298,550	384,939
Recoups to Consolidated Revenue Fund—Interest, Sinking Fund and Exchange .. .. .	(c)178,273	167,376	158,803	141,783	139,796
Grants and Advances to Local and Semi-governmental Authorities Administration .. .. .	(d)	621,553	670,686	750,043	646,903
Stores, Plant, Machinery, Suspense Accounts, etc. . . . .	45,753	69,848	90,810	100,938	141,614
Other .. .. .		145,179	120,155	198,148	175,063
		3,951	2,261	12,960	18,126
Total .. .. .	1,374,108	1,700,417	1,871,060	2,520,579	2,648,451

(a) Figures for 1938-39 are not completely comparable with those for following years. (b) Roads, plant, etc. (c) Interest and sinking fund payments. (d) Not separately available; included elsewhere.

The total expenditure, both revenue and loan, by State and local governments on roads, streets and bridges in South Australia during the years 1938-39 and 1947-48 to 1950-51 was, respectively, £1,966,000, £2,341,000, £2,605,000, £3,166,000 and £3,384,000.

6. Western Australia.—(i) *General.* Under the Main Roads Act 1930-1939 the Main Roads Board previously existing was abolished and a Commissioner of Main Roads was appointed. His duties relate to the determination of main roads after consideration of the funds available and the services to be rendered by the roads, the declaration and provision of developmental roads, the construction and maintenance of main roads, and the carrying out of surveys, investigations and experiments connected with roads and road materials. The Act authorizes two trust accounts (Main Roads Trust Account and Main Roads Contribution Trust Account) to record the moneys prescribed as available to the Commissioner for expenditure associated with roads, etc. In addition, the Commissioner operates on those Trust Accounts which are used for funds made available under the Commonwealth Aid Roads and Works Acts.

(ii) *Length of Roads and Streets.* The total known lengths of roads and streets in existence in the various municipalities at 31st October, 1951 and in road districts at 30th June, 1951, were as follows:—Bituminous, 3,966 miles; gravel water-bound, 9,912 miles; other constructed surfaces, 3,833 miles; formed only, 28,680 miles; unprepared, 30,317 miles (incomplete); total 76,708 miles.

The lengths of declared roads at 30th June, 1951, were:—Main roads, 3,154 miles; developmental roads, 13,749 miles; other classified roads, 24 miles; total, 16,927 miles. No new main roads were declared during the year 1950-51.

(iii) *Main Roads Department.* During the year 1950-51 the activities of the Department included:—clearing, 1,174 miles; forming, 1,423 miles; gravelling, 799 miles; metalling, 5 miles; reconditioning, 2,291 miles; sanding, 94 miles; side drains, 101 miles. In addition, lengths of tar and bitumen work performed aggregated 258 miles. Bridges constructed numbered 25. Work progressed on the causeway over the Swan River which involves the construction of two bridges. The expenditure during the year on this structure was £196,510. At the eastern end the pier system was completed and the pile foundation system for the piers was laid at the western end of the bridge. Construction of the Marble Bar-Port Hedland and the Wyndham-Ord River-Nicholson Roads was continued during 1950-51.

(iv) *Receipts and Payments—Combined Road Funds.* The following table shows the combined transactions of the Main Roads Trust Account, the Main Roads Contributions Trust Account, the Metropolitan Traffic Trust Account, the Transport Co-ordination Trust Account in 1938-39 and the Commonwealth Aid Roads and Works Trust Accounts during the years ended 30th June, 1939 and 1948 to 1951.

## ROAD FUNDS, WESTERN AUSTRALIA : RECEIPTS AND PAYMENTS.

(£.)

Item.	1938-39. (a)	1947-48. (b)	1948-49. (b)	1949-50. (b)	1950-51. (b)
<b>RECEIPTS.</b>					
Motor Vehicle Registration, Licences, Fees, Fines, etc. . .	218,962	354,946	303,838	346,246	394,887
Commonwealth Aid Roads and Works Acts . . . . .	823,162	1,098,758	1,404,448	1,740,482	2,476,903
Recoups from Local Authorities, etc. . . . .	} 1,958	{ 15,529	18,810	110,370	82,467
Other . . . . .					
Total . . . . .	1,044,082	1,520,548	1,727,102	2,197,127	2,956,653
<b>PAYMENTS.</b>					
Construction and Reconstruction of Roads and Bridges . . . . .	} 922,756	{ 1,014,916	1,256,351	1,507,873	2,203,645
Maintenance . . . . .					
Grants to Local Authorities, etc. . .	143,544	142,000	220,246	230,492	243,492
Transfer to State Consolidated Revenue . . . . .	..	67,003	59,234	67,711	76,337
Interest, Sinking Fund and Exchange—State Consolidated Revenue . . . . .	7,616	7,391	5,555	8,842	7,396
Administration, Plant, etc. . . . .	52,176	36,469	31,178	38,380	41,951
Other . . . . .	19,181	..	..	..	..
Total . . . . .	1,145,273	1,377,715	1,709,625	1,986,772	2,753,817

(a) Figures not completely comparable with those for following years. (b) Excludes Transport Co-ordination Trust Account.

7. *Tasmania.*—(i) *General.* Under the Transport Act 1938, which came into operation on 1st July, 1939, the Transport Commission was constituted to co-ordinate, regulate, control, and improve the means of, and facilities for, transport by road, rail or air within the State. Revenues at its disposal for road and motor traffic purposes are the Commonwealth Aid Roads and Works grants, motor vehicle registration fees and tax, and licensing fees for drivers and public motor vehicles. Under the Roads and Jetties Act 1944, which provides for the classification of the whole of the roads of the State so that they will be adequately and efficiently maintained, the cost of maintenance of roads classified as State highways, tourist roads and developmental roads is borne by the Transport Commission. It is also responsible for a proportion of the cost of maintenance of main and secondary roads. Except in special cases, municipal councils bear the cost of maintaining country roads and a proportion of the cost of main and secondary roads. The cost of construction of roads and bridges in Tasmania is borne almost entirely by the State Government. The expenditure of the Public Works Department (the construction and maintenance authority for the Transport Commission) during 1950-51 on roads, tracks and bridges amounted to £1,191,154, of which £824,853 was charged to road funds, £46,175 to revenue, £320,000 to loan and £126 to Crown lands funds. The principal construction work carried out during 1950-51 consisted of reconstruction work on the Bass Highway, the Sheffield main road and the Northern Outlet Road.

As from 1st July, 1951 certain functions with respect to the construction and maintenance of roads and the vesting and control of certain plant were transferred from the Transport Commission to the Minister for Lands and Works. The existing Road Account and Commonwealth Aid Roads and Works Account in the books of the Transport Commission were closed and a new Fund—the State Highways Trust Fund—was opened in the Treasury books.

(ii) *Length of Roads.* (a) *Classified Roads.* The mileages of classified roads in Tasmania at 30th June, 1951 were as follows:—State highways, 1,165 miles; main roads, 660 miles; secondary roads, 189 miles; tourist roads, 46 miles; developmental roads, 49 miles; subsidized roads, 78 miles; total 2,187 miles. Country roads totalled more than 10,000 miles. The mileages of sealed roads, and their proportions to the respective totals, were:—State highways, 550 miles (47 per cent.); main roads, 154 miles (23 per cent.); secondary roads, 10 miles (5 per cent.); total, 714 miles (33 per cent. of all classified roads, and 6 per cent. of all roads, in Tasmania).

(b) *Composition of Roads.* The length of all roads in Tasmania, including those with surfaces of lower grade, at 30th June, 1951 was as follows:—Sheet asphalt on concrete base, 1 mile; other bituminous, 914 miles; concrete, 8 miles; granite, limestone, etc., water-bound, 8,559 miles; surfaces of lower grade, 2,787 miles; total, 12,269 miles.

(iii) *Receipts and Payments—Combined Road Funds.* The table hereunder shows particulars of the receipts and payments of combined Road Funds and Commonwealth Aid Roads and Works Funds under the control of the Transport Commission for the years 1939-40 and 1947-48 to 1950-51:—

## ROAD FUNDS, TASMANIA : RECEIPTS AND PAYMENTS.

(£.)

Item.	1939-40. (a)	1947-48.	1948-49.	1949-50.	1950-51.
RECEIPTS.					
Motor Vehicle Taxation and Registration, Licences, Fees, Fines, etc. . . . .	193,165	264,780	297,503	327,475	364,708
Commonwealth Aid Roads and Works Acts . . . . .	220,241	286,158	348,733	450,930	640,824
Recoups from Local Authorities, etc. . . . .	..	8,660	9,636	8,966	9,176
State Loan Fund . . . . .	..	28,795	66,399	60,689	495,914
Other . . . . .	719	37,470	110,716	(b)417,380	(b)457,578
<b>Total . . . . .</b>	<b>414,125</b>	<b>625,863</b>	<b>832,987</b>	<b>1,265,440</b>	<b>1,968,200</b>
PAYMENTS.					
Construction and Reconstruction of Roads and Bridges . . . . .	130,924	402,774	322,263	219,118	621,905
Maintenance . . . . .	113,199	254,056	270,102	549,241	620,288
Jetties, etc. . . . .	22,467	4,682	10,415	..	..
Other works connected with Transport . . . . .	5,748	13,163	18,060	20,988	29,928
Grants to Local Authorities, etc. . . . .	..	258	325	2,037	4,663
Administration . . . . .	15,053	52,199	55,059	67,726	73,646
Other . . . . .	31,894	54,572	195,394	(c)394,831	(c)610,919
<b>Total . . . . .</b>	<b>319,285</b>	<b>781,704</b>	<b>872,218</b>	<b>1,253,991</b>	<b>1,961,349</b>

(a) First year of operation of Transport Commission. Figures not completely comparable with those for following years. (b) Includes hire of plant—1949-50, £237,899; 1950-51, £400,214. (c) Includes hire and maintenance of road construction plant, etc.—1949-50, £192,619; 1950-51, £360,912.

**S. Summary of Roads used for General Traffic.—(i) Proclaimed or Declared Roads.** The table hereunder is a summary of the roads proclaimed or declared under the Acts of the several States relative to the operations of the central road authorities, and shows the lengths of various classes proclaimed or declared as at 30th June, 1951. These proclaimed or declared roads are those for which the central road authority assumes responsibility under the Act for the whole, or a proportion, of the cost of construction and/or maintenance, the extent varying from State to State and with the class and locality of the roads. Before proclamation of a main road, consideration is given, in general, to the following points:—availability of funds; whether the road is, or will be, within one of several classes of main trunk routes; whether the district is, or will be, sufficiently served by railways. Provision is also made in some States for the declaration of roads other than main. The absence of a particular class from the following data for any State does not necessarily imply that there are no roads within that State that might be so classified; the classes are restricted only to roads proclaimed or declared under the Acts. A further point to make is that, through various causes, e.g. insufficiency of funds, manpower or materials, etc., construction or maintenance may not keep pace with gazettals of mileages, and that therefore the condition of a road may not match its status.

**PROCLAIMED OR DECLARED ROADS : LENGTHS, 30th JUNE, 1951.**  
(Miles.)

Class of Road.	N.S.W.	Vic.	Q'land.	S. Aust. (a)	W. Aust.	Tas.	Total.
State highways .. .. .	6,533	3,850	7,781	} 8,122	3,154	} 1,165 660	} 68,825
Trunk roads .. .. .	4,089	} 9,800	10,973				
Ordinary main roads .. .	12,698						
<b>Total Main Roads</b> .. .. .	<b>23,320</b>	<b>13,650</b>	<b>18,754</b>	<b>8,122</b>	<b>3,154</b>	<b>1,825</b>	<b>68,825</b>
Secondary roads .. .. .	59	..	627	..	..	189	875
Developmental roads .. .. .	2,859	..	245	..	13,749	49	16,902
Tourist roads .. .. .	..	432	301	..	..	46	779
Other roads .. .. .	..	(b) 375	(c) 989	..	24	(d) 78	1,466
<b>Total Other Roads</b> .. .. .	<b>2,918</b>	<b>807</b>	<b>2,162</b>	<b>..</b>	<b>13,773</b>	<b>362</b>	<b>20,022</b>
<b>Grand Total</b> .. .. .	<b>26,238</b>	<b>14,457</b>	<b>20,916</b>	<b>8,122</b>	<b>16,927</b>	<b>2,187</b>	<b>88,847</b>

(a) At 30th June, 1948. (b) Forest roads. (c) Includes mining access roads, 697 miles; farmers' roads, 290 miles; tourist tracks, 2 miles. (d) Subsidized roads.

(ii) *Composition of Roads.* The following table represents an attempt to classify all the roads used for general traffic in Australia, at the latest dates available, according to States and Territories and to certain broad composition groups. The results are not entirely satisfactory, (i) because it is doubtful whether the whole of Australia is covered, (ii) because the dates of reference differ, and (iii) because the figures constituting each group are not wholly comparable for the States and Territories. It is hoped, however, despite these defects, that the table will provide an approximate and general idea of the main types of roads in Australia.

The data in the table for the States are obtained from the State Government Statisticians, and are derived mainly from local government sources. Unincorporated areas in some States are probably excluded and the figures on the returns supplied by the local government authorities are in some cases of doubtful accuracy. Details of the composition of roads, as far as they are available, vary to such an extent that it was considered preferable to show here only major divisions.

Groups 1-4 as shown in the table include, respectively, the following types of composition :—

1. *Wood or Stone.* Wood blocks ; stone paved.
2. *Concrete.* Cement concrete ; asphaltic concrete ; bituminous concrete ; sheet asphalt on concrete base.
3. *Bituminous.* Tar or bituminous macadam ; tar and bituminous surface seal ; surfaced water-bound macadam or gravel ; bituminous or cement penetration.
4. *Macadam and Other.* Water-bound macadam ; granite, limestone, and blast-furnace slag, water-bound ; gravel water-bound ; gravel or crushed rock ; metallised (gravel or rubble) ; gravel, sand and hard loam pavements.

Groups 5 and 6 include roads so-called mainly because they are used for general traffic, irrespective of their surfaces, prepared or otherwise.

It will be noticed that some of the terms used above are practically synonymous. Such terms are, of course, not used by any one State, but are the classifications adopted by different States.

For details of any particular State, see the respective paragraphs in the preceding pages.

**ALL ROADS USED FOR GENERAL TRAFFIC : LENGTHS.**  
(Miles.)

Composition of Road.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Terr.	A.C.T.	Total.
	1951.	30th Sept., 1948.	30th June, 1951.	30th June, 1948.	1951. (a)	30th June, 1951.	31st Mar., 1952.	30th June, 1951.	
1. Wood or stone ..	..	62	..	8	..	..	..	..	70
2. Concrete ..	587	352	83	395	..	9	..	3	1,429
3. Bituminous ..	8,866	10,241	4,326	4,283	3,966	914	1,266	143	34,005
4. Macadam and other ..	37,144	28,418	9,430	13,429	13,745	8,559	145	121	110,991
5. Formed only ..	27,390	23,901	44,102	9,307	28,680	(b) 994	8,207	203	142,784
6. Cleared, or natural surface, only ..	52,637	38,437	73,895	25,220	30,317	(b) 1,793	1,092	..	223,391
<b>Total ..</b>	<b>126,624</b>	<b>101,411</b>	<b>131,836</b>	<b>52,642</b>	<b>76,708</b>	<b>12,269</b>	<b>10,710</b>	<b>470</b>	<b>512,670</b>

(a) Municipalities, 31st October and Road Districts, 30th June.

(b) Estimated dissection.

It will be seen from the foregoing table that a little more than one-quarter of the road lengths of Australia has actually been constructed, the remainder, for the greater part, being in little more than the natural state. The percentages for each group are as follows :—Group 1, 0.01 ; Group 2, 0.28 ; Group 3, 6.63 ; Group 4, 21.65 ; Group 5, 27.86 ; Group 6, 43.57. The percentage of constructed lengths to total length in each State is as follows :—New South Wales, 37 ; Victoria, 39 ; Queensland, 10 ; South Australia, 34 ; Western Australia, 23 ; Tasmania, 77 ; Northern Territory, 13 ; Australian Capital Territory, 57. Comparisons between the States should be made with caution, however, because, in addition to the defects enumerated at the beginning of this section, factors such as the area, physiography, density and distribution of population, nature of economic activity, other facilities for transport, etc., in each State must be taken into account.

9. **Summary of Expenditure on Roads and Bridges.**—(i) *General.* Figures showing the total expenditure on roads and bridges in all States are not available. Such totals are very difficult to obtain, not only because of the number of States, but also because of the number of authorities concerned. In most States there are three classes of authorities—the State Government, the central road authority, and the numerous local

government bodies. Both State Government and local government bodies operate through revenue and loan funds, and payments may be made by the State Government direct from either fund, or through the funds of other authorities. The expenditure of the central road authority may also be direct or indirect. Consequently the problem of duplication caused by inter-fund payments arises. On the other hand, some expenditure may be omitted because separate particulars are not available. Ignorance of the precise nature of items may cause either incorrect inclusion or omission. To produce accurate figures would entail more research than at present can be undertaken.

The two paragraphs following therefore represent only: (a) aggregate expenditure from the various State road funds referred to in the foregoing pages, and (b) loan fund expenditure by State Governments. No direct expenditure by local government bodies is included. Paragraph 2. Finances, of § 2, Local Government Authorities, contains some particulars of local government revenue and expenditure in connexion with roads, streets and bridges (see pages 563 and 566).

(ii) *Aggregate Expenditure from State Road Funds.* The following table shows the expenditure on the construction and maintenance of roads, including payments to local government bodies, by each State during the years 1938-39 and 1946-47 to 1950-51, as summarized from the foregoing sections. Expenditure on administration, debt charges, Commonwealth defence works, payments to State consolidated revenues, and on plant and materials is not included. In some instances expenditure on works other than roads and bridges is included. Figures are not completely comparable as between States, and, in some States, as from year to year.

**ROADS AND BRIDGES : AGGREGATE EXPENDITURE FROM ROAD FUNDS.**  
( £'000.)

Year ended 30th June—	N.S.W.(a) (b)	Victoria.(b)	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
1939 ..	3,257	2,099	2,405	692	1,067	(c) 272	9,792
1947 ..	3,305	1,976	2,613	851	791	566	10,102
1948 ..	3,886	3,113	3,939	1,314	1,267	675	13,294
1949 ..	4,224	2,601	2,708	1,499	1,614	621	13,267
1950 ..	5,160	3,143	3,212	2,067	1,872	791	16,245
1951 ..	6,063	5,333	4,380	2,174	2,628	1,277	21,855

(a) Excludes Sydney Harbour Bridge.

(b) Excludes Swan Street Bridge.

(c) Year 1939-40.

The foregoing particulars do not represent the total expenditure on roads and bridges in each State. To obtain such information additions must be made on account of (a) State Government expenditure from revenue and loan through Departments or authorities other than the Central Road Authority and (b) local government expenditure from revenue and loan, while, on the other hand, allowances must be made for inter-fund payments (see (i) above.)

(iii) *State Net Loan Expenditure.* In recent years, expenditure from State loan funds on roads and bridges has not been large, and it would appear, also, that a considerable proportion passes through the funds of the central road authorities and is therefore included in the figures of their financial operations in the foregoing sections. Gross loan expenditure by all State Governments during 1950-51 amounted to about £2,000,000, and net expenditure to about £300,000 less. Aggregate net loan expenditure on roads and bridges in each State to 30th June, 1951 amounted to the following approximate sums:—New South Wales, £21,000,000; Victoria, £14,000,000; Queensland, £9,000,000; South Australia, £4,000,000; Western Australia, £3,000,000; Tasmania, £7,000,000; total, £58,000,000.

## § 5. Water Supply, Sewerage and Drainage.

NOTE.—See also Chapter XXVI.—Water Conservation and Irrigation.

1. New South Wales.—(i) *General.* The largest two domestic water supply and sewerage systems are controlled by statutory boards each consisting of a president and a vice-president appointed by the State Government and five members elected by local councils. These are (a) the Metropolitan Water, Sewerage and Drainage Board, which administers the systems in the County of Cumberland, i.e., in Sydney and in the surrounding districts, and, in addition, has jurisdiction over territory extending along the South Coast beyond Wollongong to Lake Illawarra, and (b) the Hunter District Water Board, serving the Newcastle area. At Broken Hill a similar board includes a representative of the mining companies. Other systems, apart from irrigation projects and water storage systems administered by the State Government, are controlled by county, municipal and shire councils.

(ii) *Water Supply—to 30th June, 1951.* (a) *Metropolitan.* The storage reservoirs of the metropolitan system, with a combined available capacity of 125,144 million gallons, drain catchment areas of 376 square miles (Upper Nepean, 347 square miles and Woronora, 29 square miles). Water is drawn also from the Warragamba River, with a catchment of 3,383 square miles. This system is being developed, and building has commenced on a dam to have an overall height of 415 feet (greatest depth of water 340 feet) having a storage capacity of 460,000 million gallons and giving a safe draught of 285 million gallons per day. The existing temporary storage is supplied by a weir 50 feet high with a maximum storage of 579 million gallons. At 30th June, 1951 there were 102 service reservoirs in use with a combined capacity of 542.8 million gallons. Rating for water for 1950–51 was 9½d. in the £1 of assessed annual value and the charge for water measured by meters 1s. 6d. per 1,000 gallons.

(b) *Newcastle.* The water supply is drawn from two sources (1) the Chichester Reservoir, with a storage capacity of about 5,000 million gallons and draining a catchment of 76 square miles, and (2) the Tomago Sandbeds, which extend northerly along the coast towards Port Stephens. Service reservoirs and tanks distributed throughout the Water Supply District have a total storage capacity of 106 million gallons. Water rating for 1950–51 was 1s. 3d. in the £1 on assessed annual value. The price of water to domestic and industrial consumers is 1s. 6d. per 1,000 gallons.

(c) *Water Supplied, etc.* The following tables show, for the Sydney and Newcastle systems, the number of properties, the estimated population supplied, and other details for the years 1938–39 and 1946–47 to 1950–51 :—

## WATER SUPPLY, SYDNEY(a) : SERVICES.

Year.	Improved Properties for which Water Main available.	Estimated Population Supplied.	Average Daily Consumption.	Total Consumption for the Year.	Average Daily Consumption.		Length of Mains.	Number of Meters.
					Per Property.	Per Head of Estimated Population.		
	No.		Mill. gals.	Mill. gals.	Gallons.	Gallons.	Miles.	
1938–39 ..	350,161	1,466,000	106.3	38,790	304	72.5	4,539	126,754
1946–47 ..	387,980	1,718,000	131.2	47,874	338	77.1	4,743	160,169
1947–48 ..	400,615	1,774,000	122.1	44,682	305	69.6	4,817	170,124
1948–49 ..	414,893	1,800,000	131.3	47,925	316	73.5	4,894	182,566
1949–50 ..	428,392	1,870,000	130.8	47,735	305	72.1	4,992	196,121
1950–51 ..	442,913	1,940,000	138.9	50,689	314	71.6	5,114	208,712

(a) Includes part of South Coast.

WATER SUPPLY, NEWCASTLE : SERVICES.

Year.	Pro- perties Supplied.	Esti- mated Popu- lation Supplied.	Average Daily Supply.	Total Supply for Year.	Average Daily Supply.		Length of Mains.
					Per Pro- perty.	Per Head of Esti- mated Popu- lation.	
	No.		Mill. gals.	Mill. gals.	Gallons.	Gallons.	Miles.
1938-39..	48,370	193,480	11.9	4,331	245	61.3	936
1946-47..	56,804	223,656	18.9	6,900	333	83.9	1,134
1947-48..	58,660	231,600	18.5	6,774	316	79.9	1,169
1948-49..	61,215	241,036	19.0	6,951	310	79.0	1,202
1949-50..	63,289	247,992	19.6	7,176	310	79.3	1,215
1950-51..	65,445	261,780	22.3	8,131	340	85.1	1,234

(iii) *Sewerage and Drainage*—to 30th June, 1951. (a) *Metropolitan*. The Sydney sewerage systems consists mainly of outfall systems discharging into the Pacific Ocean. At 30th June, 1951 there were six outfalls and six treatment works, serving a population of 1,380,000 over a length of sewers of 2,951 miles.

Stormwater drainage channels under the Metropolitan Water, Sewerage and Drainage Board's control at the same date were 173 miles long. Sewerage rating for 1950-51 was 9 $\frac{3}{4}$ d. in the £1 of assessed annual value and drainage from  $\frac{1}{4}$ d. to 3d.

(b) *Newcastle*. The main sewerage system of the Newcastle area discharges into the Pacific Ocean at Merewether Gulf. In some of the outlying districts treatment works have been installed.

Sewerage rates for 1950-51 were 1s. 3d. in the £1 of assessed annual value and drainage rates (on certain areas served) 2d. in the £1.

(c) *Particulars of Services*. The following table supplies, for the Sydney system, details of sewerage services and stormwater drains as at 30th June, 1939 and 1947 to 1951.

SEWERAGE AND DRAINAGE, SYDNEY(a) : SERVICES.

At 30th June—	Improved Properties for which Sewer Available.	Estimated Population Served.	Total Sewage Pumped for the Year.	Length of Sewers.	Length of Storm- water Channels.
1939 .. .. .	254,632	1,066,000	8,299	2,561	87
1947 .. .. .	287,098	1,198,000	9,604	2,805	117
1948 .. .. .	291,069	1,263,000	9,894	2,829	129
1949 .. .. .	294,822	1,282,000	10,621	2,855	153
1950 .. .. .	298,996	1,306,000	(b) 12,200	2,899	154
1951 .. .. .	303,508	1,380,000	(b) 14,300	2,951	173

(a) Includes part of South Coast.

(b) Estimated.

At 30th June, 1951, 45,476 premises had been connected to the Hunter District Water Board's sewerage system (Newcastle area). The total length of sewers under the Board's control was 615 miles, and the length of drains over 24 inches diameter was 38 miles.



(iv) *Finances, Sydney and Newcastle Systems.* The following statement shows the debt, revenue and expenditure on account of the services of water supply, sewerage and drainage by the Metropolitan Water, Sewerage and Drainage Board and the Hunter District Water Board during 1950-51.

**WATER SUPPLY, SEWERAGE AND DRAINAGE, SYDNEY(a) AND NEWCASTLE : FINANCES, 1950-51.**

(£.)

Service.	Capital Debt.	Revenue.	Expenditure.				Surplus (+) or Deficit (-).
			Working Expenses. (b)	Interest and Exchange.	Sinking Fund and Loan Repayment.	Total.	
<b>Sydney(a)—</b>							
Water ..	42,540,485	3,397,828	1,673,497	1,416,383	306,377	3,396,257	+ 1,571
Sewerage ..	20,781,381	1,901,041	1,000,551	738,079	161,774	1,900,404	+ 637
Drainage ..	1,028,460	111,818	66,238	35,871	7,401	109,510	+ 2,308
<b>Total ..</b>	<b>64,350,326</b>	<b>5,410,687</b>	<b>2,740,286</b>	<b>2,190,333</b>	<b>475,552</b>	<b>5,406,171</b>	<b>+ 4,516</b>
<b>Newcastle—</b>							
Water ..	5,387,104	503,176	289,035	178,717	35,325	503,077	+ 99
Sewerage ..	2,600,815	245,817	142,989	91,977	16,015	250,981	+ 5,164
Drainage ..	151,593	16,797	10,215	5,181	1,139	16,535	+ 262
<b>Total ..</b>	<b>8,139,512</b>	<b>765,790</b>	<b>442,239</b>	<b>275,875</b>	<b>52,479</b>	<b>770,593</b>	<b>- 4,803</b>

(a) Includes part of South Coast. (b) Includes provision for renewals, long service leave, loss on exchange, etc. (c) Excludes non-interest bearing capital in respect of stormwater drains transferred from Public Works Department—£2,138,207 at 30th June, 1951.

The following table shows the total debt, revenue and expenditure on account of the combined services of water supply, sewerage and drainage by the Metropolitan Water, Sewerage and Drainage Board and the Hunter District Water Board for the years 1938-39 and 1946-47 to 1950-51.

**WATER SUPPLY, SEWERAGE AND DRAINAGE, SYDNEY AND NEWCASTLE : FINANCES.**

(£.)

Year.	Capital Debt.	Revenue.	Expenditure.				Surplus (+) or Deficit (-).
			Working Expenses.	Interest and Exchange.	Sinking Fund and Loan Repayment.	Total.	
<b>SYDNEY.</b>							
1938-39 ..	43,769,741	2,926,694	957,422	1,727,708	241,564	2,926,694	..
1946-47 ..	48,786,655	4,031,572	1,763,014	1,917,607	350,352	4,030,973	+ 599
1947-48 ..	51,185,095	4,198,786	1,847,321	1,962,324	375,936	4,185,581	+ 13,205
1948-49 ..	54,796,901	4,653,312	2,199,159	2,025,395	403,465	4,628,019	+ 25,293
1949-50 ..	59,918,417	5,051,876	2,488,623	2,092,890	435,660	5,017,173	+ 34,703
1950-51 ..	64,350,326	5,410,687	2,740,286	2,190,333	475,552	5,406,171	+ 4,516
<b>NEWCASTLE.</b>							
1938-39 ..	4,574,880	385,732	167,620	188,185	20,886	376,691	+ 9,041
1946-47 ..	7,038,765	548,190	236,132	266,124	41,840	544,096	+ 4,094
1947-48 ..	7,294,868	576,972	257,659	270,529	44,643	572,831	+ 4,141
1948-49 ..	7,529,877	648,869	325,657	277,879	47,811	651,347	+ 2,478
1949-50 ..	7,767,566	695,548	359,508	285,145	50,766	695,419	+ 129
1950-51 ..	8,139,512	765,790	442,239	275,875	52,479	770,593	- 4,803

NOTE.—See footnotes to previous table.

(v) *Country Water Supply and Sewerage Systems.* At 31st December, 1950, country water supply services were conducted or under construction by 67 municipalities, 55 shires and 6 county councils, and country sewerage services by 57 municipalities and 16 shires. The capital indebtedness of these schemes was £9,777,692 at 31st December, 1950, namely, £6,426,228 for water and £3,351,464 for sewerage. Of the foregoing amounts, Government advances amounted to £373,063. Debt of the municipalities amounted to £6,465,903, shires to £1,592,113 and county councils to £1,719,676. Aggregate income and expenditure, respectively, amounted to £1,385,415 and £1,145,501 in 1950.

(vi) *Other Water Supply and Sewerage Systems.* The water supply and sewerage services for Broken Hill are operated by a statutory board, the Broken Hill Water Board. Its capital indebtedness at 31st December, 1951 was £1,590,996. Income and expenditure, respectively, were £139,309 and £194,693 for 1951 and £117,977 and £134,482 for 1950.

The following country water supply systems—South-West Tablelands, Junee and Fish River—are administered by the Department of Public Works. These supply water in bulk to municipalities and shires, the Railways Department, and other large consumers; only a small quantity is sold directly to private consumers. The capital indebtedness of these systems was £2,475,506 at 31st December, 1951.

There are also the Mulwala Water Supply and Sewerage Service constructed as an urgent war-time work for the Commonwealth, and the Bethunga Water Supply System administered by the Department of Public Works in conjunction with the Junee supply.

2. *Victoria.*—(i) *Melbourne and Metropolitan Board of Works—to 30th June, 1951.*

(a) *General.* The metropolis, for water supply, sewerage and drainage and river improvement purposes, comprises all that land within a radius of 13 miles of the Post Office at the corner of Bourke and Elizabeth Streets, Melbourne, and the remaining portions of the Cities of Moorabbin, Mordialloc, and Nunawading and the shire of Mulgrave and certain portions of the remainder of the Shires of Eltham, Doncaster and Templestowe, and Dandenong, but excludes a portion of the Shire of Werribee within such radius. This territory has an area of 450 square miles and comprises 27 cities and one shire and parts of one other city and 9 other shires. The Board comprises 48 members, including the chairman, who is elected every four years by the other members. These members, or commissioners, are from time to time elected by the councils of the municipal districts wholly or partly within the metropolis. The principal functions of the Board are to control and manage the metropolitan water supply system; to provide the metropolis with an efficient system of main and general sewerage; to deal with main drains and main drainage works; and to control and manage the rivers, creeks and watercourses within the metropolis.

(b) *Water Supply.* There are five storage reservoirs serving the metropolitan area—Yan Yean, 7,234 million gallons (available for consumption, 6,605 million gallons); Toorourrong, 60 million gallons; Maroondah, 6,274 million gallons (4,855 million gallons); O'Shannassy, 930 million gallons; Silvan, 8,853 million gallons (8,823 million gallons); total 23,351 millions gallons (21,723 million gallons). Service reservoirs number 25, with a total capacity of 262 million gallons. Two new projects are under construction. One is a 23-mile conduit to carry water from the Upper Yarra catchment to the Silvan Reservoir and its estimated cost is £2,697,000. Up to 30th June, 1951, about 9 miles of the pipe-line had been laid. The other project, approved by the Board in 1946, consists of a dam, 280 feet high, which will impound 40,000 million gallons of water, on the River Yarra, immediately upstream from the confluence of the Yarra and Doctors Creek, and work on the project is proceeding. In 1951 it was estimated to cost £8,600,000.

The water rate levied by the Board in 1950-51 was 7d. in the £1 on the net annual value of the property served, and from 1st July, 1950, the charge for water supplied by measure in excess of the quantity which, at 1s. per 1,000 gallons, would produce an amount equal to the water rate payable on the property, was increased from 1s. to 1s. 3d. The following table shows particulars of Melbourne metropolitan water supply services for the years 1938-39 and 1946-47 to 1950-51.

## WATER SUPPLY, MELBOURNE : SERVICES.

Year.	Number of Houses Supplied.	Estimated Population Supplied.	Average Daily Consumption.	Total Consumption for the Year.	Average Daily Consumption.		Length of Aqueducts, etc., Mains and Reticulation.	Number of Meters.
					Per House.	Per Head of Estimated Population.		
1938-39	285,408	1,133,000	Mill. gals. 66.9	Mill. gals. 24,408	Gallons. 234	Gallons. 59.0	Miles. 3,234	189,617
1946-47	312,735	1,242,000	87.9	32,092	281	70.8	3,594	218,744
1947-48	320,798	1,275,000	91.9	33,651	287	72.1	3,691	220,992
1948-49	328,843	1,307,000	93.9	34,280	286	71.9	3,771	224,352
1949-50	342,742	1,363,000	91.7	33,458	267	67.3	3,875	229,238
1950-51	354,415	1,409,000	102.0	37,225	288	72.4	3,966	236,883

(c) *Sewerage and Drainage.* Particulars of sewerage and drainage services for 1938-39 and 1946-47 to 1950-51 are shown below. The rate levied in 1950-51 in respect of sewerage was 1s. in the £1 on the net annual value of the property served. The drainage rate was 1d. in the £1.

## SEWERAGE AND DRAINAGE, MELBOURNE : SERVICES.

Year.	Number of Houses for which Sewers are Provided.	Estimated Population for which Sewers are Provided.	Average Daily Pumping.	Total Sewage Pumped for the Year.	Average Daily Pumping.		Length of Sewers, etc.	Length of Main Drains.
					Per House.	Per Head of Estimated Population.		
1938-39	269,411	1,070,000	Mill. gals. 48.2	Mill. gals. 17,601	Gallons. 179.0	Gallons. 45.1	Miles. 2,586	Miles. 97
1946-47	294,343	1,169,000	59.1	21,570	200.8	50.6	2,773	117
1947-48	302,433	1,202,000	61.6	22,551	203.8	51.3	2,814	122
1948-49	308,772	1,228,000	62.5	22,801	202.4	50.9	2,844	125
1949-50	320,006	1,272,000	66.4	24,251	207.5	52.2	2,850	126
1950-51	321,548	1,278,000	67.1	24,491	208.7	52.5	2,927	128

The metropolitan sewerage system consists of the Main system (serving an area of 67,433 acres) and three subsidiary systems—the Sunshine system (serving an area of 941 acres in the Shire of Braybrook, including the township of Sunshine), the Kew system (serving an area of 103 acres in Kew) and the South-eastern system (serving an area of 2,292 acres in Cheltenham, Parkdale, Mentone and Mordialloc). The Metropolitan Sewage Farm, 26,057 acres in extent and situated about 24 miles south-west of Melbourne beyond the township of Werribee, serves to purify and dispose of approximately 95 per cent. of the sewerage flow of the metropolis before its discharge into Port Phillip Bay. The total capital cost (less depreciation) to 30th June, 1951 was £2,080,664. Revenue during 1950-51 amounted to £104,554, cost of sewage disposal £127,929, trading expenses £85,707, interest £75,196, and net cost of sewage purification £184,278. These financial particulars are included in the sewerage items of the summary below.

At 30th June, 1951, the Melbourne and Metropolitan Board of Works had 128 miles of main drains under its control—108 miles of underground, 11 miles of constructed open drains, and 8 miles of natural watercourses and unlined open drains.

(d) *Finances.* The following table provides a summary, for the year 1950-51, of the financial operations of the three services conducted by the Melbourne and Metropolitan Board of Works.

MELBOURNE AND METROPOLITAN BOARD OF WORKS: FINANCES, 1950-51.  
(£.)

Service, etc.	Capital Cost.(a)	Revenue.	Expenditure.				Surplus (+) or Deficit (-).
			Working Expenses.	Interest and Exchange.	Sinking Fund.	Total.	
Water ..	18,692,975	1,580,933	746,608	668,088	..	1,414,696	+ 166,237
Sewerage ..	18,192,997	1,575,752	714,314	681,839	..	1,396,153	+ 179,599
Drainage ..	2,358,058	121,956	37,344	63,269	..	100,613	+ 21,343
General(b)	..	..	284,090	9,000	81,607	374,697	- 374,697
<b>Total</b> ..	<b>39,244,030</b>	<b>3,278,641</b>	<b>1,782,356</b>	<b>1,422,196</b>	<b>81,607</b>	<b>3,286,159</b>	<b>- 7,518</b>

(a) Includes depreciation, £408,031. Total loan indebtedness, £32,642,985. (b) Statutory and general expenditure not distributed over Services.

The following table shows the financial operations of the Melbourne and Metropolitan Board of Works (all services combined) for the years 1938-39 and 1946-47 to 1950-51:—

MELBOURNE AND METROPOLITAN BOARD OF WORKS: FINANCES.

(£.)

Year.	Capital Cost.	Revenue.	Expenditure.				Surplus(+) or Deficit(-).
			Working Expenses.	Interest and Exchange.	Sinking Fund.	Total.	
1938-39 ..	27,598,603	2,214,295	762,558	1,316,603	64,269	2,143,430	+ 70,865
1946-47 ..	31,443,217	2,389,947	1,230,293	1,236,099	65,090	2,531,482	- 141,535
1947-48 ..	32,749,852	2,521,366	1,253,728	1,239,372	67,340	2,560,440	- 39,074
1948-49 ..	34,312,587	2,713,926	1,432,727	1,268,743	69,840	2,771,310	- 57,384
1949-50 ..	36,453,892	2,924,329	1,616,903	1,324,342	73,785	3,015,030	- 90,701
1950-51 ..	39,244,030	3,278,641	1,782,356	1,422,196	81,607	3,286,159	- 7,518

(ii) *Geelong Waterworks and Sewerage Trust.* (a) *General.* The Geelong Waterworks and Sewerage Trust was constituted in 1908 and reconstituted under the Geelong Waterworks and Sewerage Act in 1910. It was further reconstituted in September, 1950 to include a Government nominee (Chairman) and provision was made for a commissioner to be elected by the ratepayers of the Shire of Corio, making a total of seven commissioners instead of five as formerly. The amount of loan money which may be raised is limited to £900,000 for water supply undertaking, £760,000 for sewerage undertaking, and £270,000 for sewerage installation to properties under the deferred payment system. The population supplied is estimated by the Trust at 60,400. This and other general information relates to 30th June, 1951.

(b) *Water Supply.* The catchment area is about 16,900 acres. There are five storage reservoirs and nine service basins whose total storage capacity is 2,746 million gallons. In addition, the State Rivers and Water Supply Commission has made available a supplementary supply of a minimum quantity of 545 million gallons of water per annum from the Bellarine Peninsula System. The total expenditure on water supply to 30th June, 1951 was £888,167. Expenditure for 1950-51 comprised £46,762 on working expenses and £45,508 on interest, sinking fund and reserves, and the revenue for the year 1950-51 was £93,227. The sinking fund appropriations at June, 1951 amounted to £122,727. The replacement and contingencies reserve amounted to £183,354. There is a water rate of 1s. 4d. in the £1 (with minima of 5s. for unbuilt-on land and £1 for tenements) on the net annual value of ratable properties.

(c) *Sewerage Works.* The sewerage scheme consists of a main outfall sewer to the ocean at Black Rock, about 9 miles from Geelong, and 152 miles of main and reticulation sewers. The sewerage area is 9,638 acres, and the number of buildings within the

sewered areas is 14,060 of which 14,058 have been connected. The number of buildings within the drainage area is 14,998. The total expenditure to 30th June, 1951 on sewerage works was £674,242, and on the cost of sewerage installation under deferred payment conditions £258,344, of which £515 was outstanding. The revenue in 1950-51 amounted to £59,926 and the expenditure comprised £22,013 on working expenses and £36,632 on interest, sinking fund and reserves. Sinking fund appropriations at June, 1951 were £108,507. Replacement and contingencies reserve amounted to £155,964. A general rate of 1s. 3d. in the £1 is levied on the net annual value of ratable properties.

(iii) *The Ballarat Water Commission and the Ballarat Sewerage Authority.* (a) *General.* The Ballarat Water Commission was constituted on 1st July, 1880, and the Ballarat Sewerage Authority on 30th November, 1920. The members of the Water Commission constitute the Sewerage Authority. The Commissioners number seven, three (one of whom is chairman) being appointed by the Government, and four being elected by the Council of the City of Ballarat. General and financial information relates to the year ended 31st December, 1951.

(b) *Water Supply.* The Water Supply District embraces an area of about 65 square miles, containing a population of about 50,000. The total storage capacity of the six reservoirs is 2,332 million gallons and the catchment area is 17,545 acres.

The capital cost of construction of the waterworks was £2,034,695 to 31st December, 1951. The liabilities are loans due to the Government, amounting to £1,078,920 at 31st December, 1951. The revenue for the year 1951 was £79,737. Working expenses during 1951 amounted to £32,021 and interest and other charges to £47,038. A rate of 1s. 3d. in the £1 is levied on the net annual value of all ratable properties, with a minimum of 15s. per annum for land on which there is a building or water supply.

(c) *Sewerage.* The Ballarat sewerage district embraces the City of Ballarat and part of the Shire of Ballarat. Work was commenced in 1922 and up to 31st December, 1951 the Authority had constructed a disposals works, an ejector station and more than 100 miles of sewers. The capital cost of sewerage construction works to 31st December, 1951 was £571,204. The method of sewerage disposal is by sedimentation, oxidation and sludge digestion. One hundred and twenty-two sewered areas had been declared as at 31st December, 1951. Assessments in the sewerage district numbered 14,206, while those in sewered areas numbered 11,333. There were 9,741 buildings connected.

The scheme is financed by debenture-issue loans from various financial institutions. The liabilities on account of loans secured for construction at 31st December, 1951 amounted to £457,526, redemption payments at that date totalling £169,963. An expenditure of £157,122 was incurred for house connexions, the whole of which has been redeemed. Revenue during 1951 amounted to £48,829 and expenditure, including £27,288 on interest and redemption, to £47,702.

A general rate of 1s. 5d. in the £1 is levied on the net annual value of all properties within the drainage area.

(iv) *Sewerage Authorities.* At 30th June, 1951, 57 sewerage authorities had been constituted under the provisions of the Sewerage Districts Acts in districts outside the areas under the control of the Melbourne and Metropolitan Board of Works and the Geelong Waterworks and Sewerage Trust, and systems were in operation in 28 districts (including three partly operating) serving a population of 182,400 persons.

In addition, sewerage authorities were constituted in a further 29 districts at this date, but their operations had either been suspended or had not commenced.

(v) *Water Supply in Country Towns and Districts.* Most of the country waterworks are controlled by the State Rivers and Water Supply Commission, but in some instances the control is by waterworks trusts or by municipal corporations.

The waterworks controlled by the State Rivers and Water Supply Commission at 30th June, 1951 included 35 large reservoirs and 238 subsidiary reservoirs and service basins with a total storage capacity of 537,906 million gallons (1,975,780 acre feet). Length of channels was 15,305 miles (irrigation, 4,708 miles, domestic and stock, 8,514 miles, drainage and flood protection, 2,083 miles) and of pipe lines 1,180 miles. The quantity of water delivered to water users during 1950-51 was 684,887 acre feet. The Commission administered 68 rural districts during 1950-51 (28 irrigation districts, 35 waterworks districts, 4 flood protection districts and 1 drainage district), and the reticulated pipe supplies for domestic and industrial purposes in 130 urban districts. In addition, 121 urban districts were administered by waterworks trusts and 15 by local governing bodies. The population served in these groups of urban districts numbered, respectively, 152,320, 248,530 and 85,450 persons. The table below is a summary of the Commission's finances for operations in districts under its control for the years 1938-39 and 1946-47 to 1950-51 :-

STATE RIVERS AND WATER SUPPLY COMMISSION, VICTORIA : FINANCES.(a)  
(£.)

Year.	Total Loan Capital Expenditure to 30th June.	Receipts.	Payments.				Total.
			Operating Expenses.	Interest on Capital Allotted.	Depreciation.	Redemption.	
1938-39 ..	24,223,037	560,680	476,085	145,105	27,553	4,922	653,665
1946-47 ..	27,632,136	919,347	1,084,841	39,961	118,701	1,678	1,245,181
1947-48 ..	29,228,673	1,050,528	1,199,552	39,836	55,303	1,660	1,296,351
1948-49 ..	31,226,345	1,186,313	1,319,291	39,208	60,553	1,089	1,421,041
1949-50 ..	35,941,827	1,433,561	1,519,659	38,117	66,441	3,055	1,627,272
1950-51 ..	41,318,382	1,592,333	1,810,264	37,950	97,425	1,383	1,947,022

(a) Excludes Waterworks and River Improvements Trusts and Local Governing Bodies.

The total loan capital expenditure of waterworks and river improvements trusts and local governing bodies at 30th June, 1951 was £6,496,772, making a grand total of £47,815,154 when added to the figure for works under the control of the Commission. The net loan capital after redemption payments of £1,686,552 was £46,128,602.

The financial operations of the State Rivers and Water Supply Commission form part of Consolidated Revenue Fund; but are included in this section for convenience. The major proportion of the interest payable is borne by the State and is additional to that shown above. The net expenditure borne by the State during 1950-51 was £1,641,456.

3. Queensland.—(i) *Brisbane City Council—to 30th June, 1951.* (a) *General.* This organization conducts the water supply and sewerage systems of the City of Greater Brisbane. Prior to 1928, water and sewerage activities had been controlled by the Metropolitan Water and Sewerage Board, but were then absorbed by the Brisbane City Council, which also supplies, in bulk, the whole of the water used by the City of Ipswich and the Town of Redcliffe.

(b) *Water Supply.* Water storage facilities comprise the following (available capacities are shown in parentheses):—Somerset Reservoir, 32,000 million gallons (32,000 million gallons); Lake Manchester, 5,806 million gallons (5,725 million gallons); Brisbane River, 543 million gallons (484 million gallons); Pure Water Reservoir, Holt's Hill, 8.3 million gallons (8.3 million gallons); Enoggera Reservoir, 1,000 million gallons (631 million gallons); Gold Creek Reservoir, 407 million gallons (400 million gallons). There are eleven service reservoirs with a capacity of approximately 35.9 million gallons. The Somerset reservoir is under the control of Stanley River Works Board and is a

dual purpose project with a designed total holding capacity of 200,000 million gallons, 55,000 million gallons to be for water storage and 145,000 million gallons for flood mitigation. Water rating at 30th June, 1951 was 5d. in the £1 of unimproved capital value for improved properties, and 3d. in the £1 for vacant lands, with a minimum of £3 10s. and £2 6s. 8d. respectively. The following table is a summary of operations of the complete Brisbane City Council system (metropolitan area, Ipswich and Redcliffe) for the years 1938-39 and 1946-47 to 1950-51 :—

## WATER SUPPLY, BRISBANE(a) : SERVICES.

Year.	Services Connected.	Estimated Population Supplied.	Average Daily Consumption.	Total Consumption for the Year.	Average Daily Consumption.		Length of Trunk and Reticulation Mains.	Number of Meters.
					Per Service.	Per Head of Estimated Population.		
1938-39	No. 81,389	345,903	Mill. gals. 15.9	Mill. gals. 5,791	Gallons. 195	Gallons. 45.9	Miles. 1,169	(b)
1946-47	98,803	405,093	22.8	8,317	231	56.3	1,299	52,645
1947-48	103,846	425,769	22.9	8,365	220	53.7	1,330	52,699
1948-49	108,671	445,551	24.2	8,326	223	54.3	1,344	52,755
1949-50	111,363	445,897	26.1	9,540	235	58.6	1,376	52,807
1950-51	117,904	472,145	27.9	10,193	237	60.8	1,429	52,691

(a) Includes Ipswich and Redcliffe.

(b) Not available.

(c) *Sewerage.* The sewage treatment works are situated at Luggage Point on the north bank at the entrance to the Brisbane River. The treatment plan is the activated sludge system, but this has not been put into operation, and since the commencement of pumping operations in 1923 a sedimentation plant only has been used. Sewerage rating at 30th June, 1951 was 4½d. in the £1 of unimproved capital value for improved properties, and 3½d. in the £1 for vacant lands, with a minimum of £3 15s. and £3 5s. respectively. The following table is a summary of operations of the Brisbane sewerage scheme for the years 1938-39 and 1946-47 to 1950-51 :—

## SEWERAGE, BRISBANE : SERVICES.

Year.	Premises Connected.	Estimated Population Served.	Total Sewage Pumped for the Year.	Length of Main, Branch, Reticulation, etc., Sewers.
1938-39	No. 33,248	149,616	Mill. gals. (a)	Miles. 484
1946-47	42,246	173,209	4,539	549
1947-48	43,485	178,289	4,696	567
1948-49	44,901	184,094	4,697	580
1949-50	46,330	189,953	4,967	590
1950-51	47,808	196,013	5,351	608

(a) Not available.

(d) *Finances.* The following table shows particulars of the finances of the water supply and sewerage undertakings of the Brisbane City Council for the years 1938-39 and 1946-47 to 1950-51:—

## WATER SUPPLY AND SEWERAGE, BRISBANE: FINANCES.

(£.)

Service and Year.	Gross Capital Cost.	Revenue.	Expenditure.			Surplus(+) or Deficit(-).
			Working Expenses.	Interest Redemption, etc. Charges.	Total.	
<i>Water Supply—</i>						
1938-39 .. ..	4,849,732	606,244	129,219	280,827	422,366	+ 183,878
1946-47 .. ..	6,906,676	744,989	225,343	315,595	596,948	+ 148,041
1947-48 .. ..	7,156,116	765,936	255,430	335,307	633,982	+ 131,954
1948-49 .. ..	7,356,335	815,673	307,130	338,963	703,092	+ 112,581
1949-50 .. ..	7,579,798	866,366	353,805	276,796	700,237	+ 166,129
1950-51 .. ..	8,116,654	926,954	383,700	333,210	805,903	+ 121,051
<i>Sewerage—</i>						
1938-39 .. ..	5,992,936	240,963	52,792	493,386	485,974	- 245,011
1946-47 .. ..	6,763,448	234,032	57,600	224,194	312,152	- 78,120
1947-48 .. ..	7,048,086	254,777	63,998	246,983	343,259	- 88,482
1948-49 .. ..	7,526,302	285,194	76,098	248,341	346,120	- 60,926
1949-50 .. ..	8,117,835	412,833	87,100	264,972	379,299	+ 33,534
1950-51 .. ..	8,821,671	483,854	105,928	313,308	472,725	+ 11,129

(ii) *Country Towns.* (a) *Water Supply.* In addition to the City of Brisbane there were, at 30th June, 1951, 97 cities and towns in Queensland provided with water supply systems controlled by municipal and shire councils.

(b) *Sewerage Systems.* At 30th June, 1951, there were 13 cities and towns outside the metropolitan area—Bundaberg, Charleville, Cunnamulla, Goondiwindi, Hughenden, Ipswich, Mackay, Maryborough, Quilpie, Rockhampton, Toowoomba, Townsville and Warwick—with sewerage systems. A sewerage system was in course of construction in Mt. Isa.

(c) *Finances.* The receipts (other than loan) of water undertakings controlled by the cities and towns referred to above amounted to £731,289 in 1950-51. Expenditure amounted to £761,289, including £246,073 for debt charges. In addition, loan expenditure amounted to £488,702.

Finances of sewerage undertakings are incorporated in council general funds and are not available separately.

4. *South Australia.*—(i) *General.* The water supply and sewerage systems in this State were constructed and are maintained by the Engineering and Water Supply Department under the control of the Minister of Works. The works controlled comprise the Adelaide, Barossa, Baroota Creek, Beetaloo, Bundaleer, Tod River, Warren and other country water districts systems, the Morgan-Whyalla water supply system, the Adelaide metropolitan sewerage system, the Murray River Weirs, water conservation, and the Metropolitan Flood Waters Scheme.



(ii) *South Australian Waterworks. (a) Services.* The table hereunder shows particulars of the area, capacity, etc. of combined metropolitan and country waterworks for the years 1938-39 and 1946-47 to 1950-51 :—

**WATERWORKS, SOUTH AUSTRALIA : SERVICES.**

Year.	Assessments.(a)		Area of Districts Supplied. (a)	Capacity of Reservoirs, Tanks, etc.	Length of Mains.	Number of Meters.
	Number.	Annual Value.				
1938-39 ..	185,625	£ 6,302,445	Acres. 11,857,968	Mill. gals. 23,814	Miles. 6,384	97,074
1946-47 ..	198,952	7,190,146	11,932,461	23,920	6,927	103,514
1947-48 ..	203,422	7,405,970	11,953,022	23,927	6,997	104,726
1948-49 ..	206,904	7,694,428	11,953,235	23,941	7,056	104,649
1949-50 ..	210,808	8,113,905	11,956,885	23,942	7,125	107,092
1950-51 ..	216,989	8,556,078	11,968,452	23,943	7,203	109,433

(a) Excludes Morgan-Whyalla Water Supply—water sold by measure.

(b) *Finances.* Figures for 1938-39 and 1946-47 to 1950-51 are shown in the following table.

**WATERWORKS, SOUTH AUSTRALIA : FINANCES.**

(£.)

Year.	Invested Capital.	Revenue.	Expenditure.			Surplus (+) or Deficit (-).
			Working Expenses.	Interest and Sinking Fund.	Total.	
1938-39 ..	14,649,052	654,688	242,528	651,972	894,500	— 239,812
1946-47 ..	19,577,522	856,733	542,203	676,604	1,218,807	— 362,074
1947-48 ..	20,229,154	935,693	588,703	680,550	1,269,253	— 333,560
1948-49 ..	20,399,213	978,339	670,447	695,547	1,365,994	— 387,655
1949-50 ..	21,247,004	1,016,078	817,696	705,700	1,523,396	— 507,318
1950-51 ..	22,602,531	1,098,360	1,068,102	720,250	1,788,352	— 689,992

(iii) *Adelaide Waterworks.* At 30th June, 1951 the Adelaide waterworks supplied a district of 144,402 acres. The capacity of its five reservoirs was 14,466 million gallons and there were 1,682 miles of mains.

Two major projects are in hand—(i) the construction of a large reservoir on the South Para River to provide additional storage to serve the lower northern areas of the State and to make some additional provision for the metropolitan area, and (ii) bringing River Murray water into Adelaide to supplement the metropolitan and Warren system areas and to serve country areas en route. The capacity of the new reservoir will be about 10,000 million gallons and the pipeline from the Murray near Mannum will deliver about 12,000 million gallons per annum.

Particulars of finances for the years 1938-39 and 1946-47 to 1950-51 are shown below :—

**ADELAIDE WATERWORKS : FINANCES.**

(£.)

Year.	Invested Capital.	Revenue.	Expenditure.			Surplus (+) or Deficit (-).
			Working Expenses.	Interest and Sinking Fund.	Total.	
1938-39 ..	4,676,110	446,459	111,347	202,279	313,626	+ 132,833
1946-47 ..	6,018,680	521,962	209,107	200,105	409,212	+ 112,750
1947-48 ..	6,253,146	574,687	211,450	203,510	414,960	+ 159,727
1948-49 ..	6,248,465	607,718	246,951	210,898	457,849	+ 149,869
1949-50 ..	6,665,805	630,765	310,382	218,737	529,119	+ 101,646
1950-51 ..	7,814,093	680,275	400,600	230,821	631,421	+ 48,854

(iv) *Adelaide Metropolitan Sewerage.* The Adelaide metropolitan sewerage system, comprising the Adelaide, Glenelg and Port Adelaide areas, with drainage areas of 94 square miles in all, includes a sewage farm, and treatment works at Glenelg and Port Adelaide. The total quantity of sewage pumped by the various stations was 3,272 million gallons during 1950-51 as compared with 2,713 million gallons during 1949-50. Other particulars for 1938-39 and 1946-47 to 1950-51 are shown hereunder :—

**ADELAIDE METROPOLITAN SEWERAGE : SUMMARY.**

Year.	Length of Sewers.	Number of Con-nexions.	Invested Capital.	Revenue.	Expenditure.			Surplus (+) or Deficit (-).
					Working Expenses.	Interest and Sinking Fund.	Total.	
	Miles.		£	£	£	£	£	£
1938-39 ..	923	80,745	3,361,034	268,880	77,023	150,273	227,296	+ 41,584
1946-47 ..	1,008	93,440	4,034,770	307,215	135,868	144,702	280,570	+ 26,645
1947-48 ..	1,025	96,057	4,176,725	319,078	159,509	145,732	305,241	+ 13,837
1948-49 ..	1,048	98,948	4,324,787	333,572	182,874	148,754	331,628	+ 1,944
1949-50 ..	1,092	102,782	4,629,510	352,631	209,410	154,959	364,369	- 11,738
1950-51 ..	1,133	107,634	4,855,351	371,835	255,009	160,253	415,262	- 43,427

(v) *Country Water Supply.* Water district systems outside Adelaide at 30th June, 1951 comprised an area of 11,812,939 acres, and the capacity of the reservoirs was 9,433 million gallons. These figures exclude the Morgan-Whyalla supply system, which obtains its water from the River Murray. The storage tanks of this system had a capacity of 44 million gallons.

Construction work is proceeding on the scheme for the augmentation of the Tod River District supplies, and for the supply of other areas not already served, by utilizing water from the Uley-Wanilla sub-artesian basin. During 1950-51, 347 million gallons were pumped from the basin, meeting all the needs of Port Lincoln and augmenting the reservoir. At 30th June, 1951, £4,153,260 had been invested in the Tod River District.

At the request of the Commonwealth, the Engineering and Water Supply Department undertook the construction above ground of a 10-in. pipeline, together with service reservoirs, pumping stations, etc., from Port Augusta to the Guided Missile Range at Woomera, a distance of about 110 miles. This project was completed in June, 1949.

To bring a permanent supply of water to the Yorke Peninsula, contracts were let for 76 miles of steel pipes for the enlargement of the main between the Bundaleer and Clinton Reservoirs, but shortage of steel plate has delayed progress.

The following table gives financial information on country waterworks for 1938-39 and 1946-47 to 1950-51 :—

**COUNTRY WATERWORKS, SOUTH AUSTRALIA : FINANCES.(a)**  
(£.)

Year.	Invested Capital.	Revenue.	Expenditure.			Surplus (+) or Deficit (-).
			Working Expenses.	Interest.	Total.	
1938-39 ..	10,015,613	207,569	130,523	449,691	580,214	— 372,645
1946-47 ..	11,231,493	244,495	307,379	394,392	701,771	— 457,276
1947-48 ..	11,643,730	270,738	337,557	395,246	732,803	— 462,065
1948-49 ..	11,616,857	286,646	395,717	402,809	798,526	— 511,880
1949-50 ..	12,056,803	298,256	508,759	405,355	914,114	— 615,858
1950-51 ..	12,289,918	319,396	647,994	407,810	1,055,804	— 736,408

(a) Excludes Morgan-Whyalla system.

(vi) *Morgan-Whyalla Water Supply Scheme.* This scheme, which involved the laying of 223 miles of main, was officially opened on 31st March, 1944, the capital invested to 30th June, 1951 being £2,498,520. Particulars of this scheme, where applicable, are included in the tables of the combined waterworks in (ii) above. During 1950-51 the water used from the system between Hanson and Whyalla amounted to 1,480 million gallons. Revenue for the year 1950-51 was £228,958, working expenses, etc. £149,777, interest charges, £81,619 and deficit, £2,438.

5. **Western Australia.**—(i) *General.* The water supply and sewerage systems of Western Australia are principally under the management of Government Departments, and are divided into the following categories :—(a) Metropolitan Water Supply, Sewerage and Drainage, covering Perth, Fremantle, Claremont, Guildford, Midland Junction and Armadale District ; (b) Country Areas (previously Goldfields) Water Supply ; (c) Water Supply of other towns, etc. ; (d) Agricultural Water Supply, and (e) Artesian and sub-artesian waters.

(ii) *Metropolitan Water Supply, Sewerage and Drainage.* (a) *General.* The sources of the metropolitan water supply are the Canning Dam, Churchman's Brook, Wongong Brook, Victoria Reservoir, Armadale Pipe Head Dam and Well, and certain bores. The largest reservoir, the Canning Dam, has a capacity of 20,550 million gallons, about 5,000 million gallons more than that of the recently increased Mundaring Reservoir to which it is linked by a pipeline.

The sewage treatment works of Perth and suburbs consist of primary sedimentation with separate sludge digestion and discharge of all effluent direct to the ocean. Fremantle treatment works consist of septic tanks with ocean outfall for effluent. There are three treatment works, situated at West Subiaco, Swanbourne and Fremantle.

(b) *Water Supply.* The following table shows particulars of water supply services for 1938-39 and 1946-47 to 1950-51 :—

**METROPOLITAN WATER SUPPLY, WESTERN AUSTRALIA : SERVICES.**

Year.	Number of Services.	Estimated Population Supplied.	Average Daily Consumption.	Total Consumption for Year.	Average Daily Consumption.		Length of Mains.	Number of Meters.
					Per Service.	Per Head of Estimated Population.		
			Mill. gals.	Mill. gals.	Gallons.	Gallons.	Miles.	
1938-39 ..	61,467	248,248	14.1	5,147	229	56.8	953	40,014
1946-47 ..	70,970	279,000	24.7	9,022	348	88.6	1,107	42,968
1947-48 ..	73,601	284,915	26.9	9,838	365	94.4	1,137	44,795
1948-49 ..	76,562	290,962	27.2	9,918	355	93.5	1,173	47,073
1949-50 ..	79,835	297,123	29.1	10,618	364	97.9	1,224	49,370
1950-51 ..	84,926	303,422	28.4	10,354	334	93.5	1,271	52,277

Water rating for 1950-51 was 1s. 6d. in the £1 on annual valuation, with a minimum of 10s.

(c) *Sewerage and Drainage.* Some particulars of the metropolitan sewerage and drainage services for 1938-39 and 1946-47 to 1950-51 are shown below :—

**METROPOLITAN SEWERAGE AND DRAINAGE, WESTERN AUSTRALIA : SERVICES.**

Year.	Houses Connected.	Estimated Population Served.	Sewage Pumped for the Year. (a)	Length of Sewers.	Length of Stormwater Drains.
			Mill. gals.	Miles.	Miles.
1938-39.. ..	36,652	162,457	1,030	444	31
1946-47.. ..	44,638	(b)	2,160	537	33
1947-48.. ..	45,977	193,103	2,263	550	34
1948-49.. ..	47,446	199,273	2,273	569	34
1949-50.. ..	48,909	205,418	2,326	588	34
1950-51.. ..	50,480	212,016	3,809	605	34

(a) Aggregate of quantities pumped by the various stations. (b) Not available.

Sewerage rating for 1950-51 was 1s. 6d. in the £1 on annual valuation, with a minimum of 7s. 6d. Stormwater drainage rating was 5d. with a minimum of 2s. 6d.

(d) *Finances.* The following table shows particulars of the finances of the Western Australian Metropolitan Water Supply, Sewerage and Drainage Department for the years 1938-39 and 1946-47 to 1950-51 :—

**METROPOLITAN WATER SUPPLY AND SEWERAGE AND DRAINAGE, WESTERN AUSTRALIA : FINANCES.**

(£.)

Service and Year.	Capital Cost.	Revenue.	Expenditure.			Surplus (+) or Deficit (-).
			Working Expenses.	Interest and Sinking Fund.	Total.	
<b>Water Supply—</b>						
1938-39 .. ..	4,898,167	285,313	50,975	228,527	279,502	+ 5,811
1946-47 .. ..	5,516,603	372,168	110,572	236,432	347,004	+ 25,164
1947-48 .. ..	5,669,761	392,761	117,930	243,613	361,543	+ 31,218
1948-49 .. ..	5,899,578	416,817	136,499	253,244	389,743	+ 27,074
1949-50 .. ..	6,200,989	452,956	186,219	224,958	411,177	+ 41,779
1950-51 .. ..	6,771,509	488,396	228,442	243,807	472,249	+ 16,147
<b>Sewerage and Drainage—</b>						
1938-39 .. ..	3,497,938	174,950	30,630	149,714	180,344	- 5,394
1946-47 .. ..	3,992,651	219,359	47,401	190,472	237,873	- 18,514
1947-48 .. ..	4,148,784	223,090	51,119	196,965	248,084	- 24,994
1948-49 .. ..	4,359,547	259,597	59,182	206,264	265,446	- 5,849
1949-50 .. ..	4,567,278	274,113	84,988	196,234	281,222	- 7,109
1950-51 .. ..	4,884,224	288,598	119,125	206,701	325,826	- 37,228

(iii) *Country Areas Water Supply (Previously Goldfields Water Supply).* The source of supply for Kalgoorlie, Coolgardie and adjacent goldfields, as well as for the towns and districts on or near the pipeline, is the Mundaring Reservoir, whose capacity has recently been increased from 4,650 million gallons to 15,100 million gallons. This scheme is now linked by pipeline with the Canning Dam.

Work is proceeding for a comprehensively reticulated water scheme at an estimated cost of approximately £4,000,000 to serve an area of about 4,000,000 acres of farm lands and some 23 agricultural towns, including the principal towns on the Great Southern

Railway. The supply to the Eastern Goldfields will be increased to permit expansion of the gold-mining industry, the increased capacity of the Mundaring Reservoir (*see above*) being part of this scheme. It is also planned to increase the storage capacity of the Wellington Dam to 38,000 million gallons. Financing of the scheme is being shared by the Commonwealth and the State Governments on a £1 for £1 basis. Expenditure on this work to 30th June, 1951 totalled £755,518.

The following table shows details of the Country Areas Water Supply for 1938-39 and 1946-47 to 1950-51 :—

**COUNTRY AREAS WATER SUPPLY(a), WESTERN AUSTRALIA : SUMMARY.**

Year.	Number of Services.	Total Con-	Length of	Number of Meters.	Capital Cost.	Revenue.	Expenditure. (b)	Surplus (+) or Deficit(-).
		sumption.	Water Mains.					
		Mill. gals.	Miles.		£	£	£	£
1938-39 ..	13,670	1,735	1,720	10,872	5,527,890	331,457	298,531	+ 32,926
1946-47 ..	15,130	1,975	1,757	13,163	6,283,631	343,500	396,964	- 53,464
1947-48 ..	15,411	2,028	1,768	13,423	6,425,775	338,892	480,571	- 141,679
1948-49 ..	15,669	2,131	1,773	13,639	6,614,390	341,052	533,851	- 192,799
1949-50 ..	16,063	2,208	1,777	13,991	6,803,271	346,660	566,614	- 219,954
1950-51 ..	16,229	2,162	1,793	14,180	7,331,691	359,468	673,316	- 313,850

(a) Previously Goldfields Water Supply.

(b) Includes interest and sinking fund.

(iv) *Water Supply of Other Towns, etc.* (a) *Controlled by Public Works Department.* During 1950-51 water supplied to other towns and districts, excluding minor water supplies, amounted to 689 million gallons, including service to adjacent mines, 18 million gallons, and railways 64 million gallons. Estimated population served numbered 43,809.

(b) *Controlled by Commonwealth and State Government Railways.* Consumption for the year ended 30th June, 1951 was 292 million gallons. In addition, 470 million gallons were obtained from other sources, mainly the Country Areas Water Supply and the Metropolitan Water Supply.

(c) *Water Boards not Controlled by Government.* During 1950-51 approximately 379 million gallons of water were supplied to an estimated population of 17,770.

(v) *Agricultural Water Supply.* During the forty-one years from 1st July, 1910 to 30th June, 1951, 576 tanks were built, 387 wells sunk, and 3,944 bores put down to a total depth of 212,332 feet. Of the bores put down, 648 yielded fresh, and 383 stock water.

(vi) *Artesian and Sub-artesian Waters.* Up to 30th June, 1951 the total number of bores put down in search of artesian or sub-artesian water and in which water was struck (inclusive of operations by Defence Services) was 454, ranging in depth from 21 to 4,006 feet.

6. **Tasmania.**—(i) *Waterworks.* At the end of 1950-51 there were 36 municipal waterworks in Tasmania. The capacity of the reservoirs was 884 million gallons, the estimated population served was 194,428, the number of properties assessed was 61,305, and the length of aqueducts, mains and reticulation was about 1,110 miles. Costs of construction amounted to £2,131,310. The largest of these undertakings is Hobart, with a reservoir capacity at the end of 1950-51 of 578 million gallons, and 157 miles of reticulation and 92 miles of aqueduct and main.

(ii) *Sewerage.* Sewerage in Tasmania also is the concern of local authorities.

## § 6. Harbour Boards and Trusts.

NOTE.—The number and net tonnage of all vessels which entered the major ports in each State during the years 1938-39 and 1947-48 to 1950-51 are shown in Chapter V.—Transport and Communication, A. §3. Shipping at Principal Ports. Particulars of oversea and interstate cargo discharged and shipped during 1950-51 are shown in A. § 6 of the same chapter.

1. **New South Wales.**—(i) *Maritime Services Board of New South Wales.* (a) *General.* The Maritime Services Board of New South Wales is a corporate body of five Commissioners, three of whom are full-time members and two, representing shipping and

commercial interests, part-time members. The Board was brought into existence on 1st February, 1936 by the Maritime Services Act 1935 in order to co-ordinate the port and navigation services of the State, which had previously been administered by the Sydney Harbour Trust and by the State Department of Navigation.

The Board exercises general control over intra-state shipping, including the survey and certification of vessels, the licensing of harbour craft and the examination and issue of certificates to officers; is responsible for the provision of pilotage services, lights, beacons, buoys and other port facilities; imposes and collects rates and charges on goods and vessels; and is vested with the general control and management of the navigable waters and ports within the State.

At the Port of Sydney the Board is also responsible for the provision of adequate wharfage and channels, and carries out all construction, maintenance and dredging work. At other ports of New South Wales such work is undertaken by the Department of Public Works on behalf of the Board.

(b) *Port of Sydney.* The entrance to Sydney Harbour, the principal port of New South Wales, is nearly a mile wide, and the depth of its navigable channel is not less than 80 feet. Between the entrance, known as "The Heads", and the Harbour proper, a distance of 4 miles, there are two separate channels, each 700 feet wide, the Western Channel not less than 43 feet deep (low water ordinary spring tides) and the Eastern Channel 40 feet deep. The foreshores, which have been reduced by reclamations, are 152 miles in length and the total area of the port is 13,600 acres, or 21 square miles, of which about one-half has a depth of 30 feet or more at low water ordinary spring tide. The mean range of tides is 3 feet 6 inches.

The wharves are situated in close proximity to the business centre of the city, about four or five miles from the Heads. Excluding ferry wharves and jetties used for private purposes, there are 62,963 feet of wharfage controlled by the Maritime Services Board and 8,710 feet of commercial wharfage privately owned. Ferry berths cover 3,470 feet, and the total for all purposes is 75,143 feet. Depth of water at wharves is up to 40 feet. The principal wharves are leased to shipping companies whose vessels engage regularly in the trade of the port; the remainder are reserved for vessels which visit the port occasionally. Special facilities for the storage and handling of staple products such as wheat, wool, etc., are provided and modern plant has been installed for replenishing ships' bunkers with oil or coal.

The docking facilities comprise five large graving docks, four floating docks and eight patent slips. The Captain Cook Graving Dock, opened in March, 1945, is capable of accommodating the largest vessel afloat.

The following table shows particulars of the finances of the Board in respect of the Port of Sydney for 1938-39 and 1946-47 to 1950-51 :-

## MARITIME SERVICES BOARD : FINANCES OF THE PORT OF SYDNEY.

(£.)

Year.	Total Capital Debt.	Revenue.			Expenditure.			Surplus.
		Wharfage and Transhipment Rates.	Tonnage Rates and Berthing Charges.	Total.	Administration and Maintenance.	Interest, Sinking Fund, Exchange, etc.	Total. (a)	
1938-39..	11,276,399	773,501	38,180	1,155,627	380,120	536,781	916,901	238,726
1946-47..	11,097,221	725,903	158,521	1,379,882	702,833	540,240	1,243,073	136,809
1947-48..	11,242,140	759,014	167,406	1,446,779	793,319	530,159	1,323,478	123,301
1948-49..	11,334,338	821,376	182,360	1,569,157	923,656	517,715	1,441,371	127,786
1949-50..	11,571,669	925,144	229,092	1,658,203	957,510	526,171	1,483,681	174,522
1950-51..	11,779,317	1,032,685	333,902	1,955,073	1,155,004	528,928	1,683,932	271,141

(a) Excludes capital expenditure: 1938-39, £28,576; 1946-47, £153,854; 1947-48, £282,345; 1948-49, £221,227; 1949-50, £287,211; 1950-51, £384,911.

(c) *Port of Newcastle.* Newcastle Harbour is administered by the Maritime Services Board and an Advisory Committee consisting of five members appointed by the Governor. In regard to volume of shipping entered, Newcastle ranks second in importance in New South Wales and fifth in Australia. It is primarily a coal-loading port, and the proximity to the coal field has led to the establishment of important industries, including iron and steel works, in the district. Facilities are available for the shipment of wool, wheat and frozen meat, and a wharf is available for timber.

The area used by shipping is about 570 acres, excluding the entrance to the harbour and the inner basin, which together cover an area of 162 acres. The width of the harbour at the entrance is 1,200 feet, and the navigable channel, with a depth of 25 feet 6 inches at low water, is 350 feet wide. Wharfage accommodation amounts to 19,900 feet, the Maritime Services Board controlling 6,720 feet, the Railways Department 7,000 feet, the Public Works Department 200 feet, and private shipping companies 2,600 feet, while tie-up berths and ferry and depot wharves comprise 3,400 feet.

(d) *Port Kembla.* As from 3rd May, 1948, the Maritime Services Board assumed the administration and navigational control of Port Kembla, which had previously been administered by the New South Wales Department of Public Works. The Department continues however to be the constructing authority in respect of works, dredging and maintenance. In respect of volume of shipping entered, Port Kembla ranks third in the ports of New South Wales, and about seventh in those of Australia. It has an area of approximately 330 acres, with depths ranging from 20 to 50 feet (low water ordinary spring tide), and wharfage accommodation has been provided for large ocean-going vessels. It is the port of the southern coalfields and for the expanding industrial area in and about Wollongong.

(e) *Other Ports.* In addition to the ports of Sydney, Newcastle and Port Kembla, the Board controls 29 outports along the coastline of 609 miles. The shipping trade of these outports is relatively small.

(ii) *Port Charges.* The port charges payable in respect of shipping and ships' cargoes in New South Wales are imposed by the Commonwealth Government in terms of the Lighthouses Act and the Federal Navigation Act, and by the State authorities under the Navigation Act of New South Wales, the Harbour and Tonnage Rates Act, and the Sydney Harbour Trust Act. Since 1st February, 1936, the State enactments have been administered by the Maritime Services Board. The gross collections by the State authorities amounted to £2,628,000 in 1950-51. These figures include the Port of Sydney revenue (see table above) and State navigation service collections (£672,901 in 1950-51). Commonwealth Government revenue from light dues and navigation receipts, for the whole of Australia, amounted to £243,296 in 1950-51.

2. *Victoria.*—(i) *Melbourne Harbour Trust.* (a) *General.* Information regarding the origin and constitution of this Trust, which controls the Port of Melbourne, appears in Official Year Book No. 12, p. 970 *et seq.* At 31st December, 1951, the sheds available for wharfage accommodation had a length of 20,093 feet, covering an area of 1,389,982 square feet. The area of water in the bay and River Yarra under the control of the Trust is approximately 5,327 acres and the total length of wharves, piers and jetties in the port is 61,740 feet, giving an area of over 58 acres of wharfage, and 53,209 feet of effective berthing space. During 1951, work was continued on the River Entrance Docks project which provides for the construction of 28 new deep water berths. Other work undertaken during the year provides for new berths at Appleton Dock (ultimately

to have eighteen berths), Victoria Dock and South Wharf. The depth of water (low water ordinary spring tide) of main channels and at principal wharves is about 30 feet, the maximum being about 36 feet.

(b) *Finances.* The following table shows particulars of the financial operations of the Trust during the years 1939 and 1947 to 1951:—

## MELBOURNE HARBOUR TRUST: FINANCES.

(£.)

Year.	Gross Loan Indebtedness.	Revenue.		Expenditure.				Surplus.
		Wharfage and Tonnage Rates.	Total.	Administration and Maintenance.	Interest, Sinking Fund, Exchange, etc.	Depreciation, Renewals and Insurance Account.	Total. (a)	
1939 ..	4,018,527	689,100	843,899	282,533	270,650	129,160	837,577	6,322
1947 ..	3,937,709	819,425	1,113,456	399,641	238,084	123,940	944,516	168,940
1948 ..	3,820,203	961,925	1,313,813	471,039	220,463	134,230	1,037,152	276,661
1949 ..	3,766,678	1,118,059	1,471,221	460,955	190,056	121,798	1,015,421	455,800
1950 ..	3,972,029	1,293,923	1,771,074	675,839	187,582	162,883	1,301,687	469,387
1951 ..	5,883,857	1,493,423	2,129,432	1,036,842	235,881	175,263	1,768,105	361,327

(a) Includes statutory payments to Consolidated Revenue and Geelong Harbour Trust:—1939, £155,234; 1947, £182,851; 1948, £211,420; 1949, £242,612; 1950, £275,383; 1951, £320,119. Excludes capital expenditure:—1939, £128,567; 1947, £375,705; 1948, £393,240; 1949, £623,396; 1950, £1,589,392; 1951, £2,058,921.

(ii) *Geelong Harbor Trust.* The Geelong Harbour Trust was constituted in 1905, and reconstituted in 1934 under the provisions of the Melbourne and Geelong Harbour Trusts Act 1934. The Trust is under the control of three Commissioners appointed by the Governor-in-Council. Revenue for the year 1951 was £184,700, and revenue expenditure was £177,887. Payments made in respect of capital works amounted to £280,000 in 1951, and loans outstanding at the end of the year amounted to £567,019. Depth of water available in Geelong harbour will, upon completion of dredging operations which are well advanced, range from 32 to 37 feet (low water ordinary spring tide).

(iii) *Other Ports.* Portland is the only Victorian port other than Melbourne and Geelong of more than minor importance.

3. *Queensland.*—(i) *General.* The ports of Queensland, except Brisbane and certain minor ports, are administered by Harbour Boards with members representing the towns and districts served by the ports. Brisbane and the minor ports are controlled by the State Treasury through the Department of Harbours and Marine, which supervises the engineering activities of the other ports.

(ii) *Brisbane.* Brisbane accommodates comfortably, in its dredged and improved river, the largest vessels in the Australian trade. The main centres for shipping, although further downstream than formerly, because of the increasing size of vessels, are still within easy access of the city. The maximum depths (low water ordinary spring tide) of the shipping channel decrease from 32 feet in the North-West channel to 20 feet in



the Bulimba Reach to Victoria Bridge section. Depths at wharves vary between 23 and 29 feet. Adequate dry-docking facilities are available. The finances of Brisbane Harbour for the years 1938-39 and 1946-47 to 1950-51 are shown below :—

## BRISBANE HARBOUR : FINANCES.

(£'000.)

Year.	Loan Indebtedness.	Revenue.		Expenditure.		Credit Balance.
		Harbour Dues.	Total.	Working Expenses.	Total (including Interest and Redemption).	
1938-39 ..	1,179	165	173	36	112	(a) — 6
1946-47 ..	1,163	149	171	133	212	132
1947-48 ..	1,219	153	222	126	209	145
1948-49 ..	1,256	190	209	162	250	104
1949-50 ..	1,325	219	299	168	260	143
1950-51 ..	1,572	221	253	237	329	67

(a) Overdraft.

In addition to Brisbane Harbour, the Department of Harbours and Marine also controls the Brisbane Dry Dock, the Cairncross Dock, the Brisbane River, and ten smaller harbours not administered by Harbour Boards.

(iii) *Harbour Boards.* Harbour Boards control the ports of Bowen, Bundaberg, Cairns, Gladstone, Mackay, Rockhampton and Townsville. Finances for each port for the year 1951 are shown below, together with a summary for the years 1939 and 1947 to 1951.

## HARBOUR BOARDS, QUEENSLAND : FINANCES.

(£.)

Harbour Board.	Loan Indebtedness.	Revenue.		Expenditure (excluding Loan).		Surplus (+) or Deficit (-)
		Wharfage and Harbour Dues.	Total.	Working Expenses.	Total (including Interest and Redemption).	
Bowen .. ..	327,513	17,046	27,651	9,398	29,266	— 1,615
Bundaberg .. ..	41,555	4,123	5,794	3,519	9,747	— 3,953
Cairns .. ..	158,618	94,173	150,961	144,871	187,842	— 36,881
Gladstone .. ..	135,669	20,537	68,830	32,784	58,128	+ 10,702
Mackay .. ..	348,890	118,420	126,658	24,235	53,655	+ 73,003
Rockhampton .. ..	553,801	30,519	45,542	35,576	46,461	— 919
Townsville .. ..	220,728	118,085	174,069	119,657	148,996	+ 25,073
Total, 1951 .. ..	1,786,774	402,903	599,505	370,040	534,095	+ 65,410
„ 1950 .. ..	1,611,241	378,949	510,719	284,896	408,561	+ 102,158
„ 1949 .. ..	1,523,644	347,843	464,450	307,716	431,359	+ 33,091
„ 1948 .. ..	1,477,076	280,360	371,987	213,700	304,118	+ 7,869
„ 1947 .. ..	1,481,213	234,872	328,464	205,572	330,022	— 1,558
„ 1939 .. ..	1,548,144	249,510	401,439	139,752	343,083	+ 58,356

4. *South Australia.—The South Australian Harbours Board.* All South Australian harbours are controlled by the South Australian Harbours Board, which consists of three Commissioners appointed by the Governor for a period of five years and eligible for re-appointment. The Board is responsible to the Minister of Marine for the discharge of its duties and functions, and controls about 60 ports, but at many of them there is little or no shipping movement. The more important are Adelaide, Augusta, Lincoln, Pirie, Wallaroo and Whyalla. Maximum depths of water (low water ordinary spring tide) at the wharves of these ports range from 20 to 24 feet at Pirie to 35 feet at Adelaide (Outer Harbour). The following table shows the finances of the Board for 1938-39 and 1946-47 to 1950-51 :—

## SOUTH AUSTRALIAN HARBOURS BOARD : FINANCES.

( £. )

Year.	Capital Expenditure to 30th June.	Revenue.	Expenditure from Revenue.				Surplus (+) or Deficit (-).
			Working Expenses.	Interest.	Sinking Fund.	Total.	
1938-39 ..	7,861,905	664,915	205,848	326,719	50,000	582,567	+ 82,348
1946-47 ..	8,283,775	747,071	371,749	288,833	25,069	685,651	+ 61,420
1947-48 ..	8,367,780	873,059	386,459	281,517	27,585	695,561	+ 177,498
1948-49 ..	8,456,041	938,797	503,563	281,110	30,356	815,029	+ 123,768
1949-50 ..	8,545,084	1,050,742	583,965	281,691	33,327	898,983	+ 151,759
1950-51 ..	8,896,281	1,141,174	784,191	281,657	..	1,065,848	+ 75,326

5. *Western Australia.—(i) Fremantle Harbour Trust.* Fremantle Harbour is controlled by a board of five Commissioners appointed by the Governor-in-Council. Maximum depth of water (low water ordinary spring tide) at the entrance to the harbour is 36 feet, and at the wharves 32 feet. The length of wharf berth accommodation is 10,566 feet.

Gross earnings for the year 1950-51 amounted to £1,497,436, working expenses to £983,357, interest £119,067, sinking fund £34,517, renewals fund £2,000, and payment of surplus cash to Consolidated Revenue £150,064. There was also a special loan repayment from revenue, amounting to £111,700. The total amount debited to loan capital account at 30th June, 1951 was £3,119,590.

(ii) *Bunbury Harbour Board.* The Bunbury Harbour Board consists of five members appointed by the Government. The depth of water at the entrance and at the wharf is 27 feet (low water ordinary spring tide). Berthage accommodation is 3,700 feet. Gross earnings in 1949-50 were £20,508, working expenses £39,000, and interest £28,088. The total amount debited to loan capital account at 30th June, 1950 was £890,439.

(iii) *Other Ports.* Only the ports of Fremantle, Bunbury and Albany in Western Australia are under the control of trusts, the remainder are Government operated. Of these, Carnarvon, Geraldton and Onslow have the largest amount of shipping movement.

6. *Tasmania.*—There are seven Marine Boards and two Harbour Trusts in Tasmania. The Marine Boards control the ports of Hobart, Launceston, Circular Head, Burnie and Table Cape, Devonport, Strahan, and King Island (Currie), and the Harbour Trusts those of Smithton and Leven. Aggregate receipts of revenue accounts of all these authorities during the year 1950-51 were £432,021 and expenditures £436,569, including loan charges £74,950. The total receipts of the Hobart Marine Board during 1950-51

were £192,890, loan charges £13,087 and total expenditure £179,031. Launceston Marine Board receipts during 1950-51 amounted to £93,830, loan charges to £9,893 and total expenditure to £107,259. Loan indebtedness of all Marine Boards and Trusts at 30th June, 1951 was £1,413,672, of which £430,053 was in respect of Hobart and £75,101 in respect of Launceston.

Hobart, Launceston, Burnie and Devonport are the principal ports of Tasmania. In addition to their interstate and intra-state traffic, there is also considerable overseas shipping. Depths of water at wharves vary, in general, between 16 and 34 feet (low water ordinary spring tide), but at Hobart there is a depth of water of from 30 to 52 feet.

## § 7. Fire Brigades.

1. *New South Wales.*—(i) *General.* A Board of Fire Commissioners, consisting of eight members, operates under the Fire Brigades Act 1909-1949, and 153 fire districts had been constituted at the end of 1951. Up to the end of 1949, the cost of maintenance of fire brigades was borne in proportions of quarter, quarter, and half by the Government, the municipalities, and the insurance companies concerned, the expenditure so regulated that the proportion payable by the councils in a fire district should not, except in special circumstances, exceed the amount obtainable from  $\frac{1}{4}$ d. in the £1 rate on the unimproved capital value of ratable land in the fire district. In June, 1949 legislation was introduced (i) increasing the limit of the Board's borrowing power from £250,000 to £500,000, (ii) providing for the varying of the maximum rate that may be levied by councils, and (iii) altering the basis of contributions so that from 1st January, 1950, local councils and the Government will each pay one-eighth and the insurance companies three-quarters.

Other legislation, introduced in September, 1949 to improve and modernize the law dealing with the prevention of bush fires and to build up the organization of the bush fire-fighting services, provided for the establishment of Fire Regions and a Bush Fire Fighting Fund to be financed from contributions by the Government, councils and insurance companies in the proportion of one-quarter, one-quarter and one-half, respectively. The contribution of any council shall not exceed one-twentieth of a penny in the £1 on the unimproved capital value of ratable land in the area of the council not being land within a fire district constituted under the Fire Brigades Act 1909-1949.

(ii) *Board of Fire Commissioners of New South Wales.* At 31st December, 1951 the authorized strength of the Fire Brigade throughout the fire districts of New South Wales was 292 officers and 823 permanent, 2,113 volunteer, and 1,917 reserve firemen. Corresponding figures for the Sydney Fire District were 234, 774, 321 and 778. The revenue for the year 1951 was £1,279,131 made up as follows:—From the Government, £157,311; municipalities and shires, £157,311; fire insurance companies and firms, £943,866; and from other sources, £20,643. The disbursements for the year were £1,310,680.

2. *Victoria.*—(i) *General.* The Fire Brigades Act of 1928 provided for a Metropolitan Fire Brigades Board and a Country Fire Brigades Board each consisting of nine members. In December, 1944 the latter Board was superseded by the Country Fire Authority under an Act of that title, and the number of members was increased to ten. The income of each Board is derived in equal proportions from the Treasury, the municipalities and insurance companies.

(ii) *Metropolitan Fire Brigades Board.* On 30th June, 1951 the Board had under its control 42 stations, 550 permanent staff, 162 special service and clerical, etc. staff, and 22 part-time firemen. The total receipts for 1950-51 were £597,949, comprising contributions £465,985, receipts for services £68,076, and interest and sundries £63,888. The expenditure was £677,377.

(iii) *Country Fire Authority.* This authority, constituted in 1944, is responsible for the prevention and suppression of fires in the "country area of Victoria", which embraces the whole of the State outside the metropolitan fire district, excluding State forests and certain crown lands. The country area has been divided into 24 fire control regions, three of which (Ballarat, Bendigo and Geelong) are wholly urban and the remainder mixed urban and rural. At 30th June, 1951 there were 171 municipal councils and 132 insurance companies included in the operation of the Act, and 194 urban and 960 rural fire brigades. The effective registered strength of the brigades was 76,147 members.

The receipts for the year 1950-51 amounted to £163,048. Total expenditure other than loan amounted to £177,257.

3. *Queensland.*—(i) *General.* The Acts of 1920-1931 made provision for the retention of existing fire districts, and for the constitution of new districts. For each district there must be a Fire Brigades Board consisting of seven members, and the cost of maintenance of each brigade is proportioned as follows:—The Treasury two-sevenths, insurance companies three-sevenths, and local authorities two-sevenths. All volunteer fire brigades in a district must be registered.

(ii) *Fire Brigades Boards.* At 30th June, 1951 there were 63 Fire Brigades Boards. The total number of stations was 106, and full-time staff numbered 434, including 12 administrative, 89 officers and 333 firemen. Workshop staff numbered 14. Part-time staff numbered 565, including 65 administrative, 85 officers and 415 firemen. Volunteers numbered 366. The total revenue for the year 1950-51 was £384,038 received mainly from the following sources—Government £94,279, local authorities £94,400, insurance companies £141,474 and loans (Government and other) £31,333. The total expenditure for the year was £392,002, the chief items being salaries and wages £258,822 and interest and redemption of loans £27,463.

4. *South Australia.*—The Fire Brigades Act 1936-1944 provides for a board of five members, and the expenses and maintenance of brigades are defrayed in the proportion of two-ninths by the Treasury (subject to certain limits when the contribution exceeds £10,000), five-ninths by insurance companies, and two-ninths by the municipalities concerned. At 30th June, 1951 there were altogether 34 fire brigade stations, of which 12 were metropolitan and 22 country.

The authorized strength of the permanent staff was 420, including 311 officers and men and 80 country auxiliary firemen. The total revenue for the year 1950-51 was £214,202, made up as follows:—insurance companies £136,301, Treasury £23,414, and municipalities £54,487. The Treasury contribution includes an additional grant of £12,000.

5. *Western Australia.*—In 1942 certain Municipal and Road Board Districts were constituted fire districts under the control of the Western Australian Fire Brigades Board. There were 30 at 30th September, 1951. The income of the Board is derived in the proportion of two-ninths from the Government, two-ninths from Local Government Authorities, and five-ninths from insurance companies. The number of local government authorities and insurance companies who contributed numbered 54 and 118 respectively. The brigades throughout the State controlled by the Western Australian Fire Brigades Board at 30th September, 1951 numbered 48, with a staff of 1,320, including 207 permanent officers and firemen and 1,096 volunteer brigade officers and firemen. The revenue for the year ended 30th September, 1951 was £178,996 and the expenditure £185,598.

Under the Bush Fires Acts a Rural Fire Prevention Advisory Committee, consisting of ten members, four of whom are nominated by the Road Board Association, was set up to advise the Minister for Lands on bush fire control. The Act also provides for the registration of bush fire control officers, who numbered 1,124 at 30th June, 1951 and the establishment of bush fire brigades, the number of which was 423 at 30th June, 1951.

6. *Tasmania.*—The Fire Brigades Act 1945 provided for the creation of the Fire Brigades Commission of Tasmania to co-ordinate the activities of the 22 existing Fire Brigades Boards, while leaving the responsibility for individual control and management with the Boards. The Commission consists of five members nominated or elected by the Fire Brigades Boards and one member nominated by the Minister. Contributions towards the cost of operations remain on the old basis of one-third each from the Treasury, the municipalities and the insurance companies concerned. The cost for the year 1950–51 amounted to £66,810. There were at 30th June, 1951, 27 stations amongst the 22 brigades, and their aggregate staffs numbered 416, including 85 permanent officers and 303 part-time firemen, including officers.

## CHAPTER XVI.

### PRIVATE FINANCE.

NOTE.—This chapter, for convenience, has been subdivided into eight sections as follows :—

Currency; Banking, including Savings Banks; Companies; Insurance; Friendly Societies; Probates and Letters of Administration; State Lotteries and Betting; and Government, Semi-Governmental and Parliamentary Pension and Superannuation Schemes.

#### A. CURRENCY.

##### § 1. General.

The Australian monetary system is based on the British system, of which the unit is the pound (£) divided into 20 shillings (s.) each of 12 pence (d.). When the Australian currency was introduced in 1909 the Australian pound was specified as equivalent to 123.27447 grains of gold  $\frac{11}{12}$ ths fine or 113.002 grains of fine gold and, until the depression in 1930, was identical with the pound sterling. There was a gradual depreciation of the Australian pound in terms of sterling from the beginning of 1930 until 3rd December, 1931, when it was stabilized at the rate of £125 Australian = £100 sterling. This relationship has been maintained until the present time. Following the depreciation, no action was taken to define the value of the Australian pound in terms of gold until 5th August, 1947, when the Australian Government advised the International Monetary Fund, in terms of the membership agreement, that the par value of the Australian pound was 2.86507 grammes (44.2148 grains) of fine gold. From 19th September, 1949 this was reduced to 1.99062 grammes (30.720 grains) of fine gold.

When the Commonwealth was established in 1901, the currency in Australia consisted of United Kingdom gold, silver and bronze coins, notes issued by the banks, and Queensland Treasury notes. Queensland Treasury notes were in circulation in Queensland only, having superseded bank notes in that State after the 1893 crisis. Under the Commonwealth Constitution the control of currency, coinage and legal tender and the issue of paper money were vested in the Commonwealth. The Commonwealth assumed these powers by enacting the Coinage Act 1909 and the Australian Notes Act 1910.

##### § 2. Coinage.

1. **Coins in Circulation.**—Brief historical notes relating to the Australian Coinage are given in Official Year Book No. 37, pages 557 and 558. For weight, metal, composition, etc., of Australian coins in circulation *see* Official Year Book No. 39, page 697.

The silver coins issued prior to July, 1947 have a millesimal fineness of 925 (thirty-seven fortieths silver and three fortieths alloy) and those issued since 1st July, 1947 (dated 1946 and later) have a millesimal fineness of 500 (one-half silver and one-half alloy).

Australian coins are legal tender in Papua, New Guinea, Norfolk Island and Nauru.

From 1910 to 1916 Australian coins were minted in England by the Royal Mint, London, and the Mint, Birmingham Ltd., and in 1916 and 1917 by the Indian Mints. The minting of Australian coins was undertaken by the Australian Mints in 1916 and coins have been minted at the Melbourne branch of the Royal Mint from 1916 to the present time, at the Sydney branch from 1919 until that Mint closed in 1926 and at the Perth branch in 1922 and since 1940.

During the 1939-45 War the two Australian mints were unable to meet the demand for Australian coins and some coins were minted in the United States of America and India. Details of Australian coins obtained from each mint to 30th June, 1952, are given in the following table:—

**AUSTRALIAN COINS OBTAINED FROM MINTS FROM 1910 TO 30th JUNE, 1952.**  
(£'000.)

Mint.	Crown. 5s.	Florin. 2s.	Shilling. 1s.	Six-pence. 6d.	Three-pence. 3d.	Penny. 1d.	Half-penny. ½d.	Total.
Australia—								
Melbourne .. .. .	276	20,652	4,668	2,464	2,773	845	204	31,882
Perth .. .. .			66			610	249	925
Sydney .. .. .		169	78	140	36	18	47	488
United Kingdom—								
London .. .. .		745	550	449	494	108	30	2,376
Birmingham .. .. .		125	25			21	9	180
India—								
Calcutta .. .. .						46	23	69
Bombay .. .. .						75	25	100
United States of America—								
San Francisco .. .. .		2,800	1,400	325	600			5,125
Denver .. .. .				475	400			875
<b>Total .. .. .</b>	<b>276</b>	<b>24,491</b>	<b>6,787</b>	<b>3,853</b>	<b>4,303</b>	<b>1,723</b>	<b>587</b>	<b>42,020</b>

2. Issues of Australian Coins.—The total issues and withdrawals of Australian silver and bronze coins since 1910 are set out in the following table:—

**AUSTRALIAN COINS : SILVER AND BRONZE COIN ISSUED AND WITHDRAWN.**  
(£'000.)

Year.	Silver.					Bronze.			Total.
	Crown. 5s.	Florin. 2s.	Shilling. 1s.	Six-pence. 6d.	Three-pence. 3d.	Total.	Penny. 1d.	Half-penny. ½d.	
Issued—									
1910 to 1947 .. .. .	276	16,334	4,670	2,554	2,623	26,457	1,075	358	1,433
1947-48 .. .. .		5,120	557	250	217	6,144	72	32	104
1948-49 .. .. .		820	219	196	239	1,474	113	53	166
1949-50 .. .. .		130	359	257	332	1,078	92	57	149
1950-51 .. .. .		1,007		110	436	1,553	191	17	208
1951-52 .. .. .		1,080	982	486	456	3,004	180	70	250
<b>Total .. .. .</b>	<b>276</b>	<b>24,491</b>	<b>6,787</b>	<b>3,853</b>	<b>4,303</b>	<b>39,710</b>	<b>1,723</b>	<b>587</b>	<b>2,310</b>
Withdrawn—									
1910 to 1950 .. .. .		4,622	513	36	1	5,172 (a)	4	(b)	4
1950-51 .. .. .		1,013	9			1,022			
1951-52 .. .. .		1,767	19			1,786			
<b>Total .. .. .</b>	<b>..</b>	<b>7,402</b>	<b>541</b>	<b>36</b>	<b>1</b>	<b>7,980</b>	<b>4</b>	<b>..</b>	<b>4</b>
Net Issues to 30th June, 1952 .. .. .	276	17,089	6,246	3,817	4,302	31,730	1,719	587	2,306

(a) Includes half-pence to June, 1948. (b) Included with pence to June, 1948. (c) No allowance has been made for £52,000 silver coin, for which denominations are not available, withdrawn since 1910.

Coin withdrawn between 1947 and 1952 included a considerable quantity of silver coin withdrawn for recoinage.

3. **Legal Tender.**—Imperial gold coins of the specified weight and fineness are legal tender in Australia for any amount. Australian silver coins are legal tender for any amount not exceeding forty shillings and Australian bronze coins are legal tender for any amount not exceeding one shilling.

4. **Profits on Coinage of Silver and Bronze.**—Australian silver and bronze coins are token coins and, as the face value of the coins is greater than the value of the bullion they contain, a profit is made from their issue. This profit forms part of the Commonwealth Consolidated Revenue. In the following table details are given of the value of coins issued, the cost of bullion, the cost of minting and sundry expenses connected with the issue, and the profits made on the issue of coins during the years 1938-39 and 1947-48 to 1951-52.

**AUSTRALIAN SILVER AND BRONZE COINS : PROFITS FROM ISSUE.**  
(£.)

Year.	Coin Issued.	Cost of Bullion.	Loss on Coin Withdrawn. (a)	Gross Profit.	Cost of Minting and Sundry Charges.	Net Profit. (b)
<b>SILVER COIN.</b>						
1938-39 ..	219,600	81,314	(c)	138,286	18,459	119,827
1947-48(d) ..	6,144,200	2,681,284	961,679	2,501,237	114,638	2,386,599
1948-49 ..	1,473,800	545,868	183,941	743,991	78,856	665,135
1949-50 ..	1,078,200	592,900	e - 523,275	1,008,575	117,879	890,696
1950-51 ..	1,553,200	860,019	348	692,833	158,457	534,376
1951-52 ..	3,003,600	1,663,384	..	1,340,216	316,970	1,023,246
<b>BRONZE COIN.</b>						
1938-39 ..	41,800	7,838	(c)	33,962	26,025	7,937
1947-48 ..	103,620	35,868	108	67,644	67,518	126
1948-49 ..	165,960	58,404	90	107,466	132,766	- 25,300
1949-50 ..	149,490	63,487	71	85,932	122,660	- 36,728
1950-51 ..	208,066	100,875	47	107,144	142,848	- 35,704
1951-52 ..	249,639	125,514	..	124,125	251,991	- 127,866
<b>TOTAL.</b>						
1938-39 ..	261,400	89,152	(c)	172,248	44,484	127,764
1947-48(d) ..	6,247,820	2,717,152	961,787	2,568,881	182,156	2,386,725
1948-49 ..	1,639,760	604,272	184,031	851,457	211,622	639,835
1949-50 ..	1,227,690	656,387	e - 523,204	1,094,507	240,539	853,968
1950-51 ..	1,761,266	960,894	395	799,977	301,305	498,672
1951-52 ..	3,253,239	1,788,898	..	1,464,341	568,961	895,380

(a) Face value of coin less value of bullion recovered. (b) Minus sign (-) denotes a loss. (c) Included with Cost of Minting and Sundry Charges. (d) During 1946-47 a considerable quantity of new silver was minted but not issued until 1947-48. The cost of minting this coin is included in 1946-47. (e) In 1947-48 and 1948-49 silver in coin withdrawn was brought to account as bullion at a nominal value. In 1949-50 an adjustment was made to bring this value to the face value of the coin withdrawn. This adjustment and a consequent adjustment for an increase in the cost of bullion in coin issued during 1947-48, 1948-49 and 1949-50 are included in this figure.

5. **Australian Mints.**—(i) *General.* Soon after the discovery of gold in Australia a branch of the Royal Mint was established in Sydney. The formal opening took place on 14th May, 1855. The Melbourne branch was opened on 12th June, 1872, and the Perth Branch on 20th June, 1899. The States of New South Wales, Victoria and Western Australia provided an annual endowment in return for which the mint receipts were paid to the respective State Treasuries. Owing to losses incurred in its operations, the Sydney branch was closed at the end of 1926.

Since their establishment, the Australian branches of the Royal Mint have been primarily concerned with the refining of gold, minting of Imperial gold coins and the production of bars and ingots of gold bullion for export. The minting of Imperial gold coins was discontinued in September, 1931. In 1916 the Melbourne branch took over the minting of Australian silver and bronze coins from the Royal Mint, London. Australian coins were also minted at the Sydney Mint from 1919 to 1926 and at the



Perth Mint in 1922 and from 1940 to the present time. The Melbourne branch has also minted token coins for the Territory of New Guinea and for New Zealand.

(ii) *Gold Receipts and Issues.* (a) *Receipts.* The receipts of gold during the years 1948 to 1952 and the aggregate at each mint to the end of 1952 were as follows :—

**AUSTRALIAN MINTS : RECEIPTS OF GOLD.**

('000 oz.)

Year.	Melbourne.		Perth.		Total.	
	Gross.	Fine.	Gross.	Fine.	Gross.	Fine.
1948 ..	231	136	921	659	1,152	795
1949 ..	285	143	899	652	1,184	795
1950 ..	319	140	830	607	1,149	747
1951 ..	290	139	863	619	1,153	758
1952 ..	391	162	1,004	717	1,395	879
Aggregate to end of 1952 ..	48,511	42,763	54,755	43,222	(a)145,349	(a)122,892

(a) Includes 42,083,000 oz. gross and 36,907,000 oz. fine received by Sydney Mint until end of 1926, when it was closed.

(b) *Issues.* The Australian mints issue gold bullion for the use of local manufacturers (jewellers, dentists, etc.), and for export. Since September, 1931, when the United Kingdom departed from the gold standard, the minting of gold coins by Australian mints has ceased. Australian exports of gold are mainly in the form of 400-oz. ingots, but in earlier years a considerable amount of gold was shipped to India in 10-oz. bars. Since early in the 1939-45 War all gold has been acquired by the Commonwealth Bank and the export and use of gold has been subject to regulation by the Commonwealth Government. From December, 1951 export of a proportion of newly-mined gold for sale on premium markets overseas was permitted (see para. 6 following). The issues during the years 1948 to 1952, and the total to the end of 1952, are shown in the table below :—

**AUSTRALIAN MINTS : ISSUES OF GOLD.**

(£'000.)

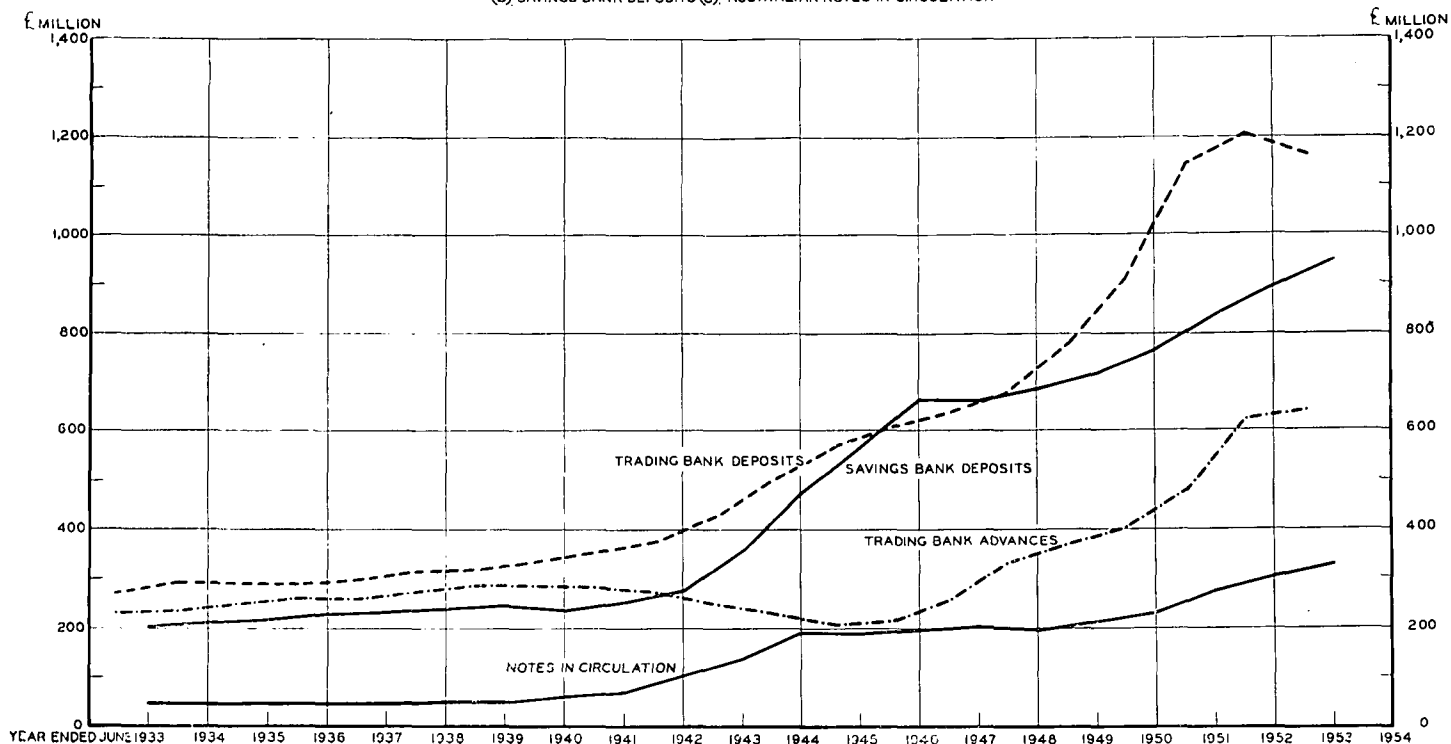
Year and Item.	Mint.			
	Sydney.	Melbourne.	Perth.	Total.
(i) Bullion (a)—				
1948 .. ..	..	603	2,800	3,403
1949 .. ..	..	604	2,770	3,374
1950 .. ..	..	591	2,580	3,171
1951 .. ..	..	592	2,632	3,224
1952 .. ..	..	700	3,049	3,749
Aggregate to 30th June, 1952 .. ..	7,574	33,423	76,880	117,877
(ii) Coin (b)—				
Aggregate to 30th June, 1952—				
Sovereigns ..	144,436	147,283	106,384	398,103
Half-sovereigns ..	4,781	947	367	6,095
Total Gold Issued to 30th June, 1952 ..	156,791	181,653	183,631	522,075

(a) Value expressed at £3 17s. 10½d. per standard ounce. (b) Gold coin has not been issued since September, 1931.

6. *Price of Gold.*—The following table shows the average prices of gold and the average value of the sovereign in London and Australia for the years 1938-39 and 1942-43 to 1951-52. The average price of gold in Australia is based on the Commonwealth Bank's buying price for gold lodged with the mints.

# BANK DEPOSITS AND ADVANCES AND NOTES IN CIRCULATION.: AUSTRALIA 1933 to 1953

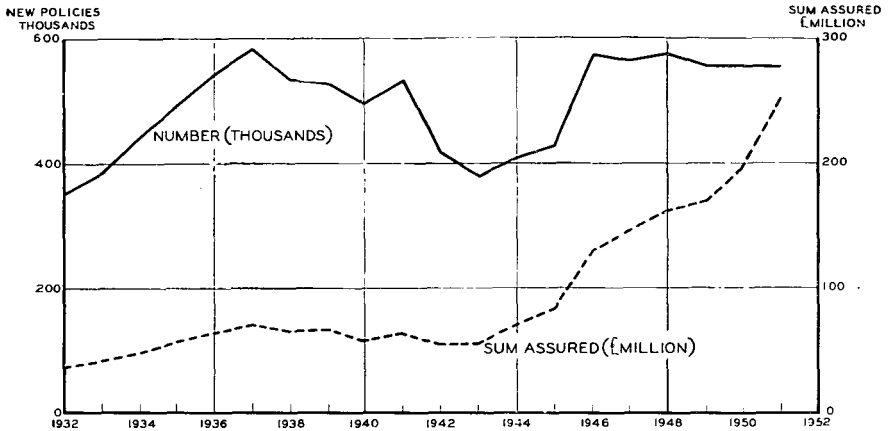
(a) PRIVATE TRADING BANKS (1), TOTAL DEPOSITS (2) ADVANCES  
(b) SAVINGS BANK DEPOSITS (c), AUSTRALIAN NOTES IN CIRCULATION



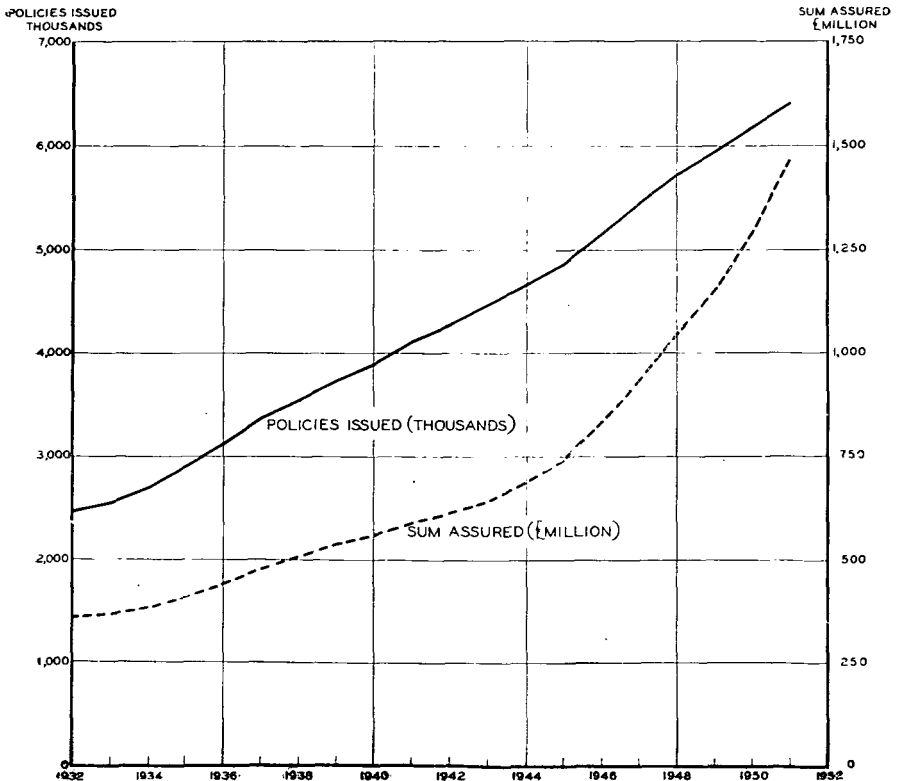
# LIFE ASSURANCE : AUSTRALIA, 1932 TO 1951

## POLICIES ISSUED AND SUM ASSURED

### NEW POLICIES ISSUED



### TOTAL EXISTING BUSINESS



## PRICE OF GOLD : LONDON AND AUSTRALIA.

Period.	London.			Australia.		
	Average price per fine oz.	Average value of Sovereign.	Average price per fine oz.	Sovereign.		
				Average value.	Equivalent to a premium of—	
£stg. s. d.	£stg. s. d.	£A. s. d.	£A. s. d.	%		
1938-39 ..	7 6 9	1 14 7	9 2 9	2 3 0	115.0	
1942-43 ..	8 8 0	1 19 7	10 9 0	2 8 0	140.0	
1943-44 ..	8 8 0	1 19 7	10 9 0	2 8 0	140.0	
1944-45 ..	8 8 3	1 19 7	10 11 10	2 8 9	143.8	
1945-46 ..	8 12 3	2 0 7	10 15 3	2 10 0	150.0	
1946-47 ..	8 12 3	2 0 7	10 15 3	2 10 0	150.0	
1947-48 ..	8 12 3	2 0 7	10 15 3	2 10 0	150.0	
1948-49 ..	8 12 3	2 0 7	10 15 3	2 10 0	150.0	
1949-50 ..	11 11 2	2 14 5	14 8 10	3 7 3	236.3	
1950-51 ..	12 8 0	2 18 5	15 9 10	3 12 0	260.0	
1951-52 ..	12 8 0	2 18 5	15 9 10	3 12 0	260.0	

In December, 1951, arrangements were made whereby producers could sell a proportion of newly-mined gold for industrial purposes on oversea premium markets. Under the arrangements, gold is acquired by the Commonwealth Bank in the usual manner and sold, at the Bank's buying price, to an association representing gold producers participating in the scheme. The association pays the Bank's handling charges and the costs of preparation of the gold and makes arrangements for export and sale. The gold can only be sold against payment in United States dollars. Profits earned by the association after meeting administrative expenses are distributed to members in proportion to the quantity of gold delivered to the Commonwealth Bank. Until August, 1952, when permission was given for the export of fine gold, gold exported under this arrangement was not to exceed a fineness of 22 carats ( $\frac{11}{12}$ ths.).

The average price (f.o.b.) obtained for gold exported under this scheme for each month from December, 1951 to June, 1953, was as follows:—

## AVERAGE PRICE OF GOLD—OVERSEA PREMIUM MARKETS.

F.O.B. (USUALLY FREMANTLE)—PER FINE OZ.

(£A. s. d.)

Month.	1951-52.	1952-53.
July .. .. .	..	16 6 10
August .. .. .	..	16 8 5
September .. .. .	..	16 11 6
October .. .. .	..	16 10 8
November .. .. .	..	16 8 7
December .. .. .	16 13 4	16 4 0
January .. .. .	16 19 11	16 12 11
February .. .. .	17 4 3	16 7 3
March .. .. .	16 19 3	16 6 2
April .. .. .	16 9 1	16 4 9
May .. .. .	16 3 6	16 3 9
June .. .. .	16 7 10	15 19 3

## § 3. Notes.

1. General.—Brief historical notes relating to the circulation and issue of notes in Australia are given in Official Year Book No. 37, pages 561 and 562. The issue of notes intended for circulation as money by any person, bank or State other than by the Commonwealth Bank is prohibited.

2. **The Australian Note Issue.**—(i) *General.* Notes in circulation in Australia are issued by the Commonwealth Bank through the Note Issue Department. The Bank is authorized to issue Australian notes in denominations of 5s., 10s., £1, £5, £10 and any multiple of £10. The Commonwealth Bank is not required to hold a specific reserve in gold against the note issue, but the assets of the Note Issue Department must be held or invested in gold, on deposit with any bank or in securities of the Government of the United Kingdom, the Commonwealth or a State. All profits of the Note Issue Department, with the exception of an amount not exceeding £500,000 each year which may be paid to the other departments or divisions of the Commonwealth Bank, are paid to the Commonwealth Consolidated Revenue Fund.

Australian notes are legal tender to any amount within Australia and have been issued in denominations of 10s., £1, £5, £10, £20, £50, £100 and £1,000.

(ii) *Australian Notes in Circulation.* Particulars of the average values of notes in circulation for the years 1938-39 and 1947-48 to 1951-52 are given in the following table:—

**AUSTRALIAN NOTE ISSUE.**  
(£'000.)

Denomination.	Average of monthly statements for year—					
	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
10s. . . . .	4,141	8,268	8,309	8,496	8,919	9,454
£1 . . . . .	21,124	65,356	64,710	65,695	67,841	69,399
£5 . . . . .	11,718	77,663	81,170	90,561	106,063	132,432
£10 . . . . .	5,126	46,216	49,438	57,871	70,671	83,131
£20 . . . . .	111	8	8	8	8	7
£50 . . . . .	1,259	85	76	69	65	59
£100 . . . . .	2,238	163	139	81	69	63
£1,000 . . . . .	2,855	547	505	220	447	572
Held by Banks	15,454	22,296	24,831	27,895	32,478	37,745
Held by Public	33,118	176,010	179,524	195,106	221,605	257,372
Total . . . . .	48,572	198,306	204,355	223,001	254,083	295,117

(iii) *Commonwealth Bank—Note Issue Department.* The following statement shows particulars of liabilities and assets of the Note Issue Department of the Commonwealth Bank as at 30th June, 1951 and 1952.

**NOTE ISSUE DEPARTMENT : LIABILITIES AND ASSETS, 30th JUNE.**  
(£'000.)

Liabilities.			Assets.		
	1951.	1952.		1951.	1952.
Notes on Issue(a) . .	275,221	301,668	Gold and Balances held abroad (including money at short call) . .	135,553	93,683
Special Reserve— Premium on gold sold . . . . .	4,755	4,755	Government Securities (including Commonwealth Treasury Bills) . .	146,719	215,261
Other Liabilities(a) . .	2,364	2,614	Other Assets . . . . .	68	93
Total Liabilities . .	282,340	309,037	Total Assets . . . . .	282,340	309,037

(a) Notes of a denomination not exceeding one pound which have been on issue for more than twenty years, and notes of a denomination exceeding one pound which have been on issue for more than 40 years are not included in the item "Notes on Issue" but are included in the item "Other Liabilities".

Until 30th June, 1951 all the net profits of the Note Issue Department, except £2,000,000 paid between 1926 and 1933 to the Capital Account of the Rural Credits Department, and £1,164,114 paid between 1943 and 1951 to the Capital Account of the Mortgage Bank Department, were paid to the Commonwealth Treasury. In 1951-52 the net profits of the Note Issue Department amounted to £3,880,762 of which £3,380,762 was paid to the Commonwealth Treasury and £500,000 to the Capital Accounts of sections of the Bank as follows:—Mortgage Bank Department £142,500, Rural Credits Department £71,500, General Banking Division £143,000, Industrial Finance Department £143,000.

§ 4. Legal Tender Extant.

Accurate information regarding the amount of legal tender in circulation is not available, but the following table provides an estimate of the amount of legal tender extant about the middle of the years 1939 and 1948 to 1952.

ESTIMATED LEGAL TENDER EXTANT : AUSTRALIA.

(£'000.)

Particulars.	1939.(a)	1948.	1949.	1950.	1951.	1952.
Australian Notes(b)—						
Held by Banks .. ..	14,829	22,766	23,744	28,068	35,130	37,478
Held by Public .. ..	32,701	173,839	189,111	203,245	240,140	265,243
Coin(c)—						
Gold(d)—Held by Banks ..	79	82	86	91	95	103
Held by Public .. ..	..	..	..	..	..	..
Silver—Held by Banks ..	2,508	6,720	6,803	6,551	5,889	6,318
Held by Public .. ..	6,830	22,236	22,712	23,013	24,106	23,344
Bronze—Held by Banks ..	132	162	143	175	161	232
Held by Public .. ..	521	1,371	1,556	1,674	1,896	2,074
Total .. ..	57,600	227,176	244,155	262,817	307,417	334,792

(a) Prior to 1947 withdrawals of coin were negligible and no allowance has been made for coin withdrawn in the estimates for the year 1939. (b) Last Monday in June, in 1939. Last Wednesday in June thereafter. (c) At 30th June. See also paragraph below. No allowance has been made for coin lost or destroyed which, during the war years, may have been considerable. (d) Value—one sovereign equals £1.

The figures shown above for silver coin represent the net issues of Australian silver coin less the excess of exports of Australian coins over the reimports of Australian coins. The amount of British coin in circulation in Australia is negligible, and, as it is not possible to ascertain accurately its volume, no allowance has been made for it. The figures shown for bronze coins refer to the total issues of Australian coin, the small amount of British coin in circulation being disregarded.

B. BANKING.

§ 1. Cheque-Paying Banks.

1. Banking Legislation.—(i) *Commonwealth Legislation.* Under Section 51 of the Commonwealth Constitution the Commonwealth Parliament has power to legislate with respect to “Banking, other than State banking; also State banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money”. The principal Commonwealth Acts at present in force relating to Banking are—

- (a) The Commonwealth Bank Act 1945–1953 which provides for the constitution and management of the Commonwealth Bank, Commonwealth Trading Bank and Commonwealth Savings Bank and the management of the Australian note issue; and
- (b) The Banking Act 1945–1953, which provides for the regulation of banking and for the protection of the currency and the public credit of the Commonwealth.

The Banking Act 1945 was assented to on 3rd August, 1945, and came into operation on 21st August, 1945. It applies to all banks, except State banks, operating in Australia or Territories of the Commonwealth. The objects of the Act are :—(a) To provide a legal framework, uniform throughout Australia, for regulating the banking system; (b) to safeguard depositors of the banks from loss; (c) to provide for the co-ordination

of banking policy under the direction of the Commonwealth Bank; (d) to control the volume of credit in circulation and bank interest rates; (e) to mobilize and to provide machinery for the control of the foreign exchange and gold resources of the Australian economy. A summary of the main provisions of the Act is given in Official Year Book No. 37, page 565.

The Banking Act 1953, assented to on 1st April, 1953, amended the Banking Act 1945. The main amendments were—

(a) *Special Accounts.* Under the Banking Act 1945 the maximum amount a bank could be required to lodge in its special account was the amount in this account on 21st August, 1945, plus the whole of the increase in Australian assets from July, 1945. This was changed, by the Banking Act 1953, to the amount at credit in the Special Account on 10th October, 1952, plus 75 per cent. of the increase in the bank's average Australian deposits from September, 1952. If, at 30th September in any subsequent year, the amount uncalled in the Special Account is more than 10 per cent. of the bank's average Australian deposits for the preceding month, then the maximum amount is reduced to the amount at credit in the Special Account at 30th September, plus 10 per cent. of the Bank's average Australian deposits for August of that year. This figure is then adjusted by 75 per cent. of the increase or decrease in the average Australian deposits each month. Provision is made so that the maximum amount will not be reduced below the amount at credit in the Special Account on 10th October, 1952, unless the average Australian deposits of the bank fall below 90 per cent. of the average Australian deposits for September, 1952. If the average Australian deposits fall below this level, the maximum amount is reduced by 75 per cent. of the decrease below 90 per cent. of the average Australian deposits for September, 1952.

If the amount to the credit of the Special Account exceeds the maximum amount, the Commonwealth Bank is required to repay the amount of the excess.

In addition, the limit on the rate of interest to be paid on deposits in the Special Account (17s. 6d. per cent. per annum) was removed. Subject to the approval of the Treasurer, this rate of interest will now be fixed by the Commonwealth Bank. Provision is also made for the Commonwealth Bank to advise the banks what movement is expected in Australian deposits and liquid assets and the amount that it will require the banks to lodge in or that it will repay from the Special Accounts.

(b) *Commonwealth Trading Bank.* The Commonwealth Bank Act 1953 established the Commonwealth Trading Bank to take over the business of the General Banking Division of the Commonwealth Bank. By the Banking Act 1953 this Bank was brought under the provisions relating to Special Accounts, advance policy, mobilization of foreign currency, control of bank interest rates, and the settlement of balances between banks. In addition, provision was made for the Commonwealth Trading Bank and the specialized departments of the Commonwealth Bank to furnish the same statistical information as the other banks.

(c) *Other Amendments.* The provision requiring banks to obtain approval of the Commonwealth Bank before purchasing Government and other securities was withdrawn, and banks incorporated in the Queen's dominions carrying on business at the commencement of the Banking Act 1953, were exempted from the requirement to hold assets in Australia at least equal to their Australian deposits.

(ii) *State Legislation.* State banking legislation relates to the incorporation of banks and the constitution and management of State banks. The Acts under which the various banks are incorporated differ. While some of the older banks were incorporated by special Act or Charter, e.g., the Bank of New South Wales by Act of Council 1817, The Bank of Adelaide by Act of the South Australian Parliament, and the Bank of New Zealand by Act of the General Assembly of New Zealand, most of the banks are incorporated under a Companies Act of the States or the United Kingdom. This is also the case with those banks which were reconstructed after the crisis of 1893. State banks, constituted under State Acts, transacting general banking business are the Rural Bank of New South Wales, The State Bank of South Australia and The Rural and Industries Bank of Western Australia.

2. **Royal Commission on Monetary and Banking Systems.**—A Royal Commission was appointed by the Commonwealth Government in November, 1935 to inquire into the monetary and banking systems in operation in Australia and to report whether any, and if so what, alterations were desirable in the interests of the people of Australia as a whole, and the manner in which any such alterations should be effected. The Commission presented its report on 15th July, 1937, and a summary of the recommendations appears in Official Year Book No. 31, p. 1010.

3. **Presentation of Banking Statistics.**—Because of the different purposes they serve in the Australian financial system, Australian cheque-paying banks have been divided for statistical purposes, into three groups and a separate series is presented for each. These groups are :—

- (a) *The Commonwealth Bank.* This is the Central Bank. It also transacts general banking business through a General Banking Division and provides special banking facilities through the Rural Credits, Mortgage Bank and Industrial Finance Departments. Statistics of the Central Banking Business (including the Note Issue Department), the General Banking Division and Rural Credits, Mortgage Bank and Industrial Finance Departments are presented in separate series.
- (b) *Private Trading Banks.* This group was formerly known as the Nine Trading Banks but the number of banks included has been reduced to seven by amalgamations. With the General Banking Division of the Commonwealth Bank, these banks provide the major part of the general banking facilities in Australia. The banks included in this group are—the Bank of New South Wales, The Commercial Banking Company of Sydney Ltd., The National Bank of Australasia Ltd. (which has absorbed the Queensland National Bank Ltd.), The Commercial Bank of Australia Ltd., The Bank of Adelaide, the Australia and New Zealand Bank Ltd. (an amalgamation of the Bank of Australasia Ltd. and The Union Bank of Australia Ltd.), and The English, Scottish and Australian Bank Ltd.
- (c) *Other Banks.* This group consists of (i) three State Government Banks—The Rural Bank of New South Wales, The State Bank of South Australia and The Rural and Industries Bank of Western Australia which, in their general banking business, specialize mainly in financing rural industries, (ii) two joint stock banks—The Ballarat Banking Co. Ltd. and The Brisbane Permanent Building and Banking Co. Ltd. which have specialized business in two districts only, and (iii) branches of three oversea banks—the Bank of New Zealand, Comptoir National d'Escompte de Paris and the Bank of China which transact limited business in Australia and are mainly concerned with financing trade, etc., between Australia and oversea countries.

In addition to the series mentioned above, a series for all cheque-paying banks is presented. This series covers the General Banking Division of the Commonwealth Bank, the Private Trading Banks and the other cheque-paying banks included in the third group.

Unless otherwise stated, the statistics presented are averages of weekly returns. Averages of liabilities and assets are the averages of the liabilities and assets of the banks on the several weekly balance days during the period concerned. Averages of bank clearings and debits to customers' accounts are the averages of transactions for weeks ended on the balance days during the period.

4. **Banks Transacting Business in Australia.**—(i) *Number of Branches.* At 30th June, 1952 the 16 banks operating in Australia transacted all classes of banking business at 3,037 branches and 1,073 agencies. The Commonwealth Bank of Australia and the Private Trading Banks have branches throughout the Commonwealth. The Rural Bank of New South Wales, State Bank of South Australia and Rural and Industries Bank of Western Australia, being State Government banks specializing mainly in financing rural industries, have branches only in those States. Two banks, the Ballarat Banking Company Ltd. and the Brisbane Permanent Building and Banking Co. Ltd., transact business only in Ballarat and Brisbane respectively. The remaining three banks are branches of oversea banks.



## CHEQUE-PAYING BANKS : NUMBER OF BRANCHES(a) AT 30th JUNE, 1952.

Banks.	New South Wales.	Victoria.	Q'land.	South Aust.	West. Aust.	Tasmania.	Nor. Terr.	Aust. Cap. Terr.	Total.
Commonwealth Bank of Australia ..	247	50	63	15	44	7	2	1	429
Private Trading Banks ..	833	728	409	222	187	59	5	5	2,448
Other Cheque-paying Banks ..	100	4	1	24	31	..	..	..	160
All Cheque-paying Banks—									
Metropolitan areas ..	435	344	92	71	88	16	..	..	1,046
Elsewhere ..	745	438	381	190	174	50	7	6	1,991
Total ..	1,180	782	473	261	262	66	7	6	3,937

(a) Includes Head Offices. Excludes agencies, 1,073.

(ii) *Capital Resources, Profits and Dividends.* The paid-up capital of cheque-paying banks (excluding the three overseas banks, the Bank of New Zealand, the Bank of China and the Comptoir National d'Escompte de Paris), together with their reserve funds, their profits and the amount of their last dividends, are shown in the following table. The information relates to the balance-sheet last preceding 31st October, 1952. All amounts are expressed in Australian currency.

CHEQUE-PAYING BANKS : CAPITAL RESOURCES, PROFITS AND DIVIDENDS, 1951-52.  
(£'000.)

Bank.	Paid-up Capital.	Re-serves.	Balance of Profit and Loss Account. (a)	Total Shareholders' Funds.	Reserve Liability of Shareholders. (b)	Net Profit for year.	Net Dividends. (c)
Commonwealth Bank of Australia—							
Central Banking Business ..	4,000	2,405	..	6,405	..	2,274	..
Note Issue Department ..	..	(d) 4,755	..	4,755	..	3,881	..
General Banking Division ..	4,286	1,355	..	5,641	..	352	..
Rural Credits Department ..	2,143	955	..	2,798	..	97	..
Mortgage Bank Department ..	4,285	268	..	4,553	..	49	..
Industrial Finance Department ..	4,286	1,080	..	5,366	..	290	..
Total ..	19,000	10,518	..	29,518	..	6,943	..
Private Trading Banks—							
Australia and New Zealand Bank Ltd. ..	10,668	7,216	1,598	19,482	10,667	701	560
The Bank of Adelaide ..	1,250	1,250	137	2,637	1,250	110	100
Bank of New South Wales ..	8,780	7,000	514	16,294	8,780	1,093	702
The Commercial Bank of Australia Ltd. ..	4,117	2,250	311	6,678	..	341	285
The Commercial Banking Co. of Sydney Ltd. ..	4,739	4,650	388	9,777	4,739	444	379
The English, Scottish and Australian Bank Ltd. ..	3,765	2,510	594	6,869	2,510	298	198
The National Bank of Australasia Ltd. (e) ..	6,726	5,000	540	12,266	1,800	616	471
The Queensland National Bank Ltd. (in voluntary liquidation) ..	..	..	130	130	..	37	..
Total ..	40,045	29,876	4,212	74,133	29,746	3,640	2,695
Other Cheque-paying Banks—							
The Ballarat Banking Co. Ltd. ..	159	159	13	331	141	11	11
The Brisbane Permanent Building and Banking Co. Ltd. ..	1,000	275	46	1,321	..	57	60
The Rural Bank of New South Wales ..	f 17,315	(g) 7,697	..	25,012	..	82	..
State Bank of South Australia ..	1,816	849	..	2,665	..	82	..
Rural and Industries Bank of Western Australia ..	6,921	123	..	7,044	..	20	..
Total ..	27,211	9,103	59	36,373	141	252	71
Grand Total ..	86,256	49,497	4,271	140,024	29,887	10,838	2,766

(a) Includes dividends declared but not paid at date of balance-sheet. (b) Includes uncalled capital. (c) Dividends paid and payable out of profits earned during 1951-52. (d) Special Reserve—Premium on gold sold. (e) The business of the Queensland National Bank Ltd. was taken over by the National Bank of Australasia Ltd. in January, 1948. (f) Total stocks and debentures issued including liability in respect of deposits taken over by the Commonwealth Bank in December, 1931. (g) Includes £5,060,501 Special Reserve Account established under Section 12 (2) of Rural Bank of New South Wales Act 1932.

5. **Commonwealth Bank.**—(i) *General.* An account of the progress and development of the Commonwealth Bank is given in earlier issues of the Official Year Book (see No. 37, pages 570 to 573). The general functions of the Bank are set out in section 8 of the Commonwealth Bank Act 1945-1953 which states—

“8. It shall be the duty of the Commonwealth Bank, within the limits of its powers, to pursue a monetary and banking policy directed to the greatest advantage of the people of Australia, and to exercise its powers under this Act and the Banking Act 1945 in such a manner as, in the opinion of the Bank, will best contribute to :—

(a) the stability of the currency of Australia ; (b) the maintenance of full employment in Australia ; and (c) the economic prosperity and welfare of the people of Australia.”

In addition to its functions as a Central Bank, the Bank controls the Australian note issue through a Note Issue Department and provides general banking facilities through a General Banking Division and special services through the Rural Credits Department, Mortgage Bank Department and Industrial Finance Department. The Commonwealth Savings Bank, a separate institution providing for small depositors, is controlled by the Commonwealth Bank Board and is operated in conjunction with the Commonwealth Bank. The Commonwealth Bank Act 1953, assented to on 1st April, 1953, provided for the establishment of the Commonwealth Trading Bank to take over the business of the General Banking Division of the Commonwealth Bank.

(ii) *Management.* Under the Commonwealth Bank Act 1911 the Bank was managed by a Governor. From 1924 to August, 1945 it was controlled by a Board of Directors. Under the Commonwealth Bank Act 1945 control was vested in a Governor, assisted by an Advisory Council. Since 21st August, 1951, under the Commonwealth Bank Act 1951, the policy of the Commonwealth Bank and the Commonwealth Savings Bank has been determined by the Commonwealth Bank Board consisting of the Governor (Chairman), the Deputy Governor, the Secretary of the Department of the Treasury and seven other members appointed by the Governor-General. The Bank is managed by the Governor who shall act in accordance with the policy of the Bank and with any directions of the Board. The Board is required to inform the Government of the monetary and banking policy of the Bank. In the event of a disagreement between the Government and the Board as to whether the monetary and banking policy of the Bank is directed to the greatest advantage of the people of Australia, the Governor-General, acting with the advice of the Executive Council, may determine the policy to be adopted by the Bank. The Commonwealth Trading Bank is to be managed by a General Manager under the Governor of the Commonwealth Bank. The policy of the Trading Bank is to be determined by the Commonwealth Bank Board.

(iii) *Central Banking Business.* Under the powers it possessed under the Commonwealth Bank Act 1911-1943 and under its war-time powers under the National Security Regulations, the Commonwealth Bank had gradually assumed the functions of a Central Bank. Part III. of the Commonwealth Bank Act 1945 formally constituted the Commonwealth Bank as a Central Bank and granted the Bank the necessary powers to carry on the business of a Central Bank. The capital for the Central Banking Business is £4,000,000 and such other sums as are transferred from the Reserve Fund. Until 30th June, 1951 the profits of the Central Banking Business were distributed as follows :— (a) One-quarter to be placed to the credit of the Commonwealth Bank Reserve Fund ; (b) one-quarter to be paid to the Mortgage Bank Department Capital Account ; and (c) one-half to be paid to the National Debt Sinking Fund. When the capital of the Mortgage Bank Department reached £4,000,000, the share of profits payable to that department were credited to the Commonwealth Bank Reserve Fund. By the Commonwealth Bank Act 1951 the distribution of profits was altered as follows :—(a) One half to be paid to the National Debt Sinking Fund ; (b) for a period of five years, an amount not exceeding £500,000 per annum may be paid to the capital of the various sections of the Bank, this amount to be distributed as follows—General Banking Division, Mortgage Bank Department and Industrial Finance Department each two-sevenths and the Rural Credits Department one-seventh ; and (c) the balance to be paid to the Commonwealth Bank Reserve Fund.

(iv) *Note Issue Department.* This Department was established in 1920 when the control of the Australian note issue was transferred from the Commonwealth Treasury to the Commonwealth Bank. The Bank may, through this department, issue, re-issue and cancel Australian notes. Until 30th June, 1951, all profits of this Department, with the exception of £2,000,000 paid to the Capital Account of the Rural Credits Department and £1,200,000 paid to the Capital Account of the Mortgage Bank Department, were paid to the Commonwealth Consolidated Revenue Fund. Under the Commonwealth Bank Act 1951 provision is made for an amount, not exceeding £500,000 per annum for five years, to be paid to the Capital Accounts of the General Banking Division and the Rural Credits, Industrial Finance and Mortgage Bank Departments. This amount is payable only if a similar amount is paid from the profits of the Central Banking Business and is to be distributed to the various sections in the same proportions as the amount payable from the profits of the Central Banking Business. The balance of the profits is to be paid to the Commonwealth Consolidated Revenue Fund.

(v) *General Banking Division.* Under the Commonwealth Bank Act 1911-1943 no provision was made for the separation of the general banking business of the bank from its central banking business. Under the Commonwealth Bank Act 1945 the General Banking Division was set up to carry on the general banking business of the Bank. The accounts and transactions of this division are kept separate and distinct from the other accounts of the Bank. The capital of the General Banking Division is £4,000,000, and such other sums as are transferred from the General Banking Division Reserve Fund, or from the profits of the Central Banking Business and the Note Issue Department. In 1951-52 an amount of £143,000 was transferred from each of these two sources, making the total capital at 30th June, 1952, £4,286,000. The profits of the General Banking Division are distributed as follows:—(a) one-half is credited to the General Banking Division Reserve Fund, and (b) one-half is paid to the National Debt Sinking Fund. Under the Commonwealth Bank Act 1953 provision is made for the business of the General Banking Division to be transferred to the newly created Commonwealth Trading Bank on a date to be proclaimed.\*

(vi) *Rural Credits Department.* The Rural Credits Department was established in 1925 for the purpose of making short-term credit available for the orderly marketing of primary produce. The Bank may, through this department, make advances, upon the security of primary produce placed under the legal control of the Bank or other security associated with the production or marketing of primary produce, to co-operative associations or marketing boards formed under the laws of the Commonwealth or of a State or Territory of the Commonwealth or other bodies specified by proclamation. The period of the advance shall not be more than one year. The capital of the Rural Credits Department is £2,000,000 and such amounts as are transferred from the profits of the Central Banking Business and the Note Issue Department. In 1951-52 an amount of £71,500 was transferred from each of these two sources, bringing the total capital to £2,143,000 at 30th June, 1952. Profits are distributed as follows:—(a) one-half is credited to the Rural Credits Department Reserve Fund, and (b) one-half is credited to the Rural Credits Department Development Fund for the promotion of primary production.

(vii) *Mortgage Bank Department.* The Mortgage Bank Department was established in 1943 for the purpose of making long-term loans to primary producers. Through this Department the Bank may make a loan to any person engaged in farming, agricultural, horticultural, pastoral or grazing operations or other form of primary production, upon the security of a mortgage to the Bank of an estate or interest in land in the Commonwealth owned by the borrower. The term of the loan shall not be less than five years nor more than forty-one years. The capital of the Department is £4,000,000 plus any amount transferred from the profits of the Central Banking Business and the Note Issue Department. In 1951-52 an amount of £142,500 was transferred from each of these two sources, making the total capital at 30th June, 1952, £4,285,000. Profits are credited to the Mortgage Bank Department Reserve Fund.

\* The date proclaimed was 3rd December, 1953.

(viii) *Industrial Finance Department.* The functions of the Industrial Finance Department established in January, 1946 are:—(a) to provide finance for the establishment and development of industrial undertakings; (b) to assist in the establishment and development of industrial undertakings; and (c) to provide advice on the operations of industrial undertakings with a view to promoting the efficient organization and conduct thereof. To exercise these functions the Bank may, through the Industrial Finance Department, lend money and purchase and sell shares or securities in an industrial undertaking. The capital of this department is £4,000,000 plus any amount transferred from the profits of the Central Banking Business and Note Issue Department. In 1951–52 an amount of £143,000 was transferred from each of these two sources, making the total capital at 30th June, 1952, £4,286,000. The Treasurer, the Bank and the Savings Bank may advance money to the Industrial Finance Department. The amount that may be advanced by the Bank is limited to £1,000,000. The profits of the Department are credited to the Industrial Finance Department Reserve Fund.

(ix) *Housing Loans.* Provision is made for the Bank, through the General Banking Division, to make loans to individuals or building societies for the erection or purchase of homes or for the discharge of mortgages on homes. These loans must be made at the lowest possible rate of interest. Loans to individuals are to be on *crédit foncier* terms, to be secured by first mortgage on an estate or interest in land owned by the borrower and to be repaid in periods of not less than five years nor more than 35 years. Loans to building societies are to be made on such security and on such terms and conditions as the Bank determines.

(x) *Liabilities and Assets—All Departments.* Liabilities and assets of each Department of the Commonwealth Bank at 30th June, 1952 are shown in the following table. The Commonwealth Savings Bank, which is operated as a separate institution, is not included (see § 2, para. 6 (iv) following):—

COMMONWEALTH BANK : LIABILITIES AND ASSETS, 30th JUNE, 1952.  
(£'000.)

Item.	Central Banking Business.	Note Issue Department.	General Banking Division.	Rural Credits Department.	Mortgage Bank Department.	Industrial Finance Department.	Total. (a)
<b>LIABILITIES.</b>							
Capital .. .. .	4,000	..	4,286	2,143	4,285	4,286	19,000
Reserve Funds .. .. .	2,405	..	1,355	655	268	1,080	5,763
Special Reserve—Premium on gold sold .. .. .	..	4,755	..	..	..	..	4,755
Development Fund .. .. .	..	..	..	56	..	..	56
Notes on Issue .. .. .	..	301,668	..	..	..	..	301,668
Deposits, bills payable and other liabilities—							
Special Accounts of Trading Banks .. .. .	244,220	..	..	..	..	..	244,220
Other deposits of Trading Banks .. .. .	45,214	..	..	..	..	..	45,214
Other (including provision for contingencies) .. .. .	6287,492	2,614	142,416	36,533	302	19,471	425,647
Total Liabilities .. .. .	583,331	309,037	148,057	39,387	4,855	24,837	1,046,323
<b>ASSETS.</b>							
Gold and balances held abroad (including money at short call) .. .. .	203,013	93,683	2,801	..	..	..	299,497
Australian notes and coin and cash balances .. .. .	2,713	..	(b) 27,968	..	50	769	30,682
Cheques and bills of other banks .. .. .	19,402	..	1,931	..	..	..	21,333
Commonwealth Government securities (including Commonwealth Treasury Bills) .. .. .	206,620	215,261	27,662	..	200	..	449,743
Securities of other Governments, and of local and semi-governmental authorities .. .. .	59,932	..	..	..	..	..	59,932
Bills receivable and remittances in transit .. .. .	1,020	..	22,107	..	..	..	23,127
Bank premises at cost less amounts written off .. .. .	236	..	2,023	..	..	..	2,259
Loans, advances, bills discounted, and other assets (after deducting debts considered bad or doubtful) .. .. .	90,395	93	63,565	39,387	4,605	24,068	159,750
Total Assets .. .. .	583,331	309,037	148,057	39,387	4,855	24,837	1,046,323

(a) Inter-departmental accounts totalling £63,181,000 have been offset in the combined figures.  
(b) Includes £22 million deposit of General Banking Division with Central Bank.

(xi) *Profits.* Net profits of the various Departments of the Commonwealth Bank for the years 1938-39 and 1947-48 to 1951-52 were as follows:—

**COMMONWEALTH BANK : NET PROFITS.**  
(£'000.)

Year ended 30th June—	General Bank Department.	Central Banking Business. (a)	Note Issue Department.	General Banking Division. (a)	Rural Credits Department.	Mortgage Bank Department. (b)	Industrial Finance Department. (c)	Total.
1939 .. .. .	356	..	767	..	32	..	..	1,155
1948 .. .. .	..	901	4,237	377	34	34	57	5,640
1949 .. .. .	..	975	4,610	419	39	36	165	6,244
1950 .. .. .	..	970	4,333	436	95	42	250	6,126
1951 .. .. .	..	1,282	3,544	445	85	47	287	5,690
1952 .. .. .	..	2,274	3,881	352	97	49	290	6,943

(a) Created 21st August, 1945. Previously combined under General Bank Department.  
(b) Commenced business 27th September, 1943. (c) Commenced business 2nd January, 1940.

The distribution of these profits for the years ended 30th June, 1948 to 1952 is given in the following table:—

**COMMONWEALTH BANK : DISTRIBUTION OF PROFITS.**  
(£'000.)

To—	1948.	1949.	1950.	1951.	1952.
National Debt Sinking Fund	639	697	703	863	1,313
Commonwealth Consolidated Revenue Fund ..	4,087	4,460	4,182	3,394	3,381
Commonwealth Bank Reserve Fund .. .. .	225	244	243	345	637
General Banking Division—					
Capital Account .. .. .	..	..	..	..	286
Reserve Fund .. .. .	188	209	218	222	176
Rural Credits Department—					
Capital Account .. .. .	..	..	..	..	143
Reserve Fund .. .. .	17	19	48	43	48
Development Fund .. ..	17	19	48	43	48
Mortgage Bank Department—					
Capital Account .. .. .	375	394	393	446	285
Reserve Fund .. .. .	35	36	41	47	50
Industrial Finance Department—					
Capital Account .. .. .	..	..	..	..	286
Reserve Fund .. .. .	57	166	250	287	290
<b>Total .. .. .</b>	<b>5,640</b>	<b>6,244</b>	<b>6,126</b>	<b>5,690</b>	<b>6,943</b>

(xii) *Central Banking Business—Average Liabilities and Assets.* The average liabilities and assets of the Central Banking Business and Note Issue Department of the Commonwealth Bank for the years ended June, 1946 to 1952 are shown in the two tables which follow.

COMMONWEALTH BANK : CENTRAL BANKING BUSINESS (INCLUDING NOTE ISSUE DEPARTMENT)—AVERAGE LIABILITIES.

(£'000.)

Year ended June—	Capital and Reserve Funds.	Notes on Issue.	Special Accounts of Trading Banks.	Other Deposits of Trading Banks.	Other Liabilities.	Total Liabilities.
1946 (a) .. .. .	10,537	193,813	241,842	26,864	144,385	617,441
1947 .. .. .	9,782	199,402	266,951	24,063	122,101	622,299
1948 .. .. .	9,437	198,090	263,688	28,018	142,014	641,247
1949 .. .. .	9,653	203,561	323,930	29,764	174,647	741,555
1950 .. .. .	9,898	222,198	379,632	30,661	200,345	842,734
1951 .. .. .	10,127	251,770	503,248	34,696	238,230	1,038,071
1952 .. .. .	10,450	293,639	468,800	31,112	270,937	1,074,938

(a) Ten months ended June, 1946.

COMMONWEALTH BANK : CENTRAL BANKING BUSINESS (INCLUDING NOTE ISSUE DEPARTMENT)—AVERAGE ASSETS.

(£'000.)

Year ended June—	Gold and Balances held Abroad.	Australian Coin.	Cheques and Bills of other Banks.	Government and other Securities (including Commonwealth Treasury Bills.)	Bills Receivable and Remittances in Transit.	Other Assets.	Total Assets.
1946 (a) .. .. .	181,594	3,266	2,294	418,266	1,833	10,188	617,441
1947 .. .. .	217,642	3,365	2,603	392,217	320	6,152	622,299
1948 .. .. .	196,694	5,186	3,099	419,857	80	16,331	641,247
1949 .. .. .	336,175	4,040	3,732	356,260	47	41,301	741,555
1950 .. .. .	434,018	3,795	4,102	348,965	81	51,773	842,734
1951 .. .. .	596,276	3,370	5,791	366,570	105	65,959	1,038,071
1952 .. .. .	470,644	2,164	6,321	503,089	85	92,635	1,074,938

(a) Ten months ended June, 1946.

(xiii) *General Banking Division—Average Liabilities and Assets within Australia.* The average liabilities and assets within Australia of the General Banking Division of the Commonwealth Bank for the years ended June, 1946 to 1952 are shown in the tables below.

In previous issues of the Official Year Book these tables related to the combined assets and liabilities of the General Banking Division and the Rural Credits, Mortgage Bank and Industrial Finance Departments. In this issue only the assets and liabilities of the General Banking Division are included. By excluding the three specialized departments a clearer picture is given of the commercial banking activities of the Commonwealth Bank carried on through the General Banking Division. Between March and July, 1952, a change was made in the asset structure of the General Banking Division. During this period certain loans to building societies and *crédit foncier* loans for housing were transferred to the Savings Bank in exchange for Government securities. The reduction in these loans (held by the General Banking Division) over this period was approximately £24,000,000. In addition, at the end of June, 1952 the General Banking Division opened in the books of the Central Bank a deposit account with a balance approximating the amount that would be required if it were subject to the Special Account provisions of the Banking Act 1945. This represents a change in the form of liquid assets which were previously held predominantly in Treasury Bills. The amount of this deposit at 30th June, 1952, was £22,000,000.

**COMMONWEALTH BANK : GENERAL BANKING DIVISION—AVERAGE  
LIABILITIES WITHIN AUSTRALIA.(a)**  
(£'000.)

Year ended June—	Inter- minable Deposits or Deposit Stock.	Deposits.			Notes in Cir- culation.	Balances due to other Banks.	Bills payable and all other Li- abilities to the Public.	Total Li- abilities.
		Not Bearing Interest.	Bearing Interest.	Total.				
1946 (b)	..	35,300	21,101	56,401	..	342	2,761	59,504
1947 ..	..	40,725	17,574	58,299	..	352	1,420	60,071
1948 ..	..	43,712	13,873	57,585	..	336	1,729	59,650
1949 ..	..	51,074	13,214	64,288	..	1,503	4,022	69,813
1950 ..	..	62,530	14,775	77,305	..	2,724	6,557	86,586
1951 ..	..	89,234	19,405	108,639	..	3,014	7,950	119,603
1952 ..	..	90,595	20,093	110,688	..	2,644	8,524	121,856

(a) Includes Territories of Papua and New Guinea.

(b) Ten months ended June, 1946.

**COMMONWEALTH BANK : GENERAL BANKING DIVISION—AVERAGE ASSETS  
WITHIN AUSTRALIA.(a)**  
(£'000.)

Year ended June—	Cash and Cash Bal- ances.	Special Account with Com- mon- wealth Bank.	Balances with other Banks. (b)	Australian Public Securities.		Other Securi- ties.	Loans, Ad- vances, and Bills Dis- counted.	All other Assets.	Total Assets.
				Trea- sury Bills.	Other.				
1946 (c)	7,321	..	195	4,198	33,597	..	17,759	1,684	64,754
1947 ..	6,553	..	230	1,909	34,302	..	20,383	1,829	65,206
1948 ..	6,640	..	280	245	32,131	..	23,378	1,942	64,616
1949 ..	6,082	..	392	..	34,138	..	31,816	1,903	74,331
1950 ..	6,166	..	512	1,962	35,353	..	45,308	1,877	91,178
1951 ..	7,176	..	820	24,049	26,868	..	62,491	3,348	123,752
1952 ..	6,581	..	994	26,392	13,274	2	76,407	3,230	126,880

(a) Includes Territories of Papua and New Guinea.

(b) Includes notes, cheques and bills of other banks.

(c) Ten months ended June, 1946.

6. **Private Trading Banks.**—(i) *Average Liabilities and Assets in Australia.* The average liabilities and assets within Australia of the Private Trading Banks (see page 617 for list of banks) for the years ended June, 1939 and 1948 to 1952 are shown in the following tables:—

**PRIVATE TRADING BANKS : AVERAGE LIABILITIES WITHIN AUSTRALIA.**  
(£'000.)

Year ended June—	Inter- minable Deposits or Deposit Stock.	Deposits.			Notes in Cir- culation.	Balances due to other Banks.	Bills payable and all other Liabilities to the Public.	Total Li- abilities.
		Not Bearing Interest.	Bearing Interest.	Total.				
1939 ..	2,644	a 118,868	198,793	317,661	167	921	(b) 3,005	324,398
1948 ..	732	471,604	201,892	673,496	158	11,934	8,423	694,743
1949 ..	729	565,140	211,262	776,402	158	32,522	10,576	820,387
1950 ..	729	685,587	224,477	910,064	158	33,227	13,323	957,501
1951 ..	729	896,499	247,727	1,144,226	158	50,259	18,240	1,213,612
1952 ..	729	963,524	238,217	1,201,741	158	61,527	14,970	1,279,125

(a) Includes other Liabilities.

(b) Excludes other Liabilities.

PRIVATE TRADING BANKS : AVERAGE ASSETS WITHIN AUSTRALIA.  
( £'000.)

Year ended June—	Cash and Cash Balances.	Special Account with Common-wealth Bank.	Balances with other Banks. (a)	Australian Public Securities.		Other Securities.	Loans, Advances and Bills Discounted.	All other Assets.	Total Assets.
				Treasury Bills.	Other.				
1939 .. ..	33,597	..	3,938	21,533	<i>b</i> 20,477	(c)	<i>d</i> 288,109	(e)9,421	377,075
1948 .. ..	44,390	262,258	12,254	18,089	65,606	<i>f</i> 1,874	329,850	17,154	751,475
1949 .. ..	48,016	322,670	14,267	22,111	61,455	742	308,582	20,213	858,056
1950 .. ..	51,960	377,006	17,683	26,502	83,813	536	403,890	18,272	979,662
1951 .. ..	59,333	500,317	23,761	36,887	90,244	1,126	479,322	18,988	1,209,978
1952 .. ..	60,589	465,991	29,140	32,402	68,416	1,124	621,435	33,151	1,312,248

(a) Includes notes, cheques and bills of other banks. (b) Government and Municipal Securities. (c) Included with Loans, Advances and Bills Discounted. (d) See footnotes (c) and (e). (e) Landed and House Property only. Other assets included with Loans, Advances and Bills Discounted. (f) Includes shares held by National Bank of Australasia Ltd. in Queensland National Bank Ltd. (in voluntary liquidation).

(ii) *Ratios of Assets and Liabilities to Total Deposits.* The following table shows, for the Private Trading Banks, the ratios of certain assets and liabilities to total deposits for the years ended June, 1939 and 1948 to 1952. The ratios are based on the average liabilities and assets for the years shown.

PRIVATE TRADING BANKS : RATIOS OF AVERAGE ASSETS AND LIABILITIES TO AVERAGE TOTAL DEPOSITS.  
(Per cent.)

Year ended June—	Cash and Cash Balances.	Treasury Bills.	Government and Municipal Securities. (a)	Special Account with Common-wealth Bank.	Advances.	Deposits.	
						Not Bearing Interest.	Bearing Interest.
1939 .. ..	10.6	6.8	6.5	..	90.7	37.4	62.6
1948 .. ..	6.6	2.7	9.7	35.9	49.0	70.0	30.0
1949 .. ..	6.2	2.9	7.9	41.6	47.5	72.8	27.2
1950 .. ..	5.7	2.9	9.2	41.4	44.4	75.3	24.7
1951 .. ..	5.2	3.2	7.8	43.7	41.9	78.4	21.6
1952 .. ..	5.0	2.7	5.7	38.8	51.7	80.2	19.8

(a) Excludes Treasury Bills.

(iii) *Proportion of Non-Interest Bearing to Total Deposits.* The following table shows, for each State, the proportion of non-interest bearing deposits to total deposits with the Private Trading Banks for each of the years ended June, 1939 and 1948 to 1952. The ratios are based on the average deposits for the years shown.

PRIVATE TRADING BANKS : PROPORTION OF NON-INTEREST BEARING DEPOSITS TO TOTAL DEPOSITS.  
(Per cent.)

Year ended June—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Total. (a)
1939 .. ..	43.5	30.3	45.4	26.1	45.7	36.5	61.1	23.2	37.4
1948 .. ..	72.3	68.5	73.3	58.8	73.0	66.3	81.0	53.3	70.0
1949 .. ..	75.2	71.0	75.7	63.0	75.9	67.5	81.3	58.4	72.8
1950 .. ..	77.9	73.7	77.9	64.9	77.9	70.1	83.9	68.7	75.3
1951 .. ..	81.3	75.8	80.9	69.8	80.5	74.6	83.2	76.2	78.4
1952 .. ..	83.1	77.8	82.5	72.0	83.1	75.6	84.7	78.4	80.2

(a) Includes Papua and New Guinea for 1948 and following periods.



(iv) *Ratio of Advances to Total Deposits.* The ratio of advances to total deposits, for each State for the years ended June, 1939 and 1948 to 1952, is shown in the following table. The ratios are based on the averages of deposits and advances for the years shown.

**PRIVATE TRADING BANKS : RATIO OF ADVANCES TO TOTAL DEPOSITS.**  
(Per cent.)

Year ended June—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Total. (a)
1939 .. ..	104.5	71.6	99.2	77.6	155.5	57.0	24.5	37.7	90.7
1948 .. ..	53.3	48.2	46.3	37.2	52.1	41.0	31.9	23.6	49.0
1949 .. ..	50.8	50.3	44.9	29.1	42.0	50.9	55.1	25.5	47.5
1950 .. ..	44.5	47.6	40.4	29.6	39.4	48.5	35.0	22.1	44.4
1951 .. ..	41.9	43.0	49.0	28.3	36.4	44.0	30.5	21.3	41.9
1952 .. ..	54.5	52.1	60.0	33.0	41.5	48.4	29.6	26.4	51.7

(a) Includes Papua and New Guinea for 1948 and following periods.

7. *Other Cheque-paying Banks.—Average Liabilities and Assets within Australia.* The average liabilities and assets within Australia of "other cheque-paying banks" (see page 617 for list of these banks) for the years ended June, 1946 to 1952 are shown in the following tables.

**OTHER CHEQUE-PAYING BANKS : AVERAGE LIABILITIES WITHIN AUSTRALIA.**  
(£'000.)

Year ended June—	Inter-minable Deposits or Deposit Stock. (a)	Deposits.			Notes in Circulation.	Balances due to other Banks.	Bills payable and all other Liabilities to the Public.	Total Liabilities.
		Not Bearing Interest.	Bearing Interest.	Total.				
1946 (b) ..	12,583	7,740	5,013	12,753	..	74	505	25,915
1947 .. ..	12,322	9,975	5,079	15,954	..	93	295	27,761
1948 (c) ..	16,476	12,522	5,434	17,956	..	411	456	35,299
1949 .. ..	20,559	18,385	7,336	25,721	..	357	776	47,413
1950 .. ..	20,206	23,025	10,080	33,105	..	174	1,245	54,730
1951 .. ..	20,056	31,947	12,421	44,368	..	194	1,594	66,212
1952 .. ..	19,336	37,445	13,369	50,814	..	504	1,478	72,132

(a) Inscribed stock and debentures, Rural Bank of New South Wales and State Bank of South Australia. (b) Ten months ended June, 1946. (c) From March, 1948, the General Bank Department of the Rural Bank of New South Wales has been included. Previously only the Rural Bank Department was included.

**OTHER CHEQUE-PAYING BANKS : AVERAGE ASSETS WITHIN AUSTRALIA.**  
(£'000.)

Year ended June—	Cash and Cash Balances.	Special Account with Commonwealth Bank.	Balances with other Banks. (a)	Australian Public Securities.		Other Securities.	Loans, Advances and Bills Discounted.	All other Assets. (b)	Total Assets.
				Treasury Bills.	Other.				
1946 (c) ..	1,850	1,918	2,388	965	7,772	217	16,795	1,259	33,164
1947 .. ..	2,518	1,960	1,638	730	8,478	265	22,868	2,341	40,798
1948 (d) ..	3,128	1,430	1,150	869	10,546	179	31,470	2,614	51,386
1949 .. ..	4,172	1,260	1,437	1,872	13,676	167	39,783	2,793	65,166
1950 .. ..	4,039	2,626	1,188	1,048	13,135	225	46,236	3,890	72,387
1951 .. ..	4,852	3,271	1,760	3,087	12,375	185	56,604	4,613	86,747
1952 .. ..	5,104	2,612	1,800	2,925	14,880	111	61,816	5,423	94,671

(a) Includes notes, cheques and bills of other banks. (b) Includes Rural and Industries Bank of Western Australia and State Bank of South Australia accounts with State Treasuries. (c) Ten months ended June, 1946. (d) See footnote (c) to table above.

8. All Cheque-paying Banks.—(i) *General*. Particulars of the average liabilities and assets within Australia of all cheque-paying banks in Australia, including the General Banking Division only of the Commonwealth Bank of Australia, are given in the following paragraph. The Central Banking business of the Commonwealth Bank of Australia is excluded. A change has been made in the assets and liabilities of the Commonwealth Bank included in these tables. Details of this change are given in § 1 para. 5 (xiii), page 623.

(ii) *Average Liabilities and Assets within Australia*. The following tables show the average liabilities and assets within Australia of all cheque-paying banks for the years ended June, 1946 to 1952.

ALL CHEQUE-PAYING BANKS : AVERAGE LIABILITIES WITHIN AUSTRALIA.(a)  
(£'000.)

Year ended June—	Inter-mine- Deposits or Deposit Stock.	Deposits.			Notes in Cir- culation.	Bal- ances due to other Banks.	Bills payable and all other Liabilities to the Public.	Total Li- abilities.
		Not Bearing Interest.	Bearing Interest.	Total.				
1946 (b) ..	14,239	436,561	245,824	682,385	166	1,649	9,956	708,395
1947 ..	13,211	480,449	229,515	709,964	159	2,193	9,307	735,034
1948 ..	17,208	527,838	221,199	749,037	158	12,681	10,608	780,692
1949 ..	21,288	634,599	231,812	866,411	158	34,382	15,374	937,613
1950 ..	20,935	771,142	249,332	1,020,474	158	36,125	21,125	1,098,817
1951 ..	20,785	1,017,680	279,553	1,297,233	158	53,467	27,784	1,399,427
1952 ..	20,065	1,091,564	271,679	1,363,243	158	64,675	24,972	1,473,113

(a) Includes Territories of Papua and New Guinea.

(b) Ten months ended June, 1946.

ALL CHEQUE-PAYING BANKS : AVERAGE ASSETS WITHIN AUSTRALIA.(a)  
(£'000.)

Year ended June—	Cash and Cash Bal- ances.	Special Account with Com- mon- wealth Bank.	Bal- ances with other Banks.	Australian Public Securities.		Other Securi- ties.	Loans, Ad- vances and Bills Dis- counted.	All other Assets.	Total Assets.
				Trea- sury Bills.	Other.				
1946 (b) ..	48,310	241,843	11,507	67,170	158,642	383	246,062	15,553	790,070
1947 ..	46,998	266,951	12,170	28,470	137,807	429	304,391	18,450	815,666
1948 ..	54,158	263,688	13,684	19,203	108,283	2,053	384,698	21,710	867,477
1949 ..	58,270	323,930	16,096	23,983	109,269	909	440,181	24,909	997,547
1950 ..	62,165	379,632	19,383	29,512	132,301	761	495,434	24,039	1,143,227
1951 ..	71,361	593,588	26,341	64,923	129,187	1,311	598,117	25,949	1,420,977
1952 ..	72,274	468,603	31,934	61,719	96,570	1,237	759,658	41,804	1,533,799

(a) Includes Territories of Papua and New Guinea.

(b) Ten months ended June, 1946.

9. Classification of Advances within Australia—Commonwealth Bank and Private Trading Banks.—(i) *States, June, 1952*. A dissection of advances made by the Commonwealth Bank (General Banking Division) and the Private Trading Banks at the end of June, 1952, is shown in the following table. Business advances, which have been classified according to the main industry of the borrower, are those made mainly for business purposes and include all loans to corporate bodies other than public authorities. Advances made to public authorities are those made to Commonwealth and State Governments, Government Agencies and Local and Semi-governmental Authorities irrespective of the purpose of the advance or the industry in which the authority is engaged. Personal advances, which have been classified according to purpose, include advances to persons in their private capacity for such purposes as the purchase of a house or of household equipment, repayment of personal debts, etc. This table in previous issues, included advances of the Rural Credits, Mortgage Bank and Industrial Finance Departments of the Commonwealth Bank. Details of this change and other changes affecting the advances of the Commonwealth Bank, General Banking Division are given in § 1 para. 5 (xiii), page 623.

## COMMONWEALTH BANK(a) AND PRIVATE TRADING BANKS: CLASSIFICATION OF ADVANCES WITHIN AUSTRALIA(b)—STATES, END OF JUNE, 1952.

(£'000.)

Classification.	N.S.W. (c)	Vic.	Q'land. (b)	S. Aust. (d)	W.Aust.	Tas.	Total Aust. (b)	Proportion of Total.
<b>A. BUSINESS ADVANCES CLASSIFIED ACCORDING TO MAIN INDUSTRY OF BORROWER.</b>								
1. Agriculture, Dairying and Grazing—								%
Mainly Sheep Grazing ..	29,536	11,067	4,529	3,177	2,539	610	51,458	6.83
Mainly Cattle Grazing ..	3,455	1,830	7,053	423	423	204	13,388	1.78
Mainly Wheat Growing ..	6,570	2,203	2,086	1,338	2,658	18	14,873	1.97
Mainly Sugar Growing ..	250	11	7,589	..	..	..	7,850	1.04
Mainly Fruit Growing ..	1,419	2,004	1,331	857	660	407	6,678	0.89
Mainly Dairying and Pig Raising ..	9,449	10,443	13,958	1,374	2,033	672	37,929	5.03
Other Rural ..	3,655	2,797	3,173	772	688	647	11,732	1.56
Total Class 1 ..	54,334	30,355	39,719	7,941	9,001	2,558	143,908	19.10
2. Manufacturing ..	81,565	78,639	18,149	8,103	3,919	2,969	193,344	25.66
3. Transport, Storage and Communication ..	4,614	4,290	2,327	644	871	539	13,285	1.76
4. Finance and Property—Builders and Contractors ..	6,797	5,367	2,254	736	788	559	16,501	2.19
Building Investment Companies and Building Societies, etc. ..	11,000	8,719	727	281	220	103	21,050	2.79
Other (Banking, Insurance, etc.)(e) ..	11,096	12,291	4,437	1,954	1,966	1,099	32,843	4.36
Total Class 4 ..	28,893	26,377	7,418	2,971	2,974	1,761	70,394	9.34
5. Commerce—								
Retail Trade ..	26,717	16,818	8,854	3,806	4,377	2,285	62,857	8.34
Wholesale Trade ..	31,710	27,072	4,209	11,616	2,966	851	78,424	10.41
Total Class 5 ..	58,427	43,890	13,063	15,422	7,343	3,136	141,281	18.75
6. Miscellaneous(f) ..	14,996	12,970	6,704	1,951	2,531	1,418	40,570	5.38
7. Not elsewhere specified ..	2,654	2,068	1,175	392	503	447	7,239	0.97
Total ..	245,483	198,589	88,555	37,424	27,142	12,828	610,021	80.96

**B. ADVANCES TO PUBLIC AUTHORITIES.**

Public Authority Advances (including Government, Semi-Governmental and Municipal Bodies) ..	5,592	6,980	2,162	295	104	786	15,919	2.11
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**C. PERSONAL ADVANCES CLASSIFIED ACCORDING TO MAIN PURPOSE OF ADVANCE.**

1. Advances for building or purchasing own home (Individuals) ..	38,611	26,549	12,081	2,634	5,466	2,250	87,591	11.63
2. All other (including Personal Loans) ..	17,517	13,022	4,651	1,724	2,285	756	39,955	5.30
Total ..	56,128	39,571	16,732	4,358	7,751	3,006	127,546	16.93

**TOTAL ADVANCES.**

Grand Total ..	307,203	245,140	107,449	42,077	34,997	16,620	753,486	100.00
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(a) General Banking Division. (b) Includes Papua and New Guinea. (c) Includes Australian Capital Territory. (d) Includes Northern Territory. (e) Includes trustee, pastoral finance and cash order companies, friendly societies, stockbrokers, real estate agents, etc. (f) Includes (i) fishing, hunting, trapping and forestry; (ii) mining and quarrying; (iii) legal and other professions, religious, charitable and benevolent institutions, hospitals, schools and industrial and trade associations; (iv) amusements, wireless broadcasting, sporting associations and promoters; and (v) hotels, boarding houses and restaurants, laundries, social clubs, etc.

(ii) *Australia, June, 1949 to June, 1952.* The following table provides a dissection of advances within Australia (including Papua and New Guinea). In this table advances of the Rural Credits, Mortgage Bank and Industrial Finance Departments (included in previous issues of the Official Year Book) have been excluded. Details of other changes in the advances of the Commonwealth Bank (General Banking Division) are given in § 1 para. 5 (xiii), page 623.

**COMMONWEALTH BANK(a) AND PRIVATE TRADING BANKS: CLASSIFICATION OF ADVANCES WITHIN AUSTRALIA(b)—AMOUNT AND PROPORTION OF EACH CLASS TO TOTAL.**

Classification.	At End of—							
	June, 1949.		June, 1950.		June, 1951.		June, 1952.	
	Amount (£'000.)	Per cent.	Amount (£'000.)	Per cent.	Amount (£'000.)	Per cent.	Amount (£'000.)	Per cent.
<b>BUSINESS ADVANCES CLASSIFIED ACCORDING TO MAIN INDUSTRY OF BORROWER.</b>								
1. Agricultural, Dairying and Grazing—								
Mainly Sheep	41,216	9.6	40,065	8.2	41,356	7.1	51,458	6.8
Mainly Cattle	9,270	2.2	9,230	1.9	10,722	1.8	13,388	1.8
Mainly Wheat	14,071	3.3	16,030	3.3	14,372	2.5	14,873	2.0
Mainly Sugar	4,735	1.1	5,702	1.2	6,904	1.2	7,850	1.0
Mainly Fruit	5,196	1.2	6,297	1.3	6,401	1.1	6,673	0.9
Mainly Dairying and Pig Raising	27,362	6.4	31,537	6.5	35,438	6.0	37,929	5.0
Other Rural	7,501	1.7	8,982	1.8	9,863	1.7	11,732	1.6
Total Class 1	109,351	25.5	117,843	24.2	125,056	21.4	143,908	19.1
2. Manufacturing	96,480	22.5	92,932	19.1	114,018	19.5	193,344	25.7
3. Transport, Storage and Communication	8,903	2.1	10,601	2.2	12,771	2.2	13,285	1.8
4. Finance and Property—								
Builders and Contractors	9,081	2.1	11,681	2.4	15,351	2.6	16,501	2.2
Building Investment Companies and Building Societies, etc.	15,022	3.5	21,082	4.3	27,177	4.6	21,050	2.8
Other (Banking, Insurance, etc.)(c)	21,871	5.1	22,526	4.6	23,301	4.0	32,843	4.3
Total Class 4	45,974	10.7	55,289	11.3	65,829	11.2	70,394	9.3
5. Commerce—								
Retail Trade	31,555	7.4	36,530	7.5	45,719	7.8	62,857	8.3
Wholesale Trade	29,994	7.0	33,516	6.9	41,957	7.2	78,424	10.4
Total Class 5	61,549	14.4	70,046	14.4	87,676	15.0	141,281	18.7
6. Miscellaneous(d)	26,937	6.3	31,665	6.5	33,857	5.8	40,570	5.4
7. Not elsewhere specified	2,741	0.6	3,276	0.7	4,901	0.8	7,239	1.0
Total	351,905	82.1	381,652	78.4	444,108	75.9	610,021	81.0

**ADVANCES TO PUBLIC AUTHORITIES.**

Public Authority Advances (including Government, Semi-Governmental and Municipal Bodies)	6,415	1.5	6,124	1.3	9,477	1.6	15,919	2.1
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**PERSONAL ADVANCES CLASSIFIED ACCORDING TO MAIN PURPOSE OF ADVANCE.**

1. Advances for Building or purchasing own home (Individuals)	46,632	10.9	68,335	14.0	94,427	16.1	87,591	11.6
2. All other (including Personal Loans)	23,804	5.5	30,441	6.3	37,357	6.4	39,955	5.3
Total	70,436	16.4	98,776	20.3	131,784	22.5	127,546	16.9

**TOTAL ADVANCES.**

Grand Total	428,756	100.0	486,552	100.0	585,369	100.0	753,486	100.0
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(a) General Banking Division. (b) Includes Papua and New Guinea. (c) Includes trustee, pastoral, finance and cash order companies, friendly societies, stockbrokers, real estate agents, etc. (d) Includes (i) fishing, hunting, trapping and forestry; (ii) mining and quarrying; (iii) legal and other professions, religious, charitable and benevolent institutions, hospitals, schools and industrial and trade associations; (iv) amusements, wireless broadcasting, sporting associations and promoters; and (v) hotels, boarding houses and restaurants, laundries, social clubs, etc.

10. Interest on Deposits: Rates—Cheque-Paying Banks.—Particulars of interest rates for fixed deposits since 1936 are shown hereunder.

**BANK FIXED DEPOSIT RATES: AUSTRALIA.**  
(Per cent. per annum.)

Dates from which Rates Operated.	Deposits for—			
	Three Months.	Six Months.	Twelve Months.	Two Years.
24th March, 1936 (a) .. .. .	2	2½	2¾	3
24th January, 1940 .. .. .	1¾	2¼	2½	2¾
28th May, 1940 .. .. .	1½	2	2¼	2½
22nd September, 1941 .. .. .	1½	1¾	2	2¼
14th March, 1942 .. .. .	1½	1½	1¾	2
17th January, 1944 .. .. .	1	1¼	1½	2
11th August, 1944 .. .. .	1½	¾	1	1¾
1st December, 1945 .. .. .	1	¾	1	(b) 1½
29th July, 1952 .. .. .	1	1¼	1½	(c) 1¾

(a) Commonwealth Bank only. Bank of New South Wales from 2nd March and Bank of Adelaide from 3rd March, 1936. (b) On first £10,000; rate on amount in excess of £10,000 is 1 per cent. (c) On first £10,000; rate on amount in excess of £10,000 is 1½ per cent.

11. Clearing House Returns—Average Weekly Clearings.—The average weekly clearings in each capital city for the years ended June, 1939 and 1948 to 1952 are shown in the following table.

**BANK CLEARINGS(a): AVERAGE WEEKLY CLEARINGS.**  
(£'000.)

Year ended June—	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Total.
1939 .. .. .	17,832	15,415	4,212	2,953	2,055	623	43,090
1948 .. .. .	44,786	41,237	9,288	8,038	4,892	1,543	109,784
1949 .. .. .	53,519	48,870	11,131	9,663	6,039	1,778	131,000
1950 .. .. .	64,909	61,003	13,278	11,604	7,458	2,116	160,368
1951 .. .. .	88,588	82,022	18,046	15,957	10,809	2,885	218,307
1952 .. .. .	92,557	86,022	17,478	17,226	11,425	2,980	227,688

(a) Excludes transactions connected with the issue and redemption of Treasury Bills.

12 Debits to Customers' Accounts—All Cheque-Paying Banks.—Statistics of debits to customers' accounts have been collected since September, 1945. Generally they represent the total of all cheques drawn by the customers of the banks. In the following table are shown the average weekly debits to customers' accounts of all cheque-paying banks for each State for the years ended June, 1948 to 1952. In this table debits to accounts of Australian Governments in capital cities are excluded as they are subject to abnormal influences and are not uniform for each State.

**AVERAGE WEEKLY DEBITS TO CUSTOMERS' ACCOUNTS: ALL CHEQUE-PAYING BANKS.**

(Excluding Debits to Australian Government Accounts in Capital Cities.)  
(£'000.)

Year ended June—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
1948 (a) .. .. .	69,360	61,197	19,864	12,710	8,071	3,947	142	175,891
1949 .. .. .	83,082	74,267	24,365	15,481	10,696	4,699	205	212,795
1950 .. .. .	104,876	97,758	29,482	19,326	13,744	5,605	265	271,056
1951 .. .. .	145,110	134,925	39,011	26,844	19,250	7,370	373	372,883
1952 .. .. .	156,603	142,358	41,516	30,791	21,810	8,856	471	402,405

(a) From January, 1948 excludes debits to Customers' Accounts relating to the transfer of accounts from the Queensland National Bank Ltd. (in voluntary liquidation) to the National Bank of Australasia Ltd.

13. Rates of Exchange.—(i) *Overseas Exchange Rates.* In the following table the average telegraphic transfer rates of exchange for Sydney on a number of overseas countries are shown. For the year 1938-39 the rates quoted are the averages of quotations at the end of each month; for subsequent years they are averages of daily quotations. Generally the averages are based on rates quoted by the Commonwealth Bank of Australia, but where these were not available rates quoted by other Australian Banks have been used.

OVERSEA EXCHANGE RATES : AVERAGE TELEGRAPHIC TRANSFER RATES FOR SYDNEY ON OVERSEA COUNTRIES. (a)

Country.	Basis of Quotation.	Rate.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
United Kingdom	£A. to £Stg.100	{ Buying	125.000	125.000	125.000	125.000	125.000	125.000
		{ Selling	125.500	125.500	125.500	125.500	125.500	125.500
New Zealand ..	£A. to £N.Z.100	{ Buying	100.063	100.000	120.638	124.000	124.000	124.000
		{ Selling	100.594	100.500	121.171	124.538	124.538	124.538
South Africa ..	£A. to £S.A.100	{ Buying	123.848	124.125	124.125	124.125	124.125	124.204
		{ Selling	125.546	125.625	125.625	125.625	125.625	125.704
Fiji ..	£A. to £F.100	{ Buying	111.125	111.125	111.125	111.125	111.125	111.125
		{ Selling	113.000	113.000	113.000	113.000	113.000	113.000
New York ..	Dollars to £A.1	{ Buying	3.7945	3.2350	3.2298	2.4611	2.2425	2.2391
		{ Selling	3.7581	3.2002	3.2041	2.4445	2.2275	2.2242
Montreal ..	Dollars to £A.1	{ Buying	3.8063	3.2360	3.2301	2.6373	2.3910	2.2851
		{ Selling	3.7797	3.1992	3.2039	2.6183	2.3732	2.2699
France ..	Francs to £A.1	{ Buying	142.29	<sup>b</sup> 470.23	811.29	809.38	788.38	787.21
		{ Selling	141.21	508.98	798.67	797.23	776.50	776.08
Switzerland ..	Francs to £A.1	{ Buying	16.778	13.938	13.938	10.748	9.843	9.826
		{ Selling	16.590	13.766	13.766	10.607	9.710	9.701
Belgium ..	Francs to £A.1	{ Buying	112.22	142.35	142.35	123.59	112.84	112.71
		{ Selling	110.94	139.68	139.68	121.26	110.71	110.57
Holland ..	Florins to £A.1	{ Buying	7.046	8.605	8.605	8.574	8.565	8.532
		{ Selling	6.943	8.465	8.465	8.434	8.425	8.397
Denmark ..	Kroner to £A.1	{ Buying	18.02	15.59	15.59	15.59	15.59	15.59
		{ Selling	17.78	15.29	15.29	15.29	15.29	15.29
Norway ..	Kroner to £A.1	{ Buying	16.01	16.12	16.12	16.12	16.12	16.11
		{ Selling	15.8c	15.82	15.82	15.82	15.82	15.82
Sweden ..	Kroner to £A.1	{ Buying	15.623	11.665	11.665	11.665	11.665	11.663
		{ Selling	15.406	11.465	11.465	11.465	11.465	11.470
Java ..	Guilders to £A.1	{ Buying	7.030	(c)	(c)	(c)	(c)	(c)
		{ Selling	6.939	8.465	8.465	(d) 8.438	(c)	(c)
Manila ..	Pesos to £A.1	{ Buying	7.659	6.533	6.529	(e) 4.996	(e) 4.540	(c)
		{ Selling	7.528	6.417	6.413	(f) 4.886	4.442	4.427
Hong Kong ..	Pence (Aust.) to 1 Dollar	{ Buying	18.526	18.609	18.587	18.488	18.569	18.591
		{ Selling	18.883	18.969	18.952	18.834	18.897	18.789
India ..	Pence (Aust.) to 1 Rupee	{ Buying	22.287	22.328	22.328	22.328	22.328	22.328
		{ Selling	22.604	22.766	22.766	22.766	22.766	22.766
Pakistan ..	Pence (Aust.) to 1 Rupee	{ Buying	(g)	22.328	22.328	31.507	32.172	32.172
		{ Selling	(g)	22.766	22.766	32.017	32.688	32.688
Ceylon ..	Pence (Aust.) to 1 Rupee	{ Buying	(g)	22.328	22.328	22.328	22.328	22.343
		{ Selling	(g)	22.766	22.766	22.766	22.766	22.788
Noumea ..	Francs to £A.1	{ Buying	(c)	(c)	(c)	(c)	(c)	(c)
		{ Selling	(c)	<sup>h</sup> 159.00	159.00	145.64	141.75	140.84
Singapore ..	Pence (Aust.) to 1 Dollar	{ Buying	34.706	35.019	34.930	34.891	34.977	34.955
		{ Selling	35.224	35.539	35.484	35.442	35.536	35.526

(a) Years ended 30th June. (b) No quotations 27th January to 13th April. (c) No quotations. (d) No quotations from 14th March, 1950. (e) No quotations 4th January to 5th March, 1950. In 1950-51 quoted for 3 days only. (f) No quotations 4th January to 23rd February, 1950. (g) Part of India. (h) Five months.

(ii) *Interstate Exchange Rates.* Exchange rates between the capital cities and towns of each of the States and other States or parts thereof at 30th June, 1952, are shown below. Rates varied from 2s. 6d. per £100 between the nearer locations to 10s. per £100 between those more widely separated.

**INTERSTATE BANK EXCHANGE RATES, 30th JUNE, 1952.(a)**  
(s. d. per £100.)

Between—	And—					Tasmania.
	New South Wales.	Victoria.	Brisbane and adjacent towns.	South Australia.	Perth and all but distant towns.	
Sydney and New South Wales towns . . . . .	..	2 6	2 6	5 0	7 6	5 0
Melbourne and Victorian towns . . . . .	2 6	..	5 0	2 6	5 0	2 6
Brisbane and adjacent towns . . . . .	2 6	5 0	..	7 6	10 0	7 6
Adelaide and South Australian towns . . . . .	5 0	2 6	7 6	..	2 6	5 0
Perth and all but distant towns . . . . .	7 6	5 0	10 0	2 6	..	7 6
Hobart and Tasmanian towns . . . . .	5 0	2 6	7 6	5 0	7 6	..

(a) Unchanged since 1st January, 1940.

There is no charge for transfers within a city or a town. In all States excepting Queensland and Western Australia, the exchange for transfers between towns in the same State is 2s. per £100. Queensland and Western Australia are divided into zones. The exchange rate for transfers between towns in the same zone is 2s. per £100, with higher rates for inter-zone transfers.

The exchange rate between Papua and New Guinea and the mainland is 10s. per £100 for all points.

## § 2. Savings Banks.

1. **General.**—The inauguration of Savings Banks in Australia dates from 1819, when a private Savings Bank was opened in Sydney. In 1832 the legislature created "The Savings Bank of New South Wales" under the control of trustees, and shortly after its establishment the funds of the private Savings Bank were transferred to the new institution. In the other States provision for placing deposits with savings banks dates from 1841 in Victoria; 1854 in Queensland; 1840 in South Australia; 1863 in Western Australia (a Savings Bank was opened in 1856 but was closed a year later); 1835 in Launceston; and 1845 in Hobart. These early banks functioned as Trustee Savings Banks, but, with the exception of the Hobart and Launceston institutions, were later absorbed by, or amalgamated with, Government Savings Banks.

Post Office Savings Banks were established in all States from 1864 onwards. These were separate Government institutions except in South Australia, where the Post Office acted as agent for the Savings Bank. Since the federation of the Australian States in 1900, post offices have been controlled by the Commonwealth Government, but they continued to act as savings bank agencies for the State institutions until the establishment of the Commonwealth Bank in 1912. They now act as agents for the Commonwealth Savings Bank.

Savings banks at present operating are the Commonwealth Savings Bank (all States and Territories); State Savings Bank of Victoria; Savings Bank of South Australia; and the two Trustee Banks—Hobart and Launceston.

The prime object of the foundation of savings banks in Australia was the encouragement of thrift, deposits of one shilling and upwards being accepted; nevertheless, the facilities offered, while preserving the original object, have led to developments in another direction. Although depositors may not operate on their accounts by means of cheques, they have practically all the other advantages of a current account and in addition receive interest on their minimum monthly balances. No charge is made by the banks for keeping the accounts.

Commencing with July, 1931, monthly returns of statistics have been furnished by savings bank authorities. The information given in the following paragraphs relates to the deposits at 30th June in each year. For convenience of reference the information has been grouped under the following headings:—

- (i) All Savings Banks; (ii) Commonwealth Savings Bank; and (iii) State Savings Banks (including Trustee Banks in Tasmania).

2. **Number of Accounts.**—The following table shows the number of savings bank accounts in existence at 30th June, 1951 and 1952. It should be noted that these figures relate to the number of accounts and not necessarily to the number of depositors.

## ALL SAVINGS BANKS : NUMBER OF ACCOUNTS.(a)

Bank.	30th June, 1951.		30th June, 1952.	
	Operative.	Inoperative. (b)	Operative.	Inoperative. (b)
Commonwealth Savings Bank ..	4,166,606	1,935,370	4,300,916	2,009,306
State Savings Bank of Victoria ..	1,461,903	553,823	1,483,465	561,995
Savings Bank of South Australia ..	518,587	147,185	544,462	159,492
Hobart Savings Bank ..	87,491 (c)	32,201	89,988 (c)	33,119
Launceston Bank for Savings ..	72,292	22,619	75,602	22,947
<b>Total .. .. .</b>	<b>6,306,879</b>	<b>2,691,198</b>	<b>6,494,433</b>	<b>2,786,859</b>

(a) Excludes special purpose and school bank accounts. (b) Inoperative accounts are those accounts with balances of less than £1 which have not been operated on for a period of over two years. (c) Estimated.

3. All Savings Banks.—(i) *Business Transacted.* The following statement shows details of the business transacted by all savings banks for the years 1950-51 and 1951-52.

ALL SAVINGS BANKS : BUSINESS TRANSACTED.  
(£'000.)

State or Territory.	1950-51.				1951-52.		
	Amount on Deposit at 30th June, 1950.	Excess of Deposits over Withdrawals during year.	Interest added during year.	Amount on Deposit at 30th June, 1951.	Excess of Deposits over Withdrawals during year.	Interest added during year.	Amount on Deposit at 30th June, 1952.
New South Wales ..	258,874	21,393	4,200	284,467	15,456	4,609	304,532
Victoria ..	257,121	20,337	4,321	281,779	14,326	4,727	300,832
Queensland ..	92,201	5,152	1,487	98,840	2,232	1,589	102,661
South Australia ..	87,695	8,473	1,681	97,849	4,027	1,850	103,726
Western Australia ..	39,612	4,409	651	44,672	1,770	729	47,171
Tasmania ..	24,272	2,421	462	27,155	2,436	528	30,119
Northern Territory	859	94	12	965	57	14	1,036
Australian Capital Territory	1,451	242	24	1,717	77	27	1,821
<b>Total .. .. .</b>	<b>762,085</b>	<b>62,521</b>	<b>12,838</b>	<b>837,444</b>	<b>40,381</b>	<b>14,073</b>	<b>891,898</b>

(ii) *Deposits.* The following table shows, for all savings banks, the amount at credit of depositors and the average deposits per head of population at 30th June, 1939 and 1948 to 1952 :—

## ALL SAVINGS BANKS : DEPOSITS.

30th June.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Terr.	A.C.T.	Total.
TOTAL (£'000.)									
1939	87,474	80,461	29,045	27,397	12,396	8,396	99	319	245,587
1948	236,964	226,401	84,836	73,613	36,183	21,572	649	1,100	681,318
1949	244,483	239,246	87,442	81,176	37,535	22,413	726	1,211	714,232
1950	258,874	257,121	92,201	87,695	39,612	24,272	859	1,451	762,085
1951	284,467	281,779	98,840	97,849	44,672	27,155	965	1,717	837,444
1952	304,532	300,832	102,661	103,726	47,171	30,119	1,036	1,821	891,898

PER HEAD OF POPULATION.  
(£ s. d.)

1939	31 16 7	42 16 8	28 10 7	45 18 6	26 7 5	35 1 5	15 14 8	25 7 4	35 4 11
1948	78 6 6	108 5 10	75 5 1	111 17 5	70 4 4	82 4 5	52 1 2	55 11 3	88 7 3
1949	78 10 5	111 16 10	75 19 9	120 12 1	70 9 4	83 4 0	52 12 7	56 11 4	90 5 6
1950	80 5 4	116 14 5	77 17 9	125 4 8	71 0 0	86 17 6	56 2 5	60 15 8	93 2 0
1951	85 15 4	124 3 5	81 12 0	135 17 11	76 16 6	93 7 5	58 15 7	68 19 7	99 6 6
1952	89 17 6	128 16 2	82 17 11	140 5 1	78 9 1	99 13 11	62 17 5	19 67 10	103 2 6



(iii) *Deposits per head and Purchasing Power.* Particulars of the deposits per head of population, actual and adjusted to purchasing power by the application of retail price index-numbers, at 30th June, in each of the years 1939 and 1943 to 1952 are shown in the following table. In calculating the index-numbers in this table the average of deposits per head of population at 30th June, 1937, 1938 and 1939 has been used as a base and made equal to 1,000.

**ALL SAVINGS BANKS : DEPOSITS PER HEAD OF POPULATION, AUSTRALIA.**

At 30th June—	Actual.		Adjusted to Purchasing Power.(a)	
	Deposits per head of population.	Index-Number.	Deposits per head of population.	Index-Number.
	£	1937-1939 = 1000	£	1937-1939 = 1000
1939 .. .. .	35.25	1,018	34.32	991
1943 .. .. .	49.48	1,429	38.66	1,117
1944 .. .. .	64.51	1,863	51.20	1,479
1945 .. .. .	76.70	2,215	60.89	1,758
1946 .. .. .	88.89	2,567	69.32	2,002
1947 .. .. .	87.08	2,515	66.24	1,913
1948 .. .. .	88.36	2,552	61.75	1,783
1949 .. .. .	90.28	2,607	57.46	1,659
1950 .. .. .	93.10	2,689	54.20	1,565
1951 .. .. .	99.32	2,869	48.39	1,397
1952 .. .. .	103.13	2,979	41.75	1,206

(a) On the basis of the All Items ("C") Series of Retail Price Index-numbers (6 capitals) for June quarter in each year. (Base: Average of June quarters, 1937, 1938 and 1939 = 1,000.)

In interpreting the figures above it should be remembered that savings bank accounts are used to some extent by institutions and business people, as well as by individuals for the investment of personal savings. The relative extent to which savings bank accounts are used for business purposes, etc., may, and probably does, fluctuate considerably from time to time.

4. **School Banking.**—With the object of encouraging principles of thrift amongst children, agencies of the Savings Banks have been established at most of the schools throughout Australia. Particulars of operative accounts for each State and Territory at 30th June, 1952 were as follows:—

**SCHOOL SAVINGS BANKS AT 30th JUNE, 1952.**

State or Territory.	Number of School Agencies.	Number of Operative Accounts.	Deposits.	Deposits per Operative Account.
			£	£ s. d.
New South Wales .. .. .	2,512	172,462	986,661	5 14 5
Victoria .. .. .	2,735	199,294	1,109,330	5 11 4
Queensland .. .. .	1,246	75,724	520,224	6 17 5
South Australia .. .. .	794	96,951	607,725	6 5 4
Western Australia .. .. .	493	52,179	384,457	7 7 4
Tasmania .. .. .	423	39,977	246,647	6 3 5
Northern Territory .. .. .	7	934	7,924	8 9 8
Australian Capital Territory .. .. .	9	955	3,825	4 0 1
<b>Total .. .. .</b>	<b>8,219</b>	<b>638,476</b>	<b>3,866,793</b>	<b>6 1 1</b>

Corresponding particulars for the Commonwealth at 30th June of the years 1939 and 1948 to 1952 appear below :—

**SCHOOL SAVINGS BANKS : AUSTRALIA.**

At 30th June—			Number of School Agencies.	Number of Operative Accounts.	Deposits.	Deposits per Operative Account.
					£	£ s. d.
1939	..	..	9,535	560,116	1,090,703	1 18 11
1948	..	..	8,556	535,433	2,514,652	4 13 11
1949	..	..	8,329	557,218	2,766,542	4 19 4
1950	..	..	8,262	576,670	3,027,666	5 5 0
1951	..	..	8,239	591,915	3,369,872	5 13 10
1952	..	..	8,219	638,476	3,866,793	6 1 1

5. **War Savings and Savings Certificates.**—Sales of savings certificates and stamps under the War Savings and Savings Certificate schemes, particulars of which were given in earlier issues of the Official Year Book (see No. 37, page 586), were discontinued after 31st January, 1949, except for some sales made to wind up savings groups, etc. This method of saving was replaced by special savings schemes to operate through the savings banks. Employers were asked to co-operate by forming employee savings groups and by making regular deductions from wages and salaries for payment into group savings bank accounts, and thence, at the end of each quarter to individual accounts. The total value of certificates outstanding at 30th June in each of the last five years was :—1948, £64,483,000 ; 1949, £62,198,000 ; 1950, £55,025,000 ; 1951, £48,115,000 ; 1952, £41,809,000.

6. **Commonwealth Savings Bank.**—(i) *General.* The Savings Bank Department of the Commonwealth Bank opened for business in Victoria on 15th July, 1912 ; in Queensland on 16th September, 1912 ; in the Northern Territory on 21st October, 1912 ; and in New South Wales, South Australia and Western Australia on 13th January, 1913. The Tasmanian State Savings Bank was absorbed by the Commonwealth Bank in January, 1913, the Queensland State Savings Bank was taken over in 1920 and the New South Wales and Western Australian State Savings Banks in 1931. The Savings Bank Department was separated from the General Bank on 9th June, 1928, and established as a separate institution known as the "Commonwealth Savings Bank". It has since then operated independently, publishing its own balance-sheets and profit and loss accounts. The Commonwealth Bank Act 1927, which provided for the establishment of the Commonwealth Savings Bank as a separate institution, provided for a Commission of three members to manage the Savings Bank. This Commission was never appointed and the Commonwealth Bank Act 1945 placed the control of the Commonwealth Savings Bank under the Governor of the Commonwealth Bank.

(ii) *Particulars for Years 1950-51 and 1951-52.* Particulars for the States and Territories for the years 1950-51 and 1951-52 are shown in the table below :—

**COMMONWEALTH SAVINGS BANK : BUSINESS TRANSACTED.**  
(£'000.)

State or Territory.	Amount on Deposit at 30th June, 1950.	1950-51.			1951-52.		
		Excess of Deposits over Withdrawals during year.	Interest added during year.	Amount on Deposit at 30th June, 1951.	Excess of Deposits over Withdrawals during year.	Interest added during year.	Amount on Deposit at 30th June, 1952.
New South Wales ..	258.874	21.393	4,200	284,467	15,456	4,609	304,532
Victoria ..	58.441	8,685	966	68,092	7,271	1,122	76,485
Queensland ..	92.201	5,152	1,487	98,840	2,232	1,589	102,661
South Australia ..	16.657	3,260	286	20,203	1,961	338	22,502
Western Australia ..	39.612	4,409	651	44,672	1,770	729	47,171
Tasmania ..	9.144	1,195	158	10,497	732	177	11,406
Northern Territory ..	859	94	12	965	57	14	1,036
Australian Capital Territory ..	1,451	242	24	1,717	77	27	1,821
Total ..	477,239	44,430	7,784	529,453	29,556	8,605	567,614

(iii) *Deposits—30th June, 1939 and 1948 to 1952.* The amount on deposit with the Commonwealth Savings Bank in each State, in the Territories of Papua and New Guinea, in London and in the British Solomon Islands at 30th June in each of the years 1939 and 1948 to 1952 was as follows :—

**COMMONWEALTH SAVINGS BANK : DEPOSITS, 30th JUNE.**

(£'000.)

Place of Deposit.	1939.	1948.	1949.	1950.	1951.	1952.
New South Wales .. ..	87,474	236,964	244,483	258,874	284,467	304,532
Victoria .. ..	11,242	48,620	51,887	58,441	68,092	76,485
Queensland .. ..	29,045	84,836	87,442	92,201	98,840	102,661
South Australia .. ..	3,167	12,993	14,587	16,657	20,203	22,502
Western Australia .. ..	12,396	36,183	37,535	39,612	44,672	47,171
Tasmania .. ..	2,358	8,028	8,362	9,144	10,497	11,406
Northern Territory .. ..	99	649	726	859	965	1,036
Australian Capital Territory .. ..	319	1,100	1,211	1,451	1,717	1,821
<b>Total .. ..</b>	<b>146,100</b>	<b>429,373</b>	<b>446,233</b>	<b>477,239</b>	<b>529,453</b>	<b>567,614</b>
Papua and New Guinea (a) .. ..	209	1,047	1,356	1,620	1,977	2,260
London (a) .. ..	571	797	768	760	864	990
British Solomon Islands (a) .. ..	..	..	..	..	..	35
<b>Grand Total .. ..</b>	<b>146,880</b>	<b>431,217</b>	<b>448,357</b>	<b>479,619</b>	<b>532,294</b>	<b>570,899</b>

(a) Not included in the figures shown in paras. 3 and 6 (ii).

(iv) *Balance-sheet, 30th June, 1951 and 1952.* Particulars of the liabilities and assets of the Commonwealth Savings Bank as at 30th June, 1951 and 1952 were as follows :—

**COMMONWEALTH SAVINGS BANK(a) : LIABILITIES AND ASSETS, 30th JUNE.**

(£'000.)

Liabilities.	1951.	1952.	Assets.	1951.	1952.
Reserve Fund .. ..	6,772	7,223	Cash Balances and Money at Short Call	54,035	59,957
Depositors' Balances and Accrued Interest	533,033	571,684	Australian Notes and Coin .. ..	686	682
Contingency Account and other Liabilities	14,990	16,306	Government Securities	437,946	430,098
			Securities of Municipal and other Public Authorities .. ..	39,244	45,807
			Bank Premises .. ..	1,727	2,315
			Other Assets (b) .. ..	21,157	57,254
<b>Total .. ..</b>	<b>554,795</b>	<b>595,213</b>	<b>Total .. ..</b>	<b>554,795</b>	<b>595,213</b>

(a) Includes branches in London, Territories of Papua and New Guinea, and British Solomon Islands.

(b) See § 1 paragraph 5 (xiii), page 623.

(v) *Profits.* Under the terms of the Savings Bank Amalgamation Agreements the profits of the Commonwealth Savings Bank in New South Wales, Queensland, Western Australia and Tasmania are equally divided between the Bank and the former controlling authorities in those States. Net profits for the years ended 30th June, 1939 and 1948 to 1952 and the distribution of those profits are shown in the following table.

## COMMONWEALTH SAVINGS BANK : DISTRIBUTION OF PROFITS.

(£.)

Year ended 30th June—	Total Profit.	Payments to State Authorities under Savings Bank Amalgamation Agreements.					Pub- lished Profit.	Distribution of Published Profit.	
		New South Wales. (a)	Queens- land. (b)	Western Aus- tralia. (b)	Tas- mania. (b)	Total.		National Debt Sinking Fund.	Savings Bank Reserve Fund.
1939 ..	532,736	168,878	30,464	13,251	3,861	216,454	316,282	158,141	158,141
1948 ..	1,536,368	421,221	176,453	40,410	12,471	650,555	885,843	442,922	442,921
1949 ..	1,438,579	420,096	152,302	19,261	9,001	600,660	837,919	418,959	418,960
1950 ..	1,492,459	430,781	159,795	24,255	4,921	619,752	872,707	436,353	436,354
1951 ..	1,616,082	459,959	170,191	30,370	9,321	669,841	946,241	473,120	473,121
1952 ..	1,522,507	453,200	140,443	20,122	7,024	620,789	901,718	450,859	450,859

(a) Paid to Rural Bank of New South Wales.

(b) Paid to State Consolidated Revenue Funds.

7. State Savings Banks.—(i) *Particulars for Years 1950-51 and 1951-52.* Particulars of the transactions of all State savings banks for the years 1950-51 and 1951-52 are given hereunder. Throughout the following tables the figures for Tasmania refer to the Trustee Savings Banks in Hobart and Launceston. Although the accounts of these institutions are made up for half-yearly periods ending 28th February and 31st August, the managements have furnished particulars of deposits as at 30th June.

## STATE SAVINGS BANKS : BUSINESS TRANSACTED.

(£'000.)

State.	Amount on Deposit at 30th June, 1950.	1950-51.			1951-52.		
		Excess of Deposits over With- drawals during year.	Interest added during year.	Amount on Deposit at 30th June, 1951.	Excess of Deposits over With- drawals during year.	Interest added during year.	Amount on Deposit at 30th June, 1952.
Victoria ..	198,680	11,652	3,355	213,687	7,955	3,605	224,347
South Australia ..	71,038	5,213	1,395	77,646	2,066	1,512	81,224
Tasmania ..	15,128	1,226	304	16,658	1,704	351	18,713
Total ..	284,846	18,091	5,054	307,991	10,825	5,468	324,284

NOTE.—The State savings banks in New South Wales, Queensland, Western Australia and Tasmania were absorbed by the Commonwealth Savings Bank.

(ii) *Deposits—30th June, 1939 and 1948 to 1952.* The following statement shows the amount on deposit with State savings banks at 30th June in each of the years 1939 and 1948 to 1952 :—

## STATE SAVINGS BANKS : DEPOSITS AT 30th JUNE.

(£'000.)

State.	1939.	1948.	1949.	1950.	1951.	1952.
Victoria ..	69,219	177,781	187,359	198,680	213,687	224,347
South Australia ..	24,230	60,620	66,588	71,038	77,646	81,224
Tasmania ..	6,038	13,544	14,051	15,128	16,658	18,713
Total ..	99,487	251,945	267,998	284,846	307,991	324,284

(iii) *Assets, 1952.* At 30th June, 1952 or in the case of Tasmania, 31st August 1952, the assets of State savings banks amounted to £344,149,188, distributed as shown on following page.

## STATE SAVINGS BANKS : ASSETS, 30th JUNE, 1952.

(£.)

Particulars.	Victoria.	South Australia.	Tasmania.(a)	Total.
Cash in hand, in transit and on				
Current Account .. ..	7,374,734	1,666,406	860,080	9,901,220
Fixed Deposits .. ..	34,612,000	12,214,500	1,505,000	48,331,500
Outstanding Interest, Dividends and Rents .. ..	1,635,277	536,887	187,063	2,359,227
Government Securities .. ..	127,384,245	49,036,756	6,626,761	183,047,762
Municipal and other Public Securities .. ..	58,109,665	12,040,581	6,388,365	77,438,611
Mortgages .. ..	7,168,369	9,758,137	4,642,552	21,569,058
Landed and House Property .. ..	900,000	461,000	128,995	1,489,995
All other Assets .. ..	6,407	..	5,408	11,815
<b>Total Assets .. ..</b>	<b>237,190,607</b>	<b>80,014,267</b>	<b>20,344,224</b>	<b>344,149,188</b>

(a) At 31st August, 1952. See para. 7 (i).

At 30th June, 1951 the assets of the State savings banks amounted to £327,204,000, of which £181,956,000 was in Government securities, £64,877,000 in municipal and other public securities and £49,402,000 in fixed deposits. State totals were: Victoria, £225,985,000; South Australia, £82,713,000; and Tasmania, £18,506,000.

(iv) *Profit and Loss Accounts, 1951-52.* Details of the profit and loss accounts of the several State savings banks for the year 1951-52 are given below:—

## STATE SAVINGS BANKS : PROFIT AND LOSS ACCOUNTS, 1951-52.

(£.)

Particulars.	Victoria.	South Australia.	Tasmania.(a)	Total.
Receipts—				
Total—Interest, Dividends, Rents, and all other .. ..	6,103,543	2,429,602	606,968	9,140,113
Expenditure—				
Interest allotted to Depositors ..	3,313,973	1,382,350	378,199	5,074,522
Provision for accrued interest on Depositors' Balances .. ..	312,918	145,000	..	457,918
Expenses of Management .. ..	1,878,697	610,658	145,179	2,634,534
All other Expenditure .. ..	366,729	103,670	17,732	488,131
Total .. ..	5,872,317	2,241,678	541,110	8,655,105
Profit for year .. ..	231,226	187,924	65,858	485,008
Balance of profit and loss account brought forward .. ..	181,655	132,384	105,782	419,821
Total .. ..	412,881	320,308	171,640	904,829
Distribution of Profits—				
Amount written off Bank Premises .. ..	26,720	9,664	9,809	46,193
Amount carried to Reserves and Depreciation Funds .. ..	225,000	175,000	56,000	456,000
Balance of Profit and Loss Account carried forward .. ..	161,161	135,644	105,831	402,636

(a) Year ended 31st August, 1952. See para. 7 (i).

In 1950-51 total receipts were £8,316,000 and expenditure, £7,701,000. Net profits amounted to £615,000.

8. *Classification of Depositors' Balances.*—The classification of deposits published by savings banks does not permit a fully detailed analysis with respect to Australia as a whole, but information supplied to the Royal Commission on Monetary and Banking Systems, for all savings banks except the Hobart Trustee Savings Bank, shows that at 30th June, 1936 the amount on deposit in accounts with balances of less than £100 represented 21 per cent. of the total deposits; balances of over £100 but under £250, 21 per cent.; over £250 but under £500, 23 per cent.; over £500 but under £1,000, 25 per cent.; while those of over £1,000 accounted for 10 per cent. School, penny bank and small inoperative accounts were excluded in determining these percentages.

A similar classification as at 30th June, 1936, 1939 and 1948 to 1952, but relating only to the combined State Savings Banks of Victoria and South Australia, is shown below.

## STATE SAVINGS BANKS : CLASSIFICATION OF DEPOSITS.

(Per cent.)

At 30th June—	£100 and under.	£101-£300.	£301-£500.	Total under £501.	£501-£1,000.	Over £1,000.
1936.. ..	19.54	26.13	17.84	63.51	27.42	9.07
1939.. ..	20.27	27.15	17.90	65.32	26.14	8.54
1948.. ..		52.72		52.72	32.74	14.54
1949.. ..		50.11		50.11	33.14	16.75
1950.. ..		48.44		48.44	32.81	18.75
1951.. ..		47.45		47.45	32.22	20.33
1952.. ..		45.85		45.85	32.33	21.82

9. Rates of Interest on Deposits.—The following tables show the rates of interest allowed at 30th June, 1939 and 1948 to 1952 by State and trustee savings banks and by the Commonwealth Savings Bank.

## STATE SAVINGS BANKS : INTEREST RATES(a) ON DEPOSITS, 30th JUNE.

(Per cent.)

Savings Bank—	State Savings Bank of Victoria.			Savings Bank of South Australia.				The Hobart Savings Bank.	The Launceston Bank for Savings.		
Interest-bearing Limit—	£1,000.			£1,000.				£450.(b)	£450.(b)		
Part of Balance—	£1 to £500.	£501 to £1,000.	De-posit Stock.	£1 to £200.	£201 to £500.	£501 to £1,000.	De-posit Stock.	£1 to £450.(b)	De-posit fixed for twelve months.		
1939 .. ..	2	2	2½	3	2½	2½	..	3	3½	3	3½
1948 .. ..	2	1	1	2½	2½	1½	..	2½	2½	2½	2½
1949 .. ..	2	1	1	2½	2½	1½	1	2½	2½	2½	2½
1950 .. ..	2	1	1	2½	2½	1½	1	2½	2½	2½	2½
1951 .. ..	2	1	1	2½	2½	1½	1	2½	2½	2½	2½
1952 .. ..	2	1	1	2½	2½	1½	1	2½	2½	2½	2½
1st August, 1952(c)	2½	1½	1½	2½	2½	1½	1½	(d) 2½	(d) 2½	(d) 2½	(d) 2½

(a) Rates on ordinary accounts. On Friendly and other Society Accounts the rates at 30th June, 1952 were—State Savings Bank of Victoria, 2 per cent. on first £2,000, 1 per cent. on balance; Savings Bank of South Australia, 2½ per cent. on first £500, 2 per cent. on next £1,500 and 1 per cent. on the balance.

(b) Increased from £300 to £450 from 13th April, 1951. (c) Rates fixed consequent upon revocation (on 28th July, 1952) of the Order under National Security (Economic Organization) Regulations fixing maximum rates of interest. The rates on Friendly and other Society Accounts were increased by ½ per cent. (d) From 1st September, 1952.

## COMMONWEALTH SAVINGS BANK : INTEREST RATES(a) ON DEPOSITS, 30th JUNE.

(Per Cent.)

Part of Balance—	1939.	1948.	1949.	1950.	1951.	1952.	1st August, 1952.(c)
£1 to £500 .. ..	2	2	2	2	2	2	2½
£501 to £1,000(b) .. ..	1½	1	1	1	1	1	1½

(a) Rates on ordinary accounts. On Friendly and other Society Accounts the rates at 30th June, 1952 were 2 per cent. on first £2,000 and 1 per cent. on the balance. These were increased by ½ per cent. from 1st August, 1952. (b) Up to 1941 the interest-bearing limit in all States except Queensland was £1,300. In Queensland it was £2,000. The limit since 1942 has been £1,000 in all States. (c) See

footnote (c) previous table.

## C. COMPANIES.

NOTE.—Statistics available in regard to companies relate to (a) Trustee, Executor and Agency Companies; (b) Building and Investment Societies; and (c) Co-operative Societies.

## § 1. Trustee, Executor and Agency Companies.

The following table shows, for the years 1939 and 1947 to 1951, particulars of the assets and liabilities of certain trustee companies transacting business in Australia and New Zealand. Figures for the year 1939 were obtained from returns supplied to the Commonwealth Bureau of Census and Statistics, while those for the years 1947 to 1951 have been extracted from a summary of the last published balance-sheets as shown in the *Australasian Insurance and Banking Record*. Individual items are therefore not entirely comparable. Details of assets of trust funds administered are shown for the year 1939, but for the years 1947 to 1951 totals are available for nine offices only.

TRUSTEE, EXECUTOR AND AGENCY COMPANIES.  
AUSTRALIA AND NEW ZEALAND.

Particulars.	1939.	1947.	1948.	1949.	1950.	1951.
Number of Companies ..	20	23	23	24	24	24
Liabilities—	£	£	£	£	£	£
Capital paid-up ..	1,312,202	1,408,452	1,408,452	1,528,452	1,528,452	1,528,452
Reserves and undistributed Profits ..	1,235,750	1,381,156	1,415,774	1,472,884	1,483,424	1,508,912
Other Liabilities ..	150,960	891,026	954,475	823,804	867,364	901,314
Total Liabilities ..	2,698,912	3,680,634	3,778,701	3,825,140	3,879,240	3,938,678
Assets—						
Government and Municipal Securities ..	730,935	a1,173,982	a1,236,679	a1,437,640	a1,450,221	a1,511,739
Loans on Mortgage ..	397,944	493,918	470,902	431,629	412,203	313,295
Other Loans and Advances ..	75,141	(b)	(b)	(b)	(b)	(b)
Real Property ..	1,148,566	1,079,443	1,077,724	1,081,434	1,111,837	1,117,672
Deposits in Banks ..	147,717	(c) 249,189	(c) 241,464	(c) 240,784	(c) 206,538	(c) 265,985
Other Assets ..	198,609	684,102	751,932	633,653	698,441	729,987
Total Assets ..	2,698,912	3,680,634	3,778,701	3,825,140	3,879,240	3,938,678
Assets of Trust Funds Administered—(d)	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Australian Government and Municipal Securities ..	68,515					
British and Foreign Government and Municipal Securities ..	1,342					
Loans on Mortgage ..	39,977	(e)	(e)	(e)	(e)	(e)
Other Loans and Advances ..	2,713					
Shares in Companies ..	59,351					
Real Property ..	51,732					
Deposits in Banks ..	8,958					
Other Assets ..	13,409					
Total Trust Fund Assets	236,997	(f) 183,138	(f) 187,044	(f) 190,594	(f) 195,982	(f) 203,585

(a) Includes fixed deposits and deposits with Government. (b) Included with other assets.  
(c) Cash. (d) Includes particulars of trust funds administered by Public Trustees in 1939 only.  
(e) Not available (f) Nine offices only.

## § 2. Building and Investment Societies.

1. Summary.—During 1951 returns were received from 912 societies, but the information is not exhaustive, as particulars regarding a number of organizations are not included. In the following table general information is given relating to the societies for the year 1951.

## BUILDING AND INVESTMENT SOCIETIES : SUMMARY, 1950-51.

Particulars.	N.S.W.	Vic.(a)	Q'land.	S. Aust. (a)	W. Aust.	Tas.	Total.
Societies making returns—							
Permanent .. No.	24	19	5	5	7	5	65
Terminating .. No.	820	2	4	19	2	..	847
Total .. No.	844	21	9	24	9	5	912
Number of shareholders ..	101,415	15,296	23,070	22,782	23,645	8,810	195,018
„ shares ..	b 1,708,861	1,088,927	6,126,415	112,689	(c)	71,667	(c)
„ borrowers ..	(d) 10,034	17,422	8,594	3,385	4,037	2,271	45,743
Income for year from interest, etc.	£ 714,205	£ 663,009	£ 153,993	£ 54,170	£ 95,693	£ 72,505	£ 1,753,575
Working expenses for year	£ 474,411	£ 499,607	£ 189,467	£ 27,550	£ 28,931	£ 21,833	£ 1,241,799
Amounts of deposits during year	£ 965,995	£ 871,748	£ 449,308	£ 374,129	£ 457,948	£ 47,070	£ 3,166,198
Repayment of loans during year	£ 1,443,237	£ 2,759,957	£ 1,126,289	£ 268,434	£ 588,093	£ 363,981	£ 6,549,991
Loans granted during year	£ e 3,509,489	£ 3,674,390	£ 1,612,898	£ 450,693	£ 844,222	£ 518,314	£ 10,610,006

(a) Year 1951: excludes Co-operative Housing Societies. (b) Terminating societies only—Starr-Bowkett Societies, 393,943 and other terminating societies, 1,314,918. (c) Not available. (d) Permanent societies only. (e) Incomplete—other terminating societies not available.

2. Liabilities and Assets.—Particulars of liabilities and assets in 1950-1951 of the 912 societies mentioned in the previous paragraph are shown below.

## BUILDING AND INVESTMENT SOCIETIES : LIABILITIES, 1950-51.

(£.)

State.	Paid-up Capital and Subscriptions.	Reserve Funds.	Deposits.	Bank Overdrafts and other Liabilities.	Total Liabilities.
New South Wales ..	12,845,644	1,669,021	1,020,377	38,798,128	54,333,170
Victoria (a) ..	3,875,948	1,254,891	3,416,465	4,695,950	13,243,254
Queensland ..	3,269,898	92,141	155,212	434,294	3,951,545
South Australia (a) ..	1,572,115	184,566	171,181	13,644	1,941,506
Western Australia ..	1,728,381	55,093	318,892	(b) 186,178	2,288,544
Tasmania ..	1,084,175	142,908	186,050	83,803	1,496,936
Total ..	24,376,161	3,398,620	5,268,177	44,211,997	77,254,955

(a) Year 1951. (b) Includes net accumulated profits, £64,331.

## BUILDING AND INVESTMENT SOCIETIES : ASSETS, 1950-51.

(£.)

State.	Advances on Mortgage.	Landed and House Property Furniture, etc.	Cash in Hand and on Deposit.	Other Assets.	Total Assets.
New South Wales ..	a 52,040,475	(b)	(c)	d 2,292,695	54,333,170
Victoria (d) ..	12,840,122	199,798	59,364	143,970	13,243,254
Queensland ..	a 3,897,817	14,158	15,596	23,974	3,951,545
South Australia (e) ..	1,722,337	50,634	90,313	78,222	1,941,506
Western Australia ..	2,141,123	15,941	42,533	88,947	2,288,544
Tasmania ..	1,422,463	11,581	16,439	46,453	1,496,936
Total ..	74,064,337	(f) 292,112	(c)	d 2,898,506	77,254,955

(a) Includes Starr-Bowkett and other terminating societies:—New South Wales, £45,368,952; Queensland, £648,880. (b) Not available. (c) Included with Other Assets. (d) Includes cash in hand and on deposit. (e) Year 1951. (f) Incomplete.



## § 3. Co-operative Societies.

1. **General.**—Returns relating to co-operative societies are divided into three classes—(i) those engaged in the manufacture and marketing of primary products and trade requirements; (ii) those engaged in retailing general household requirements; and (iii) those engaged in activities covered by both classes (i) and (ii). The first class may be described briefly as Producers' Co-operative Societies and the second as Consumers' Co-operative Societies. The particulars given for New South Wales relate to societies registered under the Co-operation Act 1923-1945. A summary of the business of co-operative societies for the years 1950-51 or 1951 for all States except Western Australia is given in the following table. For Western Australia details of the business during 1940-41 (the latest year available) are given.

## CO-OPERATIVE SOCIETIES : SUMMARY.

Particulars.	N.S.W. 1950-51. (a)	Vic. 1950-51.	Q'land. 1950-51.	S. Aust. 1951.	W. Aust. 1940-41.	Tas. 1950-51.
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## PRODUCERS' SOCIETIES.

						(b)
Number of Societies ..	199	60	124	36	37	11
" Branches ..	(c)	42	65	8	24	7
" Members ..	90,448	38,744	84,293	10,737	13,073	12,039
Gross Turnover (Sales) ..	£ 44,694,613	10,909,349	29,270,202	3,669,674	1,752,805	2,226,911
Other Income ..	£ 1,928,879	1,053,306	1,392,539	231,195	664,919	108,782
Total Income ..	£ 46,623,492	11,962,655	30,662,741	3,900,869	2,417,724	2,335,693
Total Purchases during Year ..	£ 39,160,649	9,198,324	23,850,947	2,524,807	1,570,626	1,764,417
Other Expenditure ..	£ 7,473,063	2,382,810	5,921,181	865,634	720,602	587,207
Total Expenditure ..	£ 46,633,712	11,581,134	29,772,128	3,390,441	2,291,228	2,351,624
Rebates and Bonuses ..	£ 197,940	64,331	342,558	492,030	2,363	38,004
Dividends on Share Capital ..	£ 119,682	58,355	89,301	11,485	13,114	13,240

## CONSUMERS' SOCIETIES.

						(d)
Number of Societies ..	89	33	52	14	5	..
" Branches ..	(c)	22	14	52	(c)	..
" Members ..	76,889	16,561	23,212	76,003	2,715	..
Gross Turnover (Sales) ..	£ 8,355,770	2,299,908	2,908,219	4,116,113	171,758	..
Other Income ..	£ 293,722	55,182	42,002	60,608	3,587	..
Total Income ..	£ 8,559,492	2,340,000	2,950,221	4,176,721	175,345	..
Total Purchases during Year ..	£ 6,771,721	1,934,484	2,484,309	3,393,995	140,944	..
Other Expenditure ..	£ 1,596,249	333,334	443,794	700,891	32,307	..
Total Expenditure ..	£ 8,367,970	2,267,818	2,928,103	4,094,856	173,251	..
Rebates and Bonuses ..	£ 354,017	71,448	64,068	217,183	862	..
Dividends on Share Capital ..	£ 47,168	9,633	6,765	33,592	1,583	..

## SOCIETIES WHICH ARE BOTH PRODUCERS' AND CONSUMERS'.

Number of Societies ..	..	10	2	16	43	..
" Branches ..	..	9	7	..	12	..
" Members ..	..	5,039	3,192	5,624	5,875	..
Gross Turnover (Sales) ..	£ ..	3,065,508	1,455,735	1,258,043	624,213	..
Other Income ..	£ ..	40,482	51,452	303,409	29,943	..
Total Income ..	£ ..	3,105,990	1,507,187	1,561,452	654,156	..
Total Purchases during Year ..	£ ..	2,527,788	1,248,729	1,193,368	542,849	..
Other Expenditure ..	£ ..	518,027	245,557	314,055	97,832	..
Total Expenditure ..	£ ..	3,045,815	1,494,286	1,507,423	640,681	..
Rebates and Bonuses ..	£ ..	14,121	..	54,694	12,247	..
Dividends on Share Capital ..	£ ..	7,013	1,141	7,920	4,400	..

(a) Particulars relate to societies registered under the Co-operation Act 1923-1945. Particulars shown under Producers' Societies refer to Rural Societies, and under Consumers' to Trading Societies.  
 (b) Includes one Consumers' Society for which separate details are not available for publication.  
 (c) Not available. (d) One Consumer's Society included with Producers' Societies.

2. **Liabilities and Assets.**—The next table shows the liabilities and assets for the same years for which information is available :—

## CO-OPERATIVE SOCIETIES : LIABILITIES AND ASSETS.

( £.)

Particulars.	N.S.W. 1950-51. (a)	Vic. 1950-51.	Q'land. 1950-51.	S. Aust. 1951.	W. Aust. 1940-41. (b)	Tas. 1950-51.
<b>PRODUCERS' SOCIETIES.</b>						
<b>Liabilities—</b>						(c)
Paid-up Capital .. ..	3,504,254	1,416,094	2,706,002	298,322	272,932	248,434
Loan Capital .. ..	.. ..	123,752	754,860	464,895	210,260	35,631
Bank Overdrafts .. ..	3,646,142	1,008,352	2,456,916	117,594	24,777	166,108
Accumulated Profits .. ..	.. ..	437,164	825,510	100,316	6,906	108,145
Reserve Funds .. ..	2,548,384	1,111,642	2,671,523	362,559	208,812	109,466
Sundry Creditors .. ..	.. ..	1,372,640	3,878,053	215,101	302,753	493,122
Other Liabilities .. ..	5,214,595	268,301	239,712	1,205,211	455,490	42,495
<b>Total Liabilities</b> .. ..	<b>14,913,375</b>	<b>5,737,945</b>	<b>13,533,176</b>	<b>2,763,998</b>	<b>1,481,930</b>	<b>1,203,421</b>
<b>Assets—</b>						
Land and Buildings .. ..	.. ..	.. ..	2,279,353	447,484	420,964	339,321
Machinery, Plant and other fixed Assets .. ..	5,594,473	2,331,800	4,109,196	457,971	216,520	82,928
Stocks .. ..	2,295,091	1,140,433	1,722,817	1,150,149	162,952	397,881
Sundry Debtors .. ..	3,457,982	1,910,425	4,155,787	477,500	369,605	330,537
Cash in hand and on deposit .. ..	.. ..	55,638	601,344	159,556	105,945	4,523
Profit and Loss Account .. ..	.. ..	3,049	25,502	241	44,723	..
Other Assets .. ..	3,565,829	296,609	639,117	71,097	101,221	48,231
<b>Total Assets</b> .. ..	<b>14,913,375</b>	<b>5,737,945</b>	<b>13,533,176</b>	<b>2,763,998</b>	<b>1,481,930</b>	<b>1,203,421</b>
<b>CONSUMERS' SOCIETIES.</b>						
<b>Liabilities—</b>						(e)
Paid-up Capital .. ..	1,695,963	344,056	312,613	935,903	37,425	..
Loan Capital .. ..	.. ..	58,243	90,375	374,327	(d)	..
Bank Overdrafts .. ..	281,370	109,797	238,260	48,025	4,008	..
Accumulated Profits .. ..	.. ..	122,828	56,011	174,220	4,019	..
Reserve Funds .. ..	860,088	134,170	86,038	197,004	5,035	..
Sundry Creditors .. ..	.. ..	162,975	279,049	137,622	15,096	..
Other Liabilities .. ..	801,117	36,907	132,988	25,304	471	..
<b>Total Liabilities</b> .. ..	<b>3,638,538</b>	<b>968,976</b>	<b>1,195,334</b>	<b>1,892,405</b>	<b>66,054</b>	..
<b>Assets—</b>						
Land and Buildings .. ..	.. ..	.. ..	173,640	238,675	10,002	..
Machinery, Plant and other fixed Assets .. ..	931,096	284,548	130,058	94,523	6,795	..
Stocks .. ..	1,334,127	389,326	492,301	990,838	27,555	..
Sundry Debtors .. ..	533,391	163,695	279,103	97,598	10,231	..
Cash in hand and on deposit .. ..	.. ..	36,311	22,059	60,564	7,487	..
Profit and Loss Account .. ..	.. ..	31,388	26,332	136	1,244	..
Other Assets .. ..	839,924	63,708	71,841	410,071	2,740	..
<b>Total Assets</b> .. ..	<b>3,638,538</b>	<b>968,976</b>	<b>1,195,334</b>	<b>1,892,405</b>	<b>66,054</b>	..
<b>SOCIETIES WHICH ARE BOTH PRODUCERS' AND CONSUMERS'.</b>						
<b>Liabilities—</b>						
Paid-up Capital .. ..	.. ..	186,514	83,455	168,496	158,787	..
Loan Capital .. ..	.. ..	38,531	.. ..	82,622	14,749	..
Bank Overdrafts .. ..	.. ..	107,965	137,355	318,128	32,603	..
Accumulated Profits .. ..	.. ..	81,853	19,914	9,360	11,880	..
Reserve Funds .. ..	.. ..	192,880	79,981	183,410	108,408	..
Sundry Creditors .. ..	.. ..	181,163	88,775	228,787	56,684	..
Other Liabilities .. ..	.. ..	40,850	2,248	362,813	1,410	..
<b>Total Liabilities</b> .. ..	.. ..	<b>829,456</b>	<b>411,728</b>	<b>1,355,616</b>	<b>384,530</b>	..
<b>Assets—</b>						
Land and Buildings .. ..	.. ..	.. ..	86,132	224,814	79,313	..
Machinery, Plant and other fixed Assets .. ..	.. ..	466,123	124,328	117,168	23,828	..
Stocks .. ..	.. ..	192,187	115,470	407,503	160,930	..
Sundry Debtors .. ..	.. ..	132,464	75,541	177,377	88,772	..
Cash in hand and on deposit .. ..	.. ..	4,554	1,329	37,982	17,951	..
Profit and Loss Account .. ..	.. ..	.. ..	.. ..	2,339	4,058	..
Other Assets .. ..	.. ..	34,128	8,928	388,433	9,678	..
<b>Total Assets</b> .. ..	.. ..	<b>829,456</b>	<b>411,728</b>	<b>1,355,616</b>	<b>384,530</b>	..

(a) Particulars relate to societies registered under the Co-operation Act 1923-1945. Particulars shown under Producers' Societies refer to Rural Societies and under Consumers' to Trading Societies. (b) Not available since 1940-41. (c) Includes one Consumers' Society for which separate details are not available for publication. (d) Not available. (e) One Consumers' Society included with Producers' Societies.

**D. INSURANCE.****§ 1. Introductory.**

1. **Legislation.**—Section 51 of the Commonwealth Constitution confers the necessary powers on the Commonwealth Parliament to legislate in regard to “insurance other than State insurance; also State insurance extending beyond the limits of the State concerned”. Legislation by the Commonwealth Parliament includes the Life Assurance Companies Act 1905 limiting the amount of assurance payable on the death of children, the Marine Insurance Act 1909 defining the limits of marine insurance and regulating the terms of contracts, etc., the Insurance Act 1932–1937, requiring the lodgment of deposits by insurance companies, and the Life Insurance Act 1945–1950 generally regulating life insurance business in Australia. The Life Assurance Companies Act 1905 was repealed by the Life Insurance Act 1945–1950 which incorporated the provisions of that Act. The Marine Insurance Act 1909 and the Insurance Act 1932–1937 have limited application, and, except for life insurance business which is regulated by the Life Insurance Act 1945–1950, insurance business is conducted under State laws.

2. **Insurance Act 1932–1937.**—Companies, persons or associations of persons carrying on insurance business in Australia or in any Territory of Australia are required to lodge a deposit with the Commonwealth Treasurer.

Money deposited is invested by the Treasurer in prescribed securities selected by the depositor, and all interest is paid to depositors. Deposits remain as security against liability to policy holders, and are available to satisfy judgments obtained in respect of policies.

Deposits held by States on 1st February, 1932, could, however, remain with the States subject to the conditions embodied in the laws of the States, and depositors to the extent of the value of these deposits, were exempt from liability to make deposits under the Commonwealth Act.

The following are not regarded as insurance businesses under the Act :—

Staff superannuation schemes; schemes of religious organizations solely for insurance of their property; and Friendly Society, Union and Association schemes involving superannuation or insurance benefits to employees.

This Act does not apply to State insurance within the limits of the State concerned, and, under the Life Insurance Act 1945–1950, ceased to apply to life insurance business.

Deposits lodged under the Insurance Acts at 30th June, 1952, totalled £5,032,996, comprising £1,090,132 held by the Commonwealth in respect of life insurance and £2,571,714 held by the Commonwealth and £1,371,150 held by the States in respect of other forms of insurance.

The deposits comprise cash £454,750, government, municipal and other securities £3,814,596, fixed deposits £1,000, bank guarantees and undertakings, £470,000, titles and mortgages £292,650.

3. **Life Insurance Act 1945–1950.**—The objects of this Act are :—(a) To replace all State legislation on the subject of life insurance and to provide uniform legislation for the whole of Australia; (b) to appoint an Insurance Commissioner to exercise active supervision of the activities of life insurance companies, with a view to securing the greatest possible protection for policy holders; (c) to set up adequate machinery for dealing with any company that fails to maintain a required minimum standard of solvency.

In addition, it provides for the establishment of a Commonwealth Government Insurance Office, if and when the establishment of such an office is thought to be in the public interest.

The Act was assented to on 16th August, 1945, and came into operation on 20th June, 1946. A summary of the provisions of the Act is given in Official Year Book No. 37 (pages 595 to 597).

**§ 2. Life Assurance.**

1. **General.**—Statistical returns have been collected from life assurance institutions since 1907. Until 1946 these returns were collected under the Census and Statistics Act. Since 1947 returns lodged under the Life Insurance Act 1945–1950 have been used to

compile life assurance statistics. This change in method of collection has resulted in some slight changes in definition and, as a result, the statistics for 1947 and later years are not in all cases strictly comparable with those for earlier years. In earlier years statistics of revenue and expenditure and of assets and liabilities, although generally related only to the life assurance business of the offices making the returns, included, in some cases, a small amount of other classes of business. Under the Life Insurance Act 1945-1950 companies transacting life assurance business are required to set up separate statutory funds for their life assurance business. As a result of this, it has been possible to separate life assurance business from other classes of business. Except where otherwise indicated, the figures in the succeeding paragraphs refer to Australian business only. Business in the Territories of Papua and New Guinea is, however, included in the Australian figures.

2. **Offices Transacting Business.**—The number of offices which transacted life assurance business in Australia during 1951 was 23, including two oversea companies. Of the twenty-one Australian offices, six are purely mutual, including one which transacts general business in respect of which share capital is used, thirteen are public companies, and two are State Government institutions. Of the total offices, thirteen transacted both ordinary and industrial business, and one industrial business only. Ordinary and industrial business has, where possible, been kept separate.

3. **Australian Business—Policies in Existence.**—(i) *Ordinary Business.* In the following table details of ordinary policies on the registers in each State and the Australian Capital Territory are given for the year 1951 :—

**ORDINARY LIFE ASSURANCE : AUSTRALIAN BUSINESS—POLICIES IN EXISTENCE, 1951.**

State or Territory.(a)	Assurance and Endowment Policies.				Annuity Policies.		
	No. of Policies.	Sum Assured.	Bonus Additions.	Annual Pre-miums.	No. of Policies.	Annuities Per Annum.	Annual Pre-miums.
		£'000.	£'000.	£'000.		£	£
New South Wales ..	926,905	434,233	41,964	15,122	4,377	855,567	264,478
Victoria ..	717,255	360,500	33,372	12,697	5,671	3,137,942	688,184
Queensland (b) ..	427,963	191,020	15,613	6,123	815	64,196	13,094
South Australia ..	235,414	106,666	10,282	3,769	824	66,346	11,769
Western Australia ..	159,434	74,362	7,484	2,656	562	50,677	9,181
Tasmania ..	79,709	38,218	3,436	1,263	691	57,892	14,051
Australian Capital Territory	7,030	6,971	386	238	1,519	114,014	15,126
<b>Total ..</b>	<b>2,553,710</b>	<b>1,211,970</b>	<b>112,537</b>	<b>41,868</b>	<b>14,459</b>	<b>4,346,634</b>	<b>1,015,883</b>

(a) Location of register of policies.

(b) Includes Territories of Papua and New Guinea.

The following table shows particulars of policies in existence at the end of the years 1939 and 1947 to 1951 inclusive :—

**ORDINARY LIFE ASSURANCE : AUSTRALIAN BUSINESS—POLICIES IN EXISTENCE.**

At End of Year—	Assurance and Endowment Policies.				Annuity Policies.	
	No. of Policies.	Sum Assured.	Average per Policy.	Annual Premiums.	No. of Policies.	Annuities per Annum.
		£'000.	£	£'000.		£
1939.. ..	1,243,378	427,291	344	(a) 13,954	3,826	384,584
1947.. ..	1,901,639	740,496	389	25,463	11,461	2,179,160
1948.. ..	2,070,939	834,467	403	28,767	12,644	2,511,865
1949.. ..	2,224,240	930,791	419	32,109	14,138	2,802,424
1950.. ..	2,377,032	1,047,145	441	36,081	12,538	3,383,556
1951.. ..	2,553,710	1,211,070	475	41,868	14,450	4,346,634

(a) Annual premium income.

(ii) *Industrial Business.* In the following table, details of industrial policies on the registers in each State and the Australian Capital Territory are given for the year 1951 :—

**INDUSTRIAL LIFE ASSURANCE : AUSTRALIAN BUSINESS—POLICIES IN EXISTENCE, 1951.**

State or Territory.(a)	Assurance and Endowment Policies.			Annuity Policies.		
	No. of Policies.	Sum Assured.	Bonus Additions.	Annual Premiums.	No. of Policies.	Annuities per Annum.
		£'000.	£'000.	£'000.		£
New South Wales .. .. .	1,430,907	94,737	2,466	4,871	..	..
Victoria .. .. .	1,240,361	81,458	2,341	4,242	I	13
Queensland (b) .. .. .	437,790	30,105	754	1,536	..	..
South Australia .. .. .	399,241	24,299	696	1,259	..	..
Western Australia .. .. .	234,975	16,230	403	822	..	..
Tasmania .. .. .	94,827	6,392	189	321	..	..
Australian Capital Territory .. .. .	4,615	373	14	18	..	..
<b>Total .. .. .</b>	<b>3,842,716</b>	<b>253,594</b>	<b>6,863</b>	<b>13,069</b>	<b>I</b>	<b>13</b>

(a) Location of register of policies.

(b) Includes Territories of Papua and New Guinea.

Particulars of policies in existence at the end of the years 1939 and 1947 to 1951 are shown in the following table :—

**INDUSTRIAL LIFE ASSURANCE : AUSTRALIAN BUSINESS—POLICIES IN EXISTENCE.**

At End of Year—	Assurance and Endowment Policies.				Annuity Policies.	
	No. of Policies.	Sum Assured.	Average per Policy.	Annual Premiums.	No. of Policies.	Annuities per Annum.
		£'000.	£	£'000.		£
1939 .. .. .	2,491,742	111,862	45	(a) 6,490	2	58
1947 .. .. .	3,540,816	193,107	55	10,859	3	62
1948 .. .. .	3,642,887	209,012	57	11,452	3	75
1949 .. .. .	3,725,017	224,012	60	12,001	2	39
1950 .. .. .	3,793,074	238,321	63	12,517	1	13
1951 .. .. .	3,842,716	253,594	66	13,069	1	13

(a) Annual premium income.

4. *New Policies issued in Australia.*—(i) *Ordinary Business.* During 1951 287,647 new policies were issued for £221,132,000. The average amount per policy was £769 as compared with an average of £441 per policy for all ordinary policies which were in existence at the end of 1950.

In the following table details are given of new policies issued in each State and the Australian Capital Territory during 1951 :—

**ORDINARY LIFE ASSURANCE : NEW POLICIES ISSUED IN AUSTRALIA, 1951.**

State or Territory.(a)	Assurance and Endowment Policies.				Annuity Policies.			
	No. of Policies.	Sum Assured.	Premiums.		No. of Policies.	Annuities per Annum.	Premiums.	
			Single.	Annual.			Single.	Annual.
		£'000.	£'000.	£'000.		£'000.	£'000.	£'000.
New South Wales .. .. .	101,683	78,187	169	2,789	903	220	192	106
Victoria .. .. .	84,719	67,637	68	2,436	1,257	1,020	353	259
Queensland (b) .. .. .	45,004	32,063	132	1,014	144	12	22	5
South Australia .. .. .	23,922	19,435	35	736	103	12	27	4
Western Australia .. .. .	21,319	14,447	25	556	65	8	29	3
Tasmania .. .. .	10,200	7,981	7	279	77	8	22	3
Aust. Capital Territory .. .. .	800	1,382	24	44	109	20	4	..
<b>Total .. .. .</b>	<b>287,647</b>	<b>221,132</b>	<b>460</b>	<b>7,854</b>	<b>2,658</b>	<b>1,300</b>	<b>649</b>	<b>380</b>

(a) Location of register of policies.

(b) Includes Territories of Papua and New Guinea.

New policies issued in Australia during each of the years 1939 and 1947 to 1951 were as follows:—

**ORDINARY LIFE ASSURANCE : NEW POLICIES ISSUED IN AUSTRALIA.**

Year.	Assurance and Endowment Policies.				Annuity Policies.			
	No. of Policies.	Sum Assured.	Premiums.		No. of Policies.	Annuities per Annum.	Premiums.	
			Single.	Annual.			Single.	Annual.
		£'000.	£'000.	£'000.		£'000.	£'000.	£'000.
		(a)	(a)	(a)		(a)	(a)	(a)
1939 ..	142,157	48,263			420	87		
1947 ..	250,022	119,169	304	4,356	3,376	651	452	207
1948 ..	261,596	131,903	360	4,749	1,999	567	352	171
1949 ..	253,793	140,395	347	5,030	2,533	507	468	136
1950 ..	265,846	167,271	364	5,891	2,879	878	587	209
1951 ..	287,647	221,132	460	7,854	2,658	1,300	649	380

(a) Not available.

(ii) *Industrial Business.* New policies to the number of 266,577 were issued during the year 1951 for a total of £30,661,000. The average amount per policy was £115, as compared with the average of £63 for all industrial policies current at the end of 1950.

Details of new industrial policies issued in each State and the Australian Capital Territory during 1951 are given in the following table:—

**INDUSTRIAL LIFE ASSURANCE : NEW POLICIES ISSUED IN AUSTRALIA, 1951.**

State or Territory.(a)	Assurance and Endowment Policies.		
	No. of Policies.	Sum Assured.	Annual Premiums.
New South Wales .. .. .	97,361	11,526	528
Victoria .. .. .	79,814	8,990	417
Queensland(b) .. .. .	33,010	3,702	173
South Australia .. .. .	28,076	3,012	139
Western Australia .. .. .	19,950	2,480	113
Tasmania .. .. .	7,876	889	40
Australian Capital Territory .. .. .	490	62	3
Total .. .. .	266,577	30,661	1,413

(a) Location of register of policies.

(b) Includes Territories of Papua and New Guinea.

Details of new industrial policies issued in Australia during the years 1939 and 1947 to 1951 are given in the following table:—

**INDUSTRIAL LIFE ASSURANCE : NEW POLICIES ISSUED IN AUSTRALIA.**

Year.	Assurance and Endowment Policies.			
	No. of Policies.	Sum Assured.	Single Premiums.	Annual Premiums.
		(a)	(a)	(a)
1939 .. .. .	385,498	18,542		
1947 .. .. .	315,948	27,228	6	1,293
1948 .. .. .	312,402	29,655	13	1,357
1949 .. .. .	300,988	29,690	7	1,367
1950 .. .. .	289,275	29,632	7	1,367
1951 .. .. .	266,577	30,661		1,413

(a) Not available.

5. *Policies Matured or Otherwise Discontinued in Australia.*—(i) *Ordinary Business.* The volume of business discontinued from various causes in each year is always large. In the following table details are given of ordinary life assurance policies matured or otherwise discontinued in each State and the Australian Capital Territory during the year 1951.

**ORDINARY LIFE ASSURANCE : POLICIES MATURED OR OTHERWISE  
DISCONTINUED IN AUSTRALIA, 1951.**

State or Territory.(a)	Assurance and Endowment Policies.			Annuity Policies.		
	No. of Policies.	Sum Assured.	Annual Premiums.	No. of Policies.	Annuities per Annum.	Annual Premiums.
		£'000.	£'000.		£'000.	£'000.
New South Wales .. .. .	41,820	20,717	768	340	8	3
Victoria .. .. .	31,286	17,819	662	395	342	120
Queensland(b) .. .. .	18,620	8,873	303	48	3	1
South Australia .. .. .	8,142	3,986	156	23	3	..
Western Australia .. .. .	6,835	3,252	126	36	1	..
Tasmania .. .. .	4,278	2,085	76	49	—	1
Australian Capital Territory .. .. .	— 12	— 425	— 24	56	5	1
Total .. .. .	110,969	56,307	2,067	947	360	124

(a) Location of register of policies.

(b) Includes Territories of Papua and New Guinea.

NOTE.—Minus sign (—) indicates excess of transfers to Australian registers or other adjustments to number or value of policies.

Ordinary life assurance policies matured or otherwise discontinued during each of the years 1939 and 1947 to 1951 were as follows :—

**ORDINARY LIFE ASSURANCE : POLICIES MATURED OR OTHERWISE  
DISCONTINUED IN AUSTRALIA.**

Year.	Assurance and Endowment Policies.			Annuity Policies.		
	No. of Policies.	Sum Assured.	Annual Premiums.	No. of Policies.	Annuities per Annum.	Annual Premiums.
		£'000.	£'000.		£'000.	£'000.
1939 .. .. .	80,912	24,786	(a)	275	17	(a)
1947 .. .. .	85,478	33,070	1,294	716	169	21
1948 .. .. .	92,296	37,932	1,445	816	234	223
1949 .. .. .	100,492	44,071	1,687	1,039	216	90
1950 .. .. .	113,054	50,917	1,920	4,269	274	71
1951 .. .. .	110,969	56,307	2,067	947	360	124

(a) Not available.

The number and amount of ordinary policies, excluding annuities, discontinued in the three years 1939, 1950 and 1951 and the reasons for discontinuance are given in the following table :—

**ORDINARY LIFE ASSURANCE : POLICIES(a) MATURED OR OTHERWISE  
DISCONTINUED IN AUSTRALIA.**

Cause of Discontinuance.	1939.		1950.		1951.	
	No. Policies.	Sum Assured.	No. of Policies.	Sum Assured.	No. of Policies.	Sum Assured.
		£'000.		£'000.		£'000.
Death or maturity .. .. .	22,529	5,612	34,655	10,132	36,150	10,816
Surrender .. .. .	18,409	5,863	42,710	22,270	43,347	24,303
Forfeiture .. .. .	39,382	13,414	35,945	16,939	33,259	18,108
Other .. .. .	— 128	— 103	644	1,576	— 1,787	3,080
Total .. .. .	80,192	24,786	113,054	50,917	110,969	56,307

(a) Excludes annuities.

NOTE.—Minus sign (—) indicates excess of transfers to Australian registers or other adjustments to number or value of policies.

(ii) *Industrial Business.* The number of policies discontinued each year in this branch is very large. In the following table details are given of industrial policies matured or otherwise discontinued in each State and the Australian Capital Territory during 1951 :—

**INDUSTRIAL LIFE ASSURANCE : POLICIES MATURED OR OTHERWISE  
DISCONTINUED IN AUSTRALIA, 1951.**

State or Territory.(a)	Assurance and Endowment Policies.		
	No. of Policies.	Sum Assured.	Annual Premiums.
		£'000.	£'000.
New South Wales .. .. .	87,143	6,162	342
Victoria .. .. .	67,060	4,641	264
Queensland(b) .. .. .	24,901	1,883	104
South Australia .. .. .	20,061	1,303	74
Western Australia .. .. .	13,534	1,001	55
Tasmania .. .. .	4,152	386	21
Australian Capital Territory .. .. .	84	12	1
Total .. .. .	216,935	15,388	861

(a) Location of register of policies.

(b) Includes Territories of Papua and New Guinea.

Details of industrial life assurance policies matured or otherwise discontinued during each of the years 1939 and 1947 to 1951 were as follows :—

**INDUSTRIAL LIFE ASSURANCE : POLICIES MATURED OR OTHERWISE  
DISCONTINUED IN AUSTRALIA.**

Year.	Assurance and Endowment Policies.		
	No. of Policies.	Sum Assured.	Annual Premiums.
		£'000.	£'000.
1939 .. .. .	262,096	12,132	(a)
1947 .. .. .	204,626	12,406	720
1948 .. .. .	211,386	13,750	766
1949 .. .. .	219,041	14,690	819
1950 .. .. .	221,218	15,323	851
1951 .. .. .	216,935	15,388	861

(a) Not available.

The number and amount of policies, excluding annuities, discontinued during each of the years 1939, 1950 and 1951 and the reasons for discontinuance are given in the following table :—

**INDUSTRIAL LIFE ASSURANCE : POLICIES(a) MATURED OR OTHERWISE  
DISCONTINUED IN AUSTRALIA.**

Cause of Discontinuance.	1939.		1950.		1951.	
	No. of Policies.	Sum Assured.	No. of Policies.	Sum Assured.	No. of Policies.	Sum Assured.
		£'000.		£'000.		£'000.
Death or maturity .. .. .	73,585	2,759	115,594	4,880	122,209	5,056
Surrender .. .. .	33,766	1,372	38,699	2,446	33,109	2,462
Forfeiture .. .. .	154,328	7,976	66,542	7,950	60,877	7,819
Other .. .. .	417	25	383	47	740	51
Total .. .. .	262,096	12,132	221,218	15,323	216,935	15,388

(a) Excludes annuities.



6. **Premiums and Claims, Australia.**—(i) *Ordinary Business.* Details of revenue from premiums in respect of the ordinary business of all offices doing business in Australia are shown in the following table for each State and the Australian Capital Territory for the year 1951 :—

**ORDINARY LIFE ASSURANCE : AUSTRALIAN REVENUE FROM PREMIUMS, 1951.**  
(£'000.)

State or Territory.(a)	Assurance and Endowment Premiums.		Consideration for Annuities.		Total.
	Single Premiums.	Other Premiums.	Single Premiums.	Other Premiums.	
New South Wales .. .. .	172	14,880	194	249	15,495
Victoria .. .. .	71	12,401	328	645	13,445
Queensland(b) .. .. .	84	5,913	22	12	6,031
South Australia .. .. .	36	3,660	27	10	3,733
Western Australia .. .. .	25	2,589	25	8	2,647
Tasmania .. .. .	7	1,203	22	13	1,245
Australian Capital Territory	24	200	4	120	348
<b>Total .. .. .</b>	<b>419</b>	<b>40,846</b>	<b>622</b>	<b>1,057</b>	<b>42,944</b>

(a) Location of register of policies.

(b) Includes Territories of Papua and New Guinea.

The next table shows, for each of the years 1939 and 1947 to 1951, the aggregate Australian income from premiums in respect of ordinary business of all offices doing business in Australia :—

**ORDINARY LIFE ASSURANCE : AUSTRALIAN REVENUE FROM PREMIUMS.**  
(£'000.)

Year.	Assurance and Endowment Premiums.	Consideration for Annuities.	Total.
1939 .. .. .	13,954	184	14,138
1947 .. .. .	25,140	970	26,110
1948 .. .. .	28,611	1,009	29,620
1949 .. .. .	31,904	1,158	33,062
1950 .. .. .	35,840	1,365	37,205
1951 .. .. .	41,265	1,679	42,944

Details of the claims, etc., paid on ordinary assurance policies in each State and the Australian Capital Territory during the year 1951 are shown in the following table :—

**ORDINARY LIFE ASSURANCE : PAYMENTS TO POLICY-HOLDERS IN AUSTRALIA, 1951.**  
(£'000.)

State or Territory.(a)	Claims.		Sur-renders.	Annuities.	Cash Bonuses.	Total.
	By Death or Disability.	By Maturity.				
New South Wales .. .. .	2,831	2,161	1,018	133	31	6,174
Victoria .. .. .	2,284	2,246	867	123	26	5,546
Queensland(b) .. .. .	1,124	967	326	21	13	2,451
South Australia .. .. .	639	562	161	30	6	1,398
Western Australia .. .. .	460	303	156	17	9	945
Tasmania .. .. .	232	177	73	17	2	501
Australian Capital Territory	25	18	41	5	..	89
<b>Total .. .. .</b>	<b>7,595</b>	<b>6,434</b>	<b>2,642</b>	<b>346</b>	<b>87</b>	<b>17,104</b>

(a) Location of register of policies.

(b) Includes Territories of Papua and New Guinea.

In the following table details are given of claims, etc., paid on ordinary policies in Australia for each of the years 1939 and 1947 to 1951 :—

**ORDINARY LIFE ASSURANCE : PAYMENTS TO POLICY-HOLDERS IN AUSTRALIA.**  
(£'000.)

Year.	Claims.	Surrenders.	Annuities.	Cash Bonuses.	Total.
1939 .. .. .	7,935	1,843	220	260	10,258
1947 .. .. .	10,858	1,608	261	105	12,832
1948 .. .. .	11,408	1,766	281	96	13,551
1949 .. .. .	12,273	1,951	298	98	14,620
1950 .. .. .	13,320	2,382	322	102	16,126
1951 .. .. .	14,029	2,642	346	87	17,104

(ii) *Industrial Business.* Premiums received on industrial policies in 1951 amounted to :—New South Wales, £4,800,000; Victoria, £4,198,000; Queensland, £1,511,000; South Australia, £1,235,000; Western Australia, £799,000; Tasmania, £314,000; Australian Capital Territory £17,000; Australia, £12,874,000 (including single premiums amounting to £15,000)

The Australian receipts from assurance and endowment premiums on industrial policies for the years 1939 and 1947 to 1951 were as follows :—1939, £6,490,000; 1947, £10,510,000; 1948, £11,182,000; 1949, £11,676,000; 1950, £12,207,000; 1951, £12,874,000.

Details of payments of claims, etc., on industrial policies in each State and the Australian Capital Territory during the year 1951 are given in the following table :—

**INDUSTRIAL LIFE ASSURANCE : PAYMENTS TO POLICY-HOLDERS IN AUSTRALIA, 1951.**  
(£'000.)

State or Territory.(a)	Claims.		Surrenders.	Total.
	By Death or Disability.	By Maturity.		
New South Wales .. .. .	341	1,780	236	2,357
Victoria .. .. .	264	1,644	163	2,071
Queensland(b) .. .. .	101	537	73	711
South Australia .. .. .	85	394	46	525
Western Australia .. .. .	49	282	37	368
Tasmania .. .. .	18	83	10	111
Australian Capital Territory ..	1	6	1	8
Total .. .. .	859	4,726	566	6,151

(a) Location of register of policies.

(b) Includes Territories of Papua and New Guinea.

Claims, etc., paid on industrial policies in Australia for each of the years 1939 and 1947 to 1951 were as follows :—

**INDUSTRIAL LIFE ASSURANCE : PAYMENTS TO POLICY-HOLDERS IN AUSTRALIA.**  
(£'000.)

Year.	Claims.	Surrenders.	Total.
1939 .. .. .	3,132	499	3,631
1947 .. .. .	4,983	478	5,461
1948 .. .. .	5,320	503	(a) 5,824
1949 .. .. .	5,572	546	6,118
1950 .. .. .	5,410	606	6,016
1951 .. .. .	5,585	566	6,151

(a) Includes Cash Bonuses paid £1,000.

7. **Total Revenue and Expenditure.**—(i) *Total Revenue.* The following table shows particulars of the total revenue derived by life assurance offices from sources within and beyond Australia during each of the years 1939 and 1947 to 1951 :—

**ORDINARY AND INDUSTRIAL LIFE ASSURANCE : TOTAL REVENUE.**  
(£'000.)

Year.	Assurance and Endowment Premiums.	Con- sideration for Annuities Granted.	Interest, Dividends and Rents.	All other Revenue.	Total Revenue.
<b>ORDINARY BUSINESS.</b>					
1939 .. .. .	21,568	303	9,901	17	31,789
1947 .. .. .	37,103	1,179	13,600	305	52,187
1948 .. .. .	41,614	1,232	14,371	68	57,285
1949 .. .. .	45,770	1,366	15,267	736	63,139
1950 .. .. .	50,867	1,572	16,613	2,327	71,379
1951 .. .. .	57,868	2,462	18,245	306	78,881
<b>INDUSTRIAL BUSINESS.</b>					
1939 .. .. .	7,863	..	2,127	61	10,051
1947 .. .. .	12,359	..	3,021	80	15,460
1948 .. .. .	13,075	..	3,170	10	16,255
1949 .. .. .	13,576	..	3,301	366	17,243
1950 .. .. .	14,145	..	3,548	389	18,082
1951 .. .. .	14,915	..	3,832	85	18,832

(ii) *Total Expenditure.* The next table supplies details of the total expenditure, both within and beyond Australia, of life assurance offices during each of the years 1939 and 1947 to 1951 :—

**ORDINARY AND INDUSTRIAL LIFE ASSURANCE : TOTAL EXPENDITURE.**  
(£'000.)

Year.	Claims and Annuities paid.	Surrenders.	Cash Bonuses paid to Policy-holders.	Com- mission.	Share- holders' Dividends.	All other Expendi- ture.(a)	Total Expendi- ture.
<b>ORDINARY BUSINESS.</b>							
1939 .. .. .	12,320	2,668	380	1,483	125	3,867	20,843
1947 .. .. .	17,318	2,234	143	3,250	94	5,066	28,105
1948 .. .. .	18,674	2,545	138	3,471	97	5,094	30,019
1949 .. .. .	19,735	2,845	143	3,613	105	6,390	32,831
1950 .. .. .	20,876	3,481	152	4,027	105	6,187	34,828
1951 .. .. .	21,786	3,813	134	5,042	128	7,770	38,673
<b>INDUSTRIAL BUSINESS.</b>							
1939 .. .. .	3,763	576	..	1,619	72	1,278	7,308
1947 .. .. .	6,052	543	..	2,075	46	1,763	10,479
1948 .. .. .	6,409	587	1	2,058	41	1,859	10,955
1949 .. .. .	6,778	638	..	2,082	37	2,159	11,694
1950 .. .. .	6,622	710	..	2,116	31	2,416	11,895
1951 .. .. .	6,743	667	..	2,250	35	2,646	12,341

(a) Includes other expenses of management, licence fees and taxes, &c.

8. **Liabilities and Assets.**—(i) *General.* The liabilities of the Australian offices consist mainly of their assurance funds, but in the case of public companies there is a further liability on account of the shareholders' capital. The assets consist chiefly of government and municipal securities, mortgages, loans on policies, landed and house property, etc. Loans on personal security are granted by very few of the Australian

offices. A number of the larger Australian offices have extensive business overseas and separate details of liabilities and assets in respect of Australian business are not available for years after 1941. For 1941 and earlier years *see* Official Year Book No. 37 and previous issues.

(ii) *Total Liabilities and Assets.* In the two tables which follow, the details of liabilities and assets relate to all business (Australian and overseas) of Australian companies, the life assurance business of the two State Government offices, all business of the Provident Life Assurance Co. Ltd. (incorporated in New Zealand) and the Australian business only of the Prudential Assurance Co. Ltd. (incorporated in England). For various reasons several offices do not attempt the dissection of liabilities and assets between the industrial and ordinary branches, and, therefore, the figures in the following tables relate to the ordinary and industrial branches combined. Details of the total liabilities of life assurance offices for the year 1951 are given in the following table:—

**ORDINARY AND INDUSTRIAL LIFE ASSURANCE: TOTAL LIABILITIES, 1951.**  
(£'000.)

Item.	Life Assurance Business.	Other Classes of Business.	Total Liabilities.
Shareholders' Capital—			
Authorized .. .. .	..	4,573	4,573
<i>Less</i> Unissued .. .. .	..	1,849	1,849
Subscribed Capital .. .. .	..	2,724	2,724
Paid-up—			
In Money .. .. .	..	2,312	2,312
Otherwise than in Money .. .. .	..	89	89
Total .. .. .	..	2,401	2,401
Life Assurance Statutory Funds—			
Ordinary Department .. .. .	488,020	..	488,020
Industrial Department .. .. .	103,261	..	103,261
Total .. .. .	591,281	..	591,281
Funds in respect of Other Classes of Business .. .. .	..	754	754
General Reserves .. .. .	12,192	1,096	13,288
Profit and Loss Account Balance .. .. .	..	82	82
Total, Shareholders' Capital, Assurance Funds and Reserves .. .. .	603,473	4,333	607,806
Other Liabilities—			
Deposits .. .. .	759	948	1,707
Staff Provident and Superannuation Funds .. .. .	141	335	476
Claims admitted or intimated but not paid .. .. .	7,211	59	7,270
Annuities due but not paid .. .. .	7	..	7
Premiums Paid in Advance and in Suspense .. .. .	864	10	874
Sundry Creditors .. .. .	2,213	99	2,312
Bank Overdraft .. .. .	3,031	33	3,064
Reserves and Provisions for Taxation .. .. .	2,350	138	2,488
Other Liabilities .. .. .	344	15	359
Total Liabilities .. .. .	620,393	5,970	626,363

The following table furnishes details of the total assets of life assurance offices for the year 1951 :—

**ORDINARY AND INDUSTRIAL LIFE ASSURANCE : TOTAL ASSETS, 1951.**  
(£'000.)

Item.	Life Assurance Business.	Other Classes of Business.	Total.	Amount of Total Assets held in Australia.
<b>Fixed Assets—</b>				
Office Premises .. .. .	11,345	202	11,547	8,511
Other Freehold and Leasehold Property ..	9,346	55	9,401	5,430
Office Furniture, Fittings and Equipment and Motor Vehicles .. .. .	530	38	568	426
Total Fixed Assets .. .. .	21,221	295	21,516	14,367
<b>Loans—</b>				
On Mortgage .. .. .	147,780	68	147,848	113,312
On Debentures and Shares .. .. .	1,432	36	1,468	1,455
On Policies of the Company including Advances of Premiums .. .. .	24,770	..	24,770	18,067
On Life Interests and Reversions .. .. .	286	1	287	276
On Personal Security .. .. .	33	9	42	41
Other Loans .. .. .	14,329	408	14,737	14,691
Total Loans .. .. .	188,630	522	189,152	147,842
<b>Investments—</b>				
<b>Government Securities—</b>				
Australia .. .. .	202,403	2,255	204,658	194,354
New Zealand .. .. .	31,918	85	32,003	2
Great Britain .. .. .	7,309	..	7,309	..
Other British Dominions .. .. .	6,440	5	6,445	..
Foreign .. .. .	122	..	122	..
<b>Securities of Local and Semi-Governmental Bodies .. .. .</b>				
Debentures .. .. .	18,319	1,097	19,416	18,166
Preference Shares .. .. .	13,554	39	13,593	12,625
Ordinary Shares .. .. .	12,478	465	12,943	11,408
Holdings in Controlled Companies .. .. .	2,551	334	2,885	2,785
Life Interests and Reversions purchased ..	43	..	43	43
Other Investments .. .. .	865	..	865	586
Total Investments .. .. .	396,229	4,468	400,697	312,771
<b>Cash on Deposit, Current Account and in hand .. .. .</b>				
Other Assets—	3,439	64	3,503	2,729
Outstanding Premiums .. .. .	3,024	9	3,033	2,299
Interest, Dividends and Rents accrued and outstanding .. .. .	4,584	36	4,620	3,489
Sundry Debtors .. .. .	881	33	914	535
Establishment Account(a) .. .. .	152	542	694	673
Other Assets .. .. .	2,233	1	2,234	1,411
Total Assets .. .. .	620,393	5,970	626,363	486,116

(a) Includes goodwill and other intangible assets.

(iii) *Assets held in Australia.* Details of assets held in Australia for the years 1939 and 1947 to 1951 are set out in detail in the following table:—

**ORDINARY AND INDUSTRIAL LIFE ASSURANCE(a) : ASSETS HELD IN AUSTRALIA.**  
(£'000.)

Particulars.	1939. (b)	1947.	1948.	1949.	1950.	1951.
Landed and house property ..	12,823	12,845	12,943	13,436	13,582	13,941
Government and municipal securities ..	115,712	256,777	270,988	278,354	273,331	267,158
Life interests and reversions ..	234	75	37	38	36	43
Other investments ..	6,466	11,747	17,176	25,573	36,078	45,570
Loans on mortgages ..	61,720	47,077	51,954	60,941	82,793	113,312
Loans on companies' policies ..	22,445	15,843	16,141	16,699	17,071	18,067
Other loans ..	(c)	3,598	4,108	5,484	10,941	16,463
Outstanding premiums ..	1,087	1,401	1,542	1,642	1,937	2,299
Outstanding interest, dividends and rents ..	1,811	2,863	3,025	3,116	3,323	3,489
Cash ..	2,399	2,882	3,295	4,406	3,585	2,729
Establishment and organization accounts (d) ..	1,101	942	674	674	665	673
All other assets ..	1,718	1,065	1,244	1,539	1,955	2,372
<b>Total Australian Assets</b>	<b>227,516</b>	<b>357,115</b>	<b>383,127</b>	<b>411,902</b>	<b>445,297</b>	<b>486,116</b>

(a) Life assurance and other classes of business. (b) Australian assets. (c) Included with other investments. (d) Includes goodwill and other intangible assets.

9. *Loans.*—In the following table details are given of new loans granted by life assurance companies during each of the years ended 31st December, 1948 to 1952. The information has been compiled from monthly returns furnished by each company. New loans granted by the Government Insurance Office of New South Wales and the Queensland State Government Insurance Office are not included. Advances of premiums are also excluded.

**LIFE ASSURANCE COMPANIES(a) : NEW LOANS GRANTED.(b)**  
(£'000.)

Particulars.	1948.	1949.	1950.	1951.	1952.
<b>CLASS OF SECURITY.</b>					
Mortgage of Real Estate ..	11,206	17,177	35,677	41,132	30,140
Companies' Policies ..	2,025	2,263	2,583	2,930	4,329
Other ..	2,822	3,034	4,211	7,298	4,937
<b>Total ..</b>	<b>16,053</b>	<b>22,474</b>	<b>42,471</b>	<b>51,360</b>	<b>39,406</b>
<b>STATE OR TERRITORY.(c)</b>					
New South Wales ..	9,230	13,108	21,176	26,596	21,748
Victoria ..	3,890	5,651	16,651	16,813	10,687
Queensland ..	1,612	1,447	1,915	3,325	2,065
South Australia ..	664	796	1,419	1,641	2,349
Western Australia ..	467	1,106	894	2,075	1,649
Tasmania ..	183	359	391	873	858
Aust. Cap. Territory ..	7	7	25	37	50
<b>Total ..</b>	<b>16,053</b>	<b>22,474</b>	<b>42,471</b>	<b>51,360</b>	<b>39,406</b>

(a) Excludes Government Insurance Office of New South Wales and Queensland State Government Insurance Office. (b) Excludes Advances of Premiums. (c) State or Territory of location of mortgage, registration of policy, or residence of borrower.

## § 3. Fire, Marine and General Insurance.

1. **Australasian Companies.**—The statistical information in this paragraph has been extracted from the *Australasian Insurance and Banking Record*. The following table shows, for the years 1938-39 and 1946-47 to 1950-51 particulars of the revenue and expenditure of a group of insurance companies having their head offices either in Australia, New Zealand or Fiji:—

**FIRE, MARINE AND GENERAL INSURANCE COMPANIES: SUMMARY OF REVENUE AND EXPENDITURE.**

Particulars.	1938-39.	1946-47.	1947-48.	1948-49.	1949-50.	1950-51.
No. of companies . . . . .	40	43	43	47	44	45
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Premiums, less reinsurances . . . . .	9,708	15,472	19,363	21,816	24,008	31,796
Losses . . . . .	5,417	8,056	10,437	11,502	12,585	17,131
Expenses, commission and taxes . . . . .	2,994	4,928	5,720	6,991	7,880	9,799
Transfer to Reserve for Unearned Premiums . . . . .	(a)	(a)	(a)	1,335	1,526	3,151
Underwriting Profit . . . . .	(b)1,297	(b)2,488	(b)3,206	1,988	2,017	1,715
Interest, rent, etc. . . . .	1,011	1,141	1,181	1,257	1,360	1,545
Total surplus . . . . .	2,308	3,629	4,387	3,245	3,377	3,260
Dividends and bonuses paid . . . . .	709	1,102	1,248	1,470	1,755	1,912

(a) Not available.  
Unearned Premiums.

(b) Trade surplus. No provision has been made for transfers to Reserve for

2. **Aggregate Australian Business.**—(i) *General.* While the foregoing statements relate only to those companies whose head offices are located in Australia, New Zealand or Fiji, the following particulars, which are somewhat restricted in the range of information, are in respect of all companies operating in Australia. The statistics in this paragraph conform substantially to the following definitions and should be interpreted in accordance therewith.

(a) Premiums represent the full amount receivable in respect of policies issued and renewed in the year, less returns, rebates and bonuses paid or credited to policy-holders during the year. They are not adjusted to provide for premiums unearned at the end of the year and consequently the amounts differ from "earned premium income" appropriate to the year. When business is increasing, as in recent years, premiums receivable (as shown in the statistics) are greater than "earned premium income" appropriate to the year. The converse applies when business is declining.

(b) Claims or losses include provision for outstanding claims and represent claims or losses incurred in the year. Salvage and other amounts recoverable have been deducted.

(c) Contributions to Fire Brigades, Commission and Agents' Charges, and Expenses of Management represent mainly charges paid during the year.

(d) Taxation represents mainly payments made during the year, and includes income tax, pay-roll tax, licence fees, stamp duty (where paid by the company), etc. Income tax paid during the year is based on the income of earlier years.

The tables contain selected items of statistics and the information shown is not suitable for the construction of a "profit and loss" statement or "revenue" account.

In cases where the business is underwritten in one State and the risk is situated in another the business is included in the State in which the policy was issued.

During 1951-52 (1950-51) revenue from premiums amounted to £77,608,000 (£57,949,000) and from the net interest on investments, etc., to £2,232,000 (£2,087,000), totalling £79,840,000 (£60,036,000). Expenditure on losses amounted to £40,408,000 (£27,405,000), contributions to fire brigades £1,732,000 (£1,402,000), commission and agents' charges £8,057,000 (£6,102,000), expenses of management £12,840,000 (£9,731,000) and taxation £3,794,000 (£2,460,000), a total of £66,831,000 (£47,100,000).

(ii) *States.* The following table shows, for each State, the aggregate premium income less reinsurances and returns, and claims or losses less amounts recoverable, for all classes of insurance other than life for the years 1938-39 and 1947-48 to 1951-52 :—

**FIRE, MARINE AND GENERAL INSURANCE : PREMIUMS AND LOSSES—STATES.**  
(£'000.)

State.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
<b>GROSS PREMIUMS, LESS REINSURANCES AND RETURNS.</b>						
New South Wales .. ..	6,943	13,356	15,935	18,797	23,214	31,107
Victoria .. ..	4,505	9,406	11,994	14,579	18,024	24,441
Queensland .. ..	2,327	3,406	4,557	5,422	6,755	9,015
South Australia .. ..	1,245	2,170	2,861	3,637	4,630	6,167
Western Australia .. ..	1,373	2,094	2,536	3,141	3,911	5,000
Tasmania .. ..	457	838	999	1,156	1,415	1,878
Total .. ..	16,850	31,270	38,882	46,732	57,949	77,608

<b>GROSS CLAIMS OR LOSSES, LESS AMOUNTS RECOVERABLE.</b>						
New South Wales .. ..	3,842	7,441	8,278	9,109	11,156	16,661
Victoria .. ..	2,194	4,470	5,494	6,465	9,042	12,205
Queensland .. ..	1,071	2,032	2,367	2,401	2,658	4,979
South Australia .. ..	487	1,063	1,357	1,357	1,851	2,858
Western Australia .. ..	731	1,044	1,027	1,365	1,912	2,981
Tasmania .. ..	204	303	375	471	786	724
Total .. ..	8,529	16,353	18,898	21,168	27,405	40,408

NOTE.—See footnotes to next table.

(iii) *Classes of Insurance.* The following statement shows premiums and losses in respect of the principal classes of risks, for the years 1938-39 and 1947-48 to 1951-52 :—

**FIRE, MARINE AND GENERAL INSURANCE : PREMIUMS AND LOSSES—**  
**PRINCIPAL CLASSES OF RISK, AUSTRALIA.**  
(£'000.)

Class of Risk.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
<b>GROSS PREMIUMS, LESS REINSURANCES AND RETURNS.</b>						
Fire .. ..	5,597	9,074	10,743	12,343	14,763	18,535
Workers' Compensation (a) ..	4,361	8,060	10,066	11,556	13,378	17,159
Motor Vehicle—						
Compulsory Third Party .. ..	3,848	1,436	1,832	2,383	3,040	4,750
Other .. ..		4,234	6,252	8,236	11,920	18,048
Marine .. ..	1,018	(b) 3,026	(b) 3,635	4,296	5,302	7,433
Personal Accident .. ..	554	(c)	1,012	1,188	1,541	1,899
All other .. ..	1,472	5,440	5,342	6,730	8,005	9,784
Total .. ..	16,850	31,270	38,882	46,732	57,949	77,608

<b>GROSS CLAIMS OR LOSSES, LESS AMOUNTS RECOVERABLE.</b>						
Fire .. ..	2,223	2,414	2,951	2,430	4,197	6,669
Workers' Compensation (a) ..	2,972	5,751	5,920	6,292	6,784	8,678
Motor Vehicle—						
Compulsory Third Party .. ..	2,324	1,493	2,014	2,695	3,372	5,331
Other .. ..		2,619	3,528	4,970	7,867	12,025
Marine .. ..	243	(b) 1,145	(b) 1,248	1,784	2,244	3,352
Personal Accident .. ..	264	(c)	349	412	514	634
All other .. ..	503	2,931	2,888	2,585	2,427	3,719
Total .. ..	8,529	16,353	18,898	21,168	27,405	40,408

(a) From 1947-48 excludes Workmen's Compensation Insurance in coal-mining industry in New South Wales. (b) Excludes business of Commonwealth Marine War Risks Insurance Board (see Official Year Book No. 38, pp. 753-4). (c) Included with All other.



The volume of business measured by the amount of premium income shows that fire insurance represented about 25.5 per cent. of the total business during 1950-51 and 23.9 per cent. during 1951-52, workers' compensation 23.1 per cent. during 1950-51 and 22.1 per cent. during 1951-52, motor vehicles (including compulsory third party insurance) 25.8 per cent. in 1950-51 and 29.4 per cent. in 1951-52 and marine insurance constituted 9.2 per cent. in 1950-51 and 9.6 per cent. in 1951-52.

### E. FRIENDLY SOCIETIES.

1. **General.**—The total membership of friendly societies in Australia is approximately 600,000 but as certain benefits, such as medical attendance and free medicines, and in many cases funeral expenses, are granted to members' families as well as to members themselves, this figure must, even when due allowance is made for young and unmarried members, be more than doubled to arrive at an estimate of the number of persons who receive some direct benefit from these societies. Legislation has conferred certain privileges on friendly societies, but, on the other hand, it insists on their registration, and it is the duty of the Registrars in the various States, prior to registering a new society, to see that its proposed rules conform to the law, and that the scale of contribution is sufficient to provide the promised benefits. Societies are obliged to forward to the Registrar annual returns about their membership and their finances, and reports are published in most of the States dealing with the returns received.

2. **Number of Societies, Lodges and Members.**—The number of different societies and lodges, the total number of benefit members at the end of the year 1950-51 and their average number during the year are shown in the following table :—

FRIENDLY SOCIETIES : SOCIETIES, LODGES AND MEMBERS, 1950-51.

State.	Registered Friendly Societies.	Branches.	Benefit Members at End of Year.	Average Benefit Members during the Year.
New South Wales (a) .. ..	32	2,302	213,091	219,170
Victoria (b) .. ..	111	1,436	193,851	196,991
Queensland .. ..	26	548	66,610	67,234
South Australia (c) .. ..	17	(d) 824	71,591	73,380
Western Australia (c) .. ..	13	310	28,288	28,690
Tasmania (e) .. ..	20	166	19,338	19,998
Total .. ..	..	5,586	592,769	605,463

(a) Includes branches in the Australian Capital Territory; excludes 24 miscellaneous societies consisting of Medical Institutes, Dispensaries and Accident and Burial Societies. (b) Excludes Dispensaries, Juvenile Branches and members contributing to medical benefits only. (c) Excludes Juvenile Branches. (d) Societies containing male and female branches counted as two branches. (e) Year 1951.

3. **Sickness and Death Returns.**—Sick pay is generally granted for a number of months at full rates, then for a period at half rates, and in some societies is finally reduced to quarter rates. The following table shows the total number of members who received sick pay during the year, the number of weeks in the aggregate for which they received

pay, and the average per member sick, and, further, the number of benefit members who died during the year, together with the proportion of deaths per thousand average members:—

## FRIENDLY SOCIETIES : SICKNESS AND DEATH RETURNS, 1950-51.

State.	Members who received Sick Pay.	Total Weeks Sick Pay granted.	Average Weeks per Member sick.	Benefit Members.(a)	
				Deaths.	Proportion of Deaths per 1,000 (Average).
New South Wales ..	(b)	(b)	(b)	(b)	(b)
Victoria .. .. .	41,620	478,943	11.51	2,360	11.98
Queensland .. ..	12,439	136,636	10.98	974	14.49
South Australia ..	17,374	192,558	11.08	1,095	14.92
Western Australia ..	6,003	65,606	10.93	317	11.05
Tasmania(c) .. ..	3,066	36,834	12.01	339	16.95
Total .. .. .	(b)	(b)	(b)	(b)	(b)

(a) Excludes registered wives.

(b) Not available.

(c) Year 1951.

4. Revenue and Expenditure.—(i) *Revenue*. The financial returns are not prepared in the same way in each State, but an attempt has been made in the following table to group the revenue under the main headings:—

## FRIENDLY SOCIETIES : REVENUE, 1950-51.

(£.)

State.	Entrance Fees, Members' Contributions and Levies.	Interest, Dividends and Rents.	All other Revenue.	Total Revenue.
New South Wales(a) ..	1,014,970	240,677	89,376	1,345,023
Victoria .. .. .	1,141,207	308,396	133,548	1,583,151
Queensland .. .. .	294,385	102,759	(b)	397,144
South Australia .. ..	330,809	160,613	44,399	535,821
Western Australia .. ..	162,232	36,043	3,475	201,750
Tasmania(c) .. .. .	91,554	21,896	27,551	141,001
Total .. .. .	3,035,157	870,384	298,349	4,203,890

(a) Includes Australian Capital Territory.

(b) Included in Interest, Dividends and Rents.

(c) Year 1951.

(ii) *Expenditure*. The returns relating to expenditure are in greater detail than those for revenue and particulars of the major items are shown below:—

## FRIENDLY SOCIETIES : EXPENDITURE, 1950-51.

(£.)

State.	Sick Pay.	Medical Attendance and Medicine.	Sums payable at Death of Members and Members' Wives.	Adminis-tration.	All other Expendi-ture.	Total Expendi-ture.
New South Wales(a) ..	259,551	452,121	122,110	260,245	101,155	1,195,182
Victoria .. .. .	279,094	560,112	61,121	280,435	168,745	1,349,507
Queensland .. .. .	84,453	137,389	46,335	66,154	(b)	334,331
South Australia .. ..	97,929	157,258	54,290	74,242	49,768	433,487
Western Australia .. ..	33,853	85,931	16,792	35,245	10,668	181,889
Tasmania(c) .. .. .	21,517	38,699	22,586	26,553	18,386	127,741
Total .. .. .	776,397	1,431,510	323,234	742,874	348,122	3,622,137

(a) Includes Australian Capital Territory.

(b) Included in Administration.

(c) Year 1951.

5. Funds.—The funds of friendly societies in each State at the end of the year 1950-51 were :—New South Wales, £6,845,000; Victoria, £8,615,000; Queensland, £2,640,000; South Australia, £3,987,000; Western Australia, £1,015,000; Tasmania, £649,000; total, £23,751,000.

## F. PROBATES AND LETTERS OF ADMINISTRATION.

The following particulars give some idea of the number and value of estates of deceased persons in each State for the latest year for which information is available. Owing to differences in legislation in the various States the figures are not entirely comparable.

### PROBATES AND LETTERS OF ADMINISTRATION.

Particulars.		New South Wales. 1951-52. (a)	Victoria. 1951.	Queens- land. 1950-51.	South Australia. 1951.	Western Australia. 1951.	Tasmania. 1951. (b)
Probates—							
Estates ..	No.	17,410	9,150	2,343	2,775	1,859	794
Gross Value ..	£	(c)	(d)	9,758,754	14,537,132	7,127,611	3,819,766
Net Value ..	£	73,066,021	(d)	(c)	13,627,878	6,885,423	3,622,464
Letters of Administration—							
Estates ..	No.	(d)	2,335	257	1,012	339	173
Gross Value ..	£	(d)	(d)	518,561	1,630,316	579,203	246,535
Net Value ..	£	(d)	(d)	(c)	1,447,970	575,670	228,585
Total—							
Estates ..	No.	17,410	11,485	2,600	3,787	2,198	967
Gross Value ..	£	(c)	52,348,856	10,277,315	16,167,448	7,706,814	4,066,301
Net Value ..	£	73,066,021	50,016,155	(c)	15,075,848	7,461,093	3,851,049

(a) Total estates of deceased persons assessed for death duty. (b) Estates dealt with by Taxation Department. (c) Not available. (d) Not available separately.

## G. STATE LOTTERIES AND BETTING.

### § 1. State Lotteries.

State Governments operate lotteries in New South Wales, Queensland and Western Australia. In Tasmania, Tattersall's Lotteries are conducted under Regulations framed under the Gaming Act 1935.

New South Wales State Lotteries commenced in 1932. At present, each ordinary lottery consists of 100,000 tickets at 5s. 6d. each, with prizes totalling £17,750. Each special lottery has 100,000 tickets at 10s. each, with prize money totalling £31,700. Net profits of the lottery are paid to the Consolidated Revenue Fund from which grants are made to hospitals.

In Queensland, the Golden Casket Art Union commenced in 1916 with the specific object of augmenting the funds of the Queensland War Council. Subsequently, Anzac Cottages and Nurses Quarters Funds benefited until 1920, when net profits were paid to the Department of Health and Home Affairs (Hospitals, Motherhood and Child Welfare Trust Fund) and used for the maintenance of hospitals, grants to institutions, and for motherhood and child welfare purposes. A stamp duty is imposed on tickets sold. The proceeds of this are paid to Consolidated Revenue Fund. At present, ordinary tickets are priced at 5s. 6d. each (100,000), special tickets at 10s. each (100,000), with prizes totalling £17,550 and £32,000 respectively.

In Western Australia, lotteries are conducted by the Lotteries Commission under the Lotteries Control Act of 1932. Profits are paid by the Commission to hospitals and other charities. Each lottery comprises 100,000 tickets at 2s. 6d. each, with prizes totalling £6,630.

Details of the income, expenditure and net profit of the three State Lotteries for the years 1938-39 and 1947-48 to 1951-52 are given in the following table :-

## STATE LOTTERIES : INCOME, EXPENDITURE AND NET PROFIT.

(£.)

Year ended 30th June—	Income.			Expenditure.				Net Profit.
	Tickets.	Other Income.	Total.	Prizes Allotted.	Taxes.	Administration and other.	Total.	

## NEW SOUTH WALES STATE LOTTERY.

1939 .. ..	2,388,750	18	2,388,768	1,500,059	..	55,674	1,555,733	833,035
1948 .. ..	5,660,000	219	5,660,219	3,607,300	..	112,155	3,719,455	1,940,764
1949 .. ..	6,312,500	144	6,312,644	4,024,555	..	135,981	4,160,536	2,152,108
1950 .. ..	6,990,000	336	6,990,336	4,456,505	..	151,882	4,608,387	2,381,949
1951 .. ..	7,867,500	233	7,867,733	5,015,255	..	194,819	5,210,074	2,657,659
1952 .. ..	8,830,000	142	8,830,142	5,627,205	..	266,307	5,893,512	2,936,630

## QUEENSLAND GOLDEN CASSET ART UNION.

1939 .. ..	1,902,500	2,626	1,905,126	1,217,800	95,125	146,907	1,459,832	445,294
1948 .. ..	3,360,000	1,373	3,361,373	2,146,200	168,000	196,567	2,510,767	850,606
1949 .. ..	3,790,000	1,636	3,791,636	2,420,800	189,500	223,485	2,833,785	957,851
1950 .. ..	3,972,500	1,794	3,974,294	2,537,450	198,625	236,092	2,972,167	1,002,127
1951 .. ..	4,265,000	2,484	4,267,484	2,724,300	213,250	253,132	3,190,682	1,076,802
1952 .. ..	4,882,500	1,865	4,884,365	3,118,650	244,125	294,483	3,657,258	1,227,107

## WESTERN AUSTRALIAN STATE LOTTERY.

1939 .. ..	238,680	..	238,680	127,380	..	33,432	160,821	77,859
1948 .. ..	687,490	..	687,490	364,650	..	94,697	459,347	228,143
1949 .. ..	749,981	..	749,981	397,800	..	103,813	501,613	248,368
1950 .. ..	787,470	..	787,470	417,600	..	108,876	526,566	260,904
1951 .. ..	924,965	..	924,965	490,620	..	127,731	618,351	306,614
1952 .. ..	949,975	..	949,975	511,800	..	128,892	640,692	309,283

## § 2. Totalizator Investments.

Estimates of totalizator investments and investments with licensed bookmakers for the years 1938–39 and 1947–48 to 1951–52 are given in the following table :—

### TOTALIZATOR INVESTMENTS AND INVESTMENTS WITH LICENSED BOOKMAKERS. (£'000.)

Year ended 30th June—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<b>TOTALIZATOR INVESTMENTS.(a)</b>							
1939 .. ..	1,731	2,732	722	630	762	339	6,916
1948 .. ..	8,544	7,753	929	1,682	2,225	864	21,997
1949 .. ..	8,742	9,012	973	1,736	2,333	824	23,620
1950 .. ..	9,702	9,457	1,945	1,746	2,382	950	26,182
1951 .. ..	11,550	10,756	2,249	1,966	2,718	936	30,175
1952 .. ..	16,344	11,334	2,857	2,204	3,226	951	36,916
<b>INVESTMENTS WITH LICENSED BOOKMAKERS.(b)</b>							
1939 .. ..	21,379	(c)	(c)	7,640	(c)	(d) 1,093	(c)
1948 .. ..	65,739	46,000	(c)	17,007	(c)	(e) 3,221	(c)
1949 .. ..	68,183	49,000	(c)	19,053	(c)	(f) 5,940	(c)
1950 .. ..	74,664	50,000	(c)	21,272	(c)	6,389	(c)
1951 .. ..	82,073	51,000	(c)	22,857	(c)	7,223	(c)
1952 .. ..	115,485	52,000	(c)	25,080	(c)	9,840	(c)

(a) Estimated from taxes on totalizators. (b) Estimated from taxes on betting with licensed bookmakers. (c) Not available. (d) Year ended 31st December, (e) Seven months ended 31st July, 1948. (f) Year ended 31st July.

## H. GOVERNMENT, SEMI-GOVERNMENTAL AND PARLIAMENTARY PENSION AND SUPERANNUATION SCHEMES.

### § 1. Government and Semi-Governmental Pension and Superannuation Schemes.

The Commonwealth and all State Governments have established pension or superannuation schemes for their employees. These schemes are operated through funds to which both the Government and the employees make contributions. Employees of semi-governmental authorities are in some cases covered by the Commonwealth or State Government scheme and in other cases by a separate scheme of the authority.

In the following table aggregate details are given for the year 1951–52, of the receipts, expenditure, accumulated funds and number of contributors and pensioners of the Commonwealth and State Government and main semi-governmental schemes. The funds included are :—

- (a) *Commonwealth*.—The Superannuation Fund and Defence Forces Retirement Benefits Fund.
- (b) *New South Wales*.—State Superannuation Fund, Government Railways Superannuation Fund and Police Superannuation and Reward Fund.
- (c) *Victoria*.—The Superannuation Fund, Police Superannuation Fund, Police Pensions Fund, Melbourne Harbour Trust Superannuation Account, Geelong Harbour Trust Superannuation Fund, Melbourne and Metropolitan Board of Works Superannuation Fund, Electricity Commission Provident Fund, Gas and Fuel Corporation Superannuation Fund, Metropolitan Fire Brigades Board Superannuation Fund, Country Fire Authority Superannuation Fund and Port Phillip Pilots' Sick and Superannuation Fund.

- (d) *Queensland*.—Public Service Superannuation Fund and Police Superannuation Fund.
- (e) *South Australia*.—South Australian Superannuation Fund, Police Pensions Fund and Public Service Superannuation Fund.
- (f) *Western Australia*.—The Superannuation Fund.
- (g) *Tasmania*.—Public Service Superannuation Fund (Old and New Funds), Police Provident Fund and State Teachers' Superannuation Fund.

**GOVERNMENT AND SEMI-GOVERNMENTAL PENSION AND SUPERANNUATION SCHEMES, 1951-52.**

Particulars.	C'with.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
<b>Receipts—</b>								
Contributions—								
Employees ..	4,588	2,695	1,835	218	505	222	252	10,315
Government ..	2,254	6,201	2,167	77	569	447	181	11,896
Interest ..	888	1,049	738	213	226	86	54	3,254
Other ..	13	79	12	4	5	..	1	114
<b>Total ..</b>	<b>7,743</b>	<b>10,024</b>	<b>4,752</b>	<b>512</b>	<b>1,305</b>	<b>755</b>	<b>488</b>	<b>25,579</b>
<b>Expenditure—</b>								
Pension Payments ..	2,829	4,171	2,274	250	729	484	193	10,930
Gratuities or Rewards ..	54	39	54	1	..	..	15	163
Refund of Contributions ..	417	291	140	80	53	33	27	1,041
Other ..	..	44	16	..	21	..	3	84
<b>Total ..</b>	<b>3,300</b>	<b>4,545</b>	<b>2,484</b>	<b>331</b>	<b>803</b>	<b>517</b>	<b>238</b>	<b>12,218</b>
<b>Funds at end of Year ..</b>	<b>29,849</b>	<b>32,319</b>	<b>22,557</b>	<b>4,396</b>	<b>6,493</b>	<b>2,584</b>	<b>1,664</b>	<b>99,862</b>
<b>Contributors at end of Year—</b>								
Males ..	116,736	86,894	38,650 5,181	9,714 3,316	10,925 1,317	6,884 637	5,050 1,731	287,035
Females ..								
<b>Total ..</b>	<b>116,736</b>	<b>86,894</b>	<b>43,831</b>	<b>13,030</b>	<b>12,242</b>	<b>7,521</b>	<b>6,781</b>	<b>287,035</b>
<b>Pensioners at end of Year—</b>								
Males ..	21,981	7,378 1,000 5,322 626	958 234 244 36	2,617 400 2,080 226	2,236 138 946 183	708 116 349 131	61,468	
Female ex-employees ..								
Widows ..								
Children ..								
<b>Total ..</b>	<b>13,559</b>	<b>21,981</b>	<b>14,326</b>	<b>1,472</b>	<b>5,323</b>	<b>3,503</b>	<b>1,304</b>	<b>61,468</b>

For details of the individual funds summarized above see *Finance Bulletin* No. 43 issued by this Bureau.

**§ 2. Parliamentary Pension and Superannuation Schemes.**

Pension and superannuation schemes have been established for members of the Commonwealth and all State Parliaments except the Tasmanian. Full details of these schemes are given in pages 91 to 99 of Official Year Book No. 38. All the schemes are

operated through funds to which the members of Parliament and the Commonwealth or States contribute. Details of the receipts, expenditure, funds and number of contributors and pensioners for the year 1951-52 are given in the following table :—

PARLIAMENTARY PENSION AND SUPERANNUATION SCHEMES, 1951-52.

Particulars.	C'wth.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Total.
Receipts—	£	£	£	£	£	£	£
Contributions—							
Members .. .. .	28,479	9,742	7,636	7,361	3,435	3,965	60,618
Government .. .. .	10,874	1,564	659	7,361	6,185	4,160	30,803
Interest .. .. .	2,195	1,117	..	1,181	973	244	5,710
Other .. .. .	546	..	..	..	..	..	546
Total .. .. .	42,094	12,423	8,295	15,903	10,593	8,369	97,677
Expenditure—							
Pension Payments (a) .. .. .	14,622	4,773	7,930	1,774	905	1,855	31,859
Refund of Contributions .. .. .	..	..	..	..	60	844	844
Other .. .. .	..	..	..	..	..	..	60
Total .. .. .	14,622	4,773	7,930	1,774	965	2,699	32,763
Funds at end of Year .. .. .	82,509	40,299	..	44,413	34,873	11,956	214,050
Contributors at end of Year .. .. .	No. 183	No. 101	No. 99	No. 71	No. 59	No. 80	No. 593
Pensioners at end of Year—							
Ex-members .. .. .	13	8	(b)	7	..	7	(b)
Widows .. .. .	5	7	(b)	..	5	4	(b)
Total .. .. .	18	15	(b)	7	5	11	(b)

(a) Including lump sum payments.

(b) Not available.

## CHAPTER XVII. PUBLIC FINANCE.

NOTE.—The subject of "Public Finance" is dealt with in this Chapter under the two major divisions of Commonwealth Finance and State Finance. The close financial relations between the Commonwealth and States, however, particularly since the Financial Agreement has been in operation, demand also a combination of these two divisions under the heading of Commonwealth and State Finance. Under the Financial Agreement the Commonwealth assumed the liability to bondholders for the States' Debts existing at the date of the agreement and now arranges for all borrowings for and on behalf of the Commonwealth or any State and for all conversions, renewals, redemptions and consolidations of the Public Debts of the Commonwealth and the States. In view of this it has been found convenient to deal with the Commonwealth and State Public Debt in a separate division.

The subject of income taxes is also dealt with in a separate division.

### A. COMMONWEALTH FINANCE.

#### § 1. General.

1. **Financial Provisions of the Constitution.**—The main provisions of the Constitution relating to the initiation and development of the financial system of the Commonwealth are contained in Sections 81 to 105A of the Commonwealth Constitution (*see* pages 20–23 of Official Year Book No. 39 and also in earlier issues). Two other sections which have a most important bearing on questions of Commonwealth finance are Sections 69 and 51.

Section 69 provides for the transfer to the Commonwealth from the States of certain specified departments, and Section 51, in outlining the powers of the Commonwealth Parliament, implies the transfer or creation of other departments. Section 87 deals with the financial relations between the Commonwealth and the States. These matters have been treated in previous issues of the Official Year Book and on pages 694–9 of this issue a summary is given of the present provisions for Commonwealth financial assistance to the States.

The majority of the tables relating to Commonwealth Finance have been compiled from the annual Budget Papers as presented to Parliament by the Treasurer of the Commonwealth.

2. **Accounts of Commonwealth Government.**—The Commonwealth Government, like the State Governments, bases its accounts upon three funds, the Consolidated Revenue Fund, the Trust Fund and the Loan Fund.

#### § 2. Consolidated Revenue Fund.

##### Division I.—Nature of Fund.

1. **Provisions of the Constitution.**—The provisions made for the establishment of a Commonwealth Consolidated Revenue Fund, and the means to be adopted for operating on the fund, are contained in Sections 81 to 83 of the Constitution (*see* page 20 of Official Year Book No. 39 and also in earlier issues).

2. **Annual Results of Transactions.**—In the early 1920's receipts and expenditure of the Consolidated Revenue Fund each ranged between £60 million and £70 million. Excess receipts in these years amounted to one or two million pounds a year, and were utilized for a variety of purposes, e.g., for debt redemption, naval construction, main



roads, science and industry investigations, prospecting for oil and precious metals, civil aviation, etc. In the later 'twenties and early 'thirties, when receipts and expenditure were each about £70 million or £80 million a year, there were annual deficiencies, which by the end of 1930-31 had aggregated to more than £17 million.

In subsequent years (receipts and expenditure each rising from about £70 million in 1931-32 to £95 million in 1938-39) there were excess receipts of up to £3.5 million a year. Approximately £1.5 million of these excess receipts were used to reduce the accumulated deficiency, and the balance for non-recurring grants to the States, post office works and the provision of defence equipment. The balance of the accumulated deficiency (£15.7 million) was funded in 1937-38.

For most of the 1939-45 War years and thereafter, the Consolidated Revenue Fund has been balanced, as all available revenue after charging expenditure on ordinary services has been used for defence, war and repatriation purposes. In 1951-52 the Fund was balanced after a special payment of £98.5 million had been made to the National Debt Sinking Fund for investment in a special loan for States' works requirements.

Receipts and expenditure increased from £95 million each in 1938-39 to £377 million in 1944-45. By 1949-50 they had risen to £581 million, but in 1950-51 they increased sharply to £842 million and in 1951-52 had reached more than £1,016 million.

### Division II.—Revenue.

1. General.—The following table furnishes details of the revenue from each source and the amount per head of population under each of the main headings during the years 1938-39 and 1947-48 to 1951-52 :—

#### COMMONWEALTH CONSOLIDATED REVENUE FUND : SOURCES OF REVENUE. (£'000.)

Source.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Taxation .. .. .	74,111	422,413	490,813	518,959	777,187	934,011
Proportion of Total .. %	78.0	90.7	88.5	89.4	92.3	91.9
Per head of population ..	£10 13 9	£55 5 9	£62 18 8	£64 9 5	£93 10 2	£109 7 6
Business Undertakings ..	17,892	32,580	34,912	42,087	48,792	64,955
Proportion of Total .. %	18.8	7.0	6.3	7.3	5.8	6.4
Per head of population ..	£2 11 9	£4 5 3	£4 9 6	£5 4 7	£5 17 5	£7 12 2
Territories(a) .. .. .	356	666	738	926	1,150	1,558
Proportion of Total .. %	0.4	0.1	0.1	0.1	0.1	0.1
Per head of population ..	£0 1 0	£0 1 9	£0 1 11	£0 2 3	£0 2 9	£0 3 8
Other Revenue—						
Interest, etc. .. .. .	1,144	1,296	1,532	1,889	2,756	3,795
Coinage .. .. .	128	497	635	466	499	895
Defence .. .. .	151	216	353	541	702	499
Civil Aviation .. .. .	6	1,595	1,998	2,870	3,504	3,247
Health .. .. .	18	14	20	25	31	51
Patents, Trade Marks, etc. ..	68	124	128	124	128	143
Bankruptcy .. .. .	31	16	20	22	23	27
Wool Committee Operations						
Surplus .. .. .		125	103			
Commerce and Agriculture ..		-22	235	659	1,174	34
Shipping and Transport ..	158	176	478	264	282	260
Net Profit on Australian Note						
Issue .. .. .	767	4,087	4,460	4,183	3,394	3,381
Surplus Balances of Trust						
Accounts .. .. .			17,000	6,700		
Other .. .. .	235	2,122	950	937	2,170	3,972
Total .. .. .	2,706	10,246	27,914	18,680	14,663	16,304
Proportion of Total .. %	2.8	2.2	5.0	3.2	1.8	1.6
Per head of population ..	£0 7 9	£1 6 10	£3 11 7	£2 6 5	£1 15 4	£1 18 2
Grand Total .. .. .	95,065	465,905	554,377	580,652	841,792	1,016,828
Per head of population ..	£13 14 3	£60 19 7	£71 1 8	£72 2 8	£101 5 8	£119 1 6

(a) Excludes Railways.

NOTE.—Minus sign (—) indicates an excess of refunds.

A graphical representation of the revenue and expenditure of the Commonwealth Consolidated Revenue Fund appears on page 677.

2. Taxation.—(i) *Total Collections.* (a) *Amount.* Collections under each heading for the years 1938-39 and 1947-48 to 1951-52 are shown below :—

## COMMONWEALTH TAXATION : TOTAL NET COLLECTIONS.

(£'000.)

Heading.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Customs .. .. .	31,161	57,597	63,465	77,726	91,921	113,936
Excise .. .. .	16,472	58,008	62,735	66,157	73,083	99,981
Sales Tax .. .. .	9,308	34,729	39,029	42,425	57,173	95,459
Flour Tax(a) .. .. .	1,809	985	1	..	..	..
Land Tax .. .. .	1,489	3,641	3,032	4,210	3,591	6,199
Income Taxes(b) .. .. .	11,883	161,452	182,092	179,094	267,999	537,503
Social Services Contribution .. .. .	..	71,448	90,255	100,560	73,958	7,676
Wool Deduction .. .. .	..	..	..	..	109,531	5,963
Pay-roll Tax .. .. .	..	16,595	19,803	22,728	28,721	37,170
Gold Tax .. .. .	..	11	-5	-9	..	..
Estate Duty .. .. .	1,915	4,555	4,740	6,054	6,401	7,778
Gift Duty .. .. .	..	780	582	745	1,044	1,202
Entertainments Tax .. .. .	..	5,198	5,299	4,698	5,148	6,161
Wool Levy(a) .. .. .	74	..	..	..	..	..
Wool Contributory Charge(a) .. .. .	..	1,424	1,029	1,439	44,844	2,230
Wheat Tax and Export Charge(a) .. .. .	..	5,730	18,086	12,633	13,353	12,202
Stevedoring Industry Charge(a) .. .. .	..	260	670	499	420	551
<b>Total Taxation</b> .. .. .	<b>74,111</b>	<b>422,413</b>	<b>490,813</b>	<b>518,959</b>	<b>777,187</b>	<b>934,021</b>
Proportion of Revenue .. .. .	78.0	90.7	88.5	89.4	92.3	91.9

(a) Paid to Trust Fund for purposes of industry concerned. (b) Includes War-time (Company) Tax, Super Tax and Undistributed Profits Tax.

NOTE.—Minus sign (-) indicates an excess of refunds.

(b) *Proportion of each Class on Total Collections.* The following table shows the proportion of the total collections represented by returns from each class of taxation for the years 1938-39 and 1947-48 to 1951-52 :—

## COMMONWEALTH TAXATION : PROPORTION OF EACH CLASS ON TOTAL NET COLLECTIONS.

(Per Cent.)

Heading.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Customs .. .. .	42.1	13.7	12.9	15.0	11.8	12.2
Excise .. .. .	22.3	13.7	12.8	12.7	9.4	10.7
Sales Tax .. .. .	12.6	8.2	8.0	8.2	7.4	10.2
Flour Tax .. .. .	2.4	0.2	..	..	..	..
Land Tax .. .. .	2.0	0.9	0.6	0.8	0.5	0.7
Income Taxes(a) .. .. .	16.0	38.2	37.1	34.5	34.4	57.6
Social Services Contribution .. .. .	..	16.9	18.4	19.4	9.5	0.8
Wool Deduction .. .. .	..	..	..	..	14.1	0.6
Pay-roll Tax .. .. .	..	3.9	4.0	4.4	3.7	4.0
Gold Tax .. .. .	..	..	..	..	..	..
Estate Duty .. .. .	2.6	1.1	1.0	1.2	0.8	0.8
Gift Duty .. .. .	..	0.2	0.1	0.1	0.1	0.1
Entertainments Tax .. .. .	..	1.2	1.1	0.9	0.7	0.7
Wool Levy .. .. .	..	..	..	..	..	..
Wool Contributory Charge .. .. .	..	0.3	0.2	0.3	5.8	0.2
Wheat Tax and Export Charge .. .. .	..	1.4	3.7	2.4	1.7	1.3
Stevedoring Industry Charge .. .. .	..	0.1	0.1	0.1	0.1	0.1
<b>Total</b> .. .. .	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) See footnote (b) to previous table.

(ii) *Customs Revenue. (a) Classified.* Particulars of net customs receipts<sup>7</sup> for the years 1938-39 and 1947-48 to 1951-52 are shown in the following table:—

**COMMONWEALTH CUSTOMS REVENUE: CLASSIFICATION OF NET RECEIPTS.**  
(£'000.)

Classes.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Ales, spirits and beverages ..	1,165	941	1,171	1,462	1,890	2,751
Tobacco and manufactures thereof .. .. .	3,256	10,807	14,612	17,657	20,830	24,996
Sugar .. .. .	7	7	3	2	7	..
Agricultural products and groceries .. .. .	1,366	1,443	1,301	1,515	1,690	1,806
Textiles and attire .. .. .	2,801	5,726	6,644	7,066	9,894	12,842
Metals and machinery .. .. .	2,386	4,418	5,782	8,439	8,574	14,342
Oils, paints, etc. .. .. .	9,927	16,130	17,316	19,274	23,720	25,115
Earthenware, etc. .. .. .	510	1,102	1,089	1,274	1,467	2,188
Drugs and chemicals .. .. .	310	436	322	397	758	941
Wood, wicker and cane .. .. .	739	686	993	966	488	695
Jewellery and fancy goods .. .. .	481	966	1,237	1,900	2,530	2,908
Leather and rubber .. .. .	477	810	923	1,124	1,535	2,044
Paper and stationery .. .. .	454	766	485	428	545	934
Vehicles .. .. .	2,062	2,691	3,938	8,735	7,804	8,902
Musical instruments .. .. .	32	51	78	86	124	124
Miscellaneous articles .. .. .	1,024	2,788	1,826	1,261	1,625	2,373
Primage .. .. .	3,914	7,093	5,393	5,711	8,206	9,296
Special War Duty .. .. .	..	- 10	- 6	- 9	- 1	- 1
Other receipts .. .. .	250	746	358	438	235	880
<b>Total .. .. .</b>	<b>31,161</b>	<b>57,597</b>	<b>63,465</b>	<b>77,726</b>	<b>91,921</b>	<b>113,936</b>

NOTE.—Minus sign (-) indicates an excess of refunds.

(b) *States.* The following table shows the net Customs Duties collected in each State during the years 1938-39 and 1947-48 to 1951-52:—

**COMMONWEALTH CUSTOMS REVENUE: NET COLLECTIONS IN EACH STATE.**  
(£'000.)

State.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
New South Wales(a) .. .. .	14,070	25,412	26,150	30,431	36,920	45,784
Victoria .. .. .	9,971	19,030	21,293	25,958	31,120	37,617
Queensland .. .. .	2,978	5,339	6,475	8,306	9,766	12,071
South Australia(b) .. .. .	2,090	4,117	5,138	6,817	7,899	9,591
Western Australia .. .. .	1,654	2,814	3,252	4,798	4,582	6,652
Tasmania .. .. .	398	885	1,157	1,416	1,634	2,221
<b>Total .. .. .</b>	<b>31,161</b>	<b>57,597</b>	<b>63,465</b>	<b>77,726</b>	<b>91,921</b>	<b>113,936</b>

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

(iii) *Excise Revenue. (a) Classified.* Particulars of the amount of net excise collected under each division during the years 1938-39 and 1947-48 to 1951-52 are given hereunder:—

**COMMONWEALTH EXCISE REVENUE: CLASSIFICATION OF NET RECEIPTS.**  
(£'000.)

Particulars.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Beer .. .. .	7,289	27,044	31,807	33,402	37,243	56,941
Spirits .. .. .	1,604	6,720	7,023	6,926	8,129	8,890
Tobacco .. .. .	3,868	9,931	9,622	10,229	10,759	13,845
Cigars and cigarettes .. .. .	2,419	9,786	9,558	10,192	10,662	13,848
Cigarette papers .. .. .	531	1,060	897	1,002	1,166	1,085
Petrol .. .. .	582	1,810	2,238	2,678	3,065	3,419
Matches .. .. .	82	1,304	1,201	1,201	1,213	1,058
Playing cards .. .. .	11	58	67	61	63	55
Coal .. .. .	..	..	..	207	375	499
Miscellaneous .. .. .	86	295	322	259	408	341
<b>Total .. .. .</b>	<b>16,472</b>	<b>58,008</b>	<b>62,735</b>	<b>66,157</b>	<b>73,083</b>	<b>99,981</b>

(b) States. Net excise collections in each State for the years 1938-39 and 1947-48 to 1951-52 were as follows:—

## COMMONWEALTH EXCISE REVENUE : NET COLLECTIONS IN EACH STATE.

(£'000.)

State.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
New South Wales (a) ..	6,940	22,486	25,523	26,035	29,100	40,211
Victoria ..	5,688	18,475	18,561	20,306	21,841	29,072
Queensland ..	1,538	6,601	7,102	7,317	8,272	11,047
South Australia (b) ..	1,018	4,846	5,329	5,801	6,500	8,600
Western Australia ..	1,104	4,618	5,117	5,467	5,977	8,151
Tasmania ..	184	982	1,103	1,231	1,393	1,991
Total ..	16,472	58,008	62,735	66,157	73,083	99,981

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

(iv) *Other Taxation.* (a) *General.* Taxes other than customs and excise are, in general, assessed and collected by the Commissioner of Taxation. The organization comprises an office in each State assessing the returns of taxpayers whose interests are restricted to that State only, and a Central Office assessing taxpayers whose interests are in more than one State. In the tables which follow receipts of tax on account of assessments made in each office are given.

These figures do not give the absolute measure of taxes paid by the residents of each State, because the Central Office collections, which include taxation on account of all States, have not been allocated to the States. In the absence of precise information, it may be assumed, as a rough approximation, that Central Office collections may be divided among States in proportion to State office collections. It is probable, however, that a somewhat larger share is derived from the more populous States, New South Wales and Victoria.

(b) *Land Tax.* Commonwealth Land Tax was levied annually from 1910-11 to 1951-52 on the unimproved value of land. It was abolished from 1st July, 1952. The following table shows the rates of land tax imposed for each assessment year from 1942-43 to 1950-51:—

## LAND TAX : RATE OF TAX PER £1 OF TAXABLE VALUE.

(T = Taxable Value(a).)

(Pence.)

Assessment Year.	Residents.			Absentees.				
	If the Taxable Value is from £1 to £75,000—	If the Taxable Value is over £75,000—		If the Taxable Value is from £1 to £80,000—		If the Taxable Value is over £80,000—		
		On £75,000—	On excess over £75,000—	On first £5,000—	On excess over £5,000—	On £5,000—	On next £75,000—	On excess over £80,000—
1942-43 to 1950-51 (b)	$\left(1 + \frac{T}{18,750}\right)$	5.0	9.0	1.0	$\left(2 + \frac{T-5,000}{18,750}\right)$	1.0	6.0	10.0

(a) Taxable Value:—(i) For Residents—the unimproved value of land held less an exemption of £5,000, and (ii) For Absentees—the unimproved value of land (no exemption being allowed). (b) In addition, if the taxable value exceeded £20,000, there was payable a super tax equal to the lesser amount of the following:—(i) twenty per cent. of the amount of land tax; or (ii) one per cent. of the amount by which the taxable value of the land exceeded £20,000.

In 1951-52 the exemption allowed to residents was increased to £8,750 and the super tax abolished. Except for this, the rates remained unchanged for residents. In the case of absentees, the rates were changed to the following:—(i) If the taxable value did not exceed £83,750—On first £8,750, 1.0d. in £1; on the balance,  $\left(2 + \frac{T-8,750}{18,750}\right)$  d. in £1. (ii) If the taxable balance exceeded £83,750—On first £8,750, 1.0d. in £1; on next £75,000, 6.0d. in £1; and on the balance, 10.0d. in £1. The values of land, or of interests in land, as assessed for the financial year 1939-40, were adopted for the financial years 1940-41 to 1950-51. A revaluation of land was made for the assessment year 1951-52.

Land tax receipts in each State and Central Office for the years 1938-39 and 1947-48 to 1951-52 were as follows. The receipts referred to in this table differ slightly from the collections shown on page 667 because some refunds credited before 30th June were not paid until after that date.

## LAND TAX RECEIPTS.

(£'000.)

State, etc.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Central Office ..	526	1,460	1,165	1,995	1,525	2,475
New South Wales ..	510	1,190	1,041	1,207	1,183	1,656
Victoria ..	291	656	552	692	562	1,104
Queensland ..	29	63	60	61	63	288
South Australia ..	55	118	122	114	129	275
Western Australia ..	64	102	97	104	95	228
Tasmania ..	13	33	32	38	33	137
Total ..	1,488	3,622	3,069	4,211	3,590	6,163

(c) *Estate Duty.* The Commonwealth Estate Duty was first levied in 1914. Particulars of exemptions and the rates imposed prior to 1940 are given in earlier issues of the Year Book (see No. 37, page 614).

Estate duty, under the Estate Duty Assessment Act 1940, is assessed on the net value of the estate less a statutory exemption determined in accordance with the following formula:—(a) where the whole of the estate passes to the widow, children or grand-children of the deceased, the sum of £2,000 decreasing by £1 for every £10 by which the value exceeds £2,000 up to £10,000, and thereafter decreasing by £1 for every £2 by which the value exceeds £10,000; (b) where no part of the estate passes to the widow, children or grand-children, the sum of £1,000 decreasing by £1 for every £10 by which the value exceeds £1,000 up to £6,000, and thereafter decreasing by £1 for every £8 by which the value exceeds £6,000; and (c) where part only of the estate passes to the widow, children or grand-children, the statutory exemption is to be calculated proportionately under (a) and (b).

The rates of duty levied under the Estate Duty Act 1941 increase as the value of the estate increases as follows:—£1 to £10,000, 3 per cent.; £10,001 to £20,000, 3 per cent. to 6 per cent.; £20,001 to £120,000, 6 per cent. to 26 per cent.; £120,001 to £500,000, 26 per cent. to 27.9 per cent.; over £500,000, 27.9 per cent.

Particulars of the collections in each State and Central Office for the years 1938-39 and 1947-48 to 1951-52 are shown in the following table. These figures differ slightly from the figures on page 667 as some refunds were credited before 30th June and not paid until after that date.

**ESTATE DUTY RECEIPTS.**  
(£'000.)

State, etc.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Central Office ..	999	2,046	1,993	2,494	2,502	2,848
New South Wales ..	423	988	1,121	1,246	1,456	1,943
Victoria ..	294	907	1,045	1,383	1,563	1,688
Queensland ..	60	291	225	438	308	537
South Australia ..	83	245	192	290	260	458
Western Australia ..	34	109	132	154	226	190
Tasmania ..	16	56	53	48	73	94
Northern Territory ..	..	..	..	..	1	..
Total ..	1,909	4,642	4,761	6,053	6,389	7,758

Particulars of the number and value of estates with duty assessed, for each of the assessment years 1938-39 and 1947-48 to 1951-52, are given in the following table:—

**ESTATE DUTY ASSESSMENTS.**

Particulars.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Number of Estates ..	9,681	12,082	12,350	13,982	15,680	16,289
Gross Value Assessed ..	£'000 65,999	95,373	99,717	117,534	134,074	144,073
Deductions ..	£'000 12,630	15,537	16,475	19,219	22,714	22,083
Statutory Exemption ..	£'000 14,166	14,166	14,402	16,271	18,175	18,672
Dutiable Value ..	£'000 53,069	65,670	68,840	82,044	93,185	103,318
Duty Payable ..	£ 2,002,283	4,883,702	4,902,352	5,992,790	6,933,608	7,797,967
Average dutiable value ..	£ 5,482	5,435	5,574	5,868	5,943	6,343
Average duty per estate ..	£ 207	404	397	429	442	479

(d) *Gift Duty.* The Gift Duty Assessment Act 1941-1947 and the Gift Duty Act 1941-1947 impose a gift duty on all gifts made after the 29th October, 1941. A gift has been defined as any disposition of property, which is made otherwise than by will, without adequate consideration in money or money's worth. There is a liability on both the donor and the donee to furnish a return, and both are jointly and severally liable for payment of the duty.

The following rates of duty are levied under the Gift Duty Act 1941-1947 and relate to the value of all gifts made within eighteen months:—Not exceeding £2,000, nil; £2,001 to £10,000, 3 per cent.; £10,001 to £20,000, 3 per cent. to 6 per cent.; £20,001 to £120,000, 6 per cent. to 26 per cent.; £120,001 to £500,000, 26 per cent. to 27.9 per cent.; £500,001 and over, 27.9 per cent.

An amendment which operated from 3rd June, 1947 provided that gift duty will not exceed one half of the amount by which the value of the gift exceeds £2,000.

The receipts from gift duty in each State for the years 1947-48 to 1951-52 are shown in the following table. The figures shown in the table differ from those shown on page 667 because certain refunds credited before 30th June were not paid until after that date.

**GIFT DUTY RECEIPTS.**  
(£'000.)

State, etc.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
New South Wales ..	394	262	297	500	529
Victoria ..	199	173	244	297	417
Queensland ..	53	34	46	73	39
South Australia ..	107	65	121	110	160
Western Australia ..	24	37	33	52	44
Tasmania ..	7	11	4	11	14
Northern Territory ..	..	..	..	..	..
Total ..	784	582	745	1,043	1,203

(e) *Income Taxes.* Details of taxes on income are given in Division E of this Chapter.

(f) *Pay-roll Tax.* The Pay-roll Tax Assessment Act 1941-42 and the Pay-roll Tax Act 1941 imposed a pay-roll tax of 2½ per cent. on all wages in excess of £20 per week paid by an employer after 30th June, 1941. These measures formed part of the Commonwealth scheme of child endowment, the revenue from the tax being designed to provide part of the money required. Pay-roll tax is collected in a similar manner to sales tax. Employers are required to register and to furnish a monthly return of all wages paid.

The following table shows the receipts from pay-roll tax in each State for the years 1947-48 to 1951-52. The figures shown vary slightly from the collections shown on page 667 because some refunds which were credited before 30th June were not paid until after that date.

**PAY-ROLL TAX RECEIPTS.**  
(£'000.)

State, etc.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
New South Wales .. .. .	7,313	8,535	9,510	12,091	15,728
Victoria .. .. .	4,747	5,645	6,655	8,335	10,706
Queensland .. .. .	1,876	2,356	2,714	3,393	4,300
South Australia .. .. .	1,285	1,589	1,835	2,359	3,077
Western Australia .. .. .	919	1,119	1,326	1,686	2,238
Tasmania .. .. .	459	539	656	826	1,081
Northern Territory .. .. .	14	19	23	26	35
Total .. .. .	16,613	19,802	22,719	28,716	37,165

(g) *Gold Tax.* Particulars of the Gold Tax which operated from 15th September, 1939 to 20th September, 1947 are given in Official Year Book No. 39, page 767.

(h) *Entertainments Tax.* The Entertainments Tax Assessment Act 1942-1946 and Entertainments Tax Act 1942-1949 came into force on 1st October, 1942, following the agreement of the State Governments to the request of the Commonwealth to suspend their entertainments tax legislation for the duration of the war and one year after. This enabled the Commonwealth Government to re-enter this field of taxation. Until 1945-46 the Commonwealth recompensed the States by annual payments of £765,787, an amount equal to that collected by the States during the year 1941-42. Thereafter, these payments were incorporated with Income Tax in the Tax Reimbursement and the agreement that the States should not levy a tax on entertainments was terminated.

The rates of entertainments tax from 1st October, 1949 are shown in the following table. Details of rates operating prior to 1st October, 1949 are given in earlier issues of the Official Year Book (see No. 37, page 617).

**RATES OF ENTERTAINMENTS TAX OPERATING FROM 1st OCTOBER, 1949.**

Amount paid for Admission (excluding amount of Tax).		Reduced Rates.	Full Rates.
Exceeding—	But not exceeding—		
s. d.	s. d.	s. d.	s. d.
	Is. od.	Nil	0 2
1 0	1 3	Nil	0 4
1 3	1 6	0 3	0 4
1 6	2 0	0 4	0 5
2 0	2 6	0 5	0 7
2 6	3 0	0 6	0 9
3 0	3 6	0 8	0 10
3 6	4 0	0 9	1 0
4 0	4 6	0 10	1 1
4 6	5 0	0 11	1 3
5 0	5 6	1 1	1 5
5 6	6 0	1 3	1 8
6 0	..	1s. 5d. plus 1½d. for each 6d. (or part thereof) by which the payment for admission exceeds 6s. 6d.(a)	1s. 10d. plus 2½d. for each 6d. (or part thereof) by which the payment for admission exceeds 6s. 6d.(a)

(a) Fractions of a penny in the amount of tax are treated as follows:—½d. and ¼d. are disregarded—¾d. is taken as one penny.

The reduced rates of tax apply to entertainments which consist of one or more of the following items, viz. :—a stage play, a ballet, a performance of music, a lecture, a recitation, a music hall or other variety entertainment, or a circus or travelling show, and to entertainments which consist solely of a game or sport in which human beings are the sole participants and the entertainment is conducted by a society which is not established or carried on for profit. The full rates apply to all other forms of entertainment. Entertainments tax is not charged on admission to entertainments the proceeds of which are devoted to public, patriotic, philanthropic, religious or charitable purposes or where the entertainment is of an educational or scientific character.

Entertainments tax received during the five years 1947-48 to 1951-52 is shown in the following table. The figures shown in the table differ from those shown on page 667 because certain refunds credited before 30th June were not paid until after that date.

## ENTERTAINMENTS TAX RECEIPTS.

(£'000.)

State, etc.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
New South Wales ..	2,190	2,226	1,959	2,157	2,645
Victoria .. .. .	1,572	1,601	1,430	1,523	1,771
Queensland .. ..	661	647	580	658	789
South Australia ..	364	400	335	398	452
Western Australia ..	279	281	280	284	352
Tasmania .. .. .	127	129	107	114	144
Northern Territory ..	6	7	7	6	7
Total .. .. .	5,199	5,291	4,698	5,140	6,160

In the following table details are given of the number of admissions on which entertainments tax was paid during the year ended 30th June, 1952 :—

## COMMONWEALTH ENTERTAINMENTS TAX : NUMBER OF ADMISSIONS TO TAXABLE ENTERTAINMENTS, 1951-52.

('000.)

Price of Admission (before Tax).		Theatres.	Picture Theatres.	Racing.	Dancing and Skating.	Sport.	Other.	Total.
s. d.	s. d.							
1 0	..	..	4,137	328	359	..	37	4,861
1 0½	1 6	..	22,017	516	515	403	94	23,564
1 6½	2 0	..	26,158	1,084	1,468	2,358	814	32,020
2 0½	2 6	..	68	41,135	1,164	2,715	1,807	47,399
2 6½	3 0	..	279	28,143	148	1,977	1,361	32,518
3 0½	3 6	..	162	11,964	1,930	1,085	342	16,025
3 6½	4 0	..	426	3,296	2,164	371	232	7,000
4 0½	4 6	..	81	1,492	108	140	71	2,008
4 6½	5 0	..	222	1,445	360	107	127	2,739
5 0½	5 6	..	128	230	258	62	70	132
5 6½	6 0	..	248	63	573	71	20	300
6 0½	6 6	..	51	4	93	16	18	55
6 6½	7 0	..	210	1	341	27	3	166
7 0½	7 6	..	65	..	32	37	8	42
7 6½	8 0	..	367	..	756	55	9	186
8 0½	8 6	..	30	..	27	38	31	7
8 6½	9 0	..	22	..	7	7	2	10
9 0½	9 6	..	..	..	533	113	..	4
9 6½	10 0	..	618	..	28	12	7	178
Over 10 0	..	..	570	..	1,549	328	89	180
Total	..	3,704	140,085	11,999	9,503	6,958	4,972	177,221

There were 13,150,000 admissions at the reduced rate, and 164,071,000 at the full rate.

(i) *Sales Tax.* The sales tax was first imposed in August, 1930. The operation of the tax is controlled chiefly by a system of registration of taxpayers whereby all manufacturers and wholesale merchants, who are the taxpayers under the Act in respect of goods sold in Australia, must be registered with the Department. The tax on imports subject to sales tax is collected by the Customs Department at ports of entry.

Since the inception of the tax certain exemptions have been allowed. These exemptions, which have been extended from time to time, relate mainly to goods of an essential nature or for use in primary production. The most recent exemptions were those granted from 7th August, 1952.



A general rate of Sales Tax is levied on all goods other than those specified in the schedules of the Sales Tax (Exemptions and Classifications) Act 1935-1952. These schedules set out details of goods exempt from sales tax and those subject to special rates. The general and special rates which operated from 15th November, 1946, were :—

Period.	General Rate.	Special Rates.
15th November, 1946 to 7th September, 1949 ..	10 per cent. ..	25 per cent.
8th September, 1949 to 12th October, 1950 ..	8½ per cent. ..	25 per cent.
13th October, 1950 to 26th September, 1951 ..	8½ per cent. ..	10, 25 and 33½ per cent.
27th September, 1951 to 6th August, 1952 ..	12½ per cent. ..	20, 25, 33½, 50 and 66⅔ per cent.
From 7th August, 1952 .. .. .	12½ per cent. ..	20, 33½ and 50 per cent.

For particulars of rates applicable since the inception of Sales Tax in August, 1930 see Official Year Book No. 37, page 617.

Particulars of the net amount of sales tax payable, and the sales of taxable and exempt goods in each State for 1951-52 are given in the following table. The figures are in respect of sales during the period 1st July to 30th June.

#### SALES TAX AND AMOUNT OF SALES, 1951-52.

(£'000.)

Particulars.	N.S.W. (a)	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Terr.	Total.
Net Sales on which Sales Tax was payable at—								
3½ per cent. ..	57,226	42,517	11,670	11,164	8,684	2,923	62	134,246
10 per cent. ..	9,473	7,807	3,353	1,870	1,455	285	..	24,243
12½ per cent. ..	133,613	96,337	35,713	33,606	20,261	7,788	124	327,442
20 per cent. ..	32,801	26,777	8,032	10,521	5,779	1,276	6	85,192
25 per cent. ..	2,784	1,542	771	524	367	90	1	6,079
33½ per cent. ..	15,703	11,927	3,653	2,666	1,801	520	6	36,276
50 per cent. ..	2,695	1,209	436	279	288	75	1	4,983
66⅔ per cent. ..	2,286	1,689	377	329	212	36	..	4,929
Total ..	256,381	189,805	64,005	60,959	38,847	12,993	200	623,390
Sales of Exempt Goods by Registered Persons ..	536,682	375,939	158,422	131,330	85,813	32,361	1,149	1,321,696
Total Sales of Taxable and Exempt Goods ..	793,263	565,744	222,427	192,289	124,660	45,354	1,349	1,945,086
Sales Tax Payable ..	38,235	27,751	9,248	8,789	5,527	1,757	25	91,332

(a) Includes Australian Capital Territory.

Sales of taxable and exempt goods and sales tax payable for Australia as a whole for the years 1938-39 and 1947-48 to 1951-52 are shown in the following table :—

#### SALES TAX AND AMOUNT OF SALES.

(£'000.)

Year.	Net Sales on which Sales Tax was Payable.	Sales of Exempt Goods by Registered Persons.	Total Sales of Taxable and Exempt Goods.	Sales Tax Payable.
1938-39 .. .. .	196,491	280,656	477,147	9,363
1947-48 .. .. .	314,311	639,948	954,259	34,059
1948-49 .. .. .	363,164	757,381	1,120,545	38,197
1949-50 .. .. .	455,251	866,575	1,321,826	40,789
1950-51 .. .. .	552,919	1,138,887	1,691,806	54,471
1951-52 .. .. .	623,390	1,321,696	1,945,086	91,332

In the foregoing tables exempt sales relate to goods exempted from sales tax under the Sales Tax (Exemptions and Classifications) Act 1935-1952. The figures shown in the foregoing tables do not represent the total sales of all commodities, as vendors trading in exempt goods only are not required to be registered and consequently the volume of their sales is not included in the statistics above.

(j) *Flour Tax.* Particulars of the rates of flour tax which operated from 4th December, 1933 to 21st December, 1947 are given in Official Year Book No. 37, pages 618 and 619. Because of the rise in wheat prices the rate was declared to be nil as from 22nd December, 1947.

(k) *Wool Levy.* The Wool Tax Act 1936 and Wool Tax Assessment Act 1936 provided for a levy on all wool grown in Australia and shorn on or after 1st July, 1936. Details of this levy are given in earlier issues of the Official Year Book. This levy was suspended from 1st July, 1946 until 30th June, 1952 while the Wool Contributory Charge was imposed. The amounts collected from wool levy in 1938-39, 1946-47 and 1947-48 were £74,396, £11,628 and £458 respectively. No levy has been collected since 1947-48.

However, with the repeal of the Wool Contributory Charge, a levy on wool produced in Australia was re-introduced from 1st July, 1952. The Wool Tax Acts (Nos. 1 and 2) of 1952 provide for the payment of a levy of four shillings per bale until 30th June, 1953 after which date the rate of tax may be varied within prescribed limits. The purpose of the tax is to provide funds for publicity and research previously provided by the Wool Contributory Charge.

(l) *Wool Contributory Charge.* The Wool (Contributory Charge) Act 1945 and the Wool (Contributory Charge) Assessment Act 1945 imposed a charge on all wool produced in Australia and sold, manufactured or exported. Wool sold by the Australian Wool Realization Commission was not liable to the charge. The rate of the charge was a percentage of the sale value of the wool sufficient to provide—(a) the amounts required to meet the share of the industry in the operating expenses of the Joint Organization for the disposal of wool stocks; (b) the amounts required for payment of interest on the amount spent by the Commonwealth in purchase of wool under the disposals plan; and (c) the amount of the wool levy.

The Acts came into operation on 1st July, 1946, and the rate fixed was 5 per cent. on the sale value of the wool. From 1st August, 1947 the rate was reduced to 0.75 per cent. A further reduction to 0.5 per cent. was made on 1st July, 1948. On 26th August, 1950, the rate of the charge was reduced to 0.25 per cent. and a further charge of 7.25 per cent. to provide funds for a reserve prices scheme was introduced. In the Wool (Reserve Prices) Fund Act 1950 it was provided that if a reserve prices scheme which had the general approval of wool-growers was not in operation on 30th September, 1951 the amounts of contributory charge collected for that purpose were to be refunded. A scheme placed before wool-growers was not accepted and the collections were subsequently refunded. (*See also* Chapter XIX.—Pastoral Production.) The various Wool (Contributory) Charge Acts were repealed by the Wool Tax Assessment Act of 1952 and the charge superseded by the wool levy. Collections in each State during the years 1947-48 to 1951-52 are shown in the following table:—

**WOOL CONTRIBUTORY CHARGE RECEIPTS.**  
(£'000.)

State.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
New South Wales .. ..	502	315	552	15,665	755
Victoria .. ..	360	295	402	12,957	409
Queensland .. ..	249	192	212	6,860	573
South Australia .. ..	154	108	134	4,500	278
Western Australia .. ..	134	100	116	4,061	184
Tasmania .. ..	25	19	23	801	30
<b>Total .. ..</b>	<b>1,424</b>	<b>1,029</b>	<b>1,439</b>	<b>44,844</b>	<b>2,230</b>

(m) *Wool Sales Deduction.* The Wool Sales Deduction Act 1950 and the Wool Sales Deduction (Administration) Act 1950 came into operation on 2nd December, 1950 and required that a deduction be made from the sale value of wool sold or exported, the amount deducted being set off against the Income Tax and Social Services Contribution assessed in respect of the income of the year 1950-51. These Acts were repealed by the Wool Sales Deduction Legislation Repeal Act 1951 which came into operation on 17th November, 1951, and provided for the refund to producers, etc., of amounts paid on the value of wool sold or otherwise disposed of, after 30th June, 1951. The deduction for each State during the year 1951-52 was as follows:—New South Wales, £1,343,037; Victoria, £158,964; Queensland, £3,013,160; South Australia, £1,170,491; Western Australia, £289,942; Tasmania, —£12,418; Total, £5,963,176.

(n) *Wheat Export Charge and Wheat Tax.* The Wheat Export Charge Acts 1946 imposed an export charge on wheat (including the content of wheat products) harvested after 30th September, 1945 and exported from the Commonwealth after 30th November, 1945. These Acts did not apply to wheat harvested between 1st October, 1945 and 1st October, 1947 and exported by the Australian Wheat Board, but provision was made in the Wheat Tax Act 1946 to collect an amount equivalent to the charge that would have been collected on this wheat, by imposing a tax on wheat acquired by the Board. Wheat Tax collected amounted to £5,500,000 in 1946-47 and £5,729,780 in 1947-48. These amounts were paid to the Wheat Prices Stabilization Fund and, under the Wheat Tax (Refund and Repeal) Act 1948, were refunded to growers. The amount of the refund was £11,548,637 (including interest, £318,857).

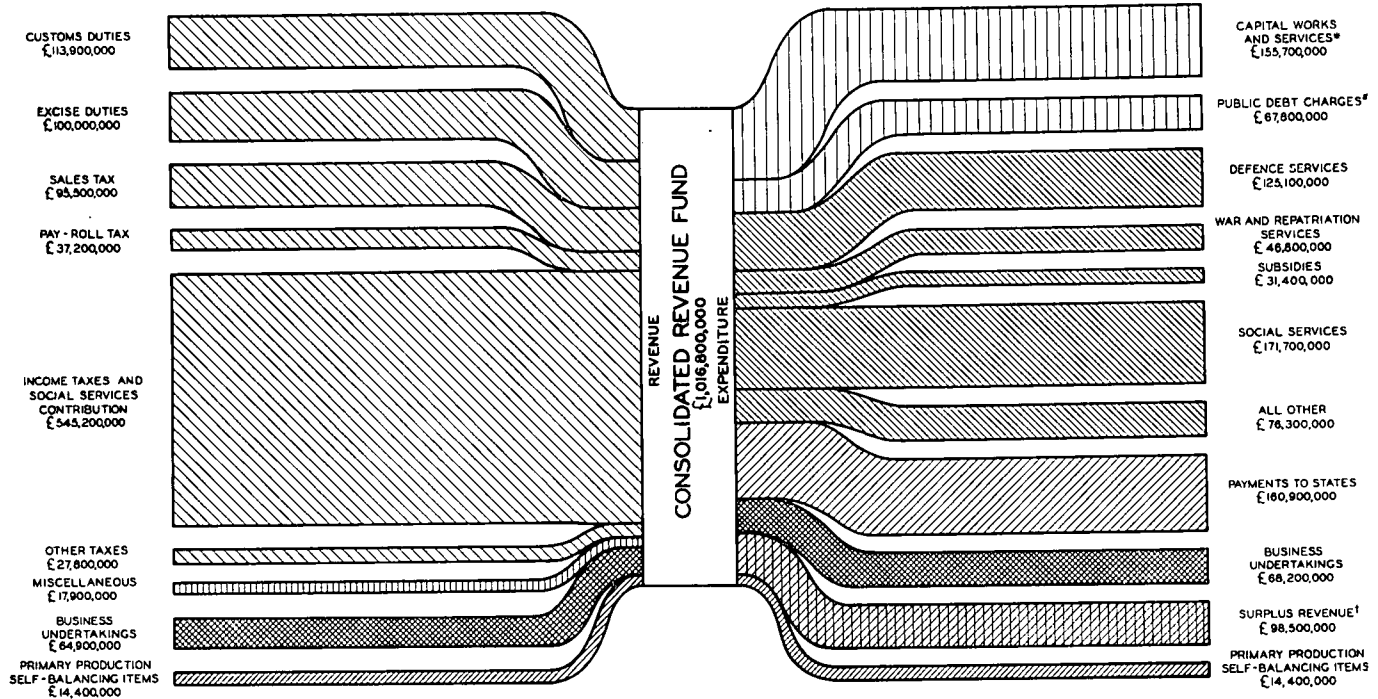
The Wheat Export Charge Act 1948, which operated from 25th November, 1948, repealed the Wheat Export Charge Acts 1946 and provided for an export charge on all wheat and wheat products of the 1947-48 and subsequent seasons exported after 25th November, 1948. Subject to a lower rate being prescribed, the rate of charge per bushel of wheat exported by the Australian Wheat Board was fixed at 50 per cent. of the amount by which the average price per bushel of all wheat exported by the Board exceeded the guaranteed price, with a maximum charge of 2s. 2d. per bushel. If the exporter was not the Australian Wheat Board the charge was the same except that there was no maximum charge of 2s. 2d. per bushel.

The guaranteed price for the 1947-48 season was 6s. 3d. per bushel for all fair average quality bulk wheat f.o.r. at the ports of export. It was raised to 6s. 8d. per bushel for the 1948-49 season with further rises to 7s. 1d. for the 1949-50 season, 7s. 10d. for the 1950-51 season and 10s. 0d. for the 1951-52 season. Unless Parliament otherwise provides the Act shall not apply to wheat harvested after 30th September, 1953.

Under the Wheat Industry Stabilization Act 1946-1948 an amount equivalent to the charges collected under the Wheat Export Charge Act 1948 is paid to the Wheat Prices Stabilization Fund. Out of this fund payments shall be made to the Australian Wheat Board, when required, for the purpose of building up the average export price for any season to the guaranteed price. By reason of the favourable level of export prices, part of the funds of the Wheat Stabilization Fund were considered surplus and accordingly, the export charge collected on wheat for the 1947-48 and 1948-49 seasons was repaid to growers under the Wheat Industry Stabilization (Refund of Charge) Acts 1950 and 1951. These repayments amounted to £17,000,000 and £12,960,000 (including interest) respectively. (*See also* Chapter XX.—Agricultural Production.)

Collections of wheat tax and wheat export charge were as follows:—1947-48, £5,730,000; 1948-49, £18,086,000; 1949-50, £12,633,000; 1950-51, £13,353,000; and 1951-52, £12,202,000.

# COMMONWEALTH CONSOLIDATED REVENUE FUND, YEAR ENDED 30<sup>TH</sup> JUNE, 1952

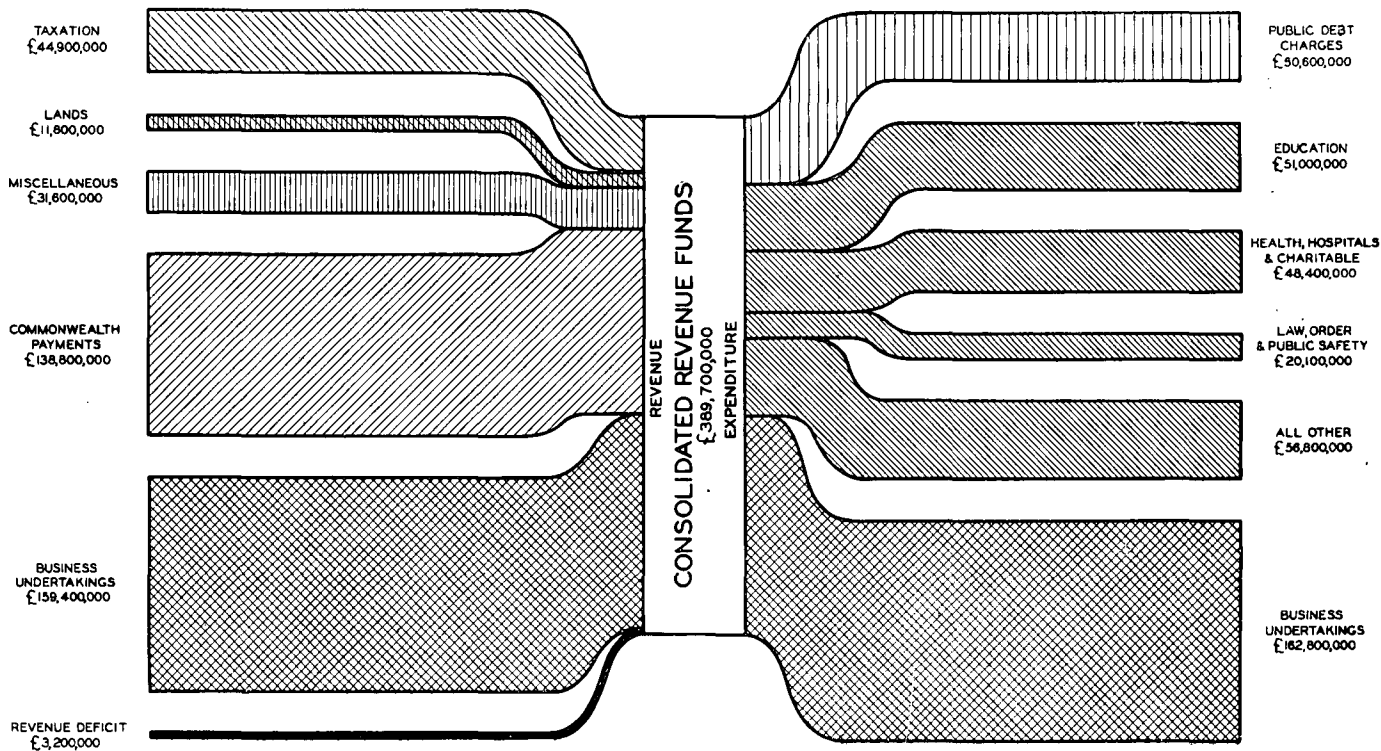


\*INCLUDES DEFENCE WORKS AND SERVICES £45,100,000

†INCLUDES WAR DEBT CHARGES £38,100,000

‡PAID TO NATIONAL DEBT SINKING FUND

# STATE CONSOLIDATED REVENUE FUNDS, YEAR ENDED 30<sup>TH</sup> JUNE, 1952



(o) *Stevedoring Industry Charge.* The Stevedoring Industry Charge Act 1947 and the Stevedoring Industry Charge Assessment Act 1947 imposed a charge of 4½d. per man-hour on the employer of a waterside worker after 22nd December, 1947.

The amounts received are paid to the Stevedoring Industry Board for the payment of attendance money to waterside workers and for other expenses of the Board.

Since 1947 the charge has been amended as follows :—11th October, 1949 a reduction to 2½d. per man-hour; 11th December, 1951 an increase to 4d. per man-hour and a further increase to 11d. per man-hour from 18th November, 1952.

Collections in each State during the years 1947-48 to 1951-52 are shown in the following table :—

**STEVEDORING INDUSTRY CHARGE RECEIPTS.**  
(£'000.)

State.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
New South Wales ..	102	234	173	142	178
Victoria .. .. .	65	165	130	107	148
Queensland .. ..	31	113	82	70	82
South Australia ..	28	72	49	42	64
Western Australia ..	18	45	35	33	45
Tasmania .. .. .	16	39	28	25	34
Northern Territory ..	..	2	2	1	..
<b>Total .. .. .</b>	<b>260</b>	<b>670</b>	<b>499</b>	<b>420</b>	<b>551</b>

3. *Business Undertakings.*—(i) *Postmaster-General's Department.* Particulars of net receipts for each of the financial years 1938-39 and 1947-48 to 1951-52 are contained in the following table :—

**POSTMASTER-GENERAL'S DEPARTMENT : NET RECEIPTS.**  
(£'000.)

Particulars.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Private boxes and bags ..	74	86	94	96	144	164
Commission on money orders and postal notes .. ..	289	374	408	441	472	827
Telegraphs .. .. .	1,372	2,834	2,991	3,756	4,442	5,066
Telephones .. .. .	8,640	14,184	15,055	19,168	22,667	31,059
Postage .. .. .	6,636	12,373	12,735	13,942	16,020	20,687
Radio .. .. .	516	798	1,192	(a)	(a)	(a)
Miscellaneous .. .. .	439	741	832	946	1,032	1,568
<b>Total .. .. .</b>	<b>17,366</b>	<b>31,390</b>	<b>33,307</b>	<b>38,349</b>	<b>44,777</b>	<b>59,371</b>

(a) Included under Broadcasting Services.

Further particulars of the Postmaster-General's Department's receipts to 1950-51 are given in Chapter V.—Transport and Communication (Division I. Posts, Telegraphs, Telephones and Wireless).

(ii) *Broadcasting Services.* Following the amendment of the Australian Broadcasting Act 1942-1946 by Act No. 64 of 1948, the Broadcasting Control Board was set up on 15th March, 1949. (See also Chapter V.—Transport and Communication).

Details of net receipts for the years 1949-50 to 1951-52 are shown in the following table :—

**BROADCASTING SERVICES : NET RECEIPTS.**  
(£'000.)

Particulars.	1949-50.	1950-51.	1951-52.
Listeners' Licence Fees .. ..	1,899	1,943	2,776
Broadcasting Station Licence Fees .. ..	17	18	20
Miscellaneous .. ..	18	10	9
Total .. ..	1,934	1,971	2,805

(iii) *Commonwealth Railways.* The Commonwealth Government is responsible for four railways—the Trans-Australian, the Central Australia, the North Australia and the Australian Capital Territory. The following table shows the amounts paid to the credit of the Consolidated Revenue Fund on account of each of these railways for the years 1938-39 and 1947-48 to 1951-52 :—

**COMMONWEALTH RAILWAY REVENUE.**  
(£'000.)

Railway.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Trans-Australian ..	331	754	889	981	1,175	1,479
Central Australia ..	138	384	679	776	816	1,241
North Australia ..	50	37	29	35	38	49
Aust. Cap. Territory ..	7	15	9	12	15	10
Total ..	526	1,190	1,606	1,804	2,044	2,779

Further particulars to 1950-51 are given in Chapter V.—Transport and Communication (Division B. Government Railways).

4. *Other Sources of Revenue.*—Revenue derived by Consolidated Revenue Fund from the Territories of the Commonwealth during 1951-52 amounted to £1,558,000 (Australian Capital Territory, £1,144,000; Northern Territory, £414,000). Of other sources of revenue, amounting in 1951-52 to £16,304,000, the following are noteworthy :—Interest, £3,795,000; Civil Aviation, £3,247,000; Net Profit on Australian Note Issue, £3,381,000; and Sale of Shares in Amalgamated Wireless (A/asia.) Ltd., £1,902,000.

**Division III.—Expenditure.**

1. *Details of Expenditure from Consolidated Revenue.*—The following table shows details of the expenditure from the Consolidated Revenue Fund during the years 1938-39 and 1947-48 to 1951-52.

COMMONWEALTH CONSOLIDATED REVENUE FUND: EXPENDITURE.  
(£'000.)

Department, etc.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Defence Services	8,061	69,148	56,304	42,774	74,045	125,586
War (1939-45) and Repatriation Services	..	62,593	111,494	74,821	129,635	105,931
War (1914-18) and Repatriation Services	19,257	19,674	21,647	21,773		
Subsidies and Bounties	236	45,882	23,108	20,683	40,537	31,341
<b>Total Cost of Departments—</b>						
Governor-General ..	33	45	52	45	53	79
Parliament ..	445	828	771	1,182	1,473	1,717
Prime Minister ..	1,133	1,857	2,239	2,734	3,954	4,185
External Affairs ..	70	1,832	1,661	1,972	3,778	7,415
Treasury ..	2,258	5,747	6,170	6,617	8,285	9,704
Attorney-General ..	282	689	745	821	1,096	1,349
Interior ..	1,275	1,703	2,039	2,358	2,727	2,871
Works ..	(a)	1,752	1,998	1,187	1,742	1,619
Civil Aviation ..	328	3,859	5,028	6,500	8,488	9,998
Trade and Customs ..	838	1,648	1,827	2,152	2,681	3,203
Health ..	338	581	768	1,034	1,133	1,305
Commerce and Agriculture ..	984	5,024	5,155	1,700	2,040	2,330
Social Services ..	325	801	1,073	1,357	1,826	2,134
Supply and Shipping and Transport ..	215	5,032	3,980	3,666	1,914	1,987
Territories ..	(b)	55	75	91	129	160
Immigration ..	(d)	1,411	3,580	9,801	12,970	13,770
Labour and National Service ..	..	1,537	1,998	2,275	2,413	2,432
National Development ..	..	353	437	442	771	1,191
Commonwealth Scientific and Industrial Research Organization ..	223	1,579	1,825	2,007	2,566	3,003
National Welfare Fund ..	(c) 16,428	88,043	110,058	123,288	132,680	171,709
National Debt Sinking Fund Special Payment (Surplus) ..	..	..	..	..	..	98,500
<b>Business Undertakings—</b>						
Postmaster-General ..	14,878	32,171	38,669	44,512	54,802	64,291
Broadcasting Services ..	(d)	(d)	(d)	2,872	3,591	4,135
Railways ..	1,351	2,089	2,594	2,792	3,381	4,025
Territories ..	1,100	4,189	5,768	7,294	8,260	9,746
<b>Capital Works and Services—</b>						
Defence and War Services ..	1,349	3,288	5,624	12,500	75,125	45,113
Repatriation ..	141	6,217	8,664	14,848	(e) 342	27,861
Postmaster-General ..	3,851	8,260	14,770	19,792	34,897	28,819
Broadcasting Services ..	(d)	(d)	(d)	157	212	251
Railways ..	142	148	223	482	1,461	2,637
Territories ..	739	1,447	2,628	3,161	5,085	5,153
Other ..	493	9,429	13,463	25,757	31,471	45,899
<b>Total Capital Works and Services</b> ..	6,715	28,789	45,372	76,697	148,593	155,733
Payments to or for States ..	15,649	66,660	78,604	101,132	128,032	160,947
Primary Production—Self-Balancing Items ..	(f) 2,015	8,914	19,329	14,073	58,197	14,432
<b>Grand Total</b> ..	94,437	464,485	554,377	580,652	841,792	1,016,828
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Per Head of Population ..	13 12 5	60 15 11	71 1 8	72 2 8	101 5 8	119 1 6

(a) Included with Department of the Interior. (b) Included with Prime Minister's Department.  
(c) Invalid and Age Pensions and Maternity Allowances. (d) Provided in part from Postmaster-General's Department Votes and balance from Wireless Broadcasting Trust Account. (e) In addition, £24,911,000 was provided from Loan Fund. (f) Assistance to Primary Producers.

Particulars for each department include interest, sinking fund, superannuation charges, etc., but do not include the expenditure on capital works and services and



Defence, War and Repatriation Services. Further details of the expenditure in each section are given in paragraphs 2 to 12 following.

A graphical representation of the revenue and expenditure of the Commonwealth Consolidated Revenue Fund appears on page 677. In this diagram Public Debt Charges (interest and sinking fund payments, etc.) are shown as a separate item, whereas in the table above these charges are included in the section to which they relate.

Details of Commonwealth expenditure on public debt charges for 1938-39 and 1947-48 to 1951-52 are shown in the following table:—

**PUBLIC DEBT CHARGES(a) : COMMONWEALTH EXPENDITURE.**  
(£'000.)

Item.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
<b>War (1914-18) Debt—</b>						
Interest .. .. .	7,508	6,213	6,066	5,868	} (c)	} (c)
Exchange on Oversea Interest	108	101	104	35		
Sinking Fund .. .. .	2,049	2,718	2,809	2,377		
Other (b) .. .. .	224	21	32	52		
<b>Total .. .. .</b>	<b>9,889</b>	<b>9,053</b>	<b>9,011</b>	<b>8,332</b>		
<b>War (1939-45) Debt (d)—</b>						
Interest .. .. .	..	38,351	38,448	39,165	44,493	43,785
Exchange on Oversea Interest	..	58	59	59	121	117
Sinking Fund .. .. .	..	9,824	10,275	10,320	13,835	15,002
Other (b) .. .. .	..	190	158	327	312	215
<b>Total .. .. .</b>	<b>..</b>	<b>48,423</b>	<b>48,940</b>	<b>50,371</b>	<b>58,761</b>	<b>59,119</b>
<b>Business Undertakings—</b>						
<b>Postmaster-General's Department—</b>						
Interest .. .. .	1,399	984	924	864	758	744
Exchange on Oversea Interest	..	396	378	417	696	693
Sinking Fund .. .. .	1,129	1,858	1,950	2,048	2,150	2,257
Other (b) .. .. .	..	58	..	..	..	..
<b>Total .. .. .</b>	<b>2,887</b>	<b>3,296</b>	<b>3,252</b>	<b>3,329</b>	<b>3,604</b>	<b>3,694</b>
<b>Railways—</b>						
Interest .. .. .	392	320	313	301	298	294
Exchange on Oversea Interest	..	63	67	74	122	121
Sinking Fund .. .. .	75	116	122	128	134	141
Other (b) .. .. .	11	20	1	7	1	..
<b>Total .. .. .</b>	<b>541</b>	<b>527</b>	<b>503</b>	<b>510</b>	<b>555</b>	<b>556</b>
<b>Territories—</b>						
Interest .. .. .	318	267	262	241	230	219
Exchange on Oversea Interest	..	..	..	..	..	..
Sinking Fund .. .. .	58	90	95	99	105	110
Other (b) .. .. .	4	..	..	..	3	..
<b>Total .. .. .</b>	<b>380</b>	<b>357</b>	<b>357</b>	<b>340</b>	<b>338</b>	<b>329</b>
<b>Works and Other Purposes—</b>						
Interest .. .. .	2,714	2,207	2,444	2,458	2,370	2,844
Exchange on Oversea Interest	512	332	361	354	424	415
Sinking Fund .. .. .	613	635	688	640	864	791
Other (b) .. .. .	37	219	77	75	59	46
<b>Total .. .. .</b>	<b>3,876</b>	<b>3,393</b>	<b>3,570</b>	<b>3,527</b>	<b>3,717</b>	<b>4,096</b>
<b>Total—</b>						
Interest .. .. .	12,331	48,342	48,457	48,897	48,149	47,886
Exchange on Oversea Interest	1,042	958	969	939	1,363	1,346
Sinking Fund .. .. .	3,924	15,241	15,939	16,112	17,088	18,301
Other (b) .. .. .	276	508	268	461	375	261
<b>Grand Total .. .. .</b>	<b>17,573</b>	<b>65,049</b>	<b>65,633</b>	<b>66,409</b>	<b>66,975</b>	<b>67,794</b>

(a) Excludes payments to or for States under the Financial Agreement. See pages 694-9.  
 (b) Redemption, conversion and loan management, etc., expenses. (c) Included with War (1939-45) Debt.  
 (d) Includes War (1914-18) Debt in 1950-51 and 1951-52.

2. **Defence Services.**—Details of the expenditure on Defence Services by the Departments of Defence, Navy, Army, Air, Supply and Defence Production are shown in the following table. The expenditure shown under Department of Supply includes the former Departments of Shipping and Fuel, Supply and Development, Supply and Shipping, and Munitions. This table covers expenditure by the service and associated departments only, and includes the cost of maintaining forces in Korea and at other oversea posts.

The figures represent the combined expenditures from revenue, trust and loan fund for the years 1938-39 and 1947-48 to 1951-52.

**DEFENCE SERVICES : COMMONWEALTH EXPENDITURE FROM REVENUE,  
TRUST AND LOAN FUNDS.**

(£'000.)

Item.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
<b>Department of Defence—</b>						
Administrative and general expenses	46	218	231	280	379	494
Buildings, works, etc. . . . .	11	7	4	7	20	34
Rent, pensions, etc. . . . .	4	14	15	16	23	29
<b>Total . . . . .</b>	<b>61</b>	<b>239</b>	<b>250</b>	<b>303</b>	<b>422</b>	<b>557</b>
<b>Department of the Navy—</b>						
Naval Forces—Pay, maintenance, etc. . . . .	2,592	12,181	12,813	12,268	19,337	30,390
Miscellaneous war expenditure . . . . .	..	1,452	607	823	1,149	59
Naval construction and additions to the fleet . . . . .	1,643	3,404	2,676	1,384	2,244	3,302
Auxiliary vessels for naval defence . . . . .	..	608	965	841	(a)	(a)
Aircraft and aero engines . . . . .	..	..	2,398	1,855	983	678
Buildings, works, etc. . . . .	433	604	872	1,121	1,659	2,812
Maintenance, rent, pensions and debt charges . . . . .	163	283	364	447	600	710
Amount chargeable to War and Repatriation Services (b) . . . . .	..	..	..	-1,729	-1,145	..
<b>Total . . . . .</b>	<b>4,831</b>	<b>18,532</b>	<b>20,695</b>	<b>17,010</b>	<b>24,827</b>	<b>37,951</b>
<b>Department of the Army—</b>						
Military Forces—Pay, maintenance, etc. . . . .	2,941	20,397	12,563	12,273	15,869	27,776
Special units serving abroad—Maintenance . . . . .	..	2,439	845	702	1,108	839
Prisoners of war, war criminals, internees . . . . .	..	62	30	42	19	..
Arms, armament, ammunition . . . . .	1,129	4,978	983	1,894	5,387	17,926
Buildings, works, etc. (c) . . . . .	418	193	249	758	4,349	8,769
Maintenance, rent, pensions and debt charges . . . . .	334	388	645	861	1,095	1,250
Amount chargeable to War and Repatriation Services (b) . . . . .	..	..	..	-942	-1,072	..
<b>Total . . . . .</b>	<b>4,822</b>	<b>28,457</b>	<b>15,315</b>	<b>15,588</b>	<b>26,755</b>	<b>56,560</b>

See next page for notes.

DEFENCE SERVICES: COMMONWEALTH EXPENDITURE FROM REVENUE,  
TRUST AND LOAN FUNDS—*continued.*

(£'000.)

Item.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
<b>Department of Air—</b>						
Air Force—Pay, maintenance, etc. . . . .	1,304	9,781	8,006	7,904	10,833	16,929
R.A.A.F. squadrons overseas . . . . .	..	1,722	1,397	529	1,209	3,113
Aircraft, equipment and stores . . . . .	1,049	6,435	6,652	2,912	13,210	23,502
Buildings, works, etc. . . . .	489	184	323	692	1,592	3,883
Maintenance, rent, pensions and debt charges . . . . .	81	419	528	781	1,030	1,149
Amount chargeable to War and Repatriation Services(b) . . . . .	..	..	..	—855	..	..
<b>Total . . . . .</b>	<b>2,923</b>	<b>18,541</b>	<b>16,906</b>	<b>11,963</b>	<b>27,874</b>	<b>48,576</b>
<b>Department of Supply—</b>						
Administrative and general expenses . . . . .	36	1,436	1,309	1,197	1,721	1,525
Supply Research Laboratories . . . . .	..	355	431	610	806	886
Government undertakings and establishments . . . . .	477	1,008	885	1,705	1,764	(d)
Transport and storage services . . . . .	..	609	383	420	257	(d)
Miscellaneous expenditure . . . . .	44	203	43	30	4	36
Defence research and development . . . . .	..	1,413	4,550	5,575	6,204	6,434
Strategic stores and equipment reserve . . . . .	..	..	..	..	57,048	10,049
Machinery, plant, equipment, etc. . . . .	655	994	482	578	897	331
Buildings, works, etc. . . . .	463	244	317	324	264	270
Maintenance, rent, pensions, and debt charges . . . . .	83	407	362	433	492	384
Amount chargeable to War and Repatriation Services(b) . . . . .	..	..	..	—462	—237	..
<b>Total . . . . .</b>	<b>1,758</b>	<b>6,669</b>	<b>8,762</b>	<b>10,410</b>	<b>69,280</b>	<b>19,915</b>
<b>Department of Defence Production(e)—</b>						
Administrative and general expenses . . . . .	..	..	..	..	..	842
Government undertakings and establishments . . . . .	..	..	..	..	..	2,508
Defence production materials . . . . .	..	..	..	..	..	1,000
Storage services . . . . .	..	..	..	..	..	720
Machinery and plant . . . . .	..	..	..	..	..	1,047
Buildings, works, etc. . . . .	..	..	..	..	..	790
Maintenance, rent and pensions . . . . .	..	..	..	..	..	233
<b>Total . . . . .</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>7,140</b>
<b>Total Defence Services—</b>						
Consolidated Revenue Fund . . . . .	(f)9,410	72,436	61,928	55,274	149,170	170,699
Trust Fund . . . . .	3,072	(g) 2	..	..	..	..
Loan Fund . . . . .	1,913	..	..	..	—12	..
<b>GRAND TOTAL . . . . .</b>	<b>14,395</b>	<b>72,438</b>	<b>61,928</b>	<b>55,274</b>	<b>149,158</b>	<b>170,699</b>

(a) Included with Miscellaneous War Expenditure. (b) Represents expenditure on War and Repatriation Services (see page 685) included in departmental expenditure above, but for which dissection is not available. (c) Includes National Defence Contributions Trust Account. (d) Provided under Department of Defence Production. (e) Included with Department of Supply prior to 1951-52. (f) Expenditure from excess receipts of previous years appropriated for Defence Equipment Trust Account. (g) Expenditure from National Defence Contributions Trust Account.

3. **War and Repatriation Services.**—Expenditure from Consolidated Revenue and Loan Fund for War and Repatriation Services and Post-war Charges in relation to both the 1914-18 and 1939-45 Wars is shown in the following table for the years 1938-39 and 1947-48 to 1951-52. Expenditure on subsidies, which for the years 1947-48 to 1949-50 were paid from the War and Repatriation Votes, have been excluded from this table and are dealt with separately in paragraph 4. Expenditure on the maintenance of forces in Korea and at other overseas posts and the cost of arms and equipment is included in Defence Services (see paragraph 2).

WAR AND REPATRIATION SERVICES AND POST-WAR CHARGES: COMMONWEALTH EXPENDITURE FROM CONSOLIDATED REVENUE AND LOAN FUNDS.  
(£'000.)

Item.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Public Debt Charges—						
Interest (including exchange on interest payments) .. .. .	7,616	44,723	44,677	45,126	44,614	43,902
Sinking Fund .. .. .	2,049	12,542	13,084	13,197	13,835	15,002
Other .. .. .	225	211	190	379	312	215
Total Public Debt Charges(a) .. .. .	9,890	57,476	57,951	58,702	58,761	59,119
War Gratuities .. .. .		3,360	31,884	9,994	30,797	42
War and Service Pensions .. .. .	8,227	17,167	20,268	22,023	27,532	33,566
Commonwealth Reconstruction Training Scheme—						
University .. .. .		3,890	3,231	2,390	1,595	510
Technical .. .. .		8,888	6,965	4,444	2,401	1,236
Rural .. .. .		340	303	252	145	61
Correspondence .. .. .		7	1			
War Service Land Settlement .. .. .		2,242	2,922	4,074	4,388	5,641
Re-establishment loans for agricultural purposes .. .. .		2,503	1,572	1,065	296	188
Repatriation Department—						
Repatriation Benefits—						
Maintenance of departmental institutions .. .. .	319	2,670	2,938	3,208	4,133	4,912
Medical treatment .. .. .	231	1,546	1,780	2,025	2,512	2,938
Small business loans .. .. .		1,535	1,073	777	583	278
Expenses in providing employment .. .. .		591	303	53	32	(b)
Vocational training .. .. .		1,238	714	265	67	(b)
Living and other allowances .. .. .	81	296	333	334	507	1,630
Soldiers' Children Education Scheme .. .. .	117	153	160	193	184	209
Other benefits and allowances .. .. .	2	105	85	70	79	89
Administration and general expenses .. .. .	315	1,911	2,075	2,473	3,061	3,196
Expenditure recovered(c) .. .. .	-71	-1,439	-1,995	-1,951	-1,777	-1,615
Total Repatriation Department .. .. .	994	8,606	7,466	7,447	9,381	11,637
War Service Homes—Salaries and general expenses .. .. .	98	176	200	266	492	631
Defence Departments—Proportion of expenditure(d) .. .. .				3,988	2,455	
Other Departments—Miscellaneous expenditure .. .. .	48	3,074	1,784	1,156	438	1,243
International Payments—						
United Kingdom Grant .. .. .			10,000	10,000		
International Relief and Rehabilitation .. .. .		2,240	2,770	1,650	(e)	(e)
International Monetary Agreements .. .. .		10,193		2,778	14	40
Reciprocal Lend-Lease to the United States Forces .. .. .		521		12		
Lend-Lease Settlement .. .. .		1,095	108			
Other .. .. .		98	149	132	81	102
Other Administrations—Recoverable expenditure(f) .. .. .		-11,248	-2,528	-1,942	-1,849	1,071
Miscellaneous Credits .. .. .		-12,714	-5,451	-2,371	-1,749	-2,853
Credits from the Disposals Commission .. .. .		-15,649	-6,454	-3,982	-1,681	-1,183
Capital Works and Services—						
Repatriation Department .. .. .	36	309	268	297	342	271
War Service Homes Act 1918-1949 .. .. .	105	5,908	8,396	14,551	24,911	27,590
Other .. .. .		3				
Total Capital Works and Services .. .. .	141	6,220	8,664	14,848	25,253	27,861
Total, War and Repatriation Services and Post-war Charges—						
Consolidated Revenue Fund .. .. .	19,398	88,485	141,805	111,443	129,977	133,792
Loan Fund .. .. .				25,483	28,773	5,120
GRAND TOTAL .. .. .	19,398	88,485	141,805	136,926	158,750	138,912

(a) Excludes Interest and Sinking Fund payments on War (1914-18) Debt due to the United Kingdom Government, payment of which was suspended in 1931. (b) Included with living and other allowances. (c) From Service Departments and Australian Soldiers' Repatriation Trust Account. (d) Represents expenditure on War and Repatriation Services by Defence Departments (see pages 683-4), but for which dissection is not available. (e) Provided under Ordinary Services. (f) Munitions, stores, etc., supplied to the Government of United Kingdom and other administrations. Includes repayments and waiver of war-time indebtedness of other administrations.

4. Subsidies and Bounties.—The following table shows details, for the years 1938-39 and 1947-48 to 1951-52, of Commonwealth expenditure from revenue on subsidies, bounties and assistance to primary producers. Expenditure on special relief such as drought, frost, flood and bush fire, etc. (see table, p. 689, for more important items), is not included, nor are items of expenditure grouped under "Primary Production—

Self Balancing Items" (see paragraph 12 following). These items of expenditure are from the proceeds of certain taxes on primary products and profits from marketing schemes, which have been paid to trust funds for the purpose of price or other stabilization schemes or for distribution to producers. Further information relating to these schemes and other assistance to primary producers is given in Chapter XX.—Agricultural Production.

Details of price stabilization subsidies and of various forms of assistance to primary producers for earlier years may be found on pages 414 and 1014-15 respectively of Official Year Book No. 38.

### SUBSIDIES AND BOUNTIES : COMMONWEALTH EXPENDITURE.

(£'000.)

Item.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
<b>Subsidies—</b>						
<b>Price Stabilization—</b>						
Tea .. .. .	..	6,840	4,667	6,986	7,129	5,577
Potatoes .. .. .	..	2,703	1,065	..	..	..
Whole Milk .. .. .	..	2,157	564	..	..	..
Recoupment of Basic Wage Increases .. .. .	..	609	..	..	..	..
Imports (other than Tea) .. .. .	..	8,539	7,605	572	..	..
Coal .. .. .	..	2,352	232	..	1,704	1,519
Firewood .. .. .	..	257	5	..	..	..
Raw Wool .. .. .	..	9,227	..	..	..	..
Tobacco .. .. .	..	41	..	..	..	..
Other .. .. .	..	2,306	682	..	140	143
<b>Total .. .. .</b>	..	<b>35,031</b>	<b>14,820</b>	<b>7,558</b>	<b>8,973</b>	<b>7,239</b>
<b>Assistance to Primary Production—</b>						
Dairy Industry .. .. .	..	7,018	4,653	8,008	<sup>a</sup> 14,998	<sup>a</sup> 17,843
Superphosphate .. .. .	..	3,491	3,374	3,657	263	..
Nitrogenous Fertilizers .. .. .	..	130	164	781	599	1,521
Jute Products for Primary Industry .. .. .	..	164	..	2	..	..
Assistance to Stock Feeders .. .. .	..	5	21	..	..	..
Wheat Industry .. .. .	..	..	..	622	683	..
Other .. .. .	..	..	37	..	36	9
<b>Total .. .. .</b>	..	<b>10,808</b>	<b>8,249</b>	<b>13,070</b>	<b>16,579</b>	<b>19,373</b>
<b>Total Subsidies .. .. .</b>	..	<b>45,839</b>	<b>23,069</b>	<b>20,628</b>	<b>25,552</b>	<b>26,612</b>
<b>Bounties—</b>						
Tractor .. .. .	..	20	37	54	90	103
Raw Cotton .. .. .	115	9	..	..	..	..
Wool Products .. .. .	..	..	..	..	14,875	2,254
Wine Export .. .. .	..	14	2	1	..	..
Wheat—for Stock Feed .. .. .	..	..	..	..	..	2,368
Other .. .. .	(b) 121	..	..	..	20	4
<b>Total Bounties .. .. .</b>	<b>236</b>	<b>43</b>	<b>39</b>	<b>55</b>	<b>14,985</b>	<b>4,729</b>
<b>Grand Total .. .. .</b>	<b>236</b>	<b>45,882</b>	<b>23,108</b>	<b>20,683</b>	<b>40,537</b>	<b>31,341</b>

(a) Dairy products.

(b) Includes Sulphur Bounty, £88,000.

5. Total Cost of Departments.—Expenditure under this heading covers expenditure by departments, other than the defence and repatriation departments and business undertakings, on administrative services and other activities. Expenditure on defence, war and repatriation services, subsidies and bounties, social services (paid from the National Welfare Fund), business undertakings, Commonwealth territories and capital works and services is excluded.

Information on the functions of the several departments and the acts administered by the Ministers of the departments was published in Official Year Book No. 37, pages 276-86, and particulars of subsequent changes in departmental structure are given in later issues.

In the following table details are given of that expenditure on the branches of each department which might be termed running expenses. Miscellaneous expenditure and debt charges, etc., are not included in this table but in the one following.

**COMMONWEALTH CONSOLIDATED REVENUE FUND: COST OF DEPARTMENTS—  
SALARIES, WAGES AND GENERAL EXPENDITURE.**

(£'000.)

Department.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Governor-General .. .. .	28	36	37	37	44	64
Parliament—						
Cost of Parliament .. .. .	279	479	521	647	833	1,062
Electoral Office .. .. .	105	151	191	288	344	341
Total .. .. .	384	630	712	935	1,177	1,403
Prime Minister—						
Department .. .. .	62	98	105	119	155	210
Audit Office .. .. .	38	147	192	210	272	289
Public Service Board .. .. .	51	153	212	289	381	405
National Library .. .. .	4	25	38	52	73	96
High Commissioner's Office—United Kingdom .. .. .	81	351	450	485	548	621
Commonwealth Grants Commission .. .. .	5	9	10	10	12	14
Office of Education .. .. .	..	148	193	226	276	200
Security Services .. .. .	..	..	13	115	208	276
Total .. .. .	241	931	1,213	1,506	1,925	2,111
External Affairs—						
Department .. .. .	20	230	238	284	380	442
Oversea representation .. .. .	..	766	689	811	965	1,160
Total .. .. .	20	996	927	1,095	1,345	1,602
Treasury—						
Department .. .. .	59	286	241	236	329	367
Taxation Branch and Boards of Review .. .. .	616	3,227	3,666	4,119	5,323	6,117
Bureau of Census and Statistics .. .. .	61	169	227	274	374	461
Commonwealth Superannuation Board .. .. .	9	20	28	38	52	73
Total .. .. .	745	3,702	4,162	4,667	6,078	7,018
Attorney-General—						
Department .. .. .	20	44	60	79	123	149
Crown Solicitor .. .. .	28	124	134	140	179	205
High Court .. .. .	34	50	53	58	69	78
Bankruptcy Administration .. .. .	44	49	54	59	79	90
Court of Conciliation and Arbitration .. .. .	24	90	118	134	139	168
Patents, Trade Marks and Designs .. .. .	71	128	145	152	197	319
Other Branches .. .. .	37	154	130	131	231	241
Total .. .. .	258	639	694	753	1,017	1,250
Interior—						
Department .. .. .	296	580	674	803	965	1,083
Meteorological Branch .. .. .	80	116	195	292	399	440
Observatory .. .. .	7	32	36	45	56	60
Forestry Branch .. .. .	10	45	51	60	79	86
Total .. .. .	393	773	956	1,200	1,499	1,669

COMMONWEALTH CONSOLIDATED REVENUE FUND: COST OF DEPARTMENTS—SALARIES, WAGES AND GENERAL EXPENDITURE—*continued.*  
(£'000.)

Department.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.			
Works .. .. .	(a)	1,659	1,873	1,058	1,594	1,481			
Civil Aviation .. .. .	90	1,262	1,839	2,115	3,166	3,571			
Trade and Customs .. .. .	721	1,442	1,620	1,860	2,474	2,953			
Health—									
Department .. .. .	} 135	261	{ 153	209	297	353			
Quarantine .. .. .							67	143	161
Health Services .. .. .							26	190	174
Total .. .. .	135	287	410	463	727	857			
Commerce and Agriculture—									
Department .. .. .	58	223	223	240	296	333			
Inspection of goods for export .. .. .	175	349	400	446	516	582			
Commercial Intelligence Services Abroad .. .. .	47	178	192	201	241	299			
Division of Agricultural Economics and Division of Agricultural Production .. .. .	..	58	63	78	119	122			
Total .. .. .	280	808	878	965	1,172	1,336			
Social Services—Department .. .. .	139	713	945	1,249	1,686	1,974			
Supply and Shipping and Transport—									
Department .. .. .	..	796	646	766	223	161			
Marine Branch .. .. .	208	360	393	435	553	748			
Ship Construction .. .. .	..	(b)	67	71	80	85			
Total .. .. .	208	1,156	1,106	1,272	856	994			
Territories—Department .. .. .	(c)	54	74	88	127	158			
Immigration—Department .. .. .	(a)	207	396	820	888	1,230			
Labour and National Service—Department .. .. .	..	1,179	1,222	1,525	1,845	1,773			
National Development—									
Department .. .. .	..	321	288	299	437	452			
Bureau of Mineral Resources .. .. .	..	(a)	118	118	282	480			
Total .. .. .	..	321	406	417	719	932			
Commonwealth Scientific and Industrial Research Organization—Department .. .. .	195	1,521	1,757	1,930	2,477	2,895			
Total All Departments .. .. .	3,837	18,316	21,227	23,955	30,816	35,271			

(a) Included with Department of the Interior.  
(c) Included with Prime Minister's Department.

(b) Provided under War and Defence Services.

The following table gives details of miscellaneous expenditure included in the total cost of the various departments. It covers such items as interest and sinking fund payments allocated to the departments, repairs and maintenance of buildings, and special expenditure for which the Commonwealth is committed, such as contributions to international organizations, payment of Commonwealth scholarships, etc. The costs of social services, which are paid from the National Welfare Fund, are not included in this table (*see* p. 691 for this information).

**COMMONWEALTH CONSOLIDATED REVENUE FUND : COST OF DEPARTMENTS—  
MISCELLANEOUS EXPENDITURE.(a)  
( £'000.)**

Department.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Governor-General .. .. .	5	9	15	8	9	15
Parliament—						
Cost of elections .. .. .	3	147	3	177	210	231
Other .. .. .	58	51	56	70	86	83
Total .. .. .	61	198	59	247	296	314
Prime Minister—						
Commonwealth Scholarship Scheme and financial assistance to University students .. .. .	..	230	219	199	425	742
Australian National University .. .. .	..	50	102	216	280	450
Bush fire and flood relief, etc. .. .. .	19	..	11	101	312	43
Jubilee celebrations, 1951 .. .. .	..	..	..	..	268	91
Other .. .. .	873	646	694	712	744	748
Total .. .. .	892	926	1,026	1,228	2,029	2,074
External Affairs—						
United Nations and Allied Organizations .. .. .	(b) 46	441	580	699	701	715
Australian National Antarctic Research Expeditions .. .. .	..	255	108	84	119	145
International development and relief Contributions to other international agencies, etc. .. .. .	..	..	..	..	1,511	4,859
Total .. .. .	4	140	46	94	102	94
Total .. .. .	50	836	734	877	2,433	5,813
Treasury—						
Exchange on interest and loan management expenses .. .. .	549	399	502	505	510	473
Other .. .. .	964	1,646	1,506	1,445	1,697	2,213
Total .. .. .	1,513	2,045	2,008	1,950	2,207	2,686
Attorney-General .. .. .	24	50	51	68	79	99
Interior—						
Other departments in Canberra—Transport services, fuel, light and power; oversea publicity, etc. .. .. .	..	139	200	209	262	231
Other .. .. .	882	791	883	949	966	971
Total .. .. .	882	930	1,083	1,158	1,228	1,202
Works .. .. .	(c)	93	125	129	148	138
Civil Aviation—						
Maintenance and development of civil aviation .. .. .	162	407	667	1,441	1,767	2,526
Domestic and international air services—Mails, subsidies, etc. .. .. .	56	1,876	2,112	2,444	3,041	3,274
Meteorological maintenance services and other .. .. .	20	314	410	500	514	627
Total .. .. .	238	2,597	3,189	4,385	5,322	6,427
Trade and Customs .. .. .	117	206	207	292	207	250
Health—						
Subsidy, cattle tick control .. .. .	69	53	53	253	53	53
Miscellaneous expenditure on health .. .. .	93	169	217	241	265	295
Other .. .. .	41	72	88	77	88	100
Total .. .. .	203	294	358	571	406	448
Commerce and Agriculture—						
Dairy industry—Efficiency grant .. .. .	..	..	141	101	205	293
Wool use publicity, promotion and research .. .. .	74	547	318	341	348	341
Wheat—Contract with New Zealand .. .. .	..	2,692	3,538	..	..	..
Other .. .. .	630	977	280	293	375	360
Total .. .. .	704	4,216	4,277	735	868	994

For footnotes see next page.



COMMONWEALTH CONSOLIDATED REVENUE FUND: COST OF DEPARTMENTS—MISCELLANEOUS EXPENDITURE(a)—*continued.*

	(£'000.)					
Department.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Social Services—						
Compassionate allowances, etc. . . . .	} 186	{ 48	53	54	76	87
Other . . . . .						
Total . . . . .	186	88	128	108	140	160
Supply and Shipping and Transport—						
Joint Coal Board . . . . .	..	866	284	724	636	716
Australian Shipping Board, shipping subsidies, etc. . . . .	..	2,927	1,939	626	86	185
Storage services . . . . .	..	(d)	572	977	285	(d)
Other . . . . .	7	83	79	67	51	92
Total . . . . .	7	3,876	2,874	2,394	1,058	993
Territories . . . . .	(e)	1	1	3	2	2
Immigration—						
Assisted migration . . . . .	(e)	1,123	2,784	6,647	8,110	8,892
Other migration activities . . . . .	(e)	74	404	2,257	3,708	3,365
Other . . . . .	(e)	7	5	77	264	283
Total . . . . .	(e)	1,204	3,193	8,981	12,082	12,540
Labour and National Service—						
Stevedoring Industry Board . . . . .	..	260	670	499	421	551
Hostels Trust Account—Working advance . . . . .	..	..	21	126	55	25
Other . . . . .	..	98	85	125	92	83
Total . . . . .	..	358	776	750	568	659
National Development . . . . .	..	32	31	25	52	259
Commonwealth Scientific and Industrial Research Organization—						
Miscellaneous grants to scientific bodies . . . . .	28	58	68	65	69	83
Other . . . . .	..	..	..	12	20	25
Total . . . . .	28	58	68	77	89	108
Total, All Departments . . . . .	4,910	18,017	20,203	23,986	29,223	35,181

(a) Includes rent, repairs and maintenance, interest and sinking fund payments, pension and superannuation contributions. (b) League of Nations. (c) Included with Department of the Interior. (d) Provided under War or Defence Services. (e) Included with Prime Minister's Department.

6. **National Welfare Fund.**—The National Welfare Fund was established for the purpose of providing a fund for the payment of Commonwealth social services benefits. During the years 1947-48 to 1949-50 an amount equivalent to the total collections of pay-roll tax and social services contribution was paid to the fund from Consolidated Revenue. During 1950-51 the social services contribution was amalgamated with the normal income tax and it became necessary to base the contributions on another formula. For the year 1950-51 the amount paid to the fund was the total of collections of pay-roll tax and social services contribution and £30,000,000. In 1951-52 the amount paid to the fund was the amount paid in 1950-51 increased in the same proportion as collections of pay-roll tax increase over the collections of pay-roll tax in 1950-51. By an amendment to the National Welfare Fund Act 1943-1950, the amount to be paid to the fund in 1952-53 and subsequent years was changed to the amount of moneys paid out of the fund. In addition to these payments from Consolidated Revenue the fund received a small amount of interest from investments of the fund.

In the following table details are given of the income and expenditure of the National Welfare Fund and the balance in the fund at the end of each year for the years 1947-48 to 1951-52. A dissection of expenditure into the various types of benefits is given in Chapter XIV.—Welfare Services (*see* page 540).

NATIONAL WELFARE FUND : RECEIPTS, EXPENDITURE AND BALANCES.  
(£'000.)

Year.	Income.			Expenditure.	Balance in Fund at end of Year.
	Contribution from Consolidated Revenue.	Interest on Investments.	Total.		
1947-48 .. .. .	88,043	503	88,546	68,613	69,927
1948-49 .. .. .	110,058	672	110,730	80,777	99,880
1949-50 .. .. .	123,288	751	124,039	92,804	131,115
1950-51 .. .. .	132,680	985	133,665	114,983	149,797
1951-52 .. .. .	171,709	1,129	172,838	137,608	185,027

7. **National Debt Sinking Fund.**—During 1951-52 surplus revenue of £98,500,000 was paid to the National Debt Sinking Fund for investment in a special loan raised to finance State works expenditure.

8. **Business Undertakings.**—(i) *Postmaster-General's Department.* From the beginning of 1949-50, Broadcasting Services were separated from the Postmaster-General's Department. In years prior to 1949-50 part of the expenditure on these services is included with the Postmaster-General's Department. Details of the expenditure of this Department for the years 1938-39 and 1947-48 to 1951-52 are given in the following table :—

POSTMASTER-GENERAL'S DEPARTMENT : EXPENDITURE.  
(£'000.)

Item.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Salaries, stores and materials, mail, engineering services, etc.	11,473	27,923	34,302	39,902	49,653	58,661
Audit (proportion) .. .. .	12	13	13	17	17	25
Pensions and Retiring Allowances .. .. .	75	28	27	23	20	20
Superannuation .. .. .	317	575	614	642	775	1,041
Rents, repairs, etc. .. .. .	114	336	461	599	733	850
Interest .. .. .	1,399	984	924	864	758	744
Sinking Fund .. .. .	1,129	1,858	1,950	2,048	2,150	2,257
Exchange on Interest Payments	359	396	378	417	696	693
Loans, Redemption and Conversion expenses .. .. .	..	58	..	..	..	..
<b>Total Working, etc., expenses .. .. .</b>	<b>14,878</b>	<b>32,171</b>	<b>38,669</b>	<b>44,512</b>	<b>54,802</b>	<b>64,291</b>
Capital Works and Services .. .. .	3,851	8,260	14,770	19,792	34,897	28,819
<b>Grand Total .. .. .</b>	<b>18,729</b>	<b>40,431</b>	<b>53,439</b>	<b>64,304</b>	<b>89,699</b>	<b>93,110</b>

Further details of expenditure for 1950-51 on account of the Postmaster-General's Department appear in Chapter V.—Transport and Communication (Division I, Posts, Telegraphs, Telephones and Wireless).

(ii) *Broadcasting Services.* Since 1949-50 all expenditure on broadcasting services has been brought together in one section. Previously these services had been financed partly by the Postmaster-General's Department and partly from the Wireless Broadcasting Trust Account. Details of expenditure for the years 1949-50 to 1951-52 are shown in the following table :—

**COMMONWEALTH BROADCASTING SERVICES : EXPENDITURE.**  
( £'000.)

Item.	1949-50.	1950-51.	1951-52.
Australian Broadcasting Control Board .. .. .	37	59	61
Australian Broadcasting Commission—Salaries, general and programme expenses .. .. .	1,539	2,010	2,254
Technical and other Services—Postmaster-General	1,290	1,509	1,807
Repairs and maintenance .. .. .	6	12	11
Audit (proportion) .. .. .	..	1	2
<b>Total Working, etc., expenses .. .. .</b>	<b>2,872</b>	<b>3,591</b>	<b>4,135</b>
<b>Capital Works and Services .. .. .</b>	<b>157</b>	<b>212</b>	<b>251</b>
<b>Grand Total .. .. .</b>	<b>3,029</b>	<b>3,803</b>	<b>4,386</b>

(iii) *Railways.* The Commonwealth Railways, previously administered by the Department of the Interior, were transferred in March, 1950 to the newly-formed Department of Fuel, Shipping and Transport (later Shipping and Transport). The expenditure on railways for the years 1938-39 and 1947-48 to 1951-52 is shown below.

**COMMONWEALTH RAILWAYS : EXPENDITURE.**  
( £'000.)

Item.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
<b>Working expenses—</b>						
Trans-Australian .. .. .	494	900	1,055	1,165	1,457	1,540
North Australia .. .. .	55	56	55	74	69	91
Central Australia .. .. .	214	486	657	728	867	1,178
Aust. Capital Territory .. .. .	7	15	18	19	26	37
Interest .. .. .	392	320	313	301	298	294
Sinking Fund .. .. .	75	116	122	128	135	141
Exchange on Interest Pay- ments .. .. .	63	70	67	74	122	121
Contribution to South Aus- tralia (Port Augusta-Port Pirie Railway) .. .. .	20	20	20	20	20	20
Superannuation .. .. .	14	28	27	28	34	43
Freight concessions—North Australia and Central Australia Railways .. .. .	..	..	204	196	297	513
Miscellaneous .. .. .	17	(a) 78	(a) 56	(a) 59	56	47
<b>Total Working, etc., ex-   penses .. .. .</b>	<b>1,351</b>	<b>2,089</b>	<b>2,594</b>	<b>2,792</b>	<b>3,381</b>	<b>4,025</b>
<b>Capital Works and Services .. .. .</b>	<b>142</b>	<b>148</b>	<b>223</b>	<b>482</b>	<b>1,461</b>	<b>2,637</b>
<b>Grand Total .. .. .</b>	<b>1,493</b>	<b>2,237</b>	<b>2,817</b>	<b>3,274</b>	<b>4,842</b>	<b>6,662</b>

(a) Includes loans, redemption and conversion expenses, 1947-48, £20,000; 1948-49, £1,000; 1949-50, £7,000.

Additional details of the financial operations of the Commonwealth Railways to 1950-51 are given in Chapter V.—Transport and Communication (Division B, Government Railways).

9. Territories.—The following table shows the expenditure on account of Commonwealth Territories for the years 1938-39 and 1947-48 to 1951-52. The Australian Capital Territory is administered by the Department of the Interior, and the Department of Territories controls the external territories and the Northern Territory. The expenditure has been grouped in one table for convenience. Information in greater detail will be found in the *Finance Bulletins* issued by this Bureau.

## COMMONWEALTH TERRITORIES : EXPENDITURE.

( £'000.)

Territory.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
<b>Administrative and Maintenance of Services—</b>						
Australian Capital(a) ..	637	1,046	1,240	1,519	1,924	2,157
Northern (a) .. ..	403	861	1,105	1,422	1,814	2,041
Papua .. ..	49	} 2,278	3,418	4,348	4,518	5,532
New Guinea .. ..	6					
Norfolk Island .. ..	5	4	5	5	4	16
<b>Total .. ..</b>	<b>1,100</b>	<b>4,189</b>	<b>5,768</b>	<b>7,294</b>	<b>8,260</b>	<b>9,746</b>
<b>Capital Works and Services—</b>						
Australian Capital(a) ..	244	1,082	1,833	2,426	3,713	3,851
Northern(a) .. ..	495	365	633	707	1,361	1,281
Papua(b) .. ..	..	} ..	162	28	11	21
New Guinea .. ..	..					
<b>Total .. ..</b>	<b>739</b>	<b>1,447</b>	<b>2,628</b>	<b>3,161</b>	<b>5,085</b>	<b>5,153</b>

(a) Excludes Railways, see para. 8 (iii).

(b) Excludes developmental expenditure.

10. Capital Works and Services.—In the following table details are given of Commonwealth expenditure on capital works and services during each of the years 1938-39 and 1947-48 to 1951-52 and of the aggregate to 30th June, 1952. The table covers all expenditure on capital works and services made from the Consolidated Revenue Fund, the Loan Fund and Trust Funds.

## COMMONWEALTH EXPENDITURE ON CAPITAL WORKS AND SERVICES FROM REVENUE, TRUST AND LOAN FUNDS.

( £'000.)

Particulars.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.	1901-2 to 1951- 52— Total(a)
<b>Defence and War—</b>							
Navy .. ..	2,076	302	768	4,240	4,262	6,415	52,789
Army .. ..	1,547	191	249	1,154	7,153	18,410	94,884
Air Force .. ..	1,538	185	323	2,266	1,592	3,883	56,851
Munitions and other .. ..	1,173	2,309	4,205	4,786	62,055	16,434	180,932
Civil Aviation .. ..	419	3,541	2,607	3,805	4,845	6,424	29,973
Ships—Construction and purchase	300	1,083	294	2,000	1,462	2,413	32,782
Docks, yards and equipment ..	..	309	198	78	95	..	13,605
Lighthouses .. ..	2	16	22	49	50	81	1,894
Snowy Mountains Authority ..	..	..	..	2,497	6,077	10,393	18,967
Health .. ..	35	12	16	477	679	1,224	3,374
Commonwealth Scientific and Industrial Research Organization ..	..	106	81	88	145	260	816

For footnotes see next page.

**COMMONWEALTH EXPENDITURE ON CAPITAL WORKS AND SERVICES  
FROM REVENUE, TRUST AND LOAN FUNDS—continued.**  
(£'000.)

Particulars.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.	1901-2 to 1951- 52— Total.(a)
War Service Homes .. ..	105	5,908	8,396	14,551	24,011	27,590	105,114
Immigration .. ..	..	18	2,744	7,304	7,168	7,243	26,161
Postmaster-General's Department ..	3,774	8,218	14,753	19,560	34,739	28,818	203,243
Broadcasting Services .. ..	..	..	..	157	211	251	619
Railways—							
Commonwealth .. ..	142	298	224	481	1,459	2,634	19,719
Other .. ..	..	22	13	13	1	1,074	3,616
Locomotives and rolling-stock .. ..	..	..	..	..	..	..	2,333
Coal Industry Act 1946 .. ..	..	..	1,650	4,232	3,000	4,100	12,982
Christmas Island Phosphate Co.—							
Acquisition of assets .. ..	..	..	1,724	..	156	..	1,880
Territories—							
Australian Capital Territory .. ..	488	1,076	1,844	2,418	3,697	3,851	26,053
Northern Territory .. ..	244	407	649	708	1,361	1,281	7,549
Papua-New Guinea .. ..	..	..	162	28	11	20	400
Norfolk Island .. ..	..	..	..	..	..	..	2
Subscriptions to Capital—							
Commonwealth Oil Refineries Ltd.	..	..	..	..	..	..	425
National Oil Pty. Ltd. .. ..	..	..	..	225	..	..	225
Amalgamated Wireless (Austral- asia) Ltd. .. ..	75	..	156	..	158	..	814
Qantas Empire Airways Ltd. .. ..	..	2,455	900	200	377	..	4,347
British Commonwealth Pacific Air- lines Ltd. .. ..	..	500	500	..	..	..	1,000
Commonwealth Engineering Co. Ltd. .. ..	..	..	..	102	..	..	202
New Guinea Resources Prospecting Co. Ltd. .. ..	..	..	..	..	13	13	26
Advances—							
Australian National Airlines Com- mission .. ..	..	1,500	700	..	..	..	4,370
Aluminium Production Commission Overseas .. ..	..	30	126	125	300	2,039	2,664
Commission .. ..	..	..	..	225	..	..	1,650
Beaufort Homes .. ..	..	300	..	..	..	..	391
Glen Davis Shale Oil Project .. ..	..	..	186	208	177	350	921
All other works, buildings, etc. ..	241	1,641	2,152	4,705	7,321	10,527	(c) 39,039
<b>Total .. ..</b>	<b>11,559</b>	<b>30,427</b>	<b>45,642</b>	<b>76,682</b>	<b>173,475</b>	<b>155,728</b>	<b>952,612</b>
Source of Funds—							
Consolidated Revenue Fund .. ..	6,715	28,789	45,372	76,697	148,593	155,733	(d)
Loan Fund .. ..	1,598	179	12	15	24,882	5	(d)
Trust Funds (e) .. ..	3,246	2	..	..	..	..	(d)
Disposals Commission (f) .. ..	..	1,815	282	..	..	..	(d)
<b>Total .. ..</b>	<b>11,559</b>	<b>30,427</b>	<b>45,642</b>	<b>76,682</b>	<b>173,475</b>	<b>155,728</b>	<b>952,612</b>

(a) Includes properties transferred from the States. (b) Includes Strategic Stores and Equipment Reserve, 1950-51, £37,048,000; 1951-52, £10,049,000. (c) Includes River Murray Waters Act:—Works, £3,101,000; War Memorial, Canberra, £292,000; Solar Observatory, Mount Stromlo, £184,000; Forestry School, Canberra, £36,000. (d) Not available. (e) From excess receipts of previous years and National Defence Contribution Trust Account. (f) Surplus buildings, equipment, etc., taken over from Disposals Commission.

**II. Payments to or for the States.—(i) General.** An outline of the provisions of the Constitution requiring the Commonwealth to make payments to the States, and of the systems which followed, is given in earlier issues of the Official Year Book (see No. 37, pages 633 to 638). In the following paragraphs reference is made to the arrangements at present in operation.

(ii) *Financial Agreement.* Details of the Financial Agreement between the Commonwealth and the States are given in Official Year Book No. 37, pages 685 to 690. Under this Agreement the Commonwealth undertook to contribute £7,584,912 per annum towards interest payable on the State Debts for a period of 58 years from 1st July, 1927. This amount is to be distributed amongst the States as follows:—New South Wales, £2,917,411; Victoria, £2,127,159; Queensland, £1,096,235; South Australia, £703,816; Western Australia, £473,432; Tasmania, £266,859.

These amounts are equal to the sums paid by the Commonwealth to each State in the year 1926-27 at the rate of 25s. per head of population, the rate at which the Commonwealth had contributed annually to the States since 1st July, 1910 as compensation for the States relinquishing, after Federation, the right to levy Customs and Excise Duties.

In addition, the Commonwealth agreed to pay to the National Debt Sinking Fund for redemption of State Debts the following amounts:—(a) an annual contribution of 2s. 6d. per cent. of the net public debt of the States at 30th June, 1927 for a period of 58 years from 1st July, 1927 (in respect of New South Wales net public debt from 1st July, 1928); (b) an annual contribution of 5s. per cent. on new borrowings (except those for redemption, conversion or funding a State deficit) after 1st July, 1927 for a period of 53 years from the date of raising; (c) an annual contribution of 5s. per cent. on loans raised to meet revenue deficits occurring between 1st July, 1927 and 30th June, 1935 for a period of 39 years from 1st July, 1944.

(iii) *Special Grants.* The Constitution provides in Section 96 for the granting of special financial assistance to the States. Western Australia has received financial assistance each year since 1910-11. In 1912 a grant was made to Tasmania, the amount payable in the first year, 1912-13, being £95,000, which was to be progressively reduced by £10,000 in each successive year. The Tasmania Grant Act 1913 provided for an addition to this grant, bringing the amount payable to £85,000 per annum to the year 1921-22, after which annual grants of varying magnitude were made. South Australia received £360,000 in 1929-30 and further grants in each successive year.

In 1933 the Commonwealth Government appointed the Commonwealth Grants Commission of three members to inquire into and report upon claims made by any State for a grant of financial assistance and any matters relevant thereto.

Applications have been received from South Australia, Western Australia and Tasmania during each year from 1933 and the recommendations of the Commission in respect of the years 1938-39 and 1948-49 to 1952-53 are shown in the following table. Commencing with 1949-50 the Commission has divided the grants recommended into two parts. One part is the Commission's estimate of the indispensable need of the claimant State for the year in which the payment is to be made after allowing a sufficient margin for safety. The other part is an adjustment of this estimate for an earlier year after an examination of the audited accounts for that year. Thus the grants for 1952-53 include an estimate of the indispensable need of the claimant State for 1952-53 and an adjustment to the estimated grant for 1950-51.

COMMONWEALTH GRANTS COMMISSION: GRANTS RECOMMENDED.  
(£'000.)

State, etc.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
South Australia—						
Estimated grant ..	1,040	1,194	3,850	4,570	4,250	6,600
Adjustment to estimated grants of previous years ..	..	(a) 1,656	(b) 324	(c) 762	(d) 308	(e) -257
Net grant recommended ..	1,040	2,850	4,174	5,332	4,558	6,343
Western Australia—						
Estimated grant ..	570	1,389	4,850	4,750	5,000	8,200
Adjustment to estimated grants of previous years ..	..	(a) 2,211	(b) 768	(c) 1,089	(d) 88	(e) -159
Net grant recommended ..	570	3,600	5,618	5,839	5,088	8,041
Tasmania—						
Estimated grant ..	410	283	1,000	1,100	750	1,550
Adjustment to estimated grants of previous years ..	..	(a) 717	(b) 262	(c) -96	(d) 126	(e) ..
Net grant recommended ..	410	1,000	1,262	1,004	876	1,550
Grand Total ..	2,020	7,450	11,054	12,175	10,522	15,934

(a) Of 1946-47.

(b) Of 1947-48.

(c) Of 1948-49.

(d) Of 1949-50.

(e) Of 1950-51.

(iv) *Tax Reimbursement Grants.* Details of the States Grants (Income Tax Reimbursement) Act 1942 and the States Grants (Entertainments Tax Reimbursement) Act 1942 are given in earlier issues of the Official Year Book (*see No. 37, pages 635 to 637*). These Acts provided for grants to the States as compensation for vacating the fields of Income Tax and Entertainments Tax. Grants under these Acts ceased after 1945-46 and were replaced by grants under the States Grants (Tax Reimbursement) Act 1946-1948. This Act provided for the following reimbursement grants to be paid to the States, the figures shown relating to 1946-47 and 1947-48 respectively:—New South Wales, £16,477,000, £18,536,625; Victoria, £8,860,000, £9,967,500; Queensland, £6,601,000, £7,426,125; South Australia, £3,458,000, £3,890,250; Western Australia, £3,384,000, £3,807,000; Tasmania, £1,220,000, £1,372,500; Total, £40,000,000, £45,000,000.

For 1948-49 and subsequent years an amount is to be determined by increasing the aggregate grants paid in 1947-48 (£45,000,000) by the same proportion as the aggregate population of the six States at the beginning of the financial year increases over the aggregate population of the six States at 1st July, 1947. This amount is to be further increased by a percentage equal to the percentage increase in average wages per person employed in the financial year preceding the year in which the reimbursement grants are to be paid over the average wages per person employed in 1945-46. The amount so determined will be the aggregate of the reimbursement grants and is to be distributed to the States in the following proportions:—

- (i) 1948-49 to 1956-57:—(a) The following percentages of the grant shall be distributed in the proportion indicated by the distribution of the aggregate reimbursement grant in 1946-47 and 1947-48, viz.:—1948-49, 90 per cent.; 1949-50, 80 per cent.; and thus decreasing by 10 per cent. each year to 10 per cent. in 1956-57, and (b) the remainder in the proportion indicated by the "adjusted" population\* for each State.
- (ii) 1957-58 and subsequent years:—the proportion indicated by the "adjusted" population for each State.

It is provided that, if the application of the foregoing formula for distribution of the aggregate grants causes the amount of the reimbursement grant for any State to fall below the grant for 1946-47, the grant payable will be the same as that for 1946-47 and the balance of the aggregate grant is to be distributed between the remaining States in the proportions above:

An amount equal to arrears of State income taxes collected by the States in any year is to be deducted from the reimbursement grants for that year. The aggregate amount so deducted less any refunds of State income taxes made by the Commonwealth is to be repaid in the event of uniform taxation ceasing to operate. This amount bore interest at 3 per cent. up to 30th June, 1946, but thereafter, under the new arrangement, will bear no interest. The payment of the tax reimbursement grant in any year to any State is subject to the condition that that State does not impose a tax on incomes in that year.

In 1950-51 an amount of £5,000,000 was paid to the States under the States Grants (Additional Tax Reimbursement Act) 1950. As this was considered as a non-recurring grant the formula outlined above was not amended.

(v) *Additional Financial Assistance, 1949-50 to 1951-52.*—(a) *Coal Strike Emergency Grant.* During 1949-50 State business undertakings suffered considerable losses as a result of the coal strike. Towards meeting these losses the Commonwealth made grants totalling £8,000,000 to the States. The amounts paid to each State were:—New South Wales, £3,261,000; Victoria, £1,830,000; Queensland, £1,309,000; South Australia, £687,000; Western Australia, £661,000; and Tasmania, £252,000.

(b) *Special Financial Assistance Grants.* During 1950-51 there were heavy additions to the financial needs of the States and in June, 1951 a special grant of £15,000,000 was made. The amounts granted to each State were—New South Wales, £6,250,000; Victoria, £4,750,000; Queensland, £2,000,000; South Australia, £800,000; Western Australia, £1,000,000; and Tasmania, £200,000.

\* In the "adjusted" population, allowances are made for differences in the proportion of school children in the population and the density of the population in each State.

Again in 1951-52 payments were made to the States under a Special Financial Assistance Act. The total amount of £33,577,000 was distributed as follows:—New South Wales, £13,074,000; Victoria, £9,124,000; Queensland, £5,005,000; South Australia, £2,790,000; Western Australia, £2,390,000; and Tasmania, £1,194,000.

(vi) *Grants for Road Construction.* (a) *Main Roads Development Act 1923-25, Federal Aid Roads Act 1926, 1931 and 1936, Federal Aid Roads and Works Act 1937 and Commonwealth Aid Roads and Works Act 1947-1949.* Details of these Acts are given in earlier issues of the Year Book (see issue No. 38, pp. 787-8) and in the *Finance Bulletins* published by this Bureau.

(b) *Commonwealth Aid Roads.* On the expiration of the Commonwealth Aid Roads and Works Act 1947-1949 the Commonwealth Aid Roads Act 1950 provided, for a period of five years from 1st July, 1950, an amount equivalent to the sum of (i) 6d. per gallon of customs duty and (ii) 3½d. per gallon of excise duty collected on petroleum and shale products as specified in Customs Tariff Item 229C and Excise Tariff Item 11 (excluding such products used in civil aircraft). Out of this amount the following grants are to be made to the States for construction and maintenance of roads and the purchase of road-making plant:—

(a) Sixty-five per cent. of the amount, less £600,000, per annum, for expenditure on roads, and

(b) Thirty-five per cent. of the amount for expenditure on roads in rural areas other than highways, trunk or main roads.

Of the former amount, one-sixth may be spent on other works connected with transport by road or water. Five per cent. of the grants to the States is payable to Tasmania. Fifty-seven per cent. is to be divided between the other States in proportion to their populations at 30th June, 1947, and 38 per cent. according to area. In addition, the Commonwealth may spend each year £500,000 on strategic roads and £100,000 on the promotion of road safety practices.

(vii) *Other Payments.* (a) *Price Control Reimbursement.* These grants are made each year to reimburse the States for expenditure incurred in administering prices, rents and land sales controls.

(b) *Western Australian Waterworks.* The Western Australia (Water Supply) Act 1948 provides for grants to Western Australia not exceeding an aggregate of £2,150,000 for the development of the agricultural areas, great southern towns and Goldfields Water Supply scheme. The amount provided by the Commonwealth is not to exceed half the total expenditure on the scheme.

(c) *Coal Mining Industry—Long Service Leave.* To provide funds for the payment for long service leave in the coal mining industry the Commonwealth imposed an excise duty of 6d. per ton on coal produced from 1st November, 1949. The rate of duty was raised to 7½d. per ton from 26th August, 1951 and to 8d. per ton from 30th May, 1952. The proceeds of this excise duty are paid to a trust fund out of which the States are reimbursed for expenditure incurred in granting long service leave to employees in the coal mining industry.

(d) *Imported Houses.* A subsidy is paid to the States for houses imported by a State or a housing authority of a State after 12th October, 1949. The amount of the subsidy is the amount by which the cost of imported houses exceeds the cost of building comparable houses from local materials. The subsidy is limited to £300 per house and in aggregate to 30,000 houses or £9,000,000.

(e) *Encouragement of Meat Production.* To develop meat production in Queensland and Western Australia grants are made to these States for the provision of improved roads and other facilities for the movement of live-stock. Provision is made for the Commonwealth to meet the cost of the construction and improvement of certain



specified roads in both States and the construction of eight cattle loading and unloading points in Queensland. Provision is also made for the Commonwealth to meet half the cost of improving watering facilities on specified stock routes in both States. The amount of the grants for improving watering facilities on stock routes is limited to £75,000 in Queensland and £31,500 in Western Australia.

(f) *Assistance to Universities.* The States Grants (Universities) Act 1951, provides for grants to be made to the States for the purpose of financial assistance to Universities during the three years 1950-51 to 1952-53.

(viii) *Amounts Paid.* (a) *Year 1951-52.* The following table shows particulars of the amounts paid to each of the States as grants for the several purposes referred to in the preceding paragraphs.

**COMMONWEALTH PAYMENTS TO OR FOR THE STATES, 1951-52.(a)**  
(£'000.)

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
Interest on States' Debts ..	2,918	2,127	1,096	704	473	267	7,585
Sinking Fund on States' Debts (b) ..	980	528	334	316	273	126	2,557
Special Grants ..	..	..	..	4,558	5,088	876	10,522
Tax Reimbursement Grants	34,745	20,347	13,962	7,409	7,000	2,805	86,268
Special Financial Assistance	13,074	9,124	5,005	2,790	2,390	1,194	33,577
Commonwealth Aid Roads(c)	4,130	2,549	2,812	1,611	2,812	733	14,647
Price Control Reimbursement ..	400	220	91	90	88	48	937
Western Australian Waterworks Grant ..	..	..	..	..	289	..	289
Coal Mining Industry—Long Service Leave ..	394	1	72	..	25	7	499
Imported Houses—Grants ..	..	1,030	419	173	166	..	1,788
Encouragement of Meat Production ..	..	..	105	..	100	..	205
Grants to Universities ..	523	406	187	168	131	58	1,473
<b>Total ..</b>	<b>57,164</b>	<b>36,332</b>	<b>24,083</b>	<b>17,819</b>	<b>18,835</b>	<b>6,114</b>	<b>160,347</b>

(a) Excludes relief to primary producers and other payments for medical research, etc. (b) Paid to National Debt Sinking Fund. (c) Paid to Trust Fund; excludes £600,000 for road safety practices and Commonwealth strategic roads.

(b) 1938-39 and 1947-48 to 1951-52. The following table shows particulars of payments by the Commonwealth to or on behalf of the States during each of these years.

**COMMONWEALTH PAYMENTS TO OR FOR THE STATES.(a)**  
(£'000.)

Particulars.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Financial Agreement—						
Interest on States' Debts ..	7,585	7,585	7,585	7,585	7,585	7,585
Sinking Fund on States' Debts (b) ..	1,478	1,732	1,852	2,005	2,241	2,557
Special Grants ..	2,020	6,042	7,450	11,054	12,175	10,522
Tax Reimbursement—						
Grants ..	..	44,588	53,488	62,271	70,107	86,268
Additional Grants ..	..	..	..	..	5,000	..
Special Financial Assistance ..	..	..	..	..	15,000	33,577
Coal Strike Emergency Grant ..	..	..	..	8,000	..	..
Price Control Reimbursement ..	..	..	597	706	704	937
Grants for Road Construction, etc. (c)	4,266	6,707	7,631	9,267	14,143	15,247
Local Public Works—Interest and Sinking Fund ..	100	..	..	..	..	..
Youth Employment ..	200	..	..	..	..	..
Western Australian Waterworks ..	..	..	..	37	218	289
Coal Mining Industry—Long Service Leave ..	..	..	..	207	374	499
Imported Houses—Grants ..	..	..	..	..	170	1,788
Encouragement of Meat Production ..	..	..	..	..	315	205
Assistance to Universities ..	..	..	..	..	..	1,473
Interest on Loans for Drought Relief ..	..	6	1	..	..	..
<b>Total ..</b>	<b>15,649</b>	<b>66,660</b>	<b>78,604</b>	<b>101,132</b>	<b>128,032</b>	<b>160,947</b>

(a) Excludes relief to primary producers and other payments for medical research, etc. (b) Paid to National Debt Sinking Fund. (c) Includes payments for road safety practices and Commonwealth strategic roads not included in the preceding table.

Since Federation to 30th June, 1952 an aggregate amount of more than £1,175 million has been paid by the Commonwealth Government to or on behalf of the States. Of this, New South Wales' share was £418 million, Victoria's £259 million, Queensland's £169 million, South Australia's £138 million, Western Australia's £138 million and Tasmania's £53 million. About £74 million was paid to the States from 1900-01 to 1909-10 under section 87 of the Constitution, £109 million from 1910-11 to 1926-27 under the Surplus Revenue Acts, and £227 million from 1927-28 to 1951-52 under the Financial Agreement. Special grants to the States of South Australia, Western Australia and Tasmania have amounted to £95 million, tax reimbursement grants under the various Acts to £491 million, and grants for road construction to £108 million.

For further particulars of the total amounts paid to the several States since Federation see *Finance Bulletin* No. 43 published by this Bureau.

Particulars of special Commonwealth grants for the relief of primary producers are not included in the foregoing tables. For details see Chapter XX.—Agricultural Production. See also para. 4. Subsidies and Bounties and para. 12.—Primary Production—Self-balancing Items of this Division.

12. **Primary Production—Self-balancing Items.**—Expenditure under this item represents the proceeds of certain taxes on primary products or profits from marketing schemes which have been paid to trust funds for the purpose of price stabilization and other assistance schemes, or for distribution to producers. Details of expenditure from the trust funds are given in § 3. Commonwealth Trust Funds. Information relating to the taxes levied is given in Division II.—Revenue of this section (see pages 675, 676 and 679) and details of the price stabilization and other assistance schemes may be found in Chapter XX.—Agricultural Production. Details of expenditure from the Consolidated Revenue Fund during the last five years are given in the following table.

**PRIMARY PRODUCTION—SELF-BALANCING ITEMS: RECEIPTS AND EXPENDITURE FROM COMMONWEALTH CONSOLIDATED REVENUE FUND.**  
(£'000.)

Receipts From—	Expenditure on—	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Flour Tax .. .. .	Wheat Industry—Assistance (a) .. .. .	985	1	..	..	..
Wheat Export Charge and Wheat Tax .. .. .	Wheat Industry Stabilization (b) .. .. .	5,730	18,086	12,634	13,353	12,202
Wool Contributory Charge	Wool Use Promotion and Disposals Plan .. .. .	1,424	1,029	1,439	1,654	486
Wool Committee Operations Surplus	Wool Reserve Prices Fund .. .. .	..	..	..	43,190	1,744
Eggs—War-time Control Surplus Funds .. .. .	Wool Industry Assistance .. .. .	125	103	..	..	..
	Eggs—War-time Control—Distribution of surplus .. .. .	650	110	..	..	..
Total .. .. .		8,914	19,329	14,073	58,197	14,432

(a) Paid to Wheat Industry Stabilization Fund.

(b) Paid to Wheat Prices Stabilization Fund.

### § 3. Commonwealth Trust Funds.

1 Receipts, Expenditure and Balances, 1951-52.—The following table shows the opening and closing balances, and receipts and expenditure of some of the more important Trust Funds of the Commonwealth for the year ended 30th June, 1952.

COMMONWEALTH TRUST FUNDS : RECEIPTS, EXPENDITURE AND BALANCES,  
1951-52.  
(£'000.)

Fund.	Balance at 30th June, 1951.	Year ended 30th June, 1952.		Balance at 30th June, 1952.
		Receipts.	Expenditure.	
Aluminium Production .. ..	45	2,739	2,710	74
Australian New Guinea Production ..	1,512	6,711	6,799	1,424
Citizens' National Emergency Loans ..	95	..	53	42
Coal Mining Industry Long Service Leave .. .. .	539	513	94	958
Coinage .. .. .	3,891	3,253	3,253	3,891
Commonwealth Aid Roads .. .. .	1,699	15,247	15,427	1,519
Commonwealth Aid Roads and Works ..	1	..	..	1
Defence Forces Retirement Benefits ..	3,167	1,422	478	4,111
Diverted Cargoes .. .. .	114	..	35	79
Enemy Subjects .. .. .	1,128	78	32	1,174
Flax Production .. .. .	252	490	424	318
Import Procurement Suspense .. .. .	452	103	71	484
Insurance Deposits .. .. .	3,064	133	..	3,197
International Development and Relief International Post-war Relief and Re- habilitation .. .. .	698	4,630	3,643	987
Lend-Lease Settlement .. .. .	1,845	(a) -112	367	219
Liquid Fuel Equalization .. .. .	930	14	68	1,791
National Debt Sinking .. .. .	10,282	161,401	36,425	135,258
National Welfare .. .. .	149,797	172,838	137,608	185,027
Parliamentary Retiring Allowances ..	55	42	15	82
Public Trustee and Custodian .. .. .	1,912	238	9	2,141
Strategic Stores and Equipment Reserve	48,010	10,049	7,867	50,192
Superannuation .. .. .	22,239	6,446	2,948	25,737
Temple Society .. .. .	448	310	37	721
War Damage .. .. .	161	41	110	92
War Gratuity .. .. .	5,934	..	1,389	4,545
War Service Homes .. .. .	..	28,238	28,238	..
War Service Homes—Insurance .. .. .	543	44	54	533
Wheat Industry Stabilization .. .. .	309	..	5	304
Wheat Prices Stabilization .. .. .	28,178	12,749	13,003	27,924
Wine Industry Assistance .. .. .	500	..	..	500
Wool Contributory Charge .. .. .	4,007	486	341	4,152
Wool Industry .. .. .	7,828	219	559	7,488
Wool Research .. .. .	812	341	421	732
Wool (Reserve Prices) .. .. .	43,283	1,881	45,050	114
Other .. .. .	19,321	(b) 294,738	291,071	22,988
<b>Total .. .. .</b>	<b>363,051</b>	<b>725,282</b>	<b>598,604</b>	<b>489,729</b>

(a) Represents transfer of receipts to International Development and Relief Fund. (b) Includes surplus balances transferred to Consolidated Revenue Fund, £179,000. These items have been treated as reductions of receipts.

2. Summary, 1938-39 and 1947-48 to 1951-52.—In the following table the balances and total receipts and expenditure of the Trust Funds are shown for each of these years.

COMMONWEALTH TRUST FUNDS.  
(£'000.)

Heading.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Balance brought forward .. .. .	25,609	171,135	196,478	245,194	278,647	363,051
Receipts .. .. .	84,167	301,981	379,294	410,174	622,435	725,282
Expenditure .. .. .	85,550	276,638	330,578	376,721	538,031	598,604
Balance carried forward .. .. .	24,226	196,478	245,194	278,647	363,051	489,729

### § 4. Commonwealth Loan Fund.

Brief historical notes relating to the Commonwealth Loan Fund are given in earlier issues of the Official Year Book (*see* No. 37, page 640). In the following table details are given of the net expenditure from the Commonwealth Loan Fund for the years 1938-39 and 1947-48 to 1951-52 and of the aggregate expenditure to 30th June, 1952. The figures shown represent "net" loan expenditure, i.e., after adjustments have been made on account of amounts expended in earlier years.

#### COMMONWEALTH NET EXPENDITURE FROM LOAN FUND.

(£.)

Particulars.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.	Total to 30th June, 1952.
War (1914-18) and Repatriation Services .. .. .	..	..	..	..	..	..	372,989,867
Defence, War (1939-45) and Repatriation Services .. .. .	..	..	-18,733,000 (a)	25,483,273	28,773,061 (b)	5,119,982 (b)	1,618,806,094
<b>Capital Works and Services—</b>							
Defence .. .. .	1,912,284	..	..	..	-11,884	..	(c) 8,682,064
Civil Aviation, Buildings and Works .. .. .	..	..	..	..	..	..	213,086
Ships, Yards and Docks .. .. .	-305,351	-164,943	-3,624	..	..	..	7,694,461
Lighthouses, Works and Services .. .. .	-1,000	..	..	..	..	..	634,490
River Murray Waters Act .. .. .	..	..	..	..	..	..	2,105,625
Postmaster-General's Department—							
Telegraph and Telephone Construction .. .. .	..	..	..	..	..	..	36,057,558
Buildings, Works, Sites, etc. .. .. .	-1,290	-1,349	-1,023	-7,409	-797	-827	4,067,991
Subscription to Capital of Amalgamated Wireless Ltd. .. .. .	..	..	..	..	..	..	300,000
Radio Stations and Equipment .. .. .	..	..	..	..	..	..	104,538
Serum and Health Laboratories .. .. .	..	..	..	..	..	..	80,149
Other Health Buildings and Services .. .. .	..	..	..	..	..	..	21,864
Repatriation Buildings, etc. .. .. .	..	..	..	..	..	..	47,026
War Service Homes (d) .. .. .	..	..	..	..	..	..	7,329,523
Railways .. .. .	-339	-4,519	-1,026	-995	-1,118	-3,005	13,755,113
Territories (e) .. .. .	-6,768	-8,644	-6,105	-7,384	-16,006	-971	8,744,153
Immigration .. .. .	..	..	..	..	..	..	1,680,834
Other .. .. .	..	..	..	..	..	..	1,381,094
<b>Other Purposes—</b>							
Assistance to States—							
Unemployment Relief .. .. .	-3,822	..	..	..	..	..	2,667,020
Mining .. .. .	..	..	..	..	..	..	283,750
Forestry .. .. .	..	..	..	..	..	..	322,000
Farmers' Debt Adjustment .. .. .	2,000,000	..	..	..	..	..	7,967,000
Roads .. .. .	..	..	..	..	..	..	249,686
Wire and Wire Netting .. .. .	..	..	..	..	..	..	608,849
Drought Relief .. .. .	..	..	..	..	..	..	1,844,205
Housing .. .. .	..	13,305,000	14,492,000	17,215,000	21,640,000	26,547,000	111,009,000
Wheat Bounty .. .. .	..	..	..	..	..	..	3,429,571
<b>Total Capital Works and Services and Other Purposes .. .. .</b>	<b>3,593,714</b>	<b>13,125,545</b>	<b>14,480,222</b>	<b>17,199,212</b>	<b>21,610,195</b>	<b>26,542,197</b>	<b>221,280,650</b>
International Bank Dollar Loan(f) .. .. .	..	..	..	..	4,043,785	23,830,838	27,874,623
<b>GRAND TOTAL .. .. .</b>	<b>3,593,714</b>	<b>13,125,545</b>	<b>-4,252,778</b>	<b>42,682,485</b>	<b>54,427,041</b>	<b>55,493,017</b>	<b>2,240,951,234</b>

(a) Repayment of surplus balances of Defence Trust Accounts. (b) Comprises expenditure under War Service Homes Acts 1914-1949—(1950-51, £24,911,484) and financial assistance to the States in connexion with War Service Land Settlement—1950-51, £3,861,577; 1951-52, £5,119,982. (c) Excludes amounts charged to War Loan Fund. (d) In addition, £13,045,408 was expended from War Loan Fund prior to 1923-24. (e) Includes Administration and other Public Buildings, Australian Capital Territory. (f) Payment to National Debt Sinking Fund. See pages 734 and 735.

NOTE.—Minus sign (—) indicates excess of repayments to Loan Fund.

Information relating to the Public Debt of the Commonwealth is given in part D. Commonwealth and State Public Debt (of this chapter).

**B. STATE FINANCE.****§ 1. General.**

1. **Functions of State Governments.**—In comparing the financial returns of the States, allowances must be made for the various functions discharged by the respective Governments, and for local conditions in each case. Direct comparisons of the revenue, expenditure and debt of the individual States are difficult, owing to the fact that functions which in one State are assumed by the Central Government are in another relegated to municipal or semi-governmental bodies which are vested with certain defined borrowing powers and whose financial transactions are not included with those of the Central Government. Care, therefore, is needed in making comparisons, and the particulars contained in this Chapter should be read with those contained in Chapter XV.—Local Government. In many respects, moreover, the budgets of the Australian Governments differ materially from those of most European countries, owing to the inclusion therein of the revenue and expenditure of departments concerned in rendering public services, such as railways, tramways, water supply, etc., which in other countries are often left to private enterprise.

2. **Accounts of State Governments.**—The various financial transactions of the States are in each case mainly concerned with one or other of three Funds—the “Consolidated Revenue Fund”, the “Trust Fund”, and the “Loan Fund”. All revenue (except certain items paid into special funds) collected by the State is paid into its Consolidated Revenue Fund, from which payments are made under the authority of an annual Appropriation Act passed by the Legislature, or by a permanent appropriation under a special act.

Figures in § 2 following relating to New South Wales represent the transactions of the Consolidated Revenue Fund and the business undertakings included in the annual budget papers. These latter are as follows:—Railways, Tramways and Omnibuses, and Sydney Harbour Trust Section of the Maritime Services Board. Adjustments have been made to the Budget figures, however, in order to obviate duplications caused by inter-fund payments and to maintain uniformity from year to year in the presentation of statistics. Particulars for all other States relate to the transactions of the Consolidated Revenue Fund.

The Trust Fund comprises all moneys held in trust by the Government, and includes such items as superannuation funds, road funds, insurance companies' deposits, etc.

The Loan Fund is debited with all loan moneys raised by the State, and credited with the expenditure therefrom on public works or other purposes.

3. **Inter-relation of Commonwealth and State Finances.**—A statement in some detail, covering the inter-relation of Commonwealth and State Finances during the period from the inception of Federation to the passing of the Financial Agreement Act 1928, was published in Official Year Book No. 22, pages 379–80. Changes in the financial relations between the Commonwealth and States since the passing of the Financial Agreement Act have been described in issues of the Official Year Book from year to year (*see also* pages 719–21).

**§ 2. State Consolidated Revenue Funds.****Division I.—Revenue.**

1. **General.**—The principal sources of State revenue are:—

- (a) Taxation; (b) The business undertakings controlled by the State Governments; (c) Sale of and rental from crown lands; (d) Payments by Commonwealth Government under the Financial Agreement, Special Grants and Tax Reimbursement Acts, etc.; (e) Interest on advances; and (f) Miscellaneous sources, comprising fines, fees, etc.

Of these sources, that yielding the largest revenue for the States as a whole is the group of business undertakings, the principal contributors being the government railways and tramways. Next in magnitude are Commonwealth payments under the Tax Reimbursement Acts, followed in order by the Commonwealth payments under the Financial Agreement and special grants, taxation and lands receipts. Since the

introduction in 1942-43 of the uniform tax scheme, Commonwealth payments under the income and entertainments tax reimbursement acts and, from 1946-47, under the tax reimbursement act, have replaced revenue previously received from income and entertainments taxes.

2. **Revenue Received.**—The following table shows particulars of the total amounts and the amounts per head of consolidated revenue received by the several States during the years 1938-39 and 1947-48 to 1951-52.

## STATE CONSOLIDATED REVENUE.

Year.	N.S.W.(a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<b>TOTAL REVENUE.</b>							
(£'000.)							
1938-39 ..	51,099	26,985	19,330	12,304	10,950	3,615	124,283
1947-48 ..	86,082	41,728	26,820	18,843	17,711	4,816	196,000
1948-49 ..	96,082	46,842	32,979	21,845	20,561	5,740	224,049
1949-50 ..	106,504	55,557	37,119	26,360	26,018	7,077	258,635
1950-51 ..	128,298	63,546	44,723	31,072	28,974	7,819	304,432
1951-52 ..	167,095	81,661	55,753	37,588	33,955	10,469	386,521

## PER HEAD OF POPULATION.

	£ s. d.																							
1938-39 ..	18	13	7	14	8	3	19	3	6	20	13	6	23	9	0	15	4	2	17	19	5			
1947-48 ..	28	12	8	20	3	4	24	2	1	28	17	9	34	16	1	18	7	11	25	15	0			
1948-49 ..	31	7	2	22	3	4	29	1	4	32	16	10	39	7	6	21	8	0	28	16	11			
1949-50 ..	33	11	6	25	12	0	31	18	3	38	7	7	47	13	5	25	10	3	32	5	4			
1950-51 ..	39	3	9	28	8	2	37	9	10	43	14	0	50	14	3	27	3	9	36	15	11			
1951-52 ..	49	15	10	35	9	7	45	13	2	51	10	9	57	8	9	35	1	3	45	9	8			

(a) See § 1 para. 2, page 702.

3. **Sources of Revenue.**—(i) *General.* Classifying the revenue of the several States in the manner indicated in para. 1 above, particulars for the year 1951-52 are as follows.—

## STATE CONSOLIDATED REVENUE : SOURCES, 1951-52.

Source of Revenue.	N.S.W.(a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<b>TOTAL REVENUE.</b>							
(£'000.)							
Taxation (b) ..	16,214	12,232	6,652	4,794	2,380	2,638	44,910
Business Under-							
takings ..	82,454	29,180	22,391	12,938	12,430	4	159,397
Lands ..	5,848	1,839	2,845	306	650	254	11,792
Interest (n.e.i.) ..	636	2,267	1,089	1,751	847	1,206	7,796
Commonwealth Pay-							
ments—							
Tax Reimburse-							
ments ..	34,745	20,347	13,962	7,409	7,000	2,805	86,268
Other (c) ..	16,392	11,471	6,186	8,142	8,039	2,337	52,567
Miscellaneous ..	10,806	4,275	2,628	2,248	2,609	1,225	23,791
Total ..	167,095	81,661	55,753	37,588	33,955	10,469	386,521

## PER HEAD OF POPULATION.

	(£ s. d.)																							
Taxation (b) ..	4	16	8	5	6	4	5	9	0	6	11	6	4	0	6	8	16	9	5	5	8			
Business Under-																								
takings ..	24	11	5	12	13	7	18	6	9	17	14	9	21	0	6	0	0	3	18	15	2			
Lands ..	1	14	10	0	16	5	2	6	7	0	8	5	1	2	0	0	17	0	1	7	9			
Interest (n.e.i.) ..	0	3	9	0	19	8	0	17	10	2	8	0	1	8	8	4	0	9	0	18	4			
Commonwealth Pay-																								
ments—																								
Tax Reimburse-																								
ments ..	10	7	1	8	16	9	11	8	8	10	3	2	11	16	10	9	7	11	10	3	0			
Other (c) ..	4	17	8	4	19	8	5	1	4	11	3	3	13	12	0	7	16	6	6	3	9			
Miscellaneous ..	3	4	5	1	17	2	2	3	0	3	1	8	4	8	3	4	2	1	2	16	0			
Total ..	49	15	10	35	9	7	45	13	2	51	10	9	57	8	9	35	1	3	45	9	8			

(a) See § 1 para. 2, page 702. (b) In all States certain taxation collections are not paid into Consolidated Revenue Fund. For total collections see next page. (c) Includes payments under Financial Agreement, Special Grants, Prices Control Reimbursement Grants and Special Financial Assistance.

In comparing the revenue of the States, it should be borne in mind that business undertakings which in one State may be controlled by the Government are, in another State, controlled by a board or trust. For example, in New South Wales and Western Australia the tramway systems are controlled by the Government, while in the other States ownership is largely vested in trusts. Harbour and river services and water supply and sewerage are also controlled in some cases by the State and in others by trusts.

(ii) *Revenue from Taxation.* (a) *General.* The following table shows, for the year 1951-52, particulars of all State taxation collections irrespective of whether such moneys have been paid into the Consolidated Revenue Funds or not. For this reason the particulars hereunder differ from those shown in the tables relating to the Consolidated Revenue Funds and represent a comprehensive statement of all taxation collections by the Government in each State. In this and the succeeding statements of taxation, the collections have been grouped according to the nature of the tax rather than the method of collection. For example, stamp duties on betting tickets and bookmakers' licences have been included under "Entertainments Tax" instead of under "Stamp Duties" and "Licences" respectively. Commonwealth payments under the State Grants (Tax Reimbursement) Act are included because these grants have replaced revenue received by the States from income and entertainments taxes prior to the introduction of the uniform tax scheme in 1942-43:—

**STATE REVENUE FROM TAXATION: TOTAL NET COLLECTIONS(a) AND  
COMMONWEALTH TAX REIMBURSEMENTS, 1951-52.**

( £'000.)

Tax.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Probate and Succession Duties ..	7,588	3,874	1,870	1,081	683	298	15,394
Other Stamp Duties ..	4,805	3,321	2,032	852	916	302	12,228
Land ..	2	876	888	405	208	132	2,511
Income (Arrears) ..	82	29	32	1	10	1	155
Liquor ..	1,650	1,323	319	46	215	128	3,681
Lotteries ..			245			(b) 1,318	1,563
Entertainments (c) ..	2,001	2,113	292	1,015	282	149	5,852
Motor—							
Registration Fees and Taxes ..	6,324	3,917	2,574	1,393	918	380	15,506
Drivers', etc., Licences ..	646	320	114	125	51	30	1,286
Other ..	1,656	978	727	142	100	128	3,731
<b>Total Motor ..</b>	<b>8,626</b>	<b>5,215</b>	<b>3,415</b>	<b>1,660</b>	<b>1,069</b>	<b>538</b>	<b>20,523</b>
Licences (n.e.i.) ..	86	192	537	{ 45	{ 24	4	982
Other ..				{ 46	{ 48		
Paid to Consolidated Revenue Fund ..	16,214	12,232	6,652	4,794	2,376	2,638	44,906
Paid to Special Funds ..	8,626	4,711	2,978	357	1,079	232	17,983
<b>Total ..</b>	<b>24,840</b>	<b>16,943</b>	<b>9,630</b>	<b>5,151</b>	<b>3,455</b>	<b>2,870</b>	<b>62,889</b>
Commonwealth Tax Reimbursement (d) ..	34,745	20,347	13,962	7,409	7,000	2,805	86,268
<b>GRAND TOTAL ..</b>	<b>59,585</b>	<b>37,290</b>	<b>23,592</b>	<b>12,560</b>	<b>10,455</b>	<b>5,675</b>	<b>149,157</b>

(a) From all sources of taxation irrespective of whether paid to Consolidated Revenue or to other funds. (b) Includes income tax on Lottery Prizes, £862,000. (c) Mainly racing. (d) Excludes £33,577,000 Special Financial Assistance, which was distributed as follows:—New South Wales, £13,074,000; Victoria, £9,124,000; Queensland, £5,005,000; South Australia, £2,790,000; Western Australia, £2,390,000; and Tasmania, £1,194,000.

The table hereunder shows, for the year 1951-52, the proportions to the total taxation revenue of collections under individual classes of tax :—

**STATE REVENUE FROM TAXATION : PROPORTIONS OF INDIVIDUAL TAXES, ETC., TO TOTAL, 1951-52.**  
(Per Cent.)

Tax.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Probate and Succession Duties ..	12.74	10.39	7.93	8.61	6.53	5.26	10.32
Other Stamp Duties ..	8.06	8.90	8.61	6.78	8.76	5.32	8.20
Land ..	..	2.35	3.77	3.22	1.99	2.33	1.68
Income (Arrears) ..	0.14	0.08	0.14	0.01	0.10	0.02	0.10
Liquor ..	2.77	3.55	1.35	0.37	2.06	2.24	2.47
Lotteries ..	..	..	1.04	..	..	23.21	1.05
Entertainments ..	3.36	5.67	1.24	8.08	2.69	2.63	3.92
Motor ..	14.48	13.98	14.47	13.22	10.22	9.48	13.76
Licences (n.e.i.) ..	0.14	0.52	2.27	0.36	0.23	0.08	0.66
Other ..	..	..	..	0.36	0.46	..	..
Total ..	41.69	45.44	40.82	41.01	33.04	50.57	42.16
Commonwealth Tax Reimbursement ..	58.31	54.56	59.18	58.99	66.96	49.43	57.84
GRAND TOTAL ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00

(b) 1938-39 and 1947-48 to 1951-52. Prior to federation, duties of Customs and Excise constituted the principal source of revenue from taxation. Thereafter, until the introduction of the uniform income tax scheme in 1942-43, the most productive State taxes were the various income taxes which, in 1941-42, included unemployment relief, State development and hospital taxes. Since 1941-42 the States have been reimbursed by the Commonwealth for the revenue lost by the discontinuance of these taxes. Details of the reimbursement grants are given on pp. 696 and 703-6. Information relating to the State income taxes which were levied prior to 1942-43 may be found in earlier issues of the Year Book.

The total amounts and the amounts per head raised from all sources of taxation by the several State Governments, including amounts not paid into the Consolidated Revenue Fund and tax reimbursements received from the Commonwealth, during the years 1938-39 and 1947-48 to 1951-52, are shown in the following table :—

**STATE REVENUE FROM TAXATION : TOTAL NET COLLECTIONS (INCLUDING COMMONWEALTH TAX REIMBURSEMENTS).**

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
TOTAL NET COLLECTIONS. (£'000.)							
1938-39 ..	20,263	12,023	8,646	4,199	3,597	1,779	50,507
1947-48(a)	31,305	18,246	12,051	6,321	5,726	3,102	76,751
1948-49(a)	36,290	21,490	14,220	7,661	6,581	3,670	89,912
1949-50(a)	41,915	25,051	16,356	8,842	7,669	4,216	104,049
1950-51(a)	51,213	30,672	19,991	10,815	9,146	4,947	126,784
1951-52(a)	59,585	37,290	23,592	12,560	10,455	5,675	149,157
PER HEAD OF POPULATION. (£ s. d.)							
1938-39 ..	7 8 2	6 8 5	8 11 6	7 1 1	7 14 1	7 9 8	7 6 1
1947-48(a)	10 8 3	8 16 4	10 16 8	9 13 10	11 5 1	11 17 0	10 1 8
1948-49(a)	11 16 11	10 3 5	12 10 8	11 10 4	12 12 1	13 13 7	11 11 6
1949-50(a)	13 4 4	11 10 10	14 1 3	12 17 6	14 1 0	15 4 0	12 19 7
1950-51(a)	15 12 10	13 14 3	16 15 2	15 4 3	16 0 2	17 4 0	15 6 6
1951-52(a)	17 15 1	16 4 1	19 6 5	17 4 5	17 13 8	19 0 2	17 11 1

(a) Includes Commonwealth Tax Reimbursement.



The following table shows, for the years 1938-39 and 1947-48 to 1951-52, the aggregate amounts collected by the several State Governments, under the various forms of State taxation. Particulars of the Commonwealth reimbursements for 1947-48 and subsequent years, and amounts paid to funds other than Consolidated Revenue, which are included in the total collections, are also shown.

**STATE REVENUE FROM TAXATION : TOTAL NET COLLECTIONS<sup>(a)</sup> AND  
COMMONWEALTH REIMBURSEMENTS.**  
(£'000.)

Tax.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Probate and Succession Duties	5,000	8,836	10,091	10,600	13,004	15,394
Other Stamp Duties .. ..	3,466	5,993	6,829	9,431	11,961	12,228
Land .. .. .	1,407	1,236	1,257	1,201	1,362	2,511
<b>Income Taxes—</b>						
State Collections .. ..	29,791	(b) 416	(b) 256	(b) 267	(b) 291	(b) 155
Commonwealth Reimbursements .. ..	..	44,588	53,488	62,271	(c) 75,107	(c) 86,268
<b>Total Taxes on Income..</b>	<b>29,791</b>	<b>45,004</b>	<b>53,744</b>	<b>62,538</b>	<b>75,398</b>	<b>86,423</b>
Liquor .. .. .	1,045	2,063	2,267	2,432	2,726	3,681
Lotteries .. .. .	532	1,011	1,137	1,276	1,426	1,563
Entertainments <sup>(d)</sup> .. ..	1,884	3,081	3,567	3,741	4,430	5,852
Motor .. .. .	6,961	8,899	10,256	12,038	15,570	20,523
Licences and all other .. ..	421	628	764	792	907	982
<b>Grand Total .. .. .</b>	<b>50,507</b>	<b>76,751</b>	<b>89,912</b>	<b>104,049</b>	<b>126,784</b>	<b>149,157</b>
<b>Paid to Special Funds .. ..</b>	<b>7,578</b>	<b>8,199</b>	<b>9,140</b>	<b>10,795</b>	<b>14,269</b>	<b>17,983</b>

(a) From all sources of taxation irrespective of whether paid to Consolidated Revenue or to other funds. (b) Arrears of State income taxes. (c) Excludes Special Financial Assistance—1950-51, £15,000,000; 1951-52, £33,577,000. (d) Mainly racing.

(iii) *Business Undertakings.* (a) 1951-52. A very large proportion of State gross revenues is made up of receipts from business undertakings under the control of the Governments. The principal of these are railways and tramways, harbour works, water supply and sewerage and electricity supply, and, in addition, State batteries for the treatment of auriferous ores are included for Western Australia, and various minor revenue-producing services are rendered by the Governments of all States. For the year 1951-52 the revenue from these sources was £159,397,000 or 41.2 per cent. of the revenue from all sources. Details of revenue are as follows:—

**STATE REVENUE FROM BUSINESS UNDERTAKINGS, 1951-52.**  
(£'000.)

Source.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas. <sup>(a)</sup>	Total.
Railways <sup>(b)</sup> .. .. .	68,910	(c) 24,375	22,391	9,418	9,216	..	134,310
Tramways and Omnibuses .. ..	11,190	(d) 303	..	..	917	..	12,410
Harbours, Rivers, Lights .. ..	2,354	(e) 441	..	1,296	478	..	4,569
Water Supply, Sewerage, Irrigation and Drainage .. ..	..	2,069	..	2,045	1,454	..	5,568
Electricity Supply .. .. .	..	1,125	..	..	..	4	1,129
Other .. .. .	..	867	..	179	365	..	1,411
<b>Total .. .. .</b>	<b>82,454</b>	<b>29,180</b>	<b>22,391</b>	<b>12,938</b>	<b>12,430</b>	<b>4</b>	<b>159,397</b>

(a) Tasmanian transport services are under the separate control of the Transport Commission. (b) The following contributions to Railways revenue from Consolidated Revenue Fund are excluded—New South Wales, £800,000; Victoria, £1,755,000; South Australia, £5,050,000. (c) Includes electric tramways operated by the Railways Department. (d) Tramway contribution to Consolidated Revenue. (e) Includes Harbour Trust Fund contribution, £319,000.

(b) 1938-39 and 1947-48 to 1951-52. The total revenue from Business Undertakings and the revenue per head in each State are shown in the following table :—

## STATE REVENUE FROM BUSINESS UNDERTAKINGS.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
TOTAL REVENUE.							
(£'000.)							
1938-39 ..	24,676	11,649	7,642	4,957	5,633	(a) 511	55,068
1947-48 ..	46,207	19,131	10,956	7,434	6,701	9	90,438
1948-49 ..	49,974	20,457	14,909	8,389	7,728	6	101,463
1949-50 ..	50,879	23,834	15,460	9,133	8,822	4	108,132
1950-51 ..	61,675	22,646	18,876	10,120	9,782	4	123,103
1951-52 ..	82,454	29,180	22,391	12,938	12,430	4	159,397

## PER HEAD OF POPULATION.

(£ s. d.)

1938-39 ..	9 0 5	6 2 6	7 11 7	8 6 6	12 1 4	(a) 2 3 0	7 19 3
1947-48 ..	15 7 5	8 15 3	9 17 0	11 8 0	13 3 4	0 0 8	11 17 8
1948-49 ..	16 6 3	9 13 7	13 2 9	12 12 3	14 16 0	0 0 6	13 1 3
1949-50 ..	16 0 10	10 19 8	13 5 10	13 6 0	16 3 4	0 0 4	13 9 10
1950-51 ..	18 16 9	10 2 6	15 16 5	14 4 8	17 2 5	0 0 4	14 17 7
1951-52 ..	24 11 5	12 13 7	18 6 9	17 14 9	21 0 6	0 0 3	18 15 2

(a) Includes Tasmanian transport services which were subsequently placed under the control of the Transport Commission.

In the table below particulars of total State revenue from Business Undertakings for the various types of undertakings are shown for the years 1938-39 and 1947-48 to 1951-52 :—

## STATE REVENUE FROM BUSINESS UNDERTAKINGS.

(£'000.)

Source.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Railways, Tramways and Omnibuses ..	48,154	82,264	92,321	98,289	112,396	146,720
Harbour Services ..	2,357	2,912	3,257	3,627	3,939	4,569
Water Supply, Sewerage, Irrigation and Drainage ..	2,543	3,560	3,950	4,338	4,745	5,568
Other .. ..	2,014	1,702	1,935	1,878	2,023	2,540
Total .. ..	55,068	90,438	101,463	108,132	123,103	159,397

(iv) *Lands.* The revenue from the sale and rental of crown lands has, with few exceptions, been treated from the earliest times as forming part of the Consolidated Revenue Funds, and has been applied to meet ordinary expenses. The following table shows the revenue from sales and rentals of crown lands for the year 1951-52.

## STATE LAND REVENUE, 1951-52.

( £'000.)

Source.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Sales ..	133	160	..	53	32	3	381
Conditional Purchases	375	..	..	5	123	9	512
Rentals ..	4,350	252	1,567	248	132	87	6,636
Forestry ..	950	1,385	1,156	..	346	151	3,988
Other ..	40	92	122	..	17	4	275
Total ..	5,848	1,889	2,845	306	650	254	11,792

The total land revenue for all States for the years 1938-39 and 1947-48 to 1951-52 respectively was:—£4,144,000, £6,196,000, £6,476,000, £7,004,000, £7,917,000, £11,792,000.

(v) *Commonwealth Payments.* Commonwealth payments to the States represent a considerable proportion of the States' Revenue. In 1951-52 the total amount (excluding sundry minor items) paid to the Consolidated Revenue Funds of the States was £138,835,000 (35.9 per cent.). This was made up of the contribution towards interest or States' debts under the Financial Agreement, £7,585,000, special grants to the States of South Australia, Western Australia and Tasmania, £10,522,000, prices control reimbursement, £883,000, special financial assistance, £33,577,000 and tax reimbursement grants, £86,268,000. The latter item has been included under the State taxation above as it is paid to the States as a reimbursement for vacating the field of income taxation.

In addition to these, the States receive a number of other payments which are paid to trust funds. The main items in this class are the contribution towards the sinking fund on States' debts (£2,557,000 in 1951-52) paid to the National Debt Sinking Fund and grants for Commonwealth Aid Roads (£14,647,000 in 1951-52) paid to State trust funds.

More detailed information concerning Commonwealth payments to the States is given under part A of this Chapter (§ 2, para. 11, page 694).

(vi) *Interest and Miscellaneous.* In addition to the foregoing, there are in each State several miscellaneous sources of revenue, including such items as interest, fines, fees, etc. In 1951-52 interest, mainly from loans to local governing bodies, on public account balances and for soldier land settlement supplied £7,796,000, whilst "Miscellaneous" revenue, which includes fines of the courts and fees for services, amounted to £23,791,000.

## Division II.—Expenditure.

1. *General.*—The principal heads of State expenditure from Consolidated Revenue Funds are:—

(a) Interest, sinking fund and exchange charges in connexion with public debt; (b) Working expenses of railways, tramways and other business and industrial undertakings; (c) Education; (d) Health and charitable expenditure; (e) Justice; (f) Police; (g) Penal establishments; and (h) all other expenditure, under which heading is included public works, lands and surveys, agriculture and forestry, legislative and general administration, pensions and miscellaneous.

In earlier years the working expenses of railways and tramways were the most important item of State Governmental expenditure, but, for a period prior to 1941-42, public debt charges were the heaviest item. Since then, however, railways and tramways expenditure has again taken the major place. In the year 1951-52 the working expenses of the railways, tramways and omnibuses were 38.9 per cent. of the total expenditure from the State Consolidated Revenue Funds; next in importance were education, 13.1 per cent.; public debt charges, 13.0 per cent.; charitable public health and hospitals, 12.4 per cent.; and law, order and public safety, 5.2 per cent.

2. **Total Expenditure.**—The total expenditure from the Consolidated Revenue Funds of the several States and the expenditure per head of population during each of the years 1938-39 and 1947-48 to 1951-52 are shown in the following table:—

## STATE EXPENDITURE : CONSOLIDATED REVENUE FUNDS.

Year.	N.S.W.(a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<b>TOTAL EXPENDITURE.</b> (£'000.)							
1938-39 ..	53,558	27,773	19,316	12,701	11,170	3,641	128,159
1947-48 ..	86,204	42,282	26,914	19,156	18,062	5,102	197,720
1948-49 ..	95,918	48,225	32,929	22,130	21,378	5,845	226,425
1949-50 ..	107,681	55,816	37,090	26,550	25,994	7,344	260,475
1950-51 ..	128,265	63,889	44,625	30,842	28,814	8,066	304,501
1951-52 ..	166,997	84,067	55,708	37,499	34,547	10,871	389,689
<b>PER HEAD OF POPULATION.</b> (£ s. d.)							
1938-39 ..	19 11 7	14 16 8	19 3 3	21 6 10	23 18 5	15 6 5	18 10 8
1947-48 ..	28 13 6	20 8 8	24 3 9	29 7 4	35 9 11	19 9 9	25 19 6
1948-49 ..	31 6 1	22 16 5	29 0 5	33 5 5	40 18 9	21 15 9	29 3 0
1949-50 ..	33 18 11	25 14 5	31 17 9	38 13 1	47 12 7	26 9 6	32 9 11
1950-51 ..	39 3 6	28 11 3	37 8 2	43 7 7	50 8 8	28 0 11	36 16 1
1951-52 ..	49 15 2	36 10 6	45 12 5	51 8 3	58 8 10	36 8 3	45 17 2

(a) See § 1, para. 2, page 702.

3. **Details of Expenditure.**—(i) 1951-52. The following table shows the total expenditure and expenditure per head for each of the principal items:—

## STATE EXPENDITURE : DETAILS, 1951-52.

Particulars.	N.S.W.(a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.(b)	Total.
<b>TOTAL EXPENDITURE.</b> (£'000.)							
Public Debt (interest, sinking fund, exchange, etc.)	17,817	11,074	7,569	6,410	5,298	2,377	50,545
Railways ..	61,160	28,424	23,959	12,722	11,044	..	137,309
Tramways and Omnibuses	13,390	..	..	..	1,011	..	14,401
Harbours and Rivers, etc.	1,601	241	..	963	262	..	3,067
Water Supply, Sewerage, Irrigation and Drainage	..	2,192	..	1,711	1,330	..	5,233
Other Business and Industrial Undertakings ..	..	934	2	188	906	779	2,809
Education ..	20,947	13,230	6,114	4,331	4,279	2,124	51,025
Health and Charitable ..	19,533	12,378	7,088	3,590	3,806	2,001	48,396
Justice ..	1,872	1,141	555	258	272	142	4,240
Police ..	4,205	3,300	2,653	971	988	458	12,575
Penal establishments ..	1,320	455	164	181	143	75	2,338
Public safety ..	250	339	222	45	75	31	962
Reduction of previous deficits (c) ..	..	..	..	..	..	126	126
All other expenditure ..	24,902	10,359	7,382	6,129	5,133	2,758	56,663
<b>Total ..</b>	<b>166,997</b>	<b>84,067</b>	<b>55,708</b>	<b>37,499</b>	<b>34,547</b>	<b>10,871</b>	<b>389,689</b>

(a) See § 1, para. 2, page 702.  
of the Transport Commission.

(b) Tasmanian transport services are under the separate control of the Transport Commission.  
(c) Appropriated from the Commonwealth grant.

## STATE EXPENDITURE: DETAILS, 1951-52—continued.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
PER HEAD OF POPULATION. (£ s. d.)							
Public Debt (interest, sinking fund, exchange, etc.) ..	5 6 2	4 16 3	6 4 0	8 15 9	8 19 3	7 19 3	5 19 0
Railways ..	18 4 6	12 7 0	19 12 5	17 8 10	18 13 8	..	16 3 2
Tramways and Omnibuses ..	3 19 10	..	..	..	1 14 3	..	1 13 11
Harbours and Rivers, etc. ..	0 9 6	0 2 1	..	1 6 5	0 8 11	..	0 7 2
Water Supply, Sewerage, Irrigation and Drainage ..	..	0 19 1	..	2 6 11	2 5 0	..	0 12 4
Other Business and Industrial Undertakings ..	..	0 8 1	..	0 5 2	1 10 8	2 12 2	0 6 7
Education ..	6 4 10	5 15 0	5 0 2	5 18 9	7 4 9	7 2 3	6 0 1
Health and Charitable ..	5 16 5	5 7 7	5 16 1	4 18 5	6 8 9	6 14 1	5 13 11
Justice ..	0 11 2	0 9 11	0 9 1	0 7 1	0 9 2	0 9 6	0 10 0
Police ..	1 5 0	1 8 8	2 3 5	1 6 8	1 13 5	1 10 8	1 9 7
Penal establishments ..	0 7 10	0 3 11	0 2 8	0 5 0	0 4 10	0 5 1	0 5 6
Public safety ..	0 1 6	0 2 11	0 3 8	0 1 3	0 2 6	0 2 1	0 2 3
Reduction of previous deficits ..	..	..	..	..	..	0 8 5	0 0 4
All other expenditure ..	7 8 5	4 10 0	6 0 11	8 8 0	8 13 8	9 4 9	6 13 4
<b>Total ..</b>	<b>49 15 2</b>	<b>36 10 6</b>	<b>45 12 5</b>	<b>51 8 3</b>	<b>58 8 10</b>	<b>36 8 3</b>	<b>45 17 2</b>

(ii) 1938-39 and 1947-48 to 1951-52. Expenditure by the several States for these years on principal items is shown in the following table:—

STATE EXPENDITURE.  
(£'000.)

Particulars.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Public Debt (interest, sinking fund, exchange, etc.) ..	40,158	40,626	41,915	43,999	46,231	50,545
Railways, Tramways and Omnibuses (working expenses) ..	38,138	74,305	87,907	99,230	115,366	151,710
Harbours and Rivers, etc. ..	680	1,332	1,609	1,789	2,155	3,067
Water Supply, Sewerage, Irrigation and Drainage ..	1,076	2,456	2,814	3,363	4,137	5,233
Other Business and Industrial Undertakings ..	1,035	1,467	2,318	2,340	2,319	2,809
Education ..	12,639	23,964	27,778	32,786	39,973	51,025
Health and Charitable ..	15,307	18,693	22,262	27,739	34,817	48,396
Justice ..	1,323	2,075	2,536	2,851	3,376	4,240
Police ..	3,733	5,987	6,906	8,257	9,831	12,575
Penal establishments ..	646	1,145	1,281	1,490	1,731	2,338
Public safety ..	297	565	644	657	711	962
Reduction of previous deficits ..	..	..	..	1,012	1,196	126
All other expenditure ..	13,127	25,105	28,455	34,962	42,658	56,663
<b>Total ..</b>	<b>128,159</b>	<b>197,720</b>	<b>226,425</b>	<b>260,475</b>	<b>304,501</b>	<b>389,689</b>

**Division III.—Surplus Revenue.**

The following table shows for each of the years 1938-39 and 1947-48 to 1951-52 the total amount and amount per head of the surplus or deficit of each State:—

**STATE SURPLUS REVENUE.**

Year.	N.S.W.(a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
TOTAL AMOUNT. (£'000.)							
1938-39 ..	-2,459	-787	14	-397	-221	-26	-3,876
1947-48 ..	-122	-554	-94	-313	-351	-286	-1,720
1948-49 ..	164	-1,383	50	-285	-817	-105	-2,376
1949-50 ..	-1,177	-259	29	-190	24	-267	-1,840
1950-51 ..	33	-343	98	230	160	-247	-69
1951-52 ..	98	-2,406	45	89	-592	-402	-3,168
PER HEAD OF POPULATION. (£ s. d.)							
1938-39 ..	-0 18 0	-0 8 5	0 0 3	-0 13 4	-0 9 5	-0 2 3	-0 11 3
1947-48 ..	-0 0 10	-0 5 4	-0 1 8	-0 9 7	-0 13 10	-1 1 10	-0 4 6
1948-49 ..	0 1 1	-0 13 1	0 0 11	-0 8 7	-1 11 3	-0 7 10	-0 6 1
1949-50 ..	-0 7 5	-0 2 5	0 0 6	-0 5 6	0 0 10	-0 19 3	-0 4 7
1950-51 ..	0 0 3	-0 3 1	0 1 8	0 6 5	0 5 7	-0 17 2	-0 0 2
1951-52 ..	0 0 8	-1 0 11	0 0 9	0 2 6	-1 0 1	-1 7 0	-0 7 6

(a) See § 1, para. 2, page 702.

NOTE.—Minus sign (-) indicates deficit.

**§ 3. State Trust Funds.**

In addition to the moneys received as revenue and paid to the credit of Consolidated Revenue Funds, considerable sums are held by the State Governments in trust for various purposes. The balances of trust funds held at 30th June of the years 1939 and 1948 to 1952 were as follows:—

**STATE TRUST FUND BALANCES.**

(£'000.)

At 30th June.	N.S.W.(a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
1939 .. ..	15,684	8,189	3,062	1,448	3,744	530	32,657
1948 .. ..	35,297	17,303	29,751	2,855	8,639	709	94,554
1949 .. ..	29,559	16,449	29,924	2,689	9,381	609	88,611
1950 .. ..	32,922	16,468	30,382	3,162	10,929	390	94,253
1951 .. ..	43,169	18,725	33,907	6,184	12,090	360	114,435
1952 .. ..	39,419	20,084	35,097	1,896	10,537	625	107,658

(a) Special Deposits Account and Special Accounts.

**§ 4. State Loan Funds.**

1. **General.**—As far back as 1812 revenue collections were supplemented by borrowed moneys, the earliest loan being raised by New South Wales for the purpose of assisting immigration, at rates of interest varying from 2½d. to 5½d. per £100 per diem, or

approximately from  $4\frac{1}{4}$  per cent. to 8 per cent. per annum. Australian public borrowing, however, is mainly due to the fact that the State Governments, in addition to ordinary administrative duties, undertake functions which in other countries are usually entrusted to local authorities or left to private enterprise. Foremost amongst these are the construction and control of the railway systems. Loan moneys have also been largely used for improvements to harbours and rivers, and for the construction of roads, water supply and sewerage works. The State loan expenditure and public debt thus differ very materially from those of most European countries, and from those of the Commonwealth, where such expenditure was very largely incurred for defence or war purposes. As shown above, the State debts consist chiefly of moneys raised and expended with the object of assisting the development of the resources of the country, and are to a very large extent represented by tangible assets.

Statements relating to Loan Expenditure are shown below for both "gross" and "net" expenditure. The gross expenditure represents the amounts disbursed during each year whereas the net expenditure represents the gross expenditure less any credits to the Loan Fund during the year on account of repayments of advances to local governing bodies, settlers, etc., the sale of assets, and transfers from other funds. Such moneys are credited to the Loan Fund in the year of repayment irrespective of when the advance was made.

2. Details of Loan Expenditure.—(i) *Gross Loan Expenditure, 1951-52.* Particulars of gross loan expenditure on works, services, etc., are shown in the following table:—

STATE GROSS LOAN EXPENDITURE ON WORKS, SERVICES, ETC., 1951-52.

(£'000.)

Heads of Expenditure.	N.S.W.	Vic.(a)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Public Works and Services—							
Railways	21,160	10,498	6,448	4,856	8,024	2,040	53,026
Tramways and Omnibuses	2,500			655	238		3,393
Roads	225	1,094	1,879	450			
Bridges						585	8,653
Harbours and Rivers	1,658	189	105	970	1,498		
Lights and Lighthouses							
Water Supply		10,620	1,382	4,065	1,562	352	19,990
Sewerage	821	80		703	405		
Electricity Supply	15,002	9,000		7,000	3,342	7,139	41,483
Public Buildings	8,941	7,272	2,409	2,146	1,403	1,026	23,197
Loans and Grants to Local Bodies	115	217	4,931				5,263
Unemployment Relief Works							
Housing(b)	3,803	4,185	1,720	6,921	271	3,090	19,990
Other Public Works, etc.	644	422		29	79	1,136	2,310
Primary Production—							
Soldier Settlement	4,905	5,754		2		130	9,891
Land for Settlement			660	228	19	9	916
Advances to Settlers				79		225	304
Water Conservation				112	176		
Irrigation and Drainage	4,357		908	467	292		6,312
Rabbit-proof Fencing		23		(c)			23
Agriculture	491		226		15		732
Agricultural Bank			1,230				1,230
Forestry	753	1,390	1,635	985	296	330	5,389
Mines and Mineral Resources	616	38	129	722	342		1,847
Other	263	125		80	45	3	516
Other Purposes		(d) 4,177		728	751	817	6,473
Total Public Works, Services, etc.	65,354	55,084	23,662	31,198	18,758	16,882	210,938
Per Head of Population..	£19 9 6	£23 18 8	£19 7 7	£42 15 6	£31 14 7	£56 10 11	£24 16 6

(a) Expenditure from Loan Funds and on account of Loans; includes expenditure from Loan Funds, from Treasurer's Advance Account, and from State Loans Repayment Fund. (b) Excludes expenditure from Commonwealth loans under Commonwealth-State Housing Agreement. (c) Included with Advances to Settlers. (d) Includes Gas and Fuel Corporation £2,393,000 and Rural Finance Corporation, for advances to rural industries, £1,600,000.

(ii) *Net Loan Expenditure, 1951-52.* State net loan expenditure on works, services, etc., was as follows:—

**STATE NET LOAN EXPENDITURE ON WORKS, SERVICES, ETC., 1951-52.**  
(£'000.)

Heads of Expenditure.	N.S.W.	Victoria. (a)	Q'land.	S. Aust. (b)	W. Aust.	Tas.	Total.
<b>Public Works and Services—</b>							
Railways .. .. .	20,934	10,495	6,413	3,708	7,452	1,819	50,821
Tramways and Omnibuses .. .. .	2,431	..	..	655	147	..	3,233
Roads .. .. .	129	1,037	1,663	439	..	..	3,233
Bridges .. .. .	..	3	..	..	..	..	3
Harbours and Rivers .. .. .	1,637	185	103	..	1,347	486	7,965
Lights and Lighthouses .. .. .	..	..	..	942	..	..	942
Water Supply .. .. .	..	10,519	1,382	3,830	1,547	351	19,510
Sewerage .. .. .	809	78	..	607	387	..	1,881
Electricity Supply .. .. .	15,001	9,000	..	7,000	3,342	7,037	41,380
Public Buildings .. .. .	8,869	6,901	2,318	2,119	1,365	1,005	22,577
Loans and Grants to Local Bodies .. .. .	115	215	4,152	—	—	16	4,465
Unemployment Relief .. .. .	..	..	..	..	..	..	..
Works .. .. .	— 38	— 9	..	..	..	— 1	— 48
Housing (e) .. .. .	3,476	3,008	1,584	6,378	270	2,592	17,308
Other Public Works, etc. .. .. .	601	422	..	29	78	706	1,836
<b>Primary Production—</b>							
Soldier Settlement .. .. .	3,209	4,992	— 15	— 177	..	— 94	7,915
Land for Settlement .. .. .	..	— 494	..	584	10	— 19	215
Advances to Settlers .. .. .	..	— 11	— 11	34	..	83	95
Water Conservation .. .. .	..	..	..	106	175	..	281
Irrigation and Drainage .. .. .	4,168	..	863	435	292	..	6,044
Rabbit-proof Fencing .. .. .	..	— 2	— 7	(d)	..	..	— 9
Agriculture .. .. .	491	..	218	..	4	..	705
Agricultural Bank .. .. .	..	..	1,087	..	..	..	1,087
Forestry .. .. .	750	1,002	1,635	140	296	327	4,150
Mines and Mineral Resources .. .. .	588	5	119	716	305	..	1,733
Other .. .. .	263	58	— 23	75	45	— 76	342
Other Purposes .. .. .	..	(e) 4,175	..	626	704	808	6,313
<b>Total Public Works, Services, etc. .. .. .</b>	<b>63,433</b>	<b>51,573</b>	<b>22,070</b>	<b>27,795</b>	<b>17,758</b>	<b>15,008</b>	<b>197,637</b>
Per Head of Population .. .. .	£18 18 0	£22 8 2	£18 1 6	£38 2 2	£30 0 10	£50 5 4	£23 5 2

(a) Expenditure from Loan Funds and on account of Loans; includes expenditure from Loan Funds, from Treasurer's Advance Account, and from State Loans Repayment Fund. (b) Credits arising from the cancellation of securities redeemed from Sinking Fund are not included. (c) Excludes expenditure from Commonwealth loans under Commonwealth-State Housing Agreements. (d) Included in Advances to Settlers. (e) Includes Gas and Fuel Corporation, £2,393,000 and Rural Finance Corporation, for advances to rural industries, £1,600,000.

NOTE.—Minus sign (—) indicates excess of repayments to loan funds.

**3. Loan Expenditure on Works, Services, etc., 1938-39 and 1947-48 to 1951-52.—**

(i) *Gross Loan Expenditure.* Gross loan expenditure on works, etc. for these years is shown in the following table:—

**STATE GROSS LOAN EXPENDITURE ON WORKS, SERVICES, ETC.**

Year.	N.S.W.	Victoria. (a)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<b>GROSS LOAN EXPENDITURE.</b>							
(£'000.)							
1938-39 .. .. .	8,789	3,218	3,393	2,529	1,783	1,687	21,399
1947-48 .. .. .	16,241	11,013	5,822	5,607	3,031	3,463	45,177
1948-49 .. .. .	22,960	12,727	7,118	7,149	3,819	4,393	58,166
1949-50 .. .. .	27,219	20,325	9,035	12,122	8,351	5,783	82,835
1950-51 .. .. .	41,168	35,309	17,698	20,601	11,404	15,200	141,380
1951-52 .. .. .	65,354	55,084	23,662	31,198	18,758	16,882	210,938

(a) See footnote (a) to previous table.



STATE GROSS LOAN EXPENDITURE ON WORKS, SERVICES, ETC.—*continued.*

Year.	N.S.W.	Victoria.(a)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
PER HEAD OF POPULATION.							
(£ s. d.)							
1938-39 ..	3 4 3	1 14 5	3 7 4	4 5 0	3 16 4	7 2 0	3 1 11
1947-48 ..	5 8 0	5 6 5	5 4 8	8 11 11	5 19 2	13 4 7	5 18 9
1948-49 ..	7 9 10	6 0 5	6 5 6	10 15 0	7 6 3	16 7 7	7 9 0
1949-50 ..	8 11 7	9 7 4	7 15 4	17 13 0	15 6 0	20 17 0	10 6 8
1950-51 ..	12 11 6	15 15 9	14 16 9	28 19 6	19 19 2	52 17 1	17 1 9
1951-52 ..	19 9 6	23 18 8	19 7 7	42 15 6	31 14 7	56 10 11	24 16 6

(a) See footnote (a) to previous table.

(ii) *Net Loan Expenditure.* The following table shows the net loan expenditure on works for the same period:—

## STATE NET LOAN EXPENDITURE ON WORKS, SERVICES, ETC.

Year.	N.S.W.	Victoria.(a)	Q'land.	S. Aust.(a)	W. Aust.	Tas.	Total.
NET LOAN EXPENDITURE.							
(£'000.)							
1938-39 ..	5,408	2,290	2,041	1,226	1,636	577	13,178
1947-48 ..	15,129	8,786	4,718	3,805	2,537	2,634	37,609
1948-49 ..	22,056	10,534	5,866	5,214	3,580	3,511	50,761
1949-50 ..	24,850	17,869	7,910	9,968	8,105	4,880	73,582
1950-51 ..	38,149	32,024	16,031	18,285	10,327	13,531	128,347
1951-52 ..	63,433	51,573	22,070	27,795	17,758	15,008	197,637

## PER HEAD OF POPULATION.

(£ s. d.)

1938-39 ..	1 19 6	1 4 6	2 0 6	2 1 2	3 10 1	2 8 7	1 18 1
1947-48 ..	5 0 8	4 4 11	4 4 10	5 16 8	4 19 9	10 1 3	4 18 10
1948-49 ..	7 4 0	4 19 8	5 3 5	7 16 9	5 17 2	13 1 9	6 10 8
1949-50 ..	7 16 8	8 4 8	6 16 0	14 10 3	14 17 0	17 11 10	9 3 7
1950-51 ..	11 13 0	14 6 4	13 8 10	25 14 4	18 1 6	47 1 0	15 10 3
1951-52 ..	18 18 0	22 8 2	18 1 6	38 2 2	30 0 10	50 5 4	23 5 2

(a) See footnotes (a) and (b) to table in para. 2 (ii) above.

The four tables in this paragraph and paragraph 2 do not include particulars of expenditure on loan discounts and flotations, the funding of deficits, the retirement of treasury bills, and similar items of a nature other than works, services, etc. The aggregate net expenditure on those items to 30th June, 1952 is shown in paragraph 4 following. Summaries of the gross and net expenditure and repayments in respect of all loan purposes for the years 1949-50 to 1951-52 are shown in paragraph 5 following.

4. Total Net Loan Expenditure to 30th June, 1952.—Particulars of the total net loan expenditure of the States from the initiation of borrowing to 30th June, 1952 are shown in the following table:—

## STATE NET LOAN EXPENDITURE TO 30th JUNE, 1952.

( £'000.)

Heads of Expenditure.	N.S.W.	Victoria. (a)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<b>Public Works and Services—</b>							
Railways .. .. .	225,648	102,657	84,985	46,759	38,068	12,204	510,321
Tramways and Omnibuses .. .. .	15,371	..	..	(b) 5,441	1,932	..	22,744
Roads and Bridges .. .. .	21,205	15,425	10,464	4,361	3,183	..	55,559
Harbours, Rivers, Light-houses .. .. .	27,934	2,060	3,793	10,705	10,382	9,147	118,659
Water Supply .. .. .	42,924	60,052	3,444	29,892	15,301	(c) 565	164,325
Sewerage .. .. .	23,821	356	..	6,184	5,607	..	109,703
Electricity Supply .. .. .	42,713	28,089	..	17,500	12,985	27,308	112,537
Public Buildings .. .. .	..	30,181	16,707	8,926	7,742	6,268	..
Loans and Grants to Local Bodies .. .. .	1,891	2,308	29,039	6	86	219	33,549
Unemployment Relief Works .. .. .	16,083	13,147	..	..	(d)	331	29,561
Housing (e) .. .. .	9,108	8,550	5,629	22,804	1,056	7,565	54,712
Commonwealth Services .. .. .	3,964	..	525	1,283	..	..	5,772
Other Public Works and Services .. .. .	7,111	2,107	2,917	1,049	2,317	3,607	19,108
<b>Primary Production—</b>							
Closer Settlement .. .. .	11,679	..	(f) 988	933	7,247	193	21,040
Land for Settlement .. .. .	..	41,571	4,957	307	336	..	47,171
Soldier Settlement .. .. .	18,489	28,580	758	6,635	3,518	1,627	59,607
Advances to Settlers .. .. .	1,964	3,764	105	1,664	2,060	547	10,104
Water Conservation .. .. .	34,144	..	4,599	4,367	2,037	..	55,021
Irrigation and Drainage .. .. .	288	1,008	121	6,035	3,839	349	11,757
Rabbit-proof Fencing .. .. .	6,083	1,154	1,012	..	4,067	..	12,316
Agriculture (h) .. .. .	..	..	6,474	..	(i) 4,311	..	10,785
Agricultural Bank .. .. .	3,782	11,395	6,973	1,492	1,683	1,749	27,074
Mines and Mineral Resources .. .. .	1,949	824	2,705	3,433	5,390	..	14,301
Other .. .. .	1,193	1,665	2,318	818	244	194	6,432
Other Purposes .. .. .	89	(j) 10,867	124	(k) 3,559	(l) 11,629	2,061	28,329
<b>Total Public Works, Services, etc. .. .. .</b>	<b>517,433</b>	<b>365,760</b>	<b>188,637</b>	<b>184,153</b>	<b>145,360</b>	<b>73,585</b>	<b>1,474,928</b>
<b>Other than Works, etc.—</b>							
Discounts and Flotation Expenses .. .. .	26,589	9,955	10,791	3,277	5,960	2,050	58,622
Revenue and General Cash Deficits .. .. .	38,948	13,055	5,826	8,730	12,115	2,378	81,052
Treasury Bills Retired .. .. .	..	..	2,857	..	..	..	2,857
Other .. .. .	..	..	(m) 2,200	..	..	..	2,200
<b>Grand Total .. .. .</b>	<b>582,970</b>	<b>388,770</b>	<b>210,311</b>	<b>196,160</b>	<b>163,435</b>	<b>78,013</b>	<b>1,619,659</b>

(a) Aggregate Gross Loan Expenditure. (b) Loans to Municipal Tramways Trust. (c) Revised. Amounts previously included in Other Public Works reclassified to Water Supply and Sewerage and Other Purposes. (d) Not available separately. Distributed under various particular headings. (e) Excludes expenditure from Commonwealth loans under Commonwealth-State Housing Agreement. (f) Under Prickly Pear Land Act. (g) Included with Advances to Settlers. (h) Includes grain elevators, New South Wales and Victoria. (i) Includes Government Agency Department of Rural and Industries Bank, £2,680,000. (j) Includes Gas and Fuel Corporation, £4,944,000 and Rural Finance Corporation, £2,419,000. (k) Includes State Bank, £2,105,000. (l) Includes Rural and Industries Bank, £5,633,000. (m) Contributions to Sinking Fund.

The figures in the foregoing table show the amounts actually expended from loan fund, and differ from those shown later in the statements relating to the public debt, which represent the amount of loans still outstanding. The statement above includes all expenditure, whether the loans have been repaid or are still in existence. As in the earlier tables on net loan expenditure, allowance has been made, however, for credits on account of repayments of advances to local government bodies, settlers, etc., the sale of assets, and transfers from other funds. In the public debt statement, on the other hand, loans repaid are not included, and in the case of loans still outstanding,

each is shown according to the amount repayable at maturity, and not according to the amount originally available for expenditure.

5. **Total Loan Expenditure, 1949-50 to 1951-52.**—The following table shows particulars, in summary form, of the total loan expenditure in each State during each of these years.

**STATE LOAN EXPENDITURE : SUMMARY.**

( £'000.)

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
1949-50.							
Works and Services—							
Gross Expenditure ..	27,219	20,325	9,035	12,122	8,351	5,783	82,835
Net Expenditure ..	24,850	17,869	7,910	9,968	8,105	4,880	73,582
Repayments ..	2,369	2,456	1,125	2,154	246	903	9,253
Other than Works, etc.(a)—							
Gross Expenditure ..	1,184	2,819	288	71	491	88	4,941
Net Expenditure ..	1,184	2,819	288	54	485	62	4,892
Repayments ..	..	..	..	17	(b) 6	26	49
<b>Total Loan Expenditure—</b>							
Gross ..	28,403	23,144	9,323	12,193	8,842	5,871	87,776
Net ..	26,034	20,688	8,198	10,022	8,590	4,942	78,474
Repayments ..	2,369	2,456	1,125	2,171	252	929	9,302
1950-51.							
Works and Services—							
Gross Expenditure ..	41,168	35,309	17,698	20,601	11,404	15,200	141,380
Net Expenditure ..	38,149	32,024	16,031	18,285	10,327	13,531	128,347
Repayments ..	3,019	3,285	1,667	2,316	1,077	1,669	13,033
Other than Works, etc.(a)—							
Gross Expenditure ..	2,745	47	150	22	29	201	3,194
Net Expenditure ..	2,745	47	150	22	20	201	3,185
Repayments ..	..	..	..	..	(b) 9	..	9
<b>Total Loan Expenditure—</b>							
Gross ..	43,913	35,356	17,848	20,623	11,433	15,401	144,574
Net ..	40,894	32,071	16,181	18,307	10,347	13,732	131,532
Repayments ..	3,019	3,285	1,667	2,316	1,086	1,669	13,042
1951-52.							
Works and Services—							
Gross Expenditure ..	65,354	55,084	23,662	31,198	18,758	16,882	210,938
Net Expenditure ..	63,433	51,573	22,070	27,795	17,758	15,008	197,637
Repayments ..	1,921	3,511	1,592	3,403	1,000	1,874	13,301
Other than Works, etc.(a)—							
Gross Expenditure—							
Discounts and Flotation Expenses ..	188	183	..	7	20	..	398
Revenue and General Cash Deficits ..	..	2,000	..	..	..	142	2,142
Contribution to Sinking Fund ..	..	..	150	..	..	..	150
Total ..	188	2,183	150	7	20	142	2,690
Net Expenditure—							
Discounts and Flotation Expenses ..	188	183	..	7	13	-1	390
Revenue and General Cash Deficits ..	..	2,000	..	..	..	142	2,142
Contribution to Sinking Fund ..	..	..	150	..	..	..	150
Total ..	188	2,183	150	7	13	141	2,682
Repayments ..	..	..	..	..	(b) 7	1	8
<b>Total Loan Expenditure—</b>							
Gross ..	65,542	57,267	23,812	31,205	18,778	17,024	213,628
Net ..	63,621	53,756	22,220	27,802	17,771	15,149	200,319
Repayments ..	1,921	3,511	1,592	3,403	1,007	1,875	13,309

(a) Includes exchange, discounts and flotation expenses, revenue and general cash deficits.  
(b) From Consolidated Revenue Fund.

NOTE.—Minus sign (—) indicates excess of repayments to loan funds.

Information relating to the States Public Debt is given in part D. Commonwealth and State Public Debt (page 719).

## C. COMMONWEALTH AND STATE FINANCE.

1. Revenue and Expenditure.—(i) *Consolidated Revenue Funds.* The following tables show the aggregate revenue and expenditure of the Consolidated Revenue Funds of the Commonwealth and States for each of the years 1938–39 and 1947–48 to 1951–52. In these tables the combined Commonwealth and State totals have been adjusted to exclude major duplications, but the separate Commonwealth and State figures are as shown in other sections of this Chapter. The items excluded from the adjusted figures include the following:—payments made by the Commonwealth to the States on account of tax reimbursements, interest under the Financial Agreement, special grants, special financial assistance, coal strike emergency grants, price control reimbursements and estimated payments of pay-roll tax by the States to the Commonwealth.

## COMMONWEALTH AND STATE CONSOLIDATED REVENUE FUNDS: REVENUE.

Year ended 30th June—					Commonwealth.	State.	Total.	
							Unadjusted.	Adjusted.
					£'000.	£'000.	£'000.	£m.
1939	..	..	..	..	95,064	124,283	219,347	209.6
1948	..	..	..	..	465,905	196,000	661,905	601.3
1949	..	..	..	..	554,377	224,049	778,426	706.6
1950	..	..	..	..	580,652	258,635	839,287	746.6
1951	..	..	..	..	841,792	304,432	1,146,224	1,032.0
1952	..	..	..	..	1,016,828	386,521	1,403,349	1,260.1

## COMMONWEALTH AND STATE CONSOLIDATED REVENUE FUNDS: EXPENDITURE.

Year ended 30th June—					Commonwealth.	State.	Total.	
							Unadjusted.	Adjusted.
					£'000.	£'000.	£'000.	£m.
1939	..	..	..	..	94,437	128,159	222,596	212.8
1948	..	..	..	..	464,485	197,720	662,205	601.6
1949	..	..	..	..	554,377	226,425	780,802	709.0
1950	..	..	..	..	580,652	260,475	841,127	748.4
1951	..	..	..	..	841,792	304,501	1,146,293	1,032.0
1952	..	..	..	..	1,016,828	389,689	1,406,517	1,263.3

(ii) *Loan Expenditure.* The aggregate gross and net loan expenditures of the Commonwealth and States on works and services for the years 1938–39 and 1947–48 to 1951–52 are shown in the following table:—

COMMONWEALTH AND STATE LOAN EXPENDITURE: WORKS AND SERVICES.(a)  
(£'000.)

Year ended 30th June—	Gross Loan Expenditure.			Net Loan Expenditure.				
	Commonwealth.(b)	State.	Total.	Commonwealth.(b)	State.	Total.		
1939	..	..	3,913	21,399	25,312	3,594	13,178	16,772
1948	..	..	13,305	45,177	58,482	13,126	37,609	50,735
1949	..	..	14,492	58,166	72,658	-4,253	50,761	46,508
1950	..	..	42,698	82,835	125,533	42,682	73,582	116,264
1951	..	..	50,413	141,380	191,793	50,383	128,347	178,730
1952	..	..	31,667	210,938	242,605	31,662	197,637	229,290

(a) Excludes expenditure on loan flotations, funding deficits, etc. (b) Includes expenditure on Defence, War (1939–45) and Repatriation Services. Excludes payments to National Debt Sinking Fund from proceeds of loan from International Bank of Reconstruction and Development (see page 735).

NOTE.—Minus sign (–) indicates an excess of repayments to loan funds.

2. **Taxation.**—The following table shows the combined Commonwealth and State taxation, and the amount per head of population, for the years 1938–39 and 1947–48 to 1951–52. Taxation collections by the State Governments which are not paid into the Consolidated Revenue Funds have been included.

**COMMONWEALTH AND STATE TAXATION : TOTAL NET COLLECTIONS.**

Particulars.	1938–39.	1947–48.	1948–49.	1949–50.	1950–51.	1951–52.
<b>NET COLLECTIONS.</b> (£'000.)						
<b>Commonwealth(a)—</b>						
Income Tax .. ..	11,883	232,900	272,347	279,654	341,957	545,179
Customs and Excise .. ..	47,633	115,605	126,200	143,883	165,004	213,917
Sales Tax .. ..	9,308	34,729	39,029	42,425	57,173	95,459
Pay-roll Tax .. ..	..	16,595	19,803	22,728	28,721	37,170
Wheat Tax and Export Charge .. ..	..	5,730	18,086	12,633	13,353	12,202
Wool Contributory Charge .. ..	..	1,424	1,029	1,439	44,844	2,230
Wool Deduction .. ..	..	..	..	..	109,531	5,963
Other .. ..	5,287	15,430	14,319	16,197	16,604	21,891
<b>Total .. ..</b>	<b>74,111</b>	<b>422,413</b>	<b>490,813</b>	<b>518,959</b>	<b>777,187</b>	<b>934,011</b>
<b>State(b)—</b>						
Income Tax .. ..	29,791	(c) 416	(c) 257	(c) 267	(c) 291	(c) 155
Other .. ..	20,716	31,747	36,167	41,511	51,386	62,734
<b>Total .. ..</b>	<b>50,507</b>	<b>(d)32,163</b>	<b>(d)36,424</b>	<b>(d)41,778</b>	<b>(d)51,677</b>	<b>(d)62,889</b>
<b>Grand Total .. ..</b>	<b>124,618</b>	<b>454,576</b>	<b>527,237</b>	<b>560,737</b>	<b>828,864</b>	<b>996,900</b>

**PER HEAD OF POPULATION.**  
(£ s. d.)

<b>Commonwealth—</b>																			
Income Tax .. ..	1	14	3	30	9	8	34	18	4	34	14	10	41	2	10	63	16	10	
Customs and Excise .. ..	6	17	5	15	2	7	16	3	8	17	17	5	19	17	0	25	1	0	
Sales Tax .. ..	1	6	10	4	10	11	5	0	1	5	5	5	6	17	7	11	3	7	
Pay-roll Tax .. ..	..	..	..	2	3	6	2	10	9	2	16	6	3	9	1	4	7	1	
Wheat Tax and Export Charge .. ..	..	..	..	0	15	0	2	6	5	1	11	5	1	12	2	1	8	7	
Wool Contributory Charge .. ..	..	..	..	0	3	9	0	2	8	0	3	7	5	7	11	0	5	3	
Wool Deduction .. ..	..	..	..	..	..	..	..	..	..	..	..	..	13	3	7	0	14	0	
Other .. ..	0	15	3	2	0	4	1	16	9	2	0	3	2	0	0	2	11	2	
<b>Total .. ..</b>	<b>10</b>	<b>13</b>	<b>9</b>	<b>55</b>	<b>5</b>	<b>9</b>	<b>62</b>	<b>18</b>	<b>8</b>	<b>64</b>	<b>9</b>	<b>5</b>	<b>93</b>	<b>10</b>	<b>2</b>	<b>109</b>	<b>7</b>	<b>6</b>	
<b>State—</b>																			
Income Tax .. ..	4	6	2	0	1	1	0	0	8	0	0	8	0	0	8	0	0	4	
Other .. ..	2	19	11	4	3	5	4	13	1	5	3	7	6	4	3	7	7	8	
<b>Total .. ..</b>	<b>7</b>	<b>6</b>	<b>1</b>	<b>4</b>	<b>4</b>	<b>6</b>	<b>4</b>	<b>13</b>	<b>9</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>6</b>	<b>4</b>	<b>11</b>	<b>7</b>	<b>8</b>	<b>0</b>	
<b>Grand Total .. ..</b>	<b>17</b>	<b>19</b>	<b>5</b>	<b>59</b>	<b>10</b>	<b>0</b>	<b>57</b>	<b>12</b>	<b>1</b>	<b>59</b>	<b>13</b>	<b>3</b>	<b>99</b>	<b>14</b>	<b>7</b>	<b>116</b>	<b>14</b>	<b>10</b>	

(a) For details see page 667. (b) For details see pages 704. (c) Arrears of State income tax.  
(d) Excludes tax reimbursements.

**D. COMMONWEALTH AND STATE PUBLIC DEBT.****§ 1. General.**

Under the Financial Agreement between the Commonwealth and the States in 1927 the Commonwealth and State Public Debts were amalgamated and the Commonwealth Government accepted responsibility for the State Public Debts. The Commonwealth is reimbursed by the States for interest, exchange, etc., paid on their behalf and the debt is redeemed from a sinking fund to which both the Commonwealth and the States make contributions. Under the agreement the Commonwealth arranges for all borrowings on behalf of the Commonwealth and the States, and Commonwealth securities are issued for all money borrowed.

In the statistical tables relating to Public Debt the units of currency for debt outstanding and interest payable, with the exception referred to below, are:—Debt in Australia—£ Australian; Debt in London—£ Sterling; Debt in New York—£ (converted from dollars at the rate of \$4.8665 to £1).

\* The totals shown represent the total "face" or "book" value of the debt without adjustment or account of the differences in currency mentioned above.

In § 3, para. 5 only, details of the debt for the Commonwealth and each State are given in Australian currency.

**§ 2. The Financial Agreement between the Commonwealth and the States.**

1. **General.**—Full details of the Financial Agreement between the Commonwealth and the States are given in earlier issues of the Official Year Book (*see* No. 37, pages 685 to 690). In this issue a summary of the main provisions only is given.

2. **Australian Loan Council.**—The Australian Loan Council was set up to co-ordinate the public borrowings of the Commonwealth and the States. It consists of the Prime Minister of the Commonwealth, or another Minister nominated by him in writing, as Chairman and the Premier of each State, or Ministers nominated by them in writing. Each year the Loan Council examines the loan programmes of the Commonwealth and the States and determines the total amount to be borrowed during the year. Borrowings by the Commonwealth for defence purposes are not subject to decisions of the Loan Council.

3. **Loan Raisings for the Commonwealth and States.**—Subject to the decisions of the Loan Council, the Commonwealth arranges for all borrowings for or on behalf of the Commonwealth or any State, and for all conversions, renewals, redemptions, and consolidations of the Public Debts of the Commonwealth and of the States.

If the Loan Council unanimously decides, however, a State may borrow outside Australia in the name of the State, and may issue securities for the amount so borrowed. The Commonwealth then guarantees that the State will fulfil all its obligations to bond-holders in respect of the money so borrowed and the money is deemed to be borrowed by the Commonwealth for and on behalf of the State.

Subject to any maximum limits decided upon by the Loan Council for interest, brokerage, discount and other charges, the Commonwealth or any State may—

- (i) borrow within its own territory, for any purpose, money from any authorities, bodies, funds or institutions (including Savings Banks) constituted or established under Commonwealth or State law or practice;
- (ii) borrow from the public by means of counter sales of securities; and
- (iii) use any available public moneys.

However, any securities issued for money so borrowed or used must be Commonwealth securities on terms approved by the Loan Council.

4. **Taking over of State Public Debts.**—The Commonwealth took over on 1st July, 1929—

- (a) the balance then unpaid of the gross public debt of each State existing on 30th June, 1927; and
- (b) all other debts of each State existing on 1st July, 1929 for money borrowed by that State deemed by the Agreement to be money borrowed by the Commonwealth for and on behalf of the State,

and in respect of these debts assumed, as between the Commonwealth and the States, the liabilities of the States to bond holders.

5. **Transferred Properties.**—In relation to State properties transferred to the Commonwealth under Section 85 of the Constitution, the States, as from 1st July, 1929, were discharged from any liability in respect of principal, interest or sinking fund on so much of the debts bearing interest at 5 per cent. per annum, taken over by the Commonwealth, as amounted to the agreed value of these properties, namely £10,924,323.

6. **Payment of Interest.**—For a period of 58 years from 1st July, 1927 the Commonwealth agreed to contribute the sum of £7,584,912 each year towards the interest payable on the State debts. The balance of the interest payable on the State debts is paid to the Commonwealth by the States.

7. **Sinking Fund.**—(i) *State Public Debt existing at 30th June, 1927.* A sinking fund at the rate of 7s. 6d. per annum for each £100 of the net public debts of the States existing on 30th June, 1927, and conversions thereof, was established under the terms of the Agreement. The Commonwealth contributes annually from revenue 2s. 6d. per cent. on the net public debts of the States existing at 30th June, 1927 and each State contributes annually 5s. per cent. on the net public debt of such State at 30th June, 1927. The payments of the Commonwealth and of all States except New South Wales will continue for a period of 58 years from 1st July, 1927, and those of New South Wales for a similar period from 1st July, 1928.

(ii) *New Borrowings.* On new borrowings after 1st July, 1927 (except those for redemptions or conversions, or funding a State deficit) a sinking fund at the rate of 10s. per cent. per annum was established and the State and the Commonwealth contribute from revenue equal shares for a period of 53 years from the date of raising. (New South Wales did not commence sinking fund contributions in respect of new loans raised in the financial year 1927–28 until 1st July, 1928.)

(iii) *Loans raised to meet a Revenue Deficit.* In respect of any loan (except any of the loans referred to in para. (iv) below) raised after 30th June, 1927 by a State to meet a revenue deficit accruing after that date, no sinking fund contribution is made by the Commonwealth, but the State makes a sinking fund contribution at the rate of not less than 4 per cent. per annum of the loan for a period sufficient to provide for the redemption of the loan, the contributions being deemed to accumulate at the rate of 4½ per cent. per annum compound interest.

(iv) *Loans raised to meet Revenue Deficits between 30th June, 1927 and 1st July, 1935.* In respect of loans raised by a State or by the Commonwealth on behalf of a State, on the security of Commonwealth Treasury Bills, to meet a revenue deficit accruing after 30th June, 1927 and before 1st July, 1935, special contributions are payable. Details of these contributions are given in Official Year Book No. 37, pages 688 and 689.

(v) *National Debt Commission.* The sinking funds established are controlled by the National Debt Commission, which may arrange with any State to act as its agent in connexion with payments due to bond holders. Except where the conditions relating to sinking funds, redemption funds, and funds of a like nature held by a State on 30th June, 1929, precluded such transfer, all such funds were transferred to the National Debt Commission.

(vi) *Operation of Sinking Fund.* Sinking fund contributions made in respect of the debts of a State, and funds of that State transferred to the National Debt Commission, are not accumulated but must be applied, whenever expedient, to the redemption and repurchase of loan securities. When such a loan security is repurchased or redeemed by the National Debt Commission, it is cancelled, and the State, in addition to sinking fund contributions otherwise payable, pays a further annual sinking fund contribution at the rate of 4½ per cent. on the face value of the cancelled security.

(vii) *Oversea Debt.* Sinking fund contributions in respect of oversea debt shall be calculated at the mint par of exchange prevailing on 1st July, 1927.

8. **Borrowing by Semi-Governmental Authorities.**—It was realized at the inception of the Loan Council that, in the interests of co-ordinated borrowing, the Council should be advised of borrowing of large amounts by semi-governmental authorities. In May, 1936, all resolutions passed by the Loan Council in connexion with semi-governmental borrowings were consolidated into one set of rules, which superseded all previous resolutions. This set of rules is regarded as the "Gentlemen's Agreement", and provides, *inter alia* for the submission of annual loan programmes, in respect of semi-governmental authorities proposing to raise £100,000 or more in a year, for the consideration of such programmes in conjunction with the loan programme of the Government concerned, and for the fixing of the terms of individual semi-governmental loans coming within the scope of the annual programme.

### § 3. Commonwealth and State Public Debt Outstanding.

1. **Public Debt, Annual Interest Payable and Average Rate of Interest at 30th June, 1952.**—In the following table details are given of the Commonwealth and State Public Debt, annual interest payable and average rate of interest at 30th June, 1952.

#### COMMONWEALTH AND STATE PUBLIC DEBT AND ANNUAL INTEREST PAYABLE AT 30th JUNE, 1952.

Particulars.	Maturing in—			Total.
	Australia.	London.	New York.	
<b>DEBT.</b>				
Commonwealth Debt—	£A.'000.	£ Stg.'000.	£'000.	£'000.
War (1914-18) Debt (a)—				
Stock and Bonds .. .. .	148,428	7,534	..	155,962
War and Peace Savings Certificates and Stamps and War Gratuity Bonds .. .. .	133	..	..	133
<b>Total War (1914-18) Debt .. .. .</b>	<b>148,561</b>	<b>7,534</b>	<b>..</b>	<b>156,095</b>
War (1939-45) Debt—				
Stock and Bonds .. .. .	1,039,691	5,775	..	1,045,466
Advance Loan Subscriptions .. .. .	1,417	..	..	1,417
National Savings Bonds .. .. .	1,792	..	..	1,792
War Savings and Savings Certificates .. .. .	41,809	..	..	41,809
War Savings Stamps .. .. .	133	..	..	133
National Savings Stamps .. .. .	18	..	..	18
Treasury Bills, Internal .. .. .	241,000	..	..	241,000
Treasury Bills, Public .. .. .	153,280	..	..	153,280
<b>Total War (1939-45) Debt .. .. .</b>	<b>1,479,140</b>	<b>5,775</b>	<b>..</b>	<b>1,484,915</b>
Works and Other Purposes—				
Stock and Bonds .. .. .	138,426	49,464	15,309	203,199
Treasury Bills and Debentures .. .. .	..	970	..	970
Treasury Bills, Internal .. .. .	10,810	..	..	10,810
International Bank Dollar Loan .. .. .	..	..	12,830	12,830
<b>Total Works and Other Purposes .. .. .</b>	<b>149,236</b>	<b>50,434</b>	<b>28,139</b>	<b>227,809</b>
<b>Total Commonwealth Debt .. .. .</b>	<b>1,776,937</b>	<b>63,743</b>	<b>28,139</b>	<b>1,868,819</b>
State Debt—				
Stock and Bonds .. .. .	1,042,606	259,731	23,992	1,326,329
Debentures .. .. .	38,983	..	..	38,983
Treasury Bills and Debentures—Short-term .. .. .	..	22,868	..	22,868
Balance of Debts of States taken over by Commonwealth and still represented by State Securities .. .. .	..	7,496	..	7,496
<b>Total State Debt .. .. .</b>	<b>1,081,589</b>	<b>290,095</b>	<b>23,992</b>	<b>1,395,676</b>
<b>Grand Total Commonwealth and State Debt .. .. .</b>	<b>2,858,526</b>	<b>353,838</b>	<b>52,131</b>	<b>3,264,495</b>

(a) See footnote on following page.



COMMONWEALTH AND STATE PUBLIC DEBT AND ANNUAL INTEREST  
PAYABLE AT 30TH JUNE, 1952—*continued.*

Particulars.	Maturing in—			Total.
	Australia.	London.	New York.	
<b>DEBT PER HEAD OF POPULATION.</b>				
	£ s. d. (Aust.)	£ s. d. (Stg.)	£ s. d.	£ s. d.
Commonwealth Debt—				
War (1914-18) Debt (a) .. ..	17 3 7	0 17 4	..	18 0 11
War (1939-45) Debt .. ..	171 0 6	0 13 5	..	171 13 11
Works and Other Purposes .. ..	17 5 1	5 16 8	3 5 1	26 6 10
Total Commonwealth Debt .. ..	205 9 2	7 7 5	3 5 1	216 1 8
Total State Debt .. ..	125 13 9	33 14 3	2 15 9	162 3 9
Grand Total Commonwealth and State Debt .. ..	330 10 5	40 18 3	6 0 7	377 9 3

<b>ANNUAL INTEREST PAYABLE.</b>				
	£A.'000.	£ Stg.'000.	£'000.	£'000.
Commonwealth Debt—				
War (1914-18) Debt (a) .. ..	4,794	228	..	5,022
War (1939-45) Debt .. ..	37,278	231	..	37,509
Works and Other Purposes .. ..	4,265	1,675	1,219	7,159
Total Commonwealth Debt .. ..	46,337	2,134	1,219	49,690
Total State Debt .. ..	31,609	9,133	889	41,631
Grand Total Commonwealth and State Debt .. ..	77,946	11,267	2,108	91,321

<b>ANNUAL INTEREST PAYABLE PER HEAD OF POPULATION.</b>				
	£ s. d. (Aust.)	£ s. d. (Stg.)	£ s. d.	£ s. d.
Commonwealth Debt—				
War (1914-18) Debt (a) .. ..	0 11 1	0 0 6	..	0 11 7
War (1939-45) Debt .. ..	4 6 2	0 0 6	..	4 6 8
Works and Other Purposes .. ..	0 9 11	0 3 11	0 2 10	0 16 8
Total Commonwealth Debt .. ..	5 7 2	0 4 11	0 2 10	5 14 11
Total State Debt .. ..	3 13 6	1 1 3	0 2 0	4 16 9
Grand Total Commonwealth and State Debt .. ..	9 0 3	1 6 1	0 4 10	10 11 2

<b>AVERAGE RATE OF INTEREST PAYABLE.</b>				
	£ s. d. (Aust.)	£ s. d. (Stg.)	£ s. d.	£ s. d.
Commonwealth Debt—				
War (1914-18) Debt (a) .. ..	3 4 8	3 0 5	..	3 4 5
War (1939-45) Debt .. ..	2 10 5	4 0 0	..	2 10 7
Works and Other Purposes .. ..	2 17 2	3 6 5	4 6 8	3 2 11
Total Commonwealth Debt .. ..	2 12 2	3 7 0	4 6 8	2 13 3
Total State Debt .. ..	2 18 5	3 3 0	3 14 1	2 19 8
Grand Total Commonwealth and State Debt .. ..	2 14 6	3 3 8	4 0 10	2 16 0

(a) Excludes War (1914-18) Debt due to United Kingdom Government (£79,724,220). Repayment of this debt and interest thereon (£3,919,774) was suspended in 1931.

2. Public Debt and Annual Interest Payable, 1939 and 1948 to 1952.—In the following table details are given of the Public Debt and annual interest payable, including the average rate of interest, at 30th June, 1939 and 1948 to 1952 :—

**COMMONWEALTH AND STATE PUBLIC DEBT AND ANNUAL INTEREST PAYABLE AT 30th JUNE.**

Particulars.	1939.	1948.	1949.	1950.	1951.	1952.
<b>DEBT.</b>						
<b>Commonwealth Debt—</b>						
<b>War (1914-18) Debt—</b>						
Australia .. £ A.'000.	175,194	154,046	153,000	156,730	149,027	148,561
London (a) .. £ Stg.'000.	11,020	10,645	10,645	8,333	8,333	7,534
<b>Total War (1914-18) Debt</b> £'000.	<b>186,214</b>	<b>164,691</b>	<b>164,545</b>	<b>165,063</b>	<b>157,360</b>	<b>156,095</b>
<b>War (1939-45) Debt—</b>						
Australia .. £ A.'000.	..	1,508,195	1,485,877	1,491,476	1,499,401	1,479,140
London .. £ Stg.'000.	..	5,775	5,775	5,775	5,775	5,775
<b>Total War (1939-45) Debt</b> £'000.	<b>..</b>	<b>1,513,970</b>	<b>1,491,652</b>	<b>1,497,251</b>	<b>1,505,176</b>	<b>1,484,915</b>
<b>Works and Other Purposes—</b>						
Australia .. £ A.'000.	43,302	77,906	92,433	101,204	122,261	149,236
London .. £ Stg.'000.	72,097	52,991	52,741	51,378	49,969	50,434
New York .. £'000.	15,914	15,855	15,798	15,731	17,383	28,139
<b>Total Debt for Works, etc.</b> £'000.	<b>131,313</b>	<b>146,752</b>	<b>160,972</b>	<b>168,313</b>	<b>189,613</b>	<b>227,809</b>
<b>Total Commonwealth Debt—</b>						
Australia .. £ A.'000.	218,496	1,740,147	1,732,210	1,749,410	1,770,689	1,776,937
London (a) .. £ Stg.'000.	83,117	69,411	69,161	65,486	64,077	63,743
New York .. £'000.	15,914	15,855	15,798	15,731	17,383	28,139
<b>Total Commonwealth Debt</b> £'000.	<b>317,527</b>	<b>1,825,413</b>	<b>1,817,169</b>	<b>1,830,627</b>	<b>1,852,149</b>	<b>1,868,819</b>
<b>State Debt—</b>						
Australia .. £ A.'000.	485,179	611,763	666,873	750,108	893,611	1,081,589
London .. £ Stg.'000.	384,328	328,190	317,348	304,261	290,516	290,095
New York .. £'000.	28,265	24,849	24,663	24,440	24,211	23,992
<b>Total State Debt</b> £'000.	<b>897,772</b>	<b>964,802</b>	<b>1,008,884</b>	<b>1,078,809</b>	<b>1,208,338</b>	<b>1,395,676</b>
<b>Grand Total Commonwealth and State Debt</b> £'000.	<b>1,215,299</b>	<b>2,790,215</b>	<b>2,826,053</b>	<b>2,909,436</b>	<b>3,060,487</b>	<b>3,264,495</b>
<b>ANNUAL INTEREST PAYABLE.</b>						
<b>Commonwealth Debt—</b>						
<b>War (1914-18) Debt—</b>						
Australia .. £ A.'000.	6,950	5,657	5,657	5,750	4,792	4,794
London (a) .. £ Stg.'000.	426	396	338	251	251	228
<b>Total War (1914-18) Debt</b> £'000.	<b>7,376</b>	<b>6,053</b>	<b>5,995</b>	<b>6,001</b>	<b>5,043</b>	<b>5,022</b>
Average Rate .. %	£3 19s. 3d.	£3 13s. 7d.	£3 12s. 11d.	£3 12s. 9d.	£3 4s. 5d.	£3 4s. 5d.
<b>War (1939-45) Debt—</b>						
Australia .. £ A.'000.	..	39,942	39,667	39,773	38,053	37,278
London .. £ Stg.'000.	..	231	231	231	231	231
<b>Total War (1939-45) Debt</b> £'000.	<b>..</b>	<b>40,173</b>	<b>39,898</b>	<b>40,004</b>	<b>38,284</b>	<b>37,509</b>
Average Rate .. %	..	£2 13s. 1d.	£2 13s. 8d.	£2 13s. 6d.	£2 10s. 11d.	£2 10s. 7d.

(a) See footnote (a) page 722.

COMMONWEALTH AND STATE PUBLIC DEBT AND ANNUAL INTEREST PAYABLE AT 30TH JUNE—*continued.*

Particulars.	1939.	1948.	1949.	1950.	1951.	1952.
<b>ANNUAL INTEREST PAYABLE—<i>continued.</i></b>						
<b>Commonwealth Debt—<i>continued.</i></b>						
<b>Works and Other Purposes—</b>						
Australia .. £ A.'000.	1,394	2,293	2,726	3,003	3,600	4,265
London .. £ Stg.'000.	2,978	1,769	1,741	1,695	1,655	1,675
New York .. £'000.	778	696	695	693	762	1,219
Total Debt for Works, etc. £'000.	5,150	4,758	5,162	5,391	6,017	7,159
Average Rate.. %	£3 18s. 5d.	£3 4s. 10d.	£3 4s. 2d.	£3 4s. 1d.	£3 3s. 0d.	£3 2s. 11d.
<b>Total Commonwealth Debt—</b>						
Australia .. £ A.'000.	8,344	47,892	48,050	48,526	46,445	46,337
London (a) £ Stg.'000.	3,404	2,396	2,310	2,177	2,137	2,134
New York .. £'000.	778	696	695	693	762	1,219
Total Commonwealth Debt £'000.	12,526	50,984	51,055	51,396	49,344	49,690
Average Rate.. %	£3 18s. 11d.	£2 15s. 11d.	£2 16s. 4d.	£2 16s. 2d.	£2 13s. 4d.	£2 13s. 3d.
<b>State Debt—</b>						
Australia .. £ A.'000.	17,240	19,686	21,396	23,771	27,172	31,609
London .. £ Stg.'000.	14,963	10,737	9,984	9,506	9,032	9,133
New York .. £'000.	1,441	918	911	904	896	889
Total State Debt £'000.	33,644	31,341	32,291	34,181	37,100	41,631
Average Rate.. %	£3 14s. 11d.	£3 5s. 0d.	£3 4s. 0d.	£3 3s. 4d.	£3 1s. 5d.	£2 19s. 8d.
<b>Grand Total Commonwealth and State Debt</b>						
£'000.	46,170	82,325	83,346	85,577	86,444	91,321
Average Rate.. %	£3 16s. 0d.	£2 19s. 0d.	£2 19s. 1d.	£2 18s. 10d.	£2 16s. 6d.	£2 16s. 0d.

(a) See footnote (a) page 722.

3. **State Public Debt and Annual Interest Payable at 30th June, 1952.**—In paragraphs 1 and 2 totals only of the States' Public Debt are given. In the following table the total debt of each State and the amounts outstanding per head of population at 30th June, 1952 are shown according to the place of flotation:—

**STATE PUBLIC DEBT AT 30th JUNE, 1952: PLACE OF FLOTATION OF LOANS.**

State.	Maturing in Australia.	Maturing Overseas.			Grand Total.
		London.	New York.	Total Overseas.	
<b>DEBT.</b>					
	£A.'000.	£ Stg.'000.	£'000.	£'000.	£'000.
New South Wales ..	388,786	122,885	10,820	133,705	522,491
Victoria .. ..	252,818	45,225	4,456	49,681	302,499
Queensland.. ..	138,312	44,258	4,740	48,998	187,310
South Australia ..	136,992	34,711	1,733	36,444	173,436
Western Australia ..	100,286	35,987	2,015	38,002	138,288
Tasmania .. ..	64,395	7,029	228	7,257	71,652
Total .. ..	1,081,589	290,095	23,992	314,087	1,395,676

STATE PUBLIC DEBT AT 30th JUNE, 1952 : PLACE OF FLOTATION OF LOANS  
—continued.

State.	Maturing in Australia.	Maturing Overseas.			Grand Total.
		London.	New York.	Total Overseas.	

## DEBT PER HEAD OF POPULATION.

	£ s. d. (Aust.)	£ s. d. (Stg.)	£ s. d.	£ s. d.	£ s. d.
New South Wales ..	114 14 10	36 5 4	3 3 10	39 9 2	154 4 0
Victoria .. ..	108 5 1	19 7 3	1 18 2	21 5 5	129 10 6
Queensland ..	111 13 8	35 14 9	3 16 7	39 11 4	151 5 0
South Australia ..	185 4 8	46 18 8	2 6 11	49 5 7	234 10 3
Western Australia ..	166 15 10	59 17 1	3 7 0	63 4 1	229 19 11
Tasmania .. ..	213 3 0	23 5 4	0 15 1	24 0 5	237 3 5
Total ..	125 13 9	33 14 3	2 15 9	36 10 0	162 3 9

The following table shows, as at 30th June, 1952, the annual interest payable, together with the average rate of interest payable, with separate information for London, New York and Australian maturities.

STATE PUBLIC DEBT AT 30th JUNE, 1952 : ANNUAL INTEREST PAYABLE—  
LOCATION.

State.	Australia.	Overseas.			Grand Total.
		London.	New York.	Total.	

## ANNUAL INTEREST PAYABLE.

	£A.'000.	£ Stg.'000.	£'000.	£'000.	£'000.
New South Wales ..	11,207	3,794	364	4,158	15,365
Victoria .. ..	7,457	1,463	181	1,644	9,101
Queensland ..	4,149	1,469	173	1,642	5,791
South Australia ..	3,978	1,078	71	1,149	5,127
Western Australia ..	2,936	1,106	92	1,198	4,134
Tasmania .. ..	1,882	223	8	231	2,113
Total ..	31,609	9,133	889	10,022	41,631

STATE PUBLIC DEBT AT 30TH JUNE, 1952: ANNUAL INTEREST PAYABLE—  
LOCATION—*continued.*

State.	Australia.	Overseas.			Grand Total.
		London.	New York.	Total.	
AVERAGE RATE OF INTEREST PAYABLE.					
	£ s. d. (Aust.)	£ s. d. (Stg.)	£ s. d.	£ s. d.	£ s. d.
New South Wales ..	2 17 8	3 1 9	3 7 4	3 2 2	2 18 10
Victoria ..	2 19 0	3 4 9	4 1 1	3 6 2	3 0 2
Queensland ..	3 0 0	3 6 5	3 13 2	3 7 1	3 1 10
South Australia ..	2 18 1	3 2 2	4 1 3	3 3 0	2 19 2
Western Australia ..	2 18 7	3 1 5	4 11 8	3 3 0	2 19 9
Tasmania ..	2 18 5	3 3 5	3 7 6	3 3 6	2 19 0
Total ..	2 18 5	3 3 0	3 14 1	3 3 10	2 19 8

4. State Public Debt, 1939 and 1948 to 1952.—In the following table the debt of each State and the amounts outstanding per head of population at 30th June, 1939 and 1948 to 1952 are shown.

## STATE PUBLIC DEBT.

30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
DEBT. (£'000.)							
1939 .. ..	359,844	179,698	127,503	108,887	95,473	26,367	897,772
1948 .. ..	384,078	188,946	138,694	118,852	100,275	33,957	964,802
1949 .. ..	396,493	202,883	144,125	124,720	102,916	37,747	1,008,884
1950 .. ..	425,289	217,413	150,662	133,174	109,550	42,721	1,078,809
1951 .. ..	462,241	250,933	166,157	148,388	123,186	57,433	1,208,338
1952 .. ..	522,491	302,499	187,310	173,436	138,288	71,652	1,395,676

DEBT PER HEAD OF POPULATION.  
(£ s. d.)

1939 .. ..	130 18 7	95 13 3	125 4 11	182 10 6	203 2 4	111 1 2	129 3 11
1948 .. ..	126 19 1	90 7 6	123 0 7	180 12 5	194 11 11	129 8 6	125 12 10
1949 .. ..	127 6 10	94 16 11	125 4 10	185 6 0	193 4 2	140 2 5	128 1 1
1950 .. ..	131 17 3	98 13 11	127 5 5	190 3 7	196 7 1	152 18 3	132 7 7
1951 .. ..	139 6 11	110 11 7	137 3 7	206 1 8	211 17 0	197 9 6	144 0 5
1952 .. ..	154 4 0	129 10 6	151 5 0	234 10 3	229 19 11	237 3 5	162 3 9

In some States certain public utilities such as tramways, water supply and sewerage, harbour services, etc., are controlled by boards or trusts, which, in addition to receiving advances from the central Government, raise loans by public borrowing on their own behalf, while in other States these services are controlled by the central Government. Comparison of the debts of the States is therefore difficult, but on page 731 figures showing the aggregate debts of the States, including these local and semi-governmental authorities, are shown for the years 1938-39 and 1947-48 to 1950-51.

5. Public Debt and Interest Payable in Australian Currency.—In the foregoing tables relating to Commonwealth and State public debt the debt outstanding in London is expressed in sterling, and debt outstanding in New York is expressed in pounds converted from dollars at the rate of \$4.8665 to £1. This method of showing the debt gives no

indication of the amount that the Australian Governments would have to find to repay the debt. In the following tables the public debt and the interest payable are shown in terms of Australian currency throughout. Debt in London and in New York has been converted to Australian currency at the selling rate of exchange on 30th June, 1952.

**COMMONWEALTH AND STATE PUBLIC DEBT AND INTEREST PAYABLE**  
**AT 30th JUNE, 1952 : AUSTRALIAN CURRENCY.**  
 (£A.'000.)

Particulars.	Maturing in—			Total.
	Australia.	London.(a)	New York. (b)	
<b>DEBT.</b>				
<b>Commonwealth Debt—</b>				
War (1914-18) Debt .. ..	148,561	9,455	..	158,016
War (1939-45) Debt .. ..	1,479,140	7,247	..	1,486,387
Works and Other Purposes .. ..	149,236	63,295	61,835	274,366
<b>Total Commonwealth Debt .. ..</b>	<b>1,776,937</b>	<b>79,997</b>	<b>61,835</b>	<b>1,918,769</b>
<b>State Debt—</b>				
New South Wales .. ..	388,786	154,221	23,777	566,784
Victoria .. ..	252,818	56,757	9,792	319,367
Queensland .. ..	138,312	55,544	10,415	204,271
South Australia .. ..	136,992	43,563	3,808	184,363
Western Australia .. ..	100,286	45,163	4,429	149,878
Tasmania .. ..	64,395	8,822	500	73,717
<b>Total State Debt .. ..</b>	<b>1,081,589</b>	<b>364,070</b>	<b>52,721</b>	<b>1,498,380</b>
<b>Commonwealth and State Debt—</b>				
Short-term Debt .. ..	405,090	29,917	..	435,007
Other Debt .. ..	2,453,436	414,150	114,556	2,982,142
<b>Grand Total Commonwealth and State Debt .. ..</b>	<b>2,858,526</b>	<b>444,067</b>	<b>114,556</b>	<b>3,417,149</b>

**ANNUAL INTEREST PAYABLE.**

<b>Commonwealth Debt—</b>				
War (1914-18) Debt .. ..	4,794	286	..	5,080
War (1939-45) Debt .. ..	37,278	290	..	37,568
Works and Other Purposes .. ..	4,265	2,102	2,679	9,046
<b>Total Commonwealth Debt .. ..</b>	<b>46,337</b>	<b>2,678</b>	<b>2,679</b>	<b>51,694</b>
<b>State Debt—</b>				
New South Wales .. ..	11,207	4,761	801	16,769
Victoria .. ..	7,457	1,836	397	9,690
Queensland .. ..	4,149	1,844	381	6,374
South Australia .. ..	3,978	1,353	155	5,486
Western Australia .. ..	2,936	1,388	203	4,527
Tasmania .. ..	1,882	280	16	2,178
<b>Total State Debt .. ..</b>	<b>31,609</b>	<b>11,462</b>	<b>1,953</b>	<b>45,024</b>
<b>Grand Total Commonwealth and State Debt .. ..</b>	<b>77,946</b>	<b>14,140</b>	<b>4,632</b>	<b>96,718</b>

(a) Converted at rate of £ stg. 100 = £A. 125 10s.

(b) Converted at rate of \$2.2146 = £A. 1.

6. Public Debt at each Rate of Interest.—The following table shows particulars of the amounts of debt for Commonwealth and State purposes at 30th June, 1952, at each rate of interest:—

COMMONWEALTH AND STATE PUBLIC DEBT AT 30TH JUNE, 1952: AMOUNTS AT EACH RATE OF INTEREST.

Rate of Interest.	Maturing in—						Total.	
	Australia.		London.		New York.		Commonwealth.	State.
	Commonwealth.	State.	Commonwealth. (a)	State.	Commonwealth.	State.		
Per cent.	£A.'000.	£A.'000.	£stg'000.	£stg'000.	£'000.	£'000.	£'000.	£'000.
5.0 .. .. .	..	..	..	1	9,658	4,793	9,658	4,794
4.25 .. .. .	..	..	..	..	(b)12,830	..	12,830	..
4.0 .. .. .	..	584	5,775	11,546	..	..	5,775	12,130
3.875 .. .. .	..	37,491	57,209	..	..	..	37,491	57,209
3.75 .. .. .	..	(c)21,340	72,852	6,951	..	..	28,291	72,852
3.625 .. .. .	..	..	107	..	..	..	..	107
3.5 .. .. .	..	..	886	5,974	72,727	1,149	7,406	81,019
3.4875 .. .. .	..	..	975	..	..	..	..	975
3.375 .. .. .	..	147	..	..	3,357	5,373	3,504	5,373
3.25 .. .. .	..	875,202	155,922	34,278	57,671	6,420	910,625	220,013
3.2391 .. .. .	..	(d)27,211	..	..	..	..	27,211	..
3.125 .. .. .	..	288,194	493,703	..	..	..	288,194	493,703
3.1 .. .. .	..	..	4,011	..	..	..	..	4,011
3.0 .. .. .	..	14,162	43,857	9,795	90,890	..	23,957	134,747
2.8347 .. .. .	..	(e)14,599	..	..	..	..	14,599	..
2.75 .. .. .	..	..	(f) 470	37,326	..	..	470	37,326
2.7125 .. .. .	..	..	418	..	..	..	..	418
2.5 .. .. .	..	..	2(f) 500	19,932	..	..	500	19,934
2.325 .. .. .	..	..	1,730	..	..	..	..	1,730
2.0 .. .. .	..	92,171	207,063	..	..	..	92,171	207,063
1.5 .. .. .	..	..	3,287	..	..	..	..	3,287
1.0 .. .. .	..	..	38,983	..	..	..	..	38,983
0.75 .. .. .	..	g 405,090	..	..	..	..	405,090	..
Overdue War (1914-18) Savings Stamps	(h) 1,164	..	..	2	..	..	1,164	2
War (1939-45) Savings Stamps	14	..	..	..	..	..	14	..
National Savings Stamps	134	..	..	..	..	..	134	..
	18	..	..	..	..	..	18	..
Total Debt	1,776,937	1,081,589	63,743	290,095	28,139	23,992	1,868,819	1,395,676

(a) Excludes War (1914-18) Debt due to United Kingdom Government, £79,724,000 (rate of interest 4.91667 per cent.). (b) International Bank Dollar Loan. (c) Includes Advance Loan Subscriptions, £1,417,000. (d) War Savings and Savings Certificates—7 years series. (e) Savings Certificates—5 years series. (f) Short-term Treasury Bills and Debentures. (g) Internal Treasury Bills, £251,810,000 and Public Treasury Bills, £153,280,000. (h) Includes War (1914-18) Gratuity Bonds, £12,000 and War (1914-18) Savings Certificates, £4,000.

The variations in the rates of interest payable on the public debts of the States from 1901 to 1952 appear in the following table which shows the percentages of the total debts in various interest groups during the years specified, and the average rate of interest in each year

## STATE PUBLIC DEBT : PERCENTAGES, ETC., IN VARIOUS INTEREST GROUPS.

Interest Rates.	Percentage of Total Debt at 30th June—							
	1901.	1911.	1921.	1931.	1939.	1941.	1951.	1952.
Not exceeding 3 per cent.	18.0	17.9	10.2	5.3	19.1	18.5	23.7	31.8
Exceeding 3 per cent. but not exceeding 4 per cent.	78.5	81.9	45.4	17.2	62.4	63.6	75.9	67.9
Exceeding 4 per cent. but not exceeding 5 per cent.	3.1	0.1	15.6	36.8	16.0	15.5	0.4	0.3
Exceeding 5 per cent. but not exceeding 6 per cent.	0.4	0.1	23.5	38.4	2.3	2.2	..	..
Exceeding 6 per cent.	..	..	5.3	2.3	0.2	0.2	..	..
Total .. .. .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average Rate of Interest Payable .. .. .	3.7	3.6	4.4	4.9	3.7	3.7	3.1	3.0

7. Dates of Maturity.—(i) *Commonwealth.* In the following table the Commonwealth Public Debt at 30th June, 1952 is classified according to the earliest and the latest years of maturity.

## COMMONWEALTH PUBLIC DEBT AT 30th JUNE, 1952(a) : CLASSIFIED ACCORDING TO EARLIEST AND LATEST YEARS OF MATURITY.

Year of Maturity.	Earliest Year.				Latest Year.			
	Maturing in—			Total.	Maturing in—			Total.
	Australia.	London.	New York.		Australia.	London.	New York.	
£A.'000.	£ Stg.'000.	£'000.	£'000.	£A.'000.	£ Stg.'000.	£'000.	£'000.	
Before 30th June, 1952	749,009	..	..	749,009	..	..	..	
1952-53(b)	475,927	7,921	9,658	493,506	435,355	970	436,325	
1953-54	14,238	..	..	14,238	12,520	..	12,520	
1954-55	51,178	..	..	51,178	91,750	..	91,750	
1955-56	132,988	16,234	..	149,222	8,513	..	9,658	
1956-57	83,280	..	1,145	84,425	43,200	6,951	1,145	
1957-58	11,300	..	..	11,300	43,969	..	43,969	
1958-59	..	..	..	..	241,140	..	241,140	
1959-60	..	..	..	..	244,903	..	244,903	
1960-61	81,804	5,775	..	87,579	236,511	16,234	252,745	
1961-62	83,280	5,974	3,357	92,611	83,085	160,059	163,416	
1962-63	(c)60,069	..	..	60,069	43,571	..	43,571	
1963-64	..	..	..	..	81,804	5,775	87,579	
1964-65	..	295	..	295	73,754	..	73,754	
1965-66	..	17,749	..	17,749	(c)16,498	..	16,498	
1966-67	..	..	1,149	1,149	..	5,974	1,149	
1969-70	..	..	..	..	..	17,749	17,749	
1974-75	..	..	..	..	..	295	295	
1975-76	..	9,795	..	9,795	..	..	..	
1977-78	..	..	..	..	..	9,795	9,795	
War (1939-45) Savings and Savings Certificates—								
Seven years series ..	27,211	..	..	27,211	27,211	..	27,211	
Five years series ..	14,599	..	..	14,599	14,599	..	14,599	
War (1939-45) Savings Stamps .. .. .	134	..	..	134	134	..	134	
National Savings Stamps	18	..	..	18	18	..	18	
War (1914-18) Savings Stamps .. .. .	14	..	..	14	14	..	14	
Peace Savings Certificates	103	..	..	103	103	..	103	
Overdue .. .. .	1,164	..	..	1,164	1,164	..	1,164	
Half-yearly .. .. .	147	..	(d)12,830	12,977	147	..	(d)12,830	
Total .. .. .	1,776,937	63,743	28,139	1,868,819	1,776,937	63,743	28,139 1,868,819	

(a) See notes to table on page 728. (b) Includes Short-term Debt. (c) Includes Advance Loan Subscriptions, £1,417,000 (d) International Bank Dollar Loan, to be repaid in half-yearly instalments from 1st September, 1955 to 1st September, 1975.



(ii) *States.* Particulars of State Public Debt at 30th June, 1952 have been classified in the following table according to the earliest and the latest years of maturity.

**STATE PUBLIC DEBT AT 30th JUNE, 1952 : CLASSIFIED ACCORDING TO EARLIEST AND LATEST YEARS OF MATURITY.**

Year of Maturity.	Earliest Year.				Latest Year.			
	Maturing in—			Total.	Maturing in—			Total.
	Aus- tralia.	London.	New York.		Aus- tralia.	London.	New York.	
£A.'000.	£ Stg. '000.	£'000.	£'000.	£A.'000.	£ Stg. '000.	£'000.	£'000.	
Before 30th June, 1952	143,248	27,681	..	170,929	..	..	..	..
1952-53 .. ..	60,725	(a)22,868	4,793	88,386	19,866	(a)34,658	..	54,524
1953-54 .. ..	55,793	21,084	..	76,877	34,104	10,796	..	44,900
1954-55 .. ..	157,160	20,141	..	177,301	198,018	3,205	..	201,223
1955-56 .. ..	12,650	16,066	..	28,716	22,693	..	4,793	27,486
1956-57 .. ..	65,412	..	6,420	71,832	19,006	..	6,420	25,426
1957-58 .. ..	39,508	..	..	39,508	37,674	20,141	..	57,815
1958-59 .. ..	1,668	14,055	..	15,723	37,62	21,084	..	58,846
1959-60 .. ..	2,732	..	..	2,732	78,390	..	..	78,390
1960-61 .. ..	111,500	..	..	111,500	66,309	18,575	..	84,884
1961-62 .. ..	133,864	23,962	5,373	213,199	31,150	..	5,373	36,523
1962-63 .. ..	169,773	12,870	..	182,643	60,209	..	..	60,209
1963-64 .. ..	3,604	10,000	..	13,604	110,825	..	..	110,825
1964-65 .. ..	1,564	12,974	..	14,538	183,630	12,870	..	196,500
1965-66 .. ..	1,084	55,028	..	56,112	110,649	10,000	..	120,649
1966-67 .. ..	2,450	..	7,406	9,856	2,450	23,962	7,406	33,818
1967-68 .. ..	2,202	15,949	..	18,151	2,202	14,850	..	17,052
1968-69 .. ..	2,455	..	..	2,455	2,455	..	..	2,455
1969-70 .. ..	3,242	18,441	..	21,683	3,242	42,068	..	45,310
1970-71 .. ..	2,369	..	..	2,369	2,369	11,546	..	13,915
1971-72 .. ..	2,177	12,225	..	14,402	2,177	15,949	..	18,126
1972-73 .. ..	2,711	..	..	2,711	2,711	..	..	2,711
1973-74 .. ..	3,336	..	..	3,336	3,336	12,225	..	15,561
1974-75 .. ..	4,378	..	..	4,378	4,378	31,415	..	35,793
1975-76 .. ..	7,338	4,351	..	11,689	7,338	..	..	7,338
1976-77 .. ..	6,001	..	..	6,001	6,001	..	..	6,001
1977-78 .. ..	1,839	..	..	1,839	1,839	4,351	..	6,190
1978-79 .. ..	1,921	..	..	1,921	1,921	..	..	1,921
1979-80 .. ..	2,008	..	..	2,008	2,008	..	..	2,008
1980-81 .. ..	2,098	..	..	2,098	2,098	..	..	2,098
1981-82 .. ..	2,193	..	..	2,193	2,193	..	..	2,193
1982-83 .. ..	1,661	..	..	1,661	1,661	..	..	1,661
Overdue .. ..	..	2	..	2	..	2	..	2
Interminable .. ..	..	1	..	1	..	1	..	1
Treasurer's option .. ..	..	2,397	..	2,397	..	2,397	..	2,397
Half-yearly drawings .. ..	10,560	..	..	10,560	10,560	..	..	10,560
Indefinite .. ..	10,365	..	..	10,365	10,365	..	..	10,365
Total .. ..	1,081,580	290,095	23,992	1,395,676	1,081,589	290,095	23,992	1,395,676

(a) Includes short-term debt, £22,868,000.

Under the Financial Agreement Act 1944, Treasury Bills issued to meet State revenue deficits accruing between 1st July, 1928 and 30th June, 1935 were retired on 31st December, 1944. In place of those not redeemed, one per cent. debentures amounting to £43,018,000 were issued. One of these debentures will mature in each year up to 1983. Particulars of these debentures are included under their respective years of maturity in the tables above.

**8. Short-term Debt.**—(i) *Amount.* Particulars of the short-term debt (Treasury Bills and Debentures) of the Commonwealth and States in London and in Australia at 30th June, 1939 and at intervals from 30th June, 1948 to 30th June, 1952 are shown in the following table. This debt is included in the public debt as shown elsewhere.

## COMMONWEALTH AND STATE SHORT-TERM DEBT.(a)

Date.	Maturing in Australia. (£ A.'000.)			Maturing in London. (£Stg.'000.)		
	Commonwealth.	States.	Total.	Commonwealth.	States.	Total.
30th June, 1939 ..	..	50,228	50,228	4,220	23,155	27,375
„ „ 1948 ..	208,280	..	208,280	1,970	22,868	24,838
„ „ 1949 ..	123,280	..	123,280	1,720	22,868	24,588
„ „ 1950 ..	108,280	..	108,280	1,470	22,868	24,338
„ „ 1951 ..	108,280	2,400	110,680	1,220	22,868	24,088
30th September, 1951	103,280	2,500	105,780	1,220	22,868	24,088
31st December, 1951	233,280	6,000	239,280	970	22,868	23,838
31st March, 1952 ..	258,280	6,000	264,280	970	22,868	23,838
30th June, 1952 ..	153,280	..	153,280	970	22,868	23,838

(a) Excludes Overdrafts and Internal Treasury Bills.

(ii) *Interest Rates.* (a) *London.* The rates of interest payable on Treasury Bills and Debentures in London during the following periods were: 1938-39—minimum rate, 2 per cent., maximum rate, 2½ per cent.; 1947-48 to 1950-51—minimum rate, 2 per cent., maximum rate, 2½ per cent. On 8th November, 1951 the rates were increased to—minimum rate, 2½ per cent., maximum rate, 2¾ per cent.

(b) *Australia.* The Treasury Bill rates in Australia were as follows:—1¼ per cent. from 1st January, 1935; 1½ per cent. from 1st May, 1940; 1¼ per cent. from 1st May, 1943; 1 per cent. from 1st March, 1945; ¾ per cent. from 1st May, 1949; 1 per cent. from 1st August, 1952.

9. *State and Municipal and Semi-Governmental Authority Public Debt.*—For the reasons indicated on page 726 direct comparisons of the debts of the several States should be made with caution. The table following shows, for 1938-39 and 1947-48 to 1950-51, particulars of the debts of the States and the debts due to the public by municipal and semi-governmental authorities in each State.

## STATE AND MUNICIPAL AND SEMI-GOVERNMENTAL AUTHORITY PUBLIC DEBT.

State.	State.	Municipal. (a)	Semi-Governmental. (a)	Total.	
DEBT. (£'000.) 1950-51.					
New South Wales ..	462,241	39,122	108,280	609,643	
Victoria ..	250,933	15,058	123,125	389,116	
Queensland ..	166,157	36,593	13,535	216,285	
South Australia ..	148,388	699	11,253	160,340	
Western Australia ..	123,186	2,538	392	126,116	
Tasmania ..	57,433	4,191	1,302	62,926	
Total	1950-51 ..	1,208,338	98,201	257,887	1,564,426
	1949-50 ..	1,078,809	84,445	206,622	1,369,876
	1948-49 ..	1,008,884	74,201	176,561	1,259,646
	1947-48 ..	964,802	67,071	161,390	1,193,263
	1938-39 ..	897,772	78,126	120,512	1,096,410

## DEBT PER HEAD OF POPULATION.

(£.) 1950-51.					
New South Wales ..	139.3	11.8	32.7	183.8	
Victoria ..	110.6	6.6	54.3	171.5	
Queensland ..	137.2	30.2	11.2	178.6	
South Australia ..	206.1	1.0	15.6	222.7	
Western Australia ..	211.9	4.3	0.7	216.9	
Tasmania ..	197.5	14.4	4.5	216.4	
Total	1950-51 ..	144.0	11.7	30.8	186.5
	1949-50 ..	132.4	10.4	25.3	168.1
	1948-49 ..	128.1	9.4	22.4	159.9
	1947-48 ..	125.6	8.7	21.0	155.3
	1938-39 ..	129.2	11.2	17.4	157.8

(a) Due to the public and excludes amounts due to Central Government. Includes bank overdrafts.

## § 4. Commonwealth Loan Raisings.

1. New Loans Raised, 1947-48 to 1951-52.—Under the Financial Agreement between the Commonwealth and the States, the Commonwealth is responsible for raising all loan moneys required by both the Commonwealth and the State Governments. Details of loan transactions given in this section relate, therefore, to all loans raised for the Commonwealth and the States. The following table shows details of new loans raised in Australia by the Commonwealth during the five years 1947-48 to 1951-52. No new loans were raised in London during this period, and the only new loan raised in New York was that from the International Bank for Reconstruction and Development, amounting to \$100,000,000, raised in May, 1951 and repayable in half-yearly instalments from 1st September, 1955 to 1st September, 1975. The rate of interest is 4½ per cent. Of this loan \$62,439,164 had been drawn at 30th June, 1952.

## COMMONWEALTH NEW LOANS(a) RAISED IN AUSTRALIA.

Month of Raising.	Amount Invited.	Number of Subscribers.	Amount Subscribed.	Rate of Interest per annum.	Year of Maturity.	Price of Issue per £100.	Allocation of Proceeds.		
							Commonwealth.		States.
							War (1939-45) and Repatriation Services.	Other Purposes.	
	£'000.		£'000.	%		£	£'000.	£'000.	£'000.
1947-48—									
October (Fourth Security Loan) ..	48,030	95,327	61,223	3½	1956-59	100	21,611	13,012	26,600
April (Fifth Security Loan) ..	35,000	87,234	43,294	3½	1957-60	100	6,621	7,645	29,028
1948-49—									
September (Sixth Security Loan) ..	15,000	84,472	15,052	3½	1962	100	52	..	15,000
March (Seventh Security Loan) ..	43,239	54,860	{ 11,982 49,842	{ 2 3½	{ 1952 1960-63	{ 100	{ 5,539	{ 32,140	{ 24,145
1949-50—									
September (Eighth Security Loan) ..	25,912	63,504	{ 8,035 37,132	{ 2 3½	{ 1953 1960-63	{ 100	{ ..	{ ..	{ 45,167
March (Ninth Security Loan) ..	40,875	46,066	{ 8,433 52,245	{ 2 3½	{ 1953 1961-64	{ 100	{ 11,887	{ 17,215	{ 31,576
1950-51—									
August (Tenth Security Loan) ..	12,911	46,302	{ 6,531 41,770	{ 2 3½	{ 1953 1961-64	{ 100	{ 1,301	{ ..	{ 47,000
November (Eleventh Security Loan) ..	21,253	32,160	{ 1,976 28,024	{ 2 3½	{ 1953 1961-64	{ 100	{ ..	{ ..	{ 30,000
May (Twelfth Security Loan) ..	40,000	46,192	{ 3,275 45,991	{ 2 3½	{ 1954 1962-65	{ 100 99	{ 328	{ ..	{ 48,938
1951-52—									
August (Thirteenth Security Loan) ..	40,000	22,628	{ 8,911 23,589	{ 2 3½	{ 1954 1962-65	{ 100	{ ..	{ 3,840	{ 28,660
November (Fourteenth Security Loan) ..	13,233	12,909	{ 2,794 10,752	{ 2 3½	{ 1954 1962-65	{ 100	{ ..	{ 1,470	{ 12,076
March (Fifteenth Security Loan) ..	30,533	19,449	{ 5,277 12,486	{ 2 3½	{ 1955 1962-65	{ 100	{ ..	{ 1,901	{ 15,862
June .. ..	160,000	(b)	160,000	2	1955	100	7,135	16,367	136,498

(a) Includes loans raised for redemption of Treasury Bills, but excludes conversion loans, loans for redemption of debt maturing in London, short-term debt and certain miscellaneous debt (see below).  
(b) Special Issue (taken up by National Debt Sinking Fund, £125.5 million, and other Commonwealth Trust Funds).

The loan of £160,000,000 issued in June, 1952 was for the purpose of fulfilling an undertaking given by the Commonwealth that the States would have access to loan funds

for their works programmes during 1951-52 up to the approved Loan Council borrowing programme of £225,287,000. Subscriptions to this special loan came from the following sources :—

National Debt Commission—	£
Investment of surplus received from Commonwealth Revenue	98,500,000
Investment of Australian currency proceeds of International Bank Loan .. .. .	27,000,000
Commonwealth Trust Moneys—Investment .. .. .	34,500,000
	160,000,000

Finance of the approved Loan Council programme in 1951-52 was therefore provided from the following sources—

Public Loans, domestic raisings, etc. .. .. .	72,422,000
Special Commonwealth Loan .. .. .	152,865,000
	225,287,000

In addition to the new loans raised shown in the foregoing table, and the redemption and conversion loans shown in the following table, there were other miscellaneous debt operations during 1951-52, viz. :—Savings Certificates and War Saving Certificates (Five and Seven Years' Series), decrease of £6,306,000 ; War Savings and Savings Stamps, decrease of £3,000 ; " Over the Counter Sales " (small amounts borrowed by the States by virtue of certain statutory rights), £1,844,000. Advance loan subscriptions in hand increased from £1,026,000 at the end of 1950-51 to £1,417,000 at the end of 1951-52.

2. Conversion and Redemption Loans, 1947-48 to 1951-52.—(i) *Australia*. Particulars of conversion loans raised in Australia during the five years 1947-48 to 1951-52 are given in the following table :—

**COMMONWEALTH CONVERSION AND REDEMPTION LOANS RAISED IN AUSTRALIA.**

Month of Raising.	Old Loan.		New Loan.				Reduction in Annual Liability for Interest.
	Amount.	Rate of Interest per annum.	Amount.	Rate of Interest per annum.	Price of Issue per £100.	Year of Maturity.	
	£A.'000.	%	£A.'000.	%	£		£A.'000.
1947-48—							
August ..	6,422	3 $\frac{1}{2}$	28,111	3 $\frac{1}{2}$	100	1956-59	238
October ..	21,689	4					
December ..	19,015	2 $\frac{1}{2}$					
	6,000	2 $\frac{1}{2}$	6,000	3 $\frac{1}{2}$	100	1956-59	- 38
1948-49—							
September ..	55,231	2 $\frac{1}{2}$	85,038	3 $\frac{1}{2}$	100	1962	-293
	14,168	3					
	7,581	3 $\frac{1}{2}$					
	8,058	3 $\frac{1}{2}$					
March ..	17,291	2	33,577	2	100	1952	-188
	59,470	2 $\frac{1}{2}$	43,184	3 $\frac{1}{2}$	100	1960-63	
1949-50—							
September ..	15,262	2	29,609	2	100	1953	- 51
	50,268	2 $\frac{1}{2}$					
	12,104	3 $\frac{1}{2}$					
	11,455	3 $\frac{1}{2}$	59,480	3 $\frac{1}{2}$	100	1960-63	
March ..	4,125	2	2,235	2	100	1953	- 21
			1,890	3 $\frac{1}{2}$	100	1961-64	
1950-51—							
August ..	9,285	3 $\frac{1}{2}$	9,715	2	100	1953	400
	27,817	4					
	116,828	4					
November ..			14,698	2	100	1953	1,187
			102,130	3 $\frac{1}{2}$	100	1961-64	
1951-52—							
November ..	26,767	3 $\frac{1}{2}$	5,077	2	100	1954	89
			21,690	3 $\frac{1}{2}$	100	1962-65	
March ..	44,467	2	33,654	2	100	1955	-189
			10,813	3 $\frac{1}{2}$	100	1962-65	

NOTE.—Minus sign (-) indicates an increase in the annual liability for interest.

(ii) *London*. The following table shows particulars of loans raised in Australia and London during the years 1947-48 to 1950-51 for the purpose of redeeming and converting London loans. There were no loans raised for this purpose in 1951-52.

## COMMONWEALTH LOANS RAISED FOR THE CONVERSION AND REDEMPTION OF LOANS MATURING IN LONDON.

Month of Raising.	Old Loan.		New Loan.				Reduction in Annual Liability for Interest and Exchange. (a)	
	Amount.	Rate of Interest per annum.	Amount raised in—		Rate of Interest per annum.	Price of Issue per £100.		Year of Maturity.
			Australia.	London.				
	£ Stg. '000.	%	£A. '000.	£ Stg. '000.	%	£	£A. '000.	
1947-48— January ..	15,870	5½	{ .. 3,761	12,870 ..	3 3½	98½ 100	1963-65 1960	} 443
1948-49— August ..	13,988	4	{ .. 5,000	10,000 ..	3 3½	100 100	1964-66 1957-60	
January ..	{ 5,170 14,775	{ 3 3½	{ .. 6,200	{ 15,000 ..	{ 3 3½	{ 100 100	{ 1965-67 1962	} 131
January ..	{ 1,959 16,027	{ 3½ 4	{ .. 6,269	{ 12,986 ..	{ 3 3½	{ 100 100	{ 1972-74 1960-63	
March ..	19,500	3½	{ .. 5,642	{ 15,000 ..	{ 3 3½	{ 100 100	{ 1975-77 1960-63	} 176
1949-50— October ..	5,583	3½	7,000	..	3½	100	1960-63	
1950-51— July ..	9,400	3½	11,785	..	3½	100	1964	44

(a) No account has been taken of cost of issuing the conversion loans at a discount. Exchange calculated at £A. 125.375 = £ stg. 100.

(iii) *New York.* During 1946-47 four loans totalling \$128,000,000 were raised in New York to redeem loans which became due for redemption or which the Commonwealth had the option of redeeming. Details of these loans are given in the last issue of the Year Book (page 836). No further loans were raised in New York for this purpose during the five years 1947-48 to 1951-52.

3. *International Bank for Reconstruction and Development Loan.*—To provide dollar funds for the purchase of certain types of capital equipment and plant which were indispensable to the furtherance of development in Australia and which could only be obtained in the United States of America and Canada, the Commonwealth Government, in August, 1950, arranged a loan of \$100,000,000 from the International Bank for Reconstruction and Development. The loan is for a term of 25 years with interest at 4½ per cent. per annum on the amount of the loan withdrawn and outstanding from time to time. In addition there is a commitment charge of ¾ per cent. per annum on the amount of the loan not withdrawn from time to time. Repayment of the loan is to be made in half-yearly instalments commencing on 1st September, 1955. The last instalment is payable on 1st September, 1975. Up to 30th June, 1952, \$62,439,164 had been drawn on the loan.

In July, 1952, a further loan of \$50,000,000 was arranged. This loan is for a term of 20 years with interest at 4½ per cent. per annum on the amount of the loan withdrawn and outstanding from time to time. There is also a commitment charge of ¾ per cent. per annum similar to that of the previous loan. Repayment of the loan is to be made in half-yearly instalments from 1st June, 1957 to 1st December, 1972.

The capital equipment and plant purchased from the proceeds of these loans are made available to Commonwealth and State Government departments and agencies and private firms and individuals for use in the development of Australian resources. Subject to a special import licence being obtained, the goods are imported and distributed through normal channels and payment made through the Australian banking system. Periodically, schedules of dollar payments for goods imported against loan licences are submitted to the International Bank for Reconstruction and Development. These schedules form the basis for periodical drawings by the Commonwealth against the loan. The amounts drawn are paid to the Commonwealth Bank to replace the dollar funds used in making the purchases. In return, the Commonwealth Government receives Australian currency from the Commonwealth Bank. This is paid to the Commonwealth National Debt Sinking Fund, out of which the loans will subsequently be redeemed.

4. Summary of Loan Transactions, 1942-43 to 1951-52.—The following table contains a summary of loan transactions on behalf of the Commonwealth and State Governments during the last ten years.

COMMONWEALTH LOAN TRANSACTIONS : SUMMARY.

Year ended 30th June.	New Loans.				Net Increase in Short-term Debt in—			Loans Raised for Conversion or Redemption of Existing Debt Maturing in—			
	Public Loans (a) Raised in—		Net Increase of Miscellaneous Debt in— (b)		Australia.		London.	Australia.		New York.	
	Aus-tralia.	New York.	Aus-tralia.	Lon-don.	Public.	In-ternal.		Aus-tralia.	Lon-don.		
	£A.'000.	\$'000.	£A.'000.	£ Stg.'000.	£A.'000.	£A.'000.	£ Stg.'000.	£A.'000.	£A.'000.	£ Stg.'000.	\$'000.
1943	184,692	..	31,304	254	172,886	8,500	1,399	21,783	..	16,451	..
1944	276,949	..	6,952	12,007	77,905	42,718	1,112	12,252	5,631	..	..
1945	264,245	..	14,218	..	32,745	32,104	250	40,666	12,650	..	..
1946	172,817	..	2,390	347	330	..	250	21,157	43,017	74,055	..
1947	105,164	..	8,086	..	65,000	25,000	250	31,227	5,334	34,591	128,000
1948	104,518	..	1,719	..	70,000	20,100	250	53,126	3,761	12,870	..
1949	76,876	..	9,202	..	85,000	41,400	250	161,799	23,111	52,986	..
1950	105,845	..	4,788	..	15,000	19,000	250	93,213	7,000	..	..
1951	127,580	9,059	30,183	..	2,400	87,000	250	153,928	11,785	..	..
1952	223,809	53,380	4,975	..	42,600	37,000	250	71,234	..	..	..

(a) Includes loans raised for redemption of Treasury Bills. No new loans were raised in London during this period. (b) "Over the Counter Sales" and net increase in debt on account of Citizens' National Emergency Loans, War Savings and Savings Certificates and Stamps, National Savings Bonds and Stamps, and Advance Loan Subscriptions. Debt in London includes Citizens' National Emergency Loans and debt to United Kingdom Government. (c) Amount drawn of \$100,000,000 loan from International Bank for Reconstruction and Development. (d) Includes special loan of £160,000,000 raised from Commonwealth Trust Funds.

NOTE.—Minus sign (—) denotes a decrease in debt.

§ 5. National Debt Sinking Fund.

1. Commonwealth Public Debt.—Particulars relating to the creation of sinking funds are included in issues of the Official Year Book prior to No. 23.

The old sinking funds were merged in the National Debt Sinking Fund on 11th August, 1923. Particulars of receipts and expenditure of the Commonwealth Account for the years 1938-39 and 1947-48 to 1951-52 were as follows:—

NATIONAL DEBT SINKING FUND : COMMONWEALTH ACCOUNT.  
(£'000.)

Items.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
<b>Receipts—</b>						
From Consolidated Revenue	3,918	15,456	16,083	16,146	17,225	(a) 116,928
Loans and Advances Repaid	17	454	766	580	4,381	2,094
War Service Homes Money Repaid	629	1,115	1,357	2,156	3,147	4,046
Half Net Profit Commonwealth Bank	321	965	1,082	1,116	1,140	1,336
Reparation Moneys	..	..	..	500	..	..
Interest on Investments	32	31	42	104	70	76
Loan (International Bank for Reconstruction and Development) Act	..	..	..	..	4,044	23,831
Other Contributions	14	12	12	12	12	12
<b>Total Receipts</b>	<b>4,931</b>	<b>18,033</b>	<b>19,342</b>	<b>20,614</b>	<b>30,019</b>	<b>148,323</b>
<b>Expenditure—</b>						
Securities Repurchased and Redeemed in—						
Australia	4,230	23,281	3,917	26,916	28,762	25,382
London	608	371	314	610	1,688	411
New York	214	90	78	118	449	448
<b>Total Expenditure</b>	<b>5,052</b>	<b>23,742</b>	<b>4,309</b>	<b>27,644</b>	<b>30,899</b>	<b>26,241</b>
Balance at 30th June	1,131	2,874	17,907	10,877	9,997	132,079
Face Value of Securities Repurchased and Redeemed in—						
Australia	4,199	23,201	3,900	26,872	28,828	26,882
London	498	294	250	496	1,409	335
New York	167	66	57	68	210	211
<b>Total Face Value</b>	<b>4,864</b>	<b>23,561</b>	<b>4,207</b>	<b>27,436</b>	<b>30,447</b>	<b>27,428</b>

(a) Includes £98,500,000 Consolidated Revenue Fund surplus.

2. *State Public Debt.*—(i) *States, 1951-52.* Prior to the passing of the Financial Agreement Act 1928, the practice by the States of providing sinking funds had been consistently followed in Western Australia only. This Act contains provisions for the establishment of a sinking fund on States' debts (see p. 720). Particulars of the transactions of the National Debt Sinking Fund (States' Account) for each State during the year 1951-52 are shown below.

**NATIONAL DEBT SINKING FUND : STATE ACCOUNT, 1951-52.**  
(£'000.)

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<b>Receipts—</b>							
<b>Contributions under Financial Agreement—</b>							
Commonwealth .. .. .	980	528	334	316	273	126	2,557
States .. .. .	3,926	2,231	1,461	1,281	1,022	404	10,325
Interest from States on cancelled Securities .. .. .	14	10	4	6	5	2	41
Special Contributions by States .. .. .	109	34	..	1	1	6	151
Interest on Investments, etc. .. .. .	1	1	1	1	..	..	4
<b>Total Receipts .. .. .</b>	<b>5,030</b>	<b>2,804</b>	<b>1,800</b>	<b>1,605</b>	<b>1,301</b>	<b>538</b>	<b>13,078</b>
<b>Expenditure—</b>							
<b>Securities Repurchased and Redeemed in—</b>							
Australia .. .. .	3,410	2,164	1,192	1,231	838	445	9,280
London .. .. .	64	79	76	96	142	17	474
New York .. .. .	243	59	89	22	12	5	430
<b>Total Expenditure .. .. .</b>	<b>3,717</b>	<b>2,302</b>	<b>1,357</b>	<b>1,349</b>	<b>992</b>	<b>467</b>	<b>10,184</b>
Balance at 30th June, 1952 .. .. .	1,381	574	494	312	318	100	3,179
<b>Face Value of Securities Repurchased and Redeemed in—</b>							
Australia .. .. .	3,568	2,266	1,235	1,268	861	463	9,661
London .. .. .	57	71	66	86	125	15	420
New York .. .. .	124	30	46	11	6	3	220
<b>Total Face Value .. .. .</b>	<b>3,749</b>	<b>2,367</b>	<b>1,347</b>	<b>1,365</b>	<b>992</b>	<b>481</b>	<b>10,301</b>

(ii) *All States, 1938-39 and 1947-48 to 1951-52.* The following table is a summary of the transactions of the National Debt Sinking Fund (State Account) for the years 1938-39 and 1947-48 to 1951-52 :—

**NATIONAL DEBT SINKING FUND : STATE ACCOUNT.**  
(£'000.)

Items.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
<b>Receipts—</b>						
<b>Contributions under Financial Agreement—</b>						
Commonwealth .. .. .	1,478	1,732	1,851	2,006	2,241	2,557
States .. .. .	4,327	7,653	8,109	8,747	9,418	10,325
Interest from States on cancelled Securities .. .. .	15	16	29	27	25	41
Commonwealth Contributions under Federal Aids Roads and Works Act .. .. .	69	68	20	..	..	..
Special Contributions by States .. .. .	61	137	174	142	147	151
Interest on Investments, etc. .. .. .	56	19	11	6	8	4
<b>Total Receipts .. .. .</b>	<b>6,006</b>	<b>9,625</b>	<b>10,194</b>	<b>10,928</b>	<b>11,839</b>	<b>13,078</b>
<b>Expenditure—</b>						
<b>Securities Repurchased and Redeemed in—</b>						
Australia .. .. .	4,008	8,950	8,337	6,509	8,877	9,280
London .. .. .	1,722	2,902	2,393	1,449	5,307	474
New York .. .. .	347	444	256	393	462	430
<b>Total Expenditure .. .. .</b>	<b>6,077</b>	<b>12,296</b>	<b>10,986</b>	<b>8,351</b>	<b>14,646</b>	<b>10,184</b>
Balance at 30th June .. .. .	1,885	1,307	515	3,092	285	3,179
<b>Face Value of Securities Repurchased and Redeemed in—</b>						
Australia .. .. .	3,996	8,930	8,292	6,480	8,859	9,661
London .. .. .	1,561	2,309	1,909	1,182	4,345	420
New York .. .. .	285	314	185	223	229	220
<b>Total Face Value .. .. .</b>	<b>5,842</b>	<b>11,553</b>	<b>10,386</b>	<b>7,885</b>	<b>13,433</b>	<b>10,301</b>

Particulars of the Financial Agreement between the Commonwealth and the States and of the provisions regarding Sinking Fund contributions are shown on page 719 of this issue and in the *Finance Bulletins* issued by this Bureau.

## E. TAXES ON INCOME.

NOTE—The following section was written prior to the introduction of the 1953-54 Commonwealth Budget, when certain changes in income taxes were made. For a description of the taxes inclusive of these changes see Appendix to this volume.

1. **General.**—A description of the development of income taxes in Australia appeared in Official Year Book No. 35, p. 926. Since July, 1942, the Commonwealth, under the uniform tax arrangement, has been the only authority imposing taxes on income. Taxes on income are assessed and imposed under the Income Tax and Social Services Contribution Assessment Act 1936-1953 and the Income Tax and Social Services Contribution Act 1952. The latter act is an annual measure and its primary purpose is to declare the rates of tax and contribution payable for the financial year. The rates for the financial year are levied, in the case of individuals, on the income of that year and, in the case of companies, on the income of the preceding year. Thus tax for the financial year 1952-53 is levied on the income of individuals in 1952-53 and on the income of companies in 1951-52.

2. **Present Taxes.**—Commencing with the 1950-51 financial year the two taxes on incomes of individuals (Income Tax and Social Services Contribution) were combined into a single tax known as Income Tax and Social Services Contribution. For the financial year 1950-51 companies were liable to pay primary tax and tax on undistributed income. Public companies were also liable to a super tax. For the financial year 1951-52 the super tax and tax on the undistributed income of public companies were discontinued. However, in the latter year provision was made for an additional tax on the income of certain public companies and an advance payment of tax for 1952-53.

3. **Assessable Income.**—Income taxes in Australia are levied, primarily, on all income derived from Australian sources by any person, rather than on income derived from all sources by Australian residents. Thus a non-resident is taxed on income derived in Australia, while a resident is, in general, not taxed on income other than dividends derived from overseas if the income is taxed in the country in which it is derived.

Certain types of Australian income are exempt from tax in Australia, the more important being (i) pensions, child endowment and other payments under the Social Services Consolidation Act 1947-1950, (ii) income from gold-mining and uranium mining, (iii) twenty per cent. of certain mining profits, (iv) dividends paid out of exempt mining profits, and (v) pay and allowances earned by a member of the Defence Forces while serving in Korea after 26th June, 1950 and Malaya after 28th June, 1950. Commencing with the year 1951-52, income received from a scholarship, bursary or other educational allowance is also exempt.

No amount is included in assessable income on account of a house occupied by its owner. Profits derived from the sale of property are not assessable income if such property was not purchased with a view to resale at a profit.

Assessable income is divided into two main groups—personal exertion and property. Personal exertion income includes all wage, salary, business and professional incomes, while property income includes all rents, dividends and interest. A further tax on property income is imposed on individuals in cases where the total taxable income exceeds £400 and the amount of property income exceeds £100 (see page 739). No distinction between personal exertion and property income is made for companies.

Expenses incurred in earning income, certain subscriptions to business associations and trade union dues, are allowable deductions. Losses incurred in previous years may be carried forward as a deduction.

Because of uncongenial climatic conditions, isolation and high cost of living, taxpayers living in certain areas are allowed an additional deduction. Two zones have been prescribed, and the allowances are Zone A, £120 and Zone B, £20.

Income Tax and Social Services Contribution is levied on the taxable income remaining after making these deductions and the concessional deductions to which reference is made in paragraph 4 following.

4. **Concessional Deductions.**—Prior to the financial year 1950-51, concessional allowances for dependants, medical expenses, life assurance and superannuation contributions, etc., were made by way of rebates of Income Tax or by way of concessional rates for Social Services Contribution. Since 1950-51 these allowances have been made by way of a deduction from income. The maximum deduction allowed for each dependant, parent or a housekeeper employed by the taxpayer for the financial years 1950-51 to 1952-53 is shown in the following table.



## CONCESSIONAL DEDUCTIONS FOR DEPENDANTS, ETC.

(£.)

Dependant, etc. (Resident).	Maximum Deduction. (a)
Spouse .. .. .	104
Daughter-housekeeper (b) .. .. .	104
Housekeeper (b) having care of taxpayer's children under 16 years of age .. .. .	104
Parent .. .. .	104
One child under 16 years of age .. .. .	78
Other children under 16 years of age .. .. .	52
Invalid relative(c) .. .. .	78
Child 16 to 21 years receiving full-time education .. .. .	78

(a) These deductions are allowed only if the dependant or parent is a resident of Australia. If the dependant derives income or is maintained for part only of the year a partial deduction is allowed.

(b) Of a widower or widow. (c) Child, step-child, brother or sister over 16 years of age.

Medical expenses paid by a taxpayer who is a resident, in respect of himself, a dependant, or other child under 21 years of age, up to £100 for each person, are allowed as a concessional deduction. Medical expenses include payments made to a legally qualified medical practitioner, nurse or chemist, or a hospital, in respect of an illness or operation, payments for dental services not exceeding £20 for any one person, payment for therapeutic treatment and eye tests, expenditure on medical or surgical appliances, artificial limbs or eyes, hearing aids and spectacles, and the remuneration of an attendant of a person who is blind or confined to bed or invalid chair.

Payments of life, etc., insurance premiums and contributions to superannuation, medical, hospital and similar funds and friendly societies, not exceeding an aggregate of £200, and funeral expenses of a dependant not exceeding £30 are allowed as concessional deductions if the taxpayer is a resident. In 1952-53 concessional deductions were extended to cover payments made by a resident taxpayer to a school, college, university or tutor on behalf of dependent student children who are less than 21 years of age (maximum £50 per dependant).

In addition to concessional deductions, all taxpayers (residents and non-residents) are allowed a deduction from income of rates and taxes on land which are annually assessed, gifts to charitable, benevolent or patriotic funds and one-third of amounts paid as calls to certain mining, forestry and oil-prospecting companies.

5. **Effective Exemptions from Tax.**—For the financial years 1950-51 to 1952-53 resident taxpayers without dependants were exempt from Income Tax and Social Services Contribution if their income did not exceed £104. The effect of the deductions for dependants was to exempt taxpayers up to the incomes shown hereunder in the years 1950-51 to 1952-53. For comparison, the effect of concessions for dependants for the years 1948-49 and 1949-50 are also shown.

## RESIDENT TAXPAYERS: EFFECTIVE EXEMPTIONS FROM TAX.

(£.)

Taxpayer with—	Social Services Contribution— Financial Years 1948-49 and 1949-50.	Income Tax and Social Services Contribution— Financial Years 1950-51 to 1952-53.
No dependants .. .. .	104	104
Wife .. .. .	200	208
„ and one child .. .. .	283	286
„ „ two children .. .. .	317	338
„ „ three children .. .. .	350	390
„ „ four children .. .. .	400	442

Commencing with the 1951-52 financial year, an aged person (i.e. a man who has attained the age of 65 years or a woman who has attained the age of 60 years) is exempt from Income Tax and Social Services Contribution if his net income (i.e. gross income less expenses of earning that income) does not exceed £234. A married couple both of whom qualify by age for the concession, are exempt from tax if their combined net incomes do not exceed £468. For the 1952-53 financial year, these exemptions were raised to £254 and £507 respectively.

6. Rates of Income Tax and Social Services Contribution on Individuals.—The following table shows the rates of income tax and social services contribution for the financial year 1950-51. The same rates operated for the 1951-52 financial year, but additional tax and contribution of 10 per cent. of the tax payable, prior to the allowance of any rebate or credit, was imposed. No change was made in tax rates for 1952-53 but the additional tax of 10 per cent. was abolished, leaving the effective rates the same as for the 1950-51 financial year.

**INCOME TAX AND SOCIAL SERVICES CONTRIBUTION—INDIVIDUALS: RATES OF INCOME TAX AND SOCIAL SERVICES CONTRIBUTION—1950-51 TO 1952-53.**

Total Taxable Income.		Column 3.		Column 4.	
Column 1.	Column 2.	Tax and Contribution on amount set out in Column 1.		Tax and Contribution on Remainder of Taxable Income.	
Not less than—	Not more than—				
£	£	£	s. d.	£	
Nil	100	Nil	plus	1d. in each £1	
100	150	0	8 4	6d. in each £1 in excess of	100
150	200	1	13 4	11d. " " "	150
200	250	3	19 2	16d. " " "	200
250	300	7	5 10	21d. " " "	250
300	400	11	13 4	26d. " " "	300
400	500	22	10 0	32d. " " "	400
500	600	35	16 8	38d. " " "	500
600	700	51	13 4	44d. " " "	600
700	800	70	0 0	48d. " " "	700
800	900	90	0 0	52d. " " "	800
900	1,000	111	13 4	56d. " " "	900
1,000	1,200	135	0 0	64d. " " "	1,000
1,200	1,400	188	6 8	72d. " " "	1,200
1,400	1,600	248	6 8	80d. " " "	1,400
1,600	1,800	315	0 0	88d. " " "	1,600
1,800	2,000	388	6 8	96d. " " "	1,800
2,000	2,400	468	6 8	104d. " " "	2,000
2,400	2,800	641	13 4	112d. " " "	2,400
2,800	3,200	828	6 8	120d. " " "	2,800
3,200	3,600	1,028	6 8	128d. " " "	3,200
3,600	4,000	1,241	13 4	136d. " " "	3,600
4,000	4,400	1,468	6 8	144d. " " "	4,000
4,400	5,000	1,708	6 8	152d. " " "	4,400
5,000	6,000	2,088	6 8	160d. " " "	5,000
6,000	8,000	2,755	0 0	168d. " " "	6,000
8,000	10,000	4,155	0 0	176d. " " "	8,000
10,000	upwards	5,621	13 4	180d. " " "	10,000

(a) In 1951-52 an additional tax of 10 per cent. was levied.

If the taxable income exceeds £400 and includes income from property, the amount of the income from property is subject to the further tax shown in the following table.

**FURTHER TAX AND CONTRIBUTION ON PROPERTY INCOME 1950-51 TO 1952-53 (a).**

Taxable Income from Property.		Column 3.		Column 4.	
Column 1.	Column 2.	Further Tax and Contribution on Taxable Income shown in Column 1.		Further Tax and Contribution on Remainder of Taxable Income from Property.	
Not less than—	Not more than—				
£	£	£	s. d.	£	
Nil	100	Nil		Nil	
100	1,000	Nil	plus	8d. on each £1 in excess of	100
1,000	4,000	30	0 0	16d. " " "	1,000
4,000	6,000	230	0 0	8d. " " "	4,000
6,000	10,000	296	13 4	4d. " " "	6,000
10,000	upwards	363	6 8	(No rate on excess over £10,000)	

(a) See footnote (a) to table above.

If the total taxable income does not exceed £1,000, the further tax on property income cannot exceed twelve pence for every £1 by which the total taxable income exceeds £400. No further tax and contribution is imposed where the taxable income from property does not exceed £100.

Prior to the 1951-52 financial year the rate of Income Tax and Social Services Contribution for primary producers was determined by the average taxable income of the five years up to the current year and this rate was applied to the taxable income of the current year. For the 1951-52 and subsequent financial years the application of the averaging provisions was limited to that part of the taxable income which did not exceed £4,000 and, where the taxable income exceeded £4,000, the balance was taxed at ordinary rates. Where the taxable income was less than £4,000, the rate of tax for average purposes was limited to the rate on a taxable income of £4,000. Provision was also made for a taxpayer to elect not to have the averaging provisions applied to his assessment for any income year and subsequent years. Such an election once made is irrevocable.

Interest on Commonwealth Loans issued prior to 1st January, 1940 is subject to the condition that it shall not be taxed at rates higher than those for 1930-31. Interest on Commonwealth Loans issued after 1st January, 1940 and interest on certain State semi-governmental loans issued free of State income tax receive a rebate of 2s. in the £1.

The minimum amount of Income Tax and Social Services Contribution payable is 10s. and the amounts payable and rebates are calculated to the nearest shilling.

7. Taxes on Specified Incomes.—The following table shows the Income Tax and Social Services Contribution payable by taxpayers, with various incomes and numbers of dependants, on income derived in each year from 1949-50 to 1952-53:—

## COMMONWEALTH TAXES ON INCOME.

(£.)

Income.	1949-50 Financial Year.			1950-51 Financial Year.	1951-52 Financial Year.	1952-53 Financial Year.
	Income Tax.	Social Services Contribution.	Total.	Income Tax and Social Services Contribution.	Income Tax and Social Services Contribution.	Income Tax and Social Services Contribution.
<b>INCOME FROM PERSONAL EXERTION.—TAXPAYER WITH NO DEPENDANTS.</b>						
150 .. .. .	..	3.05	3.05	1.65	1.80	1.65
200 .. .. .	..	5.60	5.60	3.95	4.35	3.95
250 .. .. .	..	9.00	9.00	7.30	8.05	7.30
300 .. .. .	..	13.10	13.10	11.65	12.80	11.65
350 .. .. .	..	18.05	18.05	17.10	18.80	17.10
400 .. .. .	..	23.75	23.75	22.50	24.75	22.50
500 .. .. .	..	37.50	37.50	35.85	39.45	35.85
600 .. .. .	8.50	45.00	53.50	51.65	56.80	51.65
800 .. .. .	31.50	60.00	91.50	90.00	99.00	90.00
1,000 .. .. .	62.50	75.00	137.50	135.00	148.50	135.00
1,500 .. .. .	170.85	112.50	283.35	281.65	309.80	281.65
2,000 .. .. .	320.85	150.00	470.85	468.35	515.20	468.35
3,000 .. .. .	704.15	225.00	929.15	928.35	1,021.20	928.35
5,000 .. .. .	1,720.85	375.00	2,095.85	2,088.35	2,297.20	2,088.35
<b>INCOME FROM PERSONAL EXERTION.—TAXPAYER WITH DEPENDENT WIFE.</b>						
150 .. .. .	..	..	..	..	..	..
200 .. .. .	..	..	..	..	..	..
250 .. .. .	..	1.55	1.55	1.55	1.70	1.55
300 .. .. .	..	4.90	4.90	3.75	4.10	3.75
350 .. .. .	..	9.85	9.85	7.00	7.70	7.00
400 .. .. .	..	14.35	14.35	11.30	12.45	11.30
500 .. .. .	..	25.80	25.80	22.05	24.25	22.05
600 .. .. .	..	40.30	40.30	35.30	38.85	35.30
800 .. .. .	14.35	60.00	74.35	69.25	76.15	69.25
1,000 .. .. .	41.90	75.00	116.90	110.80	121.90	110.80
1,500 .. .. .	142.50	112.50	255.00	247.15	271.85	247.15
2,000 .. .. .	285.55	150.00	435.55	426.75	469.40	426.75
3,000 .. .. .	659.15	225.00	884.15	876.35	964.00	876.35
5,000 .. .. .	1,675.85	375.00	2,050.85	2,022.45	2,224.70	2,022.45

COMMONWEALTH TAXES ON INCOME—*continued.*  
(£.)

Income.	1949-50 Financial Year.			1950-51 Financial Year.	1951-52 Financial Year.	1952-53 Financial Year.
	Income Tax.	Social Services Contribution.	Total.	Income Tax and Social Services Contribution.	Income Tax and Social Services Contribution.	Income Tax and Social Services Contribution.
<b>INCOME FROM PERSONAL EXERTION.—TAXPAYER WITH DEPENDENT WIFE AND ONE CHILD.</b>						
150	..	..	..	..	..	..
200	..	..	..	..	..	..
250	..	..	..	..	..	..
300	..	0.95	0.95	0.85	0.95	0.85
350	..	4.35	4.35	2.50	2.75	2.50
400	..	8.10	8.10	5.15	5.65	5.15
500	..	17.95	17.95	13.60	14.95	13.60
600	..	30.95	30.95	24.90	27.40	24.90
800	..	2.90	60.00	54.95	60.45	54.95
1,000	..	28.15	75.00	103.15	103.30	93.90
1,500	..	123.65	112.50	236.15	246.10	223.75
2,000	..	262.00	150.00	395.55	435.10	395.55
3,000	..	628.20	225.00	837.35	921.10	837.35
5,000	..	1,633.95	375.00	2,008.95	2,170.35	1,973.05
<b>INCOME FROM PERSONAL EXERTION.—TAXPAYER WITH DEPENDENT WIFE AND TWO CHILDREN.</b>						
150	..	..	..	..	..	..
200	..	..	..	..	..	..
250	..	..	..	..	..	..
300	..	..	..	..	..	..
350	..	2.20	2.20	0.80	0.90	0.80
400	..	5.00	5.00	2.40	2.65	2.40
500	..	14.05	14.05	8.70	9.55	8.70
600	..	26.25	26.25	18.80	20.70	18.80
800	..	60.00	60.00	46.30	50.90	46.30
1,000	..	21.25	96.25	83.20	91.50	83.20
1,500	..	114.20	112.50	226.70	228.90	208.15
2,000	..	250.25	150.00	400.25	413.45	375.85
3,000	..	613.20	225.00	838.20	893.70	812.45
5,000	..	1,618.95	375.00	1,993.95	2,134.15	1,940.15
<b>INCOME FROM PROPERTY.—TAXPAYER WITH NO DEPENDANTS.</b>						
150	..	3.05	3.05	1.65	1.80	1.65
200	..	5.60	5.60	3.95	4.35	3.95
250	..	9.00	9.00	7.30	8.05	7.30
300	..	13.10	13.10	11.65	12.80	11.65
350	..	18.05	18.05	17.10	18.80	17.10
400	..	1.65	23.75	22.50	24.75	22.50
500	..	5.30	37.50	40.85	44.95	40.85
600	..	18.25	45.00	61.65	67.80	61.65
800	..	51.55	60.00	110.00	121.00	110.00
1,000	..	94.90	75.00	169.90	181.50	165.00
1,500	..	238.65	112.50	351.15	379.50	345.00
2,000	..	428.25	150.00	578.25	621.50	565.00
3,000	..	886.55	225.00	1,111.55	1,200.85	1,091.70
5,000	..	2,003.25	375.00	2,378.25	2,586.85	2,351.70

8. **Pay-as-you-earn.**—Individual taxpayers pay tax on a pay-as-you-earn basis. A similar scheme does not operate for companies.

(a) *Salary and Wage Earners.* Salary and wage earners are subject to instalment deductions for payment of tax at current rates out of weekly (or fortnightly) earnings. Employers are required to deduct tax and contribution from each payment of wages and salary to an employee at the appropriate rate in accordance with a prescribed instalment scale. This scale shows the amount to be deducted according to the income and number of dependants of the employee.

Under the group scheme of deduction, which covers most employers of more than ten persons, the amount deducted is remitted to the Taxation Department, and after 30th June each year each employee is given a group certificate by his employer showing the amount of deductions made during the year. This certificate is forwarded to the Taxation Department with the employee's return of income for the year. If the tax assessed on the basis of this return is less than the amount shown on the group certificate a refund is forwarded to the employee with his assessment. If the tax assessed is greater than the amount shown on the group certificate the employee is required to pay the balance.

Under the stamp scheme, used by small employers, a stamp deduction sheet in two parts is used. Each four weeks the employer purchases stamps (also in two parts) for the amount of the deductions made each pay day and sticks one part on each half of the sheet. At the end of the year the employer gives the employee one half of the sheet and sends the other half to the Taxation Department. The employee's half is then used in the same way as a group certificate.

(b) *Taxpayers with Income other than Salary and Wages.* These taxpayers pay provisional tax in respect of income other than salary and wages. Collection of tax and contribution for the current year is made at the same time as collection and assessment for the previous year is adjusted. The notice of assessment shows an amount of provisional tax and contribution for the current year. This provisional amount is an approximation to the tax and contribution which will be payable after the return of income for the current year has been lodged. It is ascertained by assuming that the income of the current year will be the same as that for the previous year (for which a return has already been lodged) but the rates for the current year are applied to the income and not the rates for the year in which it was derived. The assessment notice shows the provisional tax and contribution paid in the previous year as a credit against the tax and contribution assessed on the basis of the return for that year.

By amendments to the Income Tax and Social Services Contribution Assessment Act in 1952 and 1953 provision was made for a taxpayer to reassess the provisional tax payable. As previously, provisional tax will be assessed by the Commissioner of Taxation on the basis of the income of the previous year. On receipt of his assessment the taxpayer may elect to substitute his estimate of income for the current year and pay tax on the basis of this estimate. In the 1952 amendment it was compulsory for the taxpayer to reassess his provisional tax if he considered his income for the current year would be more than 20 per cent. greater than his income in the previous year. This compulsory provision was removed by the 1953 amendment. To protect the revenue, a penalty is imposed if the taxpayer elects to pay provisional tax on an estimate of income 20 per cent. lower than the income of the previous year and he underestimates his income by more than 20 per cent.

In 1950–51 high wool prices caused a large increase in the incomes of woolgrowers. This was followed, in 1951–52, by a reduction in incomes as a result of the subsequent fall in wool prices. To avoid large overpayments that would result under the normal procedure of assessing provisional tax, provision was made for a woolgrower to defer payment of up to 40 per cent. of the provisional tax payable in 1951–52 if he considered his income was likely to be less than it was in 1950–51.

Employees with more than £100 income from sources other than wages and salaries are required to pay provisional tax in respect of that income. This limit was raised from £50 in 1952–53.

9. **Lodgment of Returns and Assessment of Tax.**—All persons with assessable income in excess of £104 are required to lodge returns by the 31st July each year (31st August for business incomes). Income Tax and Social Service Contribution payable is assessed, and assessment notices showing the amount payable are issued during the year following the year of income (in most cases from September to June following the lodgment of the return). The approximate amount payable, however, has already been collected during

the income year—from employees by deductions from wages and from non-employees by a provisional tax. The amount shown on the assessment notice is therefore adjusted against the amount already collected and any difference either collected or refunded.

10. **Company Income Taxes.**—(i) *General.* For taxation purposes, companies are divided into two main groups—public and private. A private company is defined as a company in which all the issued shares are held by not more than twenty persons or which is capable of being controlled by not more than seven persons, and which is not a company in which the public is substantially interested or a subsidiary of a public company. All other companies are regarded as public companies. Both public and private companies pay primary Income Tax and Social Services Contribution assessed on a taxable income ascertained by the same principles as for individuals.

Dividends received are assessable income, but resident companies receive a rebate at the average rate on the amount of dividends included in the taxable income. This rebate is not allowed to non-resident companies.

(ii) *Public Companies.* (a) *Primary Income Tax and Social Services Contribution.* For companies, other than life assurance companies, the rates of Income Tax and Social Services Contribution for the last three financial years were :—1950-51—On the first £5,000 of taxable income 5s. in the £1 and on the remainder of the taxable income 6s. in the £1 : 1951-52—7s. in the £1 on all taxable income ; 1952-53—On the first £5,000 of taxable income 5s. in the £1 and on the remainder of the taxable income 7s. in the £1. For mutual life assurance companies the rates were 1s. in the £1 less in each case. For other life assurance companies the rates for mutual income were the same as those for mutual life assurance companies and for the remainder of their income the rates for other companies applied.

(b) *Additional Income Tax and Social Services Contribution.* For the 1951-52 and 1952-53 financial years an additional tax of 2s. in the £1 was imposed on taxable income. This additional tax did not apply to the income of non-resident companies from dividends, the income of mutual life assurance companies or the mutual income of other life assurance companies and the income of co-operative companies and companies not carried on for the profit of individual members.

(c) *Super Tax.* Super Tax, which was levied at the rate of 1s. in the £1 on the excess of taxable income over £5,000 in 1950-51 and earlier financial years, has not since been imposed.

(d) *Undistributed Income Tax.* This tax was imposed for the financial years 1940-41 to 1950-51. Details are given in Official Year Book No. 39, page 846.

(iii) *Private Companies.* (a) *Primary Income Tax and Social Services Contribution.* For the financial years 1950-51 and 1952-53 the rates of Primary Income Tax and Social Service Contributions were the same as those for public companies (other than life assurance companies). For 1951-52 the rates were 5s. in the £1 on the first £5,000 of taxable income and 7s. in the £1 on the remainder. The additional tax and contribution and super tax were not imposed on the taxable income of private companies.

(b) *Undistributed Income Tax.* A private company incurs liability for undistributed income tax if it fails to make a sufficient distribution of income within a specified period after the close of the year of income. The tax is levied on the undistributed amount which, for practical purposes, is the taxable income less—

- (i) Primary income tax and social services contribution payable ;
- (ii) Retention allowance (i.e. the proportion of the reduced distributable income which a company may retain without incurring liability for undistributed income tax) ; and
- (iii) Certain dividends paid by the company.

The retention allowance is the following proportion of the reduced distributable income.

Financial Year 1950-51 and 1951-52.	Financial Year 1952-53.
On first £1,000 or part, 50 per cent.	On first £1,000 or part, 50 per cent.
On next £1,000 or part, 40 per cent.	On next £1,000 or part, 40 per cent.
On next £1,000 or part, 35 per cent.	On next £1,000 or part, 35 per cent.
On next £1,000 or part, 30 per cent.	On next £1,000 or part, 30 per cent.
On next £2,000 or part, 25 per cent.	On balance, 25 per cent.
On next £2,000 or part, 20 per cent.	
On next £2,000 or part, 15 per cent.	
On balance, 10 per cent.	

For the financial years 1950-51 and 1951-52, the reduced distributable income was calculated by deducting from the taxable income the primary tax payable and the amount of dividends received from other private companies. For the financial year 1952-53 all property income included in taxable income was deducted.

For financial years 1950-51 and 1951-52 the undistributed income tax was the additional tax that shareholders would have become liable to pay if the undistributed amount had been paid to them as dividends on the last day of the year of income. In effect it was levied at the shareholders' graduated rates.

For financial year 1952-53 the undistributed income tax was imposed at a flat rate of 10s. in the £1 on the undistributed amount.

(iv) *Advance Payment of Income Tax and Social Services Contribution.* In the financial year 1951-52 all companies were required to make an advance payment of part of the Income Tax and Social Services Contribution that would be assessed in 1952-53. The amount of this advance payment was fixed at 19 per cent. of the Income Tax and Social Services Contribution assessed for 1951-52 (other than tax on the undistributed income of private companies). An advance payment was not required in the financial year 1952-53, and a credit was allowed in assessments for that year of the advance payment levied in the previous year.

II. *Yield of Income Taxes.*—(i) *Collections from all Income Taxes.* The following table shows the collections of taxes of all types imposed on income for the years 1938-39 and 1947-48 to 1951-52 :—

**INCOME TAX COLLECTIONS.**  
(£'000.)

Year.	Total.		
	Commonwealth.	State.	Total.
1938-39 .. .. .	11,882	29,812	41,694
1947-48(a) .. .. .	232,944	368	233,312
1948-49(a) .. .. .	272,368	235	272,603
1949-50(a) .. .. .	279,663	258	279,921
1950-51(a) .. .. .	341,970	279	342,249
1951-52(a) .. .. .	545,179	155	545,334

(a) Commonwealth collections are greater than the Budget figures by the amount of refunds of State taxes. State collections are net arrears after deduction of these refunds.

(ii) *Commonwealth Income Tax Assessed.* The amounts of Commonwealth taxes assessed on the income of recent years are shown in the following table. The amounts are shown under the year in which most of the assessments were made, i.e., the year following the income year. Income taxes assessed on income for past years and for the years shown, after the close of the normal assessing period, are not included.

**COMMONWEALTH INCOME TAXES ASSESSED.**  
(£'000.)

Tax.	1939-40.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.(a)
Individuals—						
Income Tax .. .. .	7,423	75,886	79,545	78,982	80,712	} 332,956
Social Services Contribution .. .. .	..	62,152	75,424	86,214	92,588	
Companies—						
Income Tax .. .. .	8,041	48,174	55,543	62,758	74,952	156,163
Super Tax .. .. .	..	4,205	4,960	5,838	7,046	..
Undistributed Income Taxes b—						
Private Companies .. .. .	688	15,772	8,385	7,838	7,566	11,218
Non-Private Companies .. .. .	..	2,893	3,205	4,300	4,855	..
Total .. .. .	16,152	200,082	227,062	245,930	267,719	500,337

(a) Income Tax and Social Services Contribution were consolidated in 1951-52.

(b) Approximate.

(iii) *Commonwealth Income Tax and Social Services Contribution, 1951-52 Assessment Year.* The following table shows, for the 1951-52 assessment year, particulars for individual taxpayers, income, and tax assessed, according to grade of actual income and State, etc., of assessment.

**COMMONWEALTH INCOME TAX AND SOCIAL SERVICES CONTRIBUTION : 1951-52 ASSESSMENT<sup>(a)</sup>—NUMBER OF TAXPAYERS, TAXABLE INCOME AND NET INCOME TAX AND SOCIAL SERVICES CONTRIBUTION ASSESSED—INDIVIDUALS.**

(Incomes derived in year 1950-51.)

Grade of Actual Income <sup>(b)</sup> and State or Territory of Assessment.	Number of Taxpayers.			Actual Income.	Taxable Income.				Net Income Tax and Social Services Contribution Assessed.
	Males.	Fe-males.	Total.		Personal Exertion.		Property.		
				Salary and Wages.	Total.	Total.	Total.		
£      £	No.	No.	No.	£'000	£'000	£'000	£'000.	£'000	£'000
105- 150 ..	43,212	71,021	114,233	14,839	12,222	13,196	1,245	14,441	128
151- 200 ..	57,214	94,687	151,901	26,716	21,611	23,540	2,071	25,611	389
201- 250 ..	66,125	103,335	169,460	38,368	30,620	33,612	2,394	36,006	831
251- 300 ..	74,086	107,516	181,602	50,145	39,665	43,762	2,515	46,277	1,451
301- 350 ..	81,995	121,913	203,908	66,527	53,027	58,301	2,586	60,887	2,447
351- 400 ..	96,504	111,984	208,488	78,216	61,044	67,526	2,550	70,076	3,331
401- 450 ..	129,001	73,458	202,459	86,209	63,347	71,031	2,507	73,538	3,896
451- 500 ..	192,529	45,567	238,096	113,479	80,333	89,053	2,545	91,598	5,280
501- 550 ..	252,825	28,016	280,841	147,710	102,723	112,366	2,551	114,917	7,104
551- 600 ..	255,037	17,925	272,962	156,974	107,498	117,414	2,516	119,930	7,904
601- 650 ..	223,623	12,380	236,003	147,461	99,297	109,375	2,436	111,811	7,993
651- 700 ..	182,808	8,477	191,285	129,003	84,851	94,786	2,313	97,099	7,413
701- 800 ..	251,787	11,167	262,954	196,081	124,665	143,814	4,175	147,989	12,398
801- 900 ..	138,419	6,812	145,231	122,734	71,925	89,519	3,668	93,187	8,721
901- 1,000 ..	78,257	4,771	83,028	78,570	41,673	57,687	3,209	60,896	6,340
1,001- 1,250 ..	93,534	7,675	101,209	112,104	48,486	83,475	6,411	89,886	10,921
1,251- 1,500 ..	43,389	4,734	48,123	65,597	20,130	49,765	5,094	54,859	7,823
1,501- 2,000 ..	44,020	5,820	49,840	85,807	17,124	66,899	7,611	74,510	12,618
2,001- 3,000 ..	42,039	5,642	47,681	116,076	14,037	94,960	9,712	104,672	22,152
3,001- 4,000 ..	21,593	2,781	24,374	84,178	6,713	71,130	6,590	77,720	19,662
4,001- 5,000 ..	12,597	1,505	14,102	62,874	3,878	54,104	4,632	58,736	17,761
5,001-10,000 ..	20,749	2,617	23,366	157,673	7,010	138,917	10,344	149,261	66,729
10,001-15,000 ..	4,252	665	4,917	59,290	1,766	52,446	4,033	56,479	33,056
15,001 and over ..	3,331	621	3,952	101,932	2,346	89,638	7,969	97,607	65,359
<b>Total Residents ..</b>	<b>2,408,926</b>	<b>851,089</b>	<b>3,260,015</b>	<b>2,298,563</b>	<b>1,115,991</b>	<b>1,826,316</b>	<b>101,677</b>	<b>1,927,993</b>	<b>331,707</b>
Central Office ..	8,201	4,478	12,679	49,717	4,801	35,530	10,615	46,145	23,733
New South Wales ..	903,86	336,982	1,240,368	858,945	449,127	685,888	33,382	719,270	117,492
Victoria ..	679,802	264,997	944,799	649,921	332,002	518,273	30,829	549,102	82,377
Queensland ..	338,119	100,483	438,602	291,915	130,174	229,543	9,499	239,042	45,110
South Australia ..	223,574	69,434	293,008	213,309	93,801	169,984	9,334	179,318	29,896
Western Australia ..	163,487	47,989	211,476	159,993	65,915	128,663	5,498	134,161	25,038
Tasmania ..	78,814	23,104	101,918	62,148	32,084	48,277	2,325	50,602	6,470
Northern Territory ..	3,781	740	4,521	3,154	1,990	2,322	40	2,362	243
Aust. Cap. Terr. ..	9,762	2,882	12,644	9,461	6,097	7,836	155	7,991	1,348
<b>Total Residents ..</b>	<b>2,408,926</b>	<b>851,089</b>	<b>3,260,015</b>	<b>2,298,563</b>	<b>1,115,991</b>	<b>1,826,316</b>	<b>101,677</b>	<b>1,927,993</b>	<b>331,707</b>
<b>Total Non-residents</b>	<b>1,910</b>	<b>1,448</b>	<b>3,358</b>	<b>3,865</b>	<b>543</b>	<b>1,469</b>	<b>2,167</b>	<b>3,636</b>	<b>1,249</b>
<b>Grand Total ..</b>	<b>2,410,836</b>	<b>852,537</b>	<b>3,263,373</b>	<b>2,302,428</b>	<b>1,116,534</b>	<b>1,827,785</b>	<b>103,844</b>	<b>1,931,629</b>	<b>332,956</b>

(a) Assessment in respect of 1950-51 income issued to 30th September, 1952. Assessments issued after that date have been excluded. (b) Actual income is the total income (less any expenses of earning the income) and includes any exempt income and any concessional deductions or expenses of a capital nature which are allowed as a deduction for the purpose of assessing taxable income.



(iv) *Commonwealth Income Tax on Residents—Grades of Income.* Individual income taxes assessed on residents are distributed according to grades of actual income in the following table. The year shown in each case refers to the year in which assessment was made, i.e., the year following the income year. The figures relate only to assessments made on the income of the previous year during the normal assessing period. Assessments issued after the normal assessing period are excluded.

**COMMONWEALTH INCOME TAXES ON RESIDENT INDIVIDUALS IN GRADES OF ACTUAL INCOME.**

Grade of Actual Income.(b)	1939-40.		1948-49.(a)		1949-50.(a)		1950-51.(a)		1951-52.(a)	
	No. of Tax-payers.	Tax.	No. of Tax-payers.	Tax.	No. of Tax-payers.	Tax.	No. of Tax-payers.	Tax.	No. of Tax-payers.	Tax.
£		£'000.		£'000.		£'000.		£'000.		£'000.
105- 150	..	..	194,947	583	165,454	403	152,219	315	114,233	128
151- 200	..	..	240,677	1,730	210,687	1,085	192,835	766	151,901	389
201- 250	..	..	262,569	3,302	233,996	2,040	217,195	1,392	169,460	831
251- 300	47,732	27	231,094	4,450	242,237	3,182	238,089	2,263	181,602	1,451
301- 350	55,375	53	271,721	6,098	221,428	3,821	227,007	2,883	203,908	2,447
351- 400	48,835	73	333,946	8,848	273,497	5,658	232,212	3,566	208,488	3,331
401- 500	68,168	182	513,979	17,448	608,272	16,434	613,437	12,176	440,555	9,176
501- 600	38,939	197	233,110	11,442	361,222	13,754	475,486	13,298	553,803	15,008
601- 800	(c) 29,912	294	167,891	12,973	265,412	15,950	379,077	16,705	690,242	27,804
801- 1,000	(d) 23,070	460	63,535	8,225	85,254	8,790	117,671	8,972	228,259	15,061
1,001- 1,250	10,922	372	39,697	7,714	49,846	7,924	62,573	7,511	101,209	10,921
1,251- 1,500	6,281	306	23,776	6,505	27,473	6,378	33,790	5,982	48,123	7,823
1,501- 2,000	7,987	691	26,692	10,611	31,981	10,781	38,430	10,390	49,840	12,618
2,001- 3,000	4,549	686	21,946	15,066	28,878	16,855	34,940	17,176	47,681	22,152
3,001- 4,000	2,045	615	8,191	9,489	11,785	11,671	14,277	12,393	24,374	19,662
4,001- 5,000	984	484	3,765	6,322	5,714	8,441	6,981	9,134	14,102	17,701
5,001-10,000	1,298	1,321	4,753	13,554	6,748	17,958	9,494	22,991	23,366	66,729
10,001-15,000	205	504	732	4,418	984	5,829	1,752	9,461	4,917	33,056
15,001-30,000	(e) 92	393	354	3,973	442	4,770	954	10,060	3,124	38,841
30,001-50,000	(f) 39	316	46	855	84	1,712	155	3,385	612	15,255
50,001 and over	8	141	19	658	24	1,016	39	1,773	216	11,263
<b>Total ..</b>	<b>346,441</b>	<b>7,115</b>	<b>2,643,440</b>	<b>154,264</b>	<b>2,831,418</b>	<b>164,452</b>	<b>3,048,613</b>	<b>172,592</b>	<b>3,260,015</b>	<b>331,707</b>

(a) Includes Social Services Contribution. (b) See note (b) to previous table. (c) Grade £601-£750  
 (d) Grade £751-£1,000. (e) Grade £15,001-£25,000. (f) Grade £25,001-£50,000.

## CHAPTER XVIII.

## MINERAL INDUSTRY.

## § 1. The Mineral Wealth of Australia.

1. **Place of Mining in Australian Development.**—The discovery of gold in payable quantities first attracted population to Australia in large numbers and was thus a significant factor in its early development. In more recent times the rapid growth of Australia's secondary industries has been associated with considerable expansion in mining for silver-lead-zinc, copper and iron ores, and coal. However, the value of mineral production has lagged behind that recorded for Australia's large rural industries and in 1951 represented only about 10.4 per cent. of the net value of production of all primary industries.

2. **Extent of Mineral Wealth.**—The extent of the mineral wealth of Australia has not been determined fully, and large areas of the country still await geological survey. Regional and detailed investigations are being carried out by the Commonwealth Bureau of Mineral Resources, Geology and Geophysics, by the Geological Surveys of the State Governments and by the exploration departments of mining companies. No major discoveries have been made in recent years, although important prospects of uranium ore, bauxite (aluminium ore) and some other minerals have been recorded and are being investigated in detail.

Progress has been made in utilizing the sulphur content of domestic ores that were previously of only limited economic importance, and facilities for the treatment of copper, lead and zinc have been extended; in this sense, the mineral wealth of the country has expanded.

3. **Standardization of Mineral Statistics.**—Prior to the year 1950, the official statistics of mineral production in Australia were defective because of the widely different methods adopted by the Mines Departments of the several States in collecting, compiling and reporting the data. The Bureau of Mineral Resources, Geology and Geophysics had done much work in post-war years in re-arranging State data with the object of deriving satisfactory Commonwealth totals, but it was not until 1950 that some States commenced implementation of a plan which originated at the 1945 Conference of Australian Statisticians for the unification and standardization of Australian mineral statistics.

Further improvements were made in 1951 and 1952 and work is proceeding with the object of removing the remaining defects in the statistics, with particular emphasis on the problem of obtaining sound and uniform statistical value and employment data for all States and Territories.

The fundamental provision of the plan for standardization of Australian mineral statistics is that quantities and values of individual minerals produced should be reported in terms of the products in the form in which they are despatched from the locality of each mine. This involves the inclusion in the mining industry of ore-dressing and elementary smelting of metallic minerals (e.g. in the case of gold) and miscellaneous treatment of non-metallic minerals where these operations are carried out in an associated plant at or near the mine. For example, in the case of a metal mine, the output is recorded as ore when no treatment is undertaken at the mine or as a concentrate where ore-dressing operations are carried out in associated works in the locality of the mine. In addition to the basic quantity data, the plan provides for the reporting of contents of metallic minerals and of contents or average grade of selected non-metallic minerals. Wherever practicable, contents (based on assay) of metallic minerals are shown for each metal which is a "pay metal" or a "refiners' prize" when present in the particular mineral.

For the purpose of compiling and publishing data relating to employment, value of output, value of production, etc., a tentative detailed statistical classification for the mining industry has been used in Australia from 1950. For the purpose of this classification, the "Mining Industry" includes all mining and quarrying and the recovery of minerals from ore dumps, tailings, etc. As mentioned above, ore dressing and miscellaneous treatment of non-metallic minerals (where these are carried out in an associated plant at or near the mine) are included in the Mining Industry. The classification divides the industry into four major groups, viz. Metal Mining, Fuel Mining, Non-metal Mining and Construction-material Quarrying.

The adoption of revised methods of compiling and presenting mineral statistics in 1950 has caused a break in continuity of the data published for earlier years. For this reason, it has not been possible to continue some of the comparative tables beyond 1949, while in other tables comparisons have been continued, but data for 1950 and 1951 are in general not strictly comparable with those for 1949 and earlier years.

4. **Quantity and Value of Minerals Produced, 1951.**—In the two tables following, particulars of the quantities and recorded values of minerals produced are shown for each State and the Northern Territory for 1951. Particulars of production data by States for 1950 may be found in *Primary Industries Bulletin No. 45, Part II., Non-Rural Industries and Value of Production*. Because of the revised bases of compiling and presenting mineral statistics referred to above, the data in the tables differ considerably as to form and content from corresponding data for 1949 and earlier years published in previous issues of the Year Book.

In the main, the data consist of official statistics of Mines Departments furnished to this Bureau by the Statisticians of the several States and by the Northern Territory Mines Branch. These statistics have been supplemented, as necessary, by data obtained from the Australian Mines and Metals Association (Inc.), the Bureau of Mineral Resources, Geology and Geophysics and several other sources. The particulars shown have been compiled as far as practicable on the standardized basis outlined in par. 3 preceding. This has involved some re-arrangement of Mines Department official statistics for States which have not yet fully implemented the plan for standardization of mineral statistics in Australia.

In these tables individual minerals are arranged in four groups, viz., metallic minerals, fuel minerals, non-metallic minerals and construction materials, to correspond with the major groups of the tentative statistical classification of the mining industry.

The particulars shown in the group "construction materials" cover, broadly, data similar to those previously included under the heading of "Quarries".

## MINERAL PRODUCTION : QUANTITIES, 1951.

Mineral.	Unit.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Australia.
<b>METALLIC MINERALS.</b>									
Antimony Ore and Concentrate ..	ton	(a) 317	(a) 303	(a) 56	..	..	..	..	676
Bauxite ..	..	2,044	3,040	..	..	..	..	..	5,084
Beryllium Ore ..	lb.	(a) 25,536	..	23,111	..	203,325	..	..	251,972
Bismuth Concentrate ..	..	(a) 15,716	..	..	..	137	..	..	15,903
Copper Ore, Concentrate, etc.	ton	8,906	..	50,227	(a) 2	43	35,232	622	95,032
Gold Ore, Concentrate, etc.	..	336	1,363	892	(a) 461	..	..	..	3,058
Gold—Other Forms(d)	oz.	39,913	70,519	20,266	(e)	..	..	(e)	(e)
Ilmenite Concentrate ..	ton	(a) 1,233	..	..	..	..	..	..	1,233
Iron Ore ..	..	..	..	..	2,400,577	35,652	..	..	2,436,229
Lead Ores, Concentrate, etc.	..	243,459	..	98,436	(a) 326	5,539	10,562	..	355,322
Manganese Ore ..	..	2,685	..	..	(a) 27	(a) 5,237	..	..	7,969
Molybdenite Concentrate ..	lb.	(a) 4,000	..	658	..	..	..	..	4,658
Monazite Concentrate ..	ton	(a) 32	..	..	..	..	..	..	32
Osmiridium—Native ..	oz.	..	..	..	..	..	33	..	33
Pyritic Ore and Concentrate ..	ton	21,725	..	32,450	(a) 1,031	46,615	39,625	..	141,446
Rutile Concentrate ..	..	23,060	..	(a) 12,129	..	..	..	..	35,189
Silver Ore ..	..	(a) 111	..	..	..	..	..	..	111
Tantalite—Columbite Concentrate ..	lb.	..	..	..	..	(a) 4,614	..	511	5,125
Tin Concentrate ..	ton	(a) 578	49	(a) 490	..	61	998	37	2,213
Tungsten Concentrates—	..	..	..	..	..	..	..	..	..
Scheelite Concentrate ..	lb.	17,807	..	(a) 6,270	..	317	2,285,002	..	2,309,396
Wolfram Concentrate ..	..	31,129	764	a 340,658	..	11,038	848,589	329,080	1,561,258
Zinc Ore and Concentrate ..	ton	274,046	..	42,740	..	..	42,101	..	358,887
Zircon Concentrate ..	..	(a) 32,281	..	(a) 10,129	..	..	..	..	42,410

**FUEL MINERALS.**

Coal, Black—	..	..	..	..	..	..	..	..	..
Semi-Anthracite ..	ton	234	..	80,722	..	..	1,470	..	82,426
Bituminous ..	..	13,508,460	147,743	2,137,994	..	..	235,418	..	16,029,615
Sub-Bituminous ..	..	4,550	..	255,059	388,303	848,475	..	..	1,496,387
Total ..	..	13,513,244	147,743	2,473,775	388,303	848,475	236,888	..	17,668,428
Coal, Brown (including Lignite) ..	..	..	7,836,056	..	..	..	..	..	7,836,056
Oil (Petroleum)—Crude ..	gal.	..	68,180	..	..	..	..	..	68,180
Shale, Oil Bearing ..	ton	78,564	..	..	..	..	..	..	78,564

**NON-METALLIC MINERALS.**

Alunite ..	ton	449	..	..	..	..	..	..	449
Asbestos ..	..	432	..	..	(a) 6	2,120	..	..	2,558
Barite ..	..	879	..	..	(a) 5,294	5	..	..	6,178
Clays—	..	..	..	..	..	..	..	..	..
Brick Clay and Shale ..	..	1,496,038	(c) 845,000	213,767	(a) 212,243	(c) 310,000	(d) 60,000	..	3,137,048
Kaolin ..	..	27,811	3,927	408	(a) 3,855	12	8,075	..	44,088
Stoneware Clay ..	..	73,387	(e)	2,541	(a) 25,390	1,100	(e)	..	(f) 102,418
Cuprous Ore and Concentrate—For Fertilizer ..	..	..	..	..	..	1,337	..	183	1,520
Diatomite ..	..	7,182	949	400	..	198	..	..	8,729
Dolomite ..	..	14,125	..	7,365	(a) 52,450	124	..	..	74,064
Felspar (including Cornish Stone) ..	..	9,035	..	..	(a) 4,000	1,807	..	..	14,842
Gems ..	value only	(g)	..	(g)	(g)	..	..	..	(g)
Greensand ..	ton	..	..	..	..	3,036	..	..	3,036
Gypsum ..	..	104,697	41,126	..	147,701	77,923	..	..	371,447
Limestone (h) ..	..	1,112,496	419,477	48,518	(a) 786,657	(e)	154,010	..	2,521,158
Magnesite ..	..	35,963	398	13	(a) 998	762	..	..	38,134
Mica—Muscovite ..	lb.	..	..	..	..	..	..	133,548	133,548
Min-ral Pigments ..	ton	1,186	..	..	(a) 99	688	39	84	2,096
Phosphate Rock ..	..	29	..	..	(a) 7,900	..	..	..	7,929
Salt ..	..	..	(i)	11,210	(a) 218,910	(i)	..	..	(c) 300,000
Silica (Glass, Chemical, etc.) ..	..	(f) 104,775	(e)	(e)	(a) 24,509	6,173	6,897	..	(f) 142,354
Talc (including Steatite) ..	..	2,431	..	..	(a) 9,476	690	..	..	12,597

## MINERAL PRODUCTION: QUANTITIES, 1951—continued.

Mineral.	Unit.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Australia.
<b>CONSTRUCTION MATERIALS.(f)</b>									
Sand .. .. .	ton	962,311 (j)	304,713	(e)	419,368 (j)	9,900	(e)	(e)	1,696,292
River Gravel and Gravel Boulders .. .. .	"	903,453 (j)	130,280	(e)	661,044 (j)	128,487	(e)	(e)	1,823,264
Dimension Stone(k) .. .. .	"	90,192 (j)	11,125	3,098	59,197 (j)	69,200	(e)	(e)	232,812
Crushed and Broken Stone .. .. .	"	687,527 (j)	1,921,025	815,206	2,001,706 (j)	409,631	(e)	(e)	6,835,095
Other (Decomposed Rock, &c.) .. .. .	"	7,120,072 (j)	61,813	..	..	..	..	..	7,181,885

(a) Despatches from the mine (or sales) as distinct from production. (b) Excludes Western Australia.  
(c) Estimated. (d) Bullion, alluvial, retorted gold, etc. (e) Not available. (f) Incomplete.  
(g) Quantities not available. (h) Excludes quantities used directly as a building or road material.  
(i) Not available for publication; included in total for Australia. (j) Year 1950-51. (k) Includes some quantities of stone dressed at the quarries.

## MINERAL PRODUCTION: VALUES, 1951.

(£.)

Mineral.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Aust.
<b>METALLIC MINERALS.</b>								
Antimony Ore and Concentrate .. .. .	31,932 (a)	13,302 (a)	6,610	..	..	..	..	51,844
Bauxite .. .. .	1,945 (a)	5,798	..	..	..	..	..	7,743
Beryllium Ore .. .. .	1,723	..	934	..	11,174	..	..	13,831
Bismuth Concentrate .. .. .	3,138	..	..	..	84	..	..	3,222
Copper Ore, Concentrate, etc. .. .. .	381,321	..	2,160,467 (a)	68	758	2,378,737	33,089	4,954,440
Gold Ore, Concentrate, etc. .. .. .	19,389	50,698	3,936 (a)	4,308	(b)	95	..	(f) 78,426
Gold—Other Forms(c) .. .. .	552,384 (a)	958,207 (a)	220,391 (a)	1,332	210,495,480	..	603,326	12,837,320
Ilmenite Concentrate .. .. .	3,760	..	..	..	..	..	..	3,760
Iron Ore .. .. .	..	..	2,760,664	..	48,827	..	..	2,809,491
Lead Ore, Concentrate, etc. .. .. .	22,749,456	..	7,669,404 (a)	6,791 (a)	242,262 (a)	937,601	..	31,605,514
Manganese Ore .. .. .	26,301	..	..	320	33,789	..	..	60,410
Molybdenite Concentrate .. .. .	910	..	203	..	..	..	..	1,113
Monazite Concentrate .. .. .	3,154	..	..	..	..	..	..	3,154
Osmiridium—Native .. .. .	..	..	..	..	..	(a) 1,544	..	1,544
Pyritic Ore and Concentrate .. .. .	28,665	..	74,510	2,060	296,988	48,517	..	450,740
Rutile Concentrate .. .. .	538,872	..	278,205	..	..	..	..	817,077
Silver Ore .. .. .	451	..	..	..	..	..	..	451
Tantalite—Columbite Concentrate .. .. .	..	..	..	..	..	..	260	2,610
Tin Concentrate .. .. .	413,712 (a)	35,213	309,810	..	39,493 (a)	706,527	22,446	1,527,201
Tungsten Concentrates—	..	..	..	..	..	..	..	..
Scheelite Concentrate .. .. .	16,422	..	5,134	..	215	215,957,055	..	1,978,826
Wolfram Concentrate .. .. .	25,042	624	286,103	..	9,585 (a)	606,918	257,164	1,185,436
Zinc Ore and Concentrate .. .. .	10,219,996	..	44,550,686	..	..	21,521,235	..	16,291,917
Zircon Concentrate .. .. .	297,012	..	122,992	..	..	..	..	420,004
Other Metallic Minerals .. .. .	33,958	..	16,959	..	..	5,083	..	56,000
Total Recorded Value, Metallic Minerals .. .. .	35,349,543	1,063,842	15,712,544	2,775,543	11,181,005	8,163,312	916,285	75,162,074

## FUEL MINERALS.

Coal, Black—	..	..	..	..	..	..	..	..
Semi-Anthracite .. .. .	842	..	145,011	..	..	2,976	..	148,829
Bituminous .. .. .	29,317,114	600,734	4,144,521	..	..	302,572	..	34,364,941
Sub-Bituminous .. .. .	7,899	..	200,622	399,628	1,716,788	..	..	2,324,937
Total .. .. .	29,325,855	600,734	4,490,154	399,628	1,716,788	305,548	..	36,838,707
Coal, Brown (including Lignite) .. .. .	..	2,754,822	..	..	..	..	..	2,754,822
Oil (Petroleum)—Crude .. .. .	..	3,409	..	..	..	..	..	3,409
Shale—Oil Bearing .. .. .	181,132	..	..	..	..	..	..	181,132
Total Value, Fuel Minerals .. .. .	29,506,987	3,358,965	4,490,154	399,628	1,716,788	305,548	..	39,778,070

MINERAL PRODUCTION: VALUES, 1951—continued.  
(£.)

Mineral.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Aust.
<b>NON-METALLIC MINERALS.</b>								
Alumite .. .. .	3,088	..	..	..	..	..	..	3,088
Asbestos .. .. .	37,347	..	..	216	225,639	..	..	263,202
Barite .. .. .	1,152	..	..	21,176	18	..	..	22,346
Clays—								
Brick Clay and Shale	423,275	(d)240,000	76,399	106,122	115,185	(d) 18,000	..	978,981
Kaolin .. .. .	60,777	11,710	1,438	5,784	19	29,991	..	109,719
Stoneware Clay ..	28,491	(e)	2,356	38,088	3,300	(e)	..	(f) 72,235
Cupreous Ore and Concentrate .. .. .	..	..	..	..	16,104	..	11,337	27,441
Diatomite .. .. .	18,361	12,718	1,000	..	2,700	..	..	34,779
Dolomite .. .. .	21,393	..	15,757	26,225	599	..	..	63,974
Felspar (including Cornish Stone) .. .. .	28,964	..	..	12,000	7,390	..	..	48,354
Gems .. .. .	(f) 240	..	2,252	64,117	..	..	..	(f) 66,609
Greensand .. .. .	..	..	..	..	15,033	..	..	15,033
Gypsum .. .. .	81,722	34,733	..	110,779	46,726	..	..	273,960
Limestone(g) .. ..	467,398	196,214	93,392	422,026	(e)	117,605	..	f1,296,635
Magnesite .. .. .	91,560	1,592	50	1,996	1,969	..	..	97,167
Mica—Muscovite ..	..	..	..	..	..	..	59,083	59,083
Mineral Pigments ..	2,766	..	..	205	7,891	..	80	797
Phosphate Rock .. .	123	..	..	12,700	..	..	..	12,823
Salt .. .. .	..	(h)	22,424	437,820	(h)	..	..	(f)460,244
Silica (Glass, Chemical, etc.) .. .. .	64,998	(e)	(e)	15,626	4,417	3,675	..	(f) 88,714
Talc (including Steatite)	6,796	..	..	61,037	7,788	..	..	75,621
Other Non-Metallic Minerals .. .. .	155,805	5,866	6,011	23,470	13,951	1,134	..	206,237
Total Recorded Value, Non-Metallic Minerals .. .. .	1,494,256	502,833	221,079	1,359,387	468,729	170,483	71,217	f4,287,984

## CONSTRUCTION MATERIALS.(f)

Sand .. .. .	280,259	103,216	(e)	73,389	4,410	(e)	(e)	461,274
River Gravel and Gravel ..	..	..	..	..	..	..	..	..
Boulders .. .. .	508,321	60,453	(e)	115,683	39,665	(e)	(e)	724,122
Dimension Stone(i) ..	169,847	43,846	16,404	76,481	73,571	(e)	(e)	380,149
Crushed and Broken Stone .. .. .	942,993	1,584,333	358,106	657,554	369,867	(e)	(e)	3,912,853
Other (Decomposed Rock, etc.) .. .. .	1,196,774	27,276	..	..	..	(e)	(e)	1,224,050
Total Recorded Value, Construction Materials .. .. .	3,098,194	1,819,124	374,510	923,107	487,513	(e)	(e)	6,702,448

(a) Includes value added in smelting and/or refining. (b) Included under "Gold—Other Forms".  
(c) Bullion, alluvial, retorted gold, etc. (d) Estimated. (e) Not available. (f) Incomplete.  
(g) Excludes quantities used directly as a building or road material. (h) Not available for publication.  
(i) Includes some quantities of stone dressed at the quarries.

5. **Principal Contents of Metallic Minerals, 1951.**—The following table provides a summary of the principal contents of metallic minerals produced in 1951. Particulars of the metallic contents of minerals produced in earlier years are shown in the several sections dealing with individual minerals later in this chapter.

## MINERAL PRODUCTION: PRINCIPAL CONTENTS OF METALLIC MINERALS, 1951.

Mineral in which contained.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Aust.
<b>ANTIMONY (tons).</b>								
Antimony Ore and Concentrate .. .. .	151	(a) 72	(a) 32	..	..	..	..	255
Lead Ores, Concentrate, etc. .. .. .	488	..	..	..	..	1	..	489
Total .. .. .	639	(a) 72	(a) 32	..	..	1	..	744

MINERAL PRODUCTION: PRINCIPAL CONTENTS OF METALLIC MINERALS,  
 1951—continued.

Mineral in which contained.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Aust.
BISMUTH (lb.).								
Bismuth Concentrate ..	2,492	..	..	..	(b) 128	..	..	2,620
CADMIUM (tons).								
Lead Concentrate ..	45	..	..	..	..	..	..	45
Zinc Concentrate ..	517	..	..	..	..	38	..	555
Other ..	..	..	5	..	..	..	..	5
Total ..	562	..	5	..	..	38	..	605
COBALT (tons).								
Zinc Concentrate ..	42	..	..	..	..	..	..	42
COPPER (tons).								
Copper Ore, Concentrate, etc.	1,839	..	5,085	(c)	7	8,657	151	15,739
Gold Ore, Concentrate, etc.	4	..	1	..	..	..	..	5
Lead Concentrate ..	1,528	..	346	..	..	..	..	1,874
Zinc Concentrate ..	308	..	..	..	..	..	..	308
Total ..	3,679	..	5,432	(c)	7	8,657	151	17,926
GOLD (f. oz.).								
Antimony Ore and Concentrate ..	107	17	..	..	..	..	..	124
Copper Ore, Concentrate, etc.	5,097	..	69,392	..	..	11,396	..	85,885
Gold Ore, Concentrate, etc.	1,316	3,535	241	276	(d)	3	..	(e) 5,371
Gold—Other Forms(f) ..	34,898	62,511	8,947	86	648,245	..	38,945	793,632
Lead Ores, Concentrate, etc.	5,916	..	..	..	..	1,363	..	7,279
Zinc Concentrate ..	1,563	..	..	..	..	1,124	..	2,687
Other ..	13	..	..	..	..	560	..	573
Total ..	48,910	66,063	78,580	362	648,245	14,446	38,945	895,551
IRON (tons).								
Iron Ore ..	..	..	..	(a)	1,440,154	19,025	..	1,459,179
LEAD (tons)								
Copper Concentrate ..	..	..	..	..	..	1,067	..	1,067
Lead Ores, Concentrate, etc.	165,786	..	33,243	41	1,913	6,103	..	207,086
Zinc Concentrate ..	2,780	..	..	..	..	1,080	..	3,860
Total ..	168,566	..	33,243	41	1,913	8,250	..	212,013

MINERAL PRODUCTION; PRINCIPAL CONTENTS OF METALLIC MINERALS,  
1951—continued.

Mineral in which contained.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Aust.
SILVER (f. oz.).								
Copper Ore, Concentrate, etc.	70,497	..	18,663	..	116	477,341	1	566,618
Gold Ore, Concentrate, etc.	1,713	4,908	13	107	..	..	..	6,741
Gold—Other Forms (f)	1,383	3,418	7,979	..	188,942	..	..	201,722
Lead Ores, Concentrate, etc.	6,148,407	..	2,558,387	350	7,685	389,153	..	9,103,982
Zinc Concentrate	252,949	..	..	..	..	107,135	..	360,084
Other	4,544	..	..	..	..	..	..	4,544
Total ..	6,479,493	8,326	2,585,042	457	196,743	973,629	1	10,243,691

SULPHUR (tons).								
Pyritic Ore and Concentrate ..	10,355	..	16,225	103	(b)19,820	(a)19,549	..	66,052
Zinc Concentrate ..	86,816	..	(a)13,676	..	..	(a)13,472	..	113,964
Total ..	97,171	..	29,901	103	(b)19,820	(a)33,021	..	180,016

TIN (tons).								
Tin Concentrate ..	413	36	(a) 340	..	41	706	23	1,559

TUNGSTEN (lb., in terms of WO <sub>3</sub> ).								
Scheelite Concentrate ..	12,777	..	(a) 4,838	..	194	1,398,800	..	1,416,609
Wolfram Concentrate ..	19,303	489	a224,834	..	7,303	591,352	202,611	1,045,892
Other ..	14,678	..	..	..	..	..	..	14,678
Total ..	46,758	489	a229,672	..	7,497	1,990,152	202,611	2,477,179

ZINC (tons).								
Zinc Concentrate ..	143,086	..	21,743	..	..	24,362	..	189,191
Other ..	27	..	..	..	9	(g)	..	36
Total ..	143,113	..	21,743	..	9	24,362	..	189,227

(a) Estimated. (b) Actual recoveries. (c) Less than half the unit of quantity shown.  
 (d) Included under "Gold—Other Forms". (e) Excludes Western Australia. (f) Bullion,  
 alluvial, retorted gold, etc. (g) Not available.

6. Value of Production, 1939, 1947 to 1951.—The defective nature of mineral statistics, generally, prior to 1950 has been referred to in para. 3, preceding. This applied particularly to the values of individual minerals recorded by Mines Departments, which from the point of view of Australian statistics were very unsatisfactory as they represented a heterogeneous collection of "values" ascribed to ores, concentrates and metal contents of untreated or partly treated minerals. In 1950 satisfactory methods of compiling mineral values (i.e. as incorporated in the plan for standardization of mineral statistics referred to in para. 3) were adopted in several States but in others the old defective procedures are still being used.



In the table below particulars of the recorded values of minerals are shown for the years 1939 and 1947 to 1951. Because of the changes in the bases of recording mineral values adopted in some States in 1950, the data for that year and 1951 are not strictly comparable with those shown for earlier years. Separate figures are shown for metallic minerals, fuel minerals and non-metallic minerals. It should be noted that the values of construction materials are excluded from the particulars of non-metallic minerals and from the total.

## MINERAL PRODUCTION : VALUES.

( £'000.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Aust.
<b>METALLIC MINERALS.</b>								
1939 .. .. .	5,169	1,589	3,371	3,003	11,884	1,902	228	27,146
1947 .. .. .	13,754	943	6,301	2,478	7,867	4,040	164	35,547
1948 .. .. .	20,932	780	6,844	2,374	7,523	4,158	216	42,827
1949 .. .. .	19,469	866	8,972	1,506	8,144	4,404	547	43,908
1950(a) .. ..	24,591	1,079	12,788	2,728	9,893	4,859	628	56,566
1951(a) .. ..	35,350	1,064	15,712	2,776	11,181	8,163	916	75,162
<b>FUEL MINERALS.</b>								
1939 .. .. .	7,041	646	1,168	..	363	74	..	9,292
1947 .. .. .	12,295	1,237	2,238	68	840	155	..	16,833
1948 .. .. .	15,143	1,531	2,347	120	880	178	..	20,199
1949 .. .. .	16,303	1,850	2,874	173	972	182	..	22,354
1950(a) .. ..	22,306	2,091	3,562	131	1,185	232	..	29,597
1951(a) .. ..	29,507	3,359	4,490	400	1,717	305	..	39,778
<b>NON-METALLIC MINERALS. (b)</b>								
1939 .. .. .	178	13	19	317	42	81	16	666
1947 .. .. .	216	26	7	664	155	30	65	1,163
1948 .. .. .	276	36	20	767	158	31	78	1,366
1949 .. .. .	249	40	12	765	347	43	52	1,508
1950(a) .. ..	1,196	405	104	1,053	389	257	73	3,477
1951(a) .. ..	1,494	503	221	1,359	469	171	71	4,288
<b>TOTAL. (b)</b>								
1939 .. .. .	12,388	2,248	4,558	3,320	12,289	2,057	244	37,104
1947 .. .. .	26,265	2,207	8,545	3,210	8,862	4,225	229	53,543
1948 .. .. .	36,351	2,347	9,211	3,261	8,561	4,367	294	64,392
1949 .. .. .	36,021	2,756	11,858	2,444	9,463	4,629	599	67,770
1950(a) .. ..	48,093	3,575	16,454	3,912	11,467	5,348	701	89,550
1951(a) .. ..	66,351	4,926	20,423	4,535	13,367	8,639	987	119,228

(a) Because of revised methods adopted in the collection and presentation of mineral statistics, the values shown for the years 1950 and 1951 are not strictly comparable with those published for previous years.

(b) Excludes Construction Materials.

7. Total Production since the Inception of Mining in Australia.—The previous issue of the Year Book included a table showing the recorded values of principal minerals produced from the inception of mining in Australia to the end of 1949. Because of the revised methods of the collection and presentation of mineral statistics adopted in 1950 it is not possible to continue the table beyond 1949.

## § 2. Gold.

1. Discovery in Various States.—The discovery of gold in payable quantities was an epoch-making event in Australian history, for, as one writer aptly phrases it, this event "precipitated Australia into nationhood". A more or less detailed account of the finding of gold in the various States appears under this section in Official Year Books Nos. 1 to 4.

2. *Mine Production.*—The following table shows the mine production of gold (i.e. gold content of minerals produced) in the several States and in Australia as a whole during each of the ten decennial periods from 1851 to 1950, and in single years from 1946 to 1952. Owing to the defective information in the earlier years the figures fall considerably short of the actual totals, for during the first stages of mining development large quantities of gold were taken out of Australia by successful miners who preferred to keep the amount of their wealth secret.

**GOLD : MINE PRODUCTION.(a)**  
(<sup>'000</sup> fine oz.)

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Aust.
1851-60 .. .. .	2,715	21,973	3	..	..	186	..	24,877
1861-70 .. .. .	3,220	15,327	489	..	..	3	..	19,039
1871-80 .. .. .	2,019	9,564	2,527	736	..	165	29	14,430
1881-90 .. .. .	1,014	6,689	3,259	58	42	357	168	11,587
1891-1900 .. .. .	2,432	7,040	5,648	52	5,252	550	214	21,188
1901-10 .. .. .	2,253	7,095	5,512	73	17,784	604	111	33,432
1911-20 .. .. .	1,145	3,067	2,263	55	10,671	202	23	17,426
1921-30 .. .. .	204	593	434	10	4,557	43	2	5,843
1931-40 .. .. .	569	1,952	1,021	53	8,474	130	84	11,383
1941-50 .. .. .	573	801	749	13	6,682	157	148	9,123
1946 .. .. .	32	87	62	1	617	15	10	824
1947 .. .. .	50	85	72	1	704	15	11	938
1948 .. .. .	52	69	70	2	665	13	15	886
1949 .. .. .	52	69	76	2	648	12	30	889
1950 .. .. .	52	68	88	1	610	16	35	870
1951 .. .. .	49	66	79	(b)	648	15	39	806
1952 .. .. .	39	68	85	(b)	727	16	45	980
Total, 1851-1952..	16,470	73,713	22,437	457	58,081	2,499	954	174,611

(a) Gold content of minerals produced.

(b) Less than half the unit of quantity shown.

The amount of gold raised in Australia in any one year attained its maximum in 1903, when Western Australia also reached its highest point. For the other States the years in which the greatest yields were obtained were as follows:—New South Wales, 1852; Victoria, 1856; Queensland, 1900; South Australia, 1904; and Tasmania, 1899.

Owing to the exhaustion of the more easily worked deposits and increased costs due to deep mining the production of gold in Australia declined from 3,837,979 fine oz. in 1903 to 427,160 fine oz. in 1929, the lowest output since the discovery of the precious metal.

Increased activity in prospecting due to prevailing economic conditions resulted in some improvement in 1930, but the marked development between that year and 1939 received its impetus from the heavy depreciation of Australian currency in terms of gold. Oversea and local capital were attracted to the industry, and the employment of advanced geological methods and technical improvements brought many difficult or abandoned propositions into profit. The output of gold rose annually from 467,742 fine oz. in 1930 to 1,645,697 fine oz. in 1939. Following the outbreak of the 1939-45 War, losses of man-power through enlistment in the Armed Services and transfers to more essential work associated with the war effort resulted in a sharp fall in gold production to 656,867 fine oz. in 1944 and 657,213 fine oz. in 1945. Following the release of man-power after the war, there was an upward trend in mine production of gold until 1947 when output was 937,654 fine oz. Output fell again in 1948 to 885,507 fine oz. and remained below 900,000 fine oz. in each of the years 1949, 1950 and 1951, notwithstanding the increase in the price of gold from £A.10 15s. 3d. to £A.15 9s. 10d. which became operative from 19th September, 1949. In 1952, mine gold output increased to 980,435 fine oz., this being the highest figure recorded since 1942. Since December, 1951, the bulk of Australian newly-won gold has been sold on overseas premium markets.

3. **Refinery Production.**—The quantities and values of the refinery production of new gold of Australian origin are shown in the following table for each of the years 1940 to 1952. The value of the refined new gold is based on the price fixed by the Commonwealth Bank, but allowance is made in 1952 for premiums on sales of gold for industrial purposes in Australia and overseas. Particulars of the values ascribed to gold production (mine basis) in 1939 and earlier years were included in previous issues of the Year Book.

**GOLD : REFINERY PRODUCTION OF NEWLY-WON GOLD OF AUSTRALIAN ORIGIN.**

Year.	Quantity.	Value.	Year.	Quantity.	Value.
	'000. fine oz.	£'000.		'000. fine oz.	£'000.
1940 .. ..	1,637	17,445	1947 .. ..	969	10,430
1941 .. ..	1,441	15,393	1948 .. ..	884	9,517
1942 .. ..	1,168	12,210	1949 .. ..	879	10,670
1943 .. ..	754	7,878	1950 .. ..	844	13,077
1944 .. ..	636	6,679	1951 .. ..	850	13,172
1945 .. ..	613	6,556	1952 .. ..	1,000	16,490
1946 .. ..	820	8,830			

4. **Unit Values.**—Values per fine oz. in Australian currency assigned to the production of gold during recent years are : £9 14s. 5½d. in 1939, £10 13s. 1¾d. in 1940, £10 13s. 8d. in 1941, £10 9s. 0¾d. in 1942, £10 9s. 0d. in 1943, £10 10s. 1½d. in 1944, £10 13s. 11¼d. in 1945 and £10 15s. 3d. in each year 1946 to 1948. The unit value of gold production rose to £12 2s. 10d. in 1949, as a result of the increase in the price to £15 9s. 10d. per fine oz. fixed by the Commonwealth Bank on 19th September, 1949, consequent upon alteration in the rate of exchange. In 1950 and 1951, the unit values adopted were the Bank's price of £15 9s. 10d. per fine oz., while in 1952 allowance was made for premiums on gold sold for industrial purposes in Australia and on premium markets overseas, the weighted average value for the year being £16 9s. 10d. per fine oz. Further information regarding the price of gold realized, including particulars of prices for newly-won gold sold on overseas premium markets since December, 1951, is given in Chapter XVI.—Private Finance.

5. **Changes in Relative Positions of States as Gold Producers.**—The figures in the table showing the quantity of gold raised explain the very large increase in the population of Victoria during the period 1851 to 1861, when an average of over 40,000 persons reached the State each year. With the exception of 1889, when its output was exceeded by that of Queensland, Victoria maintained its position as the chief gold producer for a period of forty-seven years, until its production was surpassed by that of Western Australia in 1898. From that year onward the proportion contributed by Western Australia has increased and in 1952 represented 74 per cent. of the entire yield of Australia. The proportion contributed by this State for the period 1851 to 1952 was 33 per cent. and by Victoria for the same period 42 per cent.

6. **Place of Australia in the World's Gold Production.**—The table below shows, in decennial periods from 1851 to 1950 and for each of the years 1950–51 the world's gold production (as ascertained from authoritative sources) and the share of Australia therein. The details of world production from 1940 are possibly less complete than those for earlier years, because of censorship during and after the war. The figures recorded for these years represent recorded production only and therefore omit any production for those countries not reporting. Included in this latter group are the Soviet Union and other producing countries of lesser importance.

## GOLD : WORLD PRODUCTION.

Period.	World Production of Gold.		Gold Produced in Australia.		Proportion of Australian Production to Total.	Period.	World Production of Gold.		Gold Produced in Australia.		Proportion of Australian Production to Total.
	'000. fine oz.	'000. fine oz.	'000. fine oz.	%			'000. fine oz.	'000. fine oz.	%		
1851-60 .. .. .	64,483	24,877	38.58		1911-20 .. .. .	206,511	17,426	8.44			
1861-70 .. .. .	61,098	19,039	31.16		1921-30 .. .. .	183,806	5,843	3.18			
1871-80 .. .. .	55,671	14,430	25.92		1931-40 .. .. .	315,509	11,383	3.61			
1881-90 .. .. .	51,280	11,587	22.59		1941-50 .. .. .	627,400	9,122	3.66			
1891-1900 .. .. .	101,648	21,188	20.84		1950 .. .. .	a 24,200	870	3.59			
1901-10 .. .. .	182,892	33,432	18.28		1951 .. .. .	a 23,600	896	3.80			

(a) Recorded production only. See letterpress above.

The quantities of gold produced in the principal producing countries in each of the years 1938 and 1947 to 1951 are shown in the table hereunder.

## GOLD : PRODUCTION IN PRINCIPAL COUNTRIES.

('000 fine oz.)

Country.	1938.	1947.	1948.	1949.	1950.	1951.
Union of South Africa .. .. .	12,161	11,200	11,585	11,705	11,664	11,516
U.S.S.R. (Russia) .. .. .	5,236	(a)7,000	(a)7,000	(a)7,000	(a)7,000	(a)7,000
Canada .. .. .	4,725	3,070	3,530	(b)4,124	(b)4,431	(b)4,320
United States of America .. .. .	4,245	2,109	2,014	1,992	2,392	1,958
<b>Australia</b> .. .. .	<b>1,592</b>	<b>938</b>	<b>886</b>	<b>889</b>	<b>870</b>	<b>896</b>
British West Africa(c) .. .. .	730	563	677	682	695	784
Rhodesia .. .. .	815	524	516	529	513	488
Columbia .. .. .	521	383	335	385	406	431
Mexico .. .. .	924	465	338	406	408	393
Belgian Congo .. .. .	394	301	300	334	339	352

(a) Estimated. Sierra Leone.

(b) Includes Newfoundland.

(c) Includes Gambia, Gold Coast, Nigeria,

7. **Employment in Gold-mining.**—The number of persons employed in gold-mining in each State at various intervals since 1901 is shown in the following table. The figures include prospectors, etc., so far as data are ascertainable, and include those who may not have worked during the whole of the year. The figures for Queensland in the table below include persons employed in the Mount Morgan copper-gold mining establishment. In the tables in § 13 relating to employment in the mining industry generally, employment in the Mount Morgan establishment for the years 1950 and 1951 has been classified to copper-gold mining, which is a separate industry in the Draft Classification of the Mining Industry adopted for 1950.

## GOLD-MINING : PERSONS EMPLOYED.

Year.	N.S.W.	Victoria.	Q'land.(a)	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Total.
1901 .. .. .	12,064	27,387	9,438	(b)1,000	19,771	1,112	(b) 200	70,972
1903(e) .. .. .	11,247	25,208	9,229	(b)1,000	20,716	973	(b) 200	68,573
1913 .. .. .	3,570	11,931	3,123	800	13,445	481	175	33,525
1923 .. .. .	1,141	2,982	603	32	5,555	119	30	10,462
1933 .. .. .	6,913	6,126	4,161	231	9,900	229	95	27,655
1938 .. .. .	3,764	6,315	3,378	158	15,374	141	267	29,397
1947 .. .. .	795	1,135	1,834	50	7,649	14	176	11,653
1948 .. .. .	702	1,064	1,627	34	7,178	15	171	10,791
1949 .. .. .	688	1,019	1,589	52	6,800	9	238	10,395
1950 .. .. .	695	1,050	1,738	47	7,048	12	208	10,798
1951 .. .. .	574	761	1,653	27	6,742	12	143	9,912

(a) Includes employment in the Mount Morgan copper-gold mine, mill and smelter. (b) Estimated.

(c) Year of maximum production for Australia.

Owing to the exhaustion of the more easily worked deposits and increased costs due to deep mining, the number employed in gold-mining in 1929 had dwindled to the comparatively small figure of 6,108. Stimulated by the enhanced price of gold, employment in the industry rose over four-fold to 33,113 in 1935, but thereafter the numbers employed declined each year to 7,015 in 1944. Following the cessation of hostilities and a relaxation of manpower control, the numbers rose in each succeeding year to reach 11,653 in 1947. In the next three years they remained between 10,000 and 11,000 but in 1951 declined to 9,912.

8. Assistance to Gold-mining Industry.—The Commonwealth Government imposed a tax on gold produced in Australia or in any Territory under its jurisdiction and delivered to the Commonwealth Bank on or after 15th September, 1939, the rate of tax being fixed at 50 per cent. of the price payable by the Bank in excess of £A.9 per fine oz. This tax was suspended as from 20th September, 1947, by the Gold Tax Suspension Act 1947 in order to assist the gold-mining industry in meeting higher costs and to encourage greater output.

### § 3. Silver, Lead and Zinc.

1. Mine Production.—(i) *Australia.* Because of revised methods adopted in the compilation and presentation of mineral statistics, data relating to the production of silver-lead-zinc minerals for the years 1950 and 1951 are not strictly comparable with those published for previous years. The following table shows for 1950 and 1951 the mine production of silver, lead and zinc in Australia, and the respective minerals in which these metals were contained.

#### SILVER, LEAD AND ZINC : MINE PRODUCTION IN INDIVIDUAL MINERALS.

Mineral in which contained.	Silver (fine oz.).		Lead (tons).		Zinc (tons).	
	1950.	1951.	1950.	1951.	1950.	1951.
Copper Concentrate ..	778,495	566,119	1,016	1,067	..	..
Gold Bullion, etc. ..	218,399	201,722	..	..	..	..
Lead-Silver Ore ..	104,257	148,798	2,672	2,962	..	(a)
Lead-Silver-Zinc Ore ..	100	349	22	22	3	7
Lead Concentrate ..	9,426,266	8,954,390	217,269	204,094	..	2
Silver Ore ..	25,786	4,420	..	..	..	..
Zinc Concentrate ..	427,016	360,084	4,382	3,860	197,780	189,191
Other Minerals ..	3,483	7,809	6	8	..	27
Total ..	10,983,802	10,243,691	225,367	212,013	197,783	189,227

(a) Less than half the unit of quantity shown.

The following table shows the mine production of silver, lead and zinc in Australia for the years 1947 to 1951 compared with 1939.

The totals for the years 1939 and 1947 to 1949 inclusive are from data compiled by the Australian Mines and Metals Association.

#### SILVER, LEAD AND ZINC : MINE PRODUCTION, AUSTRALIA.

Metal.	Unit.	1939.(a)	1947.(a)	1948.(a)	1949.(a)	1950.	1951.
Silver ..	f. oz.	15,320,110	9,527,140	10,057,519	9,849,213	10,983,802	10,243,691
Lead ..	ton	280,003	196,623	216,955	213,491	225,367	212,013
Zinc ..	..	217,256	182,258	190,469	181,998	197,783	189,227

(a) Source : Australian Mines and Metals Association.

The following table shows the quantities of silver, lead and zinc contained in minerals won in the several States of Australia in the years 1950 and 1951 :—

## SILVER, LEAD AND ZINC : MINE PRODUCTION, STATES AND AUSTRALIA.

State.	Silver (fine oz.)		Lead (tons).		Zinc (tons).	
	1950.	1951.	1950.	1951.	1950.	1951.
New South Wales ..	6,847,686	6,479,493	175,575	168,566	144,225	143,113
Victoria .. ..	9,473	8,326	..	..	..	..
Queensland .. ..	2,708,068	2,585,042	38,790	33,243	25,800	21,743
South Australia ..	1,348	457	59	41	..	..
Western Australia ..	205,313	196,743	1,302	1,913	3	9
Tasmania .. ..	1,211,575	973,629	9,626	8,250	27,755	24,362
Northern Territory ..	(a) 339	1	15	..	..	..
Australia .. ..	10,983,802	10,243,691	225,367	212,013	197,783	189,227

(a) Estimated.

Particulars of the values ascribed to the various minerals containing silver, lead and zinc for the year 1951 are shown in the detailed tables relating to mineral production on pp. 750 and 751.

(ii) *New South Wales.* By far the greater amount of silver-lead-zinc ore in New South Wales, in fact in Australia, is won from the massive silver-lead-zinc sulphide deposit at Broken Hill. Those concerned in operating this gigantic lode are North Broken Hill Limited (which mines the northern limb of the ore-bearing structure), Broken Hill South Ltd., and Zinc Corporation Ltd. with which is associated New Broken Hill Consolidated (which are conducting operations on the southern limb).

The oxidized lead ores were directly smelted at Broken Hill prior to 1897, when smelting operations were transferred to Port Pirie in South Australia. The present-day sulphide ores are concentrated by gravity and flotation methods at Broken Hill. The lead (galena) concentrates (averaging, per ton, approximately 76 per cent. lead, 4 per cent. zinc, 30 oz. silver, 9.0 grains of gold, 0.22 per cent. antimony and 0.64 per cent. copper) are railed to Port Pirie and smelted to produce lead bullion which is later refined by a continuous lead refining process for the elimination of arsenic and antimony and the recovery of silver and gold. A large proportion of the zinc concentrates produced at Broken Hill are roasted by fertilizer plants in South Australia for the recovery of sulphur dioxide for sulphuric acid manufacture, the calcines after roasting being sent to Risdon in Tasmania for refining. The balance of the concentrates is either exported overseas or sent to Risdon in Tasmania for roasting and refining.

At Captain's Flat, Lake George Mines Limited is operating a lode of similar constitution. Concentration of the ore is carried out at the mine itself, after which process individual concentrates of zinc and lead (containing silver) are despatched to Port Kembla, New South Wales, for further treatment. Concentrates of copper, pyrites and gold are also produced at this mine.

Silver-lead-zinc ore has been mined in small quantities in various other parts of the State, the more important localities being Yerranderie, Howell and Kangiara.

Particulars of the New South Wales mine production of silver, lead and zinc, as reported by the Mines Department, are shown in the table below for the years 1950 and 1951. The greater part of the silver of New South Wales origin is contained in the lead ore and concentrates shown separately in the table. The greater part of this is mined at Broken Hill, with smaller quantities from Captain's Flat.

## SILVER, LEAD AND ZINC : MINE PRODUCTION, NEW SOUTH WALES.

Mineral in which Contained.	Quantity of Contents.	
	1950.	1951.
SILVER (fine ounces).		
Bismuth Concentrate .. .. .	81	124
Copper Ore, Concentrate, etc. .. .. .	89,823	70,497
Gold Ore Concentrate, etc. .. .. .	1,670	1,713
Gold—Other Forms .. .. .	1,984	1,383
Lead Ore, Concentrate, etc. .. .. .	6,431,587	6,148,407
Silver Ore .. .. .	25,786	4,420
Zinc Concentrate .. .. .	296,755	252,949
Total .. .. .	6,847,686	6,479,493
LEAD (tons).		
Lead Ore, Concentrate, etc. .. .. .	172,421	165,786
Zinc Concentrate .. .. .	3,154	2,780
Total .. .. .	175,575	168,566
ZINC (tons).		
Zinc Ore and Concentrate .. .. .	144,225	143,113

(iii) *Victoria*. Small quantities of lead sulphide ore occur on most of Victoria's goldfields and in minor amounts in the Omeo, Bethanga and Cassilis districts. There has been no production of lead ore in recent years, the total recorded production being about 800 tons valued at £5,892.

Practically the whole of the Victorian mine production of silver of 8,326 fine oz. for 1951 was won as a by-product of the gold-mining industry.

(iv) *Queensland*. In the far north-west of Queensland at Mt. Isa, some 600 miles west of Townsville, is operated the mining, milling and smelting enterprise of Mt. Isa Mines Ltd. Here, mining is carried out on extensive silver-lead-zinc ore lodes. After concentration by flotation in the concentrating mill, the silver-lead concentrate is converted to bullion in the smelter. All Mt. Isa bullion is exported overseas, where certain impurities, such as antimony, arsenic, and copper, as well as silver, are removed to yield a pure lead suitable for commercial use.

Zinc concentrates and copper-lead dross produced by Mt. Isa are also exported overseas. During the 1939-45 War, operations on silver-lead-zinc ores at Mt. Isa were suspended while the mine was engaged in mining copper, but normal operations of the mine were resumed in 1946. However, in February, 1953, a new copper smelter at Mt. Isa commenced production. The annual output of the smelter is estimated to be approximately 16,000 tons of blister copper.

The following table shows particulars of the Queensland mine production of silver, lead and zinc for the years 1950 and 1951.

## SILVER, LEAD AND ZINC : MINE PRODUCTION, QUEENSLAND.

Mineral in which Contained.	Quantity of Contents.	
	1950.	1951.
SILVER (fine ounces).		
Copper Ore, Concentrate, etc. .. .. .	18,043	18,663
Gold Ore, Concentrate, etc. .. .. .	15	13
Gold—Other Forms .. .. .	8,522	7,979
Lead Ore, Concentrate, etc. .. .. .	2,681,488	2,558,387
• Total .. .. .	2,708,068	2,585,042
LEAD (tons).		
Lead Ore, Concentrate, etc. .. .. .	38,790	33,243
ZINC (tons).		
Zinc Concentrate .. .. .	25,800	21,743

(v) *South Australia.* Output of lead from local ores has been very small in recent years. In 1950, 81 tons of lead-silver ore were produced (valued at £5,897 and containing 59 tons of lead and 1,348 fine ounces of silver) while in 1951, 326 tons of this ore were won (valued at £6,791 and containing 41 tons of lead and 350 fine ounces of silver). There were also 107 fine ounces of silver contained in gold ore won in South Australia in 1951.

There has been no recorded zinc production since 1903, when the zinc was contained in lead ores and concentrates which came mainly from the Glen Osmond and Strathalbyn districts.

(vi) *Western Australia.* During 1950 and 1951, lead-silver ore, lead-silver-zinc ore and lead concentrates were produced in Western Australia. Main centres of production were the Northampton area, Nabawa, the Ashburton area and the West Kimberley district. The lead concentrates won at Nabawa and in the Northampton area do not contain payable amounts of silver. Silver-lead-zinc ore is produced by the Devonian Lead Mine in the West Kimberley district.

The bulk of the mine production of silver in Western Australia is obtained as a by-product of the gold-mining industry.

Particulars of the mine production of silver, lead and zinc, as reported by the Mines Department of Western Australia for 1950 and 1951, are shown below.

## SILVER, LEAD AND ZINC : MINE PRODUCTION, WESTERN AUSTRALIA.

Mineral in which Contained.	Quantity of Contents.	
	1950.	1951.
SILVER (fine ounces).		
Copper Concentrate .. .. .	..	116
Gold Bullion, etc. .. .. .	198,420	188,942
Lead-Silver Ore .. .. .	6,551	7,164
Lead-Silver-Zinc Ore .. .. .	100	349
Lead Concentrate .. .. .	242	172
Total .. .. .	205,313	196,743
LEAD (tons).		
Lead-Silver Ore .. .. .	553	705
Lead-Silver-Zinc Ore .. .. .	22	22
Lead Concentrate .. .. .	727	1,186
Total .. .. .	1,302	1,913
ZINC (tons).		
Lead-Silver-Zinc Ore .. .. .	3	9



(vii) *Tasmania*. There are two large centres of silver-lead-zinc mining in Tasmania. The more important is the field operated by the Electrolytic Zinc Company of Australasia Limited at Read-Rosebery. These are primarily zinc mines, although lead and copper-lead concentrates are also produced. This company also owns the electrolytic zinc works at Risdon near Hobart.

The lead concentrates and copper-lead concentrates produced at Rosebery are exported overseas.

The zinc concentrates, which are the principal product from the mine, also contain some lead. This concentrate is sent to Risdon for roasting and refining, portion of the resultant lead residue being sent to Port Pirie in South Australia for refining, the balance being dumped. In addition to the refining of zinc concentrates produced at Rosebery, the Risdon plant also treats considerable quantities of zinc concentrates from the Broken Hill mines.

Of secondary importance to Rosebery is the Mount Farrell field, situated 6 miles north-east of Rosebery. These ore-bodies are mainly silver-lead lodes which yield a lead concentrate with high silver content. The zinc content is insufficient to warrant recovery.

Most of the State's silver is contained in concentrates produced at Rosebery and Mount Farrell. Some silver is obtained from the Mount Lyell copper refinery tank house slimes which are treated at Port Kembla in New South Wales.

Particulars of Tasmanian mine production of silver, lead and zinc, as reported by the Department of Mines, are shown in the following table for the years 1950 and 1951.

#### SILVER, LEAD AND ZINC : MINE PRODUCTION, TASMANIA.

Mineral in which Contained.	Quantity of Contents.	
	1950.	1951.
SILVER (fine ounces.)		
Copper Concentrate .. .. .	672,241	477,341
Lead Ore, Concentrate, etc. .. .. .	409,073	389,153
Zinc Concentrate .. .. .	130,261	107,135
Total .. .. .	1,211,575	973,629
LEAD (tons).		
Copper Concentrate .. .. .	1,016	1,067
Lead Ore, Concentrate, etc. .. .. .	7,382	6,103
Zinc Concentrate .. .. .	1,228	1,080
Total .. .. .	9,626	8,250
ZINC (tons).		
Zinc Concentrate .. .. .	27,997	24,362

(viii) *Northern Territory*. There was no production of lead-silver ore in the Northern Territory in 1951. However, 41 tons of ore valued at £883 and with a content of 339 fine ounces of silver and 15 tons of lead were won in 1950. The output in 1950 came mainly from a few old mines in the northern part of the Territory, abandoned since the early days of mining. The principal centres are Boomlera, Mount Shoobridge, McArthur River and Jervois Range.

2. **Production and Sales of Refined Silver, Lead and Zinc.**—In the following table, details are given of the production and sales of refined primary silver, lead and zinc as recorded from data received from the Australian Mines and Metals Association and from other sources. The figures shown for refined silver production include small quantities recovered from imported materials. The data relating to lead production include small quantities recovered from scrap for the years 1939 and 1948.

## REFINED SILVER, LEAD AND ZINC : PRODUCTION, SALES AND STOCKS, AUSTRALIA.

Particulars.	1939.	1948.	1949.	1950.	1951.	1952.
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## SILVER ('000 fine oz.).

Production for year .. ..	9,552	6,466	5,858	6,882	6,879	6,773
Sold to Australian consumers (a) ..	1,794	1,375	1,019	1,095	1,693	732
Exported or sold for export (a) ..	7,518	4,998	4,205	5,745	4,924	5,576

## LEAD (tons).

Refined Lead—						
Production for year .. ..	199,437	159,497	150,056	160,526	165,758	156,639
Sold to Australian consumers (a) ..	32,217	34,774	40,908	43,661	54,629	32,492
Exported or sold for export (a) ..	164,684	123,890	108,071	122,426	112,476	117,501
Lead Bullion—						
Produced for export .. ..	43,955	30,165	32,621	37,021	31,872	37,709

## ZINC (tons).

Production for year .. ..	71,220	81,312	80,956	83,652	77,010	87,438
Sold to Australian consumers (a) ..	31,088	42,018	44,024	45,141	45,950	50,174
Exported or sold for export (a) ..	43,137	37,100	38,230	38,558	29,411	38,132

(a) Source : Australian Mines and Metals Association.

3. **World Production.**—The estimated world production of silver, lead and zinc during the years 1938 and 1947 to 1951, as derived from statistics compiled by the Mineral Resources Division of the Colonial Geological Surveys, is shown in the following table.

## SILVER, LEAD AND ZINC : WORLD PRODUCTION.

Mineral.	Unit of Quantity.	1938.	1947.	1948.	1949.	1950.	1951.
Silver .. ..	(million fine oz.) ..	268	165	172	163	182	178
Lead .. ..	('000 tons of 2,240 lb.)	1,770	1,378	1,426	1,541	1,679	1,715
Zinc .. ..	('000 tons of 2,240 lb.)	1,870	1,730	1,864	1,930	2,192	2,326

4. **Silver, Lead and Zinc Production in Principal Countries, 1951.**—The following table shows particulars of silver, lead and zinc production (mine basis) in principal producing countries, according to data published by the Mineral Resources Division of the Colonial Geological Surveys.

## SILVER, LEAD AND ZINC : MINE PRODUCTION IN PRINCIPAL COUNTRIES, 1951.

Country.	Production.	Country.	Production.
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## SILVER ('000 fine oz.).

Mexico .. ..	43,798	Japan .. ..	4,506
United States of America .. ..	39,464	Belgian Congo .. ..	3,795
Canada (a) .. ..	24,245	Yugoslavia .. ..	3,032
Peru .. ..	14,856	Germany (Federal) .. ..	1,820
<b>Australia</b> .. ..	<b>10,244</b>	Union of South Africa .. ..	1,163
U.S.S.R. (Russia) .. ..	(b)	Argentina .. .. (c)	1,150
Bolivia .. ..	7,172	Chile .. ..	983

(a) Includes Newfoundland.

(b) Information not available.

(c) Year 1950.

SILVER, LEAD AND ZINC: MINE PRODUCTION IN PRINCIPAL COUNTRIES, 1951—*continued*.

Country.	Production.	Country.	Production.
LEAD (tons of 2,240 lb.).			
United States of America ..	346,575	Yugoslavia .. ..	77,506
Mexico .. ..	221,907	French Morocco .. ..	67,107
<b>Australia .. ..</b>	<b>212,013</b>	Spain .. ..	40,167
U.S.S.R. (Russia) .. ..	(b) 210,000	South-West Africa .. ..	38,611
Canada (a) .. ..	136,161	Italy .. ..	38,126
Peru .. ..	81,048	Bolivia .. ..	30,076
Germany (Federal) .. ..	(c)	Argentina .. ..	(b) 23,600

ZINC (tons of 2,240 lb.).			
United States of America ..	599,577	Belgian Congo .. ..	88,138
Canada (a) .. ..	299,157	Spain .. ..	74,353
U.S.S.R. (Russia) .. ..	(b) 240,000	Germany (Federal) .. ..	71,790
<b>Australia .. ..</b>	<b>189,227</b>	Japan .. ..	62,269
Mexico .. ..	177,220	Yugoslavia .. ..	38,798
Peru .. ..	99,699	Sweden .. ..	34,242
Italy .. ..	94,169	Bolivia .. ..	30,053

(a) Includes Newfoundland. (b) Estimated. (c) Information not available.

5. Prices of Silver, Lead and Zinc.—In view of the close association in Australia, particularly in New South Wales, of ores containing these metals, relevant particulars of the prices of each of the metals have been included in the following table. The table shows average prices in Australia and on the London Metal Exchange during the years 1938 and 1948 to 1952. Lead and zinc prices were controlled in the United Kingdom and Australia after the outbreak of war in 1939. Free trading in lead in the United Kingdom, after thirteen years of Government control, was resumed on 1st October, 1952, while the price of zinc, fixed by regulation, was abandoned from 1st January, 1953. Prices of lead and zinc were decontrolled in Australia on the 21st April, 1953. Silver prices have not been controlled in the United Kingdom and Australia.

## PRICES OF SILVER, LEAD AND ZINC.

( £ s. d.)

Metal.	1938.	1948.	1949.	1950.	1951.	1952.
Australian Prices, in Australian currency—						
Silver, per fine oz. (a) ..	0 2 2.0	0 4 8.4	0 5 1.6	0 6 9.2	0 8 1.7	0 7 9.1
Lead, per ton b	c22 0 0	22 0 0	35 0 0	43 12 7	65 0 0	74 15 1
Zinc, per ton b	c22 0 0	22 0 0	40 0 0	47 3 10	65 0 0	74 15 1
London Metal Exchange Prices, in sterling—						
Silver, per fine oz. ..	0 1 9.06	0 3 9.0	0 4 1.2	0 5 4.8	0 6 5.9	0 6 2.4
Lead, per ton b	15 6 6	95 10 0	103 3 11	106 8 2	161 19 10	135 9 0 d
Zinc, per ton b	14 1 7	80 0 9	87 8 6	119 4 3	171 12 3	149 10 2

(a) Silver prices have not been fixed by regulation in Australia, the prices shown representing export parity calculated from London Metal Exchange prices. (b) Prices fixed by regulation. (c) From February, 1940. (d) Price regulation was abandoned from 1st October, 1952.

6 Employment in Silver, Lead and Zinc Mining.—The average number of persons employed in mining for these metals during each of the years 1938 and 1947 to 1951 is given below :—

**SILVER, LEAD AND ZINC MINING : PERSONS EMPLOYED.**

Year.	N.S.W.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Australia.
1938 .. ..	5,612	530	..	4	421	3	6,570
1947 .. ..	5,331	994	12	..	523	2	6,862
1948 .. ..	5,918	1,411	17	114	577	6	8,043
1949 .. ..	6,052	1,285	32	135	616	6	8,126
1950 .. ..	6,244	1,787	33	119	618	6	8,807
1951 .. ..	6,781	1,949	15	189	602	..	9,536

**§ 4. Copper.**

1. Production.—Copper is widely distributed throughout Australia. However, the principal producing States are at present Tasmania, Queensland and New South Wales, in that order.

In view of the revised methods of compiling values of individual minerals produced, operative from 1950 (see page 748), it is not practicable to continue a table of values of mine production of copper similar to that shown in previous issues of the Year Book. The table hereunder shows the quantity of mine production of copper in Australia for the years 1950 and 1951. It should be noted that the minerals shown below contain, in addition to copper, certain other metals (see pp. 751-3 for particulars).

**COPPER : MINE PRODUCTION, AUSTRALIA.**

(Tons).

Mineral in which Contained.	Quantity of Contents.	
	1950.	1951.
Copper Ore, Concentrates, etc. .. ..	15,025	15,739
Gold Ore, Concentrates, etc. .. ..	2	5
Lead Concentrate .. ..	2,166	1,874
Zinc Concentrate .. ..	288	308
Total .. ..	17,481	17,926

Particulars of the copper content of ores and concentrates produced in each producing State and the Northern Territory, as published by the Australian Mines and Metals Association for the years 1938 and 1947 to 1951, and as recorded by this Bureau from data obtained from the several State Mines Departments and other sources for the years 1950 and 1951, are shown in the table below.

**COPPER CONTENT OF ORES AND CONCENTRATES PRODUCED.**

(Tons).

State.	1938.	1947.	1948.	1949.	1950.	1951.
New South Wales .. ..	1,963	2,391	2,515	2,453	3,893	3,679
Queensland .. ..	4,458	2,778	3,149	4,924	5,424	5,432
South Australia .. ..	254	..	4	3	..	(a)
Western Australia .. ..	5	..	..	5	1	7
Tasmania .. ..	12,729	7,954	6,574	5,229	7,884	8,657
Northern Territory .. ..	37	..	126	848	279	151
Australia .. ..	19,446	13,123	12,368	13,462	17,481	17,926

(a) Less than half a ton.

2. **Sources of Production.**—(i) *New South Wales.* The copper content of ores and concentrates produced in New South Wales in 1951 amounted to 3,679 tons. The principal sources of this production were ores mined at Broken Hill, Cobar, and Captain's Flat.

(ii) *Queensland.* In 1951 mine production of copper in this State amounted to 5,432 tons compared with 5,424 tons in 1950 and 4,924 tons in 1949. The bulk of the production in 1951 came from Mt. Morgan (4,960 tons) while the copper content of copper-lead dross from Mt. Isa Mines, treated overseas, yielded 346 tons.

A copper mill and smelter is under construction at Mt. Isa for the purpose of operating on copper ores at that site. Copper was produced from copper ore at Mt. Isa during the 1939-45 War, but production was suspended in 1946 and until recently operations have been confined to silver-lead-zinc ores. The production of copper in the new smelter commenced early in 1953.

(iii) *South Australia.* Deposits of copper were previously found over a large portion of South Australia, and its total production to date has been considerable, notwithstanding that output has diminished to negligible dimensions since the exhaustion of the ore reserves on the principal copper fields. Mine production of copper recorded in 1948 and 1949 was only 4 and 3 tons respectively, whilst production was nil in 1950 and less than half a ton in 1951

(iv) *Western Australia.* The ore sent to smelters in 1951 amounted to 43 tons containing 7 tons of metal. In the same year carbonate ores for use as fertilizers amounted to 1,337 tons, the average copper content being 10 per cent.

(v) *Tasmania.* The quantity of copper produced in Tasmania during 1951 was 8,657 tons, the Mount Lyell Mining and Railway Co. Ltd. providing the greater part thereof. Copper in concentrates produced by this company in 1951 was 8,190 tons. There was an accumulation of untreated concentrates at the end of the year containing an estimated 4,800 tons of recoverable copper. Output of blister copper was 7,428 tons in 1951, while production of cathode copper was 7,162 tons.

(vi) *Northern Territory.* Copper has been found at various places in the Territory. In 1950 and 1951, 1,450 tons and 805 tons, respectively, of ore were mined, the copper content of which was 279 tons and 151 tons. In 1949, 4,492 tons of copper ore were produced with a copper content of 848 tons. The main decrease in production was in the Barrow Creek area where 3,990 tons of ore were produced in 1949, 1,010 tons in 1950 and 503 tons in 1951.

3. **Production and Sales of Refined Copper.**—There are two refining plants in Australia, one operated by Electrolytic Refining and Smelting Co., Port Kembla, New South Wales, and the other by Mount Lyell Mining and Railway Co., Mt. Lyell, Tasmania. The electrolytic process is employed in both cases. However the latter plant produces the copper in cathode form, which with exception of a quantity sold to the trade in Tasmania, is shipped to Port Kembla for conversion into the various customary refinery shapes. In the following table, details are given of the production and sales of refined domestic primary copper, as recorded from data received from the Australian Mines and Metals Association and other sources.

#### REFINED COPPER(a) : PRODUCTION AND SALES, AUSTRALIA.

(Tons.)

Particulars.	1939.	1948.	1949.	1950.	1951.	1952.
Production for year . . . . .	17,867	11,389	9,858	13,321	13,543	19,623
Sold to Australian consumers(b)	18,808	11,407	9,884	11,910	13,746	17,102
Exported or sold for export (b)	100	..	4	..	..	..

(a) Refined from domestic primary copper.

(b) Source : Australian Mines and Metals Association.

In recent years, local demand for copper has considerably exceeded Australian production and substantial quantities of copper have been imported. A large proportion of the imports in 1948 and later years has comprised blister copper imported mainly from South Africa and refined in Australia. Recorded imports of "pigs, ingots and other refinery shapes" (including blister copper) in 1950 and 1951 were 13,948 tons and 19,592 tons respectively.

4. **World Production of Copper.**—The world's estimated mine production of copper during the years 1938 and 1946 to 1951 is shown below.

**COPPER : WORLD MINE PRODUCTION.**  
(<sup>'000</sup> tons of 2,240 lb.).

1938.	1946.	1947.	1948.	1949.	1950.	1951.
2,000	1,806	2,180	2,280	2,250	2,490	2,630

The yields in 1951 from the principal copper-producing countries reporting, as published by the Mineral Resources Division of the Colonial Geological Surveys, were as follows:—

**COPPER : MINE PRODUCTION IN PRINCIPAL COUNTRIES, 1951.**  
(Tons of 2,240 lb.).

Country.	Production.	Country.	Production.
United States of America ..	828,866	Union of South Africa ..	33,198
Chile .. .. .	373,729	Peru .. .. .	32,075
Rhodesia .. .. .	314,423	Cyprus .. .. .	23,700
Russia .. .. .	(a) 296,000	Cuba .. .. .	20,873
Canada(b) .. .. .	241,503	Finland .. .. .	18,018
Belgian Congo .. .. .	188,927	<b>Australia .. .. .</b>	<b>17,926</b>
Mexico .. .. .	66,287	Sweden .. .. .	14,200
Japan .. .. .	41,620	Norway .. .. .	13,782
Yugoslavia .. .. .	35,382	Turkey .. .. .	12,889

(a) Estimated.

(b) Includes Newfoundland.

During 1951 the share of the United States of America in the world's mine copper production amounted to 31 per cent. while the Australian proportion was less than 1 per cent.

5. **Prices.**—Since the outbreak of war in 1939, the price of copper in Australia and the United Kingdom has been fixed by Regulator. Details of the average price for the years shown are given in terms of Australian currency and sterling in the following table:—

**AVERAGE PRICE PER TON OF ELECTROLYTIC COPPER IN AUSTRALIA AND UNITED KINGDOM.**  
(£ s. d.)

Country.	December 1939.	1948.	1949.	1950.	1951.	1952.
Australia — in Aust. currency	63 17 6	140 0 0	167 19 5	189 1 8	254 6 4	308 15 1
United Kingdom — in Sterling ..	62 0 0	134 0 0	133 1 11	178 17 1	220 7 1	258 19 6

(a) Ex works Port Kembla.

6. **Employment in Copper-mining.**—The numbers of persons shown in the table below have been compiled from data supplied by Mines Departments. The figures for Queensland exclude for all years, persons employed in the Mt. Morgan copper-gold mining establishment, which was classified as a gold mine up to 1949. In the tables in § 13 relating to employment in the mining industry generally, employment in the Mt. Morgan establishment for the years 1950 and 1951 has been classified to copper-gold mining, which is a separate industry in the Draft Classification of the Mining Industry adopted from 1950..

**COPPER-MINING : PERSONS EMPLOYED.**

Year.	N.S.W.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Australia.
1938 .. ..	13	213	67	4	1,015	5	1,317
1947 .. ..	184	48	..	2	733	15	982
1948 .. ..	187	45	11	..	746	13	1,002
1949 .. ..	136	57	14	3	757	32	999
1950 .. ..	203	57	3	5	764	35	1,067
1951 .. ..	156	34	7	..	742	6	945

In 1917 more than 9,000 persons were engaged in copper-mining.

**§ 5. Tin.**

1. **Production.**—Tasmania, Queensland and New South Wales are the principal producing States.

The table of values of tin production as published in previous Year Books has been discontinued for reasons stated on page 748.

The following table shows the mine production of tin in Australia in the years 1947 to 1951 compared with 1938.

**TIN : MINE PRODUCTION, AUSTRALIA.**

(Tons.)

—	1938.	1947.	1948.	1949.	1950.	1951
Production ..	3,329	2,456	1,885	1,882	1,854	1,559

Production of refined tin for years 1938 and 1948 to 1952 is shown in the table hereunder. The information has been prepared from data received from the Australian Mines and Metals Association and other sources.

**REFINED TIN : PRODUCTION, AUSTRALIA.**

(Tons.)

—	1938.	1948.	1949.	1950.	1951.	1952.
Production .. ..	3,229	1,885	1,955	2,014	1,459	1,699

2. **Sources of Production.**—(1) *New South Wales.* Production of tin concentrates in 1951 was 578 tons, valued at £413,712, compared with 669 tons, valued at £319,531, in 1950. The tin content was 413 tons in 1951 and 482 tons in 1950. A large proportion of the output in this State is obtained in normal years by dredging and sluicing, principally in the New England district.

(ii) *Victoria*. The production of tin in this State is obtained solely as a by-product from the gold dredging operations at Eldorado. The production in 1951 amounted to 49 tons of concentrates, valued at £35,213, compared with 40 tons, valued at £21,327 in 1950. The tin content in 1951 was 36 tons and in 1950, 29 tons.

(iii) *Queensland*. The chief producing districts in Queensland during 1950 and 1951, the figures in brackets being for 1950, were Herberton, 376 (693) tons of concentrates; Cooktown, 43 (29) tons; Stanthorpe, 21 (37) tons; Chillagoe, 15 (20) tons; and Kangaroo Hills, 13 (65) tons. The total production in 1951 amounted to 490 tons, valued at £309,810, compared with 857 tons, valued at £383,313, in 1950. The tin content in 1950 and 1951 was 600 tons and 340 tons respectively. It is interesting to compare these production figures with those recorded in the early years of this century in this State when the output ranged between 2,000 and 5,000 tons per annum.

(iv) *Western Australia*. The quantity of tin concentrates reported in this State in 1951 amounted to 61 tons, valued at £39,493, compared with 51 tons in 1950, valued at £25,496. The tin content was 41 tons for 1951 and 36 tons for 1950. Production was mainly in the Pilbara and Greenbushes fields.

(v) *Tasmania*. For 1951 the output amounted to 998 tons of tin concentrates, valued at £706,527, an increase of 39 tons on the output of the previous year. The tin content for 1951 was 706 tons and for 1950, 685 tons.

(vi) *Northern Territory*. The production for 1951 amounted to 37 tons of concentrates, valued at £15,139, compared with 37 tons of concentrates valued at £15,139 produced during 1950. The tin content for 1951 and 1950 was 23 tons and 22 tons respectively.

3. **World Production.**—The world production of tin ore, *in terms of metal*, during each of the years 1938 and 1947 to 1951, as published by the Mineral Resources Division of the Colonial Geological Surveys, was as follows:—

**TIN : WORLD PRODUCTION.**  
(<sup>0</sup>000 tons of 2,240 lb.).

1938.	1947.	1948.	1949.	1950.	1951.
164.0	111.4	151.4	161.9	166.3	167.3

The production of tin reached its maximum in 1941 when 241,400 tons were recorded. The following are the chief producing countries of the world:—Malayan Union, Bolivia, Indonesia, Belgian Congo, Thailand (Siam) and Nigeria. In recent years these countries have produced approximately 90 per cent. of the total production.

The production of tin ore, *in terms of metal*, as published by the International Tin Study Group and other authorities, for the principal producing countries in 1951 was as follows:—

**TIN : PRODUCTION IN PRINCIPAL COUNTRIES, 1951.**  
(Tons of 2,240 lb.).

Country.	Production.	Country.	Production.
Malayan Union .. ..	57,167	<b>Australia</b> .. ..	<b>1,559</b>
Bolivia .. .. .	33,134	Portugal .. .. .	(b) 1,450
Indonesia .. .. .	30,986	Burma .. .. .	(b) 1,050
Belgian Congo (a) ..	13,669	United Kingdom ..	931
Thailand (Siam) .. ..	9,502	Union of South Africa ..	767
Nigeria .. .. .	8,529	Spain .. .. .	(b) 716
China .. .. .	(b) 4,800	Mexico .. .. .	366

(a) Includes Ruanda-Urundi.

(b) Estimated.

Australia's share of the world's tin production is about 1 per cent.



4. **Prices.**—At the outbreak of war in September, 1939, the price of tin in Australia and London was fixed by regulation. London control of tin prices ceased on 14th November, 1949, while the Australian price was decontrolled on the 21st April, 1953. Details of the movement in average prices for the years shown are given in terms of Australian currency and sterling in the following table:—

**AVERAGE PRICE PER TON OF TIN IN AUSTRALIA AND UNITED KINGDOM.**

(£ s. d.)

Country.	December, 1939.	1948.	1949.	1950.	1951.	1952.
Australia — in Aust. currency	(a) 299 0 0	577 7 0	620 0 0	725 5 9	1,222 8 9	1,150 10 0
United Kingdom — in sterling ..	(b) 271 0 0	(b) 548 1 11	(b) 599 16 1	(c) 745 16 9	c 1,079 16 0	(c) 964 12 1

(a) *Ex* smelters for sales of 10 cwt. or more or in ingots of 70 lb. or more. (b) Average official prices for standard tin. (c) Tin, standard, spot.

5. **Employment in Tin-mining.**—The number of persons employed in tin-mining during the years 1938 and 1947 to 1951 was as follows:—

**TIN-MINING : PERSONS EMPLOYED.**

Year.	N.S.W.	Victoria. (a)	Q'land.	W. Aust.	Tas.	Nor. Terr.	Australia.
1938 .. ..	1,440	5	1,263	73	1,123	15	3,919
1947 .. ..	523	..	528	9	627	52	1,739
1948 .. ..	534	..	480	11	577	63	1,665
1949 .. ..	548	..	515	24	576	82	1,745
1950 .. ..	403	..	568	21	569	83	1,644
1951 .. ..	334	..	609	33	551	50	1,577

(a) The tin produced in Victoria was raised by a dredging company operating primarily for gold.

**§ 6. Iron.**

1. **General.**—Although iron ore is widely distributed throughout Australia, the only known ore bodies of large extent and high grade which are easily accessible are those situated at Iron Knob, South Australia and at Yampi Sound, Western Australia. Estimates of the reserves at these centres place the quantities available at approximately 150 million tons and 100 million tons respectively. Bearing in mind the expansion of the iron industry in Australia, and the limitations of these reserves, the Commonwealth Government prohibited the export of iron ore from 1st July, 1938. A survey of the iron ore resources of Australia undertaken by the Commonwealth Geologist was completed at the end of 1940.

2. **Production.**—(i) *Australia.* The production of pig-iron and steel in Australia, of which New South Wales is the main producing State, is shown in the following table for each of the years 1942-43 to 1951-52 inclusive.

## PIG-IRON AND STEEL : PRODUCTION, AUSTRALIA.

(Tons.)

Year.	Pig-iron. (a)	Steel Ingots.	Blooms and Billets.	Year.	Pig-iron. (a)	Steel Ingots.	Blooms and Billets.
1942-43..	1,399,306	1,632,825	1,583,417	1947-48..	1,235,574	1,343,153	1,221,938
1943-44..	1,395,357	1,527,564	1,393,919	1948-49..	1,044,957	1,178,010	1,101,063
1944-45..	1,117,709	1,356,913	1,236,528	1949-50..	1,097,635	1,217,971	1,103,784
1945-46..	906,283	1,061,918	1,036,501	1950-51..	1,313,332	1,443,831	1,297,260
1946-47..	1,143,132	1,312,439	1,255,703	1951-52..	1,430,027	1,521,386	1,361,342

(a) Includes pig-iron for castings.

(ii) *New South Wales.* The production in 1935 of pig iron from ores mined in New South Wales amounted to 4,580 tons, valued at £18,320. No iron ores were produced from 1935 until 1941, when 202,180 tons of ore were mined: In 1942, 375,297 tons were mined, but only 86,185 tons in 1945. Since that year there has been no iron ore mined in this State for conversion into pig-iron. For many years the chief source of supply has been South Australia.

Small quantities of iron oxide produced in New South Wales are used by the various gas-works for purifying gas, and also in the manufacture of paper, and for pigments. These supplies are drawn chiefly from the deposits in the Port Macquarie Division. During 1950, 11,924 tons of oxide, valued at £26,940, were won, while production in 1951 was 11,886 tons, valued at £33,677.

(iii) *Queensland.* Extensive deposits of iron ore are known to exist in Queensland. Their location and size, however, in comparison with the more favourable deposits of South Australia and Western Australia, preclude their exploitation. The output of 2,850 tons, valued at £6,806, for 1950 and 2,983 tons, valued at £9,205 for 1951 came mainly from the Biggenden district.

(iv) *South Australia.* The production from the deposits worked by The Broken Hill Pty. Co. Ltd. at Iron Knob reached its maximum in 1939, when 2,571,759 tons of ore, valued at £2,957,523, were raised. Production in 1950 was 2,349,824 tons (1,409,882 tons, iron content) valued at £2,702,424 and in 1951 was 2,400,577 tons (1,440,154 tons, iron content) valued at £2,760,664.

(v) *Western Australia.* Plans drawn up in 1927 to develop the rich iron ore deposits on Cockatoo Island in Yampi Sound were realized on 24th July, 1951 when one specially designed vessel of The Broken Hill Proprietary Co. Ltd. left the island with 10,384 tons of ore for Port Kembla, New South Wales. Since that date, regular shipments of ore have proceeded for smelting at Port Kembla. In 1952, 204,945 tons valued at £203,238 were transported. The estimated iron content of this ore amounted to 128,157 tons.

The production of pig-iron was commenced at Wundowie in Western Australia in January, 1948 under the direction of the State Department of Industrial Development. The ore used is obtained from the local deposits at Wundowie and Koolyanobbing and converted to pig-iron by the use of charcoal burnt from timber obtained in the same locality. Production in 1951-52 amounted to 10,920 tons. This, in addition to meeting local requirements, provided a small quantity for export to the eastern States.

The whole iron pyrites production of Western Australia is won at the Iron King and Norseman mines and is railed, in the form of ores and concentrates, to superphosphate manufacturers at Bassendean and Bayswater on the coast.

(vi) *Tasmania*. There has been no production of ironstone in Tasmania since 1943 when 7 tons, valued at £14 were produced. The iron pyrites concentrate produced, which in 1951 amounted to 39,625 tons, valued at £48,517 (sulphur content, 19,549 tons) is a by-product from the flotation of copper ores at Mount Lyell. This product is exported to the mainland, where it is used in the manufacture of chemical fertilizers.

3. **Production of Iron and Steel in Principal Countries.**—Particulars of the production in the principal countries during the years 1938, 1950 and 1951, according to figures published by the Mineral Resources Division, Colonial Geological Surveys, are shown in the next table.

**PIG-IRON AND STEEL : PRODUCTION IN PRINCIPAL COUNTRIES.**

(<sup>0</sup>000 Tons of 2,240 lb.)

Country.	Pig-iron and Ferro-alloys.			Steel Ingots and Castings.		
	1938.	1950.	1951.	1938.	1950.	1951.
U.S. of America ..	19,161	59,286	64,686	28,350	86,461	93,928
U.S.S.R. (Russia) ..	14,756	(a)19,200	(a)21,800	17,500	(a)24,600	(a)30,800
United Kingdom ..	6,761	9,633	9,669	10,398	16,293	15,639
Germany ..	17,760	(b) 9,655	(b)10,864	22,268	(b)12,909	(b)14,820
France ..	5,977	(c) 7,638	(c) 8,612	6,040	8,515	9,680
Japan ..	2,535	2,262	3,177	6,367	4,772	6,399
Belgium ..	2,388	3,635	4,771	2,243	3,718	4,925
Czechoslovakia ..	1,215	(a) 2,020	(a) 2,120	1,710	(a) 2,693	(a) 3,260
Canada ..	761	2,224	2,503	1,155	3,022	3,185
Luxemburg ..	1,526	2,459	3,107	1,514	2,412	3,028
Italy ..	914	564	1,033	2,271	2,325	3,015
Poland ..	948	(a) 1,368	(a) 1,552	1,527	2,470	2,748
India ..	1,571	1,680	1,824	936	1,438	1,500
Sweden ..	701	824	890	957	1,418	1,480
<b>Australia(d)</b> ..	<b>930</b>	<b>1,098</b>	<b>1,313</b>	<b>1,230</b>	<b>1,255</b>	<b>1,476</b>
Hungary ..	330	(a) 500	(a) 600	638	1,007	1,215
Austria ..	542	869	1,033	663	928	1,012
Union of South Africa ..	290	721	792	341	743	933
Brazil ..	..	718	760	..	767	828
Spain ..	433	656	655	567	805	806
Mexico ..	119	240	197	72	215	446
<b>Total—All Countries</b>	<b>81,000</b>	<b>131,000</b>	<b>147,000</b>	<b>107,600</b>	<b>186,000</b>	<b>207,000</b>

(a) Estimated. (b) Western Germany. (c) Excludes electric furnace ferro-alloys. (d) Year ended 30th June.

The principal producers in Australia are The Broken Hill Pty. Co. Ltd. and Australian Iron and Steel Ltd., both in New South Wales, the former situated at Newcastle and the latter at Port Kembla. The Broken Hill Pty. Co. Ltd. established a blast furnace at Whyalla in South Australia; this was blown in during May, 1941, and has since continued to operate except for the periods May, 1944 to April, 1946 and April, 1949 to September, 1949.

In Western Australia, the production of pig-iron, under the direction of the State Department of Industrial Development, commenced in January, 1948. The output for the year 1951-52 amounted to 11,087 tons.

### § 7. Other Metallic Minerals.

1. **Tungsten.**—Tungsten ores occur in all States, and on King Island in Bass Strait. Particulars of the King Island scheelite concentrates are included with Tasmanian production. Important deposits of tungsten ores occur in Queensland, New South Wales, Tasmania and Northern Territory, but production from the other States has been comparatively unimportant. Queensland has the largest total output to date, but its annual production is now much less than formerly. In recent years the largest production has come from Tasmania, followed by Northern Territory. Production of tungsten concentrates and contents during 1951 in each State etc. is shown below :—

#### TUNGSTEN CONCENTRATES : PRODUCTION, 1951.

(Tons.)

Particulars.	N.S.W.	Vic.	Q'land.	W. Aust.	Tas.	N. Terr.	Australia.
Wolfram Concentrate ..	14	(a)	152	5	379	147	697
WO <sub>3</sub> Content .. ..	9	(a)	100	3	264	91	467
Scheelite Concentrate ..	8	..	3	..	1,020	..	1,031
WO <sub>3</sub> Content .. ..	6	..	2	..	624	..	632

(a) Less than half a ton.

The following table shows production for Australia for the years 1938 and 1947 to 1951 :—

#### TUNGSTEN CONCENTRATES : PRODUCTION, AUSTRALIA.

(Tons.)

Particulars.	1938.	1947.	1948.	1949.	1950.	1951.
Wolfram Concentrate ..	978	388	328	375	282	697
WO <sub>3</sub> Content .. ..	649	243	292	265	198	467
Scheelite Concentrate ..	40	660	651	809	800	1,031
WO <sub>3</sub> Content .. ..	26	431	510	545	532	632

NOTE.—In addition to the foregoing, 7 tons of bismuth-tungsten concentrates containing 1 ton of WO<sub>3</sub> and 12 tons of tin-tungsten concentrates with a WO<sub>3</sub> content of 6 tons were produced in New South Wales during 1951.

2. **Cadmium and Cobalt.**—The sources of cadmium in Australia are lead and zinc concentrates. The cadmium content of these concentrates produced during the year 1950 is estimated at 597 tons and during 1951 at 605 tons. The greater proportion of the concentrates are treated at Risdon, Tasmania, and at Port Pirie, South Australia, for the extraction of cadmium. The remainder of the concentrates are exported. In 1938, which is the latest year for which relatively complete world production figures are available, Australia produced 196 tons of refined cadmium, amounting to about 5 per cent. of world output.

Cobalt is present in zinc concentrates produced at Broken Hill, New South Wales, and at Rosebery, Tasmania. The cobalt is recovered in the form of cobalt oxide at the zinc refining plant at Risdon, Tasmania, and is sold as such to industry. The cobalt metal content of zinc concentrate produced in 1950 is estimated at 43 tons and in 1951 at 42 tons.

Production of refined cadmium and cobalt oxide for the years 1938 and 1947 to 1951 is shown in the following table :—

**CADMIUM (REFINED) AND COBALT OXIDE : PRODUCTION.**  
(Tons.)

Year.	Cadmium (Refined).			Cobalt Oxide.
	Extracted from Ores Mined in—			Extracted from Ores Mined in New South Wales.(a)
	New South Wales	Tasmania.	Total.	
1938 .. ..	147	49	196	19
1947 .. ..	171	34	205	12
1948 .. ..	245	44	289	15
1949 .. ..	215	44	259	14
1950 .. ..	250	44	294	16
1951 .. ..	195	36	231	13

(a) Excludes less than half a ton of Cobalt Oxide produced in Tasmania in each of the years shown.

The figures shown above do not include the metallic contents of cadmium and cobalt oxide contained in the ores and concentrates exported overseas.

3. **Platinum Group Metals.**—(i) *Platinum*. The only production in Australia in recent years has been from deposits worked at Fifield, New South Wales. In 1950 the output of concentrates was 24 oz., containing 16 oz. of platinum, and in 1951 the quantity of concentrates produced was 13 oz., the platinum content being 8 oz.

(ii) *Osmiridium*. Practically all the production of osmiridium is from the west coast of Tasmania, the only other production being a very small quantity contained in platinum concentrates produced at Fifield, New South Wales. Total production in 1950 was 48 oz. and in 1951, 34 oz. Of this, 2 oz. were from New South Wales in 1950 and half an ounce in 1951.

(iii) *Palladium*. In 1951 less than half an ounce of palladium was recovered from concentrates produced at Fifield, New South Wales.

(iv) *Osmium, iridium, etc.* There has been no production recorded in recent years.

4. **Other.**—The production, in 1951, of other metallic minerals worthy of note, is as follows :—

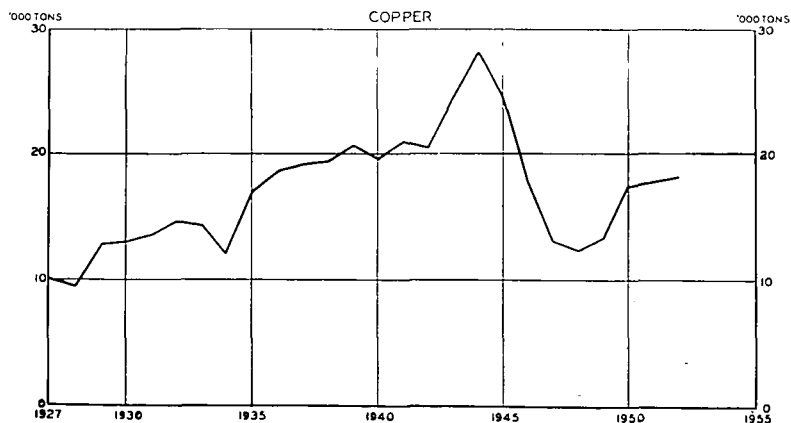
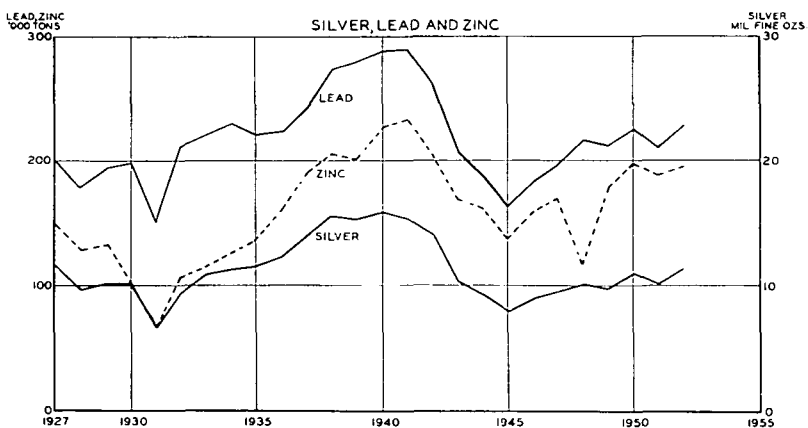
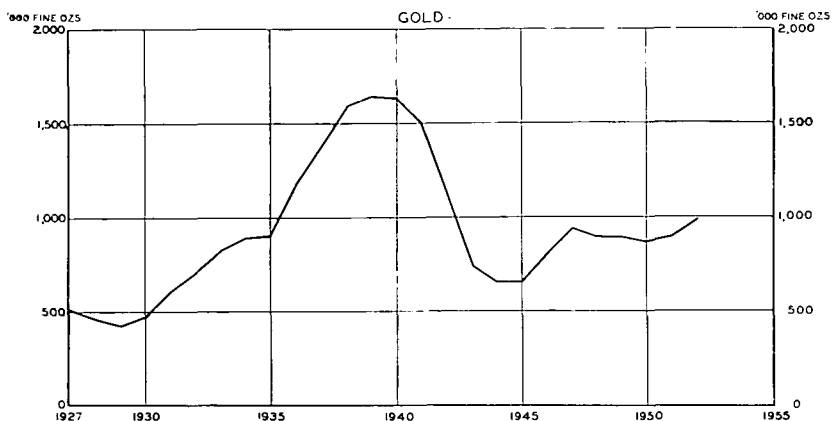
*Antimony*. The antimony content of antimony-bearing minerals produced was 744 tons. Of this amount 489 tons were in lead concentrates and 255 tons in 676 tons of antimony ore and concentrates.

*Bismuth*. Bismuth content of minerals produced was 2,620 lb., 2,492 lb. of which was contained in 7 tons of bismuth-wolfram concentrates from New South Wales.

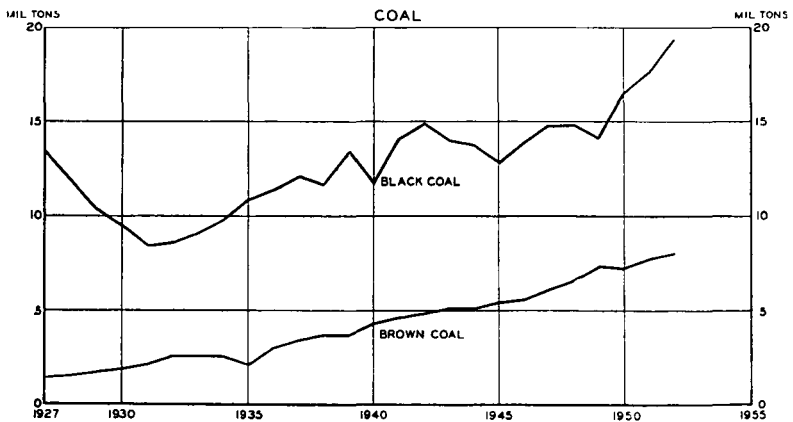
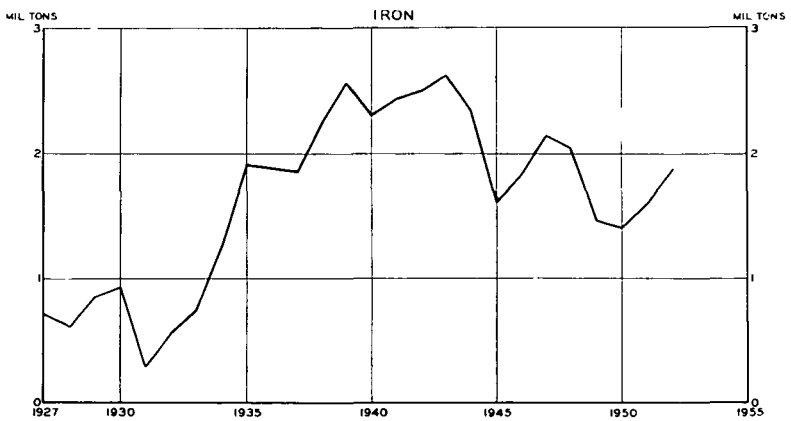
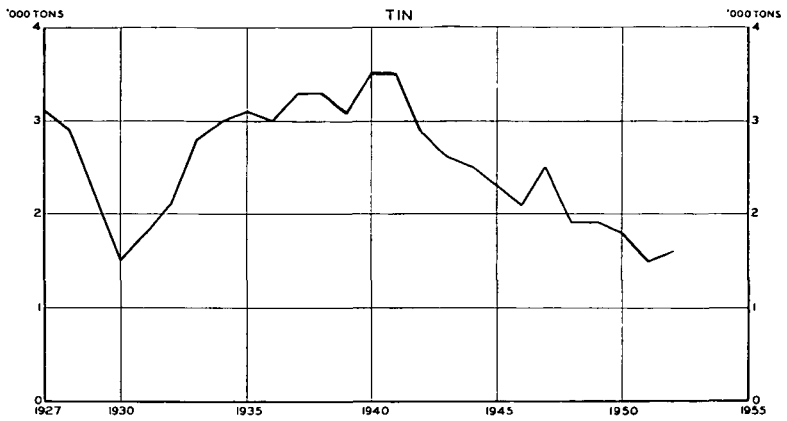
*Manganese*. Production of manganese ore comprised 6,311 tons of metallurgical grade (manganese content 3,042 tons), 1,543 tons of battery grade (manganese dioxide content 1,146 tons), and 115 tons of other grades (manganese dioxide content 70 tons). Manganese content of zinc concentrates produced in New South Wales was 3,435 tons.

*Molybdenum*. Two tons of molybdenite concentrates were produced, the molybdenum sulphide content being about 73 per cent.

## MINE PRODUCTION OF MINERALS AND METALS AUSTRALIA: 1927 to 1952



## MINE PRODUCTION OF MINERALS AND METALS AUSTRALIA: 1927 to 1952



§ 8. Coal.

1. Production in each State.—An account of the discovery of coal in each State appears in preceding issues of the Official Year Book (see No. 3, pp. 515-16). The quantity and value of the production in each State and in Australia during 1915, 1925, 1935, 1938, 1945 and for each of the years 1948 to 1952 are shown in the following table. Of the total production of black coal in 1952, 82,426 tons were classified as semi-anthracite, 16,029,615 tons as bituminous and 1,496,387 tons as sub-bituminous.

Of the total production of black coal in Australia in 1952, 4,072,274 tons (21 per cent.) were obtained by open-cut methods. The remainder, 15,332,824 tons (79 per cent.) came from underground mines. In 1948, 13 per cent. of black coal won in Australia came from open-cut mines while in 1951 the proportion had risen to 21 per cent., thus indicating the increased activity in the mining of black coal by this method.

BLACK COAL : PRODUCTION.

Year.	N.S.W.	Victoria. (a)	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
QUANTITY (tons).							
1915 ..	9,449,008	588,104	1,024,273	..	286,666	64,536	11,412,587
1925 ..	11,396,199	534,246	1,177,173	..	437,461	81,698	13,626,777
1935 ..	8,698,579	476,495	1,051,978	..	537,188	123,714	10,887,954
1938 ..	9,570,930	307,258	1,113,426	..	604,792	83,753	11,680,159
1945 ..	10,176,254	247,297	1,634,746	41,452	543,363	149,077	12,792,189
1948 ..	11,721,446	164,906	1,742,396	239,464	732,938	179,393	14,780,543
1949 ..	10,736,098	122,507	1,970,388	344,638	750,594	181,618	14,105,843
1950 ..	12,798,221	126,431	2,320,799	261,337	814,352	222,351	16,543,491
1951 ..	13,513,244	147,743	2,473,775	388,303	848,475	236,888	17,608,428
1952 ..	15,022,100	143,820	2,742,236	418,582	830,461	247,899	19,405,098
VALUE.(b) (£.)							
1915 ..	3,424,630	274,770	409,342	..	137,859	30,418	4,277,019
1925 ..	9,302,515	596,117	1,037,956	..	363,203	70,424	11,370,215
1935 ..	4,887,341	282,253	843,034	..	318,013	86,204	6,416,845
1938 ..	5,652,964	188,101	958,884	..	375,083	61,991	7,237,023
1945 ..	9,451,930	494,690	1,759,311	14,508	572,896	125,719	12,419,054
1948 ..	14,938,182	347,687	2,347,065	119,732	880,236	177,652	18,810,554
1949 ..	16,121,554	379,464	2,874,062	172,319	972,245	181,897	20,701,541
1950 ..	22,121,326	382,230	3,562,541	130,669	1,185,038	231,599	27,613,493
1951 ..	29,325,855	600,734	4,490,154	399,628	1,716,788	305,548	36,838,707
1952 ..	43,283,357	753,007	5,005,377	429,709	2,457,296	341,561	53,170,307

(a) Excludes brown coal, shown in next table.

(b) At the pit's mouth.

The figures for Victoria already quoted exclude the quantities and values of brown coal which were as follows :—

BROWN COAL : PRODUCTION IN VICTORIA.

Year.	Quantity.	Value.(a)	Year.	Quantity.	Value.(a)
	Tons.	£		Tons.	£
1915 ..	2,864	573	1948 ..	6,692,291	1,187,715
1925 ..	876,468	166,404	1949 ..	7,375,559	1,469,455
1935 ..	2,221,515	317,444	1950 ..	7,327,119	1,706,612
1938 ..	3,675,450	351,721	1951 ..	7,836,056	2,754,822
1945 ..	5,445,108	641,069	1952 ..	8,103,764	3,476,627

(a) Cost of production.



2. **Distribution and Production of Coal in each State.**—(i) *New South Wales.* The coal deposits of New South Wales are the most important and extensively worked in Australia. The principal fields are known as the Northern, Southern and Western, and are situated in the vicinity of Newcastle, Bulli and Lithgow respectively.

The coal from the various districts differs in quality or, geologically speaking, rank—that from the Northern district being especially suitable for gas-making, household purposes and steam, while the product of the Southern and Western districts is essentially a steaming coal. The Permian Coal Measures in the Northern division are being worked extensively in the Hunter River Valley area, particularly in the vicinity of Maitland, Cessnock and, more recently, Muswellbrook. The district is the most important, from the aspect of coal mining, in Australia.

The following table shows the yields in each of the three districts during the five years 1948 to 1952 compared with 1938. Separate details are given respecting coal won underground and from open cuts—

**COAL : PRODUCTION IN DISTRICTS OF NEW SOUTH WALES.**

District.	1938.	1948.	1949.	1950.	1951.	1952.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Northern—Underground ..	6,294,213	7,146,524	6,244,882	7,394,554	7,313,806	8,228,374
Open Cut ..	..	635,103	575,310	931,883	1,243,858	1,398,107
Southern—Underground ..	1,831,408	1,922,467	1,908,034	2,395,160	2,505,587	2,775,820
Open Cut ..	..	..	..	8,219	2,885	..
Western—Underground ..	1,445,309	1,397,835	1,337,044	1,406,862	1,404,819	1,487,710
Open Cut ..	..	619,517	670,828	661,543	1,042,289	1,132,089
Total—Underground ..	9,570,930	10,466,826	9,489,960	11,196,576	11,224,212	12,491,904
Open Cut ..	..	1,254,620	1,246,138	1,601,645	2,289,032	2,530,196
Grand Total ..	9,570,930	11,721,446	10,736,098	12,798,221	13,513,244	15,022,100
Total Value (a) ..	5,652,964	14,938,182	16,121,554	22,121,326	29,325,855	43,283,357
Average value per ton (a) ..	11s. 10d.	25s. 6d.	30s. 0d.	34s. 0d.	43s. 5d.	57s. 7d.

(a) At the pit's mouth.

Much development has been carried out in recent years on the New South Wales coalfields. Areas receiving particular attention are those in the vicinities of Muswellbrook and Lithgow, where the open-cut mining method is being exploited more fully. In 1952, 15,022,100 tons (420 tons semi-anthracite, 15,008,489 tons bituminous and 13,191 tons sub-bituminous) were won, which is the highest production recorded for any year and was 1,508,856 tons more than in 1951.

In 1952 open-cut production accounted for 16.8 per cent. of all coal produced in this State, a considerable advance on the 10.7 per cent. of total production recorded by open-cuts in 1948 and indicative of the recent development in this sphere.

(ii) *Victoria.* (a) *Black Coal.* During 1952, production of bituminous coal decreased by 3,923 tons to a total of 143,820 tons. Of this, 128,006 tons or 89 per cent., were won from the State Coal Mines at Wonthaggi in South Gippsland, while the remaining 15,814 tons represent the total production of four small mines at Korumburra, Kilcunda and Jumbunna.

The Department of Mines considers that future prospects at the State Coal Mines are doubtful, as seams are becoming increasingly faulted and it is difficult to induce men to work under existing conditions.

The output of black coal in Victoria during each of the five years ended 1952 compared with 1938 was as follows:—

**BLACK COAL : PRODUCTION IN VICTORIA.**

Year.	Quantities.			Total Value. (a)
	State Coal- mine.	Other Coal- mines.	Total.	
	Tons.	Tons.	Tons.	£
1938 .. .. .	253,065	54,193	307,258	188,101
1948 .. .. .	145,880	19,026	164,906	347,687
1949 .. .. .	108,159	14,348	122,507	379,464
1950 .. .. .	109,988	16,443	126,431	382,230
1951 .. .. .	132,396	15,347	147,743	600,734
1952 .. .. .	128,006	15,814	143,820	753,007

(a) At the pit's mouth.

(b) *Brown Coal. General.* The mining of brown coal is carried on only in the State of Victoria, where extensive deposits exist; estimates place the available reserves at 27,000 million tons. Large-scale developmental projects are in progress; these, when completed, will greatly reduce the dependence on fuel from other States. Brown coal produced in Victoria in 1952 amounted to 8,103,764 tons, of which 6,447,692 tons, or 79.6 per cent., were won at the State open-cut at Yallourn. During 1951-52, 6,480,723 tons of brown coal were produced at Yallourn, of which 4,151,742 tons went to the Yallourn power station, and 2,328,981 tons to the briquette factory.

*Production of Briquettes.* The briquetting plant of the State Electricity Commission started operations in November, 1924, and the output, which in 1926 was 95,477 tons, had increased to 180,905 tons in 1930 and to 568,252 tons in 1951-52. Two and a half tons of brown coal are required to make one ton of briquettes.

The table following shows the production and distribution of brown coal, and the production of briquettes in Victoria for the years 1947-48 to 1951-52, compared with 1938-39.

**BROWN COAL : PRODUCTION AND UTILIZATION, VICTORIA.**

('000 Tons.)

Year.	Total Production.	State Electricity Commission.				Brown Coal for other Industries.
		Brown Coal used as Fuel.		Brown Coal used as Material in Production of Briquettes.	Production of Briquettes.	
		Generating Station.	Briquette Factory.			
1938-39 ..	3,643	2,096	516	1,031	400	..
1947-48 ..	6,419	3,767	743	1,487	545	422
1948-49 ..	7,027	4,130	733	1,467	559	697
1949-50 ..	7,637	4,408	776	1,553	589	900
1950-51 ..	7,300	4,338	696	1,391	511	875
1951-52 ..	8,096	4,784	776	1,553	568	983

(iii) *Queensland.* The distribution of production of coal during the years 1938 and 1948 to 1952 was as follows:—

**COAL : PRODUCTION IN QUEENSLAND.**  
(Tons.)

District.	1938.	1948.	1949.	1950.	1951.	1952.
Bowen .. ..	224,778	238,487	192,300	213,908	208,145	223,788
Chillagoe .. ..	19,192	18,670	..	..	..	..
Clermont .. ..	88,407	216,610	313,124	295,635	361,874	389,270
Darling Downs .. ..	76,571	117,277	..	..	..	..
Eidsvold .. ..	..	..	27,135	40,359	54,540	52,173
Ipswich .. ..	547,901	902,411	921,417	1,144,980	1,157,220	1,263,854
Mackay .. ..	1,543	..	2,646	..	..	..
Mareeba .. ..	..	..	23,564	25,331	29,393	32,241
Maryborough .. ..	77,162	132,085	136,008	151,475	160,263	158,748
Mt. Morgan .. ..	13,698	43,245	144,146	206,886	280,772	382,043
Rockhampton .. ..	64,174	73,611	76,271	84,970	89,586	84,357
Roma .. ..	..	..	15,778	18,213	16,980	21,528
Toowoomba .. ..	..	..	98,786	118,235	99,208	112,137
Warwick .. ..	..	..	19,213	20,807	15,794	22,097
Total .. ..	1,113,426	1,742,396	1,970,388	2,320,799	2,473,775	2,742,236

The production of 2,742,236 tons in 1952 represents the highest annual production to date. Of the total, 83,562 tons were semi-anthracite, 2,314,667 tons were bituminous and 344,007 tons, sub-bituminous.

The open-cut method of mining for black coal has advanced considerably in Queensland in recent years. In 1948, 224,069 tons (or 12.8 per cent. of total production) were won from open-cuts while in 1951 and 1952, 612,909 tons (24.8 per cent.) and 730,643 tons (26.6 per cent.) respectively were mined in this manner.

(iv) *South Australia.* Coal mined in South Australia is won by open-cut methods at Leigh Creek, some 380 miles by rail north of Adelaide. This important deposit yields a low grade sub-bituminous coal of Triassic age, and has known reserves of about 380 million tons. However, this State relies to a great degree on bituminous coal from New South Wales to supplement the demand created by industrial expansion. In its first year of major production in 1944, 34,620 tons were won. Production has risen considerably in more recent years, and amounted to 388,303 tons (valued at £399,628) in 1951 and 418,582 tons (valued at £429,709) in 1952.

(v) *Western Australia.* The only coal deposit which has been developed on a commercial scale is at Collie in the south-west of the State. Collie coal is sub-bituminous in rank. Production in 1951 was 848,475 tons (valued at £1,716,788) and in 1952, 830,461 tons (valued at £2,457,296) compared with 604,792 tons (valued at £375,083) in 1938.

(vi) *Tasmania.* Two periods of coal formation are represented in Tasmania. The older (Permo-Carboniferous) seams contain fairly high ranking semi-anthracitic coal, with a high sulphur content, but production from these mines represents less than one per cent of Tasmanian black coal output. The more recent Mesozoic coal of bituminous rank is mined in the north-east of the island, the Cornwall and Mt. Nicholas mines being the most prolific producers. In 1951, output amounted to 236,888 tons (value, £305,548) while 247,899 tons (value, £341,561) were produced in 1952. Production in 1938 at 83,753 tons valued at £61,991 was considerably lower than in recent years.

(vii) *Australia's Coal Reserves.* The latest available estimate of the actual and probable coal reserves of Australia is that prepared by the Coal and Lignites Panel of the Power Survey Sectional Committee of the Standards Association of Australia in March, 1953. The following table shows the actual and probable coal reserves as determined by that Committee :—

ACTUAL AND PROBABLE COAL RESERVES OF AUSTRALIA.  
( '000,000 Tons.)

Rank of Coal.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
Anthracitic and Bituminous ..	10,000	30	4,000	..	..	240	(a)14,250
Sub-bituminous and Lignitic ..	500	40,000	53	1,025	1,002	2	(a)42,550
Total ..	10,500	40,030	4,053	1,025	1,002	242	(a)56,800

(a) Rounded figures.

3. *Production in Principal Countries.*—The following table shows the production of the principal countries during each of the three years 1950 to 1952 compared with 1938, as published by the Statistical Office of the United Nations.

COAL : PRODUCTION IN PRINCIPAL COUNTRIES.  
( '000 tons of 2,240 lb.)

Country.	Black Coal.				Brown Coal, Lignite.			
	1938.	1950.	1951.	1952.	1938.	1950.	1951.	1952.
United States of America	349,684	512,861	515,632	465,581	2,677	3,036	(a)	(a)
United Kingdom ..	227,015	223,931	222,802	233,845	..	..	..	..
Western Germany ..	b 183,238	112,539	117,009	125,289	b 191,899	77,058	81,788	84,725
Poland ..	37,502	79,252	80,679	85,811	9	4,758	..	..
France ..	45,770	51,060	52,117	56,272	1,041	1,719	1,972	2,025
Japan ..	47,915	39,078	42,624	44,052	142	1,305	1,381	1,501
India ..	29,052	33,030	34,300	37,405	..	..	..	..
Belgium ..	29,118	27,738	29,187	30,880	..	..	..	..
Union of South Africa	16,027	26,483	25,692	27,697	..	..	..	..
<b>Australia</b> ..	<b>11,680</b>	<b>16,543</b>	<b>17,608</b>	<b>19,405</b>	<b>3,875</b>	<b>7,327</b>	<b>7,836</b>	<b>8,104</b>
Canada ..	9,223	15,607	14,582	14,281	3,540	2,024	1,984	1,915
Netherlands ..	13,275	12,449	12,220	12,733	168	195	248	244
Spain ..	5,559	11,217	11,146	12,196	163	1,366	1,464	1,622
Turkey ..	2,548	4,426	4,652	4,927	143	1,167	1,240	1,390
Southern Rhodesia	1,027	2,158	2,267	2,593	..	..	..	..

(a) Included with Black Coal.

(b) Pre-war Germany.

World production of coal amounted to 1,440 million tons in 1938; it rose to 1,770 million tons in 1943 and by 1951 had reached 1,872 million tons. Of these quantities, those produced in the British Commonwealth totalled 304 million or 21 per cent. in 1938, 286 million or 16 per cent. in 1943 and 332 million tons or 18 per cent. in 1951.

4. *Exports.*—(i) *General.* The quantity of coal of Australian production exported to other countries in 1951–52 was 139,140 tons, valued at £608,045, shipped mainly

from New South Wales. These figures of oversea exports exclude bunker coal supplied to oversea vessels, which in 1951-52 amounted to 54,207 tons, valued at £246,258. The quantities and values of the oversea exports of Australian coal and of bunker coal for oversea vessels for a series of years are shown in the following table.

**COAL : OVERSEA EXPORTS AND BUNKERS, AUSTRALIA.**

Year.	Oversea Exports.(a)		Bunker Coal for Oversea Vessels.	
	Quantity.	Value.	Quantity.	Value.
	Tons.	£	Tons.	£
1913 .. .. .	2,098,505	1,121,505	1,647,870	1,018,375
1921-22 .. .. .	1,028,767	1,099,899	1,498,035	2,178,101
1931-32 .. .. .	344,015	341,800	506,140	534,897
1938-39 .. .. .	382,085	347,054	549,453	561,063
1946-47 .. .. .	44,375	54,754	355,428	655,207
1947-48 .. .. .	67,228	108,733	283,354	597,559
1948-49 .. .. .	36,913	97,353	293,707	836,117
1949-50 .. .. .	68,404	206,460	135,059	418,939
1950-51 .. .. .	72,283	242,649	69,299	284,824
1951-52 .. .. .	139,140	608,045	54,207	246,258

(a) Excludes bunker coal.

(ii) *New South Wales.* The distribution of the total output from New South Wales collieries during the years 1947-48 to 1951-52 compared with 1938-39, according to data compiled by the Government Statistician for that State, was as follows.

**COAL : DISTRIBUTION OF OUTPUT, NEW SOUTH WALES.**

(<sup>000</sup> Tons.)

Year.	Exports.				Local Consumption. (b)	Total.
	Interstate as—		Overseas as—			
	Cargo.(a)	Bunker.	Cargo.	Bunker.		
1938-39 .. .. .	1,860	411	382	517	7,213	10,383
1947-48 .. .. .	2,537	307	59	234	8,951	12,088
1948-49 .. .. .	2,443	284	31	233	8,624	11,615
1949-50 .. .. .	1,898	231	68	135	8,961	11,293
1950-51 .. .. .	1,956	225	72	136	10,295	12,684
1951-52 .. .. .	2,494	227	127	102	11,850	14,800

(a) Excludes interstate despatches by rail. (b) Includes additions to, or withdrawal from stocks. Small quantities of coal railed interstate are also included.

5. *Consumption in Australia.*—Details of the average annual production of coal and its distribution in Australia are given in the following table for the five years ended 1938-39 and 1949-50, together with similar details of production and distribution for the year 1950-51.

## COAL : PRODUCTION AND UTILIZATION IN AUSTRALIA.

Particulars.	Quantity.			Proportion of Total.		
	Average for five years ended—		1950-51.	Average for five years ended—		1950-51.
	1938-39.	1949-50.		1938-39.	1949-50.	
<b>BLACK COAL.</b>						
Source of Supplies—	'000 Tons.	'000 Tons.	'000 Tons.	%	%	%
Production (a) .. ..	11,169	14,350	16,418	99.7	99.0	96.5
Imports .. ..	31	143	598	0.3	1.0	3.5
Total Supplies .. ..	11,200	14,493	17,016	100.0	100.0	100.0
Disposal—						
Exported Overseas—						
Bunker .. ..	592	493	294	5.3	3.4	1.7
Other .. ..	346	58	72	3.1	0.4	0.4
Total .. ..	938	551	366	8.4	3.8	2.1
Consumed as fuel in—						
Electric Light and Power Works .. ..	1,796	3,379	4,674	16.0	23.3	27.5
Factories (b) .. ..	2,067	2,428	2,965	18.5	16.8	17.5
Railway Locomotives (c) .. ..	2,328	3,099	3,183	20.8	21.4	18.7
Total .. ..	6,191	8,906	10,822	55.3	61.5	63.7
Consumed as raw material in—						
Gas works .. ..	1,111	1,893	1,964	9.9	13.1	11.6
Coke works .. ..	1,467	1,846	2,618	13.1	12.7	15.4
Total .. ..	2,578	3,739	4,582	23.0	25.8	27.0
Balance available for other consumption and accumulation of stocks (d) .. ..	1,493	1,297	1,246	13.3	8.9	7.2
Grand Total .. ..	11,200	14,493	17,016	100.0	100.0	100.0
<b>BROWN COAL.</b>						
Production of Brown Coal .. ..	'000 Tons.	'000 Tons.	'000 Tons.	%	%	%
	3,064	6,499	7,300	100.0	100.0	100.0
Utilization—						
As fuel for generation of Electric Light and Power .. ..	1,673	3,899	4,338	54.6	60.0	59.4
As fuel and as a raw material by Briquette Factory .. ..	1,391	2,127	2,087	45.4	32.7	28.6
Recorded consumption as fuel in factories .. ..	(e)	410	746	(e)	6.3	10.2
Balance—Unrecorded consumption, other purposes .. ..	(e)	63	129	(e)	1.0	1.8
Total .. ..	3,064	6,499	7,300	100.0	100.0	100.0

(a) Includes miners' and colliery coal. (b) Estimated when details not available.  
(c) Government railways only. (d) Includes bunker coal for interstate and intrastate shipping.  
(e) Not available.

In order to meet the greatly increased demands for coal in Australia, arrangements have been made in recent years to import considerable quantities to augment local supplies. The quantity imported in 1949-50 was 493,805 tons and in 1950-51, 597,866 tons.

5. **Coal Value at the Mine in New South Wales.**—Particulars of the average values at the mine (or at screens where these are at a distance from the mine) of saleable coal for each district and for New South Wales as a whole are shown in the following table for the years 1938 and 1947 to 1951, according to figures compiled by the State Statistician. Saleable coal is taken to exclude miners' coal, coal consumed at the mines and other producer-consumed coal. For 1951, stocks of coal held at grass by the Commonwealth Government are also excluded. The figures for the years 1947 and 1948 include Commonwealth subsidy on coal. No deduction has been made in respect of excise duty operative from 1st November, 1949.

**AVERAGE SELLING VALUE AT THE MINE PER TON OF SALEABLE COAL : NEW SOUTH WALES.**

(s. d.)

Year.	Northern District.	Southern District.	Western District.	Average for State.
1938 .. .. .	12 0	14 0	9 6	12 0
1947 (a) .. .. .	20 11	23 11	16 10	20 9
1948 (a) .. .. .	26 1	29 11	20 6	25 8
1949 .. .. .	31 8	(b) 34 10	22 6	30 3
1950 .. .. .	36 5	(b) 39 1	29 4	(b) 35 10
1951 .. .. .	51 5	50 8	42 10	49 8

(a) Includes Commonwealth subsidy.

(b) Revised since previous issue.

7. **Prices in New South Wales, Great Britain, Canada and the United States of America.**—In the following table the prices of coal in Canada and the United States of America are compared with the average value per ton of coal in New South Wales and Great Britain.

**AVERAGE PRICES OF COAL PER TON : NEW SOUTH WALES, GREAT BRITAIN, CANADA AND UNITED STATES OF AMERICA.**

Country.	1938.	1945.	1946.	1947.	1948.	1949.	1950.	1951.
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
New South Wales—Bituminous(a)	12 0	18 7	18 10	20 9	25 8	30 3	35 10	49 8
Great Britain—Deep mined(b)	16 8	35 0	36 10	40 3	47 2½	47 11	47 9½	51 2½
	\$	\$	\$	\$	\$	\$	\$	\$
Canada—Bituminous (c) ..	5.417	6.788	6.980	6.980	6.980	6.980	(d)	(d)
United States of America—Bituminous (e)	4.327	6.356	5.776	6.873	(f)8.118	(f)8.631	(f)8.738	(g)5.698

(a) Average selling value at the mine per ton of 2,240 lb.; the figures relate to saleable coal and include subsidy from 1945 and excise duty from November, 1949. (b) Average value in sterling at the mine per ton of 2,240 lb.

(c) Wholesale price in Canadian currency per ton of 2,000 lb. (d) Not available. (e) Wholesale price, car-lots, on tracks, destination, in United States of America currency per ton of 2,000 lb.

(f) Figures for 1948 to 1950 represent averages for nine months, nine months and ten months respectively. As a result of changes in the basis of compiling the averages, figures are not strictly comparable from year to year. (g) Prices are "f.o.b. car at mine" and are not comparable with earlier figures. Average of eleven months.

8. **Employment in Coal-mines.**—The number of persons employed, both above and below ground, in coal-mines in each of the producing States for selected years from 1915 and for the years 1947 to 1951 inclusive is shown in the following table :—

**COAL-MINES : PERSONS EMPLOYED.**

Year.	New South Wales.	Victoria.		Queensland.	South Australia.	Western Australia.	Tasmania.	Total.
		Black.	Brown.					
1915 .. ..	17,959	1,312	(a)	2,518	..	498	161	22,448
1925 .. ..	24,049	1,947	646	2,826	..	677	312	30,457
1935 .. ..	13,337	1,397	615	2,455	..	689	340	18,833
1938 .. ..	15,815	1,322	444	2,495	..	765	269	21,110
1945 .. ..	17,427	1,016	584	2,966	100	860	279	23,232
1947 .. ..	17,614	860	594	3,337	124	1,032	288	23,849
1948 .. ..	18,693	824	526	3,323	237	1,064	274	24,941
1949 .. ..	18,546	787	811	3,390	347	1,044	312	25,237
1950 .. ..	18,540	777	889	3,495	408	1,099	334	25,542
1951 .. ..	18,747	773	898	3,503	434	1,125	329	25,809

(a) Included with black coal; production prior to 1925 was of little significance.

The year of maximum employment was 1926 when 31,774 persons were engaged in the coal-mines of Australia. Shortly after that year the industrial depression and a prolonged stoppage of work on one of the principal fields of New South Wales during 1929 and 1930 seriously affected the figures of employment. Since 1933 there has been a gradual increase, but the numbers employed in 1951 were only about three-quarters of the maximum figure already quoted. In New South Wales in 1939, 3,594,000 tons of coal, or 32.1 per cent. of the total output of underground coal, were cut by machinery, compared with 3,364,351 tons or 35.5 per cent. in 1949, 4,345,836 tons or 38.8 per cent. in 1950, 4,964,941 tons or 44.2 per cent. in 1951, and 6,243,060 tons or 50.0 per cent. in 1952. Similar details for other States are not available.

9. **Production of Coal per Man-day (or Man-shift) in New South Wales Underground Mines.**—The following table shows particulars of the estimated production of coal in New South Wales underground mines per man-day or man-shift for the years 1939 and 1944 to 1952. For 1947 and earlier years the figures relate to coal raised per man-day and have been calculated by the Government Statistician for New South Wales from data collected from mines as to production of coal, average numbers of employees, and numbers of days worked by the mines. From 1948, the table shows production per man-shift, as calculated by the Joint Coal Board from fortnightly returns from each mine showing actual numbers of shifts worked. Although the two series have not been compiled on identical bases, they may be taken as comparable for practical purposes.

**PRODUCTION OF COAL PER MAN-DAY (OR MAN-SHIFT) : NEW SOUTH WALES UNDERGROUND MINES.**

(Tons.)

Year.	Coal Raised per Man-day(a)		Year.	Production of Coal per Man-shift.(b)		
	Employees Below Ground.	All Employees.		Employees at Coal Face.	All Employees Below Ground.	All Employees.
1939 ..	4.42	3.35	1948 ..	9.51	4.26	2.92
1944 ..	4.13	3.09	1949 ..	9.83	4.26	2.91
1945 ..	3.97	2.98	1950 ..	10.28	4.39	2.95
1946 ..	4.05	2.99	1951 ..	10.82	(c)	2.96
1947 ..	4.11	3.01	1952 ..	10.06	(c)	3.00

(a) As compiled by Government Statistician.

(b) As compiled by Joint Coal Board.

(c) Not available.



10. **Accidents in Coal-mining.**—The following table shows the number of persons killed or injured in the coal-mining industry in Australia during 1951. Owing to the different bases of recording mining accidents in the various States of Australia the figures in the table below are not strictly comparable between States. Particulars for brown coal mining, which is confined to Victoria, are included.

**COAL-MINING : EMPLOYMENT AND ACCIDENTS, 1951.**

State.	Persons Employed in Coal-mining.	No. of Persons.	
		Killed.	Injured.
New South Wales .. .. .	18,747	14	81
Victoria (a) .. .. .	1,671	..	20
Queensland .. .. .	3,593	4	183
South Australia .. .. .	434	..	11
Western Australia .. .. .	1,125	2	151
Tasmania .. .. .	329	..	5
Total .. .. .	25,809	20	451

(a) Includes brown coal.

11. **Commonwealth Board of Inquiry into the Coal-mining Industry.**—Reference to the appointment in 1945 of the Commonwealth Board of Inquiry, its terms of reference and the report issued in 1946 is given in Official Year Book No. 37, page 842.

12. **Joint Coal Board.**—Under war-time emergency legislation, the Commonwealth had wide powers to control the production, distribution and price of coal in Australia. Under peace-time conditions, however, the constitutional powers of the Commonwealth were less effective and, in order to ensure the maintenance of supplies of coal to meet the peace-time needs of industry, it was necessary to seek wider powers.

With this objective in view, the Governments of the Commonwealth and New South Wales, the chief coal-producing State, mutually agreed to create jointly an authority with powers similar to and in some respects wider than those possessed under Commonwealth war-time legislation. Following this agreement, the Joint Coal Board was created and has functioned as from 1st March, 1947. Briefly, it is the responsibility of the Board to ensure that the coal of the State is conserved, developed, worked, distributed and used to the best advantage in the public interest, and to promote the welfare of the workers in the industry. Further details of the powers and functions of the Board are contained in previous issues of the Year Book.

### § 9. Coke and Other By-products from Coal.

1. **Coke.**—The production of metallurgical coke in Australia was limited to about 250,000 tons per annum prior to the 1914-18 War. This was below local requirements and necessitated an annual import of about 27,000 tons. By 1920, production had risen to more than 500,000 tons and by 1938-39 it had reached 1,164,873 tons. This increased production permitted an export of 30,000 tons in 1938-39. Imports in the same year were 9,700 tons. In recent years, imports have exceeded exports and in 1951-52, 6,508 tons were imported (5,037 tons from South Africa) and 1,396 tons exported (1,016 tons to New Zealand). In 1950-51, imports totalled 37,658 tons (29,802 tons from South Africa) and exports were 1,722 tons (1,403 tons to New Zealand).

In addition to metallurgical coke referred to above (which is produced by specialized coke works), considerable quantities of coke are produced in gas works as a by-product of the manufacture of gas. Output in gas works in 1951-52 was 1,040,934 tons compared with 757,046 tons in 1938-39.

In order to avoid duplication with coal values, the returns for coke have not been included in the general tables of mineral production in the early part of this chapter.

In the following table, particulars of the production of coke in coke works and gas works in Australia are shown for the years 1938-39 and 1947-48 to 1951-52. Relevant particulars of the output of coke breeze are also shown.

## TOTAL COKE PRODUCTION : AUSTRALIA.

(Tons.)

Industry.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
COKE.						
Coke Works ..	1,164,873	1,384,238	1,150,039	1,182,773	1,515,782	1,799,650
Gas Works ..	757,046	1,170,545	1,181,516	1,094,982	1,111,854	1,040,934
Total ..	1,921,919	2,554,783	2,331,555	2,277,755	2,627,636	2,840,584
COKE BREEZE.						
Coke Works ..	78,584	(a) 111,062	(a) 88,439	87,394	(a) 115,658	(a) 125,288
Gas Works ..	35,996	60,556	69,160	75,604	118,231	123,231
Total ..	114,580	171,618	157,599	162,998	233,889	248,519

(a) Includes a small quantity produced in other works.

2. **Other By-products from Coal.**—In addition to coke, other products are obtained from the treatment of coal by coke and gas works. Details of some of these are given in the following table.

## OTHER BY-PRODUCTS FROM COAL : AUSTRALIA.

Commodity.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Tar—Crude (a) .. '000 gals.	34,614	41,166	40,844	33,173	41,239	42,886
Refined (a) .. "	3,752	14,996	13,534	12,324	12,449	12,514
Tar Oils (crude) .. "	1,254	4,022	5,234	3,758	3,960	4,101
Ammoniacal Liquor .. "	5,388	18,102	19,272	18,120	24,210	23,449
Ammonium Sulphate (a) tons	24,251	39,489	53,247	48,736	57,893	63,815

(a) Includes production in works other than coke and gas works.

## § 10. Shale-oil and Mineral Oil.

1. **Shale-oil.**—(i) *General.* Reference to the deposits of shale and the search for mineral oil in Australia will be found in Official Year Book No. 22, pp. 791-3.

(ii) *New South Wales.* Reference to the establishment of the shale-oil industry in Australia will be found in previous issues of the Official Year Book. In 1937 negotiations were completed between the Commonwealth and New South Wales Governments and the National Oil Proprietary Ltd., by which the latter company undertook to develop the shale-oil industry in the Newnes-Capertee district. The Commonwealth Government agreed to protect the industry by exempting from excise, up to 10 million gallons annually, the Company's output of petrol for a period of 25 years. Production of petrol from crude oil commenced at Glen Davis, near Newnes, in 1940.

In January, 1951, the Commonwealth Government announced that in view of the continued uneconomic operation of the project, its small contribution to Australian petroleum supplies, the doubtful prospect of raising production to a considerably higher figure and the urgent need for miners in black coal production, it would close down the works completely as soon as possible. In September, 1951, the Government appointed a receiver in National Oil Pty. Ltd., the company which has operated this project. Operations were continued on a restricted basis, but ceased entirely on 30th May, 1952. A total quantity of 26,034,403 gallons of petrol had been produced at the time of the closing of the plant.

The following table shows the production of oil shale during the years 1948 to 1952 compared with 1940 :—

**OIL SHALE : PRODUCTION IN NEW SOUTH WALES.**

	1940.	1948.	1949.	1950.	1951.	1952.
Quantity tons	43,805	136,352	120,956	98,487	78,564	21,661
Value £	43,805	204,528	181,437	185,084	181,132	50,902

(iii) *Tasmania.* About 38,000 gallons of crude oil were produced in 1934 from shale treated in Tasmania, while the total quantity of oil distilled from shale up to the end of 1934 was set down at 357,000 gallons. The plant owned by the Tasmanite Shale Oil Company has not operated since the end of January, 1935.

Interest in the commercial utilization of oil shales of the Mersey Valley for the extraction of fuel oils has been retarded owing to structural and physical conditions for underground mining and the low-grade nature of the shale.

2. **Coal Oil.**—Reference to investigations made into the possibility of establishing plants for the production of oil from coal is made in previous issues of the Official Year Book. See Official Year Book No. 37, pages 844-5.

3. **Natural Oil.**—(i) *Australia.* Natural oil has been proved to exist in Queensland, Victoria and Western Australia, the best indications being found in Victoria and Queensland. Many of the conditions favourable to the accumulation of oil in commercial quantities have been shown to be present in Queensland, Western Australia and New South Wales. In the latter State, however, no strong positive evidence of its existence has been recorded.

Reference is made in § 14 below to the assistance afforded by the Commonwealth Government in the search for petroleum.

Test drilling has been carried on in two areas—Oiapu in the Gulf District of Papua and Nerrima in the Kimberley District of Western Australia. At Oiapu, further geological surveys did not indicate favourable conditions, drilling operations were terminated and the permit was not extended. At Nerrima, the Frenay Kimberley Oil Company N.L. was unable to clear the borehole and again suspended operations; negotiations led to a tripartite arrangement whereby the Commonwealth, State and company would share equally in the cost of drilling a new bore at Nerrima subject to geophysical surveys confirming the suitability of the area for test drilling. The geophysical survey results were decidedly unfavourable and, in the face of constantly rising costs, the Commonwealth and State decided not to go ahead with the project.

(ii) *Victoria.* Production of crude oil by Lakes Oil Limited at Lakes Entrance was discontinued in 1951 because of economic considerations. In the Avon area of Gippsland near the Lakes Oil Limited shaft, a small seismic survey was made by the Commonwealth Bureau of Mineral Resources, Geology and Geophysics to investigate a possible structure indicated by a previous gravity survey. In East Gippsland, the previous gravity reconnaissance surveys by Robert H. Ray Company of the United States of America and by the Bureau were extended eastward as far as Orbost in search of structures suitable for further investigation.

Geological surveys have been carried out in the Portland-Nelson-Mt. Gambier area of Western Victoria and the eastern part of South Australia by the Departments of Mines of Victoria and South Australia. Geophysical surveys (gravity) were made in Western Victoria by the Bureau of Mineral Resources, Geology and Geophysics.

(iii) *Queensland.* At Roma, Queensland, Associated Australia Oilfields N.L. drilled a hole on a structure indicated by a seismic survey made by the Bureau of Mineral Resources, Geology and Geophysics. The hole reached basement at a depth of 3,892 feet without significant indications of oil or natural gas. Another hole was begun in October, 1952 and had reached basement at a depth of about 3,600 feet. Production tests are being carried out on this well.

(iv) *South Australia.* Under prescribed conditions, the South Australian Government offers a bonus of £5,000 to the person or body corporate which first obtains from a local bore or well 100,000 gallons of crude petroleum containing not less than 90 per cent. of products obtainable by distillation. Geophysical surveys were undertaken by private interests during 1947, and continued into 1948, in the north-east corner of the State and extending over the border into New South Wales, and Queensland, but with little success. Assistance given by the Commonwealth included equipment and a geophysical survey party.

(v) *Western Australia.* Systematic geological mapping and stratigraphic and structural studies have been continued in the Carnarvon area by the Commonwealth Bureau of Mineral Resources, Geology and Geophysics. Western Australian Petroleum Company (an exploration Company formed by Caltex in partnership with Ampol Petroleum Company) landed drilling equipment in the Exmouth Gulf area. This Company also continued seismic exploration of the Giralalia Cape Range and Rough Range Anticlines during 1952. In the Fitzroy Basin, South Kimberley area, the Bureau has carried out geological and geophysical (seismic and gravity) surveys.

(vi) *Papua.* Australasian Petroleum Company and Island Exploration Company continued surface and sub-surface exploration. In the western and eastern parts of the Delta District, and between the Fly and Wawoi Rivers, Western District, field parties conducted seismic and refraction surveys. In the foothills area of the eastern and western parts of the Gulf District, three parties carried out geological surveys during 1952. Australasian Petroleum Company's Hohoro Well No. 2, which was spudded in during February, 1951, was abandoned as a dry hole in May, 1952, when it has reached a depth of 10,642 feet. Island Exploration Company's Omati Well, which was spudded in during November, 1950, was drilled to 11,915 feet during 1952.

(vii) *General.* During 1939 efforts were made to secure greater uniformity in State legislation governing the search for oil. A draft Bill based on modern legislation in other countries was prepared by the Commonwealth and submitted to the State Governments. As a result, amending legislation was passed in Victoria, Queensland, South Australia and Western Australia. There was immediate response to this in Queensland, where an agreement has been reached between the State Government and one of the major oil companies, whereby the company has undertaken to spend up to £400,000 in the search for oil in that State.

Further details of action taken by the Commonwealth Government in connexion with the search for oil will be found in § 14. Government Aid to Mining, and Mineral Control.

## § 11. Sulphur.

Sulphur, although produced in Australia as a content of certain metallic minerals, is itself *non-metallic in character*. Sulphides such as zinc concentrate and pyrites, which contain sulphur, are produced in appreciable quantities. There is no production of elemental sulphur (brimstone) in Australia. The sulphur content of zinc concentrate averages 32 per cent. and of pyrites, approximately 47 per cent. A large proportion of zinc concentrate produced is exported and therefore lost to Australia for utilization of the sulphur content. The sulphur recovered in Australia is in the form of acid, most of which is used in the manufacture of fertilizers, mainly superphosphate. As this recovery amounts to only about 40 per cent. of total requirements, it is necessary to import elemental sulphur to meet the balance. Every effort is being made by increasing and improving plant to step up recovery from local sulphides, thereby making Australia less dependent on importation of elemental sulphur.

The following table shows for the years 1939, 1950 and 1951, the sulphur content of sulphur-bearing minerals produced, quantities of sulphur recoverable therefrom, production of monohydrate acid (100 per cent. sulphuric acid), and sulphur content of monohydrate acid produced. It will be noted that particulars regarding spent oxide roasted have been included. This has been done to complete the statistics relating to recovery of sulphur and monohydrate acid production.

**SULPHUR : PRODUCTION, AUSTRALIA.**  
(Tons.)

Item.	1939.	1950.	1951.
Sulphur contained in—			
Zinc Concentrate .. .. .	123,968	119,736	113,964
Pyrites .. .. .	27,040	57,177	65,962
Spent Oxide Roasted .. .. .	(a)	(b) 2,930	(b) 3,200
<hr/>			
Total Sulphur Content .. .. .	151,008	179,843	183,126
Recoverable Sulphur (b) .. .. .	129,709	156,095	159,050
<hr/>			
Monohydrate Acid Produced .. .. .	(c) 184,493	639,600	652,125
<hr/>			
Quantity of Sulphur in Monohydrate Acid produced from—			
Sulphur (Elemental) (d) .. .. .	(b) 114,500	134,000	135,683
Zinc Concentrate .. .. .	25,300	32,000	32,850
Pyrites .. .. .	27,040	45,000	50,300
Spent Oxide .. .. .	(a)	2,050	2,230
<hr/>			
Total .. .. .	166,840	213,050	221,063

(a) Not available.

(b) Estimated.

(c) Year ended 30th June, 1939.

(d) All imported.

### § 12. Gems and Gemstones.

1. **General.**—Among the gems and precious stones discovered from time to time in the different States are agate, amethyst, beryl, chiolite, diamond, emerald, garnet, moonstone, olivine, opal, ruby, sapphire, topaz, tourmaline, turquoise and zircon. The following paragraphs, however, deal only with opal and sapphire, the most important of the more commonly found precious stones in Australia. Reference in some detail to the production of gems and gemstones in earlier years is made in previous issues of the Official Year Book.

2. **Opal.**—Opal of a recorded value of £65,474 was produced in Australia in 1951. The recorded value in 1950 was £56,219. The main producing centres are in South Australia on the Andamooka and Coober Pedy fields. Recorded output in this State was valued at £64,117. Queensland production in 1951 (£1,117) came from the Quilpie district while the opal in New South Wales (£240) was won at Lightning Ridge.

3. **Sapphire.**—The production of sapphire in Australia in 1951 was valued at £1,135 and was won at Rubyvale and Sapphire in Queensland.

### § 13. Persons Engaged, Wages Paid and Accidents in Mining.

1. **Total Employment in Mining.**—The number of person engaged in the mining industry in Australia fluctuates according to the season, the price of industrial metals, the state of the labour market, and according to the permanence of new finds and the development of the established mines. The following table shows the numbers engaged in the various mining industries in each State and Australia, as a whole in 1951, compared with the total employment for each industry in Australia in 1950. Attention is drawn to § 1. para. 3 Standardization of Mineral Statistics (pp. 747-8) which outlines the nature of changes adopted in reporting mineral statistics from 1950.

EMPLOYMENT IN MINING.

Mining Industry.	1951.								Australia, 1950.
	N.S.W. (a)	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Terr.	Aust.	
<b>Metallic Minerals—</b>									
Gold .. .. .	415	761	551	27	6,742	8	143	8,647	9,478
Iron Ore .. .. .	..	..	..	214	124	..	..	338	372
Silver-Lead-Zinc .. .. .	6,781	..	1,949	15	189	602	..	9,536	8,307
Copper-Gold .. .. .	156	..	1,136	7	..	742	6	2,047	2,184
Tin .. .. .	334	..	609	..	33	551	50	1,577	1,644
<b>Tungsten—</b>									
(i) Scheelite .. .. .	16	..	5	..	2	165	..	188	215
(ii) Wolfram .. .. .	75	..	318	3	4	..	300	700	90
Antimony .. .. .	41	17	22	..	..	..	..	80	78
Mineral Sands .. .. .	289	..	191	..	..	..	..	480	322
Bauxite .. .. .	5	9	..	..	..	..	..	14	14
Manganese .. .. .	24	..	4	3	1	..	..	32	57
Pyrites .. .. .	..	..	..	7	138	..	..	145	104
Other Metals .. .. .	31	..	5	..	6	9	..	51	27
<b>Total .. .. .</b>	<b>8,167</b>	<b>787</b>	<b>4,790</b>	<b>276</b>	<b>7,239</b>	<b>2,077</b>	<b>499</b>	<b>23,835</b>	<b>23,392</b>
<b>Fuel Minerals—</b>									
Black Coal .. .. .	18,697	773	3,503	434	1,125	329	..	24,861	24,653
Brown Coal .. .. .	..	898	..	..	..	..	..	898	889
Other Fuel .. .. .	147	..	..	..	..	..	..	147	183
<b>Total .. .. .</b>	<b>18,844</b>	<b>1,671</b>	<b>3,503</b>	<b>434</b>	<b>1,125</b>	<b>329</b>	<b>..</b>	<b>25,906</b>	<b>25,725</b>
<b>Non-metallic Minerals (c)</b>	<b>1,219</b>	<b>277</b>	<b>209</b>	<b>963</b>	<b>268</b>	<b>17</b>	<b>82</b>	<b>3,035</b>	<b>3,117</b>
<b>Total, All Mining (d)</b>	<b>28,230</b>	<b>2,735</b>	<b>8,302</b>	<b>1,673</b>	<b>8,632</b>	<b>2,423</b>	<b>581</b>	<b>52,776</b>	<b>52,234</b>

(a) Average employment during period of operation: excludes fossickers for gold (117), tin (344), tungsten (67) and opals (17). (b) Excludes fossickers for gold. (c) Excluding construction materials, particulars for which are not available. (d) Incomplete, excludes construction materials.

The following table shows employment in mining industries for the years 1945 to 1951 inclusive:—

EMPLOYMENT IN MINING : AUSTRALIA.

Mining Industry.	1945	1946.	1947.	1948.	1949.	1950.	1951.
<b>Copper, Copper-Gold and</b>							
Gold .. .. .	9,010	11,746	12,635	11,793	11,394	11,662	10,694
Silver-Lead-Zinc .. .. .	4,380	6,176	6,862	8,043	8,126	8,807	9,536
Iron Ore .. .. .	210	198	190	230	368	372	338
Tin .. .. .	2,080	1,994	1,739	1,665	1,745	1,644	1,577
<b>Black Coal—</b>							
Above ground .. .. .	5,969	6,173	6,588	7,727	7,755	8,123	8,778
Below ground .. .. .	16,679	16,192	16,667	16,688	16,671	16,530	16,083
<b>Total, Black Coal .. .. .</b>	<b>22,648</b>	<b>22,365</b>	<b>23,255</b>	<b>24,415</b>	<b>24,426</b>	<b>24,653</b>	<b>24,861</b>
<b>Brown Coal .. .. .</b>	<b>584</b>	<b>655</b>	<b>594</b>	<b>526</b>	<b>811</b>	<b>839</b>	<b>898</b>
<b>All other (a) .. .. .</b>	<b>3,123</b>	<b>3,228</b>	<b>3,717</b>	<b>3,186</b>	<b>3,630</b>	<b>4,207</b>	<b>4,872</b>
<b>Total (a) .. .. .</b>	<b>42,035</b>	<b>46,362</b>	<b>48,992</b>	<b>49,858</b>	<b>50,500</b>	<b>52,234</b>	<b>52,776</b>

(a) Excludes construction material quarrying.

2. Wages Paid in Mining.—Information regarding rates of wages paid in the mining industry is shown in the Labour Report issued by this Bureau and in Chapter VIII.—Labour, Wages and Prices of this Year Book (page 283).

3. Accidents in Mining.—The following table shows particulars of the number of men killed and injured in accidents in the various mining industries during 1950 and 1951 :—

## MINING ACCIDENTS.

Mining Industry.	1951.							Australia, 1950.	
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Terr.		Aust.
<b>KILLED.</b>									
Metallic Minerals—									
Gold ..		1			15		1	17	18
Iron Ore ..									
Silver-Lead-Zinc ..	3		1					4	4
Copper-Gold ..	1					1		1	2
Tin ..								1	2
Other Metal ..	1							1	2
Total ..	5	1	1		15	2	1	25	26
Fuel Minerals—									
Black Coal ..	14		4		2			20	16
Other Fuel ..									
Total ..	14		4		2			20	16
Non-metallic Minerals—									
All Non-metallic ..	1	3						4	1
Total, All Mining ..	20	4	5		17	2	1	49	43
<b>INJURED.</b>									
Metallic Minerals—									
Gold ..	10	1	4		493		2	510	618
Iron Ore ..				2	5			7	24
Silver-Lead-Zinc ..	202		56		7	9		274	165
Copper-Gold ..	25		35			9		69	71
Tin ..			6			11		17	9
Other Metal ..	2		73		9			84	43
Total ..	239	1	174	2	514	29	2	961	930
Fuel Minerals—									
Black Coal ..	81	17	183	11	151	5		448	337
Other Fuel ..		3						3	
Total ..	81	20	183	11	151	5		451	337
Non-metallic Minerals—									
All Non-metallic ..	3	3		8	12			26	19
Total, All Mining ..	323	24	357	21	677	34	2	1,438	1,286

(a) Excludes construction material quarrying, particulars of which are not available.

NOTE.—Owing to the varying bases of recording mining accidents in the several States of Australia, the figures in this table are not strictly comparable between States.

## § 14. Government Aid to Mining, and Mineral Control.

1. Aid to Mining.—(i) *Commonwealth.* (a) *Rewards for Discovery of Uranium Ore.* To encourage the search for and discovery of deposits of uranium ore, the Commonwealth Government has approved the granting of monetary rewards. These rewards will be paid as follows :—(1) £1,000 for the discovery of a deposit containing sufficient ore to be of economic importance; (2) £1,000 for the discovery of a deposit capable of producing 25 tons or more of uranium oxide and £2,000 for each 25 tons in excess of the first 25 tons; and (3) a maximum of £25,000 for any one deposit.

(b) *Bureau of Mineral Resources, Geology and Geophysics.* The Bureau of Mineral Resources, Geology and Geophysics has sections dealing with geology and geophysics, mining engineering, petroleum technology and mineral economics. The geological section conducts all surveys required in Commonwealth Territories, detailed and regional surveys in conjunction with or by arrangement with the State Mines Departments, surveys of possible oil-fields in Australia and New Guinea, surveys of mines for which financial assistance is sought, and investigations of deposits of radio-active minerals. The geophysical section conducts investigations throughout Australia and New Guinea connected with the search for metalliferous, radio-active and other mineral deposits; problems connected with exploration for coal, oil and water; regional magnetic and gravity surveys; engineering and military geophysics; and the operation of geophysical (magnetic and seismic) observatories. The Bureau works in close co-operation with the Mines Departments of the States. It has assumed full responsibility for geological and geophysical surveys in Commonwealth Territories, but suitable arrangements have been made to ensure that the local Administrations have the necessary technical advice directly available to them. The Bureau has also assumed full responsibility for scout-boring to prove deposits of coal in New South Wales suitable for working by open-cut methods.

(c) *Diamond Drills.* Three of the heavy diamond drills mentioned in the previous Official Year Book have been on hire to various mining companies. Four more light drills are on order and will be used in prospecting for uranium in the Northern Territory.

(d) *Search for Oil.* No variation has been made in the policy described in Official Year Book No. 37, page 850, regarding the search for petroleum throughout Australia and its Territories. In addition to its activities set out in that Year Book, the Bureau of Mineral Resources, Geology and Geophysics furnishes field laboratories and trained personnel to assist small companies in recording scientific information obtained while drilling for oil. A modern diesel-driven rotary drilling plant has been procured for deep test-drilling on suitable geological structures.

The Commonwealth Government has encouraged the search for oil in Australia, Papua and New Guinea; details of the efforts made are outlined in previous issues of the Official Year Book and in § 10. Shale-oil and Mineral Oil of this issue. A considerable amount of geological and geophysical work and test drilling has been conducted under the provision of the Petroleum Oil Search Act 1936.

(e) *Survey of North Australia.* Reference to this survey which was completed at the end of 1940 appears in Official Year Book No. 35, page 744.

(f) *Ore-dressing and mineragraphic investigations.* These investigations are conducted by the Commonwealth Scientific and Industrial Research Organization as required by the industry. Ore-dressing investigations are carried out conjointly with appropriate State institutions, the three laboratory centres being the School of Mines, Kalgoorlie, the School of Mines and Industries, Adelaide, and the University of Melbourne.

The grant of £22,000 mentioned in Official Year Book No. 37, page 851, was expended by 1947; since that year funds to continue the investigations are included in an investigational vote approved annually for the Commonwealth Scientific and Industrial Research Organization. In 1948 the Government expended approximately £5,000 on ore-dressing and £6,100 on mineragraphic investigations.

(g) *Petroleum Legislation.* The petroleum ordinances of Papua and New Guinea have been amended and combined in a single ordinance entitled Petroleum (Prospecting and Mining) Ordinance 1951.



(ii) *States. (a) General.* In addition to free assays and determinations of rocks and minerals carried out for prospectors by the Mines Departments of the States and Territories, technical officers of these departments provide advice to the mining industry where required, carry out field examinations of mining prospects, advise on exploration and development, select sites for water supply, and in general give a free technical service to the mining industry.

(b) *New South Wales.* State aid to assist metalliferous mining consisted of grants to assist the prospecting and/or mining for gold and minerals and for the purchase, removal and installation of mining plant or equipment.

(c) *Victoria.* Grants may be made to assist prospecting and development or the purchase of machinery. The Mines Department has 24 stamp batteries in different parts of the State to crush ore for prospectors at nominal rates. Small mining companies may avail themselves of these facilities.

(d) *Queensland.* The Mines Department maintains a treatment works for tin ores, etc., at Irvinebank, an assay office at Cloncurry and diamond-drilling plants in several parts of the State. The Venus State Mill at Charters Towers is available for the treatment of gold-bearing ores and another State battery is located at Kidston. In addition, many departmental compressor plants, pumping plants and other mining equipment are provided and made available on hire on the principal mining fields.

(e) *South Australia.* During 1940 the Premier announced that assistance would be given to copper-mining in the form of financial help towards such development work as was absolutely necessary for a mine to enter upon reasonably continuous production. On 5th November, 1942, the Leigh Creek Coal Act was passed to develop the Leigh Creek Coalfield. As a result of extensive drilling operations, development of open-cut mining was commenced in January, 1943. The State maintains batteries and cyanide works at Mount Torrens, Peterborough, Mongolata, Tarcoola and Glenloth and assays for public purposes are made at the School of Mines.

(f) *Western Australia.* The Mines Department has about twenty batteries throughout the mining fields where prospectors and others can have their ore treated.

(g) *Tasmania.* During 1951 the Department of Mines reported that the policy of assistance to mining was maintained to the extent provided for under the provisions of the Aid to Mining Act but little advantage was taken thereof.

Other assistance rendered to the industry is provided by a well-equipped metallurgical laboratory at Launceston where ore-dressing and other metallurgical problems can be investigated for the mine-owner, and advice given regarding the most suitable type of plant to install.

(h) *Northern Territory.* The Commonwealth Government has maintained a ten-head battery at Tennant Creek for the treatment of ore by miners. Another battery has been leased. A ten-head battery is situated on the Maranboy tin-field and crushes ore for all parties on the field. Assistance has been given to miners on the mica fields to purchase air-compressors and other mining plant on liberal terms. The Commonwealth Government has purchased all mica produced on the fields. Roads and water supply services are provided and maintained for all mines and mineral-producing areas throughout the Territory.

2. **Control of Minerals.**—(i) *Minerals Committee, and Controller of Minerals Production.* With the ending of the 1939-45 War, the activities of the Minerals Committee and Controller of Minerals Production were merged with the Bureau of Mineral Resources Geology and Geophysics. Operations conducted by the Controller taken over by the Director of the Bureau were the Dorset Tin Dredge and the Commonwealth Mica Pool. The Dorset Tin Dredge is in active operation and produces about 150 tons of tin concentrate annually; it has about ten years of operation in sight.

(ii) *Mica Production.* The Bureau, for the Department of Supply, operates the Commonwealth Mica Pool which purchases all mica won in the Harts Range, Northern Territory, thus ensuring the miners of a ready market for their product at fixed prices and also permitting an orderly distribution of mica to the trade. Under a recent Cabinet decision, the Commonwealth Mica Pool will operate until the end of 1953 when the position will be reviewed.

(iii) *Control of Exports of Metals and Minerals.* Certain metals and minerals produced in Australia are subject to export control for one or more of the following reasons:—

- (a) the necessity to conserve resources (e.g. iron ore, manganese and bauxite);
- (b) inadequacy of local production to fulfil domestic demand (e.g. tin ore, concentrates and metal; mica, manganese ore, copper, iron and steel);
- (c) the strategic importance of the minerals (e.g. beryllium ores, concentrates and metal; monazite; tantalite and tantalum products; uranium ore, concentrates, residues and metal; mica).

Mixed concentrates of beach sand minerals are prohibited exports, but rutile, zircon and ilmenite may be exported. Non-ferrous scrap is also subject to control.

(iv) *Radio-active Minerals.* Since the discovery of the possibility of using atomic energy considerable attention has been paid to the occurrence of uranium in Australia. To encourage the search for and discovery of deposits of uranium ore, the Commonwealth Government has approved the granting of monetary rewards for such discoveries. The amount of reward to be paid for the discovery of any deposit will be determined by the Minister for Supply, but will not exceed £25,000.

Up to the end of 1949 important deposits had been found only in the northern part of South Australia where the Mt. Painter and Radium Hill fields had been investigated, largely by the South Australian Government, but in that year the presence of uranium was discovered in the Rum Jungle district of the Northern Territory, and investigations carried out by the Commonwealth Bureau of Mineral Resources, Geology and Geophysics in the years 1949-1952 proved that these deposits are of substantial importance.

Towards the end of 1952 the Commonwealth Government placed the Rum Jungle deposits, together with other deposits which are known to occur, but which have not yet been adequately investigated, under the control of Consolidated Zinc Corporation Limited, to carry on the investigations on its behalf and to mine and treat the ore. Investigation of an area adjacent to Rum Jungle was carried out by the Bureau, using an airborne scintillometer. This survey indicated the presence of many radio-active anomalies, and demonstrated the effectiveness of this method of search. During 1952, arrangements were completed between the Governments of the United States of America, South Australia and the Australian Commonwealth, for the purchase of ores by the United States.

In South Australia, the South Australian Government extensively explored the Radium Hill deposit by underground development and diamond drilling. The production of ore is now proceeding and treatment plants are being erected.

During 1953, the Bureau of Mineral Resources will carry out further airborne scintillometer surveys and extensive geological, geophysical and geochemical surveys and diamond drilling operations, with a view to discovering further deposits and to assessing the value of known deposits.

During 1953 Commonwealth Legislation was enacted to set up an Atomic Energy Commission which will be responsible, in an overall sense, for the production and utilization of uranium in Australia. This Act supersedes the Atomic Energy (Control of Materials) Act No. 34 of 1946, but contains a provision of that Act which provides for control of substances which could be used for production or use of atomic energy. It gives the Commonwealth power to acquire such substances in their natural state and in waste materials from mining operations, to carry on mining and other operations necessary for the recovery of such substances, and to pay compensation for such acquisition. It also gives the Commonwealth power to obtain possession of such substances held by any person.

Further reference to the Atomic Energy Commission appears in Chapter XXVII.—Defence.

## CHAPTER XIX. PASTORAL PRODUCTION.

NOTE.—Except where otherwise indicated, values of Australian oversea trade shown throughout this chapter are expressed as *f.o.b.*, Australian currency, port of shipment.

### § 1. Initiation and Growth of Pastoral Industry.

1. **General.**—A detailed account of the various enumerations of live stock in Australia made prior to 1860 is given in previous issues of the Year Book. The numbers recorded between 1800 and 1860 are regarded as somewhat defective. Doubtless the growth of population, the expansion in the area settled and the increase in private ownership made it difficult in those early times to secure accurate returns. Since 1860 however, the annual enumerations have been based, with few exceptions, on actual collections made through the agency of the State Police or by post and reliably record the movement in live stock numbers from year to year.

2. **Live Stock Numbers since 1860.**—Particulars concerning the numbers of each of the principal kinds of live stock in Australia at decennial intervals from 1860 to 1930 and from 1939 onwards in single years are given in the following table, and are shown continuously on the graph on page 809.

During the ninety-two years from 1860 to 1952 the live stock of Australia increased considerably, viz. :—Horses, 117 per cent. ; cattle, 276 per cent. ; sheep, 484 per cent. ; and pigs, 191 per cent. The average annual increases which these aggregates represent are as follows :—Horses, 0.84 per cent. ; cattle, 1.45 per cent. ; sheep, 1.94 per cent. ; and pigs, 1.17 per cent.

#### LIVE STOCK : AUSTRALIA. (‘000.)

Year.	Horses.	Cattle.	Sheep.	Pigs.
1860 .. .. .	432	3,958	20,135	351
1870 .. .. .	717	4,276	41,594	543
1880 .. .. .	1,069	7,527	62,184	816
1890 .. .. .	1,522	10,300	97,881	891
1900 .. .. .	1,610	8,640	70,603	950
1910 .. .. .	2,166	11,745	98,066	1,026
1920 .. .. .	2,416	13,500	81,796	764
1930 .. .. .	1,793	11,721	110,568	1,072
1939 .. .. .	1,724	12,862	111,058	1,156
1940 .. .. .	1,699	13,080	119,305	1,455
1941 .. .. .	1,666	13,256	122,694	1,797
1942 .. .. .	1,611	13,561	125,189	1,415
1943 (31st March) .. .. .	1,518	14,005	124,615	1,563
1944 " " .. .. .	1,449	14,184	123,174	1,747
1945 " " .. .. .	1,359	14,133	105,371	1,631
1946 " " .. .. .	1,265	13,878	96,396	1,426
1947 " " .. .. .	1,195	13,427	95,723	1,273
1948 " " .. .. .	1,165	13,785	102,559	1,255
1949 " " .. .. .	1,115	14,124	108,735	1,196
1950 " " .. .. .	1,057	14,640	112,891	1,123
1951 " " .. .. .	999	15,229	115,596	1,134
1952 " " .. .. .	937	14,893	117,647	1,022

3. **Fluctuations.**—The increases referred to, however, have not been continuous, marked fluctuations having taken place during the period, mainly on account of droughts which have from time to time left their impress on the pastoral history of Australia. These occurred in 1868, 1877, 1883-4, 1892, 1893, 1895, 1901-2, 1912, 1914, 1918, 1919, 1922-23, 1925-26, 1927-28, 1929-30, 1940-41 and 1944-45 to 1946-47.

The years in which the numbers of live stock attained their maxima are as follows :—Horses, 1918 (2,527,000); cattle, 1951 (15,229,000); sheep, 1942 (125,189,000); and pigs, 1941 (1,797,000).

The distribution throughout Australia of beef cattle, dairy cattle, sheep and pigs as at 31st March, 1948 is shown in the graphs on pages 905-8 of Official Year Book No. 39.

The numbers of horses, beef cattle and sheep in each State and Territory are shown later in this chapter; similar information for dairy cattle and pigs appears in Chapter XXI., Farmyard, Dairy and Bee Products.

4. **Minor Classes of Live Stock.**—Statistics of the minor classes of live stock (goats, camels, mules, donkeys, etc.) have not been collected in recent years. The last year in which all States, other than Victoria, collected this information was 1941, when total numbers were as follows :—Goats, 80,366; camels, 2,267; and mules and donkeys, 10,881. Of these, goats were most numerous in Queensland, and camels, mules and donkeys in Western Australia. In the raising of goats, some attention has been devoted to the angora goat and its product (mohair), and upwards of 5,000 angora goats are included in the number shown above. Of these, 1,640 were in New South Wales, 1,000 in Queensland, 1,531 in South Australia, and 284 in Tasmania.

New South Wales ceased collecting these details after 1941 and other States after 1942.

5. **Net Exports of Principal Pastoral Products.**—The quantities by which the exports of the principal pastoral products of Australia exceeded the imports for the years 1938-39 and 1948-49 to 1951-52 were as follows :—

#### NET EXPORTS OF PASTORAL PRODUCTS : AUSTRALIA.

Product.	Unit of Quantity.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.
<b>Animals (living)—</b>						
Cattle .. .. .	No.	405	940	325	675	363
Horses .. .. .	"	2,294	594	750	512	283
Sheep .. .. .	"	66,739	83,975	96,335	83,696	78,877
Bones .. .. .	cwt.	21,497	45,032	27,908	32,556	26,447
Glue-pieces and Sinews .. .. .	"	11,145	4,357	15,650	20,882	18,505
Glycerine .. .. .	lb.	78,727	165,190	312,401	2,266,589	1,754,420
Hair and Bristles .. .. .	"	1,003,366	8,779	13,094	16,856	12,576
Hoofs .. .. .	cwt.	(a)	14,643	9,397	9,177	10,095
Horns .. .. .	"	(a)	7,412	7,862	8,723	7,220
<b>Meats—</b>						
Frozen Beef and Veal (b)	lb.	271,948,548	191,648,948	182,361,271	158,309,727	95,875,957
" Mutton and Lamb	"	186,487,551	114,863,908	193,091,750	54,108,422	31,109,668
" Rabbits and Hares	Pair	(a)	24,530,331	21,859,322	9,905,182	16,666,684
" Other .. .. .	lb.	19,583,368	28,362,199	30,083,284	24,501,305	20,504,981
Potted and Concentrated	"	(a)	1,322,815	930,326	1,403,463	1,033,212
Preserved in Tins, etc. . . . .	"	14,778,896	128,820,550	95,580,754	95,655,072	112,177,224
Other (excluding Bacon and Ham) .. .. .	"	368,448	4,603,391	4,671,570	3,066,731	3,479,278
Sausage Casings .. .. .	cwt.	8,673	2,524	17,875	2,212	5,220
<b>Skins—</b>						
Cattle .. .. .	No.	(a)	228,532	237,207	178,861	113,816
Calf .. .. .	"	(a)	12,973	14,789	14,410	44,124
Horse .. .. .	"	(a)	43,482	47,923	51,381	59,615
Sheep and Lamb .. .. .	"	(a)	11,969,742	18,302,781	13,150,437	11,935,629
Rabbit and Hare .. .. .	cwt.	37,544	87,441	93,769	122,020	57,660
Other (including Undressed Furs) .. .. .	No.	(a)	777,932	6,717	13,954	19,187
Tallow (Edible and Inedible)	cwt.	(c) 560,241	173,225	407,723	278,218	144,975
<b>Wool—</b>						
Greasy .. .. .	lb.	779,781,662	976,032,759	1,052,755,607	905,302,218	820,198,267
Scoured. Tops, Noils, Waste .. .. .	"	70,299,595	155,688,040	161,977,028	126,821,384	97,164,797

(a) Quantity not available. (b) Includes chilled beef. (c) Inedible tallow only.

NOTE.—Minus sign (—) signifies net imports.

The values of the net exports for the same five years are furnished in the next table. For the four years ended 1951-52 they amounted to £1,672,272,831, or an average of £418,068,208 per annum, of which wool represented 89.5 per cent. Meat, skins and tallow comprise the remaining principal pastoral products exported. Net exports in 1938-39 were valued at £56,290,910, of which wool represented 74.56 per cent.

## VALUE OF NET EXPORTS OF PASTORAL PRODUCTS: AUSTRALIA.

(£.)

Product.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.
Animals (living)—					
Cattle .. .. .	989	27,845	48,675	52,931	156,395
Horses .. .. .	14	219,246	179,304	153,020	123,764
Sheep .. .. .	43,443	195,742	235,152	331,920	355,481
Bones .. .. .	10,909	58,260	33,004	42,893	58,895
Glue-pieces and Sinews .. .. .	7,087	10,820	40,161	63,731	65,944
Glycerine .. .. .	1,307	14,733	17,059	204,583	292,530
Hair and Bristles .. .. .	7,280	480,928	511,089	659,140	1,191,756
Hoofs .. .. .	8,027	22,892	10,589	15,221	24,363
Horns .. .. .	18,633	19,774	20,999	25,170	47,879
Meats—					
Frozen Beef and Veal (a) .. .. .	4,323,275	5,815,421	6,704,651	6,647,854	5,229,844
" Mutton and Lamb .. .. .	4,807,423	4,222,173	7,452,668	2,664,134	1,914,722
" Rabbits and Hares .. .. .	232,034	4,152,258	3,986,639	2,734,659	4,500,273
" Other .. .. .	419,269	1,055,289	1,308,003	1,128,904	1,148,150
Potted and Concentrated .. .. .	28,025	545,467	309,168	439,790	285,949
Preserved in Tins, etc. .. .. .	493,489	8,110,397	7,542,565	9,166,589	13,101,043
Other (excluding Bacon and Ham) .. .. .	6,355	342,943	336,021	294,901	312,819
Sausage Casings .. .. .	209,280	213,396	970,689	736,171	533,201
Skins—					
Cattle .. .. .	662,203	1,104,468	1,282,936	1,288,105	809,808
Calf .. .. .	131,227	48	17,353	21,133	51,993
Horse .. .. .	7,202	123,280	135,281	242,382	280,486
Sheep and Lamb .. .. .	2,339,703	7,401,022	11,683,123	22,025,628	13,606,425
Rabbit and Hare .. .. .	396,830	2,992,027	1,628,203	2,962,581	1,333,392
Other (including Undressed Furs) .. .. .	226,376	49,203	18,314	34,046	50,298
Tallow (Edible and Inedible) .. .. .	(b) 480,744	1,141,738	1,868,237	1,420,520	888,925
Wool—					
Greasy .. .. .	36,688,235	194,747,606	264,245,994	547,983,642	277,315,218
Scoured, Tops, Noils, Waste .. .. .	5,281,729	35,825,848	47,868,193	84,159,255	44,705,476
Total Values .. .. .	56,290,910	267,287,274	356,920,984	683,544,904	364,519,669

(a) Includes chilled beef. (b) Inedible tallow only.

NOTE.—The minus sign (—) signifies net imports.

6. Value of Pastoral Production.—(i) *Gross, Local and Net Values, 1950-51 and 1951-52.* Values of pastoral production for each State are shown for 1950-51 and 1951-52 in the following table. Fuller details of the source of the information and an explanation of the terms used in this compilation will be found in Chapter XXIX.—Miscellaneous. Maintenance costs have not been computed in all States and depreciation has not been deducted; consequently the net values are inflated to the extent of these costs.

**GROSS, LOCAL AND NET VALUES OF PASTORAL PRODUCTION, 1950-51 AND  
1951-52.  
(£'000.)**

State.	Gross Production Valued at Principal Markets.	Marketing Costs.	Gross Production Valued at Farm.	Farm Costs.		Net Value of Production. (a)
				Seed used, and Fodder for Farm Stock.	Value of other Materials used in Process of Production.	
1950-51.						
New South Wales ..	315,549	10,315	305,234	1,796	(b) 796	302,642
Victoria ..	171,834	6,375	165,459	845	2,205	162,409
Queensland ..	117,216	10,930	106,286	4,120	1,640	100,526
South Australia ..	69,947	2,753	67,194	725	672	65,797
Western Aust. ..	65,961	2,341	63,620	797	1,360	61,463
Tasmania ..	14,743	511	14,232	2,096	(b) 164	11,972
Total ..	755,250	33,225	722,025	10,379	6,837	704,809

1951-52.						
State.	Gross Production Valued at Principal Markets.	Marketing Costs.	Gross Production Valued at Farm.	Farm Costs.		Net Value of Production. (a)
				Seed used, and Fodder for Farm Stock.	Value of other Materials used in Process of Production.	
New South Wales ..	168,479	9,832	158,647	2,854	(b) 1,407	154,386
Victoria ..	110,830	6,960	103,870	1,118	2,944	99,808
Queensland ..	78,230	7,300	70,930	2,750	1,100	67,080
South Australia ..	43,017	2,667	40,350	876	509	38,965
Western Aust. ..	39,977	2,242	37,735	1,273	2,020	34,442
Tasmania ..	9,287	525	8,762	2,722	(b) 228	5,812
Total ..	(c)449,820	29,526	420,294	11,593	8,208	400,493

(a) No deduction has been made for depreciation and maintenance. (b) No allowances made for costs of power, power kerosene, petrol and other oils. (c) Excludes £23,662,342 comprising an interim distribution of profits under the Wool Disposals Plan.

(ii) *Net Values, 1934-35 to 1951-52.* The net value of pastoral production by States and the net value per head of population for the years 1947-48 to 1951-52 together with the average for the years 1934-35 to 1938-39 are shown below.

**NET VALUE OF PASTORAL PRODUCTION.**

Year.	N.S.W. (b)	Vic.	Q'land.	S. Aust.	W. Aust.	Tas. (b)	Total.
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NET VALUE.(a)

(£'000.)

Average, 1934-35 to 1938-39 ..	30,592	16,784	13,384	4,583	4,307	1,429	71,079
1947-48 ..	73,757	42,753	39,312	16,930	16,815	4,303	193,870
1948-49 ..	95,640	53,714	43,869	21,456	20,802	5,374	240,855
1949-50 ..	140,027	77,629	57,327	28,558	26,442	7,138	337,121
1950-51 ..	302,642	162,409	100,526	65,797	61,463	11,972	704,809
1951-52 ..	154,386	99,808	67,080	38,965	34,442	5,812	400,493

(a) No deduction has been made for depreciation and maintenance. (b) No allowances made for costs of power, power kerosene, petrol and other oils.

NET VALUE OF PASTORAL PRODUCTION—*continued.*

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
NET VALUE PER HEAD OF POPULATION.(a)							
(£ s. d.)							
Average, 1934-35 to 1938-39	11 8 0	9 1 3	13 11 10	7 15 6	9 9 2	6 2 7	10 8 8
1947-48 ..	24 10 8	20 13 3	35 6 7	25 19 1	33 0 11	16 8 9	25 9 5
1948-49 ..	31 4 3	25 8 4	38 13 3	32 5 2	39 16 9	20 0 8	31 0 2
1949-50 ..	44 2 11	35 15 4	49 5 9	41 11 7	48 8 11	25 14 8	41 17 7
1950-51 ..	92 8 9	72 12 2	84 5 5	92 10 10	107 11 6	41 12 7	85 3 9
1951-52 ..	46 0 1	43 7 4	54 18 8	53 8 6	58 5 3	19 9 4	47 2 7

(a) No deduction has been made for depreciation and maintenance.

7. **Consumption of Meats.**—Particulars of the quantity of meat per head per annum available for civilian consumption in Australia, Canada, the United Kingdom and the United States are given in the following table. Canned and cured meat has been included at its carcass weight equivalent.

The sources of the figures for Canada, the United Kingdom, and the United States of America are *Food Balance Sheets* published by the Food and Agricultural Organization of the United Nations for the years 1949-50 to 1951-52 and *Food Consumption Levels in the United States of America, Canada and the United Kingdom* (Third Report (1946) of a Special Joint Committee set up by the Combined Food Board for the pre-war periods).

The demand for meat during the war years was such as to necessitate the introduction of rationing in order to divert supplies from civilian consumption to the armed services. The rationing of meat (other than bacon and ham, canned meat, sausages and offal) was in operation in Australia from 17th January, 1944 to 21st June, 1948. Details of the ration rates in force over this period are shown in Official Year Book No. 37, p. 858.

QUANTITY OF MEAT (INCLUDING CURED AND CANNED) AND EDIBLE OFFAL AVAILABLE FOR CIVILIAN CONSUMPTION PER HEAD PER ANNUM.

(lb.—in terms of Carcass Weight.)

Country.	Average, Pre-war.	1949-50.	1950-51.	1951-52.
Australia .. .. .	(a) 253.0	232.9	226.6	216.5
Canada .. .. .	(b) 118.4	134.5	131.8	119.9
United Kingdom .. .. .	(c) 131.7	(d)	(d)	(d)
United States of America .. .. .	(b) 134.1	(e) 143.5	(e) 137.7	(e) 140.0

(a) Average for years 1936-37 to 1938-39. (b) Average for years 1935 to 1939. (c) Average for years 1934 to 1938. (d) Comparable figures not yet available. (e) Year ended December following. These figures exclude offal, which in 1948-49 amounted to 10.1 lb. edible weight.

8. **Marketing of Meat.**—(i) *General.* The Meat Export Control Act 1935-1953 was introduced following a decision of a conference of Commonwealth and State Ministers with members of the Commonwealth Meat Advisory Committee, held in October, 1935, to set up a Meat Board with defined statutory powers. The Australian Meat Board, which was appointed under the Act in January, 1936, consisted of eighteen members, representative of producers, processors, exporters and the Commonwealth Government. Provision was made for the appointment from within the Board of an Executive Committee and a Beef Committee. The Act provided for the control of the export of meat by licence. The Board was empowered to regulate shipments of meat and to arrange contracts in respect of freights and insurances; to promote overseas sales by advertising and to foster research into meat problems; and to supervise the issue of export licences. The Board also has power to appoint a London representative.



During the 1939-45 War the control of meat exports was under National Security Regulations which ceased to operate with the expiry of the National Security Act on 31st December, 1946. Control then reverted to the Board, which was reconstituted in August, 1946 by legislation amending the Meat Export Control Act. Membership of the reconstituted Board is on an industry basis in lieu of a State basis and the number of members has been reduced from eighteen to twelve. The powers and functions of the Board were *inter alia* extended to enable it to purchase and sell any meat, meat products or edible offal on behalf of the Commonwealth Government and subject to any direction of the Minister for Commerce and Agriculture.

The Meat Export Charges Act 1935-1946 provides for the imposition of a levy on all meats exported from Australia, the funds from which are used for the purpose of defraying expenses and charges incurred by the Australian Meat Board in the course of its business. The customary provision is made for exemption from the levy when recommended by the Board.

(ii) *War-time Marketing.* Details of arrangements for the marketing of meat during the 1939-45 War are given on page 1107 of Official Year Book No. 36.

(iii) *United Kingdom Long-term Purchase Agreements.* Details of the long-term meat contracts with the United Kingdom Government from the outbreak of the 1939-45 War up to 30th September, 1950, were given on page 903 of Official Year Book No. 38, and page 1107 of Official Year Book No. 36.

After the termination of the long-term contract on 30th September, 1950, annual arrangements were entered into for the sale of Australia's exportable surplus of meat to the United Kingdom up to 30th June, 1952.

In October, 1951, representatives of the United Kingdom and Australian Governments signed the Fifteen-year Meat Agreement in London which covers the period from 1st July, 1952 to 30th September, 1967. The classes of meat included in the Agreement are chilled and frozen beef, frozen veal, frozen mutton and lamb, frozen cattle and sheep sundries and edible offals. The principal objectives of the Agreement are to promote the production of meat in Australia, enabling increased exports to be made to the United Kingdom and providing for a satisfactory market for Australian meat in the United Kingdom for the period of the Agreement.

The first detailed Agreement for beef and veal covers the period of six years ending 30th September, 1958, and for mutton and lamb for three years ending 30th June, 1955. In both cases, 1950-51 prices are the basic level. The prices which were agreed for the meat year 1952-53 represented substantial increases on those previously ruling.

The following table sets out the prices of representative descriptions of Australian beef and lamb which have been sold to the United Kingdom on a Government-to-Government basis since the beginning of the 1939-45 War.

#### CONTRACT PRICES: BEEF AND LAMB SOLD TO UNITED KINGDOM.

Beef.			Lamb.		
Contract approved from—	First Quality Ox Sides.		Contract approved from—	First Quality. (37-42 lb.)	
	Per lb. Sterling.	Per lb. Australian.		Per lb. Sterling.	Per lb. Australian.
	<i>d.</i>	<i>d.</i>		<i>d.</i>	<i>d.</i>
October, 1939..	3.406	4.266	October, 1939 ..	5.438	6.811
„ 1941..	3.781	4.736	„ 1941 ..	5.813	7.281
December, 1943..	3.969	4.971	„ 1944 ..	6.250	7.828
January, 1946..	4.344	5.441	„ 1946 ..	7.790	9.757
October 1946..	4.844	6.067	„ 1948 ..	8.667	10.855
April, 1948..	5.344	6.693	July, 1949 ..	9.688	12.134
October, 1948..	6.063	7.594	„ 1950 ..	10.438	13.074
„ 1949..	7.063	8.846	„ 1951 ..	12.26	15.33
„ 1950..	7.906	9.902	„ 1952 ..	14.30	17.87
„ 1951..	10.00	13.63			
„ 1952..	13.08	16.35			

Provision was also made in the Agreement for reservation of quantities of meat for sale to other markets. This is 3 per cent. of the quantity shipped to the United Kingdom, or such other amount as may be agreed annually between the two Governments. The quantity for 1952-53 was 5,000 tons.

Pig meats were not included in the Agreement, but a two-year arrangement terminating on 30th September, 1954 was negotiated. This arrangement did not limit shipments of pig meats to other markets.

## § 2. Horses.

1. *Distribution throughout Australia.*—The States of New South Wales, Queensland and Victoria together depasture about 80 per cent. of the total number of horses in Australia. In the following table figures are shown for each State and Territory for the years 1948 to 1952 in comparison with the average for the years 1935 to 1939 :—

### HORSES : NUMBER.

('000.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Total.
Average, 1935 to 1939 ..	537	355	444	198	154	31	33	I	1,753
1948 ..	376	221	336	101	75	23	32	I	1,165
1949 ..	358	213	325	94	69	22	33	I	1,115
1950 ..	343	200	317	83	59	21	33	I	1,057
1951 ..	329	187	307	71	55	20	29	I	999
1952 ..	311	169	289	63	53	19	32	I	937

The number of horses in Australia attained its maximum during 1918, when a total of 2,527,149 was recorded. The United States of America made its highest recording in the same year and Canada in 1921. The number in Australia has declined considerably since 1918 owing to the mechanization of transport and farming. During the period 1918 to 1952 the decrease in numbers averaged 47,000 per annum, the rate of decline being 53,000 per annum during the five years ended 1952.

The number of horses in Australia from 1860 onwards may be obtained from the graph on page 809.

The percentages of the number of horses in the several States and Territories of the total for Australia for 1952 were :—New South Wales, 33.1; Victoria, 18.1; Queensland, 30.8; South Australia, 6.7; Western Australia, 5.7; Tasmania, 2.0; Northern Territory, 3.5; and Australian Capital Territory, 0.1 per cent.

2. *Oversea Trade in Horses.*—(i) *Exports.* The export of horses from Australia during the early years of this century was fairly considerable, averaging about 15,000 head per annum between 1901 and 1920, exclusive of those used for war purposes during the 1914-18 War. Since then, exports have gradually declined and averaged only about 4,000 for the five years ended 1938-39 and 950 for the five years ended 1951-52.

(ii) *Imports.* The few horses imported into Australia consist mainly of valuable stud animals from the United Kingdom and racehorses from New Zealand. The average value per head of the horses imported during the five years 1947-48 to 1951-52 was £829. The average number imported per annum during this period was 406 and the average annual value, £336,579.

Details of the quantity and value of imports, exports and net exports of horses are shown in the following table for the years 1947-48 to 1951-52 compared with the average for the five years ended 1938-39.

## HORSES : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
Average, 1934-		£		£		£
35 to 1938-39	321	135,459	4,005	139,012	3,684	3,553
1947-48 ..	341	303,240	920	236,477	579	— 66,763
1948-49 ..	424	361,061	1,018	141,815	594	— 219,246
1949-50 ..	469	352,600	1,219	173,296	750	— 179,304
1950-51 ..	333	305,399	845	152,379	512	— 153,020
1951-52 ..	462	360,596	745	236,832	283	— 123,764

NOTE.—The minus sign (—) signifies net imports.

## § 3. Cattle.

1. **Purposes for which Raised.**—Cattle-raising is carried out in all the States, the main object in certain districts being the production of stock suitable for slaughtering purposes, and in others the raising of profitable dairy herds. The great impetus which the development of the export trade in Australian butter gave to the dairying industry led to a considerable increase in numbers and an improvement in quality of the dairy herds in Victoria, New South Wales, and southern Queensland in particular, the portion of Australia in the temperate zone being the best adapted to this industry. On the other hand, beef-producing cattle are mainly raised in the tropical districts, i.e., in the northern parts of Queensland, in the Northern Territory, and in the Kimberley district in the north of Western Australia.

2. **Distribution throughout Australia.**—Until 1880, New South Wales was the principal cattle-raising State, but in that year Queensland occupied the leading position, which it has since maintained. There was a very rapid increase in the number of cattle in Australia up to the year 1894, when 12,312,000 head were depastured. From 1895 onwards, however, the effects of droughts and the ravages of tick fever reduced the number to 7,063,000 in 1902. Following the disastrous drought which terminated in the latter year the herds were gradually built up, and, despite recurring droughts, they continued to increase until the maximum number of 14,441,000 cattle was attained in 1921. After that year the number dropped continuously till 1929, largely owing to the decline in the overseas demand for frozen beef. With the expansion of dairying it recovered to 14,049,000 in 1934, but from that year declined continuously to 1939 when it stood at 12,862,000. The upward movement which commenced in 1940 was continued until 1944, the total number of cattle (14,184,000) in the latter year being at its highest level since 1923. Drought conditions and other factors during 1944-45 and 1945-46 caused a decline in numbers to 14,133,000 in 1945, to 13,878,000 in 1946 and to 13,427,000 in 1947. This was followed by an upward movement in numbers to 15,229,000 in 1951, the highest number yet recorded. In 1952 numbers declined to 14,893,000, the reduction being confined mainly to dairy cattle in the Eastern States. A graph showing the number of cattle in Australia from 1860 appears on page 809.

The numbers of cattle (beef and dairy) in the several States and Territories in each year 1948 to 1952 compared with the average for the years 1935 to 1939 are shown below.

## CATTLE : NUMBER.

('000.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Total.
Average, 1935 to 1939 ..	3,198	1,952	6,018	331	819	262	889	9	13,478
1948 ..	3,130	2,174	5,976	445	816	244	991	9	13,785
1949 ..	3,253	2,225	5,992	461	864	266	1,053	10	14,124
1950 ..	3,440	2,231	6,305	464	865	275	1,049	11	14,640
1951 ..	3,703	2,216	6,734	433	841	272	1,019	11	15,229
1952 ..	3,621	2,215	6,434	437	852	266	1,058	10	14,893

Although the proportion is not as high as it has been in the past, Queensland was carrying 43.2 per cent. of the cattle in Australia in 1952. The percentage in each State and Territory during that year was:—New South Wales, 24.3; Victoria, 14.9; Queensland, 43.2; South Australia, 2.9; Western Australia, 5.7; Tasmania, 1.8; Northern Territory, 7.1; Australian Capital Territory, 0.1.

Graphs indicating the distribution of beef and dairy cattle separately in Australia at 31st March, 1948 are shown on pages 905-6 of Official Year Book No. 39. A graph showing the distribution in 1924-25 of the total cattle in Australia appeared on page 660 of Official Year Book No. 22, while in Official Year Book No. 34 similar graphs showing for 1938-39 the distribution of total cattle and of dairy cows may be found on pp. 453-4.

3. **Classification of Cattle According to Purpose.**—Of the total number of cattle in Australia in 1952, 10,327,000 or 69.3 per cent. were classified as beef cattle. The numbers classified as beef cattle in the several States and Territories during the years 1943 and 1948 to 1952 were as follows:—

**BEEF CATTLE : NUMBER.**  
(‘000.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Total.
1943 .. ..	1,676	577	4,893	171	605	102	978	5	9,007
1948 .. ..	1,890	698	4,593	170	590	100	991	6	9,038
1949 .. ..	1,994	711	4,569	182	634	111	1,053	7	9,261
1950 .. ..	2,167	706	4,872	193	638	117	1,049	8	9,759
1951 .. ..	2,457	727	5,293	189	618	115	1,019	8	10,426
1952 .. ..	2,416	776	5,138	201	621	110	1,058	7	10,327

A classification of numbers on this basis is not available prior to 1943.

Particulars relating to dairy cattle numbers will be found in Chapter XXI.—Farm-yard, Dairy and Bee Products.

4. **Size Classifications of Cattle Herds.**—A special series of tabulations relating to rural holdings in Australia was compiled for 1949-50 and published in Primary Industries Bulletin No. 44. The tables relating to beef and dairy cattle show classifications according to size of herd and area of the holdings.

5. **Comparison with other Countries.**—The following table shows the number of cattle in Australia and in some of the principal cattle-raising countries of the world for the years 1936-40 and at the latest available date. The figures, which have been compiled by the Food and Agriculture Organization of the United Nations, relate generally to areas embraced by post-war boundaries, but do not cover identical areas for the two periods in all cases.

**CATTLE : NUMBER IN VARIOUS COUNTRIES.**  
(‘000.)

Country.	Average, 1936-40. (a)	Year and Month.	Number.
India .. ..	(b) 137,974	1952 (May) ..	150,298
United States of America .. ..	66,684	1952 (January) ..	88,062
Brazil .. ..	40,807	1950 (December) ..	(c) 52,655
U.S.S.R. (Russia) .. ..	48,500	1946 .. ..	(c) 41,500
Argentina .. ..	33,762	1947 (June) ..	41,268
Pakistan .. ..	(b) 24,444	1949-50 .. ..	24,296
Ethiopia .. ..	(e) 18,000	1951-52 .. ..	19,000
China, Proper .. ..	(d) 23,081	1948 (April) ..	18,200
France .. ..	15,504	1951 (October) ..	16,235
Colombia .. ..	8,010	1950 (December) ..	15,512
<b>Australia</b> .. ..	<b>13,285</b>	<b>1952 (March) ..</b>	<b>14,893</b>
Mexico .. ..	11,722	1949 (December) ..	(c) 14,500
Germany .. ..	19,881	1949 (December) ..	14,202
Union of South Africa .. ..	11,636	1950 (August) ..	11,513
Turkey .. ..	7,177	1951 (December) ..	10,396

(a) Average for two to four years in some cases.  
(e) 1938.

(b) 1939.

(c) Unofficial estimate.

(d) 1937.

6. **Imports and Exports of Cattle.**—The products of the cattle-raising industry figure largely in the export trade of Australia, although the export of live cattle has never been large. The number of cattle imported is also small, consisting, as in the case of horses, mainly of valuable animals for stud purposes. Details for the years 1947-48 to 1951-52 compared with the average for the years 1934-35 to 1938-39 are as follows :—

**CATTLE : IMPORTS AND EXPORTS, AUSTRALIA.**

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
Average, 1934-35 to 1938-39	295	£ 22,304	308	£ 5,977	13	— 16,327
1947-48 ..	103	29,934	4,359	74,141	4,256	— 44,207
1948-49 ..	147	75,553	1,087	47,708	940	— 27,845
1949-50 ..	160	88,831	485	40,156	325	— 48,675
1950-51 ..	201	122,936	876	70,005	675	— 52,931
1951-52 ..	318	214,441	681	58,046	363	— 156,395

NOTE.—The minus sign (—) signifies net imports.

The average value per head of the cattle imported during the last five years was £572, while the average value per head of the cattle exported during the same period was £39.

7. **Cattle Slaughtered.**—The numbers of cattle slaughtered during each of the years ended June, 1948 to 1952 compared with the average for the years 1934-35 to 1938-39 are shown in the following table :—

**CATTLE (INCLUDING CALVES) SLAUGHTERED.**  
(’000.)

Year ended June—	Slaughtering passed for Human Consumption.									Total Slaughtering including Boiled Down.
	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Total.	
Average, 1935 to 1939 ..	1,112	812	1,046	(b) 156	(b) 124	45	(b) 4	2	3,301	3,331
1948 ..	1,076	748	1,188	165	145	38	15	3	3,378	3,411
1949 ..	1,136	850	1,089	195	159	45	15	5	3,494	3,523
1950 ..	1,156	893	1,102	213	166	58	14	6	3,608	3,648
1951 ..	1,160	915	1,181	226	160	70	15	8	3,735	3,794
1952 ..	1,247	966	1,029	197	152	71	15	9	3,686	3,738

(a) Year ended March. (b) Year ended previous December.

8. **Production of Beef and Veal.**—Details of the production of beef and veal in each State and Territory are shown in the following table for the years indicated :—

**PRODUCTION OF BEEF AND VEAL (BONE-IN WEIGHT) : AUSTRALIA.**  
(’000 tons.)

Year ended June—	N.S.W.	Victoria.	Q’land.	S. Aust.	W. Aust.	Tas.	N. Terr.	A.C.T.	Total.
Average, 1935 to 1939	(a) 173	115	181	(b) 25	(b) 27	9	(b) 1	..	531
1948	162	105	226	27	30	8	3	1	562
1949	180	118	202	30	33	10	3	1	577
1950	186	125	212	33	35	12	3	1	607
1951	193	137	232	36	34	14	4	2	652
1952	184	138	178	31	32	14	3	2	582

(a) Year ended March. (b) Year ended previous December.

9. **Consumption of Beef and Veal.**—For the three pre-war years 1936–37 to 1938–39 the average annual production of beef and veal in Australia was 569,000 tons of which 127,000 tons were exported, leaving a balance of 442,000 tons (or the carcass equivalent of 144 lb. per head per annum) available for consumption as fresh and canned meat.

Civilian consumption during the war and immediate post-war years was considerably lower than previously (due mainly to the effects of rationing), but, following the return to more normal conditions, rose to 131.6 lb. per head in 1950–51. In 1951–52, consumption fell again to 121.8 lb. per head, principally as a result of drought conditions prevailing in Queensland which restricted available supplies.

In the following table details of the production and disposal of beef and veal are shown for the periods stated.

**PRODUCTION AND DISPOSAL OF BEEF AND VEAL (BONE-IN WEIGHT) :  
AUSTRALIA.  
(’000 tons.)**

Year.	Changes in Stock.	Production.	Exports.	For Canning.	Consumption in Australia as Human Food.	
					Total.	Per Head per Annum.
Average, 1936–37 to 1938–39 .. ..	.. ..	569	127	(a)	442	lb. 144.1
1949–50 .. ..	— 9	607	94	75	447	124.3
1950–51 .. ..	+ 10	651	81	72	488	131.6
1951–52 .. ..	— 4	582	52	70	464	121.8

(a) Included with exports.

10. **Exports of Frozen Beef and Veal.**—The export of frozen meat from Australia dates from about 1881, and since that year the trade has grown considerably. The quantity of frozen beef and veal exported in 1938–39 amounted to 271,964,000 lb., valued at £4,323,680, but there was a decline during the war years owing to reduced production and the diversion of supplies to meet the requirements of the Australian and Allied Services based on Australia. By 1947–48 the quantity exported had risen again to 237,150,000 lb., valued at £6,192,615, but in subsequent years it declined once more and in 1951–52 amounted to only 95,876,000 lb., valued at £5,229,844. The quantities and values of frozen beef and veal exported during the five pre-war years ended 1938–39 and in each year 1946–47 to 1951–52 are shown in the following table:—

**EXPORTS OF FROZEN BEEF AND VEAL : AUSTRALIA.**

Year.	Exports of Frozen and Chilled Beef.		Exports of Frozen Veal.	
	Quantity.	Value.	Quantity.	Value.
	’000 lb.	£	’000 lb.	£
Average, 1934–35 to 1938–39	231,355	3,188,491	10,353	165,205
1946–47 .. ..	178,298	4,521,746	2,040	60,127
1947–48 .. ..	234,593	6,110,568	2,557	82,047
1948–49 .. ..	189,007	5,715,934	2,646	99,532
1949–50 .. ..	178,128	6,522,476	4,233	182,175
1950–51 .. ..	154,832	6,440,395	3,478	207,459
1951–52 .. ..	92,926	5,008,788	2,950	221,056

Prior to the war the largest purchaser of Australian beef and veal was the United Kingdom, which during 1938–39 took about 90.2 per cent. of the total shipments. However, at the request of the United Kingdom Government there was a considerable diversion from that country to nearer British possessions during the war years. In 1951–52 shipments to the United Kingdom were valued at £2,031,040 or 38.8 per cent. of the total value of beef and veal exports, while exports to other British countries amounted to £2,483,284, equivalent to 47.4 per cent. of the total.

In view of the preference overseas for chilled beef, the Australian beef industry was at a serious disadvantage until investigations proved that beef could be successfully transported from Australia to United Kingdom in a chilled condition. Trial shipments of 254,000 lb. in 1932-33 and 1,515,000 lb. in 1933-34 were made, and the exports in subsequent years increased to a maximum of 58,963,000 lb. in 1938-39. However, the advent of war seriously affected the export trade in chilled beef, which declined to a negligible amount after 1939-40.

#### § 4. Sheep.

1. **Initiation of the Pastoral Industry.**—Fortunately for Australia, the suitability of its climate and general conditions for the production of a high class of wool were, at an early date in the history of its settlement, surmised and tested by Captain Macarthur, one of the pioneer sheep-breeders of New South Wales. To the energy of this enterprising pastoralist is due in large measure the rapid and extremely satisfactory development of Australia as a producer of fine wool, and while it would appear that the introduction of the merino sheep into Australia was not due to Macarthur, a great deal of the credit for having successfully established the pastoral industry in Australia must certainly be his.

2. **Movement in Sheep Numbers in Australia.**—Fluctuations in the number of sheep recorded in Australia for each year from 1860 onwards may be seen from the graph on page 809. Up to 1945 there were five marked periods of decline, but the losses were made up rapidly. In each of the years 1925 to 1945 the sheep flocks exceeded 100 million, reaching 125,189,129 in 1942, the greatest number recorded in Australia. At no previous period have such large numbers been depastured continuously, and the development took place despite an increase in the annual slaughter for the meat trade over this period, from about 10 million to 25 million.

However, a sharp decline to 105 million occurred in 1945, followed by a further reduction to 96.4 million in 1946 and to 95.7 million in 1947. This represented a loss from all causes other than slaughtering of about 37 million sheep (30 per cent.) since 1944 and was largely attributable to the severe drought conditions experienced during 1944, 1945 and 1946. The passing of the drought and consequent re-stocking resulted in a rise in sheep numbers to 108.7 million in 1949, 112.9 million in 1950, 115.6 million in 1951 and 117.6 million in 1952.

The following table shows the approximate movement in sheep numbers in Australia in each season 1938-39 to 1951-52:—

**SHEEP AND LAMBS : ANALYSIS OF MOVEMENT IN NUMBERS, AUSTRALIA.**  
(‘000.)

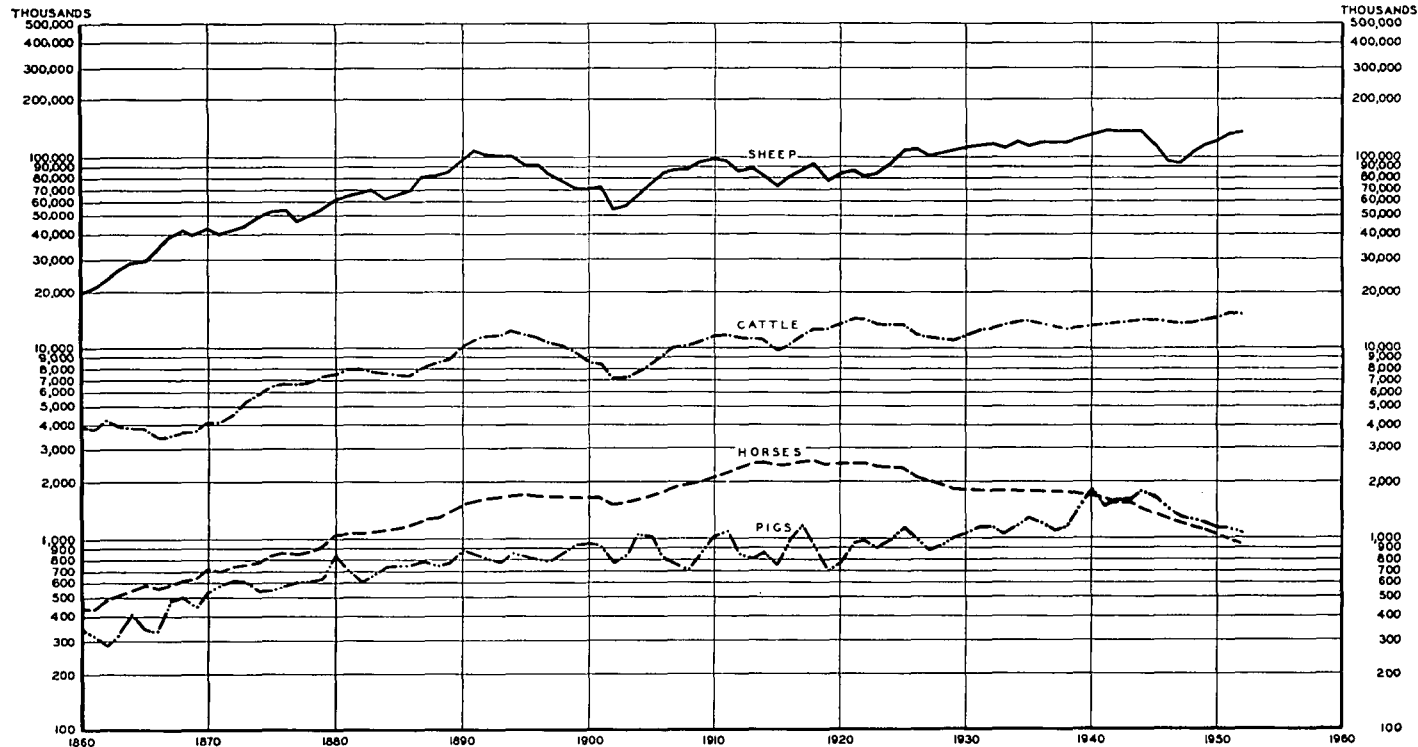
Season.	Lambs Marked.	Excess of Exports.	Sheep and Lambs Slaughtered.	Estimated Number of Deaths from Disease, Drought, etc.(a)	Number at 31st March.	Annual Net Increase (+) or Decrease (-)
1938-39 ..	25,469	67	18,900	8,817	(b) 111,058	- 2,315
1939-40 ..	33,300	72	19,006	5,975	(b) 119,305	+ 8,247
1940-41 ..	32,238	86	21,822	6,941	(b) 122,694	+ 3,389
1941-42 ..	32,246	65	22,258	7,428	(b) 125,189	+ 2,495
1942-43 ..	32,268	5	25,573	7,264	124,615	- 574
1943-44 ..	33,366	7	26,585	8,215	123,174	- 1,441
1944-45 ..	25,635	3	25,632	17,803	105,371	- 17,803
1945-46 ..	20,683	22	17,682	11,954	96,396	- 8,975
1946-47 ..	25,186	80	18,362	7,417	95,723	- 673
1947-48 ..	30,149	79	17,059	6,175	102,559	+ 6,836
1948-49 ..	30,642	84	17,477	6,905	108,735	+ 6,176
1949-50 ..	30,382	96	20,929	5,201	112,891	+ 4,156
1950-51 ..	29,816	84	16,223	10,804	115,596	+ 2,705
1951-52 ..	27,183	79	15,426	9,627	117,647	+ 2,051

(a) Balance figure.

(b) As at commencement of last year shown.

# LIVESTOCK : AUSTRALIA, 1860 to 1952

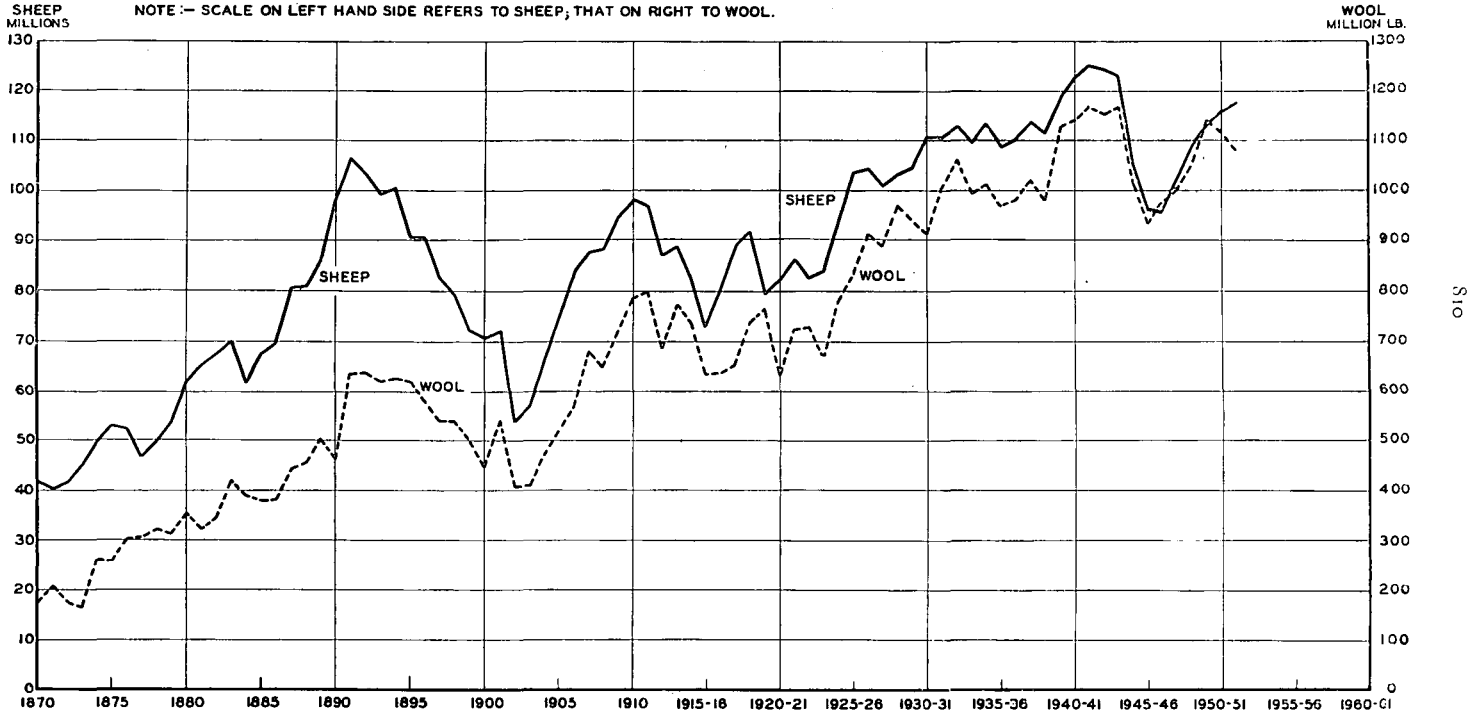
## RATIO GRAPH



- NOTE:- VERTICAL SCALE IS LOGARITHMIC, AND THE CURVES RISE AND FALL ACCORDING TO RATE OF INCREASE OR DECREASE, ACTUAL NUMBERS ARE INDICATED BY SCALE.



# SHEEP NUMBERS AND WOOL PRODUCTION: AUSTRALIA 1870 to 1951-52



3. **Distribution throughout Australia.**—With the exception of a short period in the early sixties, when the flocks of Victoria outnumbered those of New South Wales, the latter State has occupied the premier position in sheep-raising, depasturing about one half of the sheep of Australia.

A graph indicating the distribution of sheep in Australia at 31st March, 1948, is shown on page 907 of Official Year Book No. 39. Similar graphs for the years 1938–39 and 1924–25 were published in Official Year Books No. 34, page 452 and No. 22, page 659, respectively.

The numbers of sheep in the several States and Territories for each year 1948 to 1952 compared with the average for the years 1935 to 1939 are shown in the following table:—

**SHEEP : NUMBER.**  
( '000.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Total.
Average, 1935 to 1939 ..	51,774	17,555	21,061	8,515	9,839	2,312	23	240	111,319
1948 ..	46,065	17,931	16,743	9,055	10,444	2,087	19	215	102,559
1949 ..	50,404	19,170	16,499	9,366	10,872	2,160	26	238	108,735
1950 ..	53,298	19,161	17,382	9,477	10,923	2,170	26	254	112,891
1951 ..	54,111	20,012	17,478	10,166	11,362	2,181	29	257	115,596
1952 ..	53,676	21,537	16,164	11,470	12,188	2,338	31	243	117,647

Except when affected by drought, the relative number of sheep depastured in the different States has remained fairly constant.

The percentage distribution in 1952 was:—New South Wales, 45.6; Victoria, 18.3; Queensland, 13.7; South Australia, 9.8; Western Australia, 10.4; Tasmania, 2.0; Northern Territory, 0.0; Australian Capital Territory, 0.2.

4. **Classification of Sheep According to Age, Sex and Breed.**—In the following table numbers of sheep in Australia are classified according to age and sex at 31st March of the years 1943 and 1949 to 1952. Data in this form are not available prior to 1943.

**SHEEP : AGE AND SEX, AUSTRALIA.**  
( '000.)

Description.	31st March—				
	1943.	1949.	1950.	1951.	1952.
Rams, 1 year and over ..	1,651	1,443	1,497	1,473	1,507
Breeding ewes (including ewes intended for mating)	56,674	50,855	52,122	52,794	52,954
Other ewes, 1 year and over	9,636	6,796	6,982	6,760	7,451
Wethers, 1 year and over ..	31,986	26,199	29,251	31,516	34,032
Lambs and hoggets, under 1 year ..	24,667	23,442	23,039	23,053	21,703
Total, Sheep and lambs	124,614	108,735	112,891	115,596	117,647

Particulars relating to the principal breeds of sheep were collected uniformly for all States and the Australian Capital Territory at 31st March, 1950 and are shown in the following table. Later details are not available for all States:—

**SHEEP : PRINCIPAL BREEDS, 31st MARCH, 1950.**  
( '000.)

Breed.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T. (a)	A.C.T.	Australia.
Merino ..	40,017.8	6,370.4	17,326.5	7,717.9	9,666.6	284.6	25.4	224.9	82,134.1
Other recognized breeds	3,376.6	4,451.7	71.4	692.7	496.6	875.9	0.1	12.5	9,977.5
Merino come-backs(b)	3,441.7	2,080.3	54.6	167.4	139.9	326.8	0.1	7.5	6,218.3
Crossbreeds(c)	6,461.9	5,758.6	129.6	899.0	620.1	683.0	0.2	8.6	14,561.0
Total ..	53,298.0	19,161.0	17,582.1	9,477.0	10,923.2	2,170.3	25.8	253.5	112,890.9

(a) As at 31st December, 1949. Distribution between categories has been estimated. (b) Merino comeback is the progeny of a crossbred merino ewe and a merino ram, i.e., finer than half-bred. (c) Half-bred and coarser.

5. **Numbers of Sheep on Rural Holdings.**—A special series of tabulations relating to rural holdings in Australia was compiled for 1949-50 and published in *Primary Industries Bulletin* No. 44. The tables relating to sheep farming show classifications according to areas of the holdings on which the sheep were carried.

6. **Comparison with other Countries.**—As regards the size of its flocks and the quantity and quality of wool produced, Australia has long occupied a leading position amongst the sheep-raising countries of the world. In 1951-52, Australian flocks numbered 118 million sheep, compared with the estimate of 153 million for the U.S.S.R. (Russia), China and Eastern Europe, with about 48 million in Argentina and about 46 million in India and Pakistan together.

The following table shows the number of sheep in Australia in relation to the numbers in some of the principal sheep-raising countries of the world for the last available pre-war year and at the latest date of enumeration for which figures are published. The figures have been compiled by the Commonwealth Economic Committee and the International Wool Textile Organization, who have estimated the world sheep numbers in 1951-52 at 769 million.

**SHEEP : NUMBER IN VARIOUS COUNTRIES.**

( '000,000.)

Country.	Year.		
	1938-39.	1950-51.	1951-52.(a)
U.S.S.R. (Russia), China, Eastern Europe(b) ..	(c) 134.0	145.0	153.0
<b>Australia</b> .. .. .	<b>111.1</b>	<b>115.6</b>	<b>117.6</b>
Argentina .. .. .	45.9	(b) 49.0	(b) 48.0
India and Pakistan .. .. .	44.0	(b) 44.0	46.0
New Zealand .. .. .	31.9	34.8	35.3
Union of South Africa .. .. .	39.0	31.4	34.8
United States of America .. .. .	51.3	30.6	32.1
Turkey .. .. .	23.1	23.1	25.2
Uruguay .. .. .	(b) 18.0	23.4	(b) 24.0
Spain .. .. .	(b) 24.0	21.0	(b) 21.0
United Kingdom .. .. .	26.8	20.4	20.0

(a) Provisional.

(b) Unofficial estimate.

(c) Excluding Eastern Germany.

7. **Oversea Imports and Exports of Sheep.**—As in the case of cattle, the oversea exports of live sheep from Australia are of comparatively little importance. During the last five years the principal consignments of ordinary sheep have been made to Malaya (British) from Western Australia. On 27th November, 1929, the export of stud sheep was prohibited, except with the approval of the Minister for Trade and Customs.

Sheep for breeding purposes, however, were being exported in increasing numbers up to the outbreak of war in the Pacific, and shipments in 1939-40 amounted to 23,329 sheep, valued at £79,955, compared with 1,411 valued at £48,415, in 1951-52. The chief countries to which sheep for breeding purposes were consigned in 1939-40 were New Zealand, South Africa, Japan and Korea and, in 1951-52, to New Zealand and United States of America. The ordinary flock sheep exported from Australia were, for the most part, consigned to Malaya. The following table shows the imports and exports of breeding and flock sheep for the years 1947-48 to 1951-52 compared with the average for the years 1934-35 to 1938-39.

## SHEEP : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
Average, 1934-35 to 1938-39	3,795	£ 30,435	65,188	£ 67,368	61,393	£ 36,933
1947-48 ..	702	17,612	79,538	145,418	78,836	127,806
1948-49 ..	303	11,600	84,278	207,342	83,975	195,742
1949-50 ..	260	9,524	96,595	244,676	96,335	235,152
1950-51 ..	103	11,012	83,799	342,932	83,696	331,920
1951-52 ..	300	13,726	79,177	369,207	78,877	355,481

8. Sheep Slaughtered.—The following table shows the numbers of sheep slaughtered in the several States during each of the years ended June, 1948 to 1952 compared with the average for the years ended June, 1935 to 1939 :—

SHEEP (INCLUDING LAMBS) SLAUGHTERED.  
(‘000.)

Year.	Slaughterings Passed for Human Consumptions.									Total Slaughterings including Boiled Down.
	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Total.	
Average, 1934-35 to 1938-39 ..	a 6,474	7,797	1,101	b 1,703	b 1,178	358	(b) ..	25	18,636	18,693
1947-48 ..	5,743	6,242	1,036	1,755	1,442	376	3	46	16,643	16,672
1948-49 ..	6,456	6,692	994	2,208	1,515	420	3	48	18,336	18,384
1949-50 ..	6,787	8,366	959	2,284	1,347	508	3	59	20,313	20,386
1950-51 ..	5,493	5,799	745	1,892	1,230	485	1	51	15,696	15,782
1951-52 ..	5,521	6,082	829	1,680	1,319	482	1	53	15,967	16,019

(a) Average, years ended March.

(b) Average, years ended previous December.

9. Production of Mutton and Lamb.—Details of the production of mutton and lamb in each State and Territory are shown below :—

PRODUCTION OF MUTTON AND LAMB.  
(Tons.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Total.
Average, 1934-35 to 1938-39	103,706	135,149	20,166	29,710	20,476	6,035	1	396	315,639
1947-48 ..	102,818	108,610	18,664	33,289	24,120	6,906	59	814	295,280
1948-49 ..	114,338	114,738	18,440	39,452	24,872	7,574	83	886	320,383
1949-50 ..	119,815	148,234	17,673	39,913	22,446	8,926	57	1,049	358,133
1950-51 ..	92,463	103,052	13,567	34,012	21,550	8,661	27	921	274,253
1951-52 ..	94,076	108,983	14,420	31,222	23,686	8,975	34	960	282,356

10. Consumption of Mutton and Lamb.—For the three pre-war years 1936-37 to 1938-39 the annual production of mutton and lamb averaged 319,000 tons of which 89,000 tons were exported leaving a balance of 230,000 tons (or the carcass equivalent of 74.9 lb. per head per annum) available for consumption.

Civilian consumption of mutton and lamb during the war years rose substantially. This was a direct result of the preference of the Defence Service and export demand for beef and of the system of rationing which was introduced (the coupon rating for mutton and lamb being low compared with beef). Consumption per head fell steeply in 1946-47 and has since been lower than in pre-war years.

In the following table details of the production and disposal of mutton and lamb are shown for the periods stated:—

**PRODUCTION AND DISPOSAL OF MUTTON AND LAMB (BONE-IN WEIGHT) :  
AUSTRALIA.  
( '000 tons.)**

Year.	Changes in Stock.	Pro-duction.	Exports.	For Canning and Dehydra-tion.	Consumption in Aus-tralia as Human Food.	
					Total.	Per Head per Annum.
Average, 1936-37 to 1938-39 .. ..	.. ..	319	89	..	230	lb. 74.9
1947-48 .. ..	- 5	295	55	7	238	69.8
1948-49 .. ..	+ 8	321	52	7	254	73.1
1949-50 .. ..	- 5	358	86	14	263	73.1
1950-51 .. ..	+ 4	277	24	7	242	65.2
1951-52 .. ..	+ 9	282	14	11	248	65.0

II. Exports of Frozen Mutton and Lamb.—The export trade in mutton and lamb preserved by cold process expanded rapidly up to 1913 when 205 million lb. were shipped. Progress was interrupted during the 1914-18 War and, owing probably to high wool prices, the exports of mutton and lamb for a number of years after were considerably less than earlier shipments. Exports commenced to rise again in 1929-30 and from that year onwards they continued to expand almost uninterruptedly until 1942-43, in which year 203,682,000 lb. of mutton and lamb, valued at £5,495,886, were exported. In earlier years shipments consisted mainly of frozen mutton, but in 1923-24 lamb supplanted mutton and the exports of lamb were largely responsible for the increase in total shipments during the ten years to 1942-43. Due to reduced production as a result of drought conditions and the diversion of supplies to meet the requirements of the Australian and Allied Services based in Australia, there was subsequently a marked decline in mutton and lamb exports, which fell to 56,575,000 lb., valued at £1,540,419, in 1945-46. The maximum quantity exported in the post-war years amounted to 193,092,000 lb. (£7,452,675) in 1949-50. In 1950-51 exports fell steeply to 54,108,000 lb. (£2,684,134) and in 1951-52 to 31,153,000 lb. (£1,918,007), the lowest quantity recorded this century with the single exception of the war year 1917-18.

The quantities and values of exports of frozen mutton and lamb in each year 1947-48 to 1951-52 compared with the average for the five years ended 1938-39 are shown in the following table:—

**EXPORTS OF FROZEN MUTTON AND LAMB : AUSTRALIA.**

Year.	Exports of Frozen Mutton.		Exports of Frozen Lamb.		Exports of Frozen Mutton and Lamb.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	'000 lb.	£	'000 lb.	£	'000 lb.	£
Average, 1934-35 to 1938-39 .. ..	40,584	656,194	153,606	4,208,318	194,190	4,864,512
1947-48 .. ..	19,394	447,278	103,089	3,801,417	122,483	4,248,695
1948-49 .. ..	27,509	651,082	87,355	3,571,091	114,864	4,222,173
1949-50 .. ..	69,744	1,694,984	123,348	5,757,691	193,092	7,452,675
1950-51 .. ..	8,424	289,781	45,684	2,394,353	54,108	2,684,134
1951-52 .. ..	5,507	296,645	25,246	1,621,362	31,153	1,918,007

As with beef, the principal customer in this trade is normally the United Kingdom. In 1951-52 exports of mutton and lamb to the United Kingdom were, however, much lower than usual and only amounted to 16.9 per cent. and 44.4 per cent., respectively, of the total quantities exported.

## § 5. Wool.

1. **General.**—Australia is the leading wool-growing country in the world. With less than one-sixth of the world's sheep Australia produces more than one-quarter of the world's wool and of the total fine-quality merino wool, Australia produces about one-half. The bulk of the production is exported, but with the greater activity of Australian woollen mills the quantity used locally is increasing; the amount (greasy basis) so used represented more than 8 per cent. of the total production in 1951-52 compared with 6 per cent. in 1938-39.

The important position held by Australia among the principal sheep and wool producing countries of the world is shown in the following table. Further particulars of wool production in principal countries and of world production of wool by type are included in paragraph 6, World Wool Production.

### SHEEP AND WOOL : PRINCIPAL PRODUCING COUNTRIES, 1951-52.

Country.	No. of Sheep ('000,000).	Wool Production ('000,000 lb. in terms of greasy).
U.S.S.R. (Russia), China, Eastern Europe ..	(a) 153.0	(a) 545
<b>Australia .. .. .</b>	<b>117.6</b>	<b>1,080</b>
Argentina .. .. .	48.0	420
New Zealand .. .. .	35.3	407
United States of America .. .. .	32.1	259
Union of South Africa .. .. .	34.8	249

(a) Unofficial estimate. Source: Commonwealth Economic Committee and International Wool Textile Organization.

2. **Greasy and Scoured Wool.**—Whether the weight of the wool clip should be stated as “in the grease” or as “scoured and washed” is a matter which seriously affects comparisons between the clips of different seasons and of different countries. The quantity of grease and other extraneous matter in a fleece differs, not only between countries, but between districts in the same country. It fluctuates with the vagaries of the season, and with the breed and the condition of the sheep.

A committee of experts in a report to the Central Wool Committee estimated in 1940 that the clean scoured wool content of the total production of Australia averaged between 51 and 53 per cent. of its greasy weight. The Australian Wool Realization Commission assessed the clean scoured yield of the Australian wool clip in the 1951-52 season as 59 per cent. of the greasy weight.

Wool scoured in Australia by wool-scouring works, however, yields only about 46 per cent. because the grade of greasy wool treated locally for export as scoured includes a large proportion of dirty and low-grade wool.

The quantity of scoured and washed and carbonized Australian wool exported during the five years ended 1951-52 was approximately 29.0 per cent. of the total raw wool exports (excluding wool exported on skins) in terms of greasy.

3. **Production.**—The bulk of the Australian wool production is shorn from live sheep; approximately 6 per cent. is obtained by fellmongering and about 5 per cent. is on skins exported. Statistics of wool production are compiled from data received from growers, fellmongers, etc. The following table shows the production for the five years 1947-48 to 1951-52 compared with average production for the five years ended 1938-39. Particulars of the gross value of wool produced are based in the case of shorn wool upon the average price realized for greasy wool sold at auction and in the case of skin wools on prices recorded by fellmongers and skin exporters.

WOOL : TOTAL PRODUCTION (AS IN THE GREASE).

Particulars.	Average, 1934-35 to 1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.
New South Wales ..	480,670	422,260	463,208	515,043	492,130	437,837
Victoria .. ..	165,586	199,531	204,080	225,243	218,266	224,958
Queensland .. ..	164,971	153,564	156,655	162,256	154,667	138,767
South Australia ..	85,120	116,451	114,905	121,248	125,384	135,484
Western Australia(a) ..	81,543	95,410	99,429	98,889	107,341	120,401
Tasmania .. ..	15,504	15,326	16,846	16,958	17,250	20,513
Northern Territory(b) ..	35	305	305	230	235	252
Australian Capital Territory	1,827	1,767	1,977	2,123	2,266	1,765
<b>Australia—</b>						
Shorn (including Crutchings)	888,677	902,589	958,860	1,027,949	1,029,149	998,708
Dead and Fellmongered ..	50,396	48,983	45,478	51,910	45,337	36,124
Exported on Skins ..	56,183	53,042	53,067	62,131	43,953	45,145
<b>Total—Quantity</b> ..	<b>995,256</b>	<b>1,004,614</b>	<b>1,057,405</b>	<b>1,141,990</b>	<b>1,117,539</b>	<b>1,079,977</b>
<b>„ Value</b> ..	<b>£'000.</b> 51,182	<b>£'000.</b> 158,691	<b>£'000.</b> 201,959	<b>£'000.</b> 289,005	<b>£'000.</b> 651,902	<b>£'000.</b> 322,615

(a) For year ended previous December.

(b) Estimated.

Production for 1952-53 was 1,300 million lb., valued at £435,000,000 (subject to revision).

4. **Care Needed in Comparing Clips.**—In comparing successive clips allowance must be made for the circumstance that, owing to climatic or other conditions, the time of shearing may be so far delayed in some areas that one clip may include almost thirteen months' growth of wool, while the succeeding one may include little more than eleven months' growth.

5. Average Weights of Fleeces Shorn.—The average weights of sheep and lamb fleeces shorn in each of the States of Australia and the Australian Capital Territory are shown in the following table for each season 1947-48 to 1951-52 compared with the average for the five seasons 1934-35 to 1938-39 :—

## AVERAGE WEIGHT OF SHEEP AND LAMB FLEECES SHORN.

(lb.)

State.	Average, 1934-35 to 1938-39. (a)	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
SHEEP.						
New South Wales .. ..	8.87	9.88	9.97	9.82	9.68	8.43
Victoria .. ..	7.84	9.83	9.37	9.76	9.92	9.62
Queensland .. ..	7.98	9.46	9.57	9.83	9.10	8.08
South Australia .. ..	10.06	12.88	11.65	12.28	12.52	12.62
Western Australia .. ..	8.53	9.43	9.43	8.97	9.61	10.27
Tasmania .. ..	7.62	8.30	8.03	7.63	7.63	8.88
Australian Capital Territory	8.32	8.74	9.29	9.36	9.19	7.66
Australia(b) .. ..	8.57	9.97	9.85	9.89	9.83	9.18
LAMB.						
New South Wales .. ..	2.75	3.10	3.29	3.20	3.02	2.74
Victoria .. ..	2.14	2.86	2.89	2.72	2.83	2.87
Queensland .. ..	2.89	3.82	4.00	3.80	3.49	3.23
South Australia .. ..	2.57	4.12	3.56	3.52	3.67	3.70
Western Australia .. ..	2.57	2.70	2.68	2.62	2.73	2.90
Tasmania .. ..	1.37	1.98	1.91	1.76	1.91	2.05
Australian Capital Territory	1.11	1.25	1.51	1.17	1.30	1.04
Australia(b) .. ..	2.57	3.16	3.21	3.09	3.05	2.94

(a) Mean of average weights in each season.

(b) Excludes Northern Territory.

6. World Wool Production.—The following table shows particulars of total production of wool, in terms of greasy, in the principal wool-producing countries of the world, together with estimates of world production of merino, crossbred and carpet type wool for each season 1948-49 to 1951-52 compared with the average for the five seasons 1934-38. The data for countries other than Australia have been taken from reports published by the Commonwealth Economic Committee compiled from questionnaires prepared by the Committee and the International Wool Textile Organization.

In 1951-52 Australia produced 27 per cent. of the world total of all types of wool, the share of the British Commonwealth representing approximately 50 per cent. The principal wool producers, other than Australia, are Argentina with 11 per cent. of the world total, New Zealand, 10 per cent., United States of America, 7 per cent., and Union of South Africa, 6 per cent. Production in the Soviet Union, China and Eastern European countries together amounted to 14 per cent. World production of wool (all types) in 1951-52 was about 200 million lb. (5.3 per cent.) greater than the average for 1934-38.

Australia's wool clip is predominantly merino; New Zealand and Argentina produce mainly crossbred wool, while the clip of the U.S.S.R. (Russia) is largely of the carpet type. While world production of merino wool has declined by about 9 per cent. since pre-war, the production of crossbred types has risen by about 20 per cent. Carpet wool production has risen by about 5 per cent.



**WORLD PRODUCTION OF WOOL.**  
(’000,000 lb.—in terms of greasy.)

Country and Type.	Average, 1934-38.	1948-49.	1949-50.	1950-51.	1951-52.(a)
<b>British Commonwealth—</b>					
<b>Australia</b> .. .. .	<b>995</b>	<b>1,057</b>	<b>1,142</b>	<b>1,118</b>	<b>1,080</b>
New Zealand .. .. .	300	367	390	390	407
South Africa (b) .. .. .	261	227	225	240	249
United Kingdom .. .. .	111	81	88	89	93
India and Pakistan .. .. .	96	79	79	79	79
Other Commonwealth .. .. .	45	32	29	32	31
<b>Total</b> .. .. .	<b>1,808</b>	<b>1,843</b>	<b>1,953</b>	<b>1,948</b>	<b>1,939</b>
<b>Foreign—</b>					
Soviet Union, China, Eastern Europe (c) .. .. .	450	467	484	522	545
Argentina .. .. .	376	425	415	430	420
United States of America .. .. .	451	296	264	259	250
Uruguay .. .. .	114	144	163	185	187
Spain .. .. .	60	104	90	85	85
Turkey .. .. .	52	76	71	67	65
Other Foreign .. .. .	477	448	432	463	488
<b>Total</b> .. .. .	<b>1,980</b>	<b>1,960</b>	<b>1,919</b>	<b>2,011</b>	<b>2,049</b>
<b>Grand Total</b> .. .. .	<b>3,788</b>	<b>3,803</b>	<b>3,872</b>	<b>3,959</b>	<b>3,988</b>
<b>Apparel type—</b>					
Merino .. .. .	1,475	1,322	1,367	1,371	1,329
Crossbred .. .. .	1,518	1,675	1,717	1,764	1,821
Carpet type .. .. .	795	806	788	824	838

(a) Provisional. (b) Includes Basutoland and S.W. Africa Territory. (c) Comprising Soviet Union, Poland, Czechoslovakia, Hungary, Roumania, Bulgaria, Eastern Germany, Albania, China and Dependencies, Outer Mongolia and Tibet.

7. **War-time Contracts.**—(i) *Wool.* Details of the contract entered into between the Governments of Australia and the United Kingdom for the purchase of the surplus wool clip of Australia for the duration of the war and one full clip thereafter (1939-40 to 1945-46) will be found in Official Year Book No. 36, page 1106.

(ii) *Sheepskins.* Details of the war-time contract arrangements for the period April, 1940 to June, 1946 between the Australian and United Kingdom Governments for the purchase of Australia's exportable surplus of woolled sheepskins will be found in Official Year Book No. 37, page 875.

8. **Australian Wool Realization Commission.**—(i) *General.* The accumulation of Dominion wool in the hands of the United Kingdom Government as an outcome of the war-time arrangements and the disposal of these stocks concurrently with future clips were matters for discussion by a conference of officials and experts from the United Kingdom, the Commonwealth of Australia, the Dominion of New Zealand, and the Union of South Africa, held in London in April-May, 1945. At this conference it was

decided that the only sound method of handling the gigantic task of disposing of these stocks was by means of a partnership between the countries concerned, under which the old wool would be marketed and the marketing of the current clip supported throughout the period of disposal of stocks. To ensure that stability of wool prices would be achieved, a reserve price appropriate to type and governed by the general trend of prices, and at which the wool would be bought in if commercial bidding did not attain the appropriate level, was agreed upon.

(ii) *U.K.-Dominion Wool Disposals Limited.* The formation, by the four Governments, of a Joint Organization under the title of "U.K.-Dominion Wool Disposals Limited" (commonly referred to as "J.O.") was, therefore, undertaken for the purposes of buying, holding and selling wool on behalf of the United Kingdom and the Dominion Governments concerned. The Australian Wool Realization Commission was the Australian subsidiary of this organization. An account of the detailed provisions of the plan and of the functions and operations of the Australian Wool Realization Commission was given on pages 921-3 of Year Book, No. 38.

Total stocks of Dominion-grown wool in the ownership of the United Kingdom Government transferred to the Joint Organization at 31st July, 1945, were 10,407,000 bales comprising 6,796,000 bales of Australian-grown wool, 1,777,000 bales of New Zealand-grown wool and 1,834,000 bales of South-African-grown wool.

By the end of 1951 the whole of these stocks had been sold as well as the wool bought in by the Joint Organization at the reserve price. U.K.-Dominion Wool Disposals Limited went into voluntary liquidation on 22nd January, 1952.

Details of the stocks of wool held in Australia by the Central Wool Committee and its successor, the Australian Wool Realization Commission at the end of each year (31st July) from 1940 to 1951 will be found in Official Year Book No. 39, page 924.

Distributions to Australian wool growers on account of the profits arising from the transactions of J.O. in Australian wool were £23.6 million in November, 1949, £23.6 million in March, 1952, and £15.1 million in March, 1953.

(iii) *The-Contributory Charge.* Associated legislation, viz., the Wool (Contributory Charge) Act 1945 (subsequently replaced by the Wool (Contributory Charge) Act (No. 1) 1950-1951 and the Wool (Contributory Charge) Act (No. 2) 1950-1951) and the Wool (Contributory Charge) Assessment Act 1945-1951 provided for a contributory charge to be imposed on all wool produced in Australia and sold, purchased or processed by a manufacturer or exported on or after a date fixed by proclamation. The rate of the charge was to be such percentage as was prescribed from time to time of the sale value of the wool, the percentage being such as was necessary to provide the amounts required to meet the share of the industry in the operating expenses of the Joint Organization, the payment of interest on moneys expended by the Commonwealth in purchases of wool in pursuance of the Disposals Plan and unrecouped, and payment into the Wool Use Promotion Fund, as provided under the Wool Use Promotion Act 1945, of amounts equivalent to the amounts which would have been raised by the Wool Tax had it been operating.

As there was a substantial accumulation of funds collected by way of contributory charge and as the operations of J.O. had virtually ceased, the charge in 1951-52 was limited to a rate (one-eighth of one per cent.) which, it was calculated, would equal the amount which would otherwise have been raised by the Wool Tax for payment into the Wool Use Promotion Fund. The passage of amending Wool Tax legislation in June, 1952 made it possible to cease collection of the contributory charge at 30th June, 1952, and the legislation under which it was imposed was repealed. For further particulars of the Wool Contributory Charge and the amounts collected see Chapter XVII.—Public Finance, page 675.

(iv) *The Wool Tax.* As has been noted above, whilst the contributory charge legislation was in force the Wool Tax, which was imposed by the Wool Tax Act 1936 and the Wool Tax Assessment Act 1936, was not collected. When the Wool Tax was first imposed in 1936, the rate of tax was 6d. per bale, 3d. per fadge or 1d. per bag of wool delivered into the store of a wool dealer or wool selling broker or exported. The proceeds were paid into the Wool Publicity and Research Fund administered by the Australian Wool Board.

When collection of the contributory charge ceased, the Wool Tax again became operative (i.e. from 1st July, 1952) but at a rate of 4s. per bale, 2s. per fadge and 8d. per bag of wool. The new rates were provided for in the Wool Tax Act (No. 1) 1952 and the Wool Tax Act (No. 2) 1952, which also provided that in subsequent years the rate could be prescribed, by regulation, between limits of 2s. per bale and 5s. per bale.

(v) *Wool classified according to Quality.* Under control exercised during the 1939-45 War, records were kept of the classification of each lot of wool appraised according to quality, degree of fault and combing or carding type for each of the years 1940-41 to 1945-46. Since the resumption of auctions in 1946-47 this analysis has been continued by the Australian Wool Realization Commission, but the basis of the data has been changed to the catalogues of auction sales, excluding wool to which Joint Organization's reserves were not applicable, and not upon appraisement as previously. The following table provides a detailed analysis of wool appraised or sold at auction according to quality, for the years 1948-49 to 1951-52 compared with 1940-41, according to the records compiled by the Australian Wool Realization Commission. "Quality" ("64's, 60's, 58's," etc.) is a measure of the fineness and texture of wool for spinning purposes. Broadly, it means the maximum number of hanks of yarn, each of 560 yards length, which can be spun from 1lb. of combed wool. For instance, wool of 64's quality is of a fineness and texture which will produce 64 hanks, each of 560 yards, from 1lb. of tops (combed wool) of that particular wool.

#### CLASSIFICATION OF GREASY WOOL APPRAISED OR SOLD AT AUCTION : AUSTRALIA.

(Bales of approximately 300 lb.)

Pre-dominating Quality.	1940-41.(a)		1948-49.(b)		1949-50.(b)		1950-51.(b)		1951-52.(c)	
	Quantity.	Per cent.	Quantity.	Per cent.	Quantity.	Per cent.	Quantity.	Per cent.	Quantity.	Per cent.
70's and finer	200,951	6.2	143,742	4.7	132,931	4.0	124,877	3.7	141,234	4.3
64/70's	679,377	20.8	498,285	16.4	518,492	15.4	523,070	15.6	579,117	17.6
64's	869,117	26.7	558,785	18.4	618,226	18.4	625,749	18.6	536,872	16.4
64/60's	236,138	7.2	265,159	8.7	305,412	9.1	296,029	8.8	229,926	7.0
60/64's	408,534	12.5	422,161	13.9	524,380	15.6	525,883	15.7	458,170	13.9
60's and 60/58's	387,164	11.9	353,373	11.6	415,646	12.3	427,673	12.7	449,716	13.7
Total 60's and finer	2,781,281	85.3	2,241,505	73.7	2,515,087	74.8	2,523,881	75.1	2,395,035	72.9
58's	270,371	8.3	340,606	11.2	369,930	11.0	371,143	11.1	406,786	12.4
56's	135,232	4.2	288,717	9.5	307,876	9.2	300,375	9.0	306,996	9.4
50's	39,619	1.2	115,075	3.8	114,482	3.4	112,295	3.3	119,758	3.7
Below 50's	21,089	0.6	37,583	1.3	31,413	0.9	27,978	0.8	30,460	0.9
Oddments	12,955	0.4	17,577	0.5	21,918	0.7	23,107	0.7	24,643	0.7
Grand total	3,266,517	100.00	3,041,063	100.00	3,360,706	100.00	3,358,779	100.00	3,283,678	100.00

(a) Appraised greasy wool. (b) Greasy wool sold at auction to which Joint Organization's reserves were applicable. (c) All greasy wool sold at auction except "wool re-offered account buyer".

9. *Marketing of Wool.*—(i) *Minimum Reserve Price Plan.* Details of the minimum reserve price plan which was completed by the Governments of Australia, New Zealand, South Africa and the United Kingdom in May, 1951, and which was subsequently rejected at a referendum of wool-growers in Australia will be found in Official Year Book No. 39, page 925.

(ii) *Subsidy on Woollen Goods, 1950-51.* In order to reduce the effects of greatly increased wool prices in the 1950-51 season (see para. 15 following), the Commonwealth Government paid a subsidy on woollen goods manufactured for consumption in Australia

from wool sold during the 1950-51 season. The subsidy was equivalent to about 45d. per lb. of all greasy wool (1950-51 clip) consumed in Australia, the total amount paid being approximately £17,000,000.

10. **Wool Publicity and Research.**—(i) *Wool Use Promotion.* In 1936 the Australian Wool Board was set up to take measures for improving the production and increasing the use of wool. The Board's functions were redefined in the Wool Use Promotion Act 1945 as the promotion, by publicity or other means, of the use of wool throughout the world and the performance of other approved functions for the benefit of the industry.

The Wool Use Promotion Act was further amended in 1953 when the title of the Australian Wool Board was altered to the Australian Wool Bureau and the Bureau's powers were again defined as including measures for improving the production of wool and the encouragement of research in Australia and other countries directed to the promotion of the use of wool.

The Bureau is also authorized to make arrangements with other bodies in Australia and overseas likely to be conducive to promoting the use of wool, improving the production of wool in Australia and encouraging research. By virtue of this power the Bureau is represented on the International Wool Secretariat, which was established in 1937 with head-quarters in London, to promote the use of wool through a broad programme of publicity, education and research. The Wool Boards of New Zealand and South Africa are also associated with the Australian Wool Bureau in the International Wool Secretariat and, through the Secretariat, in partnership with American wool industry representatives, in the Wool Bureau Inc. The Wool Bureau Inc. operates only in North America and has similar functions to the International Wool Secretariat.

The activities of the Australian Wool Bureau are financed from the Wool Use Promotion Fund, into which are paid the proceeds of the Wool Tax.

(ii) *Research.* Until 1945 the Australian Wool Board was responsible for the supervision of economic and scientific research but in that year the Commonwealth Scientific and Industrial Research Organization was made responsible for scientific, technical and biological research into sheep raising and wool production, as well as wool textile research. Economic wool research is the responsibility of the Bureau of Agricultural Economics, a division of the Commonwealth Department of Commerce and Agriculture. The economic research work falls into two main categories, viz., farm production economics dealing with economics of wool growing and sheep-station management generally, and commodity research dealing with the economic aspects of the wool industry in Australia and of wool as a commodity in world trade.

Finance for research is provided from a Wool Research Trust Account into which, since 1945, has been paid annually from the Commonwealth Consolidated Revenue a sum equal to the amount which is raised by the wool tax or its equivalent. In 1952-53 the Commonwealth's contribution to the Wool Research Trust Account was set at 2s. per bale, 1s. per fadge and 4d. per bag of wool on which wool tax was paid—i.e. one-half of the amount raised under the wool tax at its new rate. In addition, expenditure on items of a capital nature for the research programme may be met from the Wool Industry Fund which was constituted as a Trust Account from various moneys accumulated by the Central Wool Committee in war-time.

Ample opportunity is afforded for co-operation, in these research activities, with State Departments of Agriculture and other organizations.

11. **Consumption of Wool.**—(i) *Consumption of Raw Wool.* Statistics of raw wool consumption published in recent years for the purposes of broad international comparisons are based on the quantities of scoured or carbonized wool used on the woollen and worsted systems (mill consumption) plus quantities used in such processes as felting. Consumption estimates compiled on this basis have obvious defects as they disregard oversea trade in semi-processed wool (e.g. tops and yarn) as well as woollen goods. They are, however, comparatively simple to calculate and are useful in providing an approximate indication of trends in wool consumption. Estimates of raw wool consumption on the woollen and worsted systems and by felt manufacturers in Australia are shown below for the years 1938-39 and 1947-48 to 1951-52.

**ESTIMATED CONSUMPTION OF RAW WOOL IN AUSTRALIA.**  
( '000 lb.)

Year.	Greasy Basis.			Clean Basis.		
	Used on woollen and worsted systems.	Used for felt manufacture (including Hats).	Total.	Used on woollen and worsted systems.	Used for felt manufacture (including Hats).	Total.
1938-39 ..	77,947	2,248	80,195	39,599	1,068	40,667
1947-48 ..	121,613	13,376	134,989	67,170	6,354	73,524
1948-49 ..	109,430	13,382	122,812	60,794	6,356	67,150
1949-50 ..	97,281	9,356	106,637	54,046	4,444	58,490
1950-51 ..	90,801	8,700	99,501	51,307	4,133	55,530
1951-52 ..	72,868	5,548	78,416	42,731	2,635	45,366

(ii) *Consumption of Locally Processed Wool.* As considerable quantities of tops, noils and yarn are exported from Australia, the series on raw wool consumption shown above is over-stated to this extent. The series entitled "Consumption of Locally Processed Wool" published in previous issues of the Year Book provides a more reliable indication of wool consumption in Australia, as allowance has been made for exports of wool in semi-processed form. The series has recently been revised to some extent in respect of methods of calculation (including conversion factors used) and is shown below on the revised basis for the years 1938-39 and 1947-48 to 1951-52. Briefly the series measures consumption of wool in terms of yarn used in Australian mills and other factories to produce woollen cloth and other woollen goods, yarn used for hand knitting purposes (since 1949-50) and scoured wool used for felt manufacture. No allowance has been made for oversea trade in woollen piece goods, clothing, etc., because of the obvious difficulties of accurately estimating the wool content of these products.

**ESTIMATED CONSUMPTION OF LOCALLY PROCESSED WOOL IN AUSTRALIA.**  
( '000 lb.)

Year.	Greasy Basis.				Clean Basis.			
	Worsted Yarn Used. (a)	Woollen Yarn Used.	Scoured Wool used for Felt Manufacture (including Hats).	Total.	Worsted Yarn Used. (a)	Woollen Yarn Used.	Scoured Wool used for Felt Manufacture (including Hats).	Total.
1938-39 ..	31,568	21,393	2,248	55,209	16,353	11,130	1,068	28,551
1947-48 ..	44,492	40,933	13,376	98,801	24,100	23,356	6,354	53,810
1948-49 ..	48,461	38,642	13,382	100,485	26,752	22,384	6,356	55,492
1949-50 ..	53,821	37,724	9,356	100,901	29,730	21,557	4,444	55,731
1950-51 ..	47,215	34,069	8,700	89,984	26,050	19,818	4,133	50,001
1951-52 ..	36,332	28,674	5,548	70,554	20,657	17,243	2,635	40,535

(a) Includes hand knitting yarns used from 1949-50.

12. *Exports of Wool.*—(i) *Greasy—Quantities.* Prior to the 1939-45 War, Australian greasy wool exported overseas was sent principally to the United Kingdom and other European countries. In 1938-39, 41.9 per cent. of total shipments were sent to the United Kingdom, other important consignees being France, 20.4 per cent., Belgium, 13.1 per cent., and Japan, 9.1 per cent. During the war, exports to the United Kingdom declined and shipments to the European continent and to Japan virtually ceased, while the quantity shipped to the United States of America showed great expansion. Of the total quantity of greasy wool exported overseas during the five years ended 1951-52, 13.0 per cent. was sent to the United States of America and 33.6 per cent. to the United Kingdom. Of the total shipments in 1951-52, 29.0 per cent. went to the United Kingdom, 16.3 per cent. to France, 15.7 per cent. to the United States of America, and 11.7 per cent. to Japan. The following table shows the quantities of greasy wool exported, and the principal countries of recorded destination.

EXPORTS OF GREASY WOOL (AUSTRALIAN PRODUCE).  
(‘000 lb.)

Country to which Exported.	Average, 1934-35 to 1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
United Kingdom ..	288,436	277,401	355,403	379,804	274,442	238,748
Other British Countries ..	2,158	8,275	6,848	7,652	8,773	4,589
Belgium ..	107,928	106,419	94,944	120,913	93,147	58,936
France ..	100,476	155,548	195,855	142,528	131,117	134,199
Germany ..	36,955	18,769	16,801	53,338	37,321	25,437
Italy ..	21,748	38,066	104,252	66,632	63,339	84,212
Japan ..	131,302	1,834	22,561	55,392	69,383	96,002
Netherlands ..	12,666	8,052	8,974	9,969	5,136	2,628
Poland ..	12,396	5,196	29,255	36,812	22,566	10,579
United States of America ..	25,739	118,869	70,338	116,743	154,203	129,691
Other Foreign Countries ..	23,076	35,794	76,805	67,870	48,044	38,942
Total ..	762,880	774,223	982,036	1,057,653	907,431	823,963

(ii) *Scoured and Washed and Carbonized—Quantities.* The exports of “scoured and washed” wool, whether carbonized or not, are shown below according to principal countries of destination for selected years.

EXPORTS OF WOOL—SCOURED AND WASHED AND CARBONIZED (AUSTRALIAN PRODUCE).

(‘000 lb. actual weight.)

Country to which Exported.	Average, 1934-35 to 1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
United Kingdom ..	32,806	71,395	55,088	66,537	42,365	19,977
Canada ..	2,394	10,201	10,076	10,545	7,648	4,572
Other British Countries ..	935	4,398	3,869	1,133	1,472	886
Belgium ..	8,226	13,065	7,465	9,695	5,057	4,651
France ..	9,301	17,682	25,328	11,639	6,974	7,218
Germany ..	3,007	762	882	5,450	3,118	3,692
Italy ..	360	4,567	10,523	6,010	6,081	6,821
Japan ..	724	..	98	934	7,186	1,085
Poland ..	1,002	5	160	196	..	..
United States of America ..	668	5,046	4,867	11,630	21,793	23,215
Other Foreign Countries ..	4,752	19,355	20,365	22,515	13,281	10,155
Total ..	64,175	146,386	138,721	146,325	114,975	82,272

(iii) *Tops, Noils and Waste.* Particulars of the exports of tops, noils and waste are shown in the following table.

EXPORTS OF WOOL TOPS, NOILS AND WASTE (AUSTRALIAN PRODUCE).

(‘000 lb. actual weight.)

Particulars.	Average, 1934-35 to 1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Tops ..	5,948	7,039	4,827	3,946	2,633	3,725
Noils ..		4,307	5,076	3,715	2,728	2,647
Waste—Soft wool ..		5,843	3,399	4,135	3,324	2,815
Hard wool ..	5,843				5,672	4,450

(iv) *Total Exports—Greasy and Clean Bases.* The following table shows the estimated greasy and clean weights of exports of raw and semi-processed wool for the years 1938-39 and 1947-48 to 1951-52.

**EXPORTS OF WOOL—GREASY AND CLEAN BASES.**  
( '000 lb.)

Particulars.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
<b>GREASY BASIS.</b>						
Raw Wool—						
Greasy .. .. .	795,728	774,223	982,036	1,057,653	907,446	823,963
Scoured and Washed and Carbonized ..	137,391	305,684	289,792	307,627	243,154	172,150
Exported on Skins ..	58,187	53,042	53,067	62,129	43,953	46,045
Total .. .. .	991,306	1,132,949	1,324,895	1,427,409	1,193,653	1,042,158
Semi-manufactured Wool—						
Tops .. .. .	10,124	13,726	9,461	7,458	5,003	7,078
Yarn .. .. .	58	3,474	1,965	1,029	1,321	861
Total Wool..	1,001,488	1,150,149	1,336,321	1,435,896	1,199,977	1,050,097
<b>CLEAN BASIS.</b>						
Raw Wool .. .. .	(a)	608,614	719,899	778,339	666,602	590,192
Semi-manufactured Wool	5,071	9,446	6,336	4,652	3,520	4,403
Total Wool..	(a)	618,060	726,235	782,991	670,122	594,595

(a) Not available.

(v) *Total Value of Exports.* The value of wool of Australian origin exported from Australia during the five years ended 1951-52 averaged 52.0 per cent. of the total value of exports of merchandise of Australian origin, and during 1951-52 the proportion was 49.2 per cent. The value during the period under review, together with the principal countries to which wool was exported, is shown in the following table.

**VALUE OF WOOL EXPORTS (AUSTRALIAN PRODUCE).**  
( £'000.)

Country to which Exported.	Average, 1934-35 to 1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
United Kingdom ..	19,233	51,968	80,495	114,983	193,598	89,067
Other British Countries	703	5,720	5,804	6,248	14,169	5,999
Belgium .. .. .	5,863	15,536	15,808	24,124	42,161	17,036
France .. .. .	5,618	22,775	40,262	34,851	76,352	43,813
Germany .. .. .	2,602	3,894	3,877	15,504	23,822	11,443
Italy .. .. .	1,340	7,470	23,680	17,627	40,027	30,357
Japan .. .. .	7,727	399	4,808	14,003	51,524	40,624
Netherlands .. ..	777	2,015	2,922	4,497	5,220	1,620
Poland .. .. .	793	1,123	7,291	12,483	14,752	4,963
United States of America	2,252	24,452	20,722	40,162	132,570	59,047
Other Foreign Countries	1,859	13,386	25,727	28,654	39,103	19,439
Total .. .. .	48,767	148,738	231,396	313,136	633,298	323,428

13. *Local Sales of Wool.*—In 1946-47 following the cessation of the war-time acquisition scheme which ended with the 1945-46 season, auction sales were resumed in Australia. Sales are conducted at Sydney, Goulburn, Newcastle, Albury, Melbourne, Geelong, Ballarat, Brisbane, Adelaide, Perth, Hobart and Launceston, and are attended by buyers representing manufacturers and merchants in the United Kingdom, France, the United States of America, Japan, U.S.S.R. and many other countries. More than 95 per cent. of the Australian wool clip is now disposed of at auction in Australia.

14. **Stocks of Wool.**—In the following table, stocks of raw wool held in Australia by factories (woollen mills, wool scourers and fellmongeries), brokers and Joint Organization are shown at 30th June, 1948 to 1952. Stocks of wool on skins have been omitted, as wool on skins is not recorded as production until fellmongered in Australia or exported on skins.

**STOCKS OF RAW WOOL<sup>(a)</sup> HELD IN AUSTRALIA AT 30th JUNE.**  
(\*000 lb.)

Held by—	1948.	1949.	1950.	1951.	1952.
<b>GREASY AND SLIPE WOOL.</b>					
Factories <sup>(b)</sup> .. .. .	66,250	38,837	39,136	43,728	25,962
Brokers <sup>(c)</sup> .. .. .	11,327	33,814	14,211	18,244	12,246
Joint Organization .. .. .	517,303	253,061	56,188	2	..
<b>Total</b> .. .. .	<b>594,880</b>	<b>325,712</b>	<b>109,535</b>	<b>61,974</b>	<b>39,208</b>
<b>SCOURED AND CARBONIZED WOOL.</b>					
Factories <sup>(b)</sup> .. .. .	8,635	6,118	6,842	10,722	8,461
Joint Organization .. .. .	73,475	42,603	11,512	..	..
<b>Total</b> .. .. .	<b>82,110</b>	<b>48,721</b>	<b>18,354</b>	<b>10,722</b>	<b>8,461</b>
<b>TOTAL RAW WOOL (AS IN THE GREASE).</b>					
Factories <sup>(b)</sup> .. .. .	83,520	51,073	52,820	65,172	43,884
Brokers <sup>(c)</sup> .. .. .	11,327	33,814	14,211	18,244	12,246
Joint Organization .. .. .	656,015	333,448	77,909	2	..
<b>Total</b> .. .. .	<b>750,862</b>	<b>418,335</b>	<b>144,940</b>	<b>83,418</b>	<b>56,130</b>

(a) Excludes stocks of wool on skins.  
(c) Unsold wool; assumed to be all greasy.

(b) Woollen mills, wool scourers and fellmongeries.

15. **Value.**—Wool is the chief factor in the pastoral wealth of Australia, and the nation's prosperity is largely dependent upon its satisfactory sale. During the three years ended 1951-52 the price of greasy wool sold in the selling centres of Australia averaged 93.4d. per lb. compared with the average United Kingdom contract price of 14.59d. per lb. during the years 1939-40 to 1945-46 and the average selling price of 11.5d. per lb. during the ten years ended 1938-39. The average for the nine years ended 1928-29 was 18d. per lb., and for the seven years ended 1913-14, 9d. per lb. The heavy decline in the price of wool which commenced in 1929-30 continued during the next three years. In 1933-34, prices rose in a remarkable manner, averaging 15.84d. per lb., compared with 8.72d. per lb. for the previous year, an increase of 81.6 per cent. A decline in 1934-35 was succeeded by a period of rising prices in the two years following, but in 1937-38 and in 1938-39 prices again receded.

As mentioned in paragraph 7 above, the price of wool during the 1939-45 War was determined by the British Government wool contract. The price fixed for the years 1939-40 to 1941-42 was 13.4375d. per lb., and for the years 1942-43 to 1945-46, 15.45d. per lb. With the return to auction sales since 1945-46, the average price of greasy wool sold rose to 24.49d. per lb. in 1946-47, 39.50d. per lb. in 1947-48, 48.07d. per lb. in 1948-49, 63.35d. per lb. in 1949-50 and to the unprecedented level of 144.19d. per lb. in 1950-51. This was followed by a sharp fall in 1951-52 to 72.42d. per lb. or to only slightly more than half the price in 1950-51. It was however higher than in any of the years preceding 1950-51.

The effect of fluctuating wool values upon the national income is reflected in the following figures. Based upon appraisal in each State plus certain adjustments as recorded by the State Statisticians, the gross value of wool produced in Australia for



1942-43 amounted to £73,017,000 and for 1943-44 to £75,124,000 compared with £42,043,000 realized during 1938-39 under open market conditions. The value in 1944-45 and 1945-46 declined to £64,894,000 and £58,597,000 respectively, as a result of decreased production. In 1924-25 when the record pre-war price was realized, the value was £81,430,000, and in the year 1930-31, £34,804,000. With the remarkable increases in post-war wool prices, the value of production rose to £96,858,000 in 1946-47, to £158,691,000 in 1947-48, to £201,959,000 1948-49, to £289,905,000 in 1949-50, and to the all time record figure of £651,902,000 in 1950-51. As a result of the marked decline in wool prices in 1951-52 the value of production fell to £322,615,000 or slightly less than half the value recorded in 1950-51.

The following table shows the average auction-room price of greasy wool in Australia for 1938-39 and 1947-48 to 1951-52 as compiled by the National Council of Wool Selling Brokers. This latter price represents the average price realized for all greasy wool of whatever type or quality marketed during the year indicated.

**WOOL: AVERAGE MARKET PRICE PER LB.(a)**  
(Pence.)

Description.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Greasy .. .. .	10.39	30.50	48.07	63.35	144.19	72.42

(a) Average price realized for all greasy wool of whatever type or quality marketed in Australia during the year. (Source—National Council of Wool Selling Brokers of Australia.)

16. **United Kingdom Importation of Wool.**—The important position which Australia occupies in the supply of wool to the United Kingdom is indicated in the following statement of the quantities of wool imported into that country from the principal wool-producing countries during 1938 and each year 1948 to 1952.

**WOOL(a) : IMPORTS INTO UNITED KINGDOM.**

Country of Origin.	1938.	1948.	1949.	1950.	1951.	1952.
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.
<b>Australia</b> .. .. .	<b>365,519</b>	<b>331,927</b>	<b>472,500</b>	<b>383,643</b>	<b>255,941</b>	<b>320,728</b>
New Zealand .. .. .	197,995	226,059	209,449	180,144	138,546	100,744
Union of South Africa .. .. .	106,601	57,434	59,596	59,747	45,900	64,045
India and Pakistan .. .. .	46,049	23,103	27,194	30,269	27,184	26,496
Ireland, Republic of .. .. .	8,277	5,994	6,655	8,089	4,307	7,561
Falkland Islands .. .. .	1,426	4,500	4,025	4,456	4,429	4,051
Other British Countries .. .. .	4,566	1,823	2,712	3,387	3,071	1,987
Argentina .. .. .	79,303	4,448	4,223	2,280	7,698	23,805
Uruguay .. .. .	22,073					
Other Foreign Countries .. .. .	49,517	19,612	28,003	30,825	18,806	56,273
<b>Total Quantity</b> .. .. .	<b>881,326</b>	<b>674,900</b>	<b>814,357</b>	<b>702,840</b>	<b>505,912</b>	<b>695,690</b>
<b>Total Value (£'000 sterling)</b>	<b>40,996</b>	<b>86,227</b>	<b>126,781</b>	<b>185,118</b>	<b>238,394</b>	<b>171,122</b>

(a) Greasy and Scoured.

Australian wool represented 52.0 per cent. of the total quantity imported into the United Kingdom during the five years ended 1952. New Zealand supplied 27.8 per cent. and South Africa 8.4 per cent., while the total quantity received from British countries constituted 94.2 per cent. of all United Kingdom imports.

17. **Principal Importing Countries and Sources of Supply.**—The following table furnishes in respect of the principal importing countries details of their production and imports of wool for 1952 together with the chief sources of supply. The quantities imported refer to the actual weight of wool without distinguishing between greasy and scoured except in the case of the United States of America where estimated clean content of raw wool is quoted.

**WOOL : PRINCIPAL IMPORTING COUNTRIES AND SOURCES OF SUPPLY, 1952.**  
(Million lb.)

Importing Country.	Pro- duction of Importing Country. (a)	Quantity Imported from(b)—					Total Imports.
		Australia.	Union of South Africa.	Argen- tina.	New Zealand.	Other Countries.	
United Kingdom	88	320.7	64.0	23.8	190.7	96.5	695.7
Belgium .. ..	(c)	70.9	10.5	12.7	14.8	13.6	122.5
France .. ..	35	149.0	33.7	8.4	75.3	19.9	286.3
Germany (Federal Republic) .. ..	15	36.7	24.3	5.8	17.6	28.7	113.1
Italy .. ..	37	91.7	24.0	(d)	17.2	25.4	158.3
Japan .. ..	(c)	123.6	10.4	1.9	4.5	2.6	143.0
United States of America(e) .. ..	259	92.1	24.0	62.4	71.6	117.0	367.1

(a) As in the grease, 1951-52. (b) Actual weight of greasy and scoured wool. (c) Not available. (d) Included, in "Other Countries". (e) Imports are in terms of estimated clean content of greasy and scoured wool. Actual weight of total United States of America imports was 521.9 million lb.

As a considerable transit trade exists between continental countries it must not be assumed that the whole of the imports recorded by these countries are retained for their own consumption. The countries chiefly concerned with the transit trade are the United Kingdom (12 per cent. of total imports re-exported in 1952), Belgium and France.

## § 6. Trade in Hides and Skins.

1. **Extent of Trade.**—In addition to the hides and skins treated locally, considerable quantities are exported: the value of cattle and horse hides, and sheep and other skins, sent overseas during the five years ended 1951-1952 amounted to £84,066,840 or an average of £16,813,368 per annum.

2. **Sheepskins with Wool.**—The exports of sheepskins with wool, aggregating £59,568,175 during these five years, constitute the most important item in the values referred to in the preceding paragraph. During 1938-39 France was the largest purchaser of sheepskins with wool, taking 74 per cent. of the total consignments, while the United Kingdom ranked next with 15 per cent., followed by Germany with 7 per cent. In 1951-52, France obtained 67.5 per cent. of total exports, the United Kingdom 17.1 per cent., and the United States of America 5.4 per cent. The exports of sheepskins with wool during each of the years 1947-48 to 1951-52 compared with the average for the years 1934-35 to 1938-39 were as follows:—

### EXPORTS OF SHEEPSKINS WITH WOOL : AUSTRALIA.

Particulars.	Average, 1934-35 to 1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Number .. '000	12,000	11,233	11,255	14,919	10,201	10,611
Value .. £	2,779,523	7,420,682	7,339,103	10,876,557	20,773,298	13,158,535

3. **Sheepskins without Wool.**—Up to 1943-44 sheepskins without wool were exported chiefly to the United States of America. During the year mentioned this country accounted for 97 per cent. of the total shipments while the remaining 3 per cent. were exported to the United Kingdom, Canada and the U.S.S.R. There has, however, since been a decline in shipments to the United States of America and an increase in the quantities shipped to the United Kingdom and other countries; in 1951-52 the United States of America received 65 per cent. of total shipments; the United Kingdom 32 per cent. and other countries 3 per cent. Quantities and values for the five years 1947-48 to 1951-52 compared with the average for the years 1934-35 to 1938-39 are shown in the table hereunder:—

**EXPORTS OF SHEEPSKINS WITHOUT WOOL : AUSTRALIA.**

Particulars.	Average, 1934-35 to 1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Number .. '000	808	907	814	3,441	3,000	1,454
Value .. £	69,600	148,675	107,667	826,110	1,272,096	517,887

4. **Hides.**—(i) *Exports.* The export trade in cattle hides during 1951-52 was distributed as follows:—Japan, £231,065; United Kingdom, £193,655; Turkey, £179,927; Netherlands, £102,919; Italy, £81,780; and other countries, £319,812.

The exports during each of the five years 1947-48 to 1951-52 compared with the average for the years 1934-35 to 1938-39 are shown in the table below:—

**EXPORTS OF CATTLE HIDES : AUSTRALIA.**

Particulars.	Average, 1934-35 to 1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Number .. ..	956,552	101,681	270,514	272,197	210,871	177,916
Value .. £	791,730	312,562	1,177,040	1,340,471	1,344,533	1,109,158

Calfskins exported during the five years ended 1951-52 numbered 43,044, valued at £35,027. Exports of horse hides during the same period numbered 233,989, valued at £854,173.

(ii) *Imports.* The imports of cattle hides and calfskins are fairly large, the chief sources of supply being New Zealand and the Pacific Islands. The quantities and values of cattle hides, including calfskins, imported into Australia during the years 1947-48 to 1951-52 compared with the average for the years 1934-35 to 1938-39 were as follows:—

**IMPORTS OF CATTLE HIDES AND CALFSKINS : AUSTRALIA.**

Particulars.	Average, 1934-35 to 1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Quantity .. cwt.	70,781	26,554	14,245	13,490	12,126	28,590
Value .. £	278,658	213,367	81,520	76,231	111,604	401,641

5. **Furred Skins.**—The exports of furred skins were valued as follows :—

**EXPORTS OF FURRED SKINS : AUSTRALIA.**  
(£.)

Description.	Average, 1934-35 to 1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Rabbit and Hare ..	11,150,463	3,958,173	3,004,287	1,640,492	2,995,377	1,358,462
Opossum ..	124,627	15,176	6,943	44,103	6,282	25,560
Kangaroo ..	173,128	366,904	407,866	187,182	309,242	529,742
Fox ..	57,803	7,369	4,945	6,516	13,825	6,115
Wallaby ..	17,584	14,380	5,421	6,103	14,225	8,479
Other ..	11,215	1,129	276	4,035	17,037	3,575
<b>Total ..</b>	<b>1,534,820</b>	<b>4,363,131</b>	<b>3,429,738</b>	<b>1,888,431</b>	<b>3,355,988</b>	<b>1,931,933</b>

(a) Excludes hare skins.

These skins were shipped principally to the United States of America, the United Kingdom and Canada, the values taken by each in 1951-52 being shown in the following table :—

**FURRED SKINS : EXPORTS TO PRINCIPAL COUNTRIES OF DESTINATION, 1951-52.**  
(£.)

Country.	Rabbit and Hare Skins.	Kangaroo Skins.	Fox Skins.	Other (Opossum, Wallaby, etc.).	Total.
United Kingdom ..	78,478	15,992	6,079	9,970	110,519
United States of America ..	1,085,569	512,835	26	19,476	1,617,906
Canada ..	64,586	..	..	..	64,586
Other Countries ..	129,829	915	10	8,168	138,922
<b>Total ..</b>	<b>1,358,462</b>	<b>529,742</b>	<b>6,115</b>	<b>37,614</b>	<b>1,931,933</b>

6. **Marketing of Hides and Skins.**—(i) *Sheepskins with Wool.* Details of the war-time agreement between the United Kingdom and Commonwealth Governments for the purchases by acquisition of the "exportable surplus" of woolled sheepskins in Australia were given in Official Year Book No. 37, page 886. The contract expired on 30th June, 1946, and sheepskins are marketed at open auction.

(ii) *Sheep and Lamb Pelts.* Details of the marketing control of sheep and lamb pelts were given in Official Year Book No. 38, page 930. Pelts have reverted to open marketing without export restrictions.

(iii) *Hides and Leather.* A hide acquisition and marketing scheme has been in operation since November, 1939. Until 31st December, 1948, the scheme operated under the National Security Regulations. Since 1st January, 1949, it has continued under a Commonwealth Act and six supporting State Acts.

The Australian Hide and Leather Industries Board, which administers the scheme, acquires all cattle hides and yearling and calf skins at prices from 15 per cent. to 20 per cent. above August, 1939 levels, and these are allocated to tanners at these prices. Surplus hides are disposed of by tender or open auction. The Board retains the amounts realized in excess of appraised values, and supplements the price to the producers in cases where the realized amount is less than the appraisement values.

Pre-war, about 40 to 45 per cent. of Australian production was exported, but with the development of the local tanning industry, the proportion is approximately 12½ per cent.

Returns from export sales of hides and deferred payments levied on leather exported, based on the difference between world and Australian prices for the hides involved, are paid into a fund by the Board. From this fund, premiums are paid to producers as a proportion of appraised values. These premiums compensate hide producers to some extent for the margin between local and oversea prices. Further details of the war-time operations of the scheme will be found in Official Year Book No. 37, page 387 and Official Year Book No. 38, pages 930-1.

(iv) *Rabbit Skins.* A marketing control scheme for rabbit skins was introduced under the National Security (Rabbit Skins) Regulations on 10th June, 1940 and terminated in April, 1949. Details of the scheme will be found in Official Year Book No. 38, page 931.

### § 7. Tallow.

1. **Production.**—Australia's production of tallow is in excess of local requirements and considerable quantities are normally available for export. The recorded production in factories is incomplete as production in establishments which do not come within the definition of a factory is excluded. Details of production of tallow have also been collected on a calendar year basis from slaughtering establishments up to 1951. These have also proved defective in certain respects and, as a result, the table appearing in previous issues of the Official Year Book has been deleted until more complete information becomes available.

2. **Consumption in Factories.**—Details of consumption are collected from the principal factories using tallow (soap and candle, chemical and woolscouring works). Total consumption of tallow in factories as shown in the table below for the years 1938-39 and 1947-48 to 1951-52 is however deficient to the extent that no allowance is made for the small unrecorded amounts used in other types of establishments.

#### TALLOW : CONSUMPTION IN FACTORIES, AUSTRALIA. (cwt.)

Year.	Quantity Used.	Year.	Quantity Used.
1938-39.. ..	539,095	1949-50 .. ..	1,063,194
1947-48.. ..	946,279	1950-51 .. ..	1,217,027
1948-49.. ..	1,054,040	1951-52 .. ..	1,205,307

3. **Exports of Tallow.**—Particulars of exports of edible and inedible tallow are shown in the following table for the five years 1947-48 to 1951-52 in comparison with the average for the five years ended 1938-39.

#### TALLOW : EXPORTS, AUSTRALIA. (cwt.)

Particulars.	Average, 1934-35 to 1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Edible .. ..	(a)	38,324	59,106	73,663	26,022	25,833
Inedible .. ..	606,934	68,537	142,179	348,214	260,569	126,618
Total .. ..	(a)	106,861	201,285	421,877	286,591	152,451

(a) Not available.

4. **Marketing.**—Until 30th September, 1952 the bulk of Australia's exportable surplus tallow, other than collar white mutton tallow, was sold to the United Kingdom Ministry of Food under a series of annual contracts. The 1951-52 contract was not renewed and soon afterwards tallow export control was removed following termination of the industry's equalization pool arrangement and price de-control in most States.

Price control on tallow now operates only in Queensland and there are no restrictions on the export of tallow to any destination from any part of Australia.

## CHAPTER XX.

## AGRICULTURAL PRODUCTION.

NOTE.—Values of Australian oversea trade shown throughout this chapter are expressed as £A. f.o.b. Port of Shipment, except where otherwise indicated.

## § 1. Introductory.

In general, statistics in this chapter relating to agricultural production are derived from "census" returns supplied by farmers (approximately 244,000 in 1951-52) who utilize one acre or more of land for agricultural or pastoral purposes. The returns are collected by the Statisticians of each State and by the Commonwealth Statistician in respect of the Australian Capital Territory. Particulars for the Northern Territory have not been available in recent years. The returns are collected on a substantially uniform basis in all States at 31st March each year and relate to areas sown and crops produced in the previous twelve months. Where harvests are not completed by March (e.g. potatoes) provision is made in some States for a special collection after the harvest is completed and in others for the inclusion of the total estimated yield expected from the complete harvest. In cases where additional data are available from marketing authorities or other sources, these are used in conjunction with the "census" returns. Except where otherwise stated the "agricultural" years hereafter mentioned are taken as ending on 30th June.

## § 2. Progress of Agriculture.

1. **Early Records.**—In an "Account of Live Stock and Ground under Crop in New South Wales, 19th August, 1797", Governor Hunter gives the acreage of crops as follows:—Wheat, 3,361 acres; maize, 1,527 acres; barley, 26 acres; potatoes, 11 acres; and vines, 8 acres.

At a muster taken in 1808 the following was the return of crops:—Wheat, 6,874 acres; maize, 3,389 acres; barley, 544 acres; oats, 92 acres; peas and beans, 100 acres; potatoes, 301 acres; turnips, 13 acres; orchards, 546 acres; and flax and hemp, 37 acres.

A brief reference to the attempts at cultivation by the first settlers in New South Wales and to the discovery of suitable agricultural land on the Parramatta and Hawkesbury Rivers prior to the year 1813 and west of the Blue Mountains thereafter is contained in early issues of the Official Year Book. (*See No. 22, p. 670.*)

By the year 1850 the area of crops had increased to 491,000 acres, of which 198,000 acres were cultivated in what is now the State of New South Wales, and 169,000 acres in Tasmania. At the end of 1850 the area under cultivation in Victoria, which was then the Port Phillip District of New South Wales, was 52,190 acres.

The gold discoveries of 1851 and subsequent years had at first a very disturbing effect on agricultural progress, the area of crops declining from 491,000 acres in 1850 to 458,000 acres in 1854. The demand for agricultural products occasioned by the large influx of population was, however, soon reflected in the increased area cultivated, for at the end of 1858 the land under crop in Australia exceeded a million acres.

2. **Progress of Cultivation.**—The following table shows the area of crops in each of the States and Territories of Australia at decennial intervals since 1860 and during each of the eleven seasons ended 1951-52, and on page 875 there is a graph showing the area of crops in Australia from 1860 onward.

## AREA OF CROPS.

('000 Acres.)

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Australia
1860-61	246	387	4	359	25	153	..	..	1,174
1870-71	385	693	52	802	55	157	..	..	2,144
1880-81	606	1,549	114	2,087	64	241	..	..	4,561
1890-91	853	2,032	225	2,093	70	157	..	..	5,430
1900-01	2,447	3,114	458	2,370	201	224	..	..	8,814
1910-11	3,386	3,952	667	2,717	855	287	..	..	11,894
1920-21	4,465	4,490	780	3,231	1,805	297	..	2	15,070
1930-31	6,811	6,716	1,144	5,426	4,792	268	2	5	25,164
1940-41	6,375	4,467	1,734	4,255	4,027	254	..	6	21,118
1941-42	5,930	4,735	1,671	3,976	3,852	281	(a)	5	20,450
1942-43	5,297	3,816	1,743	3,437	2,820	300	(a)	7	17,420
1943-44	4,797	3,463	1,757	3,261	2,782	335	(a)	7	15,902
1944-45	5,045	4,310	1,797	3,179	2,790	343	(a)	8	17,472
1945-46	6,087	5,327	1,822	3,824	2,945	412	(a)	9	20,426
1946-47	6,512	5,103	1,617	3,885	3,590	361	(a)	9	21,077
1947-48	7,168	5,023	1,849	3,852	4,026	342	(a)	11	22,271
1948-49	5,711	4,645	1,953	3,757	4,215	345	(a)	10	20,636
1949-50	5,670	4,480	2,057	3,617	4,399	368	(a)	10	20,601
1950-51	4,761	4,351	2,077	3,676	4,650	396	(a)	6	19,917
1951-52	4,704	4,271	2,022	3,696	4,693	410	(a)	6	19,802

(a) Not available.

The progress of agriculture was practically uninterrupted from 1860 to 1915-16, when, as the result of a special effort to raise wheat during the 1914-18 War, 18.5 million acres were cultivated in Australia. Four years later the area of crops declined to 13.3 million acres owing to the accumulation of wheat stocks consequent upon the difficulty of securing freight space during the war years. After the termination of hostilities the area again began to expand and rose steadily to a new maximum of 25.2 million acres in 1930-31. Thereafter the slump in wheat prices seriously depressed the agricultural industry and the area of crops receded to just under 20 million acres in 1935-36. Subsequently the area increased and reached a maximum of 23.5 million acres in 1938-39. Thereafter it declined to less than 16 million acres in 1943-44, rising in each succeeding year up to and including 1947-48, when the area of crops amounted to 22.3 million acres. This upward trend was reversed in 1948-49, the area of crops declining in that year and each succeeding year to 19.8 million acres in 1951-52. As the area under wheat in Australia constitutes a large proportion of the total areas cropped (55 per cent. during the ten years ended 1951-52), fluctuations in the latter follow broadly the same pattern as changes in wheat areas.

3. **Area under Sown Pastures.**—In all the States there are considerable areas of grasses mainly sown on land from which scrub has been cleared or on land which it is desired to rest from cultivation. These areas, which are not included in "area of crops", have expanded from about 5.3 million acres in 1929-30 to about 18.6 million acres in 1951-52.

4. **Australian Agricultural Council.**—Arising out of a conference of Commonwealth and State Ministers on agricultural and marketing matters held at Canberra in December, 1934, a permanent organization known as the Australian Agricultural Council was formed. The Council consists of the Commonwealth Ministers for Commerce and Agriculture and for Territories, and the State Ministers of Agriculture, with power to co-opt the services of other Commonwealth and State Ministers as required. The principal functions of the Council are:—(i) the promotion of the welfare and development of agricultural industries generally; (ii) exchange of information on agricultural production

and marketing; (iii) the improvement of the quality of agricultural products and the maintenance of high grade standards; (iv) to ensure, as far as possible, balance between production and available markets; and (v) organized marketing, etc.

In addition, a permanent technical committee known as the Standing Committee on Agriculture was formed to act in an advisory capacity to the Council. Its functions, in addition to advising the Agricultural Council on the above-mentioned matters, include the following:—(i) to secure co-operation and co-ordination in agricultural research throughout Australia; (ii) to advise the Commonwealth and State Governments, either directly or through the Council, on matters pertaining to the initiation and development of research on agricultural problems; and (iii) to secure co-operation between the Commonwealth and States and between the States in respect of quarantine measures relating to pests and diseases of plants and animals, and to advise the Commonwealth and State Governments. The personnel of this Committee consists of the permanent heads of the State Departments of Agriculture, members of the Executive Committee of the Commonwealth Scientific and Industrial Research Organization, the Commonwealth Director-General of Health, the Secretary, Department of Commerce and Agriculture, the Secretary, Department of Territories and a representative of the Commonwealth Treasury. The Council and the Standing Committee meet normally two or three times a year according to the nature and urgency of the problems to be discussed.

At the 36th Meeting of the Council held in Canberra in April, 1952, a programme of expansion of rural industries was unanimously approved by members. As a first stage quantitative production aims to be achieved over a period of five years, the target date being 1957-58, were set for the major rural products. These were set having regard to methods of production and conditions on farms existing at the time the programme was approved and do not represent a maximum level of production to be achieved, but rather suggest a balanced expansion between different commodities within the limits of physical capacity and the avenues in which production should be increased so as to contribute to the best development of rural industries in the national interest.

The production aims were based on the following general assumptions:—

- (1) That Commonwealth and State Governments will continue their efforts to expand agricultural production by increasing their extension or advisory services to farmers, by special grants for research purposes and by such incentives as special taxation depreciation allowances for primary producers;
- (2) That supplies of farm machinery, farm materials, fertilizers and labour will be adequate;
- (3) That work on land development schemes including irrigation projects, will be intensified;
- (4) That seasonal conditions are reasonably satisfactory over the next five years;
- (5) That the relative prices of individual rural commodities will be such that there will be no undue incentive to the production of any one commodity at the expense of another (such as occurred in the case of wool particularly in 1950-51);
- (6) That the price of each individual commodity will be regarded as attractive;

Details of the 1957-58 production aims for the principal rural products as agreed on by the Council compared with actual production in 1951-52 are shown in the following table.



**RURAL PRODUCTION 1951-52 AND PRODUCTION AIMS SET FOR 1957-58. BY THE  
AUSTRALIAN AGRICULTURAL COUNCIL**

**A. CROP PRODUCTION.**

Commodity.	1951-52.		1957-58 Aims.		Percentage Increase 1957-58 on 1951-52.	
	Area.	Pro- duction.	Area.	Pro- duction.	Area.	Pro- duction.
	'000 acres.	'000 bus.	'000 acres.	'000 bus.		
Wheat for Grain .. ..	10,384	159,725	13,650	191,000	31	20
Oats for Grain .. ..	2,305	34,506	2,790	42,000	12	22
Barley for Grain .. ..	1,118	21,909	1,400	25,000	25	14
Maize for Grain .. ..	170	4,018	240	7,200	41	79
Grain Sorghum .. ..	177	2,693	300	6,000	69	123
Linseed .. ..	54	296	200	2,000	270	576
Rice .. ..	36	3,048	40	4,000	11	31
		'000 lb.		'000 lb.		
Cotton (raw) .. ..	4.5	549	60	10,000	1,233	1,738
Tobacco .. ..	8.2	7,554	16.5	14,900	101	97
		'000 tons		'000 tons		
Sugar (a). ° .. ..	403	745	530	1,228	32	65

(a) Area includes stand-over and cut for plants. Production refers to raw sugar 94 net titre.

**B. LIVE STOCK PRODUCTION.**

Commodity.	Unit of Quantity.	Production.		Percentage increase 1957-58 on 1951-52.
		1951-52.	1957-58 Aims.	
Total Milk (All purposes) .. ..	Mil. gals.	1,051	1,350	28
Butter (factory) .. ..	'000 tons	131	170	30
Cheese (factory) .. ..	"	41	40	-2
Processed Milk Products .. ..	"	110	190	73
Beef and Veal(a) .. ..	"	582	672	15
Lamb (a) .. ..	"	107	190	78
Mutton (a) .. ..	"	176	213	21
Pigmeats (a) .. ..	"	85	100	18
Eggs (b) .. ..	Mil. doz.	102	129	26
Wool (c) .. ..	Mil. lb.	1,080	1,200	11

(a) Carcass weight, bone-in.

(b) Commercial production only.

(c) Total production of shorn and skin wools.

**§ 3. Distribution, Production and Value of Crops.**

1. **Area of Crops in States and Territories.**—The following table shows the areas in the several States and the Australian Capital Territory of each of the crops for the season 1951-52. Similar details for the season 1950-51 appear in *Primary Industries Bulletin* No. 45, Part I.—*Rural Industries*.

## AREA OF CROPS, 1951-52.

(Acres.)

Crop.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(a)
<b>Cereals for Grain—</b>								
Barley—								
2 Row ..	7,022	160,702	21,478	753,362	19,043	3,855	..	965,462
6 Row ..	4,119	25,522	6,680	78,251	37,531	386	22	152,511
Maize ..	54,216	4,115	111,181	..	8	18	2	169,540
Oats ..	596,527	676,503	20,839	387,377	656,559	26,539	563	2,364,907
Panicum, Millet and Setaria ..	20	1,171	16,008	..	..	..	..	17,199
Rice ..	35,589	..	75	..	..	..	..	35,664
Rye ..	1,278	18,556	291	45,043	5,884	372	10	71,434
Sorghum ..	7,101	..	169,558	..	1	..	..	176,660
Wheat ..	2,753,317	2,463,574	454,543	1,613,126	3,094,536	3,603	1,042	10,383,741
Hay ..	334,007	640,418	43,586	257,005	173,855	97,763	2,306	1,548,940
Green Fodder ..	672,633	(b) 45,661	604,190	(c) 385,079	636,728	176,319	1,225	2,521,835
Other Stock Fodder	7,687	10,132	11,350	20,093	7,272	22,577	..	79,111
<b>Grass Seed—</b>								
Lucerne ..	6,723	(d)	441	7,951	(e)	12	(f)	15,127
Clover ..	2,607	1,921	..	24,176	12,898	868	..	42,470
Other ..	3,758	9,162	5,619	10,526	52	1,910	170	31,197
<b>Industrial Crops—</b>								
Broom Millet ..	3,121	250	221	..	..	..	..	3,592
Canary Seed ..	730	195	19,971	10	..	..	..	20,906
Cotton ..	..	..	4,480	..	..	..	..	4,480
Flax—								
For Fibre ..	..	2,821	..	1,599	1,965	..	..	6,385
For Linseed ..	15,785	4,431	28,580	4,853	12	80	..	53,741
Hops ..	..	347	..	..	(g)	1,378	(f)	1,725
Peanuts ..	374	..	13,312	..	15	..	..	13,701
Sugar-cane—								
Productive ..	8,354	..	273,370	..	..	..	..	281,724
Unproductive	6,165	..	114,978	..	..	..	..	121,143
Sunflowers ..	231	35	4,092	3	..	..	..	4,361
Tobacco ..	432	1,500	5,038	..	1,229	..	..	8,199
<b>Vegetables for Human consumption—</b>								
Onions ..	401	4,745	2,527	620	334	50	5	8,682
Potatoes ..	19,034	42,108	11,465	6,971	6,885	31,514	168	118,145
Other Vegetables ..	55,176	38,130	37,833	8,801	6,865	14,958	60	161,823
<b>Vineyards—</b>								
Bearing ..	15,067	42,812	2,538	56,857	8,119	..	(g)	(f) 125,393
Not Bearing ..	1,980	2,455	281	4,357	1,239	..	(g)	(f) 10,312
<b>Orchards and other Fruit Gardens—</b>								
Bearing ..	72,427	55,376	23,282	22,246	18,715	25,099	98	217,243
Not Bearing ..	16,935	13,339	11,767	7,129	3,004	1,453	12	53,639
<b>Nurseries and Cut Flowers ..</b>	1,060	2,848	202	153	156	163	7	4,591
<b>All Other Crops ..</b>	396	1,683	2,622	104	231	1,027	12	6,075
<b>Total Area ..</b>	4,704,272	4,270,512	2,022,400	3,695,692	4,693,136	409,944	5,702	19,801,658

(a) Excludes Northern Territory, details for which are not available. (b) Excludes 41,115 acres<sup>8</sup> of pasture land sown to lucerne and 193,064 acres sown to oats, for grazing. (c) Excludes 129,608 acres of pasture land sown to lucerne for grazing. (d) Not available. Included in "All Other Crops". (e) Not available. Included in "Other Grass Seed". (f) Incomplete. See footnotes to individual States. (g) Not available for publication. Included in "All Other Crops".

2. Relative Areas of Crops in States and Territories.—The proportion of each of the crops cultivated to the extent of over 100,000 acres in the various States and Territories to the total area of crops for the season 1951-52 is shown in the next table. Similar details for the season 1950-51 appear in *Primary Industries Bulletin* No. 45, Part I.—*Rural Industries*. In four of the States, namely, New South Wales, Victoria, South Australia and Western Australia, wheat-growing for grain is by far the most extensive crop. In Queensland the most extensive crops are wheat, green fodder and sugar-cane, and in Tasmania, green fodder, hay and potatoes.

As pointed out previously, wheat is the main crop in Australia, the area thereof, for grain only, representing more than 50 per cent. of the total area of crops in 1951-52.

## RELATIVE AREAS OF CROPS, 1951-52.

(Per cent.)

Crop.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(a)
Wheat (Grain) ..	58.57	57.69	22.48	43.65	65.94	0.88	18.27	52.45
Green Fodder(b) ..	14.31	1.07	29.87	10.42	13.57	43.01	21.48	12.74
Oats (Grain) ..	12.69	15.84	1.03	10.48	13.99	6.47	9.87	11.94
Hay ..	7.11	15.00	2.16	6.95	3.70	23.85	40.44	7.82
Barley (Grain) ..	0.24	4.36	1.39	22.50	1.20	1.03	0.39	5.65
Sugar-cane ..	0.31	..	19.20	..	..	..	..	2.03
Orchards and Fruit Gardens ..	1.90	1.61	1.73	0.80	0.46	6.48	1.93	1.37
Maize (Grain) ..	1.15	0.10	5.50	..	..	..	0.04	0.86
Vineyards ..	0.36	1.06	0.14	1.66	0.20	..	(c)	d 0.68
Potatoes ..	0.41	0.98	0.57	0.19	0.15	7.69	2.95	0.60
All other ..	2.95	2.29	15.93	3.35	0.79	10.59	4.63	3.86
Total ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

(a) Excludes Northern Territory, details for which are not available. (b) Includes green forage except in Victoria. (c) Not available for publication; included in "All Other" (d) Incomplete. See footnote (c).

3. Area of Principal Crops in Australia.—The area of the principal crops during each of the five seasons ended 1951-52, compared with the average for the decennium ended 1938-39 is shown hereunder:—

## AREA OF PRINCIPAL CROPS: AUSTRALIA.

('000 Acres.)

Crop.	Average, ten years ended 1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Cereals for Grain—						
Barley, 2 Row ..	428	745	899	927	963	965
Maize ..	295	223	182	194	169	170
Oats ..	1,393	2,105	1,770	1,748	1,757	2,365
Rice ..	22	26	33	38	37	36
Wheat ..	14,345	13,880	12,583	12,240	11,663	10,384
Hay ..	2,994	1,970	1,580	1,605	1,377	1,549
Green Fodder ..	1,272	1,705	2,011	2,178	2,224	2,522
Vegetables for Human Consumption—						
Onions ..	8	11	10	8	8	9
Potatoes ..	130	146	120	134	127	118
Other vegetables for human consumption ..	(a) 83	167	176	155	156	162
Industrial Crops—						
Cotton ..	43	8	6	3	3	4
Hops ..	1	2	2	2	2	2
Sugar-cane ..	332	345	384	398	397	403
Tobacco ..	12	4	4	5	6	8
Vineyards ..	118	132	135	135	137	136
Orchards ..	276	290	287	280	275	271
All other Crops ..	206	513	454	551	616	698
Total ..	21,958	22,272	20,636	20,601	19,917	19,802

(a) Incomplete. Market gardens and pulse only.

4. **Weights and Measures.**—The production of agricultural commodities in Australia is recorded in terms of either capacity or weight. When measured in terms of capacity the unit is the bushel of 2,218.192 cubic inches or gallon of 277.274 cubic inches. When measured in terms of weight, the unit adopted is either the long ton of 2,240 lb. (except in the case of flour, bran and pollard, when the short ton of 2,000 lb. is used), the hundred-weight (cwt.) of 112 lb. or pound (lb.).

The production of cereals and fruit is recorded in bushels, the production of wine in gallons, while hay, vegetables, grapes and industrial crops are measured by weight, generally in terms of long tons or cwt.

The standard weights adopted per bushel for the more important cereals, are as follows:—rye, sorghum and wheat 60 lb.; barley, 50 lb.; maize, 56 lb.; oats, 40 lb.; and rice 42 lb. Several types of cases are used for fruits, but in determining average weights a bushel case with a capacity of 2,223 cubic inches has been adopted. The packed weight of a bushel of fruit also is subject to considerable variation according to the kind and variety of fruit. The weights adopted per bushel for the more important fruits were as follows:—Apples, pineapples and grapefruit, 42 lb.; apricots, cherries, oranges, mandarins and lemons, 48 lb.; bananas, 56 lb.; papaws, 24 lb.; peaches and pears, 45 lb.; and plums and prunes, 58 lb.

Data compiled by the State Departments of Agriculture made available to this Bureau were used in determining these average weights.

5. **Production of Crops in States and Territories.**—The following table shows production of crops in the various States and the Australian Capital Territory for the season 1951-52:—

**PRODUCTION OF CROPS, 1951-52.**

Crop.	Unit of Quantity.	N.S.W.	Vic.	Q.land	S. Aust.	W.A.	Tas.	A.C.T.	Aust.(a)
<b>Cereals for Grain—</b>									
Barley—									
2 Row .. ..	'ooo bus.	99	3,146	337	15,527	230	137	..	19,476
6 Row .. ..	" "	68	473	113	1,299	465	13	I	2,432
Maize .. ..	" "	1,411	168	2,438	..	..	I	..	4,018
Oats .. ..	" "	9,395	11,151	263	5,405	7,689	594	9	34,506
Panicum, Millet and									
Setaria .. ..	" "	I	18	174	..	..	..	..	193
Rice .. ..	" "	3,047	..	I	..	..	..	..	3,048
Rye .. ..	" "	8	123	3	207	35	7	..	383
Sorghum .. ..	" "	41	..	2,652	..	..	..	..	2,693
Wheat .. ..	" "	39,689	45,995	6,632	27,301	40,000	94	14	159,725
Hay .. ..	" tons	452	1,047	80	380	211	171	4	2,345
<b>Grass Seed—</b>									
Lucerne .. ..	Cwt.	4,749	(b)	154	4,767	(b)	23	..	(c) 9,693
Clover .. ..	" "	3,795	3,609	..	30,859	25,283	1,014	..	64,560
Other .. ..	" "	2,953	12,644	12,418	7,915	36	3,622	104	39,692
<b>Industrial Crops—</b>									
<b>Broom Millet—</b>									
Fibre .. ..	" "	18,807	1,216	884	..	..	..	..	20,907
Grain .. ..	Bus.	19,761	1,801	..	..	..	..	..	21,562
Canary Seed .. ..	" "	5,596	520	70,575	84	..	..	..	76,775
Cotton, Unginned .. ..	'ooo lb.	..	..	1,406	..	..	..	..	1,406
<b>Flax—</b>									
Straw .. ..	Ton	..	4,065	..	2,214	1,573	..	..	7,852
Linseed .. ..	" "	1,617	705	4,174	857	I	39	..	7,393
Hops (Dry Weight) .. ..	Cwt.	..	2,590	..	..	(d)	15,324	..	(c) 17,914
Peanuts .. ..	" "	4,433	..	90,713	..	179	..	..	95,325
Sugar-cane, Crushed .. ..	'ooo tons	322	..	5,005	..	..	..	..	5,327
Sunflower Seed .. ..	" lb.	165	3	1,161	2	..	..	..	1,331
Tobacco, Dried Leaf .. ..	" "	518	1,381	4,667	..	988	..	..	7,554
<b>Vegetables for human consumption—</b>									
Onions .. ..	Ton	1,937	31,150	9,691	6,302	3,855	243	38	53,216
Potatoes .. ..	" "	52,020	178,399	33,001	43,898	49,930	150,500	1,017	508,765
<b>Vineyards—</b>									
<b>Grapes—</b>									
For Drying .. ..	" "	30,528	197,601	..	44,553	11,652	..	..	284,334
Table .. ..	" "	3,132	4,697	2,228	787	1,584	..	(d)	c 12,428
Wine .. ..	" "	23,998	17,252	173	132,742	3,598	..	(d)	c 177,763

(a) Excludes Northern Territory, details for which are not available. (b) Not available.  
(c) Incomplete. See footnotes to individual States. (d) Not available for publication.

6. Production of Principal Crops in Australia.—The following table shows the production of the principal crops for the five years ended 1951-52, and the average for the decennium ended 1938-39:—

PRODUCTION OF PRINCIPAL CROPS: AUSTRALIA.

Crop.	Unit of Quantity.	Average, ten years ended 1938-39.	1947-48. <sup>a</sup>	1948-49.	1949-50.	1950-51.	1951-52.
Cereals for Grain—							
Barley, 2 Row ..	'ooo bus.	7,480	18,937	15,929	17,569	20,811	19,476
Maize ..	" "	7,228	6,168	5,188	5,996	4,729	4,018
Oats ..	" "	16,437	40,697	23,601	27,391	25,128	34,506
Rice ..	" "	2,003	2,676	2,739	3,783	4,118	3,048
Wheat ..	" "	169,398	220,116	190,703	218,221	184,244	159,725
Hay ..	" tons	3,490	3,008	2,292	2,430	2,063	2,345
Vegetables for human consumption—							
Onions ..	" "	43	86	57	48	35	53
Potatoes ..	" "	351	498	460	471	412	509
Industrial Crops—							
Cotton, Unginned ..	" lb.	15,667	2,064	1,821	719	1,102	1,406
Hops, (dry weight) ..	cwt.	18,989	(a)24,449	(a)17,073	(a)22,993	(a)26,147	(a)17,914
Sugar (from Cane) ..	'ooo tons	658	605	943	937	921	745
Tobacco (Dried leaf) ..	" lb.	5,113	2,484	3,410	4,138	4,211	7,553
Vineyards—							
Grapes ..	" tons	381	510	436	434	362	475
Wine made <sup>(b)</sup> ..	" gals.	16,104	32,879	32,818	32,675	26,036	35,255
Raisins and Currants ..	" tons	70	85	65	68	56	72

(a) Excludes Western Australia. (b) Excludes spirits used in fortified wine, such spirit having been made from distillation wine.

(b) Excludes spirits used in fortified wine, such spirit having been made from distillation wine.

7. Average Yield per Acre of Principal Crops in Australia.—The following table shows the yield per acre for Australia of the principal crops for the five years ended 1951-52 and the average for the decennium ended 1938-39.

AVERAGE YIELD PER ACRE OF PRINCIPAL CROPS: AUSTRALIA.

Crop.	Unit of Quantity.	Average, ten years ended 1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Cereals for Grain—							
Barley, 2 Row ..	Bushel.	17.49	25.43	17.72	18.95	21.61	20.17
Maize ..	" "	24.53	27.69	28.51	30.97	27.93	23.70
Oats ..	" "	11.80	19.33	13.34	15.67	14.30	14.59
Rice ..	" "	93.00	102.12	83.79	100.78	111.45	85.47
Wheat ..	" "	11.81	15.86	15.15	17.83	15.80	15.38
Hay ..	" Ton	1.17	1.53	1.45	1.51	1.50	1.51
Vegetables for human consumption—							
Onions ..	" "	5.54	8.00	5.81	6.34	4.61	6.13
Potatoes ..	" "	2.71	3.42	3.84	3.52	3.24	4.31
Industrial Crops—							
Cotton, Unginned ..	lb.	366	244	293	267	373	314
Hops (dry weight) (a) ..	cwt.	17.88	16.40	11.28	14.76	16.32	10.79
Sugar (from Cane) (a) ..	" Ton	2.76	2.72	3.54	3.33	3.39	2.65
Tobacco (Dried leaf) ..	lb.	463	646	918	903	651	921
Vineyards—							
Grapes (a) ..	" Ton	3.45	4.12	3.53	3.53	2.91	3.78
Wine (a) ..	" Gallon	335	586	557	551	450	581
Raisins and Currants (a) ..	" Ton	1.28	1.43	1.15	1.22	0.95	1.25

(a) Per acre of productive crops.

8. Gross Value of Principal Crops in Australia.—The following table shows the gross value of principal crops at the principal markets in Australia for the five years ended 1951-52 and the average for the decennium ended 1938-39.

GROSS VALUE OF PRINCIPAL CROPS : AUSTRALIA.  
(£'000.)

Crop.	Average, ten years ended 1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
<b>Cereals for Grain—</b>						
Barley .. .. .	1,214	16,299	7,394	10,709	13,339	17,739
Maize .. .. .	1,537	2,340	2,640	2,806	3,048	3,809
Oats .. .. .	1,937	12,823	5,458	8,254	10,293	19,005
Rice .. .. .	392	950	1,032	1,653	2,171	2,108
Wheat (a) .. .. .	30,125	161,904	112,465	148,596	124,740	120,734
Hay .. .. .	11,413	17,100	14,561	17,770	17,931	26,193
Green Fodder .. .. .	2,775	(b) 3,518	(b) 3,635	(b) 3,894	(b) 5,001	(b) 6,934
<b>Vegetables for human consumption—</b>						
Onions .. .. .	245	1,245	863	1,058	1,086	2,250
Potatoes .. .. .	2,314	6,543	8,125	9,142	10,265	15,982
Other vegetables for human consumption .. .. .	(c) 2,203	12,185	12,920	14,835	20,200	27,123
<b>Industrial Crops—</b>						
Cotton, Unginned .. .. .	(a) 298	46	48	26	54	127
Hops .. .. .	157	(b) 317	(b) 284	(b) 465	(b) 620	(b) 517
Sugar-cane .. .. .	7,895	11,423	17,996	18,581	19,046	19,635
Tobacco (Dried leaf) .. .. .	474	405	695	1,146	1,622	2,379
Vineyards .. .. .	3,997	8,397	7,475	8,856	10,125	14,084
Orchards .. .. .	(a) 7,953	22,066	20,160	26,273	30,656	43,838
All other Crops .. .. .	2,651	5,635	7,186	7,795	8,441	10,098
<b>Total, Gross Value</b> .. .. .	<b>77,490</b>	<b>283,196</b>	<b>222,937</b>	<b>281,889</b>	<b>278,638</b>	<b>332,555</b>

(a) Includes Governmental assistance. (b) Incomplete, excludes Western Australia. (c) Market gardens and pulse.

9. Value of Production and Indexes of Price and Quantity of Production.—(i) *Gross and Net Values, 1950-51 and 1951-52.* Uniform methods for arriving at the gross and net values of production in the various States were determined at a Conference of Statisticians held in March, 1935. The returns for the year 1933-34 and subsequent years have been valued on the new basis, and a revaluation was made for the years back to 1928-29. A more detailed reference to the value of production of agriculture and other industries in Australia as well as a brief explanation of the terms used will be found in Chapter XXIX.—Miscellaneous.

In computing the net value of production no deduction has been made for the cost of maintenance of farm buildings and fences, nor for the depreciation of farm plant, consequently, the figures stated are inflated to that extent.

GROSS, FARM AND NET VALUES OF AGRICULTURAL PRODUCTION, 1950-51  
AND 1951-52.  
(£'000.)

State.	Gross Production valued at Principal Markets.	Marketing Costs.	Gross Production valued at Farm.	Farm Costs.		Net value of Production. (a)	Depreciation (estimated).
				Seed used and Fodder for Farm Stock.	Value of other Materials used in process of production.		
<b>1950-51.</b>							
New South Wales ..	58,717	8,260	50,457	4,146	(b) 1,819	44,492	(c)
Victoria .. .. .	72,100	7,581	64,519	8,385	2,669	53,465	950
Queensland .. .. .	42,421	4,410	38,011	3,140	2,870	32,001	1,910
South Australia ..	48,935	8,216	40,719	2,633	1,684	36,402	594
Western Australia ..	43,876	4,641	39,235	2,024	4,085	33,126	(c)
Tasmania .. .. .	12,458	2,326	10,132	992	(b) 496	8,644	157
<b>Total</b> .. .. .	<b>278,507</b>	<b>35,434</b>	<b>243,073</b>	<b>21,320</b>	<b>13,623</b>	<b>208,130</b>	<b>(c)</b>
<b>1951-52.</b>							
New South Wales ..	77,026	11,058	65,968	5,334	(b) 2,301	58,333	(c)
Victoria .. .. .	88,629	11,266	77,363	10,215	3,064	64,084	950
Queensland .. .. .	47,212	4,910	42,302	3,490	3,190	35,622	2,130
South Australia ..	60,253	8,173	52,080	2,780	2,397	46,903	594
Western Australia ..	43,396	4,788	38,608	2,252	5,329	31,027	(c)
Tasmania .. .. .	15,631	3,263	12,368	1,144	(b) 508	10,716	168
<b>Total</b> .. .. .	<b>332,147</b>	<b>43,458</b>	<b>288,689</b>	<b>25,215</b>	<b>16,789</b>	<b>246,685</b>	<b>(c)</b>

(a) No deduction has been made for depreciation and maintenance. (b) No allowance made for costs of power, power kerosene, petrol and other oils. (c) Not available.

(ii) *Net Values, 1929-30 to 1951-52.* In the following table the net value of agricultural production and the net value per head of population are shown by States for the years 1947-48 to 1951-52 in comparison with the averages for the decennial periods ended 1938-39 and 1950-51 :—

## NET VALUE OF AGRICULTURAL PRODUCTION.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
NET VALUE.(a) (£'000.)							
Average, ten years 1929-30 to 1938-39	13,304	10,508	10,189	6,540	4,903	1,824	47,268
1947-48 .. ..	79,308	49,876	24,392	41,950	26,295	3,982	225,803
1948-49 .. ..	46,205	39,352	28,977	23,951	21,875	4,012	164,372
1949-50 .. ..	69,078	53,905	30,953	32,790	26,605	5,372	218,703
1950-51 .. ..	44,492	53,465	32,001	36,402	33,126	8,644	208,130
Average, ten years 1941-42 to 1950-51	38,468	31,989	21,638	20,977	15,042	4,712	132,826
1951-52 .. ..	58,333	64,084	35,622	46,903	31,027	10,716	246,685
NET VALUE PER HEAD OF POPULATION. (£ s. d.)							
Average, ten years 1929-30 to 1938-39	5 1 2	5 14 11	10 13 0	11 3 10	11 0 9	7 18 5	7 1 4
1947-48 .. ..	26 7 7	24 2 1	21 18 5	64 6 3	51 13 6	15 4 3	29 13 4
1948-49 .. ..	15 1 7	18 12 5	25 10 9	36 0 2	41 17 9	14 19 1	21 3 3
1949-50 .. ..	21 15 7	24 16 9	26 12 3	47 14 10	48 14 11	19 7 4	27 5 8
1950-51 .. ..	13 11 9	23 18 1	26 16 6	51 3 11	57 19 7	30 1 1	25 3 1
Average, ten years 1941-42 to 1950-51	12 14 4	14 16 7	19 9 9	31 18 0	28 15 7	18 3 0	17 6 5
1951-52 .. ..	17 7 8	27 16 11	29 3 5	64 6 2	52 9 8	35 17 10	29 0 8

(a) No deduction has been made for depreciation and maintenance.

(iii) *Indexes of Quantity and Price of Agricultural Production.* Quantity and price indexes of agricultural production shown in the following table have been calculated by the fixed-base weighted aggregative method. Further details on weights used, &c., are to be found in Chapter XXIX.—Miscellaneous.

## INDEXES OF QUANTITY AND PRICE OF AGRICULTURAL PRODUCTION.

(Base : Average 3 years ended June, 1939 = 100.)

Particulars.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Quantity Produced—					
Wheat .. ..	134	116	133	112	97
Other Crops .. ..	114	102	107	105	107
Total, All Crops .. ..	122	108	117	108	103
Total per Head of Population	109	95	100	89	83
Price—					
Wheat .. ..	369	294	341	338	378
Other Crops .. ..	187	186	221	256	321
Total, All Crops .. ..	267	234	274	292	346

## § 4. Wheat.

1. **Royal Commission on the Wheat Industry.**—A Royal Commission was appointed in January, 1934, to inquire into and report upon the economic condition of the industries of growing, handling and marketing wheat, and the manufacturing, distributing and selling of flour and bread. A searching inquiry was made by the Commission and the results of its investigations were submitted in a series of five reports. The first and second reports covered the wheat-growing industry, the third that of baking, the fourth the flour-milling industry, while the fifth, completed in February, 1936, dealt with the history of the Commission's investigations and traversed the principal recommendations submitted.

2. **Wheat Costs of Production Committee.**—A Wheat Costs of Production Committee was appointed by the Commonwealth Government in February, 1947, to enquire into and report upon :—(i) the reasonable costs of production of wheat per bushel in Australia's main wheat-growing districts, and (ii) whether basic items of cost could be established as an index to periodical variations in costs of the production of wheat. The Committee in its report to the Commonwealth Government in March, 1948, found that the cost of growing wheat in the Commonwealth was 6s. per bushel at sidings and advised that basic items of cost could be established as an index to periodical variations in wheat production costs.

3. **Licensing of Areas Sown to Wheat, and Acreages Sown.**—Details of the operations of the Wheat Stabilization Board in licensing wheat growing during the seasons 1941-42 to 1948-49 will be found in Official Year Book No. 38, pp. 940, 941. The Board ceased to function on 31st December, 1948.

4. **Legislation relating to Wheat Industry.**—(i) *Financial Assistance to Wheat Growers.* Reference to financial assistance during 1950-51 and 1951-52 will be found in § 23, Financial Assistance to Primary Producers, hereafter. Details of financial assistance rendered by the Commonwealth Government prior to 1950-51 appear in Official Year Books No. 37, No. 38 and No. 39.

(ii) *Stabilized Marketing.* A detailed survey of legislation relating to stabilization of the wheat industry, including controls exercised during the 1914-18 and 1939-45 Wars and legislation establishing the permanent Wheat Stabilization Plan in 1948, were given in the Appendix to Official Year Book No. 37 (pp. 1295-99).

(iii) *Wheat Stabilization Plan.* Briefly, the principal provisions of the Wheat Stabilization Plan, which is operated by the Australian Wheat Board conjointly with State Wheat Boards and similar authorities nominated by State Governments, are as follows :—

- (a) The Commonwealth Government has guaranteed a price for wheat grown and delivered to the Australian Wheat Board or other approved organizations for each season 1947-48 to 1952-53.
- (b) The price guaranteed was 6s. 3d. per bushel f.o.r. ports, bulk basis (this being related to costs of producing wheat in the 1947-48 season), subject to variation, as agreed upon by the Commonwealth Minister for Commerce and Agriculture in consultation with the appropriate State Ministers, in accordance with variations in the cost of producing wheat in subsequent seasons. Following reviews of wheat production costs, the guaranteed price was increased to 6s. 8d. per bushel f.o.r. ports, bulk basis for the 1948-49 season and to 7s. 1d. per bushel for the 1949-50 season. For the 1947-48 and 1948-49 seasons the price of wheat fixed for home consumption was the guaranteed price of 6s. 3d. and 6s. 8d. per bushel respectively, but for the 1949-50 season it remained unchanged from the previous year at 6s. 8d. per bushel. The additional 5d. per bushel payable to growers for wheat for home consumption in 1949-50 was met by subsidy provided by the Commonwealth Government. For the 1950-51 season the subsidy was withdrawn and the guaranteed and home consumption prices fixed at 7s. 10d. per bushel (f.o.r. ports, bulk basis).



- (c) The guaranteed price applies in respect of the export from any one season's crop up to a maximum of 100,000,000 bushels.
- (d) A Wheat Prices Stabilization Fund has been established by means of a tax on wheat exported. The tax applies when the export price is greater than the guaranteed price, the rate of tax being 50 per cent. of the difference between the two but not exceeding 2s. 2d. per bushel.
- (e) The Stabilization Fund will be drawn upon as required to meet the guaranteed price when this exceeds the export price. If amounts held in the Fund are at any time insufficient for this purpose, the deficiency will be provided by the Commonwealth Government from Consolidated Revenue.

(iv) *The Australian Wheat Board and the Stabilization Fund.* The Australian Wheat Board, as reconstituted under the Commonwealth Wheat Industry Stabilization Act 1948, commenced to perform its functions under the Act on 18th December, 1948.

The provisions of the Commonwealth Wheat Stabilization Plan relating to the levy of a tax on wheat exported and the establishment of a Stabilization Fund were implemented by the Commonwealth Government under legislation passed in 1946 and in 1948. Contributions to the Fund from the 1949-50, 1950-51 and 1951-52 harvests were approximately £15,000,000, £11,000,000 and £8,400,000 respectively. The 1949-50 harvest contributions were refunded to growers in August, 1952. No contributions were made to the Fund from the 1952-53 harvest.

5. *Marketing of Wheat.*—(i) *General.* On page 908 of Official Year Book No. 37 an outline was given of the circumstances leading up to the establishment by the Commonwealth Government on 21st September, 1939 of the Australian Wheat Board, under the National Security (Wheat Acquisition) Regulations.

(ii) *Australian Wheat Board.* Under the Wheat Acquisition Regulations the Board was empowered, subject to directions of the Minister for Commerce and Agriculture, to purchase, sell or dispose of wheat or wheat products, manage and control all matters connected with the handling, storage, protection, shipment, etc., of wheat acquired, and such other matters necessary to give effect to the regulations under which it was created. The Australian Wheat Board was reconstituted and vested with similar powers under the Commonwealth Wheat Stabilization Act 1948, for the purpose of administering the Wheat Stabilization Plan (see paragraph 4 (iii) above). The reconstructed Board commenced operations on 18th December, 1948.

(iii) *Wheat Acquired and Disposed of.* (a) *Wheat Acquired.* Particulars of wheat acquired by the Australian Wheat Board from the 1942-43 to 1951-52 harvests are shown in the following table :—

AUSTRALIAN WHEAT BOARD : WHEAT ACQUIRED, 1942-43 TO 1951-52.

('000 Bushels.)

Pool.	Harvest.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
6 .. ..	1942-43	44,709	40,213	4,403	34,660	17,983	22	141,990
7 .. ..	1943-44	40,880	17,227	4,599	18,141	13,853	57	94,757
8 .. ..	1944-45	12,167	941	5,837	6,758	13,079	39	38,821
9 .. ..	1945-46	54,889	25,621	7,492	18,162	17,742	23	123,929
10 .. ..	1946-47	8,635	44,482	444	24,818	20,521	68	98,968
11 and 11A ..	1947-48	89,416	44,402	10,017	29,572	31,128	59	204,594
12 .. ..	1948-49	58,358	46,661	13,544	23,515	32,828	103	175,009
13 .. ..	1949-50	75,450	55,238	11,195	26,377	34,581	88	202,929
14, 14A and 14B	1950-51	37,292	49,430	7,712	29,523	46,088	60	170,105
15 .. ..	1951-52	33,852	43,765	6,169	25,773	36,412	48	146,019

(b) *Wheat Disposal.* Details relating to the disposal of wheat during the years ended 30th November, 1946 to 1952 are shown in the following table :—

AUSTRALIAN WHEAT BOARD : DISPOSAL OF WHEAT, 1946 TO 1952.(a)  
(’000 Bushels.)

Particulars.	1946.	1947.	1948.	1949.	1950.	1951.	1952.
Sold for export as wheat ..	19,820	13,314	104,253	67,225	80,931	85,227	46,192
Sold for export as flour ..	37,487	34,927	45,553	41,938	30,947	42,454	36,693
Sold for local consumption as flour ..	32,204	30,833	33,006	34,493	35,484	37,577	39,049
Sold for all other purposes ..	26,283	25,071	22,702	24,109	25,499	29,556	26,233

(a) Years ended 30th November.

(iv) *Finance.* The Wheat Acquisition Regulations empowered the Minister to arrange with the Commonwealth Bank for advances to the Board, the advances being guaranteed by the Commonwealth Government. The Wheat Industry Stabilization Act 1948 included similar provisions for advances to the reconstituted Board established under that Act.

AUSTRALIAN WHEAT BOARD : FINANCIAL OPERATIONS POOLS Nos. 10 to 15.  
(£.)

Particulars.	No. 10 Pool.(a)	Nos. 11 and 11A Pools.(a)	No. 12 Pool.(a)	No. 13 Pool.(a)	Nos. 14, 14A and 14B Pools. (b)	No. 15 Pool.(b)
	(1946-47 Harvest).	(1947-48 Harvest).	(1948-49 Harvest).	(1949-50 Harvest).	(1950-51 Harvest).	(1951-52 Harvest).
Paid to growers .. ..	643,683,708	144,069,316	96,748,162	129,469,276	93,478,957	71,144,300
Rail freight .. ..	1,795,753	5,118,053	4,629,297	6,300,839	6,100,000	7,580,000
Expenses .. ..	1,769,592	3,830,755	3,110,979	4,393,660	4,855,000	5,250,000
<b>Total Payments</b> ..	<b>647,249,053</b>	<b>153,018,124</b>	<b>104,488,438</b>	<b>140,163,775</b>	<b>104,433,957</b>	<b>83,974,300</b>
Value of sales delivered ..	(c) 45,309,645	(d) 153,018,124	(e) 104,488,438	(f) 140,163,775	(g) 116,088,439	(h) 95,400,195
Value of flour tax .. ..	1,939,408	..	..	..	..	..

(a) Complete. (b) Incomplete. (c) Includes £4,329,780 collected under Wheat Export Charges Act 1946 and subsequently distributed to growers, plus interest, £99,224. (d) Includes £16,420,334 paid into Wheat Prices Stabilization Fund under Wheat Export Charges Act 1948, since refunded and distributed to growers, plus interest £579,666. (e) Includes £12,495,073 paid into Wheat Prices Stabilization Fund under Wheat Export Charges Act 1948, plus interest, £464,027. (f) Includes £15,244,895 paid into Wheat Prices Stabilization Fund under Wheat Export Charges Act, 1948, plus interest, £394,285. (g) Includes £11,069,030 paid into Wheat Prices Stabilization Fund under Wheat Export Charges Act 1948. (h) Includes £5,614,684 paid into Wheat Prices Stabilization Fund under Wheat Export Charges Act 1948.

NOTE.—Details of earlier pools will be found in Official Year Books No. 36, p. 798, No. 37, p. 909, No. 38, p. 943, and No. 39, p. 943.

(v) *Advances to Growers.* Full details of advances made to wheat growers in respect of pools prior to No. 12 were given in earlier issues of the Year Book.

The table below shows particulars of advances made to 23rd May, 1953 in pools Nos. 12 to 16.

**WHEAT POOLS Nos. 12 to 16 : ADVANCES MADE TO GROWERS TO 23rd MAY, 1953.**

Particulars.	Amount Paid (Trucks Terminal Port Basis).									
	No. 12 Pool.(a) (1948-49 Harvest).		No. 13 Pool.(a) (1949-50 Harvest).		No. 14, 14A and 14B Pools.(a) (1950-51 Harvest).		No. 15 Pool.(a) (1951-52 Harvest).		No. 16 Pool.(a) (1952-53 Harvest).	
	Per Bushel.	Total.	Per Bushel.	Total.	Per Bushel.	Total.	Per Bushel.	Total.	Per Bushel.	Total.
	<i>s. d.</i>	£'000.	<i>s. d.</i>	£'000.	<i>s. d.</i>	£'000.	<i>s. d.</i>	£'000.	<i>s. d.</i>	£'000.
Advances made to Growers—										
1st Payment—										
Bulk ..	5 0	} 45,339	6 0	} 62,833	6 7	} 57,798	7 10	} 59,275	12 0	} 109,619
Bagged ..	5 6		6 6		7 3		9 0		12 9	
2nd Payment—										
Bulk ..	1 6	} 13,126	2 0	} 20,292	1 0	} 8,505	1 7	} 11,560		
Bagged ..	1 6		2 0		1 0		1 7			
3rd Payment—										
Bulk ..	1 0	} 8,750	1 6	} 15,220	1 0	} 8,505	1 0	} 7,301		
Bagged ..	1 0		1 6		1 0		1 0			
4th Payment—										
Bulk ..	2 0	} 17,501	1 6	} 15,220	(b)2 0	} 18,364	1 6	} 11,397		
Bagged ..	2 0		1 6		(b)2 0		1 9			
5th Payment—										
Bulk ..	0 3.3	} 3,093	0 5	} 5,531	0 7.5	} 5,880	0 10	} 6,364		
Bagged ..	0 5.9		0 9		0 10		1 0			
6th Payment—										
Bulk ..	1 6.105	} 13,255	1 7.062	} 16,215						
Bagged ..	1 6.305		1 7.362							
Total—										
Bulk ..	11 3.405	} 101,064	13 0.062	} 135,311	b11 2.5	} 99,052	12 9	} 95,897	12 0	} 109,619
Bagged ..	12 0.205		13 10.362		b12 7		14 4		12 9	

(a) Rail freight was deducted from 1st payment.

(b) is. 6d. per bushel (bulk and bagged) less for No. 14B Pool than for Nos. 14 and 14A.

**6. International Wheat Agreement.**—Following a series of unsuccessful attempts extending over a period of years to secure an arrangement for the stabilization of international trade in wheat, an International Wheat Agreement was signed in Washington, D.C., United States of America, on 6th March, 1948, by 33 importing nations and the three exporting countries of Canada, United States of America and Australia. However, principally owing to the failure of the Government of the United States of America to ratify the Agreement within the prescribed time, it was allowed to lapse.

A further International Wheat Agreement was signed in Washington in March and April, 1949 by the representatives of 41 nations, comprising all the important wheat importing countries excluding Germany and Japan and the wheat exporting countries of Canada, United States of America, Australia, France and Uruguay. The 1949 Agreement was similar to that proposed in 1948, its stated objectives being "to assure supplies of wheat to importing countries and markets for wheat to exporting countries at equitable and stable prices".

The Agreement covered a period of four years from 1st August, 1949 to 31st July, 1953, with provision for extension beyond that date, if desired. Under its terms, the exporting countries participating in the Agreement were to sell specified minimum quantities of wheat each year if required by importing countries to do so at the maximum price quoted in the Agreement, while the importing countries were obliged to buy specified quantities if required by the exporter at the minimum price quoted for the relevant year. Expressed in Australian currency equivalent, the maximum price in respect of transactions under the Agreement was approximately 16s. 6d. per bushel (including 5d. per bushel carrying charge) for each year, while minimum prices ranged from 13s. 5d. per bushel in 1949-50 to 10s. 9d. per bushel in 1952-53.

The export and import quotas originally specified in the Agreement, totalling 456.3 million bushels, were subsequently varied because of—(i) the withdrawal of certain countries from participation in the Agreement (Uruguay as an exporter, and China, principally, of the importing countries), and (ii) the admission of new members to the Agreement. The principal new participants were Germany (from late 1949) and Japan (from 1951-52), for which the United States of America originally accepted responsibility for wheat supplied outside the provisions of the Agreement.

The adjusted quotas for 1951-52 initially totalled 580.9 million bushels, but because Australian supplies in that year were inadequate to meet commitments, her quota was reduced from 88.7 million bushels to 72.0 million bushels and the total quota was reduced to 572.8 million bushels. The table below shows guaranteed sales and purchases and actual transactions recorded during 1951-52.

**INTERNATIONAL WHEAT AGREEMENT: GUARANTEED ANNUAL SALES AND PURCHASES AND TRANSACTIONS RECORDED FOR 1951-52.**  
(’000,000 Bushels.)

Exporting Country.	Guaranteed Annual Sales.(a)	Sales Recorded 1951-52.	Importing Country.	Guaranteed Annual Purchases.(a)	Purchases Recorded 1951-52.
United States of America ..	255.1	255.1	United Kingdom ..	177.1	177.1
Canada .. .. .	241.6	241.6	Germany .. .. .	66.1	65.7
Australia .. .. .	72.0	71.2	Italy .. .. .	40.4	36.1
France .. .. .	4.1	4.1	India .. .. .	55.1	55.0
			Netherlands .. ..	24.8	24.9
			Belgium .. .. .	20.2	20.1
			Union of South Africa ..	11.0	10.2
			Remaining Importing Countries .. .. .	186.2	182.9
<b>Total .. .. .</b>	<b>572.8</b>	<b>572.0</b>	<b>Total .. .. .</b>	<b>580.9</b>	<b>572.0</b>

(a) Wheat and wheat flour as wheat.

A further agreement covering a period of three years from 1st August, 1953 to 31st July, 1956 was signed in Washington in April, 1953 by all member countries of the 1949 Agreement except the United Kingdom. It was decided that Australia's export quota under the new Agreement should be 48 million bushels.

7. **Wheat Farms.**—(i) *Number.* Particulars of the number of farms growing 20 acres and upwards of wheat for grain during each of the years 1947-48 to 1951-52, compared with the average for the five years ended 1938-39, are shown in the following table. It should be noted that a farm worked on the share system or as a partnership is included as one holding only.

**NUMBER OF FARMS GROWING 20 ACRES AND UPWARDS OF WHEAT FOR GRAIN.**

State.	Average 1934-35 to 1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
New South Wales ..	15,657	16,797	15,674	15,594	14,279	13,147
Victoria .. .. .	12,393	12,703	12,105	11,491	11,203	10,076
Queensland .. .. .	2,403	2,921	3,804	3,744	3,862	3,005
South Australia ..	12,255	10,171	9,405	9,346	8,416	8,345
Western Australia ..	8,859	7,551	7,779	7,808	7,814	7,766
Tasmania .. .. .	269	126	123	58	79	51
<b>Total (a) .. .. .</b>	<b>51,836</b>	<b>50,269</b>	<b>48,890</b>	<b>48,041</b>	<b>45,653</b>	<b>42,390</b>

(a) Excludes Australian Capital Territory.

(ii) *Special Tabulations relating to Wheat Holdings.* With the co-operation of State Statisticians, a series of special tabulations relating to rural holdings was undertaken for all States for the year 1949-50. The tabulations, which covered, *inter alia*, a series

of size classifications of wheat farms, have been published in detail in *Primary Industries Bulletin*, 1949-50, No. 44. A similar tabulation was made for the year 1947-48, a summary of the results being published in *Production Bulletin* No. 42, Part II.—*Primary Industries* and Official Year Book No. 38, page 947.

8. Area, Production and Average Yield.—(i) *Area*. Wheat is the principal crop raised in Australia, and its progress since 1860 has been almost continuous. Prominent features in its early development were the increase in population following the discovery of gold and the redistribution of labour after the surface gold had been won. The economic depression of 1893 interrupted its progress, but its subsequent recovery was assisted by the invention of mechanical appliances, the use of superphosphates as an aid to production, and the introduction of new and more suitable varieties for Australian conditions. The establishment of closer settlement schemes and the settling of returned soldiers and others on the land were additional factors in its expansion. The most serious interruptions in more recent years were those occasioned by the two World Wars and the economic depression of the early 'thirties.

As previously mentioned, any variation in the acreage sown to this cereal materially affects the total area of crops. The area, production and average yield per acre of wheat for grain in each State are shown below for the years 1947-48 to 1951-52 in comparison with the averages for the decennial periods ended 1938-39 and 1950-51:—

#### WHEAT FOR GRAIN: AREA, PRODUCTION AND AVERAGE YIELD.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA ('000 ACRES).								
Average, 1929-30 to 1938-39 ..	4,302	3,063	277	3,526	3,158	17	2	14,345
1947-48 ..	5,043	3,227	462	2,375	2,760	8	5	13,880
1948-49 ..	4,038	2,996	608	2,063	2,867	7	4	12,583
1949-50 ..	4,012	2,828	600	1,896	2,894	6	4	12,240
1950-51 ..	3,329	2,735	559	1,848	3,185	5	2	11,663
Average, 1941-42 to 1950-51 ..	3,721	2,737	411	2,036	2,346	6	2	11,259
1951-52 ..	2,733	2,464	455	1,613	3,094	4	1	10,384
PRODUCTION ('000 BUSHEL). (a)								
Average, 1929-30 to 1938-39 ..	55,935	38,416	4,118	34,700	35,812	374	43	169,398
1947-48 ..	95,227	46,962	10,685	32,524	34,500	118	100	220,116
1948-49 ..	64,704	49,064	14,317	26,136	36,250	156	76	190,703
1949-50 ..	81,939	57,434	11,778	28,351	38,500	127	92	218,221
1950-51 ..	43,273	51,236	8,785	30,936	49,900	95	19	184,244
Average, 1941-42 to 1950-51 ..	52,817	39,529	7,461	26,386	29,446	113	48	155,800
1951-52 ..	39,689	45,995	6,632	27,301	40,000	94	14	159,725
AVERAGE YIELD PER ACRE (BUSHEL). (a)								
Average, 1929-30 to 1938-39 ..	13.00	12.54	14.88	9.84	11.34	21.73	20.63	11.81
1947-48 ..	18.88	14.55	23.11	13.70	12.50	15.20	20.90	15.86
1948-49 ..	16.02	16.38	23.56	12.67	12.64	22.69	18.23	15.15
1949-50 ..	20.42	20.31	19.63	14.95	13.30	23.26	20.55	17.83
1950-51 ..	13.00	18.73	15.72	16.74	15.67	17.84	10.10	15.80
Average, 1941-42 to 1950-51 ..	14.19	14.44	18.16	12.96	12.55	19.86	18.49	13.84
1951-52 ..	14.42	18.67	16.59	16.92	12.93	26.10	13.97	15.38

(a) 60 lb. per bushel.

A graph showing the expansion of the area sown to wheat for grain in Australia since 1860 appears on page 875 while a map showing the distribution of areas growing wheat for grain throughout Australia in 1947-48 appeared on pp. 977-8 of issue No. 39. Similar maps showing the distribution of wheat areas in 1924-25 and 1938-39 appeared in Official Year Book No. 22, p. 695, and Official Year Book No. 34, p. 451, respectively.

(ii) *Production.* Apart from the variations in the area sown, the size of the wheat harvest in Australia is largely determined by the nature of the season and inconsistencies in this respect are reflected in the yearly production.

It should be noted, however, that with improved farming methods, including the proper tillage of the soil, rotation of crops, the growing of suitable varieties and the application of fertilizers, average yields per acre during five decades to 1951 have shown a continued improvement.

The main wheat-producing States of Australia are New South Wales, Victoria, South Australia and Western Australia. Queensland production normally approaches local demands, but Tasmania imports from the mainland to satisfy its needs, though partly in exchange it ships flour made from local wheat which is particularly suitable for biscuits. Normally the production of wheat greatly exceeds Australian requirements, and from half to three-quarters of the crop is exported overseas.

Australia's wheat production in 1951-52 was 159.7 million bushels, representing an average yield of 15.38 bushels per acre. This was 3.9 million bushels more than the average for the decennium ended 1950-51 and 9.7 million bushels less than the average for the ten years ended 1938-39.

(iii) *Average Yield.* Short-term variations in this are due chiefly to the vagaries of the seasons. The best average yields per acre for single seasons since 1901 were obtained in 1920-21, 16.08 bushels; in 1942-43, 16.78 bushels; and in 1949-50, 17.83 bushels. The average yield obtained for the 1951-52 season was 15.38 bushels.

(iv) *Decennial Averages, 1861-70 to 1943-52.* The following table shows the average area, production and yield per acre for decennial periods since 1861.

#### WHEAT FOR GRAIN : AVERAGE AREA AND PRODUCTION, AUSTRALIA.

Decennium.	Area.	Production.	Yield per Acre.
	'000 Acres.	'000 Bushels.	Bushels.
1861-70 .. .. .	831	10,622	12.77
1871-80 .. .. .	1,646	17,711	10.76
1881-90 .. .. .	3,258	26,992	8.29
1891-1900 .. .. .	4,087	29,934	7.32
1901-10 .. .. .	5,711	56,058	9.82
1911-20 .. .. .	8,928	95,480	10.69
1921-30 .. .. .	11,291	135,400	11.99
1931-40 .. .. .	14,176	177,758	12.54
1941-50 .. .. .	11,358	145,599	12.82
1943-52 .. .. .	11,097	155,101	13.98

9. *Varieties of Wheat Sown.*—(i) *General.* The breeding of wheat suitable to local conditions has long been established in Australia. Farrar (1845-1905) did invaluable work in pioneering this field and the results of his labour and the continued efforts of those who have since followed him have proved of immense benefit to the wheat industry of Australia. Their efforts have resulted in better average yields, a greater uniformity of sample, with which has accrued certain marketing advantages, as well as an improvement in the quality of wheat grown. More than 1,000 different varieties of Australian wheats have been catalogued by the Commonwealth Scientific and Industrial Research Organization, but the number of the principal varieties grown during each season is restricted to about 40.

(ii) *States, 1951.* Details of the principal varieties of wheat sown in 1951 in the five main producing States and the proportion each bears to the total area sown are given in the following table.

**WHEAT : PRINCIPAL VARIETIES SOWN FOR ALL PURPOSES. 1951.**

New South Wales.		Victoria.(a)		Queensland.(b)	
Variety.	Proportion.	Variety.	Proportion.	Variety.	Proportion.
	%		%		%
Bencubbin ..	34.50	Quadrat ..	36.36	Charter ..	16.54
Gabo ..	13.00	Insignia ..	30.37	Gabo ..	14.67
Kendee ..	7.78	Pinnacle ..	15.79	Seafoam ..	8.30
Celebration ..	6.53	Bencubbin ..	4.67	Puora ..	7.85
Ford ..	5.87	Magnet ..	3.99	Lawrence ..	7.30
Charter ..	5.39	Baldmin ..	1.78	Puseas ..	4.25
Bordan ..	4.00	Gabo ..	1.52	Puglu ..	3.95
Koala ..	2.36	Pindar ..	1.39	Fedweb ..	3.62
Quadrat ..	2.31	Diadem ..	0.98	Three Seas ..	3.19
Magnet ..	1.86	Ghurka ..	0.88	Puno ..	3.11
Eureka and		All other (c) ..	2.27	Celebration ..	3.06
Eureka 2 ..	1.63			Kendee ..	2.76
Warigo ..	1.56			Cailloux ..	2.02
Yalta ..	1.30			Warput ..	0.88
All other (c) ..	11.91			All other (c) ..	18.50
Total ..	100.00	Total ..	100.00	Total ..	100.00

South Australia.		Western Australia.	
Variety.	Proportion.	Variety.	Proportion.
	%		%
Gabo ..	20.58	Bungulla ..	27.92
Bencubbin ..	15.08	Bencubbin ..	23.98
Warigo ..	6.10	Glucub ..	11.09
Scimitar ..	4.93	Kondut ..	10.96
Dirk ..	4.00	Wongoondy ..	4.29
Quadrat ..	4.00	Eureka ..	3.26
Reldep ..	3.97	Koorda ..	3.22
Waratah ..	3.42	Ranee ..	1.99
Marathon ..	3.21	Gabo ..	1.74
Javelin ..	2.70	Regalia ..	1.26
Gluyas ..	2.69	Insignia ..	1.17
Sword ..	2.64	Blucub ..	0.95
Insignia ..	2.44	All other (c) ..	8.17
Rapier ..	2.06		
Bungulla ..	1.99		
Glen Wari ..	1.95		
All other (c) ..	18.24		
Total ..	100.00	Total ..	100.00

(a) Wheat sown for grain and hay only.  
"not stated."

(b) Wheat sown for grain only.

(c) Includes

10. **F.A.Q. Standard of Wheat.**—The Chambers of Commerce in each of the four main wheat States each year determine the "f.a.q." standard for the State. "F.a.q." means "fair average quality", and the standard is used as the basis for sales of the season's crop. It represents the average quality for the season, and this average varies from year to year, and from State to State. "F.a.q." is an Australian term, and the method differs from that of other countries which sell according to sample, or (as in Canada) according to grades which are fixed, and do not vary from year to year.

Samples of wheat are obtained by the Chambers of Commerce from the different wheat districts, and are mixed to give a representative sample of the whole crop. From this representative sample the f.a.q. weight is determined by the use of the Schopper 1-litre scale chondrometer.

The f.a.q. weight of a bushel of wheat used in each of the four main wheat-producing States for the 1952-53 season's crop was as follows (1951-52 details in parentheses)—New South Wales, 64 lb. (63 lb.); Victoria, 64½ lb. (64 lb.); South Australia, 63½ lb. (63 lb.); and Western Australia, 64¾ lb. (62½ lb.).

11. **Price of Wheat.**—(i) *Home Consumption.* The price charged by the Australian Wheat Board for wheat sold to millers for gristing into flour for consumption in Australia and for wheat sold as stock feed is shown in the table below for the years indicated.

**AUSTRALIAN WHEAT BOARD'S PRICE FOR WHEAT FOR HOME CONSUMPTION :  
AUSTRALIA.**

(s. d. per Bushel, Bulk Basis.)

Particulars.	1947.	1948.	1949.	1950.(a)	1951.	1952.	1953.
For Flour ..	(b) 3 11	6 3	6 8	6 8	7 10	10 0	11 11
For Stock Feed ..	4 11	6 3	6 8	6 8	7 10	(c)12 0	(c)13 11

(a) Excludes 5d. per bushel subsidy paid by the Commonwealth Government, making the total return to growers 7s. 1d. per bushel, bulk basis. (b) Excludes 1s. per bushel recovered from Flour Tax and included in advances to growers. (c) Excludes subsidy of 4s. 1d. in 1952 and 2s. 2d. in 1953 paid by the Commonwealth Government. In Western Australia the price in 1952 was 10s., exclusive of subsidy.

(ii) *Export Wheat Prices—Australian Wheat Board's Basic Selling Price.* Details of the export wheat prices are given in the table below for the years stated. Owing to changes which have occurred in the manner of selling export wheat, it is not possible to quote prices on a strictly comparable basis throughout the period covered by the table. The prices for 1939 represent the "weighted average shippers' limits f.o.r. ports for growers' bagged and bulk lots, Sydney, Melbourne and Adelaide." Following the acquisition of the 1939-40 and later wheat crops by the Commonwealth Government, it was no longer possible to record prices on this basis. The prices shown below for the years 1946 to 1951 are the basic export selling prices of the Australian Wheat Board. The quotations are more or less nominal, as the market is "broad" and wheat is sold at times above and below this basic price, depending upon conditions of sale. Much of the wheat is sold at prices fixed under contract for delivery over lengthy periods.

As from August, 1949, under the terms of the International Wheat Agreement, Australia has undertaken to sell, if required, 80.8 (subsequently increased to 88.7, but for the year 1951-52, because of the small harvest, reduced to 72.0) million bushels per year (August to July) to contracting importing countries. After commitments



under the International Wheat Agreement have been met, Australia is free to sell any additional wheat available at any price which may find a market. It has therefore become necessary since August, 1949, to distinguish between the prices applicable to wheat for sale within and without the Agreement as follows :—

(a) *Prices at which Australia is prepared to sell Wheat under the Terms of the I.W.A.* These are shown in terms of Australian currency under the heading "I.W.A. Quota Wheat" in the table below. Up to July, 1953 (that is for the full period covered by the 1949 Agreement) negotiations were at the maximum price permitted by the Agreement. As the prices were fixed basically in terms of gold the maximum prices expressed in terms of Australian currency rose from 11s. 2d. prior to devaluation to 16s. 1d. per bushel after devaluation (19th September, 1949). From 1st December, 1951 the f.o.b. price at which Australia will sell wheat under the I.W.A. was increased to 16s. 6d. per bushel (bulk basis) by the addition of 5d. per bushel carrying charge.

(b) *Prices at which Australia is prepared to sell Wheat outside the I.W.A.* These are shown in terms of Australian currency under the heading "Free" Wheat in the table below. The amount of wheat available for sale at these prices on the "free" market is that which is available, after commitments under the I.W.A. have been met and thus varies considerably from year to year.

Owing to the fact that in recent years varying proportions of exportable wheat have been sold forward on contracts for delivery some months ahead at widely differing prices and because sales have been made on differential bases under the I.W.A. since August, 1949 prices recorded in the table below do not necessarily represent the prices actually received for wheat shipped during the periods shown.

### EXPORT WHEAT PRICES : AUSTRALIA.

(s. d.)

Year ended December.	Average price per bushel for bulk and bagged lots f.o.b. ports basis.	Year ended July.	Australian Wheat Board average selling price per bushel for f.a.q. bulk wheat, f.o.b. basis.	
			I.W.A. Quota Wheat.	"Free" Wheat.
	s. d.		s. d.	s. d.
1939(a) .. ..	2 4	1950 .. ..	15 5	18 6
1946(b) .. ..	10 11	1951 .. ..	16 1	18 9
1947(b) .. ..	16 8	1952 .. .. (d)	16 4	20 9
1948(b) .. ..	18 8	1953 .. .. (d)	16 6	21 2
1949(b)(c) .. ..	15 1			

(a) Weighted average of shippers' limits for growers' bulk and bagged lots, Sydney, Melbourne and Adelaide, for eight months ended August, 1939. (b) Australian Wheat Board basic export selling price. (c) Average for seven months ended July, 1949. (d) Includes 5d. per bushel carrying charge from 1st December, 1951.

(iii) *Payments to Growers.* Reference is made in par. 5 (v) of this section to the amounts paid to growers from the wheat pools.

12. *Value of the Wheat Crop.*—The estimated value of the wheat crop in each State and in Australia during the seasons 1950–51 and 1951–52 is shown below. The values are on a gross basis at the principal market in each State and are based upon payments made to producers.

## WHEAT FOR GRAIN : VALUE OF CROP(a), 1950-51 AND 1951-52.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
1950-51—								
Aggregate value £	28,868,190	34,054,844	6,285,124	22,793,283	32,664,123	63,890	10,617	124,740,971
Value per acre ..	£8/13/5	£12/9/0	£11/4/11	£12/6/8	£10/5/1	£12/0/3	£5/10/8	£10/13/11
1951-52—								
Aggregate value £	29,031,730	34,090,625	5,395,520	22,643,963	29,492,155	68,780	10,803	120,733,576
Value per acre ..	£10/10/11	£13/16/9	£11/17/5	£14/0/9	£9/10/7	£19/1/10	£10/7/4	£11/12/7

(a) Gross value of total crop, including drought relief and also seed used on farm.

13. **Production and Disposal of Wheat in Australia.**—In the following table details are given of the production of wheat and its disposal during each of the cereal years ended 30th November, 1948 to 1952 in comparison with the average for the three years ended November, 1937 to 1939. The particulars respecting local consumption refer to sales actually executed by the Australian Wheat Board, whilst those respecting exports represent actual shipments. (For particulars of production and exports from 1860 see graph, p. 876).

## WHEAT : PRODUCTION AND DISPOSAL, AUSTRALIA.

('000,000 Bushels.)

Particulars.	Average, Three Years ended 30th Nov. 1939.	Year ended 30th November—				
		1948.	1949.	1950.	1951.	1952.
Opening stocks (including flour as wheat) .. .. .	10.2	13.3	26.3	19.0	43.8	19.4
Production .. .. .	164.7	220.1	190.7	218.2	184.2	159.7
<b>Total Available Supplies</b> .. .. .	<b>174.9</b>	<b>233.4</b>	<b>217.0</b>	<b>237.2</b>	<b>228.0</b>	<b>179.1</b>
Exports—						
Wheat .. .. .	75.0	86.9	82.5	82.8	85.9	45.6
Flour as wheat .. .. .	30.6	43.0	35.7	36.9	41.6	35.2
Local Consumption—						
Flour as wheat .. .. .	30.9	33.6	34.5	35.5	37.6	39.0
Stock feed .. .. .	9.3	20.7	22.6	23.5	27.4	23.9
Seed .. .. .	14.6	12.5	12.2	11.6	10.5	10.3
Breakfast foods and other uses .. .. .	(a)	4.2	4.2	3.0	4.3	3.8
Balance retained on farm (excluding seed) .. .. .	(b)	3.9	4.2	4.7	4.2	3.4
Closing stocks (including flour as wheat) .. .. .	14.5	26.3	19.0	43.8	19.4	16.9
<b>Total Disposals</b> .. .. .	<b>174.9</b>	<b>231.1</b>	<b>214.9</b>	<b>241.8</b>	<b>230.9</b>	<b>178.1</b>
Excess (+) or Deficiency (—) of Disposals in respect of Available Supplies (c) .. .. .	..	—2.3	—2.1	+4.6	+2.9	—1.0

(a) Included with flour (local consumption). (b) Included with stock feed. (c) Includes allowance for unrecorded movements in stocks, gain or loss in out-turn, etc.

14. Exports of Wheat and Flour.—(i) *Quantities.* The following table shows particulars of the exports of wheat and flour and total of both in terms of wheat for each of the years 1947-48 to 1951-52 compared with the average for the five years ended 1938-39. For the sake of convenience, flour has been expressed at its equivalent in wheat, 1 ton of flour being taken as equal to 46.3 bushels of grain. Wheat and flour have been imported to tide over lean seasons on only two occasions since 1900: in 1902-3 the wheat harvest was as low as 12,378,000 bushels, and wheat and flour representing 12,468,000 bushels of wheat were imported, whilst an equivalent of 7,279,000 bushels was imported in 1914-15 to supplement the yield of 25 million bushels produced in that season. During the five years ended 1951-52 exports in terms of wheat averaged 112,252,000 bushels compared with the average of 106,432,000 bushels for the five years ended 1938-39.

**WHEAT AND FLOUR : EXPORTS FROM AUSTRALIA.**

Year.	Quantity.			Value (£'000.)			
	Wheat.	Flour.		Total as Wheat.	Wheat.	Flour.	Total.
		As Flour.	As Wheat. (a)				
'000 bush.	Tons. (2,000 lb.)	'000 bush.	'000 bush.	'000 bush.	'000 bush.	'000 bush.	
Average, 1934-35							
1938-39 ..	76,473	617,073	29,959	106,432	14,813	5,058	19,871
1947-48 ..	60,174	788,017	36,485	96,659	52,813	31,981	84,794
1948-49 ..	83,030	860,578	39,845	122,875	64,705	33,916	98,621
1949-50 ..	78,426	775,499	35,906	114,332	62,173	26,482	88,655
1950-51 ..	86,782	886,533	41,046	127,828	74,151	33,022	107,173
1951-52 ..	62,921	791,470	36,645	99,566	55,287	33,107	88,394

(a) One ton (2,000 lb.) of flour is taken to be equivalent to 46.3 bushels of wheat. (b) Excludes wheatmeal for baking.

(ii) *Destination.* (a) *Wheat.* The following table shows the exports of wheat to various countries for each of the five years ended 1951-52 and the average for the five years ended 1938-39.

**WHEAT : EXPORTS FROM AUSTRALIA.**

('000 Bushels.)

Country to which Exported.	Average. 1934-35 to 1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
United Kingdom ..	45,195	17,226	34,523	9,435	20,017	17,932
Cyprus ..	..	..	1,582	773	1,276	2,266
India ..	1,662	21,336	16,939	35,254	16,742	7,372
Ireland, Republic of ..	3,276	2,402	1,337	321	1,897	1,933
New Zealand ..	1,537	4,401	7,395	5,756	4,863	9,649
Rhodesia, Southern ..	..	741	799	712	1,034	1,513
Union of South Africa ..	602	5	1,623	2,242	430	..
Other British Countries ..	3,985	4,900	4,885	629	1,184	1,609
Egypt ..	503	509	8,510	6,511	17,075	3,980
Finland ..	..	..	..	1,337	309	331
Germany ..	235	..	..	..	(a)2,336	(a)4,734
Italy ..	3,152	665	5	325	7,965	6,473
Japan ..	6,471	..	1,843	6,885	2,798	..
Netherlands ..	760	402	352	1,339	1,786	3,095
Persia (Iran) ..	..	23	2,260	1,023	740	148
Spain ..	246	..	..	1,655	..	..
Sweden ..	..	556	746	1,029	1,342	1,493
Other Foreign Countries ..	8,849	7,008	231	3,200	4,988	303
<b>Total ..</b>	<b>76,473</b>	<b>60,174</b>	<b>83,030</b>	<b>78,426</b>	<b>86,782</b>	<b>62,921</b>

(a) Germany, Federal Republic of.

(b) *Flour.* The following table shows the exports of flour to various countries for each of the five years ended 1951-52, and the average for the five years ended 1938-39 :—

**FLOUR : EXPORTS FROM AUSTRALIA.**

(Tons of 2,000 lb.)

Country to which Exported.	Average, 1934-35 to 1938-39. (a)	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
United Kingdom .. ..	142,912	56,366	233,544	35,236	112,953	96,432
Ceylon .. ..	16,915	190,217	187,987	131,348	190,674	187,134
Hong Kong .. ..	44,966	21,988	9,820	90,699	21,122	8,689
India .. ..	2,732	59,642	72,192	188,358	54,609	83,142
Malaya (British) .. ..	63,309	136,488	100,445	78,372	79,930	60,030
Mauritius .. ..	54,960	46,367	19,722	33,204	22,168	22,347
Singapore .. ..	(b)	4,729	15,282	21,399	58,339	52,238
Sudan Anglo-Egyptian	4,060	28	5,446	15,214	16,710	16,146
Other British Countries	5,623	122,712	70,037	35,589	60,173	41,013
Egypt .. ..	24,284	85,841	42,869	53,759	121,001	65,143
Indonesia, Republic of	..	..	..	4,472	62,890	62,322
Japan .. ..	722	1,887	124	18,649	163	..
Siam .. ..	3,175	..	3,249	12,068	8,697	8,475
Other Foreign Countries	283,415	61,752	99,861	57,132	77,104	88,359
<b>Total .. ..</b>	<b>647,073</b>	<b>788,017</b>	<b>860,578</b>	<b>775,499</b>	<b>886,533</b>	<b>791,470</b>

(a) Excludes wheatmeal for baking.  
58,377 tons, Palestine.

(b) Included with Malaya (British).

(c) Includes

15. *Stocks of Wheat and Flour.*—Stocks of wheat and flour in terms of wheat held by each State at 30th November in each year 1939 and 1948 to 1952 are shown in the following table. These data are based on stocks held at mills, sidings, ports and depots as recorded by the Australian Wheat Board.

**WHEAT (INCLUDING FLOUR IN TERMS OF WHEAT) : STOCKS AT 30TH  
NOVEMBER.(a)**

(Bushels.)

30th November—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
1939 .. ..	6,674,033	4,702,088	549,219	6,133,986	2,512,576	240,728	20,812,630
1948 .. ..	14,051,381	4,366,397	1,533,993	4,677,100	1,285,047	391,417	26,305,335
1949 .. ..	7,863,597	4,932,544	1,022,181	2,263,210	2,758,154	130,511	18,970,197
1950 .. ..	16,875,191	12,596,836	1,880,457	6,658,635	5,556,227	221,856	43,789,202
1951 .. ..	3,595,558	6,250,683	565,049	5,557,175	3,248,883	162,826	19,380,174
1952 .. ..	5,880,929	4,432,261	5,000	4,253,930	2,107,632	187,226	16,866,978

(a) One ton of flour is treated as equivalent to 46.3 bushels of wheat.

16. *Bulk Handling of Wheat in Australia.*—(i) *Description and Development of the Bulk Handling System.* A detailed description of the bulk handling system including its advantages and disadvantages compared with other methods of handling appeared on pages 954-8 of Official Year Book No. 39.

New South Wales, Victoria and Western Australia have operated bulk handling systems for a number of years, but no attempt was made until 1952 to introduce such a system in Queensland or South Australia. In this year, partly because of the difficulty of obtaining supplies of jute bags, the Australian Wheat Board erected an up-to-date plant for the receipt and shipping of wheat in bulk at the Port of Ardrossan in South Australia and a temporary silo at Pinkenba, Brisbane. Tasmania has to date not found bulk handling necessary as it is a relatively small wheat producer.

(ii) *Bulk Handling in the States.* Particulars of the operation of the bulk handling system and projected extensions of the system in the States concerned are set out below :—

(a) *New South Wales.* At present, there are 180 elevators situated at the more important wheat receiving stations throughout the State, with a storage capacity of 24,678,000 bushels, as well as terminal elevators at Sydney and Newcastle, which have receiving capacity per day of 6,000 tons and 2,000 tons respectively.

Work is proceeding on additions to country silos and the extension to the Newcastle terminal. In addition, four wheat storage sub-terminals at Junee, Temora, Parkes and Werris Creek are being erected to overcome the shortage of sacks and the immediate difficulties involved in constructing permanent silos at country centres. Two of these sub-terminals were in operation for the 1951-52 season. For that season there were also 75 temporary country bulkheads erected by the Australian Wheat Board each with a capacity of approximately 100,000 bushels. These bulkheads are operated by the Government Grain Elevators.

The following table illustrates the development of the bulk handling system in New South Wales from its inception in 1920-21 :—

GRAIN ELEVATORS : WHEAT RECEIVED, NEW SOUTH WALES.

Season.	Elevators in Country Districts.		Storage Capacity of Elevators available in Country Districts. (a)	Wheat Received.			Proportion of Total Crop Received in Elevators.
	Available.	Used.		In Country Elevators.	In Terminal Elevators from Non-Silo Stations.	Total.	
	No.	No.	Bushels.	Bushels.	Bushels.	Bushels.	%
1920-21 .. .. .	28	28	5,450,000	1,941,694	..	1,941,694	3.5
1930-31 .. .. .	99	99	16,373,000	22,948,116	724,972	23,673,088	35.9
1940-41 .. .. .	175	159	23,548,000	11,453,207	7,140	11,460,347	47.9
1948-49 .. .. .	180	180	24,478,000	36,103,108	..	36,103,108	55.8
1949-50 .. .. .	180	180	24,478,000	40,208,521	88,164	40,296,685	49.2
1950-51 .. .. .	180	180	24,678,000	62,679,000	..	26,679,000	61.7
1951-52 .. .. .	180	180	24,678,000	28,631,000	105,000	28,736,000	72.4

(a) At one filling. (b) Includes 268,000 bushels received into bulkheads. (c) Includes 3,483,000 bushels received into bulkheads and terminals.

(b) *Victoria.* The Victorian Grain Elevators Board operates at present 147 country elevators, including nine leased from flour mills, with a capacity of 16,639,000 bushels and a terminal elevator at Geelong with a capacity of 4,100,000 bushels. Amendments to the Grain Elevators Acts were passed in 1950 to permit the construction of elevators at a number of stations not yet provided with bulk handling facilities, and to erect additional bins at stations where the existing storage capacity is inadequate. The shortage of essential construction materials and labour has so far prevented commencement of this new work.

Temporary means of extending bulk handling facilities have been adopted pending these extensions and owing to cornsack difficulties. During the war years, the Australian Wheat Board had constructed or acquired sub-terminal storages at Dunolly, Murtoa and Warracknabeal with total storage capacity of 23,000,000 bushels. In addition, in recent years, a programme of construction of temporary bulkheads at country stations has been planned by the Australian Wheat Board and, for the 1951-52 season, 71 of these with a capacity of 5,990,000 bushels were in operation. Bulkheads were also constructed at eight country centres in New South Wales, where bulk wheat receipts are under the control of the Victorian bulk handling authorities. These gave a further 1,064,000 bushels of bulk storage capacity.

The following table sets out the development of the bulk handling system in Victoria for a series of years from 1939-40.

## GRAIN ELEVATORS : WHEAT RECEIVED, VICTORIA.

Season.	Elevators.		Terminal.		Wheat Received.	Proportion of Total Crop Received in Elevators.
	Number.	Capacity at one filling.	Number.	Capacity at one filling.		
1939-40 ..	48	'000 Bush. 5,385	1	'000 Bush. 2,250	'000 Bush. 10,784	% 23.9
1948-49 ..	138	14,159	1	4,100	38,739	79.0
1949-50 ..	138	14,159	1	4,100	45,341	78.9
1950-51 ..	(a) 147	16,639	1	4,100	(b) 40,590	79.2
1951-52 ..	(a) 147	16,639	1	4,100	(b) 41,849	91.0

(a) Includes 9 elevators leased from country flour mills. (b) Includes bulkheads and sub-terminals.

(c) *Queensland.* Bulkheads of 90,000 bushels capacity each have been erected at Oakley and Dalby in the Darling Downs. These together with a temporary terminal silo at Pinkenba, Brisbane with a capacity of 500,000 bushels first came into operation in the 1952-53 season.

(d) *South Australia.* Arising from the shortage of cornsacks which threatened the 1951-52 season and also the restricted demand overseas for wheat in bags, the Australian Wheat Board constructed a bulk terminal at Ardrossan capable of receiving wheat direct from growers on York Peninsula and storing approximately 1,000,000 bushels of wheat. With shipments being made during the receipt period the total which could be received into this facility would be about 1,250,000 bushels, whilst any bagged wheat received in excess of that accommodation could be later cut into the storage and shipped in bulk. This facility is controlled by the Australian Wheat Board and operated from the 1952-53 harvest.

(e) *Western Australia.* Under the Bulk Handling Act, 1936, the Co-operative Bulk Handling Ltd., controlled and managed by Western Australian wheat growers, has until 31st December, 1955, the sole right of receiving wheat in bulk at railway stations and sidings where the company has installations.

The company operates 268 sidings equipped for bulk handling, a shipping gallery and conveyor belt at Geraldton and a silo at Fremantle. The installations at Geraldton and Fremantle are owned by the State Government. Plans are in hand for the construction of a terminal at Albany and improvements at Bunbury which at present has a storage capacity of 300,000 bushels.

The method of storage in Western Australia differs from that employed in the eastern States. Horizontal storages made simply from timber and galvanized iron are employed as compared with the more costly vertical concrete structures in the eastern States. The Western Australian storage bins can be dismantled, moved and re-erected as required.

Owing to the nature of the system in use in Western Australia, particulars of the capacity comparable with those published for New South Wales and Victoria do not exist. The table below sets out the number of sidings equipped for bulk handling, receipts of bulk wheat and the proportion of the marketable harvest represented by the receipts for the seasons indicated.

## BULK WHEAT HANDLED : WESTERN AUSTRALIA.

Season.				Total Sidings Equipped.(a)	Total Bulk Receivals.	Receivals as a Proportion of Marketable Harvest.
				No.	Bushels.	%
1931-32	..	..	..	5	1,265,000	3.4
1941-42	..	..	..	232	33,304,000	(b) 97.8
1948-49	..	..	..	234	32,815,119	(c) 100.0
1949-50	..	..	..	234	34,565,140	(c) 100.0
1950-51	..	..	..	260	46,088,474	(c) 100.0
1951-52	..	..	..	268	36,412,027	(c) 100.0

(a) These figures do not include four bins in Lakes District erected in 1940, a fifth point at Ravensthorpe equipped for the 1947-48 season, and two installations in East and West Yorkrakin built in 1949. These points are removed from the railway and wheat received is transported by road to the rail or direct to the port. They do not include six points at which wheat is directly loaded into railway wagons.

(b) Quantities affected by war-time restrictions and difficulties. (c) In 1948, the Wheat Stabilization Act passed by the Western Australian Parliament as complementary legislation to the Federal Act provided for all bagged wheat to be treated. This is done by the company paying the grower the value of the bag when received and issuing him a bulk wheat receipt.

17. World Area and Production of Wheat.—The details in the following table of the world area and production of wheat by principal countries and by continents have been compiled from official sources so far as they are available, but more particularly from the records published by the Food and Agriculture Organization of the United Nations, and the United States Office of Foreign Agricultural Relations. The harvests shown for countries in the Northern Hemisphere are those garnered during the period March to October whilst those for the Southern Hemisphere cover the period November to February following.

## WHEAT : AREA, PRODUCTION AND YIELD PER ACRE IN VARIOUS COUNTRIES.

Continent and Country.	Area.(a)			Production.			Yield per Acre.		
	Average 1935-39.	1951.	1952.(b)	Average 1935-39.	1951.	1952.(b)	Average 1935-39.	1951.	1952.(b)
	'000 acres.	'000 acres.	'000 acres.	'000 bushels.	'000 bushels.	'000 bushels.	bus.	bus.	bus.
North America—									
Canada ..	25,595	25,254	25,995	312,399	552,657	687,922	12.2	21.9	26.5
United States ..	57,293	61,492	70,585	758,629	980,810	1,291,447	13.2	16.0	18.3
Total(c) ..	84,170	88,470	98,370	1,086,000	1,550,000	1,997,000	12.9	17.5	20.3
Europe—									
France ..	12,560	10,900	11,000	286,505	265,000	310,000	22.8	24.3	28.2
Greece ..	2,172	2,357	2,382	30,425	34,200	38,500	14.0	14.5	16.2
Italy ..	12,577	12,125	12,000	278,366	260,000	295,000	22.1	21.4	24.6
Spain ..	(d) 11,253	10,380	10,625	(d) 157,986	175,000	170,000	14.0	16.0	16.0
United Kingdom	1,843	2,131	2,030	62,351	86,460	86,130	33.8	40.6	42.4
Western Germany	(e) 2,785	2,650	2,950	(e) 92,400	112,580	120,920	33.2	42.5	41.0
Yugoslavia ..	5,400	4,349	4,530	97,700	83,664	61,618	18.1	19.2	13.6
Total(c) ..	74,890	71,170	71,340	1,599,000	1,585,000	1,650,000	21.4	22.3	23.1
U.S.S.R. ...	104,000	(f)	(f)	1,240,000	(f)	(f)	11.9	(f)	(f)

See next page for footnotes.

WHEAT: AREA, PRODUCTION AND YIELD PER ACRE IN VARIOUS COUNTRIES—*continued.*

Continent and Country.	Area.(a)			Production.			Yield per Acre.		
	Average 1935-39.	1951.	1952.(b)	Average 1935-39.	1951.	1952.(b)	Average 1935-39.	1951.	1952.(b)
	'000 acres.	'000 acres.	'000 acres.	'000 bushels.	'000 bushels.	'000 bushels.	bushel.	bushel.	bushel.
<b>Africa—</b>									
Algeria ..	4,185	4,037	4,258	35,201	33,000	45,000	8.4	8.2	10.6
Egypt ..	1,464	1,554	1,455	45,849	45,000	40,500	31.3	29.0	27.8
Total(c) ..	13,850	15,360	16,920	143,000	160,000	175,000	10.3	10.4	10.3
<b>Asia—</b>									
China ..	(e) 49,000	(g) 53,000	(f)	(e) 750,000	(g) 788,395	(g) 789,975	e 15.3	g 14.9	(f)
India ..	(e) 34,765	24,134	23,235	(e) 379,100	248,000	246,000	e 10.9	10.3	10.6
Iran ..	(e) 4,191	(f)	6,529	(e) 72,128	66,000	75,000	e 17.2	(f)	11.5
Japan ..	1,735	1,812	1,781	49,954	54,750	50,480	28.8	30.2	31.7
Pakistan ..	(h)	10,832	10,435	(h)	147,600	115,000	(h)	13.6	11.0
Turkey ..	8,973	12,000	13,500	135,690	205,000	235,000	15.1	17.1	17.4
Total(e) ..	108,190	114,620	115,320	1,498,000	1,610,000	1,630,000	13.8	14.0	14.1
<b>South America—</b>									
Argentina ..	15,834	6,772	13,500	221,769	77,161	285,000	14.0	11.4	20.0
Chile ..	1,963	1,853	2,070	31,562	36,300	43,590	16.1	19.6	21.1
Total(c) ..	20,490	12,150	19,190	281,000	155,000	375,000	13.7	12.8	19.5
<b>Oceania—</b>									
Australia ..	13,128	10,334	10,209	169,744	159,725	195,208	12.9	15.4	19.1
Total(c) ..	13,349	10,479	10,339	176,873	163,725	199,208	13.2	15.6	19.3
<b>World Total(e)</b>	418,940	427,250	446,480	6,024,000	6,480,000	7,326,000	14.4	15.2	16.4

(a) Figures refer to harvested areas as far as possible. (b) Preliminary. (c) Totals (estimates) include allowances for any missing data for countries shown and for other producing countries not shown. (d) 1935 only. (e) Average of less than five years. (f) Not available. See footnote (c). (g) Unofficial. (h) Included with India.

18. Exports—Principal Countries.—The following table shows the quantities of wheat exported from the chief exporting countries for the period 1934-38 and the years 1950 and 1951 according to statistics recently published by the Food and Agriculture Organization of the United Nations, and the United States Office of Foreign Agricultural Relations.

While Australia's production of wheat ranges between 2 and 4 per cent. of the world's total, its exports account for a much higher proportion of the total quantities shipped. During the five years 1934-38 Australia's share of world wheat exports was 16 per cent., but in 1951 the proportion fell to 11 per cent., although the actual quantity shipped was somewhat greater.



## WHEAT(a) : EXPORTS, PRINCIPAL COUNTRIES.

Exporting Country.	Average, 1934-38.		1950.		1951.	
	Quantity.	Proportion of World Total.	Quantity.	Proportion of World Total.	Quantity.	Proportion of World Total.
	'000 bushels.	%	'000 bushels.	%	'000 bushels.	%
Canada .. .. .	175,294	27.58	206,962	26.57	289,663	27.00
Argentina .. .. .	122,740	19.31	102,263	13.13	91,512	8.53
<b>Australia .. .. .</b>	<b>102,406</b>	<b>16.11</b>	<b>125,951</b>	<b>16.17</b>	<b>122,891</b>	<b>11.45</b>
United States of America .. .. .	46,274	7.28	250,286	32.13	474,066	44.19
U.S.S.R. (Russia) .. .. .	26,631	4.19	(b)14,697	1.89	(b)25,720	2.40
France .. .. .	18,316	2.88	32,488	4.17	30,107	2.80
All other .. .. .	143,993	22.65	46,305	5.94	38,937	3.63
<b>Total .. .. .</b>	<b>635,654</b>	<b>100.00</b>	<b>778,952</b>	<b>100.00</b>	<b>1,072,896</b>	<b>100.00</b>
<b>World Production (mil. bush.)</b>	<b>6,024</b>		<b>6,317</b>		<b>6,480</b>	
<b>Proportion of Australia's Production to World Production .. .. .</b>	<b>%</b>		<b>%</b>		<b>%</b>	
	2.82		2.92		2.46	

(a) Includes flour expressed in terms of wheat.

(b) Unofficial.

19. Imports—Principal Countries.—The principal importers of wheat, together with quantities imported for the periods indicated, are shown in the following table :—

## WHEAT(a) : IMPORTS, PRINCIPAL COUNTRIES.

Importing Country.	Average, 1934-38.		1950.		1951.	
	Quantity.	Proportion of World Total.	Quantity.	Proportion of World Total.	Quantity.	Proportion of World Total.
	'000 bushels.	%	'000 bushels.	%	'000 bushels.	%
United Kingdom .. .. .	208,737	33.82	143,136	18.82	177,557	17.70
Belgium and Luxembourg .. .. .	42,853	6.94	23,391	3.08	35,277	3.52
Brazil .. .. .	36,387	5.89	45,462	5.98	41,141	4.10
China .. .. .	27,469	4.45	(b)	(b)	(b)	(b)
United States of America .. .. .	26,539	4.30	15,013	1.97	31,698	3.16
Italy .. .. .	26,043	4.22	41,509	5.46	60,115	5.99
Germany .. .. .	25,606	4.15	(c) 63,694	(c) 8.37	c 108,803	(c) 10.85
Netherlands .. .. .	22,593	3.66	26,642	3.50	31,908	3.18
Switzerland .. .. .	16,020	2.74	13,246	1.74	14,102	1.41
Greece .. .. .	16,428	2.66	14,436	1.90	21,079	2.10
Japan .. .. .	11,552	1.87	57,900	7.61	61,563	6.14
Austria .. .. .	8,969	1.45	13,885	1.83	16,983	1.69
India and Pakistan .. .. .	1,826	0.30	53,773	7.07	113,095	11.27
Egypt .. .. .	588	0.10	20,699	2.71	41,791	4.17
All other .. .. .	144,772	23.45	227,884	29.96	247,972	24.72
<b>Total .. .. .</b>	<b>617,282</b>	<b>100.00</b>	<b>760,580</b>	<b>100.00</b>	<b>1,003,084</b>	<b>100.00</b>

(a) Includes flour expressed in terms of wheat.

(b) Not available.

(c) Federal Republic.

## § 5. Oats.

i. Area, Production and Average Yield.—Oats are usually next in importance to wheat amongst the grain crops cultivated in Australia, but while wheat grown for grain in 1951-52 accounted for 52.45 per cent., oats grown for grain represented only 11.94 per cent. of the area of crops. The area, production and average yield per acre of oats for the years 1947-48 to 1951-52 and the averages for the ten-year periods ended 1938-39 and 1950-51 are shown in the following table :—

## OATS FOR GRAIN : AREA, PRODUCTION AND AVERAGE YIELD.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
AREA ('000 ACRES).								
Average, 1929-30 to 1938-39 ..	229	478	5	282	369	30	..	1,393
1947-48 ..	609	650	25	309	495	17	..	2,105
1948-49 ..	378	540	21	286	532	12	I	1,770
1949-50 ..	375	483	21	261	585	23	..	1,748
1950-51 ..	332	527	17	271	586	24	..	1,757
Average, 1941-42 to 1950-51 ..	452	516	20	286	453	18	..	1,745
1951-52 ..	596	676	21	387	657	27	I	2,365
PRODUCTION ('000 BUSHELS).(a)								
Average, 1929-30 to 1938-39 ..	3,578	5,750	68	2,233	3,973	831	4	16,437
1947-48 ..	13,674	15,381	474	5,394	5,411	360	3	40,697
1948-49 ..	5,779	7,490	410	2,643	6,998	262	10	23,601
1949-50 ..	7,016	8,718	338	3,464	7,268	577	10	27,391
1950-51 ..	3,994	9,034	221	3,534	7,914	429	2	25,128
Average, 1941-42 to 1950-51 ..	6,277	7,425	339	3,177	5,207	436	6	22,867
1951-52 ..	9,395	11,151	263	5,405	7,689	594	9	34,506
AVERAGE YIELD PER ACRE (BUSHELS).(a)								
Average, 1929-30 to 1938-39 ..	15.66	12.03	12.77	7.91	10.77	28.15	22.35	11.80
1947-48 ..	22.45	22.66	18.97	17.47	10.94	21.09	6.86	19.33
1948-49 ..	15.28	13.88	19.68	9.23	13.16	22.36	14.14	13.34
1949-50 ..	18.72	18.04	16.50	13.25	12.43	25.31	28.83	15.67
1950-51 ..	12.02	17.14	13.01	13.02	13.51	18.31	6.96	14.30
Average, 1941-42 to 1950-51 ..	13.88	14.38	16.51	11.10	11.50	24.65	12.70	13.09
1951-52 ..	15.75	16.48	12.61	13.95	11.71	22.39	15.39	14.59

(a) 40 lb. per bushel.

The principal oat-growing States are New South Wales and Victoria which produce on the average, more than half the total quantity grown in Australia. Western Australia and South Australia also produce considerable quantities, but in Queensland and Tasmania the output is small.

Oats are mainly used in Australia as feed grain. During the ten years ended 1951-52 the average annual quantity consumed by stock was about 11.5 million bushels, leaving a balance of about 6.5 million bushels for seed purposes, about 3.4 million bushels for oat-meal and a small quantity for the production of spirits and for malting. Prior to the year 1947-48 exports of oats were usually small, but from 1947-48 to 1951-52 heavy shipments were made and exports over these years averaged 9.84 million bushels.

The smallest average yield per acre ever recorded for Australia was that experienced in the abnormally dry season 1944-45, namely 4.41 bushels, while the largest in the last ten years was that of the season 1947-48, amounting to 19.33 bushels per acre, this being the highest yield since 1920-21.

2. **Price of Oats.**—The average wholesale price in the Melbourne market for oats of good milling quality in 1951-52 was 10s. 6½d per bushel. This represents an increase of 25.6 per cent. on the price in 1950-51 (8s. 4¾d.) and of 204.8 per cent. on the price in 1938-39 (3s. 5¾d.).

3. **Value of Oat Crop.**—The estimated values of the oat crops for the seasons 1950-51 and 1951-52 were as follows :—

**OATS : VALUE OF CROP, 1950-51 AND 1951-52.**

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
1950-51—								
Aggregate value £	1,514,420	3,976,845	125,700	1,371,979	3,116,030	187,740	809	10,293,523
Value per acre ..	£4/11/2	£7/10/10	£7/7/11	£5/1/1	£5/6/5	£8/0/2	£2/12/8	£5/17/2
1951-52—								
Aggregate value £	5,411,980	5,791,686	170,828	3,204,791	4,086,678	334,230	4,993	19,005,186
Value per acre ..	£9/1/5	£8/11/3	£8/3/11	£8/5/6	£6/4/6	£12/11/11	£8/17/4	£8/0/9

4. **Imports and Exports.**—The production of oats in Australia is sufficient to admit of a regular export trade. The quantities and values of oats exported from Australia during the years 1947-48 to 1951-52 compared with the average for the years 1934-35 to 1938-39 are shown hereunder :—

**OATS : EXPORTS, AUSTRALIA.**

Particulars.	Average, 1934-35 to 1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Quantity .. bush.	286,360	6,803,427	14,853,777	6,625,560	7,946,736	12,971,224
Value .. £	36,458	3,945,807	6,160,586	2,393,566	3,529,070	8,000,703

The quantity of oats imported into Australia is usually not very large, although in 1945-46 imports exceeded exports by 801,922 bushels. Canada was the chief supplier. The previous year when imports exceeded exports was in 1927-28 (by 460,581 bushels) when New Zealand was the main supplier. In 1951-52 the principal countries of destination of the exports were Federal Republic of Germany, Netherlands, United Kingdom, Union of South Africa, Denmark and Belgium.

5. **Oatmeal, etc.**—The production of oatmeal amounted in 1951-52 to 363,400 cwt., equivalent to about 2,035,000 bushels of oats, or about 6.0 per cent. of the total production. Prior to the 1939-45 War the exports of oatmeal were small, but in recent years a considerable export trade has developed and in 1951-52 the quantity shipped amounted to 133,386 cwt. or 36.7 per cent. of total production.

6. **World Production.**—The world's production of oats for the year 1952, excluding that produced in U.S.S.R., according to preliminary details released by the Food and Agriculture Organization of the United Nations, amounted to 3,348 million bushels, harvested from 90 million acres, representing an average yield of 37.20 bushels per acre. This compared with the production in the previous year of 3,458 million bushels from an

area of 89 million acres giving an average yield of 38.85 bushels per acre. The world's average production including that of the U.S.S.R. for the years 1935 to 1939 amounted to 4,336 million bushels from 139 million acres giving an average yield of 31.26 bushels per acre. In comparison with the average return per acre for world production in 1952 that of Australia for the same period (14.59 bushels) appears very small. Yields in excess of 40 bushels per acre are not uncommon and some European countries record averages in excess of 50 bushels per acre.

### § 6. Maize.

1. **States Growing Maize.**—Maize is grown for grain chiefly in Queensland and New South Wales, the area so cropped in these States during the 1951-52 season being 165,397 acres, or 98 per cent. of the total for Australia. In all States except South Australia the crop is grown to a greater or lesser extent for green fodder, particularly in connexion with the dairying industry.

2. **Area, Production and Average Yield.**—Although maize for grain is grown extensively in other countries, the area sown to maize for grain in Australia has averaged only 238,869 acres during the past decennium. Compared with the previous year, the area in 1951-52 increased by 201 acres and was considerably less than the comparatively large areas of 414,914 and 400,544 acres sown in 1910-11 and 1927-28 respectively.

There has been a considerable increase in recent years in the growing of maize from hybrid strains of seed. Varieties have been developed which are capable of producing average yields per acre considerably in excess of the older open pollinated types. The expansion in areas sown to hybrid maize necessitates a parallel development in the specialized industry of growing hybrid strains of seed.

The area, production and average yield per acre of maize for grain in each State for the years 1947-48 to 1951-52 and the averages for the ten-year periods ended 1938-39 and 1950-51 are given in the following table. Separate details for hybrid and other varieties are shown for New South Wales and Queensland for 1951-52.

MAIZE FOR GRAIN : AREA, PRODUCTION AND AVERAGE YIELD.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA (ACRES).								
Average, 1929-30 to 1938-39 ..	114,881	18,413	161,380	12	15	..	7	294,708
1947-48 ..	86,979	7,968	127,703	..	90	7	1	222,748
1948-49 ..	77,820	6,460	97,598	3	72	5	..	181,958
1949-50 ..	72,872	5,136	115,550	..	20	10	3	193,591
1950-51 ..	52,674	4,089	112,467	..	107	2	..	169,339
Average, 1941-42 to 1950-51 ..	91,099	6,644	141,041	2	75	7	1	238,869
1951-52— Hybrid ..	24,268	4,115	{ 24,133 87,048 }	..	8	18	2	169,540
Other ..	29,948							
PRODUCTION ('000 BUSHELS). (a)								
Average, 1929-30 to 1938-39 ..	3,072	631	3,525	..	..	..	..	7,228
1947-48 ..	2,356	324	3,487	..	1	..	..	6,168
1948-49 ..	2,476	260	2,451	..	1	..	..	5,188
1949-50 ..	2,408	194	3,393	..	1	..	..	5,996
1950-51 ..	1,512	187	3,029	..	1	..	..	4,729
Average, 1941-42 to 1950-51 ..	2,498	252	3,432	..	1	..	..	6,183
1951-52— Hybrid ..	692	168	{ 627 1,811 }	..	..	1	..	4,018
Other ..	719							

(a) 56 lb. per bushel.

MAIZE FOR GRAIN: AREA, PRODUCTION AND AVERAGE YIELD—*continued.*

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
<b>AVERAGE YIELD PER ACRE (BUSHEL).<sup>(a)</sup></b>								
Average, 1929-30 to 1938-39 ..	26.74	34.28	21.84	29.84	10.02	..	8.48	24.53
1947-48 ..	27.10	40.66	27.30	..	7.17	15.71	11.00	27.69
1948-49 ..	31.82	40.23	25.12	6.67	6.25	19.20	..	28.51
1949-50 ..	33.05	37.80	29.36	..	22.05	20.50	10.00	30.07
1950-51 ..	28.70	45.65	26.93	..	14.30	12.50	..	27.93
Average, 1941-42 to 1950-51 ..	27.42	37.97	24.33	18.00	10.84	11.14	12.00	25.89
1951-52— Hybrid ..	28.50	40.81	26.00	..	13.88	34.78	3.00	23.70
Other ..	24.00							

(a) 56 lb. per bushel.

The average yield for Australia for the ten-year period was 25.89 bushels per acre. Among principal producing countries the United States of America during 1952 averaged 40.64 bushels, Italy, 29.91 bushels and Brazil, 20.27 bushels.

3. **Price of Maize.**—The average wholesale price of maize in the Melbourne market in 1951-52 was 21s. 3½d., per bushel compared with 14s. 4¾d. in 1950-51. No comparable pre-war price is available, but that in the Sydney market in 1938-39 was 4s. 6½d.

4. **Value of Crop.**—The values of the crops for the seasons 1950-51 and 1951-52 were as follows:—

## MAIZE FOR GRAIN: VALUE OF CROP, 1950-51 AND 1951-52.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
1950-51— Aggregate value	£ 1,095,980	193,771	1,756,187	..	2,118	30	..	3,048,086
Value per acre	£20/16/2	£47/7/9	£15/12/4	..	£19/15/11	£15/0/0	..	£18/0/0
1951-52— Aggregate value	£ 1,492,580	172,601	2,142,796	..	275	880	..	6,3809,138
Value per acre	£27/10/7	£41/18/11	£19/5/6	..	£34/7/1	£48/17/9	£3/0/0	£22/9/4

5. **Exports of Maize and Maize Products.**—Details of exports of maize for the five years ended 1951-52 compared with the five-yearly average ended 1938-39 are shown below.

## MAIZE: EXPORTS, AUSTRALIA.

Particulars.	Average, 1934-35 to 1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Quantity .. bush.	57,432	547,536	126,686	1,201,032	1,188,960	187,600
Value .. £	8,571	627,565	105,786	613,604	785,686	148,580

In recent years only small quantities of maize have been imported.

Exports of cornflour, which prior to the war were very small, increased considerably during the war years, the principal country of destination being New Zealand. In 1951-52 1,538,424 lb., valued at £58,376, were exported, compared with an annual average of 36,761 lb., valued at £364, during the five years ended 1938-39. It should be noted that these figures include some quantities of "cornflour" made from wheat. Imports of cornflour into Australia are negligible.

6. **World Production.**—According to preliminary details released by the Food and Agriculture Organization of the United Nations, world production of maize, excluding that of the U.S.S.R., in the year 1952, amounted to 5,590 million bushels, harvested from 209 million acres giving an average yield per acre of 26.75 bushels. This compared with production in the previous year of 5,189 million bushels from 204 million acres yielding an average per acre of 25.44 bushels. Production (including that of the U.S.S.R.) over the years 1935 to 1939 averaged 4,725 million bushels from 216 million acres giving an average yield per acre of 21.88 bushels.

The United States of America is the most important maize-producing country in the world and during the three years ended 1952 the area sown to maize in that country averaged 81 million acres or 39 per cent. of the world total. During the same period production averaged 3,088 million bushels or about 58 per cent. of the world total. These figures are not strictly comparable with those for other countries included in the above-mentioned world totals as the area and an estimate of grain equivalent of maize used as green fodder are included. In recent years maize grain actually harvested in the United States has amounted to about 90 per cent. of the total crop.

§ 7. Barley.

1. **Area, Production and Average Yield.**—The area sown to barley for grain expanded considerably during the ten years preceding the 1939-45 War—from 383,000 acres in 1930-31 to 836,000 acres in 1939-40. This increase was followed by a decline to 443,000 acres in 1943-44, but the area sown has increased in succeeding years, and in 1951-52 reached the record level of 1,118,000 acres. Victoria was originally the principal barley-growing State, but since 1913-14 its place has been taken by South Australia which accounted for 74 per cent. of the Australian acreage in 1951-52. Victoria was next in importance with 17 per cent., leaving a balance of about 9 per cent. distributed among the other States. The totals here given relate to the areas harvested for grain; small areas are sown for hay, but more considerable quantities are cut for green forage. These, however, are not included in this section. The area, production and average yield per acre of barley for grain in the several States for the years 1947-48 to 1951-52 and the averages for the ten-year periods ended 1938-39 and 1950-51 are shown in the following table:—

BARLEY FOR GRAIN: AREA, PRODUCTION AND AVERAGE YIELD.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA ('000 ACRES).								
Average, 1929-30								
to 1938-39 ..	11	107	8	331	31	7	..	495
1947-48 ..	23	165	17	562	63	9	..	839
1948-49 ..	19	196	28	698	64	7	..	1,012
1949-50 ..	13	236	25	694	68	4	..	1,040
1950-51 ..	9	217	26	765	59	3	..	1,079
Average, 1941-42								
to 1950-51 ..	20	158	17	506	64	6	..	771
1951-52—								
Malting (2-Row)	7	161	21	753	19	4	..	965
Other (6-Row)	4	25	7	79	38	..	..	153
Total ..	11	186	28	832	57	4	..	1,118

PRODUCTION ('000 BUSHELS). (a)

Average, 1929-30								
to 1938-39 ..	173	1,976	132	5,714	371	186	I	8,553
1947-48 ..	519	3,577	433	15,363	745	219	..	20,856
1948-49 ..	322	3,548	622	12,104	981	208	..	17,785
1949-50 ..	265	4,876	578	12,725	968	131	..	19,543
1950-51 ..	129	4,510	489	16,727	925	91	..	22,871
Average, 1941-42								
to 1950-51 ..	287	2,808	356	9,889	790	136	I	14,267
1951-52—								
Malting (2-Row)	99	3,147	337	15,527	230	137	..	19,477
Other (6-Row)	68	473	113	1,299	465	13	I	2,432
Total ..	167	3,620	450	16,826	695	150	I	21,909

(a) 50 lb per bushel.

BARLEY FOR GRAIN: AREA, PRODUCTION AND AVERAGE YIELD—*continued.*

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AVERAGE YIELD PER ACRE (BUSHELS). (a)								
Average, 1929-30 to 1938-39 ..	16.62	18.44	16.67	17.29	11.89	25.21	18.88	17.29
1947-48 ..	22.13	21.78	25.18	27.32	11.79	26.79	19.50	24.87
1948-49 ..	16.91	18.12	22.49	17.35	15.29	28.39	..	17.58
1949-50 ..	20.64	20.65	23.06	18.34	14.24	30.12	..	18.79
1950-51 ..	15.56	20.77	18.74	21.87	15.64	27.81	..	21.20
Average, 1941-42 to 1950-51 ..	14.17	17.77	20.96	19.54	12.31	25.69	13.33	18.51
1951-52—								
Malting (2-Row)	14.12	19.58	15.69	20.61	12.10	35.48	..	20.17
Other (6-Row)	16.61	18.54	16.97	16.60	12.38	33.30	26.05	15.95
Total ..	15.04	19.44	15.99	20.23	12.29	35.28	26.05	19.60

(a) 50 lb. per bushel.

Taking Australia as a whole, about 86 per cent. of the area of barley for grain in 1951-52 was sown with malting or 2-row barley while the remainder consisted of 6-row, or feed varieties. The proportion, however, varied considerably in the several States. The disposal of barley during the season 1951-52 was as follows:—malt works, 6,063,000 bushels; flour and other grain mills, 169,000 bushels; distilleries, 310,000 bushels; exports, 12,061,593 bushels; leaving a balance of 3,305,000 bushels for feed, seed and other purposes.

The following table sets out the acreage and production of malting and other barley in Australia during the seasons 1947-48 to 1951-52 and the averages for the ten-year periods ended 1938-39 and 1950-51.

## BARLEY, MALTING AND OTHER: AREA AND PRODUCTION, AUSTRALIA.

Season.	Area. ('000 Acres.)			Production. ('000 Bushels.)			Average Yield per Acre. (Bush.)		
	Malting (2-row).	Other (6-row).	Total.	Malting (2 row).	Other (6-row).	Total.	Malting (2-row).	Other (6-row).	Total.
Average, 1929-30 to 1938-39 ..	428	67	495	7,480	1,073	8,553	17.49	16.03	17.29
1947-48 ..	745	94	839	18,936	1,920	20,856	25.43	20.46	24.87
1948-49 ..	899	113	1,012	15,930	1,855	17,785	17.72	16.46	17.58
1949-50 ..	927	113	1,040	17,509	1,974	19,543	18.95	17.51	18.79
1950-51 ..	963	116	1,079	20,811	2,060	22,871	21.61	17.82	21.20
Average, 1941-42 to 1950-51 ..	667	104	771	12,647	1,620	14,267	18.97	15.57	18.51
1951-52 ..	965	153	1,118	19,477	2,432	21,909	20.17	15.95	19.60

During the last ten-yearly period shown the average area of barley of the malting, or 2-row class, was more than six times the corresponding figures for barley of the 6-row, or feed class. The average yield per acre for malting barley was 22 per cent. higher than that for 6-row barley.

2. Australian Barley Board.—Following the outbreak of war in 1939, the Australian Barley Board, representative of the industry, was formed, and the Commonwealth Government acceded to its request to acquire the entire 1939-40 barley crop, which was placed under the control of the Board. A pool was established from which proceeds were distributed with appropriate margins for different grades of barley.

The Board was responsible for the marketing and storage of barley, and, like the Australian Wheat Board, appointed licensed receivers to receive grain on its behalf and to act as agents for all local and oversea sales.

Following the decision of the Commonwealth Government not to acquire barley in the smaller producing States after 1941-42, the Governments of Western Australia and Queensland established State Barley Boards to control marketing in these States.

Particulars of the barley acquired and sold, and of advances made to growers by the Australian Barley Board in respect of the 1945-46 to 1947-48 crops are given in the following table. The Commonwealth Government did not acquire barley after the 1947-48 crop, and the Victorian and South Australian Governments formed a joint board under the same name as the former Commonwealth board to market the 1948-49 and subsequent crops of the two States. Details of these acquisitions are also shown in the table below.

**AUSTRALIAN BARLEY BOARD : BARLEY ACQUIRED, SOLD, ETC.,  
TO 31st DECEMBER, 1952.**

Pool.	Quantity Acquired.	Quantity Sold.(a)	Total Advances made per Bushel on 2-row No. 1 Grade less freight.	Total Payments to Growers.
	'000. bushels.	'000. bushels.	s. d.	£
No. 7 (1945-46 Crop) .. ..	6,716	6,782	(b) 6 0.17	1,962,049
„ 8 (1946-47 „ ) .. ..	8,543	8,572	(b) 8 2.625	3,497,956
„ 9 (1947-48 „ ) .. ..	17,228	17,302	(b) 15 1.7	12,737,512
„ 10 (1948-49 „ ) .. ..	13,986	14,087	(b) 7 11.9	5,377,137
„ 11 (1949-50 „ ) .. ..	16,250	16,336	(b) 10 2.2	7,905,902
„ 12 (1950-51 „ ) .. ..	19,976	20,154	(b) 11 2.488	10,721,180
„ 13 (1951-52 „ ) (c) .. ..	19,340	19,475	(d) 14 9	13,697,930

(a) Includes surplus in out-turn. (b) Paid to growers in the northern part of South Australia. Growers in the south-east of South Australia and Victoria received an additional 2d. per bushel. (c) Subject to revision. (d) To 31st December, 1952.

3. Prices.—The average wholesale prices in the Melbourne market during 1951-52 were 12s. 10½d. per bushel for malting barley and 9s. 6½d. per bushel for feed barley. These were substantially higher than in 1950-51 when prices were 7s. 8d. and 7s. 1¾d. per bushel respectively. In 1938-39 comparative prices were 3s. 5½d. per bushel and 2s. 11½d. per bushel respectively.

4. Value of Barley Crop.—The estimated values of the barley crops for the seasons 1950-51 and 1951-52 and the value per acre are shown in the following table :—

**BARLEY FOR GRAIN : VALUE OF CROP, 1950-51 AND 1951-52.**

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
1950-51—								
Aggregate value £	6,520	2,518,234	290,652	9,901,590	520,415	43,490	..	13,338,901
Value per acre	£7/15/5	£11/12/0	£11/2/9	£12/18/11	£8/16/1	£13/6/9	..	£12/7/4
1951-52—								
Aggregate value £	113,000	2,753,491	329,496	13,852,936	583,214	106,190	365	17,738,692
Value per acre ..	£10/2/10	£14/15/9	£11/14/0	£16/13/2	£10/6/2	£25/0/9	£16/11/10	£15/17/4



5. **Exports.**—Australian exports of barley during the five years ended 1951-52 averaged 10,780,000 bushels, South Australia being the principal exporting State and the United Kingdom, Netherlands and Japan the principal countries to which barley was shipped. Particulars of Australian exports for the years 1947-48 to 1951-52 together with the average for the five years ended 1938-39 are shown in the following table :—

**BARLEY : EXPORTS, AUSTRALIA.**

Particulars.	Average, 1934-35 to 1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Quantity ('000 bush.)	3,279	8,050	10,876	10,703	12,208	12,062
Value .. £'000	483	8,134	6,864	6,433	9,053	11,154

Imports of barley in recent years have been negligible.

In addition to exports of barley grain, there is also an export of Australian pearl and scotch barley, the total for 1951-52 amounting to 467,814 lb., valued at £16,292, and consigned mainly to Ceylon, Singapore and Malaya.

6. **Malt.**—(i) *Production.* The production of malt in Australia was sufficient to meet local requirements and to provide a margin for export up until 1947-48 but since then imports have risen rapidly in each succeeding year, reaching a surplus of 265,731 bushels over exports in 1951-52. Details of the quantity of grain used and the production of barley malt are given in the following table.

**BARLEY MALT : GRAIN USED AND MALT PRODUCED, AUSTRALIA.**

Particulars.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Grain used .. bush.	3,729,730	4,976,615	5,048,387	5,293,979	5,543,042	6,063,112
Malt produced bush.(a)	3,620,909	4,879,145	4,989,371	5,437,539	5,550,307	6,072,509

(a) 40 lb. per bushel.

(ii) *Net Exports.* Details of the net exports of malt for the years 1947-48 to 1951-52, together with the average for the five years ended 1938-39, are given in the next table :—

**MALT : NET EXPORTS, AUSTRALIA.**

Particulars.	Average, 1934-35 to 1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Quantity .. bush.	108,550	12,920	—14,002	—95,460	—131,556	—265,731
Value .. £	37,647	14,159	—16,508	—107,641	—195,982	—389,342

NOTE.—Minus sign (—) denotes net imports.

7. **World Production.**—In comparison with the barley production of other countries, that of Australia is extremely small. The main world producers in 1952 were China, Canada and the United States of America. Australian production in that year was less than one per cent. of the world total.

According to preliminary results compiled by the Food and Agriculture Organization of the United Nations world production of barley in the year 1952, excluding that of the U.S.S.R., amounted to 2,342 million bushels harvested from 98.3 million acres, equivalent to an average yield per acre of 23.82 bushels. This compared with the production

of 2,251 million bushels in the previous year from 96.1 million acres giving an average yield per acre of 23.41 bushels. Production, including that of U.S.S.R., over the years 1935-39 averaged 2,338 million bushels from 114.2 million acres, representing an average yield of 20.47 bushels per acre.

### § 8. Rice.

Rice growing is almost entirely concentrated in Asia and the extent to which this crop is grown in other countries is relatively small. In Australia experimental rice cultivation was carried on at the Yanco Experimental Farm in New South Wales for a number of years before 1924-25, but it was not until that year that an attempt was made to grow the crop on a commercial basis, 16,240 bushels being produced from 153 acres, or an average of 106 bushels per acre. Favoured by tariff protection and high average yields, the development of rice culture in the Murrumbidgee Irrigation Area made rapid progress, and production soon equalled Australian requirements and later provided a margin for export.

The area which growers may plant is subject to control. Each year representatives of the Rice Marketing Board, rice growers, the Department of Agriculture and the Water Conservation and Irrigation Commission of New South Wales meet to decide the maximum area which growers may plant in the following season, the extent of any expansion being determined by the limits imposed by the quantity of water available.

For the five years ended 1938-39 the area sown to rice in the Murrumbidgee Irrigation Area averaged 22,800 acres. The area sown fluctuated considerably during succeeding years, the maximum of 40,690 acres being recorded in 1943-44. In 1950-51 the area sown was 36,945 acres, but in 1951-52 it fell to 35,664 acres.

The production of paddy rice in 1943-44 was more than 4 million bushels or an average yield of just under 100 bushels per acre. In 1944-45 it dropped to nearly 1.7 million bushels or 69 bushels per acre, owing to water shortage arising from severe drought conditions. In 1950-51 production reached its highest level with 4.1 million bushels or an average of 111 bushels per acre, but in 1951-52 it declined to 3.0 million bushels or an average of 85 bushels per acre.

Prior to 1938-39 the greater part of Australia's export of rice was consigned to the United Kingdom, but, because of shortages in Pacific areas arising from war damage in south-east Asia, exports from Australia have been diverted mainly to the islands in this region.

Details relating to area, production, and trade for the years 1947-48 to 1951-52 compared with the averages for the years 1934-35 to 1938-39 are shown in the following table:—

RICE : AREA, PRODUCTION AND TRADE, AUSTRALIA.(a)

Year.	No. of Growers.	Area.	Production (Paddy Rice).		Average Yield (Paddy) per acre.	Imports.		Exports.	
			Quantity.	Gross Value. (b)		Un-cleaned.	Cleaned.	Un-cleaned.	Cleaned.
		Acres.	'000 Bushels.c	£'000.	Bushels.c	Centals.	Centals.	Centals.	Centals.
Average, 1934-35 to 1938-39 ..	(d) 313	22,823	2,274	450	99.66	2,124	38,272	9,357	271,851
1947-48 ..	349	26,208	2,676	950	102.12	..	5	4,763	622,208
1948-49 ..	404	32,689	2,739	1,032	83.79	..	549	8,658	610,497
1949-50 ..	444	37,540	3,783	1,653	100.78	..	6,685	225	597,759
1950-51 ..	462	36,945	4,118	2,171	111.45	1	63	2,065	657,267
1951-52 ..	452	35,664	3,048	2,108	85.47	3	18	4,140	559,395

(a) Rice growing in Australia has been practically confined to New South Wales with very small acreages only being sown in Queensland in the 1950-51 and 1951-52 seasons. (b) Excludes the value of straw.

(c) 42 lb. per bushel.

(d) 1938-39 figure, previous years not collected.

## § 9. Sorghum for Grain.

1. **Area, Production and Average Yield.**—The growing of sorghum for grain on an extensive scale is a recent development in Australia. No details of the area and production of this cereal are available prior to 1939-40, but the output was of little importance. The climatic conditions of Queensland and northern New South Wales are particularly suited for the growing of sorghum and the development so far has been restricted to these areas, but more particularly to Queensland which accounts for the greater portion of the area sown. The grain produced is fed to live-stock and is becoming an important source of supply for supplementing other coarse grains for the feeding of live-stock. Other sorghums are grown in Australia mainly as green fodder, hay and silage (sweet sorghums and sudan grass) and for the production of brush for broom manufacture (broom millet). Particulars of the area and production of sorghum grown for grain are given in the following table.

GRAIN SORGHUM : AREA, PRODUCTION AND AVERAGE YIELD, AUSTRALIA.

Year.	Area.			Production.(a)			Average Yield per Acre.(a)		
	N.S.W.	Q'land.	Total.	N.S.W.	Q'land.	Total.	N.S.W.	Q'land.	Total.
	(c)	(c)	(d)	(c)	(c)	(d)	(c)	(c)	(d)
1939-40 ..	Acres.	Acres.	Acres.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1947-48 ..	24,680	116,079	140,769	467,412	3,335,322	3,802,784	18.94	28.73	27.01
1948-49 ..	4,732	48,011	52,745	83,244	899,136	982,389	17.59	18.73	18.63
1949-50 ..	3,573	99,362	102,937	67,809	2,157,717	2,225,526	18.97	21.72	21.62
1950-51 ..	4,466	166,311	170,778	73,773	3,683,286	3,757,064	16.52	22.15	22.00
1951-52 ..	7,101	169,558	176,660	41,487	2,651,790	2,693,289	5.84	15.64	15.25

(a) 60 lb. per bushel. (b) Includes small areas sown and quantities produced in other States.  
(c) Not available. (d) Queensland only.

2. **Queensland-British Food Corporation Project.**—Early in 1948 an agreement was entered into between the Queensland Government and the Overseas Food Corporation of the United Kingdom Government to develop selected areas of Central Western Queensland for the growing of grain sorghum for pig-raising in Queensland and/or for export to the United Kingdom, and for sunflower and possibly other oilseed production. Because of losses incurred, the United Kingdom and Queensland Governments decided, early in 1953, to abandon the project. Although the scheme resulted in financial loss, the activities of the Corporation did much to indicate ways by which combined grain sorghum production and beef cattle husbandry could be used as a basis for closer settlement of the great tracts of brigalow country in Queensland. The activities of the Corporation are described in "The future of the Queensland-British Food Corporation", a White Paper Cmd 8760 presented to the United Kingdom Parliament, February, 1953.

## § 10. Potatoes.

1. **Area, Production and Average Yield.**—Victoria possesses peculiar advantages for the growing of potatoes, as the rainfall is generally satisfactory and the climate is unfavourable to the spread of Irish blight; consequently, the crop is widely grown. The principal areas of that State are the central highlands, and the south-western and Gippsland districts. Tasmania comes next in order of acreage sown, although the production exceeded that of Victoria in some of the war years. New South Wales occupies third place in acreage and production. The area for these three States accounted for 78 per cent. of the total for Australia in 1951-52.

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The area sown, production and average yield per acre of potatoes in each State during the years 1947-48 to 1951-52 and the averages for the ten-year periods ended 1938-39 and 1950-51 are shown hereunder :—

POTATOES : AREA, PRODUCTION AND AVERAGE YIELD.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	A.C.T.	Aust.
AREA (ACRES).								
Average, 1929-30 to								
1938-39 .. .. .	19,199	54,658	11,039	5,042	4,953	34,684	30	129,605
1947-48 .. .. .	21,911	59,400	10,664	6,202	6,955	40,382	115	145,629
1948-49 .. .. .	18,101	45,785	11,184	5,860	6,344	32,319	89	119,682
1949-50 .. .. .	23,369	50,651	11,624	7,245	6,895	34,110	108	134,002
1950-51 .. .. .	18,374	52,482	10,783	6,969	6,780	31,581	142	127,111
Average, 1941-42 to								
1950-51 .. .. .	23,296	56,653	12,083	7,486	7,387	45,048	111	152,064
1951-52 .. .. .	19,034	42,108	11,465	6,971	6,885	31,514	168	118,145
PRODUCTION (TONS).								
Average, 1929-30 to								
1938-39 .. .. .	44,122	150,238	18,100	20,202	23,410	94,500	63	350,635
1947-48 .. .. .	65,535	184,882	29,299	34,181	40,608	142,746	716	497,967
1948-49 .. .. .	61,265	166,105	27,511	33,054	39,516	131,800	561	459,812
1949-50 .. .. .	69,395	167,881	30,681	40,984	39,459	122,000	637	471,037
1950-51 .. .. .	43,102	139,391	24,725	35,955	43,887	124,000	660	411,720
Average, 1941-42 to								
1950-51 .. .. .	61,197	194,898	27,144	36,563	38,650	173,612	597	532,661
1951-52 .. .. .	52,020	178,399	33,001	43,898	49,930	150,500	1,017	508,765
AVERAGE YIELD PER ACRE (TONS).								
Average, 1929-30 to								
1938-39 .. .. .	2.30	2.75	1.64	2.50	4.73	2.72	2.09	2.71
1947-48 .. .. .	2.99	3.11	2.75	5.51	5.84	3.53	6.23	3.42
1948-49 .. .. .	3.38	3.63	2.46	5.64	6.23	4.08	6.30	3.84
1949-50 .. .. .	2.97	3.31	2.64	5.66	5.72	3.58	5.90	3.52
1950-51 .. .. .	2.35	2.66	2.29	5.16	6.47	3.93	4.65	3.24
Average, 1941-42 to								
1950-51 .. .. .	2.63	3.44	2.25	4.88	5.23	3.85	5.38	3.50
1951-52 .. .. .	2.73	4.24	2.88	6.30	7.25	4.78	6.05	4.31

After the outbreak of war in the Pacific in December, 1941, the area sown to potatoes increased rapidly and reached a maximum of 241,803 acres in 1944-45. Areas sown in subsequent seasons were considerably less, however, and have shown a general decline to the figure for the 1951-52 season, 118,145 acres.

Compared with the average yield per acre obtained in other countries, that returned for Australia is low; the production in New Zealand, for example, in 1951-52 averaged 6.85 tons per acre from an area of about 12,000 acres, as compared with the record yield of 4.31 tons per acre in Australia from 118,145 acres in the same season.

2. Gross Value of Potato Crop.—The estimated gross value of the potato crop of each State for the seasons 1950-51 and 1951-52 is shown in the following table :—

POTATOES : VALUE OF CROP, 1950-51 and 1951-52.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
1950-51—								
Aggregate value	£1,218,170	£3,661,748	£556,313	£877,152	£1,153,130	£2,779,740	£18,654	£10,264,907
Value per acre ..	£66/6/0	£69/15/5	£51/11/10	£125/17/4	£170/1/7	£88/0/5	£131/7/4	£80/15/1
1951-52—								
Aggregate value	£2,097,710	£5,512,002	£962,117	£1,640,688	£1,587,166	£4,141,040	£41,010	£15,981,733
Value per acre ..	£110/4/2	£130/18/0	£83/18/4	£235/7/2	£230/10/6	£131/8/1	£244/2/2	£135/5/5

3. **Consumption.**—The annual consumption of potatoes in Australia during each of the three years 1949–50 to 1951–52 amounted to 391,800 tons, 341,700 tons and 438,100 tons respectively, or 109.0 lb., 92.1 lb. and 114.9 lb. per head of population respectively. These figures exclude the quantities used for seed, which averaged about 60,000 tons annually over this period. Consumption during the three years ended 1938–39 averaged 318,500 tons (103.8 lb. per head of population) excluding 37,000 tons for seed. New South Wales, Queensland and, in some seasons, South Australia do not produce the quantities necessary for their requirements and must import from Tasmania and Victoria which have a surplus.

4. **Marketing.**—Commonwealth control of potato marketing under war-time legislation ceased at the end of 1948 with the completion of sales of the 1947–48 crop.

Later crops have been marketed by Boards established in the respective States under State legislation. Although the State Boards operate separately they have a working arrangement for the interstate marketing of potato crops.

5. **Exports.**—Prior to the 1939–45 War, small quantities of potatoes were exported, principally to the Pacific Islands and Papua. Since the war, an expanded export trade has been developed, principally with Eastern countries, including Singapore, Ceylon, Hong Kong and Indo-China. However in 1951–52, the bulk of exports was diverted to New Zealand which received a total of 6,883 tons. Details showing exports for the years 1947–48 to 1951–52 and the annual average for the period 1934–35 to 1938–39 are given in the following table:—

**POTATOES : EXPORTS, AUSTRALIA.**

Particulars.		Average, 1934–35 to 1938–39.	1947–48.	1948–49.	1949–50.	1950–51.	1951–52.
Quantity ..	tons	18,838	30,008	15,074	15,183	6,231	12,468
Value ..	£	16,639	622,379	243,540	340,747	190,128	436,780

Imports of potatoes are negligible.

### § 11. Onions.

1. **Area, Production and Average Yield.**—Australia's supply of onions comes chiefly from Victoria, which accounted for 54.7 per cent. of the total area and 58.5 per cent. of the quantity produced in 1951–52. Queensland came next with 29.1 per cent. of the area and 18.2 per cent. of the production, leaving a balance of 16.2 per cent. of area and 23.3 per cent. of production distributed among the remaining four States. The Victorian crop consists almost entirely of brown onions of good keeping qualities, and the bulk of the crop is grown in a small section of the Western Division of the State, where soil conditions have been found to be particularly suitable for onion growing on a commercial scale. Details of the area, production and average yield per acre are given in the following table for the years 1947–48 to 1951–52 together with averages for the ten-year periods ended 1938–39 and 1950–51.

**ONIONS : AREA, PRODUCTION AND AVERAGE YIELD.**

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	A.C.T.	Aust.
AREA (ACRES).								
Average, 1929–30 to 1938–39 ..	124	6,159	840	450	109	5	3	7,690
1947–48 .. ..	568	6,722	2,378	583	475	19	6	10,751
1948–49 .. ..	322	5,554	2,828	498	499	31	4	9,736
1949–50 .. ..	225	4,093	2,371	435	371	28	3	7,526
1950–51 .. ..	211	4,148	2,399	506	379	19	5	7,667
Average, 1941–42 to 1950–51 .. ..	607	5,944	2,123	543	402	47	5	9,671
1951–52 .. ..	401	4,745	2,527	620	334	50	5	8,682

ONIONS : AREA, PRODUCTION AND AVERAGE YIELD—*continued.*

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
PRODUCTION (TONS).								
Average, 1929-30 to 1938-39 ..	354	35,431	2,548	3,414	814	20	11	42,592
1947-48 .. ..	2,158	61,540	12,843	5,350	4,000	75	31	85,997
1948-49 .. ..	1,242	33,684	12,535	4,971	3,930	180	27	56,569
1949-50 .. ..	770	25,436	13,137	4,607	3,611	130	22	47,713
1950-51 .. ..	539	18,182	7,256	5,242	4,033	89	26	35,367
Average, 1941-42 to 1950-51 .. ..	1,914	34,862	8,842	4,879	3,186	157	26	53,866
1951-52 .. ..	1,937	31,150	9,691	6,302	3,855	243	38	53,216
AVERAGE YIELD PER ACRE (TONS).								
Average, 1929-30 to 1938-39 ..	2.85	5.75	3.03	7.59	7.47	4.00	3.67	5.54
1947-48 .. ..	3.80	9.16	5.40	9.18	8.42	3.95	5.17	8.00
1948-49 .. ..	3.86	6.06	4.43	9.98	7.88	5.81	6.75	5.81
1949-50 .. ..	3.42	6.21	5.54	10.59	9.73	4.64	7.33	6.34
1950-51 .. ..	2.55	4.38	3.02	10.36	10.64	4.68	5.20	4.61
Average, 1941-42 to 1950-51 .. ..	3.15	5.87	4.16	8.99	7.93	3.34	5.20	5.57
1951-52 .. ..	4.83	6.56	3.83	10.16	11.54	4.86	7.60	6.13

Details of the area and production of fresh vegetables other than potatoes and onions are given in § 17.

2. **Gross Value of Onion Crop.**—The gross value of the onion crop is shown in the following table for the years 1950-51 and 1951-52.

## ONIONS : VALUE OF CROP, 1950-51 AND 1951-52.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
1950-51—								
Aggregate value £	25,060	571,142	176,690	188,712	121,206	2,310	1,209	1,086,329
Value per acre..	£118/15/4	£137/13/10	£73/13/0	£372/19/0	£319/16/1	£121/11/7	£241/16/0	£141/13/9
1951-52—								
Aggregate value £	118,500	1,176,951	454,186	349,761	139,429	8,510	2,325	2,249,662
Value per acre..	£295/10/2	£248/0/10	£179/14/8	£564/2/7	£417/9/0	£170/4/0	£465/0/0	£250/2/4

3. **Consumption.**—The annual consumption of onions in Australia averaged 45,100 tons or 12.3 lb. per head of population during the three years ended 1951-52 compared with 40,600 tons or 13.2 lb. per head during the three years ended 1938-39. These figures exclude an estimated wastage which averaged 7,900 tons and 2,200 tons respectively.

4. **Imports and Exports.**—Onions are the only root crop, other than potatoes, in which any considerable overseas trade is carried on by Australia. Onions were imported in 1950-51 for the first time since 1946-47 when approximately 100 tons were obtained, principally from New Zealand. Imports in 1950-51 amounted to 636 tons principally from Lebanon, Egypt and India and in 1951-52 to 2,397 tons principally from New Zealand. During 1951-52 exports, which amounted to 3,673 tons, valued at £152,216, were shipped mainly to Singapore and Canada.

## § 12. Hay.

1. General.—(i) *Area and Production.* As already stated, the chief crop in Australia is wheat grown for grain. Up to and including 1946-47 hay has been next in importance but since that year it has been third to oats (for grain).

In 1951-52 the hay area represented 7.8 per cent. of the total area cropped. A graph showing the area sown to hay since 1860 appears on page 875. In most European countries the hay consists almost entirely of meadow and other grasses, but in Australia a very large proportion consists of oats, wheat and lucerne. The area, production and average yield per acre of hay of all kinds in the several States during the years 1947-48 to 1951-52 and the averages for the ten-year periods ended 1938-39 and 1950-51 are shown below:—

## HAY : AREA, PRODUCTION AND AVERAGE YIELD.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA (ACRES).								
Average, 1929-30 to 1938-39 ..	757,010	1,110,616	67,850	541,265	432,217	83,118	2,338	2,994,414
1947-48 ..	627,654	657,146	71,834	296,261	229,172	84,354	3,766	1,970,187
1948-49 ..	374,392	591,341	59,642	234,792	226,779	90,579	2,486	1,579,511
1949-50 ..	339,091	606,525	55,108	294,590	216,320	91,335	2,271	1,605,240
1950-51 ..	238,931	557,454	44,934	260,856	176,990	96,388	1,609	1,377,162
Average, 1941-42 to 1950-51 ..	545,550	759,917	63,335	362,294	259,792	93,642	2,883	2,086,513
1951-52 ..	334,007	640,418	43,586	237,005	173,855	97,763	2,306	1,548,940
PRODUCTION (TONS).								
Average, 1929-30 to 1938-39 ..	958,549	1,263,127	104,297	577,100	463,981	119,826	2,830	3,489,710
1947-48 ..	978,236	1,042,438	132,694	443,659	267,901	137,648	5,182	3,007,758
1948-49 ..	496,873	933,983	117,339	311,997	277,329	150,699	4,064	2,292,284
1949-50 ..	496,081	1,000,855	116,412	384,604	272,052	155,653	4,332	2,429,989
1950-51 ..	314,940	894,585	101,319	362,162	226,703	160,722	2,509	2,062,940
Average, 1941-42 to 1950-51 ..	646,498	1,046,230	117,488	449,806	295,706	144,851	3,867	2,704,446
1951-52 ..	450,774	1,046,764	79,763	379,978	211,629	172,286	3,655	2,344,849
AVERAGE YIELD PER ACRE (TONS).								
Average, 1929-30 to 1938-39 ..	1.27	1.14	1.54	1.07	1.07	1.44	1.21	1.17
1947-48 ..	1.56	1.59	1.85	1.50	1.17	1.63	1.38	1.53
1948-49 ..	1.33	1.58	1.97	1.33	1.22	1.66	1.63	1.45
1949-50 ..	1.46	1.65	2.11	1.31	1.26	1.70	1.91	1.51
1950-51 ..	1.32	1.60	2.25	1.39	1.28	1.67	1.56	1.50
Average, 1941-42 to 1950-51 ..	1.19	1.38	1.86	1.24	1.14	1.55	1.34	1.30
1951-52 ..	1.35	1.63	1.83	1.48	1.22	1.76	1.58	1.51

Owing to various causes, the principal being the variation in the relative prices of grain and hay and the favourableness or otherwise of the season for a grain crop, the area of hay is liable to fluctuate considerably. The area under hay in Australia during the season 1915-16, 3,597,771 acres, was the largest on record, whilst the average for the decennium ended 1950-51 was 2,086,513 acres.

(ii) *Varieties Grown.* Information regarding areas cut for hay is available for all States, and details for 1951-52 are given in the following table. Similar information for 1950-51 appears in *Primary Industries Bulletin* No. 45, Part I.—*Rural Industries.*

HAY : AREA UNDER VARIOUS KINDS GROWN, 1951-52.  
(Acres.)

State.	Wheaten.	Oaten.	Lucerne.	Other.	Total.
New South Wales ..	120,756	113,348	72,760	27,143	334,007
Victoria ..	34,964	214,427	40,851	350,176	640,418
Queensland ..	6,807	3,284	29,791	3,704	43,586
South Australia ..	63,439	132,465	7,789	53,312	257,005
Western Australia ..	48,597	84,244	143	40,871	173,855
Tasmania ..	2,452	32,668	781	61,862	97,763
Australian Capital Territory ..	146	1,100	972	88	2,306
Total ..	277,161	581,536	153,087	537,156	1,548,940

For all States and the Australian Capital Territory combined the proportions of the areas sown to the principal kinds of hay in 1951-52 were 37 per cent. for oaten, 18 per cent. for wheaten, 10 per cent. for lucerne, and 35 per cent. for other hay. In that year, oaten hay predominated in the States of South Australia and Western Australia, wheaten hay in New South Wales, lucerne in Queensland, and meadow and grass in Victoria and Tasmania.

2. **Value of Hay Crop.**—The following table shows the value, and the value per acre, of the hay crop of the several States for the seasons 1950-51 and 1951-52 :—

HAY : VALUE OF CROP, 1950-51 AND 1951-52.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
1950-51—								
Aggregate value £	3,537,030	8,307,154	1,235,606	2,766,993	964,429	1,084,870	34,599	17,930,591
Value per acre . .	£14/16/1	£14/18/0	£27/10/0	£10/12/2	£5/9/0	£11/5/1	£21/10/1	£13/0/5
1951-52—								
Aggregate value £	6,702,190	11,407,015	2,228,823	2,877,613	1,438,253	1,464,430	74,497	26,192,821
Value per acre . .	£20/1/4	£17/16/3	£51/2/9	£11/3/11	£8/5/5	£14/19/7	£32/6/1	£16/18/2

3. **Farm Stocks of Hay.**—Details of stocks of hay held on farms are now collected at the annual census of farm production. Particulars of stocks so held at 31st March in each year 1948 to 1952 are given in the table below.

STOCKS OF HAY HELD ON FARMS.

(Tons.)

31st March—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
1948 ..	825,821	1,059,842	96,158	478,142	176,188	95,147	3,676	2,734,974
1949 ..	691,608	969,242	84,170	404,813	177,502	88,098	3,345	2,418,778
1950 ..	680,498	1,014,747	101,222	341,888	188,167	116,549	2,530	2,445,601
1951 ..	608,416	940,537	102,487	321,873	154,094	112,887	1,774	2,242,068
1952 ..	500,596	1,129,163	29,766	418,734	142,711	129,893	2,702	2,353,565

4. **Imports and Exports.**—Under normal conditions, hay, whether whole or in the form of chaff, is somewhat bulky for oversea trade, and consequently does not figure largely amongst the imports and exports of Australia. During 1951-52 exports amounted to 3,663 tons, valued at £92,669.

### § 13. Green Fodder.

1. **Nature and Extent.**—Considerable areas are devoted to the growing of green fodder, mainly in connexion with the dairying industry. The areas recorded in respect of green fodder include areas of crops cut for feeding to live stock as green fodder, together with areas fed off to stock as green forage. Included with the latter are areas which may have been sown with the intention of harvesting for grain, but which, due to adverse seasonal conditions, showed no promise of producing grain or even hay and were fed off to live stock. The principal crops cut for green fodder are oats, wheat and lucerne, while small quantities of barley, sorghum, maize, rye and sugar-cane also are so used. In 1951-52 the area under green fodder (2,521,835 acres) consisted of oats (1,455,611 acres), lucerne (228,703 acres), wheat (177,634 acres), sorghum (62,017 acres), maize (49,736 acres), barley (78,502 acres), rye (33,464 acres), sugar-cane (6,431 acres) and other crops (429,737 acres). Particulars concerning the area of green fodder in the several States during each of the years 1947-48 to 1951-52 are given in the following table together with the average for the periods of ten years ended 1938-39 and 1950-51.



**GREEN FODDER : AREA.**  
(Acres.)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Average, 1929-30 to								
1938-39 .. .. .	482,989	120,355	347,804	106,820	189,332	24,255	656	1,272,211
1947-48 .. .. .	488,028	46,100	511,115	141,452	400,100	116,482	2,044	1,705,321
1948-49 .. .. .	548,106	50,847	544,669	291,688	447,411	125,961	2,150	2,010,832
1949-50 .. .. .	584,541	44,928	581,811	277,265	550,690	136,412	2,249	2,177,896
1950-51 .. .. .	528,214	41,279	583,304	340,727	566,312	163,153	1,214	2,224,203
Average, 1941-42 to								
1950-51 .. .. .	588,948	68,292	573,050	236,257	409,716	97,437	1,744	1,975,444
1951-52 .. .. .	672,633	45,661	604,190	385,079	636,728	176,319	1,225	2,521,835

2. Value of Green Fodder Crops.—The value of these crops is variously estimated in the several States, and the Australian total for the season 1951-52, excluding Western Australia, may be taken approximately as £6,934,000.

**§ 14. Sugar-cane.**

1. Area.—Sugar-cane growing appears to have commenced in Australia in or about 1862, and is confined to New South Wales and Queensland. A brief outline of the development of the industry was included in earlier issues of the Official Year Book (see No. 38, page 985). The area of sugar-cane in Australia for the seasons 1947-48 to 1951-52 and the averages for the ten-year periods ended 1938-39 and 1950-51 are shown in the following table. In 1951-52 the total area of sugar-cane (excluding areas cut for green fodder) was a record at 402,867 acres, an increase of 1.4 per cent. over the 1950-51 area of 397,122 acres.

**SUGAR-CANE : AREA.(a).**  
(Acres.)

Season.	New South Wales.			Queensland.			Australia.			Total.
	Area crushed.	Area of stand-over and newly-planted cane.	Area cut for plants.	Area crushed.	Area of stand-over and newly-planted cane.	Area cut for plants.	Area crushed.	Area of stand-over and newly-planted cane.	Area cut for plants.	
Average, 1929-30 to										
1938-39 .. .. .	9,106	9,023	140	229,327	75,409	9,368	238,433	84,432	9,508	332,373
1947-48 .. .. .	7,113	8,955	360	215,378	98,403	14,705	222,491	107,358	15,065	344,914
1948-49 .. .. .	8,386	8,761	312	257,944	97,434	10,664	266,330	106,195	10,976	383,501
1949-50 .. .. .	8,517	8,081	297	272,312	97,878	10,639	281,329	105,959	10,936	398,224
1950-51 .. .. .	8,207	7,134	236	263,666	106,903	10,976	271,873	114,037	11,212	397,122
Average, 1941-42 to										
1950-51 .. .. .	7,896	8,272	293	237,685	86,693	12,035	245,581	94,965	12,328	352,874
1951-52 .. .. .	8,354	5,974	191	273,370	101,731	13,247	281,724	107,705	13,438	402,867

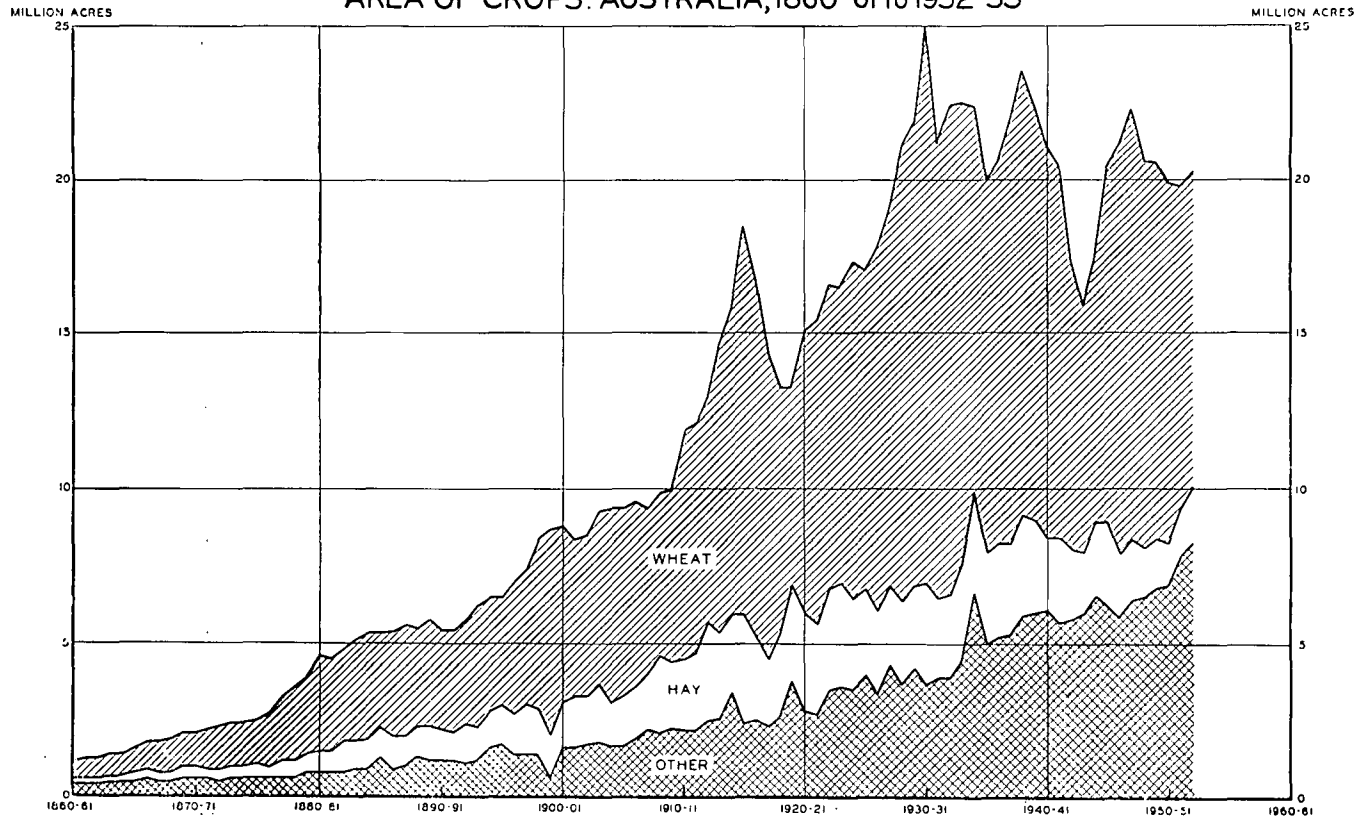
(a) Excludes areas cut for green fodder.

2. Productive and Unproductive Cane.—The areas shown in the preceding table do not include the small acreage cut for green fodder, which in 1951-52 amounted to 6,431 acres. The whole area planted is not cut for crushing during any one season, there being always a considerable amount of young and "stand-over" cane as well as a small quantity required for plants. Thus the season in which the highest acreage is recorded may not show the greatest area of productive cane cut for crushing.

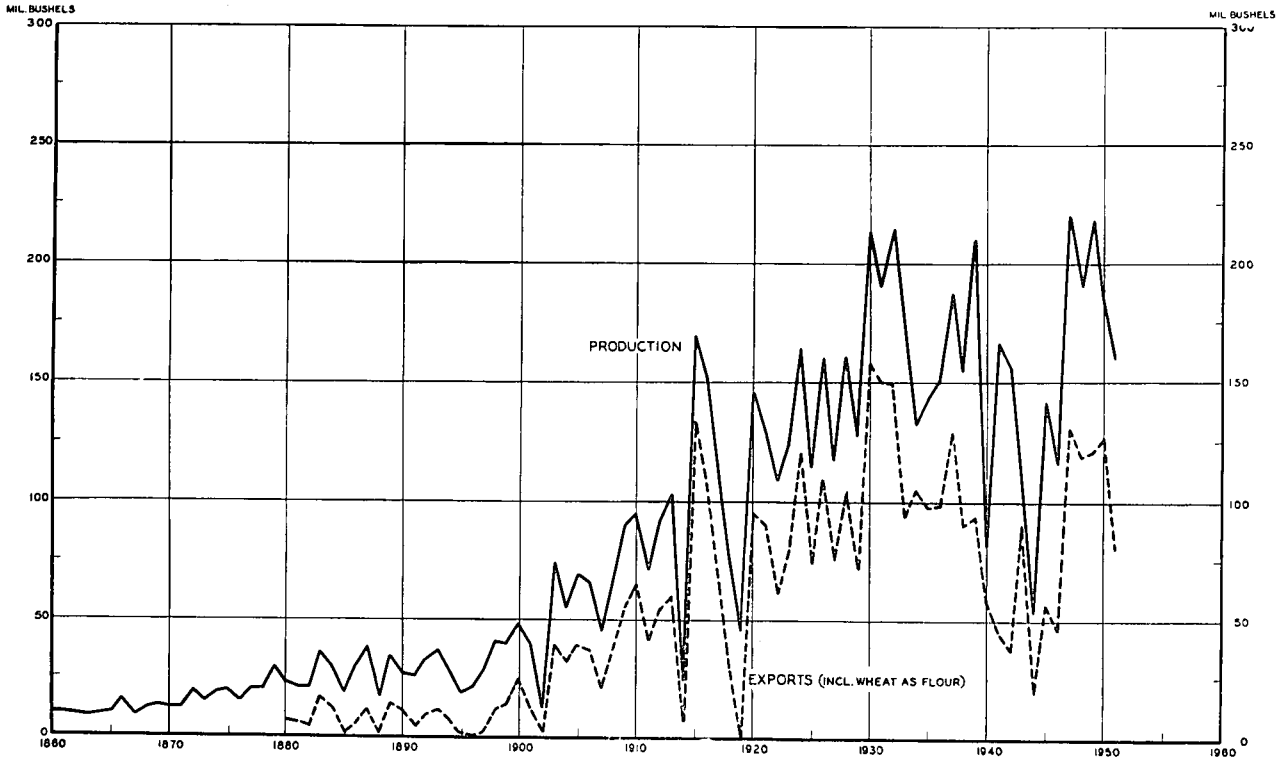
3. Production of Cane and Sugar.—For Queensland, statistics of the production of sugar-cane are not available prior to the season 1897-98. In that season the total for Australia was 1,073,883 tons, as against the maximum production of 7,051,555 tons in 1950-51.

The average production of cane during the ten seasons ended 1950-51 was 5,190,256 tons, and of raw sugar 721,395 tons. Particulars of the total production of cane and sugar for the years 1947-48 to 1951-52 and the averages for the ten-year periods ended 1938-39 and 1950-51 are as follows.

# AREA OF CROPS: AUSTRALIA, 1860-61 to 1952-53

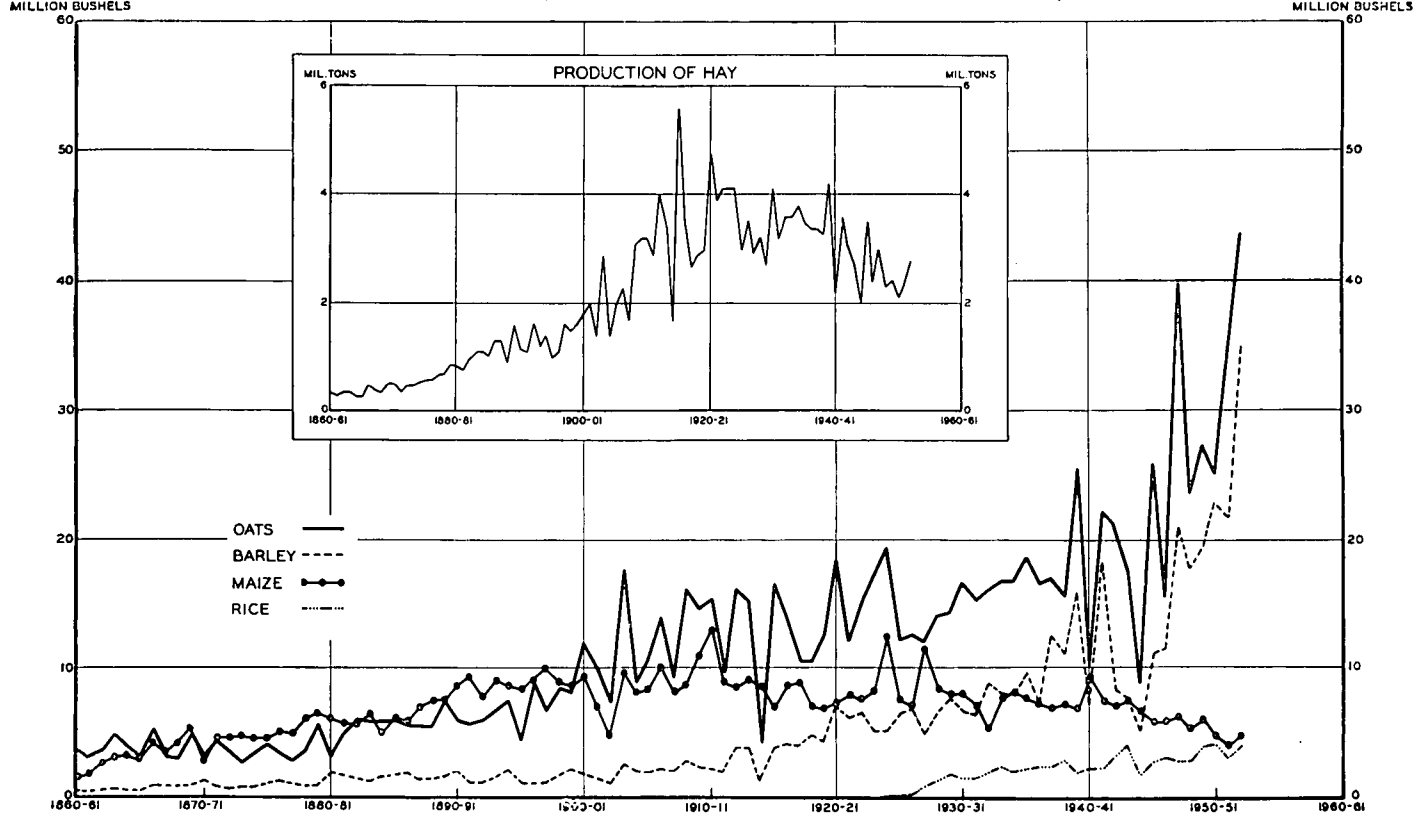


## WHEAT PRODUCTION AND EXPORTS: AUSTRALIA, 1860-61 to 1951-52



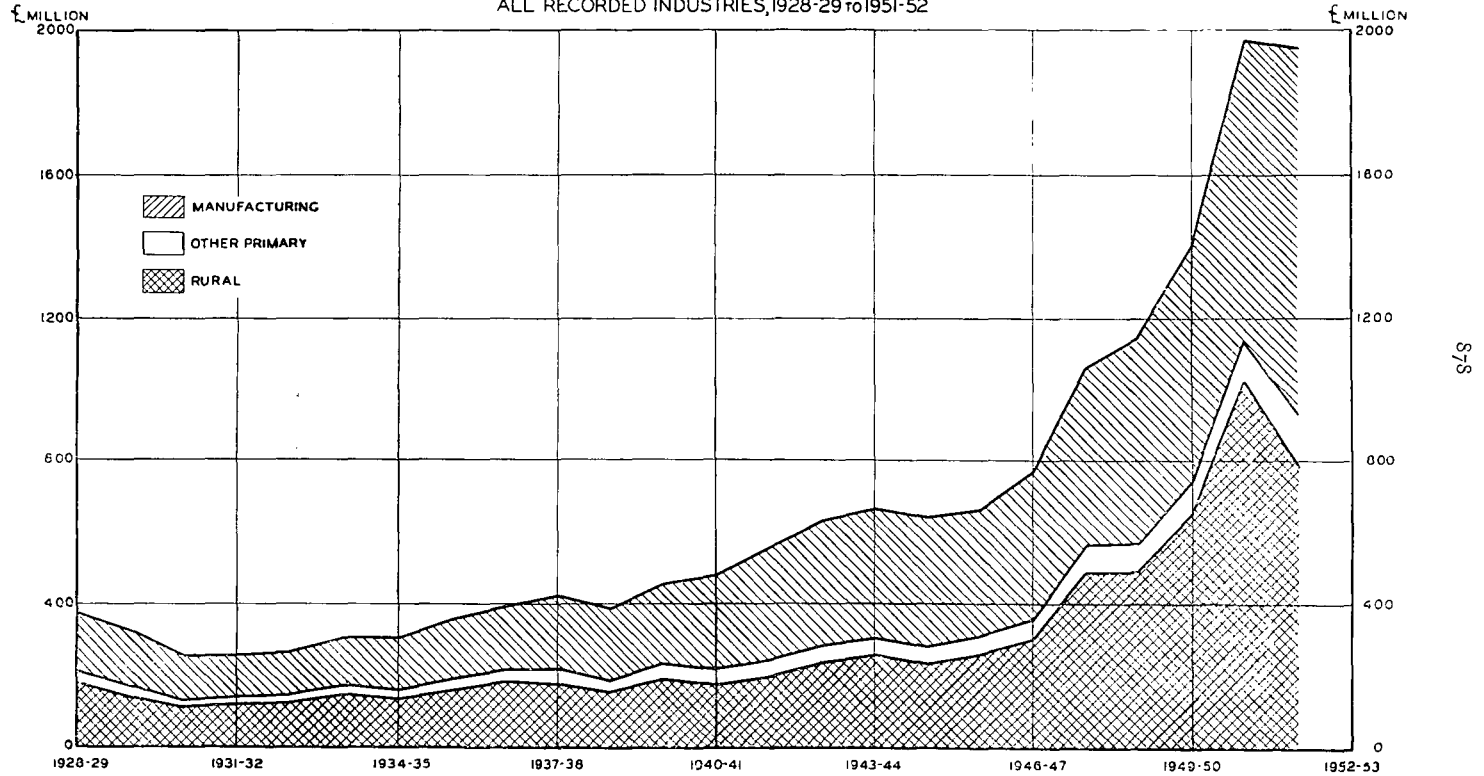
NOTE.—The export figures for the years 1915-16 to 1920-21 do not represent the surplus available for export in each of these years because of the dislocation of shipping due to the 1914-1918 War. For these years the quantity consumed in Australia has been averaged and the balance taken as exports.

# PRODUCTION OF OATS, BARLEY, MAIZE, RICE AND HAY : AUSTRALIA, 1860-61 TO 1952-53



# NET VALUE OF PRODUCTION: AUSTRALIA

ALL RECORDED INDUSTRIES, 1928-29 to 1951-52



## SUGAR-CANE : PRODUCTION OF CANE AND SUGAR.

(Tons.)

Season.	New South Wales.		Queensland.		Australia.	
	Cane.	Sugar.(a)	Cane.	Sugar.(a)	Cane.	Sugar.(a)
Average, 1929-30 to						
1938-39 .. .. .	241,402	30,317	4,461,988	626,789	4,703,390	657,106
1947-48 .. .. .	267,261	33,560	4,150,986	571,694	4,418,247	605,254
1948-49 .. .. .	273,974	33,003	6,433,556	910,049	6,707,530	943,052
1949-50 .. .. .	330,738	40,706	6,518,042	896,413	6,848,780	937,119
1950-51 .. .. .	359,849	41,258	6,691,706	879,844	7,051,555	921,102
Average, 1941-42 to						
1950-51 .. .. .	289,536	36,601	4,900,720	684,794	5,190,256	721,395
1951-52 .. .. .	321,388	41,060	5,005,172	704,341	5,326,560	745,401

(a) Raw sugar at 94 net titre.

The production of raw sugar in Australia in 1951-52 amounted to 745,401 tons manufactured from 5,326,560 tons of cane, compared with the record production of 943,052 tons in 1948-49, and production of 921,102 tons in 1950-51.

Official annual data are not available regarding the total number engaged in the sugar industry in Queensland other than the number of separate holdings growing cane (6,136 in 1951-52) and of employees in sugar mills (5,788 in 1951-52).

According to data obtained from the population census of 30th June, 1947, the number of persons engaged in the sugar-cane industry in New South Wales and Queensland comprised 15,789 males and 287 females, a total of 16,076 persons, of whom 2,521 were employers and 4,549 were self-employed.

4. Average Production of Cane Sugar.—Owing to climatic variation, comparison between the average yields of cane per productive acre in Queensland and New South Wales cannot be accurately made except on an annual basis. In New South Wales the crop matures in from 20 to 24 months, whereas in Queensland a period of from 12 to 14 months is sufficient. Allowing for the disparity in maturing periods the average annual yields of cane per productive acre during the ten years ended 1950-51 were 36.67 tons for New South Wales, and 20.62 tons for Queensland. Similarly, the yields of sugar per acre crushed for the same period were estimated at 4.64 tons and 2.88 tons respectively. Apart from the consideration mentioned above, the yields of cane and sugar per acre crushed for Australia for the ten years ended 1950-51 were 21.13 tons and 2.94 tons respectively, as compared with 19.73 tons and 2.76 tons for the decennium ended 1938-39.

## SUGAR-CANE AND SUGAR : YIELD PER ACRE.

(Tons.)

Season.	New South Wales.			Queensland.			Australia.		
	Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.	Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.	Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.
Average, 1929-30 to									
1938-39 .. .. .	26.51	3.33	7.96	19.46	2.73	7.13	19.73	2.76	7.15
1947-48 .. .. .	37.57	4.72	7.96	19.27	2.65	7.26	19.86	2.72	7.30
1948-49 .. .. .	32.67	3.94	8.30	24.94	3.53	7.07	25.19	3.54	7.11
1949-50 .. .. .	38.83	4.78	8.13	23.89	3.29	7.27	24.34	3.33	7.31
1950-51 .. .. .	43.85	5.03	8.72	25.38	3.34	7.61	25.94	3.39	7.66
Average, 1941-42 to									
1950-51 .. .. .	36.67	4.64	7.91	20.62	2.88	7.16	21.13	2.94	7.19
1951-52 .. .. .	38.47	4.92	7.83	18.31	2.58	7.11	18.91	2.65	7.15

5. Quality of Cane.—The quantity of cane required to produce a ton of sugar varies with the variety planted, the district and the season. For the ten years ended 1950-51 it required on the average 7.19 tons of cane to produce 1 ton of sugar, or 13.91 per cent.

of its total weight, as compared with 7.15 tons for the ten years ended 1938-39. As the result of the systematic study of cane culture in Queensland and improvements in field and mill methods the sugar content of the cane has been considerably increased, and in 1937-38 only 6.78 tons of cane were required to produce 1 ton of sugar. It is believed that this is the highest sugar content obtained anywhere in the world.

The Bureau of Sugar Experiment Stations in Queensland is rendering useful service to the sugar industry by advocating and demonstrating better methods of cultivation, the more scientific use of fertilizers, lime, etc., and by producing and distributing improved varieties of cane.

**6. Production and Utilization.**—Details of the production and utilization of raw sugar for the three years ended 1938-39 and each year 1947-48 to 1951-52 are shown below. It should be noted that the details of sugar production refer to the annual periods shown, without regard to the season in which the sugar was produced; they include the small quantities of beet sugar produced in certain of these years. Consumption is shown in terms of refined sugar, including that consumed in manufactured products.

#### RAW SUGAR : PRODUCTION AND UTILIZATION, AUSTRALIA.

Year.	Changes in Stock.	Production.	Exports. (a)	Miscel- laneous Uses.(b)	Consumption in Australia. (a)	
					Total.(c)	Per Head. (c)
	'000 tons.	'000 tons.	'000 tons.	'000 tons.	'000 tons.	lb.
Average, 1936-37 to 1938-39 .. ..	+ 6.2	779.3	435.3	11.2	326.6	106.5
1947-48 .. ..	+42.9	633.2	140.3	22.1	427.9	125.4
1948-49 .. ..	+ 7.3	897.3	461.0	19.5	409.5	117.6
1949-50 .. ..	-10.4	902.5	483.4	19.5	410.0	116.2
1950-51 .. ..	+ 5.8	906.9	433.3	21.8	446.0	120.2
1951-52 .. ..	- 7.0	702.2	206.1	23.8	479.3	125.7

(a) Includes sugar content of manufactured products.  
in refining.

(c) In terms of refined sugar.

(b) Includes industrial uses and losses

**7. Consumption in Factories.**—The quantity of sugar used in factories in 1951-52 amounted to 273,536 tons compared with 260,560 tons in 1950-51 and 123,883 tons in 1938-39. These figures include, where necessary, estimates of consumption based on the sugar content of the finished product. Particulars of sugar used in establishments not classified as factories are not available, and consequently these quantities are deficient to that extent. In 1951-52 consumption by factories engaged in the production of jams, jellies and preserved fruit (including condiments, pickles, etc.) amounted to 82,745 tons and by those producing confectionery, ice cream, etc., amounted to 54,011 tons.

**8. Control of Cane Production in Queensland.**—Agreements between the Commonwealth and Queensland Governments have fixed the wholesale price of sugar and sugar products from time to time. On 1st September, 1946, a Sugar Agreement Act came into operation, fixing the wholesale price at £33 4s. per ton (4d. per lb. retail). Subsequently this Act was twice amended, in December, 1947, when the price was raised to £37 6s. 8d. per ton (4½d. per lb. retail) and in October, 1949, when a further increase to £41 9s. 4d. per ton (5d. per lb. retail) was granted. This Act was due to expire on 31st August, 1951, but on 27th June, 1951, a new agreement was signed. This new agreement, which came into operation on 7th July, 1951, repealed the 1946, 1947 and 1949 agreements and increased the wholesale price to £53 6s. 8d. per ton (6½d. per lb. retail). The wholesale price was further increased on 24th March, 1952 to £64 per ton (8d. per lb. retail) and on 13th October, 1952 to £72 per ton (9d. per lb. retail) by an exchange of letters between the two Governments. These amendments have not yet been incorporated in the Act. The new agreement is intended to cover the period up to 31st August, 1956.

The net proceeds of all sugar sold in Australia and sugar sold abroad are pooled and a uniform price per ton is paid to the mills. This pooling is made possible by the acquisition by the Queensland Government of all sugar produced in the State, under legislation which has been in force since 1915. The small New South Wales production (about 5 per cent. of the whole) is also acquired by the Queensland Government by private agreement.

Sugar production, which in 1923 had scarcely been sufficient to cover Australian requirements, grew very rapidly in subsequent years. In 1925 the Queensland Government took steps to prevent, as a general rule, new land from being opened up for cane production. During that year 56 per cent. of the sugar production was consumed in Australia and 44 per cent. exported. After 1925, production remained stable for some years. In 1929 the operations of the pool, which had hitherto received at a uniform price all sugar offered it by the mills, were re-organized. After 1929, mills received the full pool price for sugar up to the amount of their previous maximum production only. Any further supplies were acquired at export price only.

Between 1929 and 1939 the export price was generally less than half the pool price. In spite of this, production increased by 72 per cent. during that period. In 1939, in view of the fact that the International Sugar Agreement imposed certain restrictions on the volume of Australian exports, the Queensland Parliament passed further legislation limiting the pool (mill peaks) to 737,000 tons in respect of production in Queensland. Any production in excess of this was to be acquired at a penalty price. This tonnage was divided up in quotas between the mills, on the understanding that the mills would allocate quotas of production to individual farmers. Proclamations issued by the Queensland Government, however, permitted the harvesting of the whole of the crops for the seasons 1939 to 1948.

In 1948 the mill peak was raised to 874,000 tons. As a result of the Commonwealth Countries Sugar Marketing Agreement, negotiated in London in December, 1949, the Queensland Government initiated a controlled expansion of the industry, and for the 1950 season mill peaks were increased to 942,300 tons. Further increases in mill peaks to 1,045,000 tons to operate from 1953 and to 1,162,000 tons to operate from 1954 were subsequently announced.

9. **Sugar-beet.**—The production of sugar-beet fell from an average of 4,642 tons in the ten years ended 1938–39 to 584 tons in 1947–48. There has been no production in subsequent years and the Victorian Government has now dismantled and disposed of its factory which formerly treated the sugar-beet at Maffra.

10. **Sugar Agreement in Australia—Embargo on Imports, etc.**—Reference was made in Official Year Book No. 37 (pp. 940, 941) to the agreement operating between the Commonwealth and Queensland Governments in respect of the sugar industry in Australia. Briefly, the agreement places an embargo on sugar importations and fixes the price of sugar consumed in Australia. A new agreement operating from 7th July, 1951 covers the period up to 31st August, 1956.

11. **International Sugar Agreement.**—Delegates of 21 nations, representing 90 per cent. of producers, met in London and entered into an agreement on 6th May, 1937, providing for the regulation of the production and marketing of sugar in the world during a period of five years from 1st September, 1937. The object of the agreement was to ensure an adequate supply of sugar at a price not exceeding the cost of production, including a reasonable profit to efficient producers. For this purpose, each exporting country was given a basic annual export quota which would be increased in proportion to any expansion in sugar consumption. By this means and by limitations on stocks and measures to encourage more consumption it was hoped that the International Sugar Council, which was established to administer the agreement, would be able to hold in proper balance the supplies and requirements of sugar. The export quota originally allotted to Australia was 400,000 long tons. This figure could be increased, however, where the delivery from any British Colony fell short of its quota. In such circumstances, the deficiency could be allocated among other producing countries of the Empire, including Australia.



This agreement, which normally would have expired on 31st August, 1942, has proved of great benefit to Australia. In 1943, fourteen of the original 21 nations signed a protocol continuing the agreement for another two years ending 31st August, 1944. Nine further protocols have since been signed, the latest extending the agreement to 31st August, 1955. The first protocol, signed in 1943, continued the agreement unchanged, while later protocols contained two new provisions. The first of these provisions was that during the period of the extension, the quotas fixed in the agreement should be inoperative. The second provision was that the signatories of the protocols recognized that revision of the agreement was necessary and should be undertaken when the time appeared opportune. The protocols prescribed that, in any negotiations for a new agreement, the existing agreement shall be taken as the starting point. The United Nations, at the request of the International Sugar Council, convened a conference in London in July, 1953, to discuss the conclusion of a new International Sugar Agreement. Australia was represented at the conference.

12. **Net Return for Sugar Crop.**—Details of the disposal of the crop, net value of exports and the average price realized during each of the years 1938-39 and 1947-48 to 1951-52 will be found in the following table :—

**RAW SUGAR(a) : NET RETURNS, AUSTRALIA.**

Year.	Proportion Exported. (b)	Net Value of Exports per Ton. (b)		Average Price per Ton for Whole Crop.	Estimated Value of Crop.
		£	s. d.		
	Per cent.				£
1938-39 .. ..	55.78	8	4 3	15 3 11	12,806,376
1947-48 .. ..	17.61	29	12 6	24 10 9	14,879,144
1948-49 .. ..	47.00	28	2 0	25 8 6	23,904,606
1949-50 .. ..	46.92	29	7 6	26 13 8	25,362,288
1950-51 .. ..	43.73	32	16 6	28 3 4	26,131,998
1951-52 .. ..	21.12	36	15 6	34 7 0	24,911,788

(a) 94 net titre.

(b) As supplied by the Queensland Sugar Board.

The estimated value of the raw sugar produced has been based upon details taken from the audited accounts of the Queensland Sugar Board. The values stated represent the gross receipts from sales in Australia and overseas, less refining costs, freight, administrative charges, etc., and export charges, but not deducting concessions to the fruit industry and other rebates which in 1951-52 amounted to £3,484. The value thus obtained represents the net market value of all raw sugar sold, which, since 1933, has been divided between the growers and millers in the approximate proportions of 70 per cent. and 30 per cent. respectively. Prior to that year the distribution was about two-thirds to the grower and one-third to the miller.

13. **Exports of Sugar.**—Particulars of the exports of cane sugar (raw and refined) for the five years ended 1938-39 and each year 1947-48 to 1951-52 are as follows :—

**SUGAR : EXPORTS, AUSTRALIA.**

Particulars.	Average, 1934-35 to 1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
	Quantity tons	377,930	100,351	415,194	432,711	387,841
Value £	3,480,632	3,062,450	13,199,309	14,147,150	14,791,575	6,896,398

14. **Sugar By-products.**—Large quantities of molasses are produced as a by-product in the sugar mills. Details for a series of years of the quantities produced and the amounts used for distilling, fuel, manure and other purposes will be found in Chapter XXIV.—Manufacturing Industry.

Boards are now being made from the residue of crushed fibre after the removal of the sugar content from sugar-cane. These boards are used in the building industry for walls and ceilings and possess high insulating and sound-absorbing properties.

15. **Sugar Prices.**—The prices of sugar in Australia from 1939 to 1941 and 1947 to 1951 in the case of raw sugar, and from 1925 to 1936 and 1947 to 1956 in the case of refined sugar, are shown in the following table.

SUGAR : PRICES IN AUSTRALIA.

Year.	Raw Sugar, 94 Net Titre.			Refined Sugar.		
	Average Return per Ton received by millers and growers for—			Date of Determination.	Wholesale Price per Ton.	Retail Price per lb.
	Home Consumption.	Exports.(a)	Whole Crop. (a)			
	£ s. d.	£ s. d.	£ s. d.		£ s. d.	d.
1939 ..	23 12 6	10 7 6	15 17 7	1.9.25 to 31.8.31..	37 6 8	4½
1940 ..	23 1 0	11 5 6	17 2 11	1.9.31 to 4.1.33 ..	37 6 8	4½
1941 ..	22 13 0	10 18 9	17 18 11	5.1.33 to 31.8.36..	33 4 0	4
1947 ..	24 0 0	29 12 6	24 19 9	4.12.47 to 28.10.49	37 6 8	4½
1948 ..	23 1 0	28 2 0	25 8 6	29.10.49 to 6.7.51	41 9 4	5
1949 ..	24 6 0	29 7 6	26 13 8	7.7.51 to 23.3.52..	53 6 8	6½
1950 ..	24 11 0	32 16 6	28 3 4	24.3.52 to 12.10.52	64 0 0	8
1951 ..	33 14 0	36 15 6	34 7 0	13.10.52 to 31.8.56	72 0 0	9

(a) Including "Excess" Sugar.

16. **Marketing Arrangements.**—After the outbreak of war in September, 1939, the British Ministry of Food concluded arrangements with the Queensland Government for the purchase of Australia's surplus production of raw sugar for the season 1939. The price was fixed at £Stg.7 10s. per ton at United Kingdom ports plus the preference on dominion sugar of £Stg.3 15s. per ton under the existing tariff. Similar agreements were negotiated for the disposal of the surplus raw sugar in each subsequent season. The price in sterling currency per ton c.i.f. United Kingdom ports, basic 96° polarization, inclusive of the tariff preference has risen to £32 17s. 6d. per ton from 1st January, 1951, to £38 10s. from 1st January, 1952 and to £42 6s. 8d. from 1st January, 1953. However, the latter price applied only to 314,000 tons of 1953 exports, the remainder being sold at world prices plus preference. (For prices in previous years see earlier issues.)

In December, 1949, a Commonwealth Countries Sugar Marketing Agreement was formulated in London, the terms of which include an undertaking by the United Kingdom Government to find a market for the Australian exportable surplus sugar to the end of 1952.

From January, 1953, a new arrangement entered into, pursuant to the British Commonwealth Sugar Agreement, came into operation. For the six years 1953-1958, Australia is to plan for aggregate exports not exceeding 600,000 tons annually. Of this amount, the United Kingdom Government agreed to take 314,000 tons at guaranteed prices to be negotiated annually. The balance of 286,000 tons is expected to find a market in the United Kingdom or Canada at the world price plus United Kingdom or Canadian preference. Provision is made for extension of the term of the agreement, and for upward revision of the quotas, if necessary.

17. **Fruit Industry Sugar Concession Committee and Sugar Rebates.**—The 1931-36 and subsequent Sugar Agreements between the Commonwealth and Queensland Governments have provided for the establishment of a Committee entitled the "Fruit Industry

Sugar Concession Committee". The Agreements provide that the Queensland Government shall, on behalf of the Australian Sugar Industry, contribute £216,000 annually to a fund administered by the Committee. (The annual contribution is temporarily suspended whilst the Committee's accumulated funds exceed £500,000). From this fund, the Committee pays a rebate to Australian manufacturers amounting to £2 4s. per ton of refined sugar used in the processing of approved fruit products. Payment of this rebate is conditional upon manufacturers paying for all fresh fruit used in such products at prices not lower than those declared by the Committee to be reasonable prices. The Committee also pays exporters of approved fruit products an export sugar rebate the rate of which is equivalent to the amount (if any) by which the price of Australian sugar to manufacturers exceeds the price at which the cheapest available foreign sugar could be landed in Australia. This rebate ensures that manufacturers of fruit products containing sugar are not handicapped on the world's markets by having to pay a higher price for Australian sugar than they would pay for foreign sugar landed in Australia duty free. A similar rebate on some other products (not being approved fruit products) is paid to exporters by the Queensland Government on behalf of the Australian sugar industry. After paying rebates and administrative expenses the Committee is empowered to use any money remaining in the fund for the promotion of the use and sale of Australian fruit products, or for scientific research.

18. **Sugar Inquiry Committee.**—The Sugar Inquiry Committee under the Chairmanship of the Commonwealth Prices Consultant, was constituted by the Commonwealth Government on 18th March, 1952, to conduct an investigation into the Australian Sugar Industry. The terms of reference to the Committee included a general survey of all branches of the Australian sugar industry and particular examination of the prices and other matters covered by the Sugar Agreement between the Commonwealth and Queensland Governments.

The Committee conducted public hearings in New South Wales, Victoria and Queensland and also accepted much supporting material in confidence. It presented its report on 11th September, 1952. As an outcome of the report, the wholesale price of refined sugar was increased as from 13th October, 1952, by £8 per ton (equivalent to an increase of 1d. per lb. in the retail price). Other amendments recommended by the Committee were made to the Sugar Agreement.

19. **Bulk Handling of Sugar.**—Following a successful trial shipment of bulk raw sugar to England in 1951 and consideration of two independent and comprehensive reports on bulk handling prepared for it, the Sugar Board recommended, and the Queensland Government subsequently approved (on 5th August, 1952), the establishment of bulk handling facilities at the ports of Mackay and Lucinda Point. Consideration was to be given later to the installation of similar facilities in certain other Queensland ports. The Government Railways have conducted experiments with improvised railway trucks for conveying bulk sugar with a view to provision of the necessary bulk rail transport facilities.

## § 15. Vineyards.

1. **Progress of Cultivation.**—(i) *Area of Vineyards.* Since the early days of Australian settlement the expansion of the cultivation of vines has been most rapid in Victoria and South Australia, the area under vineyards in the 1952 season in these two States comprising 78 per cent. of the total area. The purposes for which grapes are grown in Australia are (a) for wine-making, (b) for table use, and (c) for drying. The total area of vines in the several States during each of the years 1947-48 to 1951-52 and the averages for the ten-year periods ended 1938-39 and 1950-51 are shown in the following table.

## VINEYARDS : AREA.

(Acres.)

Season.	N.S.W.	Victoria.	Queen-land.	S. Aust.	W. Aust.	Australia.(a)
Average, 1929-30 to 1938-39	15,777	40,563	2,142	54,156	5,666	118,304
1947-48 ..	16,541	43,784	3,087	58,885	10,025	132,322
1948-49 ..	16,568	45,609	3,265	59,806	10,014	135,262
1949-50 ..	16,931	45,386	3,135	60,253	9,676	135,381
1950-51 ..	16,917	45,313	3,045	61,971	9,258	136,504
Average, 1941-42 to 1950-51	16,392	43,669	3,124	58,700	9,791	131,676
1951-52—						
Wine ..	8,115	7,369	332	47,539	2,411	65,766
Table ..	2,525	1,507	2,487	263	1,456	8,238
Drying ..	6,407	36,391	..	13,412	5,491	61,701
Total ..	17,047	45,267	2,819	61,214	9,358	135,705

(a) Excludes particulars for Australian Capital Territory.

(ii) *Wine Production, Bounties, etc.* The production of wine in Australia has shown a marked increase in recent years, rising from 14.3 million gallons in 1938-39 to 35.3 million gallons in 1951-52. In the same period consumption in Australia has expanded from 4.5 million gallons (0.7 gallons per head of population) to 13.8 million gallons (1.6 gallons per head of population). For many years prior to the 1939-45 War a bounty was paid on wine shipped overseas under the provisions of the Wine Export Bounty Act of 1930, as amended from time to time. Details of the bounty, payment of which was discontinued in 1947, may be found in Official Year Book No. 39, page 992.

The quantity of wine produced in the several States during the 1947-48 to 1951-52 seasons, together with the averages for the ten-year periods ended 1938-39 and 1950-51, is shown in the following table:—

## WINE : PRODUCTION.(a)

('000 Gallons.)

Season.	N.S.W.	Victoria.	Queensland.	S. Aust.	W. Aust.	Australia.
Average, 1929-30 to 1938-39	2,099	1,449	36	12,127	393	16,104
1947-48 ..	4,500	2,958	28	24,729	664	32,879
1948-49 ..	4,127	3,081	36	24,952	622	32,818
1949-50 ..	5,185	3,230	45	23,702	513	32,675
1950-51 ..	4,372	2,358	43	18,611	652	26,036
Average, 1941-42 to 1950-51	3,700	2,127	34	18,472	577	24,910
1951-52 ..	5,465	3,472	33	25,495	790	35,255

(a) Excludes spirits used in fortified wine, such spirit having been made from distillation wine.

2. *Imports and Exports of Wine.*—(i) *Imports.* The principal countries of origin of wine imported into Australia were, before the 1939-45 War, France, Spain, Portugal and Italy, the bulk of the sparkling wines coming from France. The bulk of the post-war

wine imports have been obtained from France. Imports for 1951-52 amounted to 79,791 gallons valued at £166,761 compared with 45,816 gallons valued at £97,655 in the previous year and an average of 36,685 gallons valued at £39,577 for the five years ended 1938-39.

(ii) *Exports.* Before the 1939-45 War practically all wine exported was sent to the United Kingdom, only 200,000 gallons (approximately) being sent elsewhere. Exports in 1951-52 totalled 1,162,292 gallons, of which the United Kingdom received 552,309 gallons, New Zealand, 175,881 gallons, Canada, 332,831 gallons, and other countries 101,271 gallons.

Exports for the five years ended 1951-52 are shown in the following table in comparison with average exports during the five years ended 1938-39:—

**WINE : EXPORTS FROM AUSTRALIA.**

Year.	Quantity (Gallons).			Value. (£)		
	Sparkling.	Other.	Total.	Sparkling.	Other.	Total.
Average, 1934-35 to 1938-39	3,772	3,559,094	3,562,866	5,400	938,195	943,595
1947-48 ..	5,935	2,682,431	2,688,366	8,071	1,421,861	1,429,932
1948-49 ..	5,180	1,873,083	1,878,263	11,558	982,401	993,959
1949-50 ..	6,093	1,097,225	1,103,318	6,323	509,516	515,839
1950-51 ..	3,651	1,219,258	1,222,909	7,121	627,741	634,862
1951-52 ..	6,685	1,155,610	1,162,295	18,983	711,554	730,537

3. *Oversea Marketing of Wine.*—(i) *The Wine Overseas Marketing Act 1929-1953.* This Act was introduced at the request of the viticultural interests in Australia with the object of placing the oversea marketing of Australia's surplus wine on an orderly basis. The Wine Overseas Marketing Board was appointed to supervise the export, and the sale and distribution after export, of Australian wine.

The name of the Board was changed to the Australian Wine Board in 1936. An amendment to the Act in 1945 made provision for eleven members on the Board, comprising five representatives of proprietary and privately-owned wineries and distilleries, two representatives of co-operative wineries and distilleries, three representatives of grape-growers supplying to wineries and distilleries, and one representative of the Commonwealth Government. No wine may be exported except by means of a licence which is issued under conditions recommended to the Minister by the Board; these include the withholding of shipments as directed by the Board. The Board has a London agency which advises on marketing conditions. The methods of marketing adopted by the Board have resulted in the widening of the distribution of Australian wines overseas.

(ii) *The Wine Grapes Charges Act 1929-1941.* This Act provides for the imposition of a levy on all grapes used in Australia for the manufacture of wines or spirit used for fortifying wine. The proceeds of the levy are used to defray the administrative and other expenses of the Board, and provision is made for such exemptions from the levy as the Board may recommend.

4. *Other Viticultural Products.*—(i) *Table Grapes.* Grapes for table use are grown in all the States except Tasmania, but the area cultivated to this variety is only about 7 per cent. of the productive area of grapes. The greatest development in the industry has taken place in the drying of raisins and currants, particularly in Victoria and South Australia. The quantities of table grapes produced during the season 1951-52 in each State are shown in § 3 of this chapter.

(ii) *Raisins and Currants.* The quantities of raisins (sultanas and lexias) and currants dried during each of the seasons 1947-48 to 1951-52 and the averages for the ten-year periods ended 1938-39 and 1950-51 are shown in the following table. The production of 103,410 tons for the 1943-44 season represents the greatest output recorded in any year. Owing to adverse seasonal conditions, heavy crop losses occurred during the three succeeding years. Production in 1947-48 amounted to 84,828 tons, but in none of the three seasons following did it reach 70,000 tons. In 1951-52, however, it amounted to almost 72,000 tons.

**RAISINS(a) AND CURRANTS : PRODUCTION.**  
(Tons.)

Season.	N. S. Wales.		Victoria.		South Aust.		Western Aust.		Australia.	
	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.
Average, 1929-30 to 1938-39 ..	4,234	796	35,235	7,995	11,494	8,007	697	1,789	51,660	18,587
1947-48 ..	6,044	1,079	47,160	8,086	11,358	6,682	544	2,975	66,006	18,822
1948-49 ..	3,819	1,090	35,705	7,967	6,829	6,250	478	2,766	46,831	18,073
1949-50 ..	5,721	898	42,194	6,930	5,895	4,244	289	1,685	54,099	13,757
1950-51 ..	4,419	971	28,007	6,081	7,870	5,830	402	2,547	40,698	15,429
Average, 1941-42 to 1950-51 ..	6,161	1,107	40,916	7,579	11,325	6,569	590	2,727	58,992	17,982
1951-52 ..	7,095	537	44,834	3,858	7,999	4,730	391	2,522	60,319	11,647

(a) Sultanas and lexias.

5. *Production and Disposal of Dried Vine Fruit.*—As the production of dried vine fruit is far in excess of Australia's requirements, considerable quantities are available for export. The quantities disposed of in Australia and overseas, as recorded by the Commonwealth Dried Fruits Control Board for the season ended December, 1952, totalled 69,475 tons, Australian consumption amounting to 18,521 tons and oversea exports 50,954 tons. Australian consumption includes amounts delivered to biscuit manufacturers, bakeries, etc., as well as retail sales for household consumption.

The following table shows the oversea exports of raisins and currants during each of the years 1947-48 to 1951-52 compared with the average for the five years ended 1938-39.

**RAISINS AND CURRANTS(a) : EXPORTS, AUSTRALIA.**

Year.	Raisins.		Currants.		Total Raisins and Currants.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Tons.	£	Tons.	£	Tons.	£
Average, 1934-35 to 1938-39	43,191	1,686,447	15,054	548,838	58,245	2,235,285
1947-48 ..	31,364	1,795,358	10,066	468,684	41,430	2,264,042
1948-49 ..	37,077	2,369,216	13,696	740,762	50,773	3,109,978
1949-50 ..	28,558	1,818,662	7,063	408,962	35,621	2,227,624
1950-51 ..	27,122	2,586,243	7,231	716,767	34,353	3,303,010
1951-52 ..	32,669	3,960,703	5,003	646,676	37,672	4,607,379

(a) Excludes quantities exported as mincemeat which amounted to 4,150 tons in 1951-52 value at £643,194.

Since 1912 Australia has not only produced sufficient raisins and currants for home consumption but has been able to maintain a large export trade. The chief countries importing Australian raisins and currants are the United Kingdom, New Zealand and Canada, the quantities exported thereto in 1951-52 being 18,640 tons, 7,303 tons and 10,269 tons respectively. Exports to Canada increased from 4,600 tons in 1928-29 to 16,944 tons in 1939-40 and to 25,955 tons in 1944-45, but had decreased to 10,269 tons by 1951-52.

6. **Post-war Contracts.**—A long-term agreement was negotiated between the Governments of the United Kingdom and Australia for the purchase of the exportable surplus of the dried vine fruit crop for the 1946, 1947 and 1948 seasons. A further agreement was reached between the Governments of the United Kingdom and Australia under which Australian dried vine fruits were purchased by the United Kingdom during the five years 1949 to 1953. This contract originally provided that the quantity of fruit to be purchased each year should not exceed a value of £2,500,000 sterling currency on an f.o.b. basis. This provision, however, was deleted after the 1951 season, enabling unrestricted tonnages of Australian dried vine fruits to enter the United Kingdom during 1952 and 1953. Export prices were fixed for the first two years, but during the remaining three years they were the subject of annual agreements by the two Governments. In April, 1953, the United Kingdom Government agreed to extend the five year contract for a period of one year to provide for the purchase by the British Ministry of Food of the exportable surplus from the 1954 crop on the same terms and conditions as applied under that contract. The contract prices for currants, sultanas and lexias sold to the United Kingdom during the years 1946 to 1953, are shown in the following table.

**DRIED VINE FRUITS : CONTRACT PRICES PER TON TO UNITED KINGDOM.**  
(£A. s. d., f.o.b. Australian Ports.)

Fruit.	Grade.	1946 to 1948.	1949 and 1950.	1951.	1952.	1953.
Currants ..	1 Crown and upwards	50 0 0	60 0 0	93 15 0	100 0 0	96 17 6
Sultanas ..	1 Crown and upwards	65 0 0	70 0 0	125 0 0	123 2 6	117 10 0
Lexias ..	4 and 5 Crown ..	64 7 6	64 7 6	125 0 0	123 2 6	117 10 0

7. **Oversea Marketing of Dried Fruits.**—(i) *The Dried Fruits Export Control Act 1924-1953.* This Act was passed by the Commonwealth Parliament at the request of the dried fruits industry to organize the oversea marketing of Australian dried vine fruits. The Dried Fruits Control Board was appointed to control the export, and the sale and distribution after export, of Australian sultanas, currants and lexias. The Board, as at present constituted, consists of eleven members comprising seven growers' representatives, two members with commercial experience, one member with experience in marketing dried fruits and one representative of the Commonwealth Government. In conjunction with its London agency, the Board has improved the marketing of Australian dried fruits overseas, and has increased the demand for the product. Its system of appraisalment has resulted in more satisfactory realizations. Its methods of ensuring continuity of supply and regulating shipments and its participation in the advertising campaign of the Australian Overseas Trade Publicity Committee have benefited the industry considerably. No dried fruits may be exported except by means of a licence, which is issued subject to conditions recommended by the Board.

(ii) *Dried Fruits Export Charges Act 1924-1929.* This Act provides for the imposition of a levy on all sultanas, currants and lexias exported from Australia for the purpose of defraying the administrative expenses of the Board and the cost of advertising, etc. The rate of the levy is fixed by regulation. Under an amendment made in 1927 provision was made for the exemption of sultanas, currants and lexias from the levy upon recommendations by the Board.

(iii) *The Dried Fruits Act 1928-1935.* In previous issues of the Official Year Book reference has been made to the Dried Fruits Act and its provisions have been outlined (see p. 894 of Official Year Book No. 28).

## § 16. Orchards and Fruit-Gardens.

1. **Area.**—The largest area of orchards and fruit-gardens prior to the 1939-45 War was attained in 1933-34 when 281,899 acres were planted. From that year until 1942-43, when 260,384 acres were under fruit, there was a gradual decline. In each subsequent year there was a continuous upward movement to 1947-48 when the area reached a new

peak of 290,320 acres. Subsequently there was a continuous decline to 270,882 acres in 1951-52. The total area of orchards and fruit-gardens in the several States during the years 1947-48 to 1951-52 compared with the averages for the ten seasons 1929-30 to 1938-39 and the ten seasons 1941-42 to 1950-51 is shown in the following table:—

## ORCHARDS AND FRUIT-GARDENS : AREA.

(Acres.)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Average, 1929-30 to 1938-39 .. .. .	84,025	76,643	32,437	29,365	20,703	32,627	69	275,869
1947-48 .. .. .	98,901	71,513	38,665	28,338	22,063	30,739	101	290,320
1948-49 .. .. .	95,421	71,746	37,735	29,732	22,585	29,448	84	286,751
1949-50 .. .. .	94,725	71,046	35,986	26,858	22,744	28,471	98	279,928
1950-51 .. .. .	91,477	69,911	35,241	28,686	22,013	27,130	103	274,561
Average, 1941-42 to 1950-51 .. .. .	88,149	70,247	34,306	27,997	21,818	30,678	106	273,301
1951-52 .. .. .	89,362	68,715	35,049	29,375	21,719	26,552	110	270,882

2. Varieties of Crops.—The varieties grown differ in various parts of the States, ranging from such fruits as the pineapple, papaw and mango of the tropics, to the strawberry, the raspberry and the currant of the colder parts of the temperate zone. In New South Wales, citrus fruits (oranges, lemons, etc.) and bananas are the principal crops, although apples, peaches, plums, pears and cherries are extensively grown. The principal varieties grown in Victoria are the apple, peach, pear, orange, plum and apricot. In Queensland, the banana, pineapple, apple, orange, mandarin, peach and plum are the varieties most largely cultivated. In South Australia, in addition to the apple, orange, apricot, plum, peach and pear, the almond and the olive are extensively grown. In Western Australia, the apple, orange, lemon, pear, plum, peach, apricot and fig are the chief varieties. In Tasmania, the apple occupies over two-thirds of the fruit-growing area, but small fruits, such as the currant, raspberry and gooseberry, are extensively grown, while the balance of the area is mainly taken up with the pear, apricot and plum. The following table shows the acreage—bearing and non-bearing—of the principal kinds of fruit, and the quantity and value of fruit produced.

## ORCHARDS AND FRUIT-GARDENS, 1951-52.

Fruit.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	A.C.T.	Aust.
AREA, BEARING AND NON-BEARING (ACRES).								
Apples ..	14,442	19,922	7,563	7,054	12,308	18,842	75	80,206
Apricots ..	2,003	5,083	272	4,143	429	1,347	5	13,282
Bananas ..	19,085	..	6,396	..	540	..	..	26,021
Cherries ..	2,429	1,832	6	957	39	80	2	5,345
Citrus—								
Oranges ..	26,533	5,166	3,756	6,342	3,802	..	..	45,599
Mandarins ..	2,119	96	1,558	120	220	..	..	4,113
Lemons and								
Limes ..	3,615	2,021	428	341	564	..	..	6,969
Other ..	796	356	129	266	191	..	..	1,738
Nuts ..	545	966	244	3,225	277	..	6	5,263
Peaches ..	7,040	14,173	1,425	2,064	801	95	5	25,603
Pears ..	3,447	12,604	312	1,771	1,011	1,806	6	20,957
Pineapples ..	359	..	9,215	..	1	..	..	9,575
Plums and Prunes	4,535	3,315	1,248	1,583	895	259	6	11,841
Small Fruits ..	12	730	191	187	16	4,078	..	5,214
Other Fruits ..	2,402	2,451	2,306	1,322	625	45	5	9,156
<b>Total ..</b>	<b>89,362</b>	<b>68,715</b>	<b>35,049</b>	<b>29,375</b>	<b>21,719</b>	<b>26,552</b>	<b>110</b>	<b>270,882</b>



## ORCHARDS AND FRUIT-GARDENS, 1951-52—continued.

Fruit.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
<b>PRODUCTION.</b>								
Apples bus.	1,351,144	1,579,123	494,510	1,249,816	1,127,733	4,930,000	10,729	10,743,055
Apricots "	333,276	519,190	14,118	507,340	50,181	67,518	104	1,491,727
Bananas "	2,229,192	..	446,874	..	73,276	..	..	2,749,342
Cherries "	126,684	69,919	128	51,479	1,034	4,576	17	253,837
Citrus—								
Oranges	2,748,967	484,235	284,549	831,793	407,322	..	..	4,756,866
Mandarins	203,943	15,784	117,745	24,743	16,756	..	..	378,971
Lemons and Limes	401,658	182,682	52,717	50,686	93,657	..	..	781,400
Other	126,773	48,610	15,260	34,976	25,031	..	..	250,650
Nuts lb.	165,058	244,682	64,605	1,170,848	35,878	..	694	1,681,765
Peaches bus.	903,421	1,590,702	84,047	157,309	77,478	8,890	172	2,822,019
Pears "	296,362	2,538,109	25,316	281,771	85,554	306,662	89	3,533,863
Pineapples "	39,424	..	1,904,955	..	40	..	..	1,944,419
Plums and Prunes	309,603	190,592	68,771	129,393	89,020	57,229	131	844,739
Small Fruits cwt.	221	11,876	7,588	2,228	374	169,581	..	191,868

GROSS VALUE OF PRODUCTION.  
(£.)

Apples ..	2,519,210	1,973,904	843,730	1,015,214	1,669,869	4,404,310	20,207	13,346,444
Apricots ..	823,430	519,190	43,287	807,623	54,084	58,740	261	2,306,615
Bananas ..	5,566,150	..	901,246	..	274,787	..	..	6,742,183
Cherries ..	640,560	209,757	768	211,064	9,926	5,300	87	1,077,462
Citrus—								
Oranges	4,067,470	712,438	442,494	1,270,424	379,119	..	..	6,871,945
Mandarins	290,240	23,347	187,901	40,929	24,435	..	..	566,852
Lemons and Limes	410,900	143,600	44,395	33,579	49,518	..	..	681,992
Other	134,690	42,713	17,586	23,643	15,446	..	..	234,078
Nuts ..	17,160	29,652	3,230	107,662	3,912	..	79	161,095
Peaches ..	1,099,260	1,670,237	137,325	262,939	98,103	5,700	314	3,273,878
Pears ..	380,660	2,411,204	32,543	427,144	132,326	367,250	264	3,751,691
Pineapples ..	44,350	..	1,539,894	..	36	..	..	1,584,280
Plums and Prunes	737,700	139,988	165,188	193,046	116,456	26,750	244	1,379,372
Small Fruits ..	1,770	94,860	65,327	25,301	9,180	741,610	..	938,048
Other Fruits ..	392,540	70,735	272,723	129,796	54,315	1,400	138	921,647
Total ..	17,126,090	8,041,625	4,697,637	5,448,664	2,891,512	5,611,060	21,594	43,838,182

3. **Principal Fruit Crops.**—The area, production and gross value of the principal fruit crops during the periods 1947-48 to 1951-52 compared with the average for the ten seasons 1929-30 to 1938-39, and the average of ten seasons 1941-42 to 1950-51, are shown hereunder:—

## PRINCIPAL FRUIT CROPS : AREA, PRODUCTION AND GROSS VALUE OF PRODUCTION.

Year.	Apples.	Apricots.	Bananas.	Citrus Fruits.	Peaches.	Pears.	Plums and Prunes.
<b>AREA, BEARING AND NON-BEARING (ACRES).</b>							
Average, 1929-30 to 1938-39	100,258	11,632	23,353	50,706	23,390	20,725	15,912
1947-48 .. .. .	84,199	13,179	36,591	54,619	28,474	22,785	12,579
1948-49 .. .. .	83,802	13,564	32,263	56,126	28,353	22,634	12,540
1949-50 .. .. .	81,744	13,277	29,669	57,367	27,318	21,579	12,226
1950-51 .. .. .	80,986	13,302	27,515	57,363	26,197	21,737	12,163
Average, 1941-42 to 1950-51	84,681	12,843	26,824	52,661	27,053	22,428	12,563
1951-52 .. .. .	80,206	13,282	26,021	58,419	25,603	20,957	11,841

PRINCIPAL FRUIT CROPS: AREA, PRODUCTION AND GROSS VALUE OF PRODUCTION—*continued.*

Year.	Apples.	Apricots.	Bananas.	Citrus Fruits.	Peaches	Pears.	Plums and Prunes.
PRODUCTION ('000 BUSHELS).							
Average, 1929-30 to 1938-39	10,013	1,014	2,270	5,011	1,984	2,130	648
1947-48 .. .. .	14,292	1,551	3,017	6,770	2,962	3,240	1,129
1948-49 .. .. .	8,313	1,347	3,147	7,056	2,204	3,125	820
1949-50 .. .. .	9,225	1,463	3,428	6,394	2,303	2,861	806
1950-51 .. .. .	9,711	1,309	3,224	7,645	2,435	3,549	940
Average, 1941-42 to 1950-51	11,299	1,278	3,224	5,903	2,334	2,968	907
1951-52 .. .. .	10,743	1,492	2,749	6,168	2,822	3,534	845
GROSS VALUE OF PRODUCTION. (£.)							
Average, 1929-30 to 1938-39	2,676,915	326,539	1,072,459	1,807,894	679,158	558,872	286,018
1947-48 .. .. .	6,716,011	1,190,253	3,355,820	4,314,866	1,557,541	1,443,751	714,632
1948-49 .. .. .	5,381,065	982,987	3,403,546	4,019,784	1,342,400	1,585,031	612,013
1949-50 .. .. .	7,709,500	1,327,785	3,879,916	5,350,266	1,687,135	2,107,553	786,212
1950-51 .. .. .	9,105,215	1,463,818	4,531,525	5,936,626	2,067,733	2,626,873	1,106,946
Average, 1941-42 to 1950-51	5,203,936	948,490	3,085,397	4,304,352	1,380,618	1,463,173	688,239
1951-52 .. .. .	13,346,444	2,306,615	6,742,183	8,354,867	3,275,878	3,751,691	1,379,372

4. **Production of Jams and Jellies and Preserved Fruit.**—Considerable quantities of fruit are used in the production of jams and jellies and preserved fruit in Australia. In 1951-52 output of jams and jellies amounted to 108,173,000 lb. whilst output of preserved fruit, excluding preserved apples, amounted to 241,288,000 lb. Production of preserved apples was 14,845,000 lb.

The recorded consumption of fruit in factories for all purposes, including that used for juice and cordial manufacture and for drying, was 195,877 tons in 1951-52.

5. **Consumption of Fruit and Fruit Products.**—Details of the estimated consumption of fruit and fruit products per head of population for a series of years ending 1952-53 are shown in Chapter XXIX.—Miscellaneous of this Year Book.

6. **Imports and Exports of Fruit.**—(i) *General.* The imports of fresh fruit into Australia are negligible, whilst those of dried fruit consist mainly of dates.

A considerable export trade in both fresh and dried fruit is carried on by Australia with oversea countries. The values of the shipments in 1951-52 amounted to £6,895,313 and £5,021,635 respectively. Apples constitute the bulk of the fresh fruit exported, although the exports of citrus fruit and pears are fairly considerable. Shipments of raisins' and currants have increased greatly since 1914-15 and are mainly responsible for the growth in the dried fruit exports, although dried tree fruit also figures amongst the exports.

(ii) *Fresh Fruit.* Particulars of the Australian export trade in fresh and frozen fruit are shown in the following table:—

FRESH AND FROZEN FRUIT : EXPORTS, AUSTRALIA.

Year.	Apples.		Pears.		Citrus.		Total.(a)	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Average, 1934-35 to 1938-39	'000 bus.	£'000.	'000 bus.	£'000.	'000 bus.	£'000.	'000 bus.	£'000.
1947-48 .. .. .	4,591	1,396	632	268	533	234	5,865	1,981
1948-49 .. .. .	3,352	2,095	400	366	571	604	4,402	3,886
1949-50 .. .. .	2,116	1,771	621	604	611	552	3,449	3,117
1950-51 .. .. .	3,010	2,438	572	639	563	650	4,225	3,934
1951-52 .. .. .	3,263	3,393	885	1,301	619	761	4,854	5,727
1951-52 .. .. .	3,263	4,285	808	1,492	432	779	4,601	6,895

(a) Total, including exports of all other fresh and frozen fruit.

(iii) *Dried Tree Fruit.* The quantity and value of oversea imports and exports of dried fruit, other than raisins and currants, for the five years ending 1951-52, compared with the average for the five years 1934-35 to 1938-39, are shown below. Normally, the bulk of the imports consists of dates obtained almost entirely from Iraq. This trade was prohibited during the war years but has since been resumed.

**DRIED TREE FRUIT(a) : IMPORTS AND EXPORTS, AUSTRALIA.**

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	'000 lb.	£	'000 lb.	£	'000 lb.	£
Average, 1934-35 to 1938-39	12,225	80,121	4,315	117,222	-7,910	37,101
1947-48 ..	11,835	253,971	4,508	294,932	-7,327	40,961
1948-49 ..	11,316	239,857	4,796	343,067	-6,520	103,210
1949-50 ..	10,125	212,216	10,218	660,635	93	448,419
1950-51 ..	11,666	285,164	24,336	1,366,259	12,670	1,081,095
1951-52 ..	12,680	292,701	4,520	414,256	-8,160	121,555

(a) Excludes raisins and currants referred to separately under Vineyards, § 15, par. 5.

NOTE.—Minus sign (-) denotes net imports.

(iv) *Jams and Jellies.* The exports of jams and jellies have reached large proportions since the 1939-45 War. In 1951-52 shipments totalled 19,919,000 lb. valued at £1,149,096 compared with average exports of 7,118,000 lb. valued at £137,707 during the five years ended 1938-39. Small quantities of jam were imported before the war but the quantities involved now are negligible. Particulars of exports during each of the five years ended 1951-52, compared with the average for the five years 1934-35 to 1938-39, are as follows:—

**JAMS AND JELLIES : EXPORTS, AUSTRALIA.**

Particulars.	Average, 1934-35 to 1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Quantity '000 lb.	7,118	59,642	53,603	65,229	42,129	19,919
Value £	137,707	2,232,168	2,049,224	2,473,095	1,871,686	1,149,096

(v) *Preserved Fruit.* The total quantity of fruit preserved in liquid, or partly preserved in liquid or pulped, imported into Australia during 1951-52 was 2,923,321 lb. valued at £200,784. Large quantities of fruit preserved in liquid are normally exported from Australia, the value of shipments in 1938-39 amounting to £1,271,525. In 1951-52 the value of exports had increased to £6,501,251. In addition, the exports of pulped fruits during 1951-52 amounted to 9,738,789 lb. valued at £451,980. Quantities of fruit preserved in liquid exported from Australia for each of the five years ended 1951-52 compared with the average for the five years 1934-35 to 1938-39 are shown in the following table:—

**FRUIT PRESERVED IN LIQUID : EXPORTS FROM AUSTRALIA.**

('000 lb.)

Year.	Apricots.	Peaches.	Pears.	Other.	Total.
Average, 1934-35 to 1938-39	8,084	34,588	21,220	5,004	68,896
1947-48.. ..	5,451	44,553	23,480	11,327	84,811
1948-49.. ..	10,656	55,027	30,205	18,353	114,241
1949-50.. ..	9,171	31,589	33,243	27,166	101,169
1950-51.. ..	7,772	31,169	26,157	32,573	97,671
1951-52.. ..	10,267	41,590	35,714	22,790	110,361

7. **Marketing of Apples and Pears.**—(i) *Apple and Pear Organization Act 1938–1953.* This Act, which was passed by the Commonwealth Parliament at the request of the apple and pear industry, provides for the establishment of an Australian Apple and Pear Board for the purpose of organizing and controlling the export trade in fresh apples and pears.

The Board originally comprised sixteen members but by an amendment of the Act in 1947 the members were reduced to twelve, representative of the following interests :— one member to represent the Commonwealth Government ; seven members to represent growers of apples and pears on the basis of two for Tasmania and one each for the other States ; three members to represent exporters of apples and pears on the basis of one each for Tasmania and Western Australia and one for the other States ; and one member to represent the employees engaged in the apple and pear industry.

The Board has power to regulate the shipment of apples and pears from Australia by licensing exporters and issuing permits to export. Power is also given to determine export quotas and to allocate the consignments from each State. The Board may appoint persons to represent it overseas.

The Apple and Pear Publicity and Research Act 1938 and the related Apple and Pear Tax Acts, referred to in earlier issues of the Official Year Book, were repealed by amendment to the Apple and Pear Organization Act in 1947.

(ii) *Apple and Pear Export Charges Act 1938–1947.* This Act provides for the imposition of a levy on all apples and pears exported from Australia for the purpose of providing the funds necessary to meet the administrative and other expenses of the Board.

(iii) *Apple and Pear Acquisition.* Exports of apples and pears were seriously curtailed as a result of the war, and during the 1940 to 1948 seasons, crops were acquired and marketed under the National Security (Apple and Pear Acquisition) Regulations and Regulations issued under the Defence (Transitional Provisions) Act 1946. During the 1949 season in Tasmania and the 1949 and 1950 seasons in Western Australia the crops were marketed under State schemes, but crops in all States have since been marketed on a normal commercial basis. Details of the acquisition scheme which operated during the 1940 to 1948 seasons will be found on pages 1003 and 1004 of Official Year Book No. 38 and in earlier issues of the Year Book.

8. **Oversea Marketing of Canned Fruit.**—(i) *The Canned Fruits Export Control Act 1926–1953.* This legislation was introduced at the request of canners and representative organizations of fruit-growers with the object of organizing the oversea marketing of canned fruit. The original Act referred to canned apricots, peaches and pears only, but canned pineapples, canned pineapple juice and certain canned fruit salads were subsequently brought within the scope of the Board's operations. The personnel of the Australian Canned Fruits Board consists of one representative each from proprietary and privately owned canneries, co-operative canneries, pineapple interests and the Commonwealth Government. No canned fruits to which the Act applies are permitted to be exported except under a licence issued in accordance with conditions recommended by the Board. The system of marketing adopted by the Board, including the fixation of minimum selling prices overseas, the appointment of a London agency and the engaging in oversea trade publicity, has resulted in the satisfactory disposal of the annual exportable surplus of canned fruits. The distribution of canned fruits has been widened and the exporting side of the industry placed on a sounder basis through the Board's operations.

(ii) *The Canned Fruits Export Charges Act 1926–1938.* This Act provides for the imposition of a levy on the export of canned fruits to meet the administrative and other commitments of the Board. The rate of the levy is fixed by regulation from time to time. An amendment in 1929 provided for certain exemptions from payment of the levy when recommended by the Board.

### § 17. Vegetables for Human Consumption.

1. **Area and Production of Fresh Vegetables.**—Details of the areas planted and production of individual kinds of vegetables, excluding potatoes and onions referred to in §§ 10 and 11 of this chapter, are shown below for the seasons 1949-50 to 1951-52. Comparable figures prior to the 1942-43 season are not available.

#### FRESH VEGETABLES(a) FOR HUMAN CONSUMPTION : AUSTRALIA.

Vegetable.	1949-50.		1950-51.		1951-52.	
	Area Sown.	Production.	Area Sown.	Production.	Area Sown.	Production.
	Acres.	Tons.	Acres.	Tons.	Acres.	Tons.
Beans, French(b) ..	15,805	15,728	14,752	19,822	15,111	19,469
Beans, Navy ..	2,177	779	2,254	355	2,185	446
Beetroot ..	1,627	10,652	2,243	13,116	2,440	16,345
Cabbages and Brussels Sprouts ..	7,358	81,531	8,095	91,831	8,160	81,321
Carrots ..	4,740	30,962	5,237	39,139	5,396	41,761
Cauliflowers ..	7,118	84,531	7,253	92,163	7,506	76,910
Lettuces ..	3,293	12,045	3,468	13,678	3,644	13,838
Parsnips ..	1,487	11,242	1,394	12,224	1,677	13,445
Peas, Blue ..	7,813	4,029	8,695	4,826	7,668	5,332
Peas, Green ..	40,134	31,105	36,630	30,178	41,056	36,231
Pumpkins ..	25,216	67,278	27,062	70,316	29,522	76,754
Tomatoes ..	18,943	101,436	18,066	89,342	17,339	102,092
Turnips, Swede and White ..	6,449	28,412	7,067	26,937	6,977	26,435
All Other ..	8,912	..	13,590	..	13,142	..
<b>Total</b> ..	<b>151,072</b>	<b>..</b>	<b>155,806</b>	<b>..</b>	<b>161,823</b>	<b>..</b>

(a) Excludes potatoes and onions.  
in "All Other".

(b) Excludes french beans harvested dry; these are included

2. **Production of Canned and Dehydrated Vegetables.**—Total production of canned vegetables in 1951-52 amounted to 100,446,000 lb., which was considerably higher than pre-war production, and approximately 90 per cent. of the peak war-time production. The principal canned vegetables produced in 1951-52 were beans 27,178,000 lb., green peas 24,374,000 lb., tomatoes 9,605,000 lb. and beetroot 9,298,000 lb.

The production of dehydrated vegetables, which was initiated during the 1939-45 War by the Commonwealth Government, rose to a maximum of 22 million lb. in 1945-46, but in recent years has declined to an annual output of less than one million lb.

3. **Imports and Exports of Vegetables.**—Oversea exports of pulse and fresh vegetables during 1951-52 consisted of :—Pulse, 11,005 tons, £616,936; onions, 3,673 tons, £178,916; potatoes, 12,468 tons, £436,780; other vegetables, 2,635 tons, £198,224. Imports totalled 13,424 tons, valued at £339,587, of which pulse comprised 10,890 tons, valued at £684,525.

In 1951-52 exports of vegetables preserved in liquid consisted of :—Peas, 901,785 lb., £61,181; tomatoes, 1,317,663 lb., £82,104; other vegetables, 6,138,643 lb., £435,438.

4. **Consumption of Vegetables.**—Details of the estimated consumption of vegetables for a series of years ending with 1952-53 are shown in Chapter XXIX.—Miscellaneous of this Year Book.

### § 18. Tobacco.

1. **States, Area and Production.** Tobacco-growing years ago promised to occupy an important place amongst the agricultural industries of Australia. As early as the season 1888-89, the area of this crop amounted to 6,641 acres, of which 4,833 were in New South Wales, 1,685 in Victoria, and 123 in Queensland. This promise was, however, not fulfilled, and after numerous fluctuations, in the course of which the Victorian area rose in 1895 to more than 2,000 acres, and that in Queensland to more than 1,000 acres, the total area declined considerably.

The expansion of the tobacco-growing industry was hoped for as a 1939-45 war-time measure but, after increasing slightly during the first three war years, the acreage planted decreased to 1948-49, but by 1951-52 had recovered to 73 per cent. of the annual average for the ten years ended 1938-39. Owing to improvement in average yields, however, the production of dried leaf in 1951-52 was 50 per cent. higher than the pre-war average.

In the following table particulars of the area and production of tobacco are given by States for each of the years 1947-48 to 1951-52, together with averages for the ten-year periods ended 1938-39 and 1950-51 :—

#### TOBACCO : AREA AND PRODUCTION.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
AREA (ACRES).							
Average, 1929-30 to 1938-39 ..	1,274	6,237	2,865	292	502	89	11,259
1947-48 .. .. .	414	958	1,912	..	559	..	3,843
1948-49 .. .. .	428	994	1,678	..	620	..	3,720
1949-50 .. .. .	327	919	2,677	..	661	..	4,584
1950-51 .. .. .	342	1,021	4,142	..	967	..	6,472
Average, 1941-42 to 1950-51 ..	513	1,407	2,626	..	900	..	5,446
1951-52 .. .. .	432	1,500	5,038	..	1,229	..	8,199
PRODUCTION OF DRIED LEAF ('000 lb.).							
Average, 1929-30 to 1938-39 ..	860	2,354	1,400	83	361	56	5,114
1947-48 .. .. .	338	130	1,581	..	435	..	2,484
1948-49 .. .. .	402	793	1,626	..	595	..	3,416
1949-50 .. .. .	299	668	2,540	..	631	..	4,138
1950-51 .. .. .	184	911	2,144	..	972	..	4,211
Average, 1941-42 to 1950-51 ..	446	938	1,909	..	730	..	4,023
1951-52 .. .. .	518	1,381	4,667	..	988	..	7,554

2. **The Tobacco Industry.**—(i) *Marketing.* The Australian Tobacco Board was constituted in May, 1941, under the National Security (Australian Tobacco Leaf) Regulations for the purpose of controlling the marketing of Australian-grown tobacco leaf, which was required to be submitted to the Board for appraisalment. The Board ceased to function towards the end of 1948 and subsequent crops have been marketed at open auction in the respective States.

(ii) *Tariff Board Inquiries.* The tobacco industry has been the subject of a number of investigations. The Tariff Board inquired into the industry in 1926, 1931 and 1940 and reports were issued.

(iii) *Tobacco Inquiry Committee.* Details of the recommendations by the Tobacco Inquiry Committee and grants periodically approved by the Commonwealth Government up to 30th June, 1952, were given in Official Year Book No. 39, page 1007.

In October, 1952, the Commonwealth Government agreed that—

- (a) the tenure of the 1946 grant (for experimental and demonstration work in connexion with tobacco leaf production; particularly in regard to control and elimination of diseases and pests) which expired on 30th June, 1952, be extended for a further period of five years;

- (b) the Commonwealth's annual contribution be increased from £10,000 to £15,000, the allocation being as follows :—New South Wales, £2,250 ; Victoria, £3,375 ; Queensland, £5,625 ; Western Australia, £3,750 ;
- (c) the conditions of the grant be the same as those under which the 1946 grant was made, except that provision be made to enable any unexpended moneys to be carried forward for use in subsequent years, provided that the accumulated carryover be kept within a specified limit.

The Scientific and Industrial Research Organization is investigating diseases affecting the tobacco plant, including work on disease-resisting varieties, and is making tests of smoking quality. In spite of delays due to the war, the Organization has been successful in discovering effective means of preventing blue mould, which has seriously retarded the development of the industry. The States are carrying out field investigations on disease resistance, selection, yield and quality improvement, and are conducting instructional, demonstrational and field experimental work.

(iv) *Tobacco Factories.* In 1951-52 the quantity of stemmed leaf used in tobacco factories in Australia amounted to 29.8 million lb. of which 3.7 million was of local origin, the balance being imported, chiefly from the United States of America.

3. *Oversea Trade.*—Imports of tobacco and manufactures thereof into Australia during 1951-52 were valued at £18.8 million, including 27 million lb. of unmanufactured tobacco valued at £8.8 million. Exports of tobacco and manufactures thereof during 1951-52 were valued at £344,180.

### § 19. Hops.

Hop-growing in Australia is practically confined to Tasmania and some of the cooler districts of Victoria, the total area for 1951-52 being 1,725 acres, of which 1,378 acres were in Tasmania, and 347 acres in Victoria. A small area was also grown in Western Australia, but the details are not available for publication. The Tasmanian area, though still small, has increased during the present century, the total for 1901-2 being 599 acres. The cultivation of hops was much more extensive in Victoria some 60 years ago than at present, the area in 1883-84 being 1,758 acres.

The production of hops in Australia is insufficient to meet local requirements, and additional supplies are imported to meet the needs of the brewing industry. In the following table details of the production, imports and exports of hops and the quantity of hops used in breweries are shown for each of the years 1947-48 to 1951-52 in comparison with the average for the five years ended 1938-39.

HOPS : PRODUCTION AND DISPOSAL, AUSTRALIA.

Year.	Production.		Imports.	Exports.	Net Available Supplies. (a)	Quantity used in Breweries.
	Quantity.	Gross Value.				
	Cwt.	£	Cwt.	Cwt.	Cwt.	Cwt.
Average, 1934-35 to 1938-39 .. ..	20,576	173,253	1,020	78	21,518	18,992
1947-48 .. ..	24,449	317,531	9,823	15	34,257	25,050
1948-49 .. ..	17,073	283,608	6,159	..	23,232	29,543
1949-50 .. ..	22,993	465,158	12,047	..	35,040	31,997
1950-51 .. ..	26,147	620,304	20,596	11	46,732	36,011
1951-52 .. ..	17,914	517,303	24,592	..	42,506	38,012

(a) Disregards movements in stocks.

The Tariff Board conducted an inquiry into the hop-growing industry and issued a report on 12th June, 1945.

### § 20. Flax.

For many years flax was grown intermittently in parts of Victoria and unsuccessful attempts were made to introduce its cultivation in some of the other States.

During the 1914-18 and 1939-45 Wars there was an acute shortage of flax fibre and expansion of production was encouraged by the Commonwealth Government. The area sown reached a maximum of more than 61,000 acres in 1944-45 but by 1951-52 it had fallen again to less than 6,400 acres.

Details of the area under flax and the production of straw are given in the following table :—

#### FLAX FOR FIBRE : AREA AND PRODUCTION.

Year.	Victoria.	S. Australia.	W. Aust.	Australia.
AREA (ACRES).				
Average, 1934-35 to 1938-39.. ..	1,021	..	..	(a) 1,030
1947-48 .. ..	12,183	3,544	2,063	17,790
1948-49 .. ..	6,971	3,099	1,816	11,886
1949-50 .. ..	5,261	1,753	2,441	9,455
1950-51 .. ..	3,633	1,198	1,957	6,788
1951-52 .. ..	2,821	1,599	1,965	6,385
PRODUCTION (TONS OF STRAW).				
Average, 1934-35 to 1938-39.. ..	61	..	..	61
1947-48 .. ..	19,427	6,068	1,694	27,189
1948-49 .. ..	11,062	3,631	2,213	16,906
1949-50 .. ..	6,925	1,511	2,629	11,065
1950-51 .. ..	5,071	1,365	2,264	8,700
1951-52 .. ..	4,065	2,214	1,573	7,852

(a) Includes nine acres of unproductive flax in Queensland.

Although the growing of flax on a large scale was established as a war-time measure, it is proposed to continue the industry at a level sufficient to meet local requirements, providing that it can be efficiently maintained in competition with other countries. To stimulate the production of flax fibre, on 16th July, 1950, the Flax Canvas Bounty Act was passed, authorizing the payment of £60 per ton of scutched flax fibre used.

The industry is under the control of the Flax Production Committee appointed under the Supply and Development (Flax Production) Regulations. The Committee has, amongst other things, organized the growing and harvesting of the crop and the processing of the flax, as well as disposing of the resultant products to spinners and others in Australia and overseas. In 1943-44 in the four producing States there were 31 mills under the control of the Committee. The number of flax mills operating in 1951-52 was 13.

Prior to 1948-49, the growing of flax for linseed oil had not been developed extensively in Australia. Action has since been taken to develop this industry, however, the ultimate objective being the production of sufficient linseed to meet Australia's total oil requirements. The area sown in 1951-52 (53,741 acres) was a record, but production at 7,393 tons was somewhat lower than in 1950-51 when 7,954 tons were produced. Details are shown in the following table for the years 1947-48 to 1951-52.



## FLAX FOR LINSEED : AREA AND PRODUCTION.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
AREA (ACRES).							
1947-48 .. ..	1,019	384	112	177	65	87	1,844
1948-49 .. ..	5,048	3,793	4,193	959	389	357	14,739
1949-50 .. ..	6,085	8,148	9,533	3,737	899	453	28,855
1950-51 .. ..	14,630	9,370	14,986	8,161	543	146	47,836
1951-52 .. ..	15,785	4,431	28,580	4,853	12	80	53,741
PRODUCTION (TONS OF LINSEED).							
1947-48 .. ..	108	69	32	43	4	17	273
1948-49 .. ..	757	688	875	277	24	76	2,697
1949-50 .. ..	1,602	1,449	2,249	885	55	153	6,393
1950-51 .. ..	1,163	1,724	3,561	1,438	36	32	7,954
1951-52 .. ..	1,617	705	4,174	857	1	39	7,393

The flax industry was the subject of investigations in 1933 and in 1936 (*see Official Year Book No. 32, p. 658*). In addition the Tariff Board has conducted an enquiry into the need for assistance to linseed growers and on the form such assistance should take and subsequently issued a report on 21st March, 1951.

## § 21. Peanuts.

The production of peanuts, or groundnuts, in Australia is mainly confined to Queensland, although small quantities are grown in New South Wales and Western Australia. Details of the area and production are given in the table below.

## PEANUTS : AREA AND PRODUCTION, AUSTRALIA.

Year.	Area (Acres).				Production (Tons).			
	N.S.W.	Q'land.	W. Aust.	Australia. (a)	N.S.W.	Q'land.	W. Aust.	Australia. (a)
Average, 1929-30 to 1938-39 ..	29	8,320	100	8,449	(b) 11	3,715	24	3,750
1947-48 .. ..	97	34,645	28	34,770	41	15,804	3	15,848
1948-49 .. ..	129	24,290	32	24,451	67	9,928	14	10,009
1949-50 .. ..	133	17,697	27	17,857	52	7,907	9	7,968
1950-51 .. ..	225	16,656	92	16,973	103	5,312	18	5,433
Average, 1941-42 to 1950-51 ..	64	22,359	31	22,454	31	10,735	8	10,774
1951-52 .. ..	374	13,312	15	13,701	222	4,535	9	4,766

(a) Excludes Northern Territory.

(b) Average for five years.

The gross value of the 1951-52 crop was £475,000.

Considerable quantities of peanut kernels were formerly imported annually, chiefly from India, for oil expression purposes. These imports were suspended from 1946 to 1949, but have since been resumed on an increasing scale. Total supplies available for consumption in Australia in 1951-52 of 9,309 tons (shell equivalent) consisted of 5,433 tons locally produced (previous season) and 3,876 tons imported.

## § 22. Cotton.

1. **General.**—The production of cotton in Australia is restricted to Queensland, where cultivation began in 1860. Details of areas sown for years prior to 1930 and of Government financial assistance to growers up to 1940 appear in Official Year Book No. 39 and earlier issues.

Australia produces only portion of its requirements of raw cotton, the balance being obtained in 1950–51 chiefly from India, Pakistan, Brazil, Egypt and the U.S. of America. Efforts have been directed towards increasing production by an extension of area, the introduction of irrigation methods and payment of bounties but so far have not met with much success. Production was increased very considerably during the early war years—it reached a peak of 17,550,000 lb. unginnged cotton in 1939–40—but has since fallen away. The expansion of the industries connected with the spinning and weaving of cotton is referred to in Chapter XXIV.—Manufacturing Industry.

The Raw Cotton Bounty Act 1940 provided an extension until 31st December, 1946 of assistance previously granted by way of bounty. The Act was amended in August, 1946 to provide a guaranteed net average return to cotton-growers of 15d. per lb. of raw cotton for five years from 1st January, 1947. It was superseded by the Cotton Bounty Act 1951, which guaranteed a net average return of 9½d. per lb. of seed cotton for five years from 1st January, 1951. The 1951 Act was amended in 1952 to provide for a guaranteed return of 14d. per lb. of seed cotton for the 1953 crop, and for variation by regulation of the guaranteed return, in succeeding seasons, with a minimum of 9½d. per lb. The Government has decided that the return for the 1954 crop will remain at 14d. per lb.

2. **Area and Production.**—The area under cultivation and the production in Queensland for the years 1947 to 1951 are shown hereunder together with the averages for the periods of ten years ended 1939 and 1950 :—

### COTTON : AREA AND PRODUCTION IN QUEENSLAND.

Season ended September—	Area Sown.	Production of Cotton.				Average Yield per Acre Sown.	
		Unginned.		Ginned.	Ginned— Equiva- lent in Bales. (a)	Unginned.	Ginned.
		Quantity.	Gross Value.				
	Acres.	'000 lb.	£	'000 lb.	Bales.	lb.	lb.
Average, 1930 to 1939 .. ..	58,436	16,617	291,106	5,564	11,181	284	95
1947 .. ..	8,460	2,064	46,213	762	1,531	244	90
1948 .. ..	6,222	1,821	47,918	713	1,439	293	115
1949 .. ..	2,688	719	26,322	255	522	267	95
1950 .. ..	2,952	1,102	53,671	402	806	373	136
Average, 1941 to 1950 .. ..	21,253	5,852	130,450	2,043	4,124	275	96
1951 .. ..	4,480	1,406	127,008	549	1,124	314	123

(a) Bales of approximately 500 lb.

3. **Consumption of Raw Cotton.**—The following table shows the expansion which has taken place in the consumption of raw cotton in Australia since 1938–39.

## RAW COTTON : PRODUCTION, IMPORTS AND CONSUMPTION, AUSTRALIA.

('000 lb.)

Year.	Production.	Imports.	Total.	Consumption in Cotton Mills.
Average, 1936-37 to 1938-39..	5,180	9,882	15,062	12,523
1947-48 .. .. .	762	34,114	34,876	31,401
1948-49 .. .. .	713	37,234	37,947	31,077
1949-50 .. .. .	255	28,357	28,612	33,823
1950-51 .. .. .	402	45,201	45,603	40,907
1951-52 .. .. .	549	43,296	43,845	39,030

## § 23. Financial Assistance to Primary Producers.

NOTE.—See also Chapter XVII.—Public Finance, pages 685-6.

1. Bounties.—Bounties paid by the Commonwealth Government during the year ended 30th June 1952 amounted to £4,729,000 compared with £14,985,000 in 1950-51. Brief details of the various Bounty Acts under which these amounts were paid are given below :—

(i) *Wheat Bounty Act 1951*. This Act provides for the payment of bounty for two years from 1st December, 1951 on wheat sold by the Australian Wheat Board as feed for poultry, pigs or dairy cattle up to a maximum of 26 million bushels, the rate to be the lesser amount by which 16s. 1d. per bushel exceeds—(a) the guaranteed price of wheat for the season plus 2s., or (b) 14s. The rate of bounty during 1951-52 (from 1st December, 1951) was 4s. 1d. per bushel and a total amount of £2,368,000 was paid on 11,599,000 bushels.

(ii) *Wool Products Bounty Act 1950*. This Act provided for a bounty to be paid on certain wool products made in Australia between 29th November, 1950 and 31st December, 1951, the rate to be fixed according to the quantity and type of clean wool used in them as estimated by the Australian Wool Realization Commission acting as agent for the Commonwealth Government. The cost to the Commonwealth in 1950-51 was £14,875,000 and in 1951-52, £2,254,000.

(iii) *Tractor Bounty Act 1950*. This Act provides for the payment to manufacturers of tractors produced in a factory in the Commonwealth of a bounty based on the belt pulley horse-power of the engine. Payments for 1950-51 were made on 1,501 tractors produced, and amounted to £90,000, and for 1951-52 on 1,275 tractors produced, and amounted to £103,000.

(iv) *Flax Canvas Bounty Act 1950*. This Act provides for the payment of a bounty on flax canvas manufactured in Australia during the two years from 17th July, 1950 for sale and use within the Commonwealth, the rate to be £60 per ton of scutched flax fibre used. Payments during 1950-51 amounted to £20,000 on 342 tons of fibre and during 1951-52 to £4,000 on 135 tons of fibre.

2. **Subsidies.**—Subsidies paid by the Commonwealth Government as assistance to primary producers amounted to £16,579,000 in 1950–51 and to £19,373,000 in 1951–52. The principal subsidies paid were as follows :—

(i) *Dairy Industry.* Under the provisions of the Dairy Industry Assistance Act 1943 subsidy was paid on a flat rate basis on milk supplied for the manufacture of butter, cheese and processed milk products during 1950–51 and 1951–52. The subsidy was designed to ensure a return to dairymen equal to the average cost of production of their produce. In 1950–51 the rate of subsidy on butter was 8s. 4d. per cwt. and on cheese 37s. 11d. per cwt., total payments amounting to £14,998,000. The respective rates rose in 1951–52 to 10os. 1d. and 35s. 10d. per cwt. and total payments to £17,843,000

(ii) *Artificial Fertilizers.* Prices charged to primary producers for superphosphate and nitrogenous fertilizers (other than sulphate of ammonia produced locally as a by-product on which a surcharge is fixed) have been less than cost, the balance being met by the surcharge on sulphate of ammonia and by Commonwealth subsidy. Total subsidy payments in 1950–51 amounted to £862,000, comprising £599,000 on nitrogenous fertilizers and £263,000 on superphosphate. Subsidy on superphosphate ceased during 1950–51 and in 1951–52 payments totalling £1,521,000 were made, wholly on account of nitrogenous fertilizers.

(iii) *Wheat-growers.* During the year ended 30th November, 1950 a subsidy of 5d. per bushel was paid on wheat for local consumption to raise the return to growers from 6s. 8d. per bushel, f.o.r. ports, bulk basis, the Australian Wheat Board's local selling price for the year, to 7s. 1d., the price guaranteed by the Commonwealth Government. The amount of subsidy paid by the Commonwealth during the year 1950–51 on this account amounted to £683,000.

## § 24. Fertilizers.

1. **General.**—In the early days of settlement in Australia scientific cultivation was little understood. It was common, as in other new countries, for the land to be cropped continuously to a degree of exhaustion. This practice is very much less in evidence now than in the early days of Australian agricultural development. Under the guidance of the State Departments of Agriculture, scientific farming is now much more widely practised. The importance of fallowing, crop rotation, and the application of suitable fertilizers in adequate quantities is now appreciated by farmers. The introduction of the modern seed-drill, acting also as a fertilizer-distributor, has greatly facilitated the use of artificial manures and much land formerly regarded as useless for cultivation has now been made productive.

In order to protect the users of artificial fertilizers, legislation has been passed in each of the States regulating the sale and prohibiting the adulteration of fertilizers. A list of these Acts and their main features is given in Official Year Book No. 12, p. 378.

2. **Imports and Exports.**—The Australian output of prepared fertilizers is derived chiefly from imported rock phosphate and is sufficient for local requirements.

The chief sources of Australia's supplies of rock phosphate are Nauru, Gilbert Islands Group and Christmas Island. Sodium nitrate is obtained chiefly from Chile.

The imports of artificial fertilizers during the five years ended 1951-52, compared with average imports for the period 1934-35 to 1938-39, are shown in the following table:—

## ARTIFICIAL FERTILIZERS : IMPORTS INTO AUSTRALIA.

Fertilizer.		Average, 1934-35 to 1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Ammonium	tons	26,090	18,834	10,200	27,259	42,756	40,848
Sulphate	£	214,509	337,470	228,346	662,121	1,049,893	1,015,570
Potash Salts	tons	10,641	10,849	9,220	12,924	14,605	15,978
	£	82,220	206,231	139,299	265,454	335,826	368,665
Rock Phosphate	tons	635,097	701,602	909,764	1,185,402	1,101,678	1,014,100
	£	775,840	1,862,846	2,022,983	2,559,282	2,216,928	2,258,487
Sodium Nitrate	tons	7,199	6,458	7,173	13,416	5,679	15,802
	£	63,464	68,085	106,711	273,099	130,389	362,755
Other	.. tons	3,430	2,743	534	673	1,369	2,735
	£	7,657	38,259	35,233	24,966	47,396	120,191
Total	.. tons	682,457	740,486	936,891	1,239,674	1,166,087	1,089,463
	£	1,143,690	2,512,891	2,532,572	3,784,922	3,780,432	4,125,668

Exports of fertilizers (practically all of which are manufactured locally) amounted to 1,472 tons valued at £79,683 in 1951-52 compared with 1,666 tons valued at £63,387 in 1950-51 and 4,826 tons valued at £34,411 for the average of the five years ended 1938-39. Superphosphate is the principal fertilizer exported and amounted to 990 tons in 1951-52.

3. Quantities Locally Used.—Information regarding the area fertilized with artificial fertilizers and the quantity of artificial fertilizers (superphosphate, bonedust, nitrates, etc.) used in each State during the year 1951-52 is given in the following table. Details of the area manured with natural manure (stableyard, etc.) are no longer collected.

## AREA FERTILIZED AND QUANTITY OF ARTIFICIAL FERTILIZERS USED, 1951-52.

State or Territory.	Area Fertilized ('000 Acres).			Fertilizers Used (Tons).		
	Crops.	Pasture Lands.	Total.	Crops.	Pasture Lands.	Total.
New South Wales .. .. .	2,337	1,755	4,090	91,957	85,164	177,121
Victoria .. .. .	3,370	7,453	10,832	163,204	415,817	579,022
Queensland .. .. .	325	3	328	72,209	311	72,610
South Australia .. .. .	3,173	2,150	5,323	153,806	116,240	270,046
Western Australia .. .. .	4,545	3,650	8,195	226,409	172,895	399,303
Tasmania .. .. .	176	522	698	23,232	33,487	56,719
Australian Capital Territory .. .. .	4	21	25	248	785	1,033
Total .. .. .	13,937	15,554	29,491	731,155	824,699	1,555,854

Particulars of the quantity of artificial fertilizers used in each State and Territory during each of the years 1947-48 to 1951-52, compared with the average for the five years ended 1938-39, are shown in the next table. These details include the quantity used in the top-dressing of pasture lands.

**QUANTITY OF ARTIFICIAL FERTILIZERS USED.**  
(Tons.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
Average, 1934-35 to 1938-39 ..	148,277	305,969	50,651	200,566	230,713	30,272	276	966,724
1947-48 ..	171,707	402,643	54,433	224,253	292,723	41,945	870	1,188,574
1948-49 ..	171,738	467,690	62,084	250,107	333,622	39,109	860	1,325,210
1949-50 ..	174,171	550,020	72,298	243,768	357,632	53,874	1,098	1,452,861
1950-51 ..	160,871	563,086	73,761	255,781	377,083	56,224	822	1,487,628
1951-52 ..	177,120	579,022	72,610	270,046	399,304	56,719	1,033	1,555,854

As mentioned in § 23 the Commonwealth Government has encouraged the use of artificial fertilizers by providing subsidies to primary producers. In 1951-52 subsidy was paid only on nitrogenous fertilizers.

4. **Local Production.**—Complete information regarding local production of fertilizers is not available. The number of firms engaged in the manufacture of chemical fertilizers in Australia for the year 1951-52 was 49, made up as follows:—New South Wales, 13; Victoria, 9; Queensland, 8; South Australia, 7; Western Australia, 5; and Tasmania, 7. The production of superphosphate in Australia during 1951-52 amounted to 1,597,080 tons, the largest producing States being Victoria, Western Australia and South Australia.

**§ 25. Ensilage.**

1. **Government Assistance in Production.**—The several State Governments devote a considerable amount of attention to the education of the farming community in regard to the value of ensilage. Monetary aid is afforded in the erection of silos, and expert advice is supplied in connexion with the design of the silos and the cutting and packing of the ensilage.

2. **Quantity Made and Stocks Held on Farms.**—Information regarding production and farm stocks of ensilage for the years ended 31st March, 1950, 1951 and 1952 are given in the following table:—

**ENSILAGE : PRODUCTION AND FARM STOCKS.**  
(Tons.)

Year ended 31st March—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
<b>Production—</b>								
1950 .. ..	73,047	25,687	10,622	5,545	11,091	8,271	64	134,327
1951 .. ..	55,470	26,105	8,775	3,842	12,188	10,649	119	117,148
1952 .. ..	47,920	24,591	7,654	8,234	11,433	10,638	4	110,474
<b>Farm Stocks—</b>								
1950 .. ..	108,156	(a)	15,096	2,940	4,628	6,814	194	(a)
1951 .. ..	87,253	(a)	12,825	1,802	2,952	8,979	108	(a)
1952 .. ..	74,042	(a)	5,973	5,580	2,235	10,289	101	(a)

(a) Not available.

The drought of 1902-3 drew increased attention to the value of stocks of ensilage, and during the four seasons ended 1909-10 there was an increase both in the number of holdings on which ensilage was made and in the quantity produced. The accumulated stocks proved of great value during the 1914 drought, though far less than would have been the case if more attention had been paid to production during the previous years

when there was a surplus of green fodder. The quantities made since that date have fluctuated considerably, but the output increased up to 1939-40 in which year the production of 303,495 tons was the highest yet recorded. During subsequent seasons output declined noticeably and reached the extremely low level of 94,744 tons during the drought year 1944-45, but rose to 180,622 tons in 1947-48, and decreased continuously in each succeeding year to 110,474 tons in 1951-52.

### § 26. Agricultural Colleges and Experimental Farms.

Agricultural colleges, administered by State Departments of Agriculture, have been established in all States except Tasmania. The primary function of these colleges is the training of students in the various phases of agricultural work and live stock husbandry. Students are required to undertake a considerable amount of practical work in addition to lectures and theory. A secondary function of the colleges is agricultural research and experimentation. To a lesser degree they carry out extension work in the form of public field days. Upon graduation, students receive diplomas in agriculture, dairying or animal husbandry, according to the course undertaken.

Experimental farms have been set up by State Departments of Agriculture in all States. They are primarily concerned with agricultural research and experimentation, each farm concentrating on problems specific to the district in which it is located. The results of the work undertaken are passed on to farmers at field days, which are held at regular intervals, through publication in various agricultural or scientific journals and through the agricultural extension officers of the State Departments of Agriculture.

The Commonwealth Scientific and Industrial Research Organization has field stations scattered throughout Australia, and sometimes undertakes joint research with the appropriate State authorities. In general, however, the Commonwealth Scientific and Industrial Research Organization concentrates on fundamental research, except when otherwise specifically invited, while the State Departments of Agriculture study problems of particular significance within their own boundaries. The universities also carry out valuable research work on their own experimental farms.

### § 27. Tractors on Rural Holdings.

The growth of mechanization in agriculture is indicated by the increase in the number of tractors on rural holdings from 41,943 in 1939 to 143,497 in 1952 or by 242 per cent. Since 1943, the first year in which the collection was made by types, wheeled type tractors have increased by 187 per cent., and crawler types by 87 per cent.

The table below sets out the total number of tractors on rural holdings in 1939, and the number of wheeled type and crawler tractors for the five years ended 1952.

#### TRACTORS ON RURAL HOLDINGS.

March—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(a)
WHEELED TYPE TRACTORS.(b)								
1948 ..	18,659	15,611	16,312	7,429	7,482	1,876	62	67,431
1949 ..	21,283	18,480	17,980	8,891	8,527	2,069	71	77,301
1950 ..	25,533	23,235	20,616	11,184	10,323	2,464	84	93,439
1951 ..	30,061	28,132	24,406	13,562	12,331	3,056	107	111,655
1952 ..	35,302	33,678	26,953	15,396	14,579	3,857	142	129,907

NOTE.—See next page for footnotes.

TRACTORS ON RURAL HOLDINGS—*continued.*

March—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(a)
CRAWLER OR TRACK TYPE TRACTORS.(b)								
1948 ..	1,599	684	2,637	2,235	1,569	178	3	8,905
1949 ..	1,649	770	2,781	2,380	1,693	173	2	9,448
1950 ..	1,831	884	3,111	2,525	1,796	201	8	10,356
1951 ..	2,145	926	3,388	2,566	2,223	264	6	11,518
1952 ..	2,828	1,187	3,941	2,788	2,498	342	6	13,590

## TOTAL TRACTORS.

1939(c) ..	12,926	8,802	8,541	5,969	5,680	(d)	25	(e) 41,943
1948 ..	20,258	16,295	18,949	9,664	9,951	2,054	65	76,336
1949 ..	22,932	19,250	20,761	11,271	10,220	2,242	73	86,749
1950 ..	27,364	24,119	23,727	13,709	12,119	2,665	92	103,795
1951 ..	32,206	29,058	27,794	16,128	14,554	3,320	113	123,173
1952 ..	38,130	34,865	30,894	18,184	17,077	4,199	148	143,497

(a) Excludes Northern Territory. (b) Details not collected separately prior to 1943. (c) At commencement of year. (d) Not available. (e) Excludes Tasmania.

## § 28. Number and Area of Rural Holdings and Employment Thereon.

1. **Number and Area.**—A holding in Australia has been defined by Statisticians on a more or less uniform basis and discrepancies which exist are not of sufficient importance to vitiate any comparisons. For the purpose of these statistics, a holding may be defined as land of one acre or more in extent, used in the production of agricultural produce, the raising of live stock or the products of live stock.

The following table shows the number and area of the holdings in each State for the years 1938-39 and 1947-48 to 1951-52.

## RURAL HOLDINGS : NUMBER AND AREA.

Year.	New South Wales.	Victoria.	Queens-land.	South Australia.	Western Australia.	Tas-mania.	Australian Capital Territory.	Total.
NUMBER OF RURAL HOLDINGS.								
1938-39..	75,365	72,452	41,503	31,280	21,052	11,680	204	253,536
1947-48..	74,669	70,910	42,070	27,901	19,141	11,852	215	246,758
1948-49..	74,303	71,049	41,986	28,110	19,754	11,739	214	247,155
1949-50..	73,987	70,486	41,560	27,900	19,565	11,548	221	245,267
1950-51..	73,195	69,698	41,499	28,248	19,289	11,468	229	243,626
1951-52..	73,122	69,298	41,641	28,698	19,515	11,414	226	243,914



RURAL HOLDINGS: NUMBER AND AREA—*continued.*

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
TOTAL AREA OF RURAL HOLDINGS.								
('000 ACRES.)								
1938-39..	174,660	40,791	317,782	144,682	211,720	6,778	371	896,784
1947-48..	169,198	39,345	358,621	142,393	208,693	6,183	368	924,801
1948-49..	167,637	38,867	356,422	146,723	210,658	6,123	376	926,806
1949-50..	170,027	38,342	355,803	146,563	211,057	6,411	403	928,606
1950-51..	168,375	38,108	359,606	151,731	213,362	6,476	395	938,053
1951-52..	168,250	37,935	358,320	151,785	215,386	6,438	395	938,509

It is not possible to classify these holdings according to the purpose for which they are used. This arises from a number of factors, the chief of which is mixed farming. The general trend in Australia is for farmers to diversify their activities and consequently it is very difficult to determine whether the purpose of many holdings is mainly agricultural, pastoral or dairying, or any of these in combination.

An approximate classification was, however, made for New South Wales for 1945-46 and details may be found on page 1018 of Official Year Book No. 39.

2. **Special Tabulation Relating to Rural Holdings, 1949-50.**—With the co-operation of State Statisticians, the second series of special tabulations relating to rural holdings was undertaken for all States for the year 1949-50. These tabulations have been published in detail in Primary Industries Bulletin No. 44, 1949-50. The following table shows particulars of the number and area of rural holdings classified according to the size of holdings.

## RURAL HOLDINGS: NUMBER AND AREA CLASSIFIED IN AREA SERIES, 1949-50.

Area Series (Acres).	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(a)
NUMBER OF HOLDINGS.								
Under 3 .. ..	941	408	214	317	463	157	..	2,500
3- 4 .. ..	1,391	967	239	432	469	178	1	3,677
5- 9 .. ..	3,160	2,445	634	927	1,036	437	14	8,653
10- 24 .. ..	4,563	6,916	1,596	2,690	1,569	977	9	18,320
25- 49 .. ..	4,080	5,520	1,852	2,192	761	1,168	15	15,588
50- 99 .. ..	5,209	7,676	4,060	2,182	663	2,048	9	21,847
100- 149 .. ..	4,027	6,816	3,733	1,187	745	1,662	4	18,774
150- 249 .. ..	6,656	8,742	6,720	1,732	1,279	1,708	6	26,843
250- 499 .. ..	9,034	11,118	7,386	2,969	1,699	1,472	16	33,694
500- 749 .. ..	6,478	7,047	3,380	2,650	898	510	18	20,981
750- 999 .. ..	4,657	3,794	1,527	1,897	887	226	16	13,004
1,000- 1,499 .. ..	6,695	4,128	1,957	2,631	1,905	288	34	17,638
1,500- 2,499 .. ..	5,925	2,881	1,549	2,584	3,083	256	46	16,324
2,500- 4,999 .. ..	5,559	1,401	1,523	1,991	2,718	229	21	13,442
5,000- 9,999 .. ..	2,517	424	1,185	806	746	134	7	5,819
10,000-19,999 .. ..	1,107	123	1,200	311	143	59	2	2,945
20,000-49,999 .. ..	832	61	1,640	173	52	32	3	2,793
50,000-99,999 .. ..	369	11	608	78	37	7	..	1,110
100,000 and over .. ..	187	8	557	151	412	..	..	1,315
Total .. ..	73,987	70,486	41,560	27,900	19,565	11,548	221	245,267

(a) Excludes Northern Territory.

RURAL HOLDINGS: NUMBER AND AREA CLASSIFIED IN AREA SERIES, 1949-50—continued.

Area Series (Acres).	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(a)
AREA OF HOLDINGS. ( <sup>000</sup> ACRES.)								
Under 3 .. .. .	2	1	..	..	1	..	..	4
3- 4 .. .. .	5	3	..	..	2	..	..	13
5- 9 .. .. .	20	16	4	6	7	3	..	56
10- 24 .. .. .	71	113	25	45	24	16	..	294
25- 49 .. .. .	148	197	68	77	26	43	..	559
50- 99 .. .. .	375	555	301	157	47	148	..	1,583
100- 149 .. .. .	561	824	457	144	90	197	..	2,273
150- 249 .. .. .	1,292	1,680	1,264	339	246	324	1	5,146
250- 499 .. .. .	3,249	3,931	2,633	1,112	595	502	6	12,028
500- 749 .. .. .	3,976	4,345	2,060	1,630	549	308	11	12,879
750- 999 .. .. .	4,050	3,288	1,315	1,647	796	194	14	11,304
1,000- 1,499 .. .. .	8,173	5,021	2,362	3,205	2,302	345	41	21,449
1,500- 2,499 .. .. .	11,374	5,410	3,009	4,876	6,048	496	93	31,306
2,500- 4,999 .. .. .	19,090	4,677	5,301	6,793	9,275	811	69	46,016
5,000- 9,999 .. .. .	16,932	2,809	8,349	5,470	4,810	904	56	39,330
10,000-19,999 .. .. .	14,918	1,672	17,274	4,344	1,869	763	25	40,865
20,000-49,999 .. .. .	26,454	1,756	51,240	5,406	1,879	899	87	87,721
50,000-99,999 .. .. .	25,780	685	42,108	5,502	2,711	457	..	77,243
100,000 and over .. .. .	33,557	1,359	218,032	105,809	179,780	..	..	538,537
Total .. .. .	170,027	38,342	355,803	146,563	211,057	6,411	403	928,606

(a) Excludes Northern Territory.

3. Employment on Rural Holdings.—The following table shows, for each State of Australia, the recorded number of persons permanently and temporarily engaged on rural holdings as at 31st March, 1952. Additional particulars relating to the number of males employed in agriculture are available up to 1941-42 in Official Year Book No. 36, page 852, and previous issues. Similar details for later years are not available.

RURAL HOLDINGS: PERMANENT FULL-TIME AND TEMPORARY EMPLOYMENT AS AT 31st MARCH, 1952.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
<b>Permanent—</b>								
Owners, Lessees or Share-farmers Males	69,157	67,065	43,196	27,213	20,016	9,543	140	236,330
Females	1,743	3,477	9,618	2,969	1,704	537	5	20,053
Relatives of Owner, Lessee or Share-farmer over 14 years of age, not receiving wages or salary Males	8,608	6,264	5,112	1,732	2,157	706	10	24,589
Females	6,165	1,229	5,397	893	4,104	143	1	17,932
Employees, including Managers and Relatives working for wages or salary Males	32,322	15,334	19,640	8,418	8,062	4,334	154	88,264
Females	1,890	1,108	3,833	837	711	225	14	8,618
<b>Total Permanent</b>								
Males	110,087	88,663	67,948	37,363	30,235	14,583	304	349,183
Females	9,798	5,814	18,848	4,699	6,519	905	20	46,603
<b>Persons</b>	<b>119,885</b>	<b>94,477</b>	<b>86,796</b>	<b>42,062</b>	<b>36,754</b>	<b>15,488</b>	<b>324</b>	<b>395,786</b>
<b>Temporary—</b>								
Males	27,720	15,088	21,821	17,283	3,258	3,072	114	88,356
Females	1,824	1,047	1,238	3,111	200	1,152	4	8,576
<b>Persons</b>	<b>29,544</b>	<b>16,135</b>	<b>23,059</b>	<b>20,394</b>	<b>3,458</b>	<b>4,224</b>	<b>118</b>	<b>96,932</b>
<b>Total Persons</b> ..	<b>149,429</b>	<b>110,612</b>	<b>109,855</b>	<b>62,456</b>	<b>40,212</b>	<b>19,712</b>	<b>442</b>	<b>492,718</b>

The next table shows for Australia as a whole the number of persons permanently engaged full-time on rural holdings as at 31st March of the six years 1947 to 1952.

**RURAL HOLDINGS : PERMANENT FULL-TIME AND TEMPORARY EMPLOYMENT, AUSTRALIA.**

Particulars.	As at 31st March—					
	1947.	1948.	1949.	1950.	1951.	1952.
<b>Permanent—</b>						
<b>Males—</b>						
Owners, Lessees or Share-farmers	240,753	240,992	236,467	235,302	237,251	236,330
Relatives of Owner, Lessee or Share-farmer over 14 years of age, not receiving wages or salary .. .. .	32,233	28,171	25,195	25,889	24,676	24,589
Employees, including managers and relatives working for wages or salary .. .. .	84,300	90,502	91,177	90,924	91,226	88,264
Total, Males .. .. .	357,286	359,665	352,839	352,115	353,153	349,183
,, Females .. .. .	48,844	47,509	47,933	53,348	52,346	46,603
Total Permanent .. .. .	406,130	407,174	400,772	405,463	405,499	395,786
<b>Temporary—</b>						
Total, Males .. .. .	(a)	(a)	(a)	83,227	83,190	88,356
,, Females .. .. .	(a)	(a)	(a)	8,862	8,663	8,576
Total Temporary .. .. .	(a)	(a)	(a)	92,089	91,853	96,932
Grand Total .. .. .	(a)	(a)	(a)	497,552	497,352	492,718

(a) Not available.

## CHAPTER XXI.

## FARMYARD, DAIRY AND BEE PRODUCTS.

NOTE.—Values of Australian oversea trade shown throughout this chapter are expressed as £A. f.o.b. Port of Shipment, except where otherwise indicated.

## § 1. Introductory.

1. **General.**—The introduction of cattle into Australia and the early history of the dairying industry are referred to in some detail in earlier issues of this publication. It may here be noted that the original stock has been crossed with specially imported stud cattle, while further judicious crossings of strains have resulted in an increased and improved milk supply. In Australia dairy cattle thrive in the open throughout the year, local climatic conditions demanding no protection other than tree plantations for shelter, and in certain districts rugging in the coldest weather. Indigenous and imported grasses furnish food during the greater part of the year, and winter fodder, when necessary, is given to the cattle in the fields. With the wider application of scientific methods in the treatment of animals and pasturages and in the processes of manufacture, coupled with herd testing and effective State supervision, the dairying industry has shown rapid expansion. It has been demonstrated that Australian production and marketing methods do not adversely affect the vitamin content of the butter and that the loss during cold storage even for as long as two years is insignificant.

2. **Mixed Farming.**—Dairying is not, as formerly, wholly confined to agriculturists, since many graziers in a large way of business also give it their attention. In non-coastal regions it is generally carried on in conjunction with agriculture and sheep-raising, sufficient fodder being grown to carry the cattle through the winter months. Local wants are thus met, and in many places remote from the metropolis well-equipped factories have been established. The extent to which dairy cattle were run in conjunction with pig raising and wheat growing in 1949-50 is shown in the relevant tables published in the section "Special Tabulations Relating to Rural Holdings, 1949-50" of *Primary Industries Bulletin* No. 44, 1949-50.

3. **Employment.**—The numbers of persons employed in primary industry are ascertained at the annual census of rural production. The particulars collected are in respect of those persons who were permanently engaged in the actual work of the farm and include owners, lessees, tenants or sharefarmers, relatives over 14 years of age not receiving wages, and other permanent employees, including managers and relatives, working for wages or salary. Details of the numbers so engaged are given in Chapter XX.—Agricultural Production, § 28.

For the years up to 1939-40, information was also collected which enabled the classification of each holding according to the chief purpose for which it was used, thus obtaining a distribution of employment in the three main classes, viz., Agriculture, Pastoral and Dairying. However, because of difficulties in determining with precision the chief purpose for which holdings are used, this information has since been omitted from the schedules. Consequently it has not been possible to continue to compile details of employment in the dairying industry from data obtained from this source.

Details of the number of persons who described themselves at the population census of 30th June, 1947 as being engaged in dairy farming were shown for each State in Official Year Book No. 38, page 1025. They comprised 96,508 males and 10,018 females, a total of 106,526 persons.

4. **Growth of the Dairying Industry.**—The following table gives some indication of the growth of the dairying industry since 1918-19 :—

#### DAIRYING INDUSTRY : AUSTRALIA.

Year.	Number of Dairy Cows.		Total Milk Produced for all Purposes.	Production of Butter.	Production of Cheese.	Milking Machines (No. of Stands) (a)
	In Milk.	Dry.				
			Mill. gals.	Tons.	Tons.	
918-19 ..	1,319,588	582,448	529.6	81,162	10,621	(b)
1928-29 ..	1,744,728	600,342	815.4	129,817	13,490	(b)
1938-39 ..	2,600,707	608,812	1,189.2	203,500	29,304	(b)
1947-48 ..	2,267,221	818,044	1,173.1	162,054	41,478	134,774
1948-49 ..	2,339,885	818,725	1,212.6	165,830	43,202	144,916
1949-50 ..	2,354,217	837,218	1,241.8	173,599	44,796	155,218
1950-51 ..	2,252,741	895,930	1,199.7	163,934	44,310	165,788
1951-52 ..	2,098,560	874,192	1,051.3	135,319	40,598	171,712

(a) "Number of Stands" indicates the number of cows that can be milked simultaneously—i.e., the cow capacity of installed milking machines. (b) Not available.

5. **Official Supervision of Dairying Industry.**—Dairy experts of the various State Agricultural Departments give instruction in approved methods of production, and inspect animals, buildings and marketable produce. A high standard of cleanliness, both of *personnel* and *materiel*, prevails.

The export trade is regulated by the terms of the Commonwealth Commerce (Trade Descriptions) Act 1905-1933, and regulations thereunder. It will be sufficient to state here that the true trade description, etc., must be marked on all produce intended for export, while official inspection ensures the maintenance of purity and quality. Upon request of the exporter the goods are given a certificate by the inspector.

6. **Australian Agricultural Council.**—General information on the constitution and functions of the Australian Agricultural Council is given on pages 832-4 of Chapter XX.—Agricultural Production. Details are also given on these pages of the production aims for the five-year period ended 1957-58 (including specific targets for the principal dairy products) as set by the Council at its 36th Meeting in April, 1952.

## § 2. Value of Farmyard, Dairy and Bee Production and Indexes of Price and Quantity Production.

1. **Gross Value of Farmyard, Dairy and Bee Production, 1936-37 to 1951-52.**—The following table shows the gross value of recorded farmyard and dairy production at the principal markets in Australia.

GROSS VALUE OF FARMYARD, DAIRY AND BEE PRODUCTION: AUSTRALIA.(a)  
(£'000.)

Particulars.	Average 1936-37 to 1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Whole Milk(b) used for—						
Butter .. ..	22,550	29,753	34,655	39,414	36,692	38,875
Cheese .. ..	1,505	4,087	4,943	5,451	5,398	6,700
Condensing, concentrating, etc. .. ..	1,094	3,470	5,241	5,900	6,223	7,948
Human Consumption and other purposes ..	7,971	16,109	19,428	24,511	28,315	37,261
Subsidy Paid on Whole Milk for—						
Butter, Cheese, Condensing, Concentrating, etc. ..	..	8,104	5,540	8,062	13,629	15,041
Human Consumption ..	..	1,167	320	..	..	..
Total Whole Milk (in- cluding Subsidy) ..	33,120	62,690	70,127	83,338	90,257	105,825
Pigs Slaughtered .. ..	5,526	10,551	12,325	14,281	15,358	18,516
Dairy Cattle Slaughtered ..	1,591	2,602	2,769	3,492	4,872	5,966
Eggs .. ..	9,117	20,414	23,870	25,766	28,047	37,534
Poultry .. ..	2,386	6,297	7,146	7,726	9,408	10,985
Honey .. ..	154	781	1,597	787	871	800
Beeswax .. ..	10	40	87	50	71	62
Total .. ..	51,904	103,375	117,921	135,440	148,884	179,688

(a) Excludes Australian Capital Territory and Northern Territory, details for which are not available.  
(b) Excludes Commonwealth subsidy which is shown separately below.

2. Gross and Net Values, 1951-52.—The values of dairy, poultry and bee farming on gross, local and net bases are shown in the following table. Production values for this and other industries are dealt with more fully in Chapter XXIX.—Miscellaneous.

GROSS, LOCAL AND NET VALUE OF FARMYARD, DAIRY AND BEE PRODUCTION,  
1951-52.  
(£'000.)

State.	Gross Production valued at Principal Markets.	Marketing Costs.	Gross Production valued at Farm.	Farm Costs.		Net Value of Pro- duction. (a)
				Fodder fed to Farm Stock.	Value of Other Materials used in process of Pro- duction.	

DAIRY PRODUCTION.

New South Wales ..	38,966	4,576	34,390	3,711	154	(b) 30,525
Victoria .. ..	47,285	1,859	45,426	4,474	1,800	39,152
Queensland .. ..	21,776	580	21,196	2,510	510	18,176
South Australia ..	10,573	221	10,352	798	696	8,858
Western Australia ..	6,789	190	6,599	1,487	1,109	4,003
Tasmania .. ..	4,918	239	4,679	1,409	208	(b) 3,062
Total .. ..	130,307	7,665	122,642	14,389	4,477	103,776

(a) No deduction has been made for depreciation and maintenance. (b) No deduction has been made for costs of power, power kerosene, petrol and other oils.

GROSS, LOCAL AND NET VALUE OF FARMYARD, DAIRY AND BEE PRODUCTION, 1951-52—*continued.*

(£'000.)

State.	Gross Production valued at Principal Markets.	Marketing Costs.	Gross Production valued at Farm.	Farm Costs.		Net Value of Production. (a)
				Fodder fed to Farm Stock.	Value of Other Materials used in process of Production.	
<b>POULTRY PRODUCTION.</b>						
New South Wales ..	20,775	1,927	18,848	5,119	..	13,729
Victoria ..	18,043	1,353	16,690	4,120	..	12,570
Queensland ..	2,358	345	2,013	730	75	1,208
South Australia ..	3,286	340	2,946	925	..	2,021
Western Australia ..	2,470	516	1,954	807	..	1,147
Tasmania ..	1,587	118	1,469	590	..	879
<b>Total ..</b>	<b>48,519</b>	<b>4,599</b>	<b>43,920</b>	<b>12,291</b>	<b>75</b>	<b>31,554</b>

## BEE PRODUCTION.

New South Wales ..	283	29	254	..	..	254
Victoria ..	237	24	213	..	..	213
Queensland ..	33	5	28	..	..	28
South Australia ..	164	14	150	..	..	150
Western Australia ..	130	15	115	..	..	115
Tasmania ..	15	1	14	..	..	14
<b>Total ..</b>	<b>862</b>	<b>88</b>	<b>774</b>	<b>..</b>	<b>..</b>	<b>774</b>

## TOTAL FARMYARD, DAIRY AND BEE PRODUCTION.

New South Wales ..	60,024	6,532	53,492	8,830	154	(b) 44,508
Victoria ..	65,565	3,236	62,329	8,594	1,800	51,935
Queensland ..	24,167	930	23,237	3,240	585	19,412
South Australia ..	14,023	575	13,448	1,723	696	11,029
Western Australia ..	9,389	721	8,668	2,294	1,109	5,265
Tasmania ..	6,520	358	6,162	1,999	208	(b) 3,955
<b>Total ..</b>	<b>179,688</b>	<b>12,352</b>	<b>167,336</b>	<b>26,680</b>	<b>4,552</b>	<b>136,104</b>

(a) No deduction has been made for depreciation and maintenance.

(b) No deduction has been

made for costs of power, power kerosene, petrol and other oils.

3. Net Value of Production, 1934-35 to 1951-52. In the following table the net values of farmyard, dairy and bee production (total and per head of population) are shown by States.

## NET VALUE OF FARMYARD, DAIRY AND BEE PRODUCTION.(a)

Year.	N.S.W. (b)	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.(b)	Total.
NET VALUE. (£'000.)							
Average, 1934-35 to 1938-39	11,848	12,238	7,118	1,938	979	943	35,064
1947-48..	25,692	26,087	15,029	7,035	2,460	1,718	78,021
1948-49..	28,991	30,335	17,443	7,366	2,897	2,225	89,257
1949-50..	33,943	35,643	19,537	9,140	3,326	2,484	104,073
1950-51..	38,852	39,650	21,141	8,513	3,886	2,755	114,797
1951-52..	44,508	51,935	19,412	11,029	5,265	3,955	136,104

## NET VALUE PER HEAD OF POPULATION. (£ s. d.)

Average, 1934-35 to 1938-39	4 8 3	6 12 2	7 4 7	3 5 11	2 3 0	4 0 10	5 2 11
1947-48..	8 10 10	12 12 2	13 10 2	10 15 8	4 16 8	6 11 4	10 5 0
1948-49..	9 9 3	14 7 1	15 7 5	11 1 6	5 11 0	8 5 11	11 9 0
1949-50..	10 14 0	16 8 6	16 15 11	13 6 2	6 1 11	8 19 1	12 19 9
1950-51..	11 17 6	17 14 6	17 14 6	11 19 6	6 16 0	9 11 8	13 17 6
1951-52..	13 5 3	22 11 4	15 17 11	15 2 5	8 18 2	13 4 11	16 0 4

(a) No deduction has been made for depreciation and maintenance.  
made for costs of power, power kerosene, petrol and other oils.

(b) No deduction has been

4. Indexes of Quantity and Price of Farmyard, Dairy and Bee Production, 1947-48 to 1951-52.—For details of the methods of calculating these indexes and of the weights used see Chapter XXIX.—Miscellaneous.

## INDEXES OF QUANTITY AND PRICE OF FARMYARD, DAIRY AND BEE PRODUCTION: AUSTRALIA.

(Base: Average 3 years ended June, 1939 = 100).

Particulars.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
<b>Quantity produced—</b>					
Milk .. ..	103	106	109	105	92
Other products .. ..	115	120	115	109	108
Total Farmyard and Dairy	107	111	111	106	97
Total per Head of Population .. ..	96	98	95	88	78
<b>Price—</b>					
Milk .. ..	178	189	220	244	319
Other products .. ..	195	216	248	295	363
Total Farmyard and Dairy	183	197	228	258	332

## § 3. Dairy Cattle and Dairy Products.

1. Dairy Herds.—Owing to the lack of uniformity in the schedules used by the several States in the collection of live-stock statistics, it is not possible to measure with precision the growth of the dairy herds of Australia prior to 1943. However, statistics of dairy cows, which provide a reliable measurement of this development, show that in 1918-19 there were 1,902,036 dairy cows (in milk and dry), compared with 2,345,070 in 1928-29 and 3,209,519 in 1938-39. The numbers remained at this level until March, 1944, but have since declined, the number recorded at 31st March, 1952 being 2,972,752. In New South Wales, Victoria, South Australia and Tasmania the proportion of dairy to all cattle is high. In Queensland, the Northern Territory and Western Australia there is a great preponderance of other cattle, the main object in these areas being the production of beef. Since 1939 there have been substantial decreases in the number of dairy cows in New South Wales and Queensland. The numbers of dairy cows for 1948 to 1952 shown in the following table refer to those recorded by farmers as being in milk and dry as at 31st March. The figures shown for the years 1935 to 1939 cover the same categories, but the period differs in some States (see footnote (a)). To this extent the figures lack comparability.



## NUMBER OF CATTLE AND DAIRY COWS (IN MILK AND DRY).

State.	Average, 1935-39. (a)	31st March—					
		1948.	1949.	1950.	1951.	1952.	
N.S. Wales	All Cattle ..	3,054,164	3,129,740	3,252,752	3,440,461	3,702,848	3,620,953
	Dairy Cows ..	1,024,761	862,041	872,431	875,988	855,882	820,518
Victoria	All Cattle ..	1,892,465	2,174,203	2,224,543	2,230,948	2,216,253	2,214,530
	Dairy Cows ..	912,621	896,856	930,252	956,558	943,039	914,809
Queensland	All Cattle ..	6,047,726	5,975,460	5,991,797	6,304,778	6,733,548	6,434,374
	Dairy Cows ..	924,875	946,174	963,473	962,752	967,959	859,434
South Australia	All Cattle ..	331,488	445,287	461,686	464,141	432,566	437,468
	Dairy Cows ..	154,870	166,954	172,765	174,835	160,204	152,192
W. Australia	All Cattle ..	796,473	815,610	864,131	864,936	841,204	851,534
	Dairy Cows ..	121,127	132,305	133,219	129,365	127,544	130,625
Tasmania	All Cattle ..	260,267	244,107	266,419	274,740	271,784	266,263
	Dairy Cows ..	93,708	79,135	84,433	80,546	91,859	92,833
Nor. Territory	All Cattle ..	893,925	991,429	1,052,811	1,048,875	1,019,149	1,057,906
	Dairy Cows ..	(b)	(b)	(b)	(b)	(b)	(b)
Aust. Cap. Ter.	All Cattle ..	8,261	8,748	10,071	11,161	11,477	10,293
	Dairy Cows ..	1,019	1,770	1,937	2,391	2,184	2,341
Australia	All Cattle ..	13,284,769	13,784,584	14,123,610	14,640,040	15,228,829	14,893,321
	Dairy Cows ..	3,232,981	3,085,265	3,158,670	3,191,435	3,148,671	2,972,752

(a) As at 31st March for New South Wales and Australian Capital Territory; 1st March for Victoria; 1st January for Queensland, South Australia, Western Australia and Tasmania. (b) Not available.

In the next table the dairy cattle in each State are shown in various categories as at 31st March, 1950, 1951 and 1952. Information in this detail was not collected uniformly in all States prior to 1943.

## NUMBER OF DAIRY CATTLE.

State.	31st March.	Dairy Cows.		Dairy Heifers 1 year and over.	Dairy Calves under 1 year.	Dairy Bulls.	Total Dairy Cattle.
		In Milk.	Dry.				
New South Wales	1950	693,203	182,785	210,851	162,067	24,097	1,273,003
	1951	672,871	183,011	204,056	161,991	23,827	1,245,756
	1952	632,718	187,800	201,604	159,435	23,313	1,204,870
Victoria	1950	715,327	241,231	298,563	231,104	38,958	1,525,183
	1951	674,011	269,028	281,795	227,203	37,356	1,489,393
	1952	655,127	259,682	275,987	210,758	36,969	1,438,523
Queensland	1950	693,413	269,339	234,317	207,726	27,965	1,432,760
	1951	666,398	301,551	229,800	215,070	27,369	1,440,198
	1952	572,448	286,986	224,350	185,990	26,876	1,295,659
South Australia	1950	118,263	56,572	50,827	37,358	8,328	271,348
	1951	105,765	54,439	42,341	33,483	7,597	243,625
	1952	103,658	48,534	40,166	36,718	7,499	236,575
Western Australia	1950	60,383	68,982	42,263	48,950	5,835	226,413
	1951	60,373	66,671	41,365	48,097	5,860	222,875
	1952	60,092	70,533	40,292	53,556	5,996	230,469
Tasmania	1950	71,985	17,561	27,065	36,168	4,280	157,959
	1951	71,633	20,226	27,148	33,926	4,091	157,024
	1952	73,329	19,504	26,007	32,749	3,947	155,536
Australian Capital Territory	1950	1,643	718	342	369	36	3,138
	1951	1,190	994	678	655	56	3,573
	1952	1,188	1,153	452	686	66	3,545
Australia	1950	2,354,217	837,218	865,128	723,742	109,499	4,889,804
	1951	2,252,741	895,930	827,183	720,425	106,165	4,802,444
	1952	2,098,560	874,192	808,858	679,901	104,666	4,566,177

A graph showing the distribution of dairy cattle in Australia at 31st March, 1948 appears on page 906 of Official Year Book No. 39.

2. **Size of Dairy Herds.**—A series of special tabulations relating to rural holdings, undertaken for all States for the year 1949-50, covered, *inter alia*, a classification of holdings with dairy cattle according to size of herd. Details of these tabulations are published in *Primary Industries Bulletin* No. 44, 1949-50.

3. **Factory System.**—(i) *General.* Cream separation and butter-making are often carried on together under the co-operative system. The creation of large central butter factories has resulted in a considerable reduction in the cost of manufacture, since improved appliances such as refrigerators, etc., may be profitably worked at the larger establishments. The product is also of a more uniform quality, and few farmers prefer to convert to cream rather than send milk to the factory. Formerly, the average quantity of milk used per pound of hand-made butter was about 3 gallons, but factory butter requires less than 2½ gallons.

(ii) *Number of Factories.* In 1951-52 the factories in Australia for the manufacture of butter, cheese and condensed milk numbered 399 and were distributed among the States as follows:—New South Wales, 90; Victoria, 139; Queensland, 91; South Australia, 42; Western Australia, 14; and Tasmania, 23. More details regarding numbers of factories, output, etc., are given in Chapter XXIV.—Manufacturing Industry.

4. **Butter and Cheese—Stabilization Schemes.**—(i) *Voluntary Plan.* During the period from January, 1926 to April, 1934, a voluntary scheme known as the "Paterson Plan" was in operation and had the effect of stabilizing the price of butter in Australia. Details of this scheme may be found on page 1028 of Official Year Book No. 38 and in earlier issues.

(ii) *Compulsory Plan.* On 1st May, 1934 the "Paterson Plan" was superseded by a compulsory price equalization plan, details of which were shown on page 1029 of Official Year Book No. 38 and earlier issues. This compulsory plan was invalidated by the decision in 1936 of the Privy Council which declared in the James (Dried Fruits) Case that the Commonwealth had no power under the Constitution to regulate trade between the States.

(iii) *Equalization Scheme.* Since the Privy Council decision, the butter price stabilization scheme has continued to operate by voluntary action based on the agreements between the manufacturers and the Commonwealth Dairy Produce Equalization Committee Limited. The Committee, which comprises members of the State Dairy Products Boards and other persons representing the industry, enters into agreements with manufacturers to secure to them equal rates from sales of butter and cheese, and for this purpose may fix basic prices at which these products sold in Australia or abroad are to be taken into account. The effect is that local and export trade are distributed in equitable proportions among the manufacturers by means of quotas. The Committee fixes basic prices and equalizes returns to factories through an Equalization Fund. The States originally participating in the scheme were New South Wales, Victoria, Queensland and Tasmania in respect of both butter and cheese, and South Australia in respect of cheese. South Australia and Western Australia entered the scheme in respect of butter on 1st April, 1946 and Western Australia extended its participation to include cheese in January, 1947.

The home consumption prices of butter and cheese were fixed by the Commonwealth Prices Commissioner up to 19th September, 1948, from which date prices have been controlled by State Governments.

5. **Commonwealth Subsidies.**—(i) *Butter, Cheese and Processed Milk Products.* Under the provisions of the various Dairy Industry Assistance Acts, the first of which was passed in 1942, the Commonwealth Government has provided subsidies on milk supplied for the manufacture of butter, cheese and processed milk products. Subsidies were paid on a seasonal basis prior to 1st April, 1946, but from that date have been on a flat rate basis. Subsidies are distributed by the Commonwealth Dairy Produce Equalization Committee Limited through factories to milk producers by payments on butter, cheese and processed milk products manufactured. Subsidy on milk supplied for the manufacture of processed milk products was discontinued from 1st July, 1948 to 30th June, 1949 and again from 1st July, 1952.

The following table shows particulars, in respect of butter and cheese, of the rates realized on local, interstate and oversea sales and the average equalization and subsidy rates in operation for the years ended June, 1939 and 1949 to 1953.

**BUTTER AND CHEESE : RATES REALIZED ON SALES, AVERAGE EQUALIZATION RATES AND RATES OF COMMONWEALTH SUBSIDY UNDER DAIRY INDUSTRY ASSISTANCE ACTS.**

(Rates s. d. per cwt.)

Year ended 30th June.	Rates Realized on Sales.			Average Equalization Rate.	Rate of Subsidy.	Rate of Overall Return to Manu- facturers.
	Local.	Interstate.	Overseas.			
<b>BUTTER.</b>						
1939.. ..	154 5.5	146 5.5	121 7.5	136 3.5	..	136 3.5
1949.. ..	209 9.0	197 3.5	267 0.6	237 6.7	28 11.3	266 6.0
1950.. ..	209 9.6	196 2.0	293 2.4	248 11.2	43 11.2	292 10.4
1951.. ..	208 6.4	193 11.9	307 11.2	241 8.4	82 3.9	324 0.3
1952.. ..	(a)	(a)	(a)	b329 0.0	b100 1.1	429 1.1
1953.. ..	(a)	(a)	(a)	b393 0.0	b 85 0.0	b478 0.0
<b>CHEESE.</b>						
1939.. ..	(c) 94 8.6		59 3.2	71 7.6	..	71 7.6
1949.. ..	123 7.0		148 7.9	138 1.0	11 3.9	149 4.9
1950.. ..	122 9.5		162 3.3	141 4.8	23 10.9	165 3.7
1951.. ..	123 9.8		171 4.2	144 1.6	37 10.9	182 0.5
1952.. ..	(a)		(a)	b204 6.1	b 35 10.1	240 4.2
1953.. ..	(a)		(a)	b230 0.0	b 32 0.0	b262 0.0

(a) Not yet available. (b) Interim rates. (c) Lower rates were determined for cheese sold in these years for processing for local consumption.

(Source : Commonwealth Dairy Produce Equalisation Committee Limited.)

Following representations by industry organizations, the Commonwealth Government established the Joint Dairy Industry Advisory Committee in November, 1946, comprising a chairman nominated by the Government, four representatives of Commonwealth Government Departments and four industry representatives from the several States. The Committee's functions, broadly, are to advise and assist in conducting cost and other surveys of dairy farm production and to act as an advisory body to the Government in these matters. Since 1st April, 1947, the rates of overall return to milk producers determined by the Commonwealth Government for the purpose of subsidy payments have been based on recommendations made by the Committee following surveys of production costs in the dairy industry.

Under the Five-year Stabilization Plan which came into operation on 1st July, 1952, the Commonwealth Government, with the approval of the States, determines each season the ex-factory prices of butter and cheese, guarantees to dairy farmers a return, based upon costs of efficient production, in respect of quantities of butter and cheese sold within the Commonwealth, plus an additional 20 per cent. (if produced), and hence determines the amount of subsidy it will make available to lift the return on that part of output covered by the guarantee to the guaranteed level.

Amounts realized on exports of butter and cheese in excess of the f.o.b. equivalent of the guaranteed return have been credited to the Dairying Industry Stabilization Fund, which was established in July, 1948 for the purpose of stabilizing returns from exports. During 1951-52 the Stabilization Fund met the deficiency in respect of all exports which did not return sufficient to meet the basic return to the factory. Since 1st July, 1952, it has been available to the industry to be used, in whatever manner considered desirable by it, to make good any deficiency in respect of all exports other than the 20 per cent. provided for under the Commonwealth Government's Five-year Stabilization Plan. After allowing for outstanding debits the amount standing to the credit of the Dairying Industry Stabilization Fund at 30th June, 1952 totalled approximately £2,500,000.

(ii) *Whole Milk.* In addition to the subsidies referred to above, the Commonwealth Government has also subsidized the production of whole milk consumed directly. The subsidy rates varied according to States, regions within the State and the seasonal period. Commonwealth subsidy on whole milk was paid during the year 1948-49 in respect of milk supplied up to 30th September, 1948, but was discontinued after that date. Details of the amounts distributed during each year will be found in Official Year Book No. 38, page 1031.

6. Total Dairy Production.—The dairy production for each State in 1951-52 is shown below :—

DAIRY PRODUCTION, 1951-52.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
MILK ('000 GAL.).								
Used for—								
Butter ..	(a) 123,544	(b) 278,471	(c) 129,317	35,465	29,480	34,452	42	630,771
Cheese ..	4,562	47,472	10,442	22,618	1,389	878	..	87,360
Condensing and concentrating								
Other purposes ..	13,693	53,456	41,389	28,399	18,068	10,770	551	76,324
	99,410	67,419						
Total ..	241,209	446,818	181,148	86,482	48,937	46,100	593	1,051,287
BUTTER (TONS).								
In Factories On Dairy and other Farms(g)	(d) 23,438	(e) 59,236	(f) 27,850	7,767	6,705	6,170	..	131,166
	1,804	1,106	361	364	175	337	6	4,153
Total ..	25,242	60,342	28,211	8,131	6,880	6,507	6	135,319
CHEESE (TONS).								
In Factories On Dairy and other Farms(g)	1,995	22,240	(h) 4,700	10,615	624	408	..	40,582
	..	15	..	..	1	..	..	16
Total ..	1,995	22,255	4,700	10,615	625	408	..	40,598

(a) Includes 3,590,000 gallons of milk, the produce of New South Wales, sent as cream to factories in Victoria and Queensland. (b) Includes 562,000 gallons of milk, the produce of Victoria, sent as cream to New South Wales. (c) Includes 595,000 gallons of milk, the produce of Queensland, sent as cream to New South Wales. (d) Includes 251 tons of butter made from cream, the produce of Victoria and Queensland. (e) Includes 695 tons of butter made from cream, the produce of New South Wales. (f) Includes 78 tons of butter made from cream, the produce of New South Wales. (g) Estimated. (h) Includes 16½ tons of cheese made in establishments not classified as factories.

7. *Whole Milk.*—(i) *Production and Utilization.* During the five years ended 1938-39 approximately 80 per cent. of Australia's milk supply was used for butter-making, 4 per cent. for cheese manufacture. 2 per cent. for condensary products and 14 per cent. for fluid consumption and other purposes. There has since been a considerable decline in the proportion of milk used for butter-making, with corresponding increases in the quantities used for other purposes. In 1951-52, 60.0 per cent. of the total milk supply was used for butter, 8.3 per cent. for cheese, 7.3 per cent. for condensary products and 24.4 per cent. for other purposes.

Details of the production of whole milk for various purposes are shown in the following table for each year 1947-48 to 1951-52 in comparison with the average for the years 1934-35 to 1938-39:—

**PRODUCTION AND UTILIZATION OF WHOLE MILK : AUSTRALIA.**  
(<sup>'000</sup> gallons.)

Year.	Total Production.	Quantity used for—			
		Butter (Factory and Farm).	Cheese (Factory and Farm).	Condensary Products.	Other purposes.
Average, 1934-35 to 1938-39	1,149,559	913,754	48,595	28,116	159,094
1947-48 .. ..	1,173,105	763,049	90,121	78,113	241,822
1948-49 .. ..	1,212,644	781,230	93,720	87,653	250,041
1949-50 .. ..	1,241,759	806,682	96,757	89,565	248,755
1950-51 .. ..	1,199,716	762,692	96,532	84,828	255,664
1951-52 .. ..	1,051,287	630,771	87,360	76,324	256,832

In the following table, particulars of production of whole milk in the several States are shown for the years 1947-48 to 1951-52, compared with the average for the five years ended 1938-39. Victoria is the principal milk-producing State and in 1951-52 output from that State, viz., 446.8 million gallons, represented 42.5 per cent. of total production. Output from New South Wales was 241.2 million gallons or 22.9 per cent. of the total and that of Queensland 181.1 million gallons (17.2 per cent.) Production in the remaining States accounted for 17.4 per cent. of the total Australian output.

**TOTAL PRODUCTION OF WHOLE MILK.**  
(<sup>'000</sup> gallons.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
Average, 1934-35 to 1938-39 ..	331,963	402,447	278,226	63,538	40,394	32,659	332	1,149,559
1947-48 .. ..	295,370	428,569	272,791	92,498	50,363	32,936	578	1,173,105
1948-49 .. ..	291,915	462,446	277,152	91,319	50,612	38,541	659	1,212,644
1949-50 .. ..	311,580	469,253	281,125	89,388	49,476	40,243	694	1,241,759
1950-51 .. ..	298,159	445,671	278,111	83,545	52,407	41,136	687	1,199,716
1951-52 .. ..	241,209	446,818	181,148	86,482	48,937	46,100	593	1,051,287

(ii) *Production per Cow.* The annual quantity of milk produced per dairy cow reaches as high as 1,000 gallons, varying greatly with breed, locality and season. For the whole of Australia for all dairy cows and for all seasons prior to 1916 it averaged considerably less than 300 gallons per annum. In recent years not only has there been an improvement in the quality of the cattle, but the application of scientific methods has been continually extended, and the 300-gallon average has been exceeded in each year since 1924, the yield of 392 gallons in 1931 constituting a record. In 1951-52 the yield was 343 gallons. The annual average yields per cow shown in the following table are based on the number of dairy cows which were in milk during any part of the year. The average shown is, therefore, less than that for cows which were yielding during the greater

part of the year. It should be noted that there are many difficulties attending the collection of particulars of the total quantity of milk obtained during any year. In addition, there is the further difficulty of ascertaining with reasonable accuracy the average number of cows in milk during the same period. The average yield per cow shown hereunder may be accepted as sufficiently reliable to show the general trend :—

MILK PRODUCTION.

Heading.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Average, 1934-35 to 1938-39—								
Dairy Cows(a) No.	1,030,441	913,635	909,006	154,349	120,767	93,764	958	3,222,920
Production '000 gal.	331,963	402,447	278,226	63,538	40,394	32,659	332	1,149,559
Av. per cow .. gal.	322	440	306	412	334	348	347	357
1947-48—								
Dairy Cows(a) .. No.	855,874	887,045	929,915	165,473	132,008	77,127	1,761	3,049,203
Production '000 gal.	295,370	428,569	272,791	92,498	50,363	32,936	578	1,173,105
Av. per cow .. gal.	345	483	293	559	382	427	328	385
1948-49—								
Dairy Cows(a) .. No.	867,236	913,569	954,824	169,909	132,762	81,784	1,854	3,121,938
Production '000 gal.	291,915	462,446	277,152	91,319	50,612	38,541	659	1,212,644
Av. per cow .. gal.	337	506	290	537	381	471	355	388
1949-50—								
Dairy Cows(a) .. No.	874,210	943,405	963,113	173,850	131,292	86,989	2,164	3,175,023
Production '000 gal.	311,580	469,253	281,125	89,388	49,476	40,243	694	1,241,759
Av. per cow .. gal.	356	497	292	514	377	463	321	391
1950-51—								
Dairy Cows(a) .. No.	865,935	949,798	965,355	167,519	128,455	90,703	2,288	3,170,053
Production '000 gal.	298,159	445,671	278,111	83,545	52,407	41,136	687	1,199,716
Av. per cow .. gal.	344	469	288	499	408	454	300	378
1951-52—								
Dairy Cows(a) .. No.	838,200	928,924	913,696	156,198	129,085	92,346	2,263	3,060,712
Production '000 gal.	241,209	446,818	181,148	86,482	48,937	46,100	593	1,051,287
Av. per cow .. gal.	288	481	198	554	379	499	262	343

(a) Mean for the year.

8. Butter Production.—There was a steady increase in the annual output of butter for many years prior to the 1939-45 War. The average annual production rose from 126,000 tons for the five years ended 1928-29 to 195,000 tons for the five years ended 1938-39.

Following the record output of 211,988 tons in 1939-40 the general trend of butter production declined until 1946-47, when 143,308 tons were produced. Output increased again to 173,599 tons in 1949-50, but in 1950-51 decreased to 163,934 tons and in 1951-52 to 135,319 tons. The foregoing figures include butter produced on farms which has shown a decline from 8,714 tons in 1938-39 to 4,153 tons in 1951-52.

The following table shows production of butter in factories in each State for the years 1947-48 to 1951-52, compared with the average for the five years ended 1938-39.

BUTTER PRODUCTION IN FACTORIES.

(Tons.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.(a)
Average, 1934-35 to 1938-39 ..	52,949	62,489	53,255	7,570	5,459	3,811	185,533
1947-48 ..	33,958	56,717	46,454	9,043	7,061	4,441	157,674
1948-49 ..	33,267	60,039	47,197	8,800	6,966	4,821	161,090
1949-50 ..	36,817	63,358	48,196	8,236	6,769	5,069	168,445
1950-51 ..	34,318	57,982	47,447	7,377	6,797	5,710	159,631
1951-52 ..	23,438	50,236	27,850	7,767	6,705	6,170	131,166

(a) Northern Territory and Australian Capital Territory : nil.

The table below shows the monthly production of factory butter in Australia in each of the years 1938-39 and 1947-48 to 1951-52. The annual output of farm butter is also shown.

**PRODUCTION OF BUTTER IN FACTORIES AND ON FARMS : AUSTRALIA.**  
(Tons.)

Particulars.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
<b>Factories—</b>						
July .. ..	9,415	7,830	7,892	7,393	7,338	7,013
August .. ..	11,645	8,901	10,411	10,169	10,355	9,119
September .. ..	15,531	12,813	13,335	13,903	14,417	11,511
October .. ..	20,485	17,282	17,487	19,083	19,897	16,748
November .. ..	22,561	17,432	18,166	21,524	21,245	16,051
December .. ..	20,710	20,601	18,481	21,334	20,629	13,889
January .. ..	15,872	19,334	17,101	17,389	18,181	12,337
February .. ..	15,816	13,708	14,246	14,725	13,791	9,501
March .. ..	17,729	13,486	15,380	15,126	12,619	10,197
April .. ..	16,583	10,098	12,153	11,146	8,841	9,132
May .. ..	15,568	8,632	9,139	9,484	6,584	8,219
June .. ..	12,871	7,380	7,299	7,169	5,734	7,449
<b>Factory Total(a) ..</b>	<b>194,587</b>	<b>157,587</b>	<b>161,090</b>	<b>168,445</b>	<b>159,631</b>	<b>131,166</b>
<b>Made on Farms(b) ..</b>	<b>8,714</b>	<b>4,467</b>	<b>4,740</b>	<b>5,154</b>	<b>4,393</b>	<b>4,153</b>
<b>Grand Total ..</b>	<b>203,054</b>	<b>162,054</b>	<b>165,830</b>	<b>173,599</b>	<b>163,934</b>	<b>135,319</b>

(a) Year ended June.

(b) Year ended March.

9. **Cheese Production.**—Until 1916 the annual production of cheese had not reached 10,000 tons. From 1916 to 1926-27 it ranged between 10,000 and 13,000 tons with two years (1921 and 1924) having more than 14,000 tons. For the next five years between 13,500 and 14,800 tons were produced each year. In 1932-33 production rose to 16,488 tons, and, with some reversals of trend, continued to rise and reached the record output of 44,796 tons in 1949-50. Production decreased slightly in 1950-51 and more substantially in 1951-52 to 40,582 tons. The States contributing chiefly towards the general increase over the years are Victoria, Queensland and South Australia.

The following table shows production of cheese in factories in each State in the years 1947-48 to 1951-52 in comparison with average output during the years 1934-35 to 1938-39 :—

**CHEESE PRODUCTION IN FACTORIES.**  
(Tons.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.(a)
<b>Average, 1934-35 to</b>							
1938-39 .. ..	3,332	6,177	5,071	5,437	390	1,210	21,617
1947-48 .. ..	2,637	16,167	9,641	11,530	1,019	447	41,441
1948-49 .. ..	2,490	18,352	9,390	11,654	870	404	43,160
1949-50 .. ..	2,827	21,193	9,050	10,587	701	418	44,776
1950-51 .. ..	2,960	22,570	8,678	8,932	748	412	44,300
1951-52 .. ..	1,995	22,240	4,700	10,615	624	408	40,582

(a) Northern Territory and Australian Capital Territory : Nil.

The monthly production of cheese in factories in Australia, together with the annual output from farms, is shown in the table below for 1938-39 and each of the years 1947-48 to 1951-52.

PRODUCTION OF CHEESE IN FACTORIES AND ON FARMS : AUSTRALIA.  
(Tons.)

Month.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
<b>Factories—</b>						
July .. ..	1,517	2,393	2,951	1,995	1,654	2,135
August .. ..	1,950	3,047	3,143	3,104	3,020	3,050
September .. ..	2,820	4,259	4,572	4,625	5,064	4,666
October .. ..	4,028	5,703	5,978	6,265	6,975	6,290
November .. ..	3,990	5,760	5,802	6,525	7,175	6,112
December .. ..	3,462	5,343	5,317	6,208	6,175	5,158
January .. ..	2,212	4,463	4,257	4,591	4,441	3,715
February .. ..	1,715	2,864	2,997	3,175	2,783	2,442
March .. ..	1,826	2,428	3,165	2,833	2,612	2,165
April .. ..	1,656	1,698	2,446	2,316	1,635	1,682
May .. ..	1,898	1,795	1,854	1,790	1,325	1,565
June .. ..	1,900	1,688	1,578	1,349	1,442	1,602
Factory Total(a) ..	28,974	41,441	43,160	44,776	44,301	40,582
Made on Farms(b) ..	330	37	42	20	9	16
Grand Total .. ..	29,304	41,478	43,202	44,796	44,310	40,598

(a) Year ended June. (b) Year ended March.

10. Condensed, Concentrated and Powdered, etc. Milk Production.—The manufacture of these products has expanded greatly since 1938-39—to meet the needs of the Services during the 1939-45 War and for export purposes since the war. The output of condensed milk (sweetened and unsweetened) in 1951-52 was 202 per cent. higher than in the three years ended 1938-39 while that of powdered milk (full cream and skim) was 175 per cent. higher. Over the same period the quantity of whole milk used in the manufacture of the products shown below increased from 33.2 million gallons to 78.3 million gallons or by 136 per cent. These products are manufactured mainly in Victoria, which produced 70 per cent. of the total (in terms of whole milk equivalent) in 1951-52. New South Wales accounted for 18 per cent. and the remaining States for 12 per cent.

The following table shows details of the output of condensed, concentrated, powdered, etc. milk during the years 1947-48 to 1951-52, compared with the available details for the years 1936-37 to 1938-39.

PRODUCTION OF CONDENSED, CONCENTRATED AND POWDERED, ETC., MILK : AUSTRALIA.

Year.	Full Cream Milk Products.				Total Whole Milk Equivalent of Full Cream Milk Products.	Milk By-Products.	
	Condensed Milk (Sweetened and unsweetened).	Concentrated Whole Milk.(a)	Powdered Full Cream Milk.	Infants' and Invalids' Foods (Including Malted Milk and Milk Sugar).		Skim Milk.	Powdered Butter-milk and Whey.
	Tons.	Tons.	Tons.	Tons.	'000 Gals.	Tons.	Tons.
Average, 1936-37 to 1938-39 .. ..	17,347	(b) 1,355	9,464	(c) 1,131	33,226	(d)	(e) 701
1947-48 .. ..	45,595	13,444	16,015	9,452	78,113	4,379	3,411
1948-49 .. ..	47,773	13,177	19,768	10,104	87,653	6,116	3,019
1949-50 .. ..	49,767	17,270	22,539	10,531	89,565	9,393	2,989
1950-51 .. ..	50,507	18,351	17,594	12,100	84,828	6,583	3,192
1951-52 .. ..	52,467	16,743	15,177	12,066	78,295	10,887	2,938

(a) Mainly for ice-cream manufacture. (b) Incomplete. (c) Malted milk and milk sugar only. (d) Not available separately; included with Powdered Full Cream Milk. (e) Excludes Powdered Whey.



11. **Local Consumption of Butter and Cheese.**—The production of butter and cheese less net exports and adjusted to account for movements in stocks, represents the quantity available for consumption in Australia.

A system of butter rationing introduced as a war-time measure and retained until 16th June, 1950, had the effect of considerably reducing civilian consumption. In the last year of rationing, 1949-50, consumption was 25.3 lb. per head per annum compared with an average of 32.9 lb. during the years 1936-37 to 1938-39. In 1950-51, following the cessation of rationing, consumption rose sharply to 30.9 lb. per head and in 1951-52 rose still further to 31.2 lb.

Cheese consumption rose considerably during the period of butter rationing, from 4.4 lb. per head pre-war to 6.3 lb. per head in 1949-50. There was a further slight rise in 1950-51 to 6.5 lb. per head, but this was followed by a decline in 1951-52 to 6.0 lb. per head.

The following table shows details of the production and disposal of butter and cheese for each of the years 1948-49 to 1951-52 compared with the average for the years 1936-37 to 1938-39.

**PRODUCTION AND DISPOSAL OF BUTTER AND CHEESE : AUSTRALIA.**  
(’000 tons.)

Year.	Changes in Stock.	Production.	Exports. (a)	Consumption in Australia.	
				Total.	Per Head per annum.
<b>BUTTER.</b>					
Average, 1936-37 to 1938-39	(b)	191.0	(c) 90.0	101.0	lb. 32.9
1948-49.. .. .	(d) -2.1	165.8	83.4	84.5	24.3
1949-50.. .. .	(d) +0.8	173.6	81.9	90.9	25.3
1950-51.. .. .	(d) -5.9	163.9	55.2	114.6	30.9
1951-52.. .. .	(d) +3.5	135.3	12.9	118.9	31.2
<b>CHEESE.</b>					
Average, 1936-37 to 1938-39	(b)	24.9	11.5	13.4	lb. 4.4
1948-49.. .. .	- 0.7	43.2	26.2	17.7	5.1
1949-50.. .. .	- 1.0	44.8	23.1	22.7	6.3
1950-51.. .. .	..	44.3	20.1	24.2	6.5
1951-52.. .. .	..	40.6	17.9	22.7	6.0

(a) Figures for butter include ghee expressed as butter as well as butter shipped as ships' stores. Figures for cheese include ships' stores after allowance for a small quantity of cheese imported. (b) Not available. (c) Excludes ghee. (d) Includes allowance for movements in stocks other than those held in main cold stores.

12. **Marketing of Dairy Products.**—(i) *The Dairy Produce Export Control Act 1924-47.* Introduced at the request of the dairying industry this Act was passed by the Commonwealth Parliament with the object of organizing the oversea marketing of Australian dairy produce. A Dairy Produce Control Board was appointed and was in existence from 1924 to 1935. It dealt with matters relating to the organization and supervision of oversea marketing of dairy produce. In the course of its functions the Board regulated shipments to ensure regularity of supply in the London market, controlled forward selling, obtained reductions in oversea freights and insurance rates and participated in an advertising campaign in the United Kingdom.

Prior to the appointment of the Dairy Produce Control Board a voluntary body—the Australian Dairy Council—was established to advise and make recommendations to the Governments on problems connected with the production, manufacture and quality of dairy produce, pasture improvement and diseases of dairy cattle.

Following a recommendation by the Australian Agricultural Council the functions of these bodies were combined by an amending Act of 1935 under the Australian Dairy Produce Board and provision was made for the allocation of money from the Board's funds for research and investigation into pastures, diseases of dairy cattle and the quality of butter. The functions of the Board were later extended to enable it to advise the Government in connexion with the transport of dairy produce, the securing of new markets, the expansion of existing markets and other matters.

The Australian Dairy Produce Board was re-constituted in 1947 by an amendment to the Dairy Produce Export Control Act, reducing its membership from seventeen to twelve. The functions of the Board were extended to enable it to purchase and sell, on behalf of the Commonwealth, dairy produce intended for export, and to control all matters concerning the handling, storage, protection, treatment, transfer and shipment of the produce so purchased or sold. In 1953 the direct farmer representation on the Board was increased from two to three members thus raising the total membership from twelve to thirteen.

(ii) *The Dairy Produce Export Charges Act 1924-1937.* This Act provides for the imposition of a levy on all butter and cheese exported from Australia to cover the administrative expenses of the Board and for advertising and other purposes. The rate of the levy is fixed by regulation.

13. **Butter and Cheese Contracts.**—(i) *General.* Details of the war-time contracts arranged between the United Kingdom and Australian Governments whereby the former undertook to purchase Australia's surplus butter and cheese were shown on pp. 985 and 986 of Official Year Book No. 37. The purchase of butter and cheese in 1944-45 and subsequent years has been covered by the Long-Term Purchase Agreement (*see sub-par. (ii) following*).

For the years 1943-44 to 1947-48 the United Kingdom Government reimbursed the Australian Government to the extent of subsidy paid on butter and cheese exported on Ministry of Food account. From 1st July, 1948 to 30th November, 1950 in respect of butter, and for the year 1948-49 in the case of cheese, however, contract prices paid by the United Kingdom Government were in excess of the basic return to the Australian manufacturer. As a result, subsidy on butter and cheese exported was discontinued from that date and returns from export sales in excess of the basic return to the producer have been credited to the Dairying Industry Stabilization Fund (*see par. 5 (i) ante*). The Fund was drawn upon to cover the deficiencies in export prices during 1951-52 and since July, 1952 has been available to make good the deficiency in respect of all exports other than the 20 per cent. provided for under the Five-year Stabilization Plan.

The following table indicates the prices per cwt. Australian currency f.o.b. part of shipment payable under the Long-term Purchase Agreement for the various grades of butter and cheese for the years 1946-47 to 1952-53.

**PRICES OF BUTTER AND CHEESE : UNITED KINGDOM CONTRACTS.**

*per cwt. Australian Currency, f.o.b. .*

(s. d.)

Period.	Choice.	1st.	2nd.	Pastry.	Whey, 1st.	Whey, 2nd.	Whey, Pastry.
<b>BUTTER.</b>							
1946-47 .. ..	216 10½	215 4	210 7½	206 10½	206 10½	201 10½	196 10½
1947-48 .. ..	254 4½	252 10	248 1½	244 4½	244 4½	239 4½	234 4½
1948-49 .. ..	291 10½	290 3½	285 7½	281 10½	281 10½	276 10½	271 10½
1949-50 .. ..	313 9	312 4	307 6	303 9	303 9	298 9	293 9
1950-51 .. ..	339 4½	337 9½	307 6	303 9	303 9	298 9	293 9
1951-52 .. ..	365 0	363 5½	352 6	347 6	272 0	267 0	262 0
1952-53 .. ..	392 6	390 11½	380 0	367 6	367 6	361 3	355 0

PRICES OF BUTTER AND CHEESE: UNITED KINGDOM  
 CONTRACTS—*continued.*  
 (s. d.)

Period.						Choicest, 1st.	2nd.	3rd.
CHEESE.								
1946-47	..	..	..	..	..	126 3	123 9	121 3
1947-48	..	..	..	..	..	145 7½	143 1½	140 7½
1948-49	..	..	..	..	..	164 4½	161 10½	159 4½
1949-50	..	..	..	..	..	175 0	172 6	170 0
1950-51	..	..	..	..	..	188 9	172 6	170 0
1951-52	..	..	..	..	..	201 10½	189 4½	176 10½
1952-53	..	..	..	..	..	220 0	207 6	195 0

(ii) *Long-term Purchase Agreement.* Early in 1945 an agreement was completed between the United Kingdom and Australian Governments covering the sale to the former of Australia's surplus butter and cheese for the four years 1944-45 to 1947-48. The Agreement was later extended to cover the period up to 30th June, 1955. In the original agreement, prices were stipulated for the initial two years ended June, 1946, while any variation in price for the succeeding years was not to exceed 7½ per cent. of the price paid for the preceding year. In accordance with the terms of the agreement, prices were increased for the year 1946-47 and further increases were agreed upon for the years 1947-48 to 1950-51 following representations from the Australian Government after having considered recommendations by the Joint Dairy Industry Advisory Committee (*see par. 5 above*). The United Kingdom undertakes responsibility for storage costs if unable to provide ships to lift butter and cheese from store after 90 days, and makes advances against stored stock in this event. The usual provisions relative to quality, packing, etc., continued to obtain, but in regard to payment the United Kingdom now pays the whole of the value on shipment, instead of 97½ per cent. on shipment and 2½ per cent. 60 days after the date of the last bill of lading, as formerly.

14. *Oversea Trade in Butter, Cheese and Milk.*—(i) *General.* The production of butter and cheese in Australia is considerably in excess of local requirements and consequently a substantial surplus is available for export overseas. In normal circumstances the extent of this surplus is chiefly dependent upon the seasonal conditions. Exports of butter, which averaged 90,000 tons in the three-pre-war years, were maintained to a certain extent during the war-time and post-war years by the restriction of supplies for local consumption, but, because of lower production they nevertheless fell as low as 41,800 tons in 1944-45. In the last year of rationing, 1949-50 exports were 81,900 tons, but in 1950-51 they fell to 55,200 tons and in 1951-52 to 12,900 tons. Exports of cheese, which averaged 11,500 tons pre-war rose to a maximum of 26,100 tons in 1948-49, but they subsequently fell and in 1951-52 amounted to 17,900 tons.

During 1938-39, 96,900 tons or 95 per cent. of all butter exported, was shipped to the United Kingdom. With the decline in total exports there has also been a substantial reduction in the quantity shipped to the United Kingdom. In 1951-52 it amounted to only 4,500 tons (39 per cent. of total exports).

In 1938-39, exports of cheese totalled 16,000 tons of which 15,500 tons or 97 per cent. were exported to the United Kingdom. Of the total of 18,000 tons exported in 1951-52 13,200 tons or 73 per cent. were shipped to the United Kingdom.

Total quantities and values of exports of Australian origin of butter, cheese and condensed, concentrated, etc., milk and cream are shown on page 933.

(ii) *Butter and Cheese Exports graded according to Quality.* All butter and cheese exported comes under the provisions of the Exports (Dairy Produce) Regulations and is subject to the supervision, inspection and examination of officers appointed for that purpose. These commodities are graded according to quality which has been fixed by

regulation as follows :—Flavour and aroma, 50 points ; texture, 30 points ; and condition, 20 points. Butter and cheese graded at 93 to 100 points is of choicest quality ; at 90 to 92 points, first quality ; at 86 to 89 points, second quality ; and at 80 to 85 points, pastry or cooking quality or, in the case of cheese, third quality.

In the following table particulars are given of the relative proportions of butter and cheese graded for export according to quality. Further details, which include actual quantities by States, are to be found in *Primary Industries Bulletin* No. 46, *Part I.—Rural Industries*, 1951–52.

**BULK BUTTER AND CHEESE GRADED FOR EXPORT : AUSTRALIA.**  
(Per Cent.)

Grade.	Butter.			Cheese.		
	1949–50.	1950–51.	1951–52.	1949–50.	1950–51.	1951–52.
Choicest .. .. .	55.31	50.31	56.40	2.71	2.81	3.41
First Quality .. .. .	37.92	40.67	34.28	67.10	68.48	70.74
Second Quality .. .. .	5.73	7.25	7.27	30.19	28.71	25.85
Third Quality(b) .. .. .	1.04	1.77	2.05	(a)	(a)	(a)
Total .. .. .	100.00	100.00	100.00	100.00	100.00	100.00

(a) Included with Second Quality.

(b) Includes rejected.

### § 4. Pigs and Pig Products.

1. Pigs.—Between 1928–29 and 1938–39 the number of pigs in Australia fluctuated around one million. In the latter year an upward movement commenced and continued until the record number of 1,797,340 was recorded in 1940–41. There was a decline in the following two years but the numbers rose again to 1,746,721 in 1943–44 ; thereafter, there has been an almost continuous decline, the year 1950–51 being the exception, to the figure for 1951–52 of 1,022,124. Details of the number of pigs by States for each of the five years 1948 to 1952, together with the average for the five years 1935 to 1939, are given in the following table.

#### NUMBER OF PIGS.

As at 31st March.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	N.T.(a)	A.C.T.	Total.
Average, 1935 to 1939(b) ..	391,874	287,140	294,777	80,548	83,999	42,772	479	544	1,182,133
1948 .. .. .	365,171	271,492	378,102	100,343	93,180	45,149	680	566	1,254,683
1949 .. .. .	375,212	223,823	407,322	71,427	80,689	36,996	384	468	1,196,321
1950 .. .. .	333,198	212,901	391,836	69,523	79,126	35,841	419	423	1,123,267
1951 .. .. .	316,833	237,127	374,991	67,517	89,910	45,446	1,122	642	1,133,588
1952 .. .. .	292,829	213,670	316,529	64,903	86,224	46,926	794	249	1,022,124

(a) As at 1st January. (b) As at 31st March for New South Wales and Australian Capital Territory ; 1st March for Victoria ; 1st January for Queensland, South Australia, Western Australia and Tasmania.

A more accurate index of the development of pig-raising in Australia is provided in the following table, which shows for each of the years 1938–39 to 1951–52, the number of slaughterings together with the total number recorded.

NUMBER OF PIGS AND NUMBER SLAUGHTERED<sup>(a)</sup>: AUSTRALIA.

Year.	Number of Pigs. <sup>(b)</sup>	Number Slaughtered.	Year.	Number of Pigs. <sup>(b)</sup>	Number Slaughtered.
1938-39 ..	1,155,591	1,829,392	1945-46 ..	1,425,709	1,650,926
1939-40 ..	1,455,341	1,949,582	1946-47 ..	1,273,011	1,591,627
1940-41 ..	1,797,340	2,335,801	1947-48 ..	1,254,683	1,550,163
1941-42 ..	1,414,920	2,581,859	1948-49 ..	1,196,321	1,675,807
1942-43 ..	1,563,000	2,072,921	1949-50 ..	1,123,267	1,556,918
1943-44 ..	1,746,721	1,841,198	1950-51 ..	1,133,588	1,516,270
1944-45 ..	1,630,855	1,922,388	1951-52 ..	1,022,124	1,487,695

(a) The numbers slaughtered relate to slaughterings for human consumption. (b) For dates of enumeration see previous table.

Further details relating to pig numbers are given in Chapter XIX.—Pastoral Production. A graph showing the distribution of pigs in Australia at 31st March, 1948, appears on p. 908 of Official Year Book No. 39.

2. Size of Pig Herds.—A series of special tabulations relating to rural holdings undertaken for all States for the year 1949-50 covered, *inter alia*, a classification of holdings carrying pigs according to size of herd. Full details of these tabulations are published in *Primary Industries Bulletin* No. 44, 1949-50.

3. Pork.—(i) *Production*. In the following table details of the production of pork in each State are shown for the years 1947-48 to 1951-52 compared with average production during the years 1934-35 to 1938-39.

PRODUCTION OF PORK (BONE-IN WEIGHT).  
(Tons.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Total.
Average, 1934-35 to 1938-39 ..	9,938	12,236	9,867	3,215	1,741	1,240	7	38	38,282
1947-48 ..	6,448	7,138	7,134	2,954	2,234	1,391	28	34	27,361
1948-49 ..	9,831	8,623	12,254	2,358	2,649	1,442	27	56	37,240
1949-50 ..	10,260	6,645	12,911	2,009	1,793	1,208	42	90	34,958
1950-51 ..	9,307	7,596	11,751	2,774	2,116	1,499	64	150	35,257
1951-52 ..	10,382	8,716	8,604	2,551	2,550	1,981	70	170	35,024

(ii) *Consumption*. As in the case of other meats, pork was subject to rationing during the late war and immediate post-war years. This resulted in the consumption of pork per head declining from the pre-war average of 10.4 lb. to 4.9 lb. in 1945. After 1945, the demand for pork for the Armed Services declined and larger quantities were available for civilian consumption. As a result, consumption per head rose steadily again to reach 7.4 lb. per head in 1948-49. Since then it has remained at about 7 lb. per head. In the following table details of the production and disposal of pork are shown for the years 1947-48 to 1951-52 compared with averages for the three years 1936-37 to 1938-39.

PRODUCTION AND DISPOSAL OF PORK (BONE-IN WEIGHT): AUSTRALIA.  
(\*000 tons.)

Year.	Changes in Stock.	Production. (a)	Exports.	Canning.	Consumption in Australia.	
					Total.	Per Head per annum.
Average, 1936-37 to 1938-39 ..	..	45.5	13.7	..	31.8	10.4
1947-48 ..	..	27.4	1.6	1.7	24.1	7.1
1948-49 ..	..	37.3	9.0	1.9	25.8	7.4
1949-50 ..	..	35.0	6.7	2.2	26.0	7.2
1950-51 ..	..	35.3	5.6	4.0	25.2	6.8
1951-52 ..	..	35.0	1.7	5.0	27.9	7.3

(a) Includes an estimate of trimmings from baconer carcasses.

4. Bacon and Ham.—(i) *Production.* As in the case of pork, the increased demand for bacon and ham during the war years stimulated production to a level not previously attained. Production reached its peak in 1944-45 when 56,246 tons of bacon and ham were cured. This has been followed by a continuous decline in output in each succeeding year to 36,628 tons in 1951-52. Details of production are shown by States in the following table for each year 1947-48 to 1951-52 compared with the average production for the five pre-war years ended 1938-39.

PRODUCTION OF BACON AND HAM (CURED WEIGHT).

(Tons.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
Average, 1934-35 to 1938-39	9,963	7,614	9,269	2,950	2,013	970	1	32,780
1947-48 .. ..	14,175	11,159	10,142	4,884	4,232	1,317	..	45,909
1948-49 .. ..	13,302	10,204	9,412	3,788	3,756	1,122	..	41,584
1949-50 .. ..	12,955	9,779	10,018	3,318	3,542	991	..	40,603
1950-51 .. ..	12,629	7,905	8,764	3,042	3,558	946	..	36,844
1951-52(a) .. ..	12,514	8,964	7,669	2,969	3,683	829	..	36,628

(a) Pressed and canned bacon and ham have been converted to bone-in-weight.

(ii) *Consumption.* Consumption per head declined in the early stages of the 1939-45 War from the pre-war average of 10.2 lb. per annum, but by 1944 it had been restored to this level and subsequently increased to 12.7 lb. in 1946-47. Since that year, however, there has been a steady decline to 7.2 lb. per head during 1951-52. Details of production and disposal of bacon and ham for the years 1948-49 to 1951-52 compared with average production and disposal for the period 1936-37 to 1938-39 are shown in the following table:—

PRODUCTION AND DISPOSAL OF BACON AND HAM (CURED WEIGHT) : AUSTRALIA.

('000 tons.)

Year.	Changes in Stock.	Production.	Exports.	Canning.	Consumption in Australia.	
					Total.	Per head per annum.
Average, 1936-37 to 1938-39 .. ..	(a)	32.5	1.0	..	31.5	10.2
1948-49 .. ..	-0.1	41.6	3.4	2.2	36.1	10.4
1949-50 .. ..	+0.1	40.6	3.3	2.6	34.6	9.6
1950-51 .. ..	+0.2	36.8	3.0	2.9	30.7	8.3
1951-52(b) .. ..	+0.2	36.6	2.8	6.1	27.5	7.2

(a) Not available.

(b) Pressed and canned bacon and ham have been converted to bone-in-weight.

5. *United Kingdom Contracts.*—Details relating to the several war-time contracts and the more recent Long-term Purchase Agreement between the Governments of the Commonwealth and the United Kingdom for the sale and purchase of Australia's surplus production of meats (including pigmeats) are included in Chapter XIX.—Pastoral Production.

6. *Overseas Trade in Pigs and Pig Products.*—Total quantities and values of exports of Australian origin of pigs and pig products (bacon and ham, lard and frozen pork) for the years 1938-39 and 1947-48 to 1951-52 are shown on page 933.

### § 5. Poultry-Farming.

1. **General.**—Poultry-farming has been carried on in Australia for many years and the State Departments of Agriculture have encouraged its development by appointing experts to advise on the care and management of poultry and by conducting egg-laying competitions. Originally the industry was conducted in conjunction with other branches of rural activity, mainly dairying, but it is now a specialized and distinct industry and it is from this source that the bulk of the commercial production is obtained. Practically all farms keep poultry for the purpose of supplying their own domestic requirements and in many cases some supplies from this source are also marketed. In addition, many private homes keep small numbers of fowls in backyard runs and this helps to maintain domestic needs particularly when eggs are in short supply.

2. **Numbers of Poultry.**—In pre-war years the numbers of the principal kinds of poultry were a normal feature of the annual census of live-stock in all States except Victoria and Tasmania. These data were collected on a restricted scale by all States in 1942-43, the details obtained being confined to farms of one acre or more producing eggs or poultry for sale. The collection has since been discontinued in some States. Because of their incompleteness, details of poultry numbers are not published.

3. **Recorded Production and Disposal of Eggs.**—(i) *Shell Eggs.* Available statistics of the production and disposal of eggs in Australia are restricted to those recorded by the Egg Boards of the several States. Egg Boards, or authorities appointed to control the marketing of eggs, have operated in the States of New South Wales, Victoria and Queensland for some years, whilst in South Australia the Board commenced to operate in August, 1942. It was not until August, 1943 that Advisory Committees were established in Western Australia and Tasmania. Statistics of recorded production of eggs for Australia as a whole are not available, therefore, prior to 1943-44.

Details of production in the respective States as recorded by these authorities for the years 1947-48 to 1951-52 are shown in the following table :—

**SHELL EGGS : PRODUCTION(a) RECORDED BY EGG BOARDS.**  
(‘000 dozen.)

State.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
New South Wales ..	50,569	52,052	52,269	50,465	50,271
Victoria .. ..	36,220	32,842	29,985	25,573	23,492
Queensland .. ..	9,693	12,144	11,176	10,858	8,426
South Australia ..	14,440	14,115	13,089	11,663	10,741
Western Australia ..	7,653	7,939	7,653	7,437	8,077
Tasmania .. ..	852	1,117	1,514	1,297	1,027
<b>Total .. ..</b>	<b>119,427</b>	<b>120,209</b>	<b>115,686</b>	<b>107,293</b>	<b>102,034</b>

(a) Receipts from consignors and sales by producer agents.

(ii) *Egg Pulp.* Prior to the 1939-45 War, production of egg pulp was about 7 million lb. per annum. This was used almost entirely for the manufacture of cakes, pastry and biscuits, only negligible quantities being exported. Production was expanded greatly during the war years to meet the requirements of the Armed Services and has since been maintained at a high level for export purposes and to meet increased local requirements.

Particulars of the production of whole egg pulp as recorded by the Egg Boards in the several States are shown in the following table.

**LIQUID WHOLE EGG : PRODUCTION RECORDED BY EGG BOARDS.**  
(<sup>'000</sup> lb.)

State.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
New South Wales .. ..	14,600	15,966	14,760	16,003	12,357
Victoria .. ..	16,139	14,579	8,565	6,153	6,559
Queensland .. ..	3,240	4,560	4,498	4,008	2,278
South Australia .. ..	8,510	7,663	6,574	5,692	5,629
Western Australia .. ..	1,834	1,782	1,837	1,939	2,878
Tasmania .. ..	189	129	407	353	249
<b>Total .. ..</b>	<b>44,512</b>	<b>44,679</b>	<b>36,641</b>	<b>34,148</b>	<b>29,950</b>

In addition to liquid whole egg production was also recorded of liquid egg whites and liquid egg yolks. Output in 1951-52 amounted to 912,000 lb. and 654,000 lb. respectively compared with 517,000 lb. and 279,000 lb. respectively in the previous year.

(iii) *Egg Powder.* The production of dried egg powder was not established in Australia until 1942, when the industry was introduced to treat Australia's surplus eggs so as to maintain exports to the United Kingdom. The shortage of refrigerated shipping space precluded the export of shell eggs so they were converted into powdered form. Since the termination of hostilities in 1945, the manufacture of egg powder has been continued for export purposes, but has been considerably curtailed since 1946-47. Owing, no doubt, to the availability of fresh eggs, a market has not yet been established in Australia. Recorded production was 472,000 lb. in 1950-51 and 158,000 lb. in 1951-52, production being confined to New South Wales and South Australia.

4. **Production and Consumption of Eggs.**—Statistics of egg production must necessarily be accepted with some reserve. Owing to the difficulties experienced in obtaining a complete census of output, it is more expedient to compute a figure based on the best data available. The production shown in the following table, which shows also details of exports and consumption, is based upon the records of Egg Boards of production from areas under their control plus an estimate of production from uncontrolled areas and an estimate of the production of "back-yard" poultry-keepers. The estimates of total production obtained have been checked with data from other sources and found to be reasonably in accord.

**ESTIMATED PRODUCTION AND DISPOSAL OF EGGS IN SHELL : AUSTRALIA.**

(<sup>'000</sup> tons.)(a)

Year.	Changes in Stock.	Estimated Total Production.	Exports.	For Drying and Pulping.(b)	Consumption in Aus- tralia as Human Food.	
					Total.	Per head per annum.
Average, 1936-37 to 1938-39 .. ..	(c)	89.5	7.6	3.2	78.7	lb. 25.7
1948-49 .. ..	+ 0.1	119.4	11.9	22.8	84.6	24.3
1949-50 .. ..	- 0.3	116.5	14.0	19.0	83.8	23.3
1950-51 .. ..	+ 0.2	110.4	8.4	17.0	84.8	22.9
1951-52 .. ..	+ 1.1	106.9	8.5	14.9	82.4	21.6

(a) The average weight of an egg in Australia is taken as 1.75 oz.

(b) Includes wastage.

(c) Not available.



Details of the consumption of shell eggs, liquid whole egg and total shell egg equivalent (expressed in lb. and in number of eggs) per head of population per annum are shown in the following table:—

**SUPPLIES OF EGGS AND EGG PRODUCTS MOVING INTO CONSUMPTION :  
AUSTRALIA.**

(lb. per head per annum.)

Commodity.	Average, 1936-37 to 1938-39.	1948-49.	1949-50.	1950-51.	1951-52.
Shell Eggs .. ..	25.7	24.3	23.3	22.9	21.6
Liquid Whole Egg and Egg Powder(a) .. ..	0.9	2.8	2.6	2.2	2.3
Total Shell Equivalent— lb. per Head ..	26.6	27.1	25.9	25.1	23.9
No. per Head(b) ..	243	248	236	229	219

(a) In terms of weight of shell eggs.  
1.75 oz.

(b) The average weight of an egg in Australia is taken as

5. **Marketing of Eggs.**—(i) *United Kingdom Contracts.* Details of the annual contracts entered into between the United Kingdom and Australian Governments will be found in Official Year Book Nos. 38, pp. 1048-9 and 39 p. 1044.

In respect of the 1953-54 season the Ministry of Food will pay to the Australian Government the actual United Kingdom market realizations for eggs in shell, less actual cost, paid by the Ministry up to the point of delivery to wholesalers. For the same season the contract price for egg pulp was fixed at £294 sterling per ton, f.o.b. Australian ports which is equivalent to 3s. 3.375d. per lb. (Australian currency) and represents an increase of 3½d. per lb. (Australian currency) over the contract price for the 1952-53 season.

The prices stipulated in the several contracts for eggs and egg products for the years 1949-50 to 1953-54 are shown in the following table. Contract prices in operation for the years 1939-40 to 1944-45 were shown on page 997 of Official Year Book No. 37, and those for 1945-46 to 1948-49 on page 1049 of Official Year Book No. 38.

**PRICES OF EGGS AND EGG PRODUCTS : UNITED KINGDOM CONTRACTS.**

*Australian Currency, f.o.b.*

(s. d.)

Year.	Eggs in Shell.(a)	Frozen Whole Egg Pulp.	Whole Egg Powder.	Sugared Egg Powder.
	Per doz.	Per lb.	Per lb.	Per lb.
1949-50 .. ..	2 7	1 11.05	7 5.88	5 2.63
1950-51 .. ..	2 7	2 0.38	7 5.88	5 2.63
1951-52 .. ..	3 3	2 4.75	8 10.25	6 1.75
1952-53 .. ..	4 2.25	2 11.625	(b)	(b)
1953-54 .. ..	(c)	3 3.375	(b)	(b)

(a) Price for pack of 15 lb. per long hundred (ten dozens); proportionate adjustments made for other packs. (b) Not purchased by the United Kingdom Government. (c) No contract price fixed. See letterpress above.

(ii) *Egg Export Control Act 1947.* Following the termination of Commonwealth control over the production and marketing of eggs on 31st December, 1947, functions relating to the local marketing of eggs reverted to State Egg Boards which became responsible for stabilizing prices and marketing of eggs produced in the respective States.

In order to assist in marketing Australia's surplus production of eggs under the Long-term Purchase Agreement with the United Kingdom, the Commonwealth established the Australian Egg Board under the Egg Export Control Act 1947. The Board, which commenced to operate on 1st January, 1948, is empowered to buy and sell, on behalf of the Commonwealth Government, eggs and egg products intended for export which comply with the provisions of the Export (Dairy Produce) Regulations. In addition, the Board is authorized to deal with all matters relating to the export of eggs and egg products from Australia, to make such experiments as are likely to lead to the improvement of the quality of Australian eggs and to promote their sale overseas. The Board consists of ten members, including six representatives of egg producers and one representative of the Commonwealth Government.

6. *Oversea Trade in Poultry Products.*—The Australian oversea export of poultry products has in the past been confined chiefly to eggs in shell and egg contents, which are consigned mainly to the United Kingdom. New South Wales, Victoria and South Australia are at present the largest exporters. Exports of eggs in shell from Australia rose from less than 3 million dozen valued at £219,000 in 1928-29 to 21.7 million dozen valued at more than £1,100,000 in 1934-35, but declined to 10.3 million dozen in 1939-40. A high level of exports in 1940-41 was followed by a steep decline down to almost negligible quantities in 1942-43 and 1943-44. In 1949-50 exports reached the record level of 23.0 million dozen, but in the two succeeding years amounted to less than 14 million dozen.

Prior to the 1939-45 War, exports of egg contents were small and in 1939-40 there was an excess of imports. During the war years, exports expanded greatly, mainly to meet Service requirements, and since the close of the war there has been further expansion, although the latest year, 1951-52, shows a considerable decline from the peak year, 1947-48.

Since the close of the war there has also been a remarkable increase in the exports of frozen poultry, exports amounting to 2,219,000 pair in 1951-52 compared with 283,000 pair in 1945-46. The average for the pre-war years 1934-35 to 1938-39 was only 37,913 pair.

Total quantities and values of exports of Australian origin of poultry products (live poultry, frozen poultry, eggs in shell, egg pulp and powder and undressed feathers) for the years 1938-39 and 1947-48 to 1951-52 are shown on page 933.

## § 6. Bee-Farming.

1. *Production of Honey and Bees-wax.*—Although practised as a separate industry, bee-farming is also carried on in conjunction with other branches of farming, but its place in Australia's rural economy is not very significant. The returns of honey from productive hives during 1951-52 showed an average of 74.56 lb. per hive and the average quantity of wax was 0.95 lb. per productive hive.

The number of hives and the production of honey and bees-wax during the year 1951-52 are shown in the following table.

BEEHIVES, HONEY AND BEES-WAX, 1951-52.

State.	Beehives.			Honey Produced.		Bees-wax Produced.	
	Pro- ductive.	Unpro- ductive.	Total.	Quantity.	Gross Value.	Quantity.	Gross Value.
	'000.	'000.	'000.	'000 lb.	£	lb.	£
New South Wales..	97	67	164	6,814	270,285	85,801	12,870
Victoria..	65	40	105	5,208	216,999	55,963	19,587
Queensland..	16	15	31	706	27,724	15,080	5,278
South Australia..	69	23	92	4,191	149,814	58,178	14,782
Western Australia	26	4	30	3,480	122,044	44,860	7,851
Tasmania..	4	1	5	254	13,250	3,266	1,220
Australia(a) ..	277	150	427	27,653	800,116	263,148	61,588

(a) Excludes Australian Capital Territory and Northern Territory.

The production of honey and bees-wax fluctuates considerably and is determined mainly by the flow of nectar from flora of the eucalypts, which varies greatly from year to year. In recent years there has been a pronounced upward trend in the output of honey, the 1948-49 figure (53,200,000 lb.) being an all-time record. Production in 1951-52 (20,653,000 lb.), although much lower than in 1948-49, was still higher than pre-war.

The table hereunder shows the production of honey and bees-wax for the five years ended 1951-52 in comparison with the averages for the years 1934-35 to 1938-39.

### HONEY AND BEES-WAX PRODUCTION.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.(a)
HONEY ('000 lb.).							
Average, 1934-35 to							
1938-39 ..	3,827	3,600	689	3,388	1,125	181	12,810
1947-48 ..	9,776	6,934	1,895	5,298	1,732	208	25,843
1948-49 ..	26,008	8,730	3,045	10,906	4,290	221	53,200
1949-50 ..	9,227	7,744	1,187	5,179	2,041	285	25,663
1950-51 ..	9,994	8,088	1,925	5,803	1,314	315	27,439
1951-52 ..	6,814	5,208	706	4,191	3,480	254	20,653
BEES-WAX (lb.).							
Average, 1934-35 to							
1938-39 ..	55,927	41,856	10,318	41,083	18,855	2,382	170,421
1947-48 ..	113,211	70,851	32,147	85,405	19,598	3,144	324,356
1948-49 ..	295,892	90,778	47,184	140,384	55,239	2,944	632,421
1949-50 ..	117,939	78,124	22,162	70,442	32,045	3,724	324,436
1950-51 ..	126,047	90,605	29,907	78,838	16,968	4,218	346,583
1951-52 ..	85,801	55,963	15,080	58,178	44,860	3,266	263,148

(a) Excludes Australian Capital Territory and Northern Territory.

2. **Oversea Trade in Bee Products.**—Prior to the 1939-45 War the production of honey exceeded Australian requirements and a small quantity was available for export. As a result of increased production, exports have risen considerably since 1938-39, when a quantity of 687,000 lb. of honey was shipped. In 1948-49 the record quantity of 32.09 million lb., was exported. In 1950-51 exports amounted to 7.48 million lb. and in 1951-52 to 15.91 million lb.

The wider use of frame hives has reduced the production of wax, and as a result the quantity imported has generally exceeded that exported. During each of the five years prior to 1951-52 production was high on account of exceptionally good seasons, and exports exceeded imports by substantial margins. However, with the falling off in production in 1951-52 imports (73,294 lb.) again exceeded exports (23,587 lb.).

Total quantities and values of exports of Australian origin of honey and bees-wax for the years 1938-39 and 1947-48 to 1951-52 are shown on page 933.

## § 7. Exports of Australian Farmyard, Dairy and Bee Products.

The quantities and values of Australian farmyard, dairy and bee products exported during each of the five years ended 1951-52 are shown below in comparison with those of 1938-39.

AUSTRALIAN FARMYARD, DAIRY AND BEE PRODUCTS : EXPORTS OF AUSTRALIAN ORIGIN.

Particulars.	Unit of Quantity.	QUANTITY.					
		1938-39.	1947-48.	1948-49.	1949-50.	1950-51	1951-52.
Bees-wax .. .. .	lb.	5,565	98,050	77,187	355,289	301,992	23,587
Butter .. .. .	'ooo lb.	229,543	184,774	183,554	177,452	120,031	25,417
Cheese .. .. .	"	35,924	50,944	58,287	51,404	44,790	40,316
Eggs in shell .. .. .	'ooo doz.	10,144	14,518	19,605	23,047	13,522	13,832
Eggs not in shell—							
Egg pulp .. .. .	'ooo lb.	650	25,981	27,041	16,827	18,582	10,848
Egg Powder .. .. .	"		4,638	2,144	807	99	169
Feathers, undressed .. .. .	"	(a)	(a)	(a)	(a)	(a)	(a)
Honey .. .. .	'ooo lb.	(b)	14,986	32,094	20,769	7,484	15,912
Lard .. .. .	"	(b)	5,491	119	205	665	169
Meats—							
Bacon and ham .. .. .	(c)	1,739	8,588	8,661	7,679	6,334	5,200
Frozen poultry .. .. .	'ooo pair	22	1,871	2,493	2,876	2,013	2,219
Frozen pork .. .. .	'ooo lb.	30,716	3,728	20,126	14,975	12,472	3,898
Milk—							
Condensed, Preserved, etc.—							
Sweetened Full Cream .. .. .	"	12,572	66,639	66,000	70,495	73,001	66,508
Skim .. .. .	"	..	..	243	2	10	5
Unsweetened .. .. .	"	754	3,342	3,316	1,862	4,607	2,396
Dried or Powdered—							
Full Cream .. .. .	"	3,001	14,049	14,149	23,865	16,996	12,590
Skim .. .. .	"	575	5,644	10,174	19,072	8,558	15,852
Infants' and Invalids' Foods—							
Essentially of milk .. .. .	"	1,637	3,416	6,250	7,002	6,044	6,343
Other .. .. .	"	..	4,036	5,195	5,453	6,415	5,600
Malted .. .. .	"	565	3,609	4,227	2,738	2,254	2,361
Pigs, live .. .. .	No.	61	941	1,179	813	2,208	1,236
Poultry, live .. .. .	"	2,189	73,942	80,020	78,882	60,342	81,629

VALUE. (£.)

Bees-wax .. .. .	148	16,166	11,832	53,443	60,424	6,922
Butter .. .. .	12,891,837	20,629,483	23,806,663	24,669,790	18,469,147	4,593,251
Cheese .. .. .	1,073,931	3,253,273	4,100,641	4,145,462	4,025,120	4,063,854
Eggs in shell .. .. .	638,159	1,575,073	2,360,464	2,948,889	1,892,644	2,364,243
Eggs not in shell—						
Egg Pulp .. .. .	23,014	1,811,520	2,457,185	1,906,219	2,017,474	1,290,709
Egg powder .. .. .		788,858	286,773	165,959	27,025	24,191
Feathers, undressed .. .. .	307	9,947	8,294	2,026	3,685	5,424
Honey .. .. .	13,957	579,285	1,217,193	814,115	292,880	705,831
Lard .. .. .	(b)	67,744	9,628	8,995	14,784	59,388
Meats—						
Bacon and ham .. .. .	(c)	119,994	865,201	903,673	1,016,263	965,651
Frozen poultry .. .. .	19,917	1,709,066	2,643,895	2,793,306	2,884,680	3,036,073
Frozen pork .. .. .	882,117	208,717	1,199,034	1,067,844	1,050,927	484,539
Milk—						
Condensed, Preserved, etc.—						
Sweetened Full Cream .. .. .	405,913	3,077,093	3,441,735	3,612,703	4,175,382	4,940,442
Skim .. .. .	..	..	13,166	88	565	276
Unsweetened .. .. .	19,120	126,050	91,169	88,035	232,631	150,983
Dried or Powdered—						
Full Cream .. .. .	92,835	906,713	1,220,512	1,955,665	1,457,773	1,458,345
Skim .. .. .	6,160	188,383	412,835	713,435	350,388	754,407
Infants' and Invalids' Foods—						
Essentially of milk .. .. .	209,925	306,363	579,767	684,838	672,812	955,460
Other .. .. .	..	649,706	702,782	658,486	743,140	955,543
Malted .. .. .	57,058	309,807	369,057	256,938	205,205	304,086
Pigs, live .. .. .	371	7,743	11,638	17,156	17,081	32,724
Poultry, live .. .. .	970	7,054	7,864	10,392	18,026	9,376
Total .. .. .	16,523,477	37,035,129	48,855,167	47,595,836	39,613,046	27,120,020

(a) Quantity not available. (b) Includes lard oil and refined animal fats. (c) Excludes tinned bacon.

### § 8. Imports of Dairy and Farmyard Products into United Kingdom.

NOTE.—Values of imports in this section are expressed in £ sterling at the landed c.i.f. point.

1. Summary, Principal Products.—The following table shows the quantities and values of the principal dairy products imported into the United Kingdom during the years 1939 and 1948 to 1952.

#### DAIRY PRODUCTS : IMPORTS INTO UNITED KINGDOM.

Product.	1939.	1948.	1949.	1950.	1951.	1952.
Butter .. .. '000 cwt.	8,737	5,452	6,360	6,705	6,164	5,185
£'000	48,424	67,827	86,873	91,434	90,488	82,417
Cheese .. .. '000 cwt.	2,845	3,147	4,259	3,080	3,884	2,737
£'000	8,869	26,452	38,508	27,659	39,882	28,277
Milk, powdered and preserved						
£'000	2,818	5,314	10,893	6,391	9,724	10,398
Bacon and ham .. '000 cwt.	7,953	2,761	2,804	5,187	5,590	5,479
£'000	37,105	28,872	32,158	63,438	88,685	81,355
Pork .. .. '000 cwt.	989	224	602	612	311	302
£'000	3,036	1,244	4,904	5,189	2,688	3,835
Eggs, dried .. '000 cwt.	10	117	117	344	376	10
£'000	85	3,611	3,805	4,413	5,377	417
Eggs in shell .. '000 doz.	283,315	154,764	209,814	167,919	113,423	122,477
£'000	12,835	21,577	30,522	21,548	16,718	21,617
Eggs, liquid or frozen '000 cwt.	800	598	534	469	264	249
£'000	2,292	5,985	4,626	4,792	2,685	3,083

2. Butter.—(i) Imports. Australia normally supplies a considerable proportion of the butter imported into the United Kingdom. The quantity in 1952, however, was much lower than usual and amounted to only 277,911 cwt., or 5.36 per cent. of the total importation. The Australian contribution was valued at £4,507,584 and was exceeded by that received from New Zealand and Denmark. New Zealand supplied 57.28 per cent. of the total quantity imported during 1952 and Denmark, 33.54 per cent.

In the following table particulars of the quantity and value of butter imported into the United Kingdom are shown for the years 1938 and 1952 according to country of origin.

#### BUTTER : IMPORTS INTO UNITED KINGDOM.

Country from which Imported	1938.		1952.	
	Quantity.	Value.	Quantity.	Value.
	Cwt.	£	Cwt.	£
New Zealand .. ..	2,592,251	14,524,140	2,969,930	46,519,557
Australia .. ..	1,797,811	9,629,939	277,911	4,507,584
Other British Countries .. ..	422,704	2,454,725	10,807	165,696
Denmark .. ..	2,364,799	12,960,434	1,739,006	28,238,938
Netherlands .. ..	711,910	3,465,835	114,863	1,836,834
Other Foreign Countries .. ..	1,628,438	7,838,060	72,347	1,147,891
Total .. ..	9,517,913	50,873,133	5,184,864	82,416,500

(ii) *London Prices.* In the following table the prices shown up to and including September, 1939 represent the mean of the top prices quoted weekly for choicest salted Australian butter together with their f.o.b. equivalents in Sydney and Melbourne in terms of Australian currency. Since September, 1939, the price represents that fixed in accordance with the contract between the Governments of Australia and the United Kingdom for choicest Australian butter. Pence have been omitted throughout.

**AVERAGE PRICE PER CWT. OF AUSTRALIAN CHOICEST BUTTER IN LONDON  
(WITH F.O.B. EQUIVALENTS IN AUSTRALIAN CURRENCY).**

Month.	1938-39.		1939-40.		Year.	London.	Aus- tralia.
	London.	Aus- tralia.(a)	London.	Aus- tralia.			
	Shillings (Stg.).	Shillings (Aust.).	Shillings (Stg.).	Shillings (Aust.).			
July ..	120	135	114	(a) 127	1940-41 ..	(b) 110	(c) 137
August ..	118	132	110	(a) 123	1941-42 ..	110	137
September ..	116	130	120	(a) 135	1942-43 ..	114	143
October ..	111	124	(b) 110	(c) 137	1943-44 ..	114	143
November ..	104	115	(b) 110	(c) 137	1944-45 ..	148	185
December ..	107	119	(b) 110	(c) 137	1945-46 ..	148	185
January ..	120	134	(b) 110	(c) 137	1946-47 ..	173	217
February ..	118	132	(b) 110	(c) 137	1947-48 ..	203	254
March ..	115	128	(b) 110	(c) 137	1948-49 ..	233	292
April ..	113	126	(b) 110	(c) 137	1949-50 ..	251	314
May ..	107	119	(b) 110	(c) 137	1950-51 ..	272	339
June ..	113	126	(b) 110	(c) 137	1951-52 ..	292	365
					1952-53 ..	314	393

(a) Sydney and Melbourne.  
contract price.

(b) Contract price f.o.b. Australian ports.

(c) Equivalent of

3. *Cheese.*—The value of cheese imported into the United Kingdom in 1952 was £28,277,000. Of this, £15,366,000 represented imports from New Zealand, £4,112,000 from Denmark, £2,849,000 from the Netherlands and £2,722,000 from Australia.

4. *Bacon.*—Of a total import in 1952 of bacon valued at £68,243,000, the value of that supplied by Denmark was £47,286,000, Poland, £10,249,000, and the Netherlands, £10,158,000.

5. *Pork.*—The value of the United Kingdom imports of pork was £3,835,000 in 1952. Imports from New Zealand, valued at £1,192,000, and Argentina, £736,000, comprised 50 per cent. of the imports into the United Kingdom.

6. *Eggs.*—In 1952 the value of eggs imported into the United Kingdom was £25,117,000, comprising eggs-in-shell, £21,617,000, liquid or frozen eggs, £3,083,000, and dried eggs, £417,000. The Australian share in this trade amounted to £5,114,000. Eggs-in-shell were supplied by Denmark, £13,990,000 and Irish Republic, £3,299,000.

7. **Milk Products.**—In 1952 the value of powdered and preserved milk imported into the United Kingdom was £10,398,000, comprising condensed milk, sweetened, £3,130,000, condensed milk, unsweetened, £1,742,000 and powdered milk, £5,526,000. Australia supplied unsweetened milk powder valued at £980,000.

8. **Other Products.**—The imports into the United Kingdom from Australia of poultry amounted to £1,978,000, while those of bees-wax, lard and honey in 1952 were unimportant.

## CHAPTER XXII.

## FORESTRY.\*

## § 1. General.

NOTE.—Values of Australian oversea trade shown throughout this Chapter are expressed in £A f.o.b., Port of Shipment, except where otherwise indicated.

1. **Objects of Forestry.**—The objects of forestry are to protect and treat forests as restorable resources to provide their maximum direct and indirect benefits to a country. The direct benefits lie in the providing of essential commodities such as structural timber, pulpwood, firewood, tans, oils, resins, etc., and the indirect benefits includes the regulation of stream flow from catchment areas, by providing conditions ideal for the maximum penetration into the soil of rainfall and other precipitation.

Australia has a particular interest in water and soil conservation because the area suitable for agricultural and pastoral development is not so large that material reduction or deterioration of productive capacity cannot but retard development; moreover, the water conservation and irrigation schemes, constructed to ensure the successful cropping of very large areas, are ultimately dependent on regular stream flow and minimum siltation.

Forestry aims to protect existing forests from destructive agencies generally; to improve the quality and condition of forests by carrying out judicious fellings; to control exploitation; to regenerate cut over area; to afforest with native or exotic species denuded lands, or those which for protection or other reasons are from a national point of view better under forest than under any other crop.

2. **General Account of Forests and Timbers.**—Compared with Australia's land area of approximately three million square miles, the area of forest land capable of producing commercial timber has always been very small, occupying in the main the wetter belts of the coastal areas and the near coastal highlands. In the early days timbers were exploited chiefly on account of their accessibility, ease of working and general utility regardless of their intrinsic merits, and so it was that what are now regarded as superlative furniture and cabinet timbers were often put to quite inferior uses. Clearing of forest land to make room for crops and pastures has bitten deeply into the original forest estate which has been further degraded by recurrent forest fires.

The forests of Australia consist predominantly of relatively coarse bluish green foliated evergreen hardwoods. The characteristic genus is *Eucalyptus*, embracing five to six hundred species, which with few exceptions are endemic to Australia. The genus includes such species as the mountain ash (*Eucalyptus regnans*) of Victoria and Tasmania and karri (*E. diversicolor*) of Western Australia, both of which for height and grandeur have few equals in the world. At the other ends of the scale of size of species of this genus are dwarf types, including the small multiple stemmed species collectively known as the "mallees", which thrive in some of the drier belts. Probably not more than 80 to 90 of the species of eucalypts are used for sawmilling in Australia, and, for one reason or another, not more than 30 to 40 are extensively exploited. Some of the outstanding eucalypts are listed in Official Year Book No. 39 and earlier issues.

\* A specially contributed article dealing with Forestry in Australia appeared as part of this chapter in Official Year Book No. 19 (see pp. 701-12 therein). See also "The Commercial Timbers of Australia, Their Properties and Uses" by I. H. Boas, published by the Council for Scientific and Industrial Research in 1947, "Timbers and Forest Products of Queensland" by E. H. S. Swain, published in 1928 and "Australian Standard Nomenclature of Australian Timbers" published by the Standards Association of Australia.



The range and properties of eucalypt timbers fulfil all Australia's requirements where strength and durability are required, and in large measure they also meet general building requirements and, to a lesser extent perhaps, the needs of export packaging. In recent years certain of the eucalypts have been extensively pulped for paper-making and, less widely, for the manufacture of hardboard. The species most commonly used for the production of paper pulp is *E. regnans*, but *E. obliqua*, *gigantea*, *sieberiana*, *scabra*, *goniocalyx baxteri*, *condeniana* and *muellariana* are used to a lesser extent, and still different species are at present used in pulping for fibreboard manufacture.

A large number of other genera represented in the Australian forest flora also produce commercial hardwoods. Among the outstanding furniture cabinet and veneer timbers are red cedar (*Cedrela toona* var. *australis*), Queensland maple (*Flindersia brayleyana*), Southern and Northern silky oak (*Grevillea robusta* and *Cardwellia sublimis*, respectively), Queensland walnut (*Endiandra palmerstoni*), blackwood (*Acacia melanoxylon*), rose mahogany (*Dysoxylum fraserianum*), etc. Turpentine (*Syncarpia laurifolia*) ranks with the world's best as a harbour piling timber and swamp box (*Tristania suaveolens*) is almost as good. Coachwood (*Ceratopetalum apetalum*) came into prominence for rifle furniture and for aircraft ply during the last war. The foregoing are but a few examples indicating the range of use of the timbers of the Australian hardwood forests.

Indigenous softwood resources have never been large and are now seriously depleted. A remnant only remains of the forests of hoop pine (*Araucaria cunninghamii*), bunya pine (*Araucaria bidwillii*) of New South Wales and Queensland, kauri (*Agathis spp.*) of Queensland, and huon pine (*Dacrydium franklinii*), celerytop pine (*Phyllocladus rhomboidalis*) and King William pine (*Athrotaxis selaginoides*) of Tasmania.

There are still considerable areas of the slow-growing but useful white ant resisting cypress (*Callitris spp.*) in the forest of the inland areas of Queensland, New South Wales and Victoria, but many of them are being overcut and in some localities regeneration of the forests presents difficulties.

The savannah forests of the interior yield minor products such as sandalwood and tan barks, and the leaves of some of the mallees are used for oil distillation.

**3. Extent of Forests.**—According to data submitted mainly by State forestry authorities for the Sixth British Commonwealth Forestry Conference held in Canada in 1952, the total area of forest in Australia is 159,751 square miles, or about 5.4 per cent. of the total land area of the continent. The forest area is distributed amongst the States as follows—New South Wales and the Australian Capital Territory, 47,356 square miles; Victoria, 26,236; Queensland, 22,300; South Australia, 10,311 (including 4,600 square miles of mallee suitable for firewood only); Western Australia, 41,256; and Tasmania, 12,292. The total area of 159,751 square miles is considerably greater than the area previously given for Australia, owing to the inclusion of considerable areas of low grade forest, in many cases suitable for little more than the production of firewood. It is doubtful if the remaining prime native forest area of Australia exceeds 20,000 square miles.

The South Australian authorities especially emphasize that, after excluding the mallee firewood areas, the proportion of the remaining forest comparable with even mediocre forest land in other States is so small as to be almost negligible. Apart from this specific case it seems clear that there is considerable variation in the standards adopted for the definition of forest land. Also it should be emphasized that the figures given are stated to be rough estimates only. Furthermore, it is generally agreed that the figures for forest areas given are often far in excess of those which are both suitable for reservation and likely to be maintained for timber production. Considering these facts the proportion of Australia carrying commercial forests is very low. On the other hand it should be noted that approximately 68 per cent. of the area of the continent is practically uninhabited and carries less than one person in every eight square miles.

The table below shows a classification of the estimated total forest area referred to above :—

**CLASSIFICATION OF FOREST AREA : AUSTRALIA.**  
(Square miles.)

Class of Forest.	State Forest.	Communal Forest.	Private Forest.	Total.	
				Area.	Proportion of Total Forest Area.
Exploitable—					Per cent.
Softwood .. ..	4,157	5	1,072	5,234	3.3
Mixed wood .. ..	729	..	..	729	0.5
Hardwood .. ..	41,020	74	11,050	52,144	32.6
Total .. ..	45,906	79	12,122	58,107	36.4
Potentially Exploitable—					
Softwood .. ..	156	..	78	234	0.1
Mixed wood .. ..	..	..	..	..	..
Hardwood .. ..	15,063	..	12,877	27,940	17.5
Total .. ..	15,219	..	12,955	28,174	17.6
Other Land Classed as Forest .. ..	67,294	450	5,726	73,470	46.0
Grand Total .. ..	128,419	529	30,803	159,751	100.0
Proportion of Total Forest Area .. .. Per cent.	80.4	0.3	19.3	..	100.0

The bulk of the softwood areas of approximately 5,468 square miles is in Queensland and New South Wales and consists principally of natural forest, a large proportion of which is slow-growing cypress pine (*Callitris spp.*) in low rainfall areas, the per acre volume of which is comparatively low.

4. **Forest Reservations.**—Over the years recognition became more general that forest reservations were inadequate, but it was not until an Interstate Forestry Conference was held at Hobart in 1920 that a specific target to be aimed at was mentioned. The figure then agreed upon was an area of 24½ million acres of indigenous forest, which it was considered should be permanently reserved to meet the future requirements of Australia.

The forest reservations in Australia at 30th June, 1952, totalled 28,769,231 acres of which 21,314,780 acres are described as Dedicated State Forests, and 7,454,451 acres as Timber and Fuel Reserves. The distribution of these areas is shown by States in § 4. 2 hereafter.

In general, the timber and fuel reserves are temporary only and are liable to be alienated after the timber on them has been exploited. Some of these areas contain land of high value for forestry purposes, but the greater part does not justify permanent reservation.

If the permanently reserved areas were all of good quality, accessible, and fully productive forests supplying the class of timber required, they could be regarded as adequate for a much larger population than exists in Australia at the present time. Actually, however, a considerable proportion is in inaccessible mountainous country and many of the forests contain a mixture of species, some only of which are at present of commercial value: a good proportion consists of inferior forest and a large proportion of the whole has been seriously degraded by recurrent fires. Also, the indigenous forest does not contain adequate supplies of softwoods producing commercial timbers, of which our needs have to be largely met by softwood timber imported from other countries.

It is freely acknowledged by Australian forestry authorities that information on forest resources is very imperfect. It is not possible at present to give a reliable estimate of the forest areas needed to meet all future demands because of the number of unknown variables involved; in particular the yield capacity per acre, future consumption of different classes of timber per head, and the future population. It would appear, however, that all available potentially good forest country, including adequate areas for plantations of conifers, will need to be reserved, protected and systematically managed, if Australia is to approach the goal of self sufficiency in timber supplies in the future. One of the most urgent requirements in this connexion is a comprehensive, if provisional, estimate of forest resources.

5. **Plantations.**—Reference has been made to the inadequacy of indigenous softwood supplies, but, as a result of the planned policy of the forest services of the States and the Commonwealth and, to a less extent, of several private commercial organizations, the area of softwood plantations is steadily increasing. It now totals approximately 500 square miles and the species used are mainly exotic to Australia. It was natural that this aspect of forestry received earliest attention in South Australia as it is the State most poorly endowed with natural forest. This State now has a larger area of planted softwoods than any other State in Australia, and for some years has been exploiting considerable quantities of timber from these plantations. The total production is now in the vicinity of 100,000,000 superficial feet and this quantity is expected to be increased very substantially during the next decade. Production is also increasing in the other States and first thinnings from their plantations are already supplying a significant portion of the requirements of the case-making industry.

According to statements provided by State authorities, the total effective area of plantations in Australia as at the 30th June, 1952 was 318,338 acres. Details by States are given under § 4. 3.

## § 2. Forestry Activities of the Commonwealth.

1. **Prior to 1925.**—When the Commonwealth of Australia was established on the 1st January, 1901, forestry was not included among the matters transferred from the States to the control of the Commonwealth, and Federal jurisdiction was therefore restricted to the then relatively unimportant forests of the Australian Territories. After the 1914–18 War these Territories (including Papua-New Guinea and Norfolk Island) covered a large area, and in the aggregate contained a substantial forest resource. In the early twenties of this century a professional forester was appointed as forestry adviser to the Commonwealth Government, and he submitted preliminary reports on the forest resources of Papua-New Guinea, Norfolk Island and the Australian Capital Territory, with suggestions for future policy.

2. **Forestry and Timber Bureau.**—In 1925 the Commonwealth Forestry Bureau was instituted, and the previous Commonwealth Forestry Adviser became the Inspector-General of Forests. Pending completion of the Australian Forestry School in Canberra, which took place in 1927, it commenced its career in Adelaide in 1926, where all States sent students, while a nucleus of qualified officers were sent abroad to undergo special courses of instruction. By an Act of 1930, the Bureau received statutory powers, and its functions included the advising of the various Territory Administrations on forestry matters, the management of forests placed under its control, the establishment of experimental stations, the training of students, etc.

At the end of the 1939–45 War, the Commonwealth Government decided to continue certain advisory functions which during the War had been carried out by War-time Timber Control, and such functions were incorporated in the Forestry and Timber Bureau Act 1946, under which the title of the Bureau was altered to Forestry and Timber Bureau. The powers and functions of the Bureau were extended to embrace the collection of statistics and information, and advising the Governments of the Commonwealth and the States or other interested bodies on matters relating to the supply, production, oversea trade and distribution of timber in Australia.

The activities of the Bureau under its statutory functions are summarized below under four main headings

(a) *Forestry Education—Australian Forestry School.*—For information on the conditions required for enrolment as a student, the methods of entry and the scholarships available, see issues of this Year Book prior to No. 39. The Calendar of the School is also available on application to the Director General.

A Board of Higher Forestry Education advises in regard to the maintenance of the standard of the school diploma course and regarding pre-requisite university courses leading to the diploma course. Students who have passed the approved two-year university preliminary science course and two years of diploma course at the school may be granted the degree of B.Sc.F. by their universities.

The number of students enrolled decreased from 80 during 1950 to 60 during 1951, to 37 during 1952 and to 32 during 1953. The high level of enrolment in 1950 and 1951 resulted from the intake of Commonwealth Reconstruction Training Scheme students from the Universities.

(b) *Silvicultural Research.* The Bureau was charged with the responsibility of initiating research into problems connected with silviculture, forest management and forest protection, and some progress has been made by the establishment of a small Central Research Station at Canberra. Experimental forest research stations were also established at Mt. Burr in the south-east of South Australia and in Tasmania on a co-operative basis with the Forest Services of those States.

With its present limited staff, the research work of the Bureau has been concentrated largely upon studies of forest and climatic conditions, the genetical relationships and silvicultural requirements of various species, forest nutrition and the improvement of forest yields. A considerable expansion in the research activities is envisaged over the next few years as suitable trained staff becomes available.

The activities of the Central Research Station are in course of expansion and an Experimental Forest Research Station has been opened at Dwellingup, Western Australia, in co-operation with the Forests Department of that State. It is proposed to extend further the field of this class of work by the establishment of Research Stations in other States and Papua-New Guinea in co-operation with the respective Forest Services.

(c) *Timber Supply.* The value of reliable statistical data covering availability of timber and timber requirements was so forcibly demonstrated during the 1939-45 War that it was considered essential to maintain at least a skeleton organization against times of future national emergency. Apart from this, it became clear that for many years to come shortages of timber on the one hand and heavy post-war reconstruction demands on the other, accentuated by a rapidly increasing population, would necessitate assessment of requirements and availability of supplies being kept constantly under review as a basis for short and long term policies of timber supply and distribution.

Advice is currently provided to Government Departments and the trade in matters pertaining to timber supply, including—(a) the availability of total quantities and quantities of particular grades and specifications required to meet Australia's needs; (b) the quantity of timber that should be imported; (c) the extent to which exports of timber and related products might be allowed without detriment to local needs; and (d) distribution of timber within Australia.

(d) *Research and Investigation regarding Forest Resources.* Production of timber from native grown species has considerably increased since 1939 in order to assist in meeting the heavy demands, firstly for war purposes, and more latterly for building and other constructional projects of the post-war era.

In the national interests it is essential that overcutting of our forests should be avoided and in consequence it is a matter of primary importance that reliable information be available as to the country's forest resources and potentialities. To this end a national forest stocktaking is being carried out by the Bureau in co-operation with the Forest Services of the States and, to assist in the work of forest assessment, special consideration is being given to the development of the use of aerial surveys.

Consideration is also being given, in co-operation with the State Forest Services, to the establishment of increased areas of plantations of exotic pines with a view to providing additional supplies of softwood timber to meet requirements.

3. **Commercial Forests.**—The forest areas under Commonwealth control include the following :—

- (a) *Australian Capital Territory.* The forests of the Australian Capital Territory are administered by a Division of the Forestry and Timber Bureau. Further information is contained in Chapter VII.—The Territories of Australia.
- (b) *Northern Territory.* The forests of the Northern Territory are administered by the Administrator of that Territory under ordinance. The native forests of the Territory are very limited, consisting only of a limited area of rain forest in the North, patches of cypress pine, river fringing forests of paper bark, titree and savannah woodland. A Forestry Officer has recently been appointed to the Territory and efforts are to be made to protect and extend the forests.
- (c) *Norfolk Island.* The forests of Norfolk Island are administered by the Administrator of that Territory. The area reserved for forest covers 1,037 acres, of which the main species is Norfolk Island pine.
- (d) *Papua and New Guinea.* The forests are under the control of a Forestry Department and administered under ordinance of the Territorial Administration. Forestry in the Territory of Papua and New Guinea commenced with the appointment of two Forestry Officers to the Administration of New Guinea in 1938. Plans for the expansion of forestry activities are being prepared by the Director of the Forestry Department. This planning has been somewhat hampered by the loss of all records through enemy activities in 1942. Further information is contained in Chapter VII.—The Territories of Australia.

4. **Forest Products Research.**—Fundamental investigations connected with the properties and uses of timber and forest products generally are carried out by the Forest Products Division of the Commonwealth Scientific and Industrial Research Organization. These investigations cover a very wide field, e.g., pulp, paper, seasoning, structure and chemistry of wood, tans, etc.

Details can be obtained from the annual reports and publications of the Division.

### § 3. Forest Congresses.

The first British Empire Forestry Conference was held in London in 1920. Subsequent conferences were held in Ottawa in 1923, Australia and New Zealand, 1928, South Africa, 1935 and again in the United Kingdom in 1947. In 1952 (the name of these conferences having been changed in conformity with the development of the British Commonwealth of Nations) the Sixth British Commonwealth Forestry Conference was held in Canada. It is proposed to hold the next conference in Australia and New Zealand in 1957.

Forestry matters were considered at the first session of the Food and Agriculture Organization of the United Nations held at Quebec in 1945, and at the second session at Copenhagen in 1946, which the Director-General of the Forestry and Timber Bureau attended as alternate delegate and adviser in forestry matters for the Commonwealth.

The Third World Forestry Congress was held in Helsinki in 1949 and was attended by the Officer-in-Charge of the Division of Forest Resources of the Forestry and Timber Bureau, who also attended the United Nations Scientific Conference on Conservation and Utilization of Resources, held at Lake Success, United States of America, in the same year.

### § 4. State Forestry Departments.

1. **Functions.**—Except for Queensland, the powers and functions of State forest authorities are laid down under Forestry Acts and Regulations. In each State there is a department or commission to control forestry work. The functions of these administrations are as follows:—(a) The securing of an adequate reservation of forest lands; (b) the introduction of proper measures for scientific control and management of forest lands; (c) the protection of forests; (d) the conversion, marketing and economic utilization of forest produce; and (e) the establishment and maintenance of coniferous forests to remedy existing deficiency in softwoods. Annual reports are issued by each State forest authority. In Queensland, forestry is a sub-department of the Department of Public Lands. For many years Victoria has possessed a forestry school at which recruits are trained for the forestry service of the State.

2. **Forest Reservations.**—As mentioned in § 1, para. 4 *ante*, State forest authorities agreed that, in order to secure Australia's future requirements, an area of 24½ million acres should be permanently reserved. In June, 1952, the area of State forests reserved in perpetuity totalled 21,314,780 acres or 87 per cent. of the area recommended as the goal to be attained.

In addition to the work of permanently reserving areas in each State, foresters are endeavouring to survey all timbered lands with a view to the elimination of those unsuitable for forestry. Considerable areas have been revoked in certain States, while dedications of new areas have resulted in gains to the permanent forest estate. The Forestry Departments also control more than 7,000,000 acres, recorded as temporary timber and fuel reserves, but, while these areas contain some land of high value for forestry purposes, the greater part does not justify permanent reservation.

In the following table details of forest areas as recorded by State Forest Authorities, distinguishing between Dedicated State Forests and Timber and Fuel Reserves, are shown for each State as at 30th June, 1952.

AREA OF FOREST RESERVATIONS, 30th JUNE, 1952.  
(Acres.)

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
Dedicated State Forests ..	6,136,462	5,171,186	4,500,709	(a) 258,593	3,441,950	1,805,880	21,314,780
Timber and Fuel Reserves ..	1,386,189	(b)	c 3,099,434	..	2,831,800	(c) 137,028	d 7,454,451
Total ..	7,522,651	d 5,171,186	e 7,600,143	258,593	6,273,750	e 1,942,908	d28,769,231

(a) Includes Timber and Fuel Reserves. (b) Not available. (c) Excludes Fuel Reserves. (d) Incomplete.

3. **Reforestation, Afforestation, etc.**—In the table below details are shown of the area of indigenous forest improved or regenerated, the area of forest plantations and the number of persons employed by Forestry Departments for the year 1951–52.

FORESTRY AREAS, AND NUMBERS EMPLOYED BY FORESTRY DEPARTMENTS, 1951-52.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Total area of indigenous forest improved or regenerated .. acres	1,566,793	1,115,433	503,982	9,928	1,897,300	420,000	5,513,436
Total area of effective plantations—							
Hardwoods .. .. acres	909	3,067	2,770	4,159	18,189	153	29,337
Softwoods .. .. "	45,222	55,287	50,387	115,755	15,148	(a) 7,202	289,001
Number of persons employed in Forestry Departments—							
Office staff .. .. "	(b) 457	232	196	109	62	69	1,125
Field staff .. .. "	243	375	2,111	631	(c) 141	(d) 82	3,583

(a) Includes 30 acres of nurseries. (b) Includes Wood Technology staff totalling 65. (c) Excludes 451 other employees. (d) Excludes 245 bush employees.

4. Revenue and Expenditure.—The revenue of State Forestry Departments for 1951-52 was £7,639,388, as compared with £5,064,685 in 1950-51 and £1,466,781 in 1938-39; State details for 1951-52 were as follows:—New South Wales, £2,043,954; Victoria, £1,889,947; Queensland, £2,182,406; South Australia, £889,793; Western Australia, £481,497; and Tasmania, £151,791.

The expenditure of the Departments for 1951-52 was £10,475,950, as compared with £8,599,036 in 1950-51 and £1,840,088 in 1938-39; State details for 1951-52 were as follows:—New South Wales, £2,404,004; Victoria, £2,798,629; Queensland, £3,010,983; South Australia, £984,402; Western Australia, £838,846; and Tasmania, £439,086.

### § 5. Forestry Production.

1. Timber.—Particulars of logs treated and the production of rough sawn timber by sawmills and other woodworking establishments are shown in the following table by States for the year 1951-52.

#### OUTPUT OF NATIVE TIMBER : ALL MILLS, 1951-52.

('000 super. feet.)

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<b>LOGS TREATED, INCLUDING THOSE SAWN ON COMMISSION.(a)</b>							
Hardwood ..	508,095	526,216	340,998	8,076	391,234	230,425	2,005,044
Softwood ..	87,232	33,231	128,660	100,310	5,778	8,288	363,499
Total ..	595,327	559,447	469,658	108,386	397,012	238,713	2,368,543
<b>SAWN TIMBER PRODUCED FROM LOGS ABOVE.(b)</b>							
Hardwood ..	328,663	331,398	209,003	4,495	174,326	122,048	1,169,933
Softwood ..	51,970	21,705	82,678	62,626	3,003	4,515	226,497
Total ..	380,633	353,103	291,681	67,121	177,329	126,563	1,396,430

(a) Includes logs used for plywood and veneer production.

(b) Includes the sawn equivalent of timber peeled or sliced for plywood and veneers.

The following table shows logs used and the sawn timber produced in Australia for the years 1938-39 and 1947-48 to 1951-52.

#### OUTPUT OF NATIVE TIMBER : ALL MILLS, AUSTRALIA.

Particulars.	Unit.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Logs used—							
Hardwood ..	'000 super. feet (hoppus measure)	1,015,136	1,436,654	1,544,601	1,637,236	1,797,226	2,005,044
Softwood ..	" "	293,680	425,812	432,567	415,712	300,052	363,499
Total ..	" "	1,308,816	1,862,466	1,977,168	2,052,948	2,097,278	2,368,543
Sawn Timber Produced—							
Sawn equivalent of Timber Peeled or Sliced for Plywood and Veneers—							
Hardwood ..	'000 super. feet	(a)	2,981	2,190	3,602	} 27,322	} 28,387
Softwood ..	" "	21,639	27,629	22,644	22,444		
Total ..	" "	21,639	30,610	24,834	26,046		
Used for other purposes—							
Hardwood ..	" "	} 695,376	841,512	905,514	961,540	} 1234018	} 1,368,043
Softwood ..	" "		245,191	253,740	235,474		
Total ..	" "		695,376	1,086,703	1,159,254		
Total Sawn Timber—							
Hardwood ..	" "	526,229	844,493	907,704	965,142	1,068,096	1,169,933
Softwood ..	" "	190,786	272,820	276,384	257,918	193,244	226,497
Total ..	" "	717,015	1,117,313	1,184,088	1,223,060	1,261,340	1,396,430

(a) Not available for publication; included with softwoods.

The next table shows the sawn output of native timber in sawmills and other wood-working establishments in each State for the years 1938-39 and 1947-48 to 1951-52.

SAWN OUTPUT (a) OF NATIVE TIMBER : ALL MILLS.

('000 super. feet.)

State.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
New South Wales ..	179,350	332,591	353,685	341,143	338,347	380,633
Victoria ..	120,197	260,502	281,852	308,792	329,640	353,103
Queensland..	193,250	235,214	250,355	251,127	252,378	291,681
South Australia ..	14,537	47,700	51,633	56,775	59,393	67,121
Western Australia ..	125,453	131,597	126,859	138,077	156,809	177,329
Tasmania ..	84,228	109,709	119,704	127,146	124,773	126,563
Total ..	717,015	1,117,313	1,184,088	1,223,060	1,261,340	1,396,430

(a) Includes the sawn equivalent of timber peeled or sliced for plywood and veneers.

In addition to the sawn timber shown in the preceding table, a large amount of other timber, e.g., sleepers, piles, poles, fencing material, timber used in mining, and fuel, is obtained from forest and other lands. Complete information in regard to the volume of this output is, however, not available. In Western Australia particulars are obtained of the quantities of timber hewn by contractors for the Railway Department, mines, etc., as well as of the quantities produced by other agencies, but the figures have not been included in the preceding tables. The quantities so produced in Western Australia in the six years shown in the preceding table were as follows:—1938-39, 35,862,540 sup. feet; 1947-48, 17,210,844 sup. feet; 1948-49, 16,331,835 sup. feet; 1949-50, 16,823,566 sup. feet; 1950-51, 19,396,134 sup. feet: and 1951-52, 21,156,790 sup. feet. The annual reports of the Forest Departments of the States contain particulars of the output of timber from areas under department control, but owing to lack of uniformity in classification and measurement, accurate determination of total production cannot be made. Moreover, there is a moderate quantity of hewn timber produced from privately owned land, but information regarding output is not available.

2. Paper and Wood Pulp.—(i) *Tasmania*. The manufacture of paper from Australian-grown timber has been established in three States. In Tasmania two large mills are making paper from indigenous hardwoods. The paper produced at Burnie covers a wide range of high class printing, writing, drawing, duplicating and blotting papers. At Boyer on the River Derwent, 20 miles from Hobart, newsprint is manufactured from locally ground wood pulp to which is added a small proportion of kraft pulp imported from New Zealand. When running at full capacity total production is 1,560 tons per week. An associate of the Burnie company was formed in 1948 to make vegetable parchment, grease-proof, glassine and specialty papers. Production of vegetable parchment commenced in June, 1952, using a machine of 126 in. width, and a second machine of 94 in. width was first used in May, 1953 to produce sulphite bonds and banks. A greaseproof machine is expected to be in operation towards the end of 1953 and two additional machines are to be installed for production of high-class writing and printing papers. Raw materials requirements will be met by extension to the major pulp mill. Hardwood not suitable for pulping and Tasmanian coal are used as fuels. During 1951-52, 169,212 tons of pulpwood and 48,334 tons of firewood were used by these mills.

(ii) *Victoria*. In Victoria wood pulp is produced for paper-making at Maryvale. Associated with the pulp mill is a paper-making plant capable of producing about 20,000 tons of kraft paper per annum. The timber used at this mill consists mainly of hardwoods at present unsuitable for other purposes and, in addition, a small quantity of pine, mainly thinnings, mill waste, and special softwood for production of cellulose. During 1951-52 the wood taken from Crown Lands for the production of pulpwood and cellulose amounted to 1,888,352 cubic feet of which 1,869,896 cubic feet were hardwood and 18,456 cubic feet were radiata pine.



(iii) *South Australia.* In South Australia a pulp and paper board mill commenced operations during 1941-42 near Millicent. The mill uses considerable quantities of softwoods from the Mount Burr and Penola pine plantations. During 1951-52, 31,177,455 super. feet of pulp wood were produced, 4,581,004 super. feet for local use and 26,596,451 super. feet for use in an interstate mill.

3. *Other Forest Products.*—(i) *Veneers, Plywood, etc.* Cutting of timber for the manufacture of veneers, plywood, etc., has been carried out in most States for a number of years. Recently, however, this has been considerably extended in all States, and much greater use has been made of local-grown timbers, both hard and softwoods. In recent years special attention has been paid to the selection of logs suitable for peeling.

The following table shows the production of plywood for each of the years 1938-39 and 1947-48 to 1951-52 :—

PLYWOOD PRODUCED.  
(’000 square feet  $\frac{3}{8}$  in. basis.)

State.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
New South Wales ..	24,194	23,726	25,572	28,008	32,287	31,784
Queensland ..	66,100	99,823	104,262	111,048	104,849	110,028
Other States ..	14,511	15,528	16,451	17,977	16,361	17,341
Total ..	104,805	139,077	146,285	157,033	153,497	159,153

During 1951-52, 444.2 million square feet ( $\frac{1}{8}$ -in. basis) of veneers were produced by the rotary process for the manufacture of plywood, and 87.3 million square feet ( $\frac{1}{8}$ -in. basis) were sold or added to stock, the bulk of which would eventually be used in the production of plywood. In addition, 20.2 million square feet were produced by slicing.

(ii) *Eucalyptus Oil.* Oil may be distilled from the foliage of all varieties of eucalyptus, and several of them furnish a product widely known for its commercial and medicinal uses. Complete information regarding Australian production and consumption of eucalyptus oil is not available, but considerable quantities are manufactured, particularly in Victoria. The value of overseas exports of eucalyptus oil distilled in Australia amounted in 1938-39 to £86,714; in 1949-50 to £147,355; in 1950-51 to £468,680; and in 1951-52 to £445,206. The quantities exported in the years 1949-50 to 1951-52 were 680,802 lb., 1,219,762 lb., and 1,254,618 lb., respectively.

(iii) *Sandalwood and Sandalwood Oil.* Most of the sandalwood is produced in Western Australia for export to Asiatic countries. Small quantities are also produced in South Australia, Queensland and New South Wales. Details of exports of sandalwood are shown in paragraph 3 (ii), § 6. Oil distilled from Western Australian sandalwood has a medicinal value and is used extensively in the manufacture of perfumes. Quantities of this oil are exported annually to the eastern States of Australia and overseas countries, principally to the United Kingdom. Oversea exports of Australian sandalwood oil amounted in 1938-39 to £13,964; in 1949-50 to £22,889; in 1950-51 to £9,629; and in 1951-52 to £19,397.

(iv) *Grass Tree or Yacca Gum.* South Australia is the chief State producing this gum, which is used in the preparation of varnishes and lacquers. Quantities are also obtained in New South Wales and Western Australia but these are small. The production in South Australia during 1951-52 amounted to 1,002 tons, whilst the exports from Australia amounted to 1,013 tons valued at £38,529.

(v) *Tanning Barks.* The forests of Australia are capable of yielding a wealth of tanning materials; many species of eucalyptus and other genera contain varying proportions of tannin, chiefly in the bark, but also in the wood and twigs. Scattered distribution however, has resulted in the richest tan-bearing species only being used in

Australia. These are :—Golden wattle (*Acacia pycnantha*), black or green wattle (*Acacia decurrens* or *mollissima*), and mallet (*Eucalyptus astringens*). Mallet (*E. astringens*), of Western Australia, is not extensively used in Australian tanneries, but is exported to Europe and other countries. Reference to oversea trade in tanning barks is made in § 6, para. 3.

A brief account of work done by the Council for Scientific and Industrial Research in connexion with tanning materials is given in Official Year Book No. 22, p. 743.. The production of extract from the bark of karri (*E. diversicolor*), of which very large quantities are available at karri sawmills, has passed the experimental stage, and private enterprise has started production on a commercial scale. The experimental work in kino impregnated karri (*E. calophylla*) bark is not yet complete. The production of tanning bark in Australia approximated 25,000 tons per annum in the years prior to 1939, but since then production has declined and in 1951-52 stood at approximately 11,000 tons. However, this diminution is offset by the increased use of vegetable tanning extract, which rose from 3,686 tons in 1938-39 to 6,880 tons in 1951-52.

4. Value of Production.—(i) *Gross, Local and Net Values, 1951-52.* The values of forestry production on a gross, local and net basis are shown in the following table for the year 1951-52.

GROSS, LOCAL AND NET VALUE OF FORESTRY PRODUCTION, 1951-52.  
(£'000.)

State.	Gross Production Valued at Principal Markets.	Marketing Costs.	Gross Production Valued at Place of Production.	Net Value of Production. (a)
New South Wales .. .. .	12,848	387	12,461	12,461
Victoria .. .. .	9,275	796	8,479	8,479
Queensland .. .. .	8,230	1,190	7,040	7,040
South Australia .. .. .	3,323	144	3,179	3,179
Western Australia .. .. .	4,258	569	3,689	3,689
Tasmania .. .. .	3,422	305	3,057	3,057
Total .. .. .	41,356	3,451	37,905	37,905

(a) No deduction has been made for depreciation and maintenance nor for the value of materials used in the process of production.

(ii) *Net Values, 1934-35 to 1951-52.* In the following table the net value of forestry production and the net value per head of population are shown by States for the years 1947-48 to 1951-52 in comparison with the average for the five years ended 1938-39.

NET VALUE OF FORESTRY PRODUCTION.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
NET VALUE.(a) (£'000.)							
Average, 1934-35 to 1938-39 .. .. .	2,094	837	2,226	547	1,176	394	7,274
1947-48 .. .. .	5,741	3,494	3,394	1,700	1,605	1,834	17,768
1948-49 .. .. .	6,561	3,940	3,804	2,104	1,791	2,105	20,305
1949-50 .. .. .	7,185	5,570	4,020	2,300	2,021	2,099	23,195
1950-51 .. .. .	8,966	6,437	5,029	2,656	2,908	2,432	28,428
1951-52 .. .. .	12,461	8,479	7,040	3,179	3,689	3,057	37,905

NET VALUE PER HEAD OF POPULATION. (£ s. d.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
NET VALUE PER HEAD OF POPULATION. (£ s. d.)							
Average, 1934-35 to 1938-39 .. .. .	0 15 7	0 9 1	2 5 2	0 18 7	2 11 8	1 13 9	1 1 4
1947-48 .. .. .	1 18 2	1 13 9	3 1 0	2 12 1	3 3 1	7 0 1	2 6 8
1948-49 .. .. .	2 2 10	1 17 3	3 7 0	3 3 3	3 8 7	7 16 11	2 12 3
1949-50 .. .. .	2 5 4	2 11 4	3 9 2	3 7 0	3 14 1	7 11 4	2 17 11
1950-51 .. .. .	2 14 9	2 17 7	4 4 4	3 14 9	5 1 10	8 9 2	3 8 9
1951-52 .. .. .	3 14 3	3 13 8	5 15 4	4 7 2	6 4 10	10 4 9	4 9 3

(a) No deduction has been made for depreciation and maintenance nor, since the year 1948-49, for the value of materials used in the process of production; in earlier years deductions were made on this account for one or two States only.

5. **Employment.**—(i) *Forestry Operations.* The estimated number of persons employed in forestry operations as at June, 1952 is shown in the following table. These estimates, which have been based upon pay-roll tax and other data, include working proprietors, but exclude those employed in the sawmilling industry for which particulars are shown in the next table.

**ESTIMATED NUMBERS EMPLOYED IN FORESTRY, JUNE, 1952.**

(Excluding Sawmilling Industry.)

Sex.	N.S.W. (a)	Victoria.	Q'land.	S. Aust. (b)	W. Aust.	Tasmania.	Total.
Males .. ..	8,624	6,540	6,265	1,579	1,900	2,017	26,925
Females .. ..	35	50	6	21	19	9	140
Total .. ..	8,659	6,590	6,271	1,600	1,919	2,026	27,065

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

(ii) *Milling Operations.* Details of the number of persons employed, including working proprietors, in the milling operations of sawmills during the year 1951-52 are shown in the next table. Further details regarding the operations of these mills are shown in Chapter XXIV.—Manufacturing Industry.

**SAWMILLS : PERSONS EMPLOYED, 1951-52.**

Sex.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total. (a)
Males .. ..	10,265	7,170	7,027	1,789	3,732	2,170	32,153
Females .. ..	370	163	249	126	29	22	959
Total .. ..	10,635	7,333	7,276	1,915	3,761	2,192	33,112

(a) Excludes Northern Territory and Australian Capital Territory.

**§ 6. Imports and Exports of Timber and Tanning Substances.**

i. **Imports of Dressed and Undressed Timber.** The quantities of timber imported into Australia during the years 1938-39 and 1949-50 to 1951-52 inclusive are shown in the following table according to countries of origin:—

**IMPORTS OF DRESSED AND UNDRESSED TIMBER INTO AUSTRALIA :**

**COUNTRIES OF ORIGIN.**

('000 super. feet.)

Country of Origin.	Dressed Timber.				Undressed Timber.(a)			
	1938-39.	1949-50.	1950-51.	1951-52.	1938-39.	1949-50.	1950-51.	1951-52.
Borneo (British) .. ..	..	..	..	..	5,997	30,804	24,463	15,929
Canada .. ..	8,927	398	696	9,193	296,948	80,201	85,083	77,168
Malaya, Federation of .. ..	..	..	2	..	165	2,167	7,727	11,113
New Zealand .. ..	..	773	531	3,230	11,193	15,085	10,709	26,352
Other British Countries .. ..	3	6	54	19	4,598	3,830	3,780	8,041
Brazil .. ..	..	..	..	76	..	8,617	32,525	29,037
Finland .. ..	340	370	3,327	8,826	1,696	1,938	6,757	2,989
Norway .. ..	4,209	9,242	15,114	12,525	21	10	307	395
Portugal .. ..	..	..	101	3,728	..	..	251	196
Rumania .. ..	..	..	..	..	269	10	8,634	6,198
Sweden .. ..	1,978	33,189	64,700	59,337	4,654	23,115	53,018	26,768
United States of America .. ..	2,242	5	..	7,554	12,245	46,368	58,845	115,576
Other Foreign Countries .. ..	79	171	593	3,155	10,312	1,713	12,858	11,531
Total .. ..	17,778	44,154	85,118	107,649	348,098	213,858	304,957	331,293

(a) Includes logs not sawn and excludes timber not measured in super. feet.

The figures in the table above exclude items such as architraves, veneers, plywood, staves, etc., quantities for which are either not shown, or are expressed in dissimilar units in the Customs entries. The total value of the items so excluded amounted to £2,773,047 in 1951-52.

The bulk of the imports of dressed timber now comes from Norway and Sweden and consists of softwoods cut for making boxes, and tongued and grooved timber, weather-boards, etc. The total value of dressed timber, shown in the table above amounted to £7,097,000 during 1951-52, the major items being tongued and grooved weather-boarding. Undressed timber imported totalled £15,992,000, principally softwood beams, baulks, etc., valued at £9,861,000, and softwood boards and planks valued at £4,475,000. The principal component of beams, baulks, etc., was oregon pine from Canada and the United States of America, while the balance was mainly hemlock from North America, pine from New Zealand, Sweden and Finland, and spruce from Sweden. Included in the softwood boards and planks are oregon and hemlock from North America, pines principally from New Zealand and Brazil, spruce, principally from Sweden and Rumania (although there are considerable quantities from other European countries), red and white pine from New Zealand, and other softwood from Brazil.

2. Exports of Undressed Timber and Railway Sleepers.—The quantities of undressed timber and railway sleepers exported during the years 1938-39 and 1949-50 to 1951-52 are shown below, together with the countries of destination.

EXPORTS OF UNDRESSED TIMBER (a) AND RAILWAY SLEEPERS FROM AUSTRALIA : COUNTRIES OF DESTINATION.

('000 super. feet.)

Country of Destination.	Undressed Timber (excluding Railway Sleepers).				Railway Sleepers.			
	1938-39.	1949-50.	1950-51.	1951-52.	1938-39.	1949-50.	1950-51.	1951-52.
United Kingdom ..	11,750	15,319	7,266	4,849	1,438	..	325	217
Ceylon ..	535	326	..	..	5,324	423	346	..
Mauritius ..	334	397	539	187	503	350	..	..
New Zealand ..	17,145	11,634	7,526	14,507	16,896	11,358	5,059	4,148
Pacific Islands (British) ..	1,287	527	559	1,173	126	347	85	162
Union of South Africa ..	7,164	2,655	2,834	1,258	4,941	1,923	1,401	97
Other British Countries	779	2,120	2,098	1,793	75	92	35	124
Egypt ..	718	..	..	..	4,198	..	..	..
Iran ..	..	..	74	..	271	1,005	196	..
Other Foreign Countries	4,065	789	621	105	194	42	72	..
Australian Produce ..	43,797	33,767	21,537	23,872	34,036	15,540	7,519	4,748
Other Produce ..	541	470	299	124	..	..	..	..
Total ..	44,338	34,237	21,836	23,996	34,036	15,540	7,519	4,748

(a) Excludes timber not measured in super. feet.

The bulk of the exports of undressed timber were consigned to New Zealand, and the United Kingdom, and consisted largely of the Western Australian hardwoods, jarrah and karri, which have earned an excellent reputation for such purposes as harbour works and wood paving, etc. The total value of exports of undressed timber, excluding railway sleepers, during 1951-52 was £1,561,987 of which £1,445,118 was hardwood and £116,869 was softwood. Railway sleepers exported were valued at £162,837.

3. Classification of Imports and Exports.—(i) *General.* The quantities and values of timber, according to items, imported and exported during the year 1951-52 are shown in the following table:—

TIMBER : IMPORTS AND EXPORTS, AUSTRALIA, 1951-52.

Description.	Quantity.				Value (£).		
	Unit of Quantity.	Imports.	Exports.	Excess of Imports over Exports.	Imports.	Exports.	Excess of Imports over Exports.
Logs, not sawn ..	'000 sup. ft.	20,870	7,775	13,095	478,481	433,325	45,156
Timber, undressed—							
Beams, Baulks, etc. ..	"	218,093	15,041	203,052	10,211,379	960,964	9,250,415
Boards, Planks, etc. ..	"	91,378	1,180	90,198	5,270,356	68,474	5,201,882
Boxmaking timber ..	"	562	(a)	..	31,403	(a)	..
Railway sleepers ..	"	..	4,748	-4,748	..	162,837	..
Other undressed ..	"	(b)	(b)	(b)	261,961	99,224	31,303
Timber, dressed—							
Bent or cut into shape ..	"	(b)	(b)	(b)	107,080	..	..
Boxmaking timber ..	'000 sup. ft.	11,505	(b)	(b)	699,495	..	..
Tongued, and grooved, weatherboards ..	"	77,193	(b)	(b)	5,071,768	8,578	7,195,776
Other, dressed or moulded ..	"	18,946	(b)	(b)	1,326,011	..	..
Plywood ..	'000 sq. ft.	77,107	188	76,919	2,126,118	10,992	2,115,126
Veneers ..	"	19,661	5,396	14,265	277,888	92,246	185,642
Total ..	..	(b)	(b)	(b)	25,861,940	1,836,640	24,025,300

(a) Not separately recorded. (b) Not available.

NOTE.—Minus sign (—) denotes an excess of exports.

(ii) *Sandalwood.* Sandalwood is exported, principally from Western Australia, to Singapore, Malaya and Hong Kong, where it is highly prized and largely used for artistic and ceremonial purposes. During 1951-52 total exports were 361 tons valued at £83,010, as compared with 344 tons, £80,987 in 1950-51, 195 tons, £45,546 in 1949-50, and 1,648 tons, £42,328 in 1938-39.

(iii) *Tanning Bark.* With the exception of 1950-51 when 10,019 cwt. of tanning bark valued at £11,020 were exported from Tasmania to India, imports have been considerably in excess of exports for every year since 1938-39. Imports have, however, declined from 86,367 cwt. (£56,986) during 1945-46 to 10,783 cwt. (£24,359) during 1951-52, compared with 6,199 cwt. (£2,318) during 1938-39. In 1938-39 exports totalled 18,220 cwt. valued at £8,630. There were no exports of tanning bark during 1951-52.

The imports of tanning bark consist almost exclusively of wattle bark from the plantations in South Africa. One species of Australian wattle, *Acacia mollissima*, is chiefly relied upon for the production of wattle bark in the South African plantations, most of the seed being obtained from the best wattle bark areas in eastern Tasmania and western Victoria. Two reasons are given to account for the success of the industry in the Union of South Africa:—(a) The suitability of the treeless, grassy highlands of Natal; and (b) the availability of native labour.

(iv) *Other Tanning Substances.* Considerable quantities of tanning substances other than bark are imported annually into Australia. The total value in Australian currency of the importations in 1951-52 was £637,900, and was composed as follows:—Tanners' Bates, £3,880; wattle bark extract, £569,353; other extract, £19,327; and valonia, myrobalans, cutch, etc., £45,340.

Exports of tanning extracts and other tanning substances from Australia amounted to £326,371 in 1951-52.

## CHAPTER XXIII.

## FISHERIES.

## § 1. General.

1. **Fish Stocks.**—Australia possesses a varied native fauna of freshwater and marine fish, including tropical and temperate species. In addition, certain exotic species have become acclimatized in the freshwater streams. The commercial fisheries exploit on-shore, demersal (bottom) and pelagic (surface) stocks. The on-shore stocks are at present of greatest importance.

The Australian marine fauna includes also a number of mollusca (oysters, scallops) and crustacea (crabs, prawns, crayfish) groups which are commercially exploited.

In winter whales of various species, of which the humpback is the most common, appear off the western and eastern coasts.

2. **Fishing Areas.**—The principal fishing areas at present are the coastal lakes, streams, estuaries and beaches, from Cairns in Queensland to Ceduna in South Australia, and from Esperance to Geraldton in Western Australia. There are interruptions of variable size; for the most part, these fishing grounds are associated with the coastal streams. The demersal grounds fall into two classes—(a) the reefs from which cod and other tropical species are taken in tropical waters, and snapper in temperate waters; and (b) the grounds from which flathead, morwong, etc., are taken. The reefs extend intermittently from northern Queensland around the southern part of the continent to Shark's Bay in Western Australia. The flathead grounds lie on the continental shelf off south-east Australia, chiefly from Crowdy Head to south of Cape Everard and further off the east Tasmanian coast from Babel Island southwards to Storm Bay. Other demersal grounds exist in the Great Australian Bight but would require large modern trawlers for commercial exploitation. The demersal shark grounds lie principally in Bass Strait and on the continental shelf off eastern South Australia. Other grounds have been located off southern Western Australia.

The grounds of existing pelagic fisheries include that for the Spanish mackerel off the north-eastern coast from about Coff's Harbour to Cairns and that for barracouta in Bass Strait and off eastern Tasmania. Jack mackerel is found in the waters of eastern Tasmania, the south-east coast of New South Wales, and Western Australia. Tuna is now being taken in commercial quantities on the New South Wales and South Australian coasts.

Pearlshell is fished from Cooktown in Northern Queensland (and from Thursday Island) round the north coast of Australia to Exmouth Gulf in Western Australia. Trochus shell is obtained from Mackay in Queensland round the north coast to King Sound in Western Australia.

Edible oysters are found in the temperate waters of Queensland, New South Wales and Victoria. Some cropping of natural resources takes place in Queensland, but the principal cultivation grounds are found in New South Wales. The scallop is taken commercially only in Tasmanian waters.

Crabs of various species are found in practically all coastal waters. Prawns are taken in the temperate waters of Queensland and New South Wales. Crayfish are taken on reefs of the continental shelf in the waters of all southern States, the fishery extending (with a major interruption in the Bight) from Port Macquarie in New South Wales to Geraldton in Western Australia. Considerable development has taken place in the crayfish fisheries, particularly in South Australian and Western Australian waters, owing to the opening up of markets in the United States of America for frozen crayfish tails.

Whales emigrating from Antarctic waters to their breeding grounds in the warmer waters of low latitudes pass up both the western and eastern coasts of Australia, returning to the Antarctic in the spring. Three whaling stations operate in Western Australia (Pt. Cloates, Babbage Island adjoining Carnarvon, and near Albany) and one in Queensland (Moreton Bay).

3. **Fishing Boats and Equipment.**—The fishing equipment includes almost every possible type of gear, and appropriate boats are employed. The on-shore equipment includes mesh-nets, trawl-nets, and traps of various types. The demersal reef-fishery

is worked with traps, hand lines and other long lines. The demersal flathead-fishery is worked by both otter trawl (with V.-D. gear) and Danish seine; in addition some hand-lining is carried out. The demersal shark fishery is worked by long lines. The pelagic mackerel-fishery employs trolling gear with lures of various types, while the pelagic barracouta fishery employs principally barbless jigs. Tuna is taken by trolling and, more recently, by pole fishing with live bait, and jack mackerel and pilchards are taken with purse-seine and lampara nets.

The boats for the on-shore fisheries are almost invariably small vessels fitted with low-power petrol engines. The vessels working the reefs are larger (up to 50 feet) and have more power. The otter trawl vessels are steam trawlers, and the Danish seine vessels are 40 to 70 feet in length with diesel engines. The shark boats have diesel power and range from 35 to 50 feet in length.

4. **Administration.**—The fisheries are administered by State Departments implementing State laws. This administration includes licensing of men and boats, and restrictions of fishing by prohibitions against fishing at certain times and places and by certain methods. The States also prescribe the gear that may be used and for some fishes the legal minimum size at which they may be landed.

In October, 1946 the Commonwealth Government appointed a Director of Fisheries and established the Commonwealth Fisheries Office as a division of the Department of Commerce and Agriculture to co-ordinate fisheries administration and develop the fisheries of Australia.

In July, 1952, a conference of fisheries and legal officers of the Commonwealth and all States, except Western Australia, agreed on procedure for implementing through the States the Fisheries Act 1952, and the Pearling Act 1952, which had been passed by the Commonwealth Parliament at the end of February. These Acts were passed to enable the Commonwealth to conserve and develop fisheries in Australian waters outside the States' 3-mile territorial limit. As a first result of the July conference the conservation of the school shark and tiger flathead fisheries was taken in hand by the Commonwealth in co-operation with the States concerned.

The Commonwealth Scientific and Industrial Research Organization, through its Fisheries Division, is responsible for fishery research (*see* § 4, par. 2 hereafter).

## § 2. Development and Present Condition of the Fishery.

1. **Fisheries Proper.**—(i) *General.* The earliest Australian fishery was on-shore. To this was soon added the demersal reef fishery using lines. At each centre of population this sequence has almost invariably been followed, and expansion of the industry up to about the year 1900 consisted chiefly of the extension of these operations into hitherto unworked areas. The taking of barracouta in Tasmanian waters was begun at least by 1880, if not earlier, but the main development of this fishery occurred between 1915 and 1925.

The first major development of the fishery came with the institution of trawling operations off the New South Wales coast in 1918 by the New South Wales Government. The State enterprise failed, but the fishery was found very profitable by private enterprise. In 1936 the use of Danish seine vessels began and the fleet of these vessels rapidly expanded, and in 1946 (after the return of vessels requisitioned in war-time) a peak was reached and thirteen steam trawlers and 120 Danish seine vessels were licensed. The total catch of trawled fish in 1946-47 was 16,000,000 lb. However, by the end of 1947 many of these vessels found that the fish stocks, particularly of flathead, appeared to be seriously depleted. Of the species taken by the trawl fishery, tiger flathead, morwong and nannygai are the most important, and of these flathead may be regarded as the prime fish and commands a higher price. Since 1947 the composition of the catch has changed, because of depletion of the flathead stocks, and the lower priced fish have become a larger proportion of the catch. In 1951-52 ten steam trawlers (all based at Sydney but fishing right down the coast to Bass Strait) and thirty-nine Danish seine vessels in New South Wales, with a few more in Victoria, were engaged in the trawl fishery.

In Queensland waters the Spanish mackerel is taken by line fishermen, operating in off-shore waters out to the Barrier Reef between Gladstone and Cairns, with Townsville as the centre. This fishery started in 1930 and by 1942 production had risen to about 1,000,000 lb. The catch decreased considerably during the war and post-war period, but by 1949-50 it had increased again to the 1942 level of approximately 1,000,000 lb.

In 1930 fishing for snapper shark was started in south-eastern waters, particularly off the Victorian and Tasmanian coasts. This fishery extended rapidly its area of operations, particularly in the Bass Strait area and the south-east coast of South Australia, and the catch increased from 23,000 lb. in 1930 to a steady 3,000,000 lb. catch in each year since 1942. Great impetus was given to the fishery during war years by the demand for livers for fish oil production for medicinal purposes. This demand has eased with the return of cod-liver oil, and the production overseas of synthetic vitamin "A". However shark is still fished for the flesh, which is sold as "flake", mainly in the Melbourne Fish Market.

Pilchards occur in the southern waters of Australia from Port Stephens to the south-west of Western Australia. Commercial catches have been made with lampara nets and to a less extent with purse seines at Jervis Bay on the New South Wales coast, in Port Phillip Bay in Victoria, at Coffin Bay in South Australia and at Albany in Western Australia. Anchovies in Port Phillip Bay and sprats in Tasmanian waters are caught in payable quantities, though there is usually some difficulty in finding a market for them. Jack mackerel have been caught in commercial quantities off the east coast of Tasmania and off Eden in New South Wales.

The tuna fishery was established on the New South Wales coast during the second half of 1949, when fishermen, using improvised trolling gear, caught 1,000 tons of southern blue-fin tuna. The catch was canned at Narooma and Eden, and samples of both canned and frozen fresh tuna were sent to California, where it met with approval. Owing to adverse marine conditions, subsequent years have been disappointing. The American-owned tuna clipper *Senibua*, whose operations were subsidized by the Commonwealth, proved that Australian tuna could be caught by pole fishing with live bait. As tuna come close to the coast, ice can be used instead of refrigeration to preserve the catch to the landing port. This means that smaller and less expensive vessels can be used.

(ii) *Production.* The total recorded catch of fresh fish during 1951-52 amounted to 65,000,000 lb., compared with 64,000,000 lb. in the previous year. This is a considerable decline on the peak production of 76,000,000 lb. reached in 1947-48.

Production for the years 1938-39 and 1947-48 to 1951-52 is shown by States in the following table:—

RECORDED PRODUCTION OF FRESH FISH.  
( '000 lb.)

State.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
New South Wales ..	(a) 29,382	32,813	29,506	27,985	24,206	25,473
Victoria ..	12,840	9,745	9,907	9,722	10,741	10,133
Queensland ..	9,182	10,508	10,129	10,125	8,897	9,020
South Australia ..	(a) 8,960	(a) 4,750	(a) 5,264	(a) 5,799	(a) 6,502	6,950
Western Australia(a) ..	5,841	6,953	9,254	8,911	7,659	8,089
Tasmania ..	(a) 2,393	11,288	11,302	7,376	5,934	5,224
Northern Territory ..	28	112	52	52	56	62
<b>Total ..</b>	<b>68,626</b>	<b>76,169</b>	<b>75,414</b>	<b>69,970</b>	<b>63,995</b>	<b>64,951</b>

(a) Year ended previous December.



2. **Oysters and Shell Fisheries.**—Initially the Australian oyster fisheries depended solely upon the harvesting of naturally grown stock in littoral and submarine areas. However, the stocks soon deteriorated and attention was turned to methods of cultivation. This is carried on mainly in New South Wales where there has been constant improvement in methods and the present technique in certain areas is highly efficient. The production for Australia in 1951-52 was 8,209,000 lb. Scallops are taken by dredge in the D'Entrecasteaux Channel in Tasmania.

Cray fisheries have developed greatly in recent years and the development has been such as to permit an export trade of crayfish tails to America to meet the off-season demand for frozen tails. Details of production by States for the years 1938-39 and 1947-48 to 1951-52 are shown in the following table:—

RECORDED PRODUCTION OF CRAYFISH.  
(‘000 lb.)

State.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
New South Wales ..	420	406	687	595	487	688
Victoria ..	201	82	461	820	426	623
South Australia ..	(a) 686	(a) 941	(a) 870	(a) 1,671	(a) 2,089	2,750
Western Australia(a) ..	1,754	3,037	3,646	6,657	8,515	7,795
Tasmania ..	2,048	3,613	4,213	3,116	2,196	1,879
Australia ..	5,109	8,079	9,877	12,859	13,713	13,735

(a) Year ended previous December.

3. **Pearl-shell and Trochus.**—The industry, which ceased operations on Japan's entry into the war in December, 1941, did not resume on a commercial basis at Queensland centres until late in 1945, and at Western Australian centres until 1946, while operations off the Northern Territory coast were not resumed until 1948.

Before the war a large proportion of the key men were Japanese; the others included Malays, Chinese, Koepangers, Filipinos, Papuans and Torres Straits Islanders. On the resumption of operations without the Japanese, the labour available was, with few exceptions, inefficient. Queensland with a more ready source of labour from the Torres Strait Islands and mainland was able to expand its fishing more rapidly, and in the 1949 season, achieved its second highest pearl shell production on record. The expansion of the industry at Darwin has been retarded by the fact that the key men lack the local knowledge acquired by the Japanese. Western Australian centres also suffered from lack of skilled labour. In 1953 the Commonwealth permitted the employment at Broome, under certain conditions, of 35 Japanese divers, tenders and engine-drivers.

Tables showing the principal statistics relating to pearl-shell and trochus are shown in § 5, para. 1 (iii) hereafter.

Reference to inquiries into the pearl-shell fishing industry by a Royal Commission in 1912, and by the Tariff Board in 1935, appears on page 1031 of Official Year Book No. 37.

### § 3. Marketing and Distribution.

1. **Marketing.**—The greater portion of Australian fish is sold in metropolitan markets. In Queensland, fish marketing is under the control of a Fish Board, which has representatives of producers, wholesalers, consumers, and a Government nominee as chairman. A central market is located in Brisbane and there are branch markets or depots at 14 centres along the coast. The organization ensures that all fish is marketed through the correct channels, and the board has encouraged to a very marked extent the steadily increasing annual fish production of the State. The fish marketing methods in this

State have proved most successful. In New South Wales the central market in Sydney is conducted by the Chief Secretary's Department, and the port depots in various centres along the coast by fishermen's co-operatives. These co-operatives distribute some of their fish to local centres and to inland country districts, and send the balance to the central market in Sydney. In Victoria, South Australia, and Western Australia fish is sold in central markets by agents. The greater part of the catch of fish in Tasmania is either processed in canneries in that State or exported to the mainland. There is some interstate movement of fish from the northern rivers of New South Wales to Queensland, from Tasmania to New South Wales and Victoria, and from South Australia to Victoria.

2. **Consumption of Fish.**—Prior to the 1939-45 War, Australians consumed annually the fresh and canned equivalent of about 131 million lb. of round fish, or 19.0 lb. per person. About 70 million lb. was produced locally and the remainder was imported. Total consumption (including canned and cured) during 1951-52 is estimated at 89.0 million lb. edible weight (10.5 lb. per head) as compared with 84.5 million lb. edible weight (10.2 lb. per head) in the previous year. This is equivalent to approximately 167.7 million lb. fresh round weight (19.6 lb. per head) and 157.6 million lb. fresh round weight (19.0 lb. per head) respectively. Fish is not, as in many countries, a staple item in the diet of Australians and, away from the sea board, is still regarded rather as a luxury.

3. **Processing, including Canning.**—The equipment for handling fish has in the past been rather inadequate, but in most States since the war cold storage facilities have been improved and increased. In Queensland and New South Wales particularly, the depots which have been established at fishing ports have been equipped with cold storage space. In several States there has been a development of establishments equipped for snap freezing of fish, in particular the freezing of crayfish tails for export. A number of vessels have been equipped with freezing plants to process crayfish at sea.

In all States there has been a development of facilities for light processing of fish.

Reference to the production of processed fish and number of factories operating will be found in § 5, par. 3 hereafter. Considerable expansion has taken place in the industry, particularly since 1945-46. In 1938-39, three factories processed 603,302 lb. of fish valued at £13,700, whereas in 1951-52 seventeen factories processed 6,754,943 lb., valued at £884,697.

4. **By-Products.**—Processing of offal for fish-meals, etc., has been established in certain States. The processing of livers for vitamin-rich oils has been undertaken in several States and oil-production has been favourably developed.

## § 4. Inquiries and Research.

1. **General.**—The Australian fishing industry has been the subject of a number of official inquiries seeking an explanation of the very slow rate of development and the unfortunate conditions prevailing within the industry as well as the paucity of supplies available to the public. Details of the inquiries undertaken, the recommendations arising from them and subsequent developments will be found in Official Year Book No. 38, page 1082.

2. **Commonwealth Scientific and Industrial Research Organization, Division of Fisheries.**—Details of the establishment, organization and functions of the Division of Fisheries of the Commonwealth Scientific and Industrial Research Organization will be found in Official Year Book No. 38, page 1083.

Since its inception, the work of the Division has extended, and there are field stations at Melbourne, Perth, Hobart, Dunwich (Queensland) and Thursday Island. The Division has two research vessels, F.R.V. *Derwent Hunter*, working in South Australian waters and a ketch F.R.V. *Gahleu* working as a pearling lugger in the Thursday Island area.

As a result of the exploratory investigations and the research of the Division, together with the collaboration of commercial fishermen, it has been shown that important species of pelagic fish can be taken in commercial quantities in Australia. It has been shown, too, that crayfish, mullet, shark, whitebait and New South Wales trawl fish stocks need the protection of regulations to preserve them. In all but the last mentioned, restrictions have been imposed by the administrative departments to preserve the stocks.

Research on oysters has been aimed at cultivation methods, including the fertilization of mud to increase the output. It has been determined that the Pacific oyster from Japan can be established and grown satisfactorily in Tasmanian waters. Experiments are being carried out with Australian species of pearl-shell in the Thursday Island area to determine whether the cultivation methods used in Japan can be established.

**3. Commonwealth Fisheries Authority.**—The Commonwealth Fisheries Office, a section of the Department of Commerce and Agriculture, was established as a result of a recommendation in 1941 by the Tariff Board, after a public inquiry into the fishing industry, that a Commonwealth developmental authority should be established. Details of the establishment, organization and functions of the Authority will be found in Official Year Book No. 38, page 1084.

In accordance with the Tariff Board report, scientific research, as distinct from developmental and administrative functions, was left to the Commonwealth Scientific and Industrial Research Organization which had established a Division of Fisheries for this purpose in 1937.

After the revocation of the Commonwealth war-time powers, the Commonwealth and State spheres were fixed at an interstate conference in February, 1947. The Commonwealth is responsible for extra-territorial waters, whaling, pearling, rehabilitation of ex-servicemen in the fishing industry, fishery training schools, commercial development of fisheries, promotion of uniform conditions governing catches of various species of fish, statistics, information and publications.

**4. North Australia Development Committee.**—In 1946 the North Australia Development Committee gave considerable attention to the fisheries resources of North Australia and recommended that a hydrological and oceanographical survey should be made of the area. It also suggested that a biological survey should be made of pearl shell with particular reference to the possibility of instituting pearl shell culture. It recommended that all information regarding the area should be compiled and made available for scientific workers. It also recommended that an economic survey of the fisheries resources should be made, comparing them particularly with those of the Netherlands East Indies.

**5. Whaling.**—The Commonwealth Fisheries Office carried out extensive investigational and preparatory work for the establishment of an Australian whaling industry. A commission of three members was established in 1949, and a station was built at Babbage Island in Western Australia. Operations did not begin until the 1950 season, when 40 whales were processed and in 1952, with three catcher boats, this station obtained its quota of 600 whales. A second station in Western Australia at Pt. Cloates, which began operating in 1949, in 1952 took 536 whales of its 600 quota, and a smaller station near Albany took 51 of a quota of 75. A new station at Moreton Island (Queensland) in its first season (1952), took its full quota of 600 whales.

The Director of Fisheries represents Australia on the International Whaling Commission, which controls whaling throughout the world.

§ 5. The Fishing Industry.

1. Boats and Men Engaged, and Take.—(i) *General Fisheries.* The returns have been compiled from particulars supplied by the State Departments, and while the data do not generally lend themselves to presentation on a uniform basis, the principal facts are shown in the following tables.

GENERAL FISHERIES, 1951-52.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust. (a)	Tas.	N.T.	Aust.
No. of boats engaged ..	2,142	693	3,408	1,400	531	911	10	9,095
Value of boats and equipment .. £'000	1,503	622	922	475	686	400	5	4,613
No. of men engaged ..	(b)2,598	974	6,963	3,992	925	1,134	16	16,602
Total take of—								
Fish .. '000 lb.	25,473	10,133	9,020	6,950	8,089	5,224	62	64,951
£'000	1,385	760	519	550	290	261	5	3,770
Crayfish .. '000 lb.	688	623	..	2,750	7,795	1,879	..	13,735
£'000	106	62	..	242	585	141	..	1,136
Prawns .. '000 lb.	1,792	..	375	..	24	..	..	2,191
£'000	358	..	47	..	5	..	..	410
Crabs .. '000 lb.	52	..	313	..	40	..	..	405
£'000	3	..	29	..	4	..	..	36

(a) Year ended December, 1951. (b) Fishermen's licences issued; licences are issued only to persons deriving a substantial proportion of their income from personal exertion from the capture and sale of fish.

Figures for Australia for the years 1938-39 and 1947-48 to 1951-52 are shown in the table below:—

GENERAL FISHERIES : AUSTRALIA.

Particulars.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
No. of boats engaged	5,462	11,059	10,160	9,329	8,628	9,095
Value of boats and equipment .. £'000	649	4,222	3,668	4,104	4,149	4,613
No. of men engaged(a)	9,081	18,378	17,440	15,637	14,870	16,602
Fish obtained—						
Quantity .. '000 lb.	68,626	76,169	75,414	69,970	63,995	64,951
Gross value .. £'000	1,385	2,827	3,160	2,877	3,555	3,770
Crustaceans obtained—						
Gross value .. £'000	135	457	664	914	725	1,582

(a) Includes Fishermen's licences issued for New South Wales; see note (b) above.

(ii) *Edible Oyster Fisheries.* Edible oyster fisheries are of small dimensions outside New South Wales and Queensland. The available returns show the following takes during 1951-52 in these States:—New South Wales, 7.6 million lb., value £380,144; Queensland, 482,000 lb., value £15,050. In Tasmania the scallop is far more important than the oyster, and in 1951-52 the take was valued at £38,650.

Figures for Australia for the years 1938-39 and 1947-48 to 1951-52 are shown in the following table :—

## EDIBLE OYSTER FISHERIES : AUSTRALIA.

Particulars.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
No. of boats engaged	754	815	833	1,132	1,020	1,114
No. of men engaged ..	850	626	768	878	664	901
Oysters obtained—						
Quantity (a) '000 lb.	9,984	8,115	7,063	9,307	7,245	8,535
Gross value (b) £	132,201	295,763	291,470	425,745	398,995	435,513

(a) Includes scallops in Tasmania, 7,470 cwt. in 1947-48; 5,969 cwt. in 1948-49; 4,211 cwt. in 1949-50; 3,219 cwt. in 1950-51; and 2,908 cwt. in 1951-52; 1938-39 weight not available. (b) Includes scallops in Tasmania, valued at £14,500 in 1938-39; £33,115 in 1947-48; £26,460 in 1948-49; £23,580 in 1949-50; £31,540 in 1950-51; and £38,650 in 1951-52.

(iii) *Pearl and Pearl-shell Fisheries.* (a) *States.* The following table shows particulars of equipment used in the pearling industry, men engaged and production for the year 1951-52 :—

## PEARL AND PEARL-SHELL FISHERIES, 1951-52.

State or Territory.	Boats Engaged.	Value of Boats and Equipment.	Men Engaged.	Pearl-shell.		Gross Value of Pearls obtained. (c)	Tortoise-shell.		Trochus-shell.	
				Quantity obtained.	Gross Value.		Quantity obtained.	Gross Value.	Quantity obtained.	Gross Value.
	No.	£	No.	Tons.	£	£	Tons.	£	Tons.	£
Queensland ..	103	395,250	41,250	446	253,420	..	..	..	1,159	232,932
W. Australia(b) ..	24	102,600	215	321	174,432	1,490	2	150	17	1,400
Nor. Territory ..	5	25,000	51	86	31,000	..	..	..	..	..
Australia ..	132	522,850	1,516	853	458,852	1,490	2	150	1,176	234,332

(a) Includes Torres Strait Islanders and Australian aborigines. (b) Year ended December, 1951. (c) Incomplete; as returned.

(b) *Australia.* A summary of the principal statistics relating to pearl and pearl-shell fisheries is given in the following table for the years 1938-39 and 1947-48 to 1951-52.

## PEARL AND PEARL-SHELL FISHERIES : AUSTRALIA.

Particulars.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Boats engaged	No. 181	123	141	126	154	132
Value of boats and equipment	£ 168,133	247,150	387,550	404,139	557,990	522,850
Men engaged	No. 1,750	1,245	1,417	1,383	1,621	1,516
Pearl-shell obtained—						
Quantity ..	tons 2,543	723	1,346	1,542	1,091	853
Value ..	£ 222,281	415,325	573,785	551,715	508,230	458,852
Value of—						
Pearls obtained(a) £	3,397	1,294	1,930	1,040	3,635	1,490
Trochus-shell obtained—						
Quantity ..	tons 321	272	414	577	1,287	1,176
Value ..	£ 23,823	18,729	28,170	51,682	228,325	234,332

(a) Incomplete; as returned.

2. Value of Production.—(i) *Gross and Local Values, 1951-52.* Although statistics of the value of production of the fishing industry have been on an established basis for some years, attention is drawn to the fact that the actual collection of statistics of the quantity of fish taken presents many difficulties and consequently any defects which may occur in the collection must necessarily be reflected in the value of production. Particulars of the value of other materials used in the process of production are not available for all States, so the values can only be stated at the point of production and not on a net basis as has been done with other industries. Variations in the relative proportions of marketing costs to gross production suggest that complete uniformity in method has not yet been attained.

GROSS AND LOCAL VALUE OF FISHERIES PRODUCTION, 1951-52.  
(£'000.)

State.	Gross Production Valued at Principal Markets.	Marketing Costs.	Gross Production Valued at Place of Production.	Value of other Materials used in Process of Production.	Net Value of Production.(a)
New South Wales .. ..	2,233	412	1,821	156	1,665
Victoria .. ..	824	118	706	(b)	(b)
Queensland .. ..	1,095	260	835	225	610
South Australia .. ..	792	91	701	(b)	(b)
Western Australia .. ..	1,253	28	1,225	167	1,058
Tasmania .. ..	441	(b)	441	(b)	(b)
Total (c) .. ..	6,638	909	5,729	(b)	(b)

(a) No deduction has been made for depreciation and maintenance. (b) Not available.  
(c) Excludes production in the Northern Territory.

(ii) *Local Values, 1934-35 to 1938-39 (Average) and 1947-48 to 1951-52.* In the following table the local value of fisheries production and the local value per head of population are shown by States for the average of years 1934-35 to 1938-39 and each of the years 1947-48 to 1951-52. Local value is gross value less marketing costs and is the value at the place of production. The value of materials used in the course of production is not available for all States and consequently production is valued at that point. These values therefore overstate the net values by the extent of these costs.

LOCAL VALUE OF FISHERIES PRODUCTION.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
LOCAL VALUE.(a) (£'000.)							
Average, 1934-35 to 1938-39 ..	588	159	292	182	229	80	1,530
1947-48 ..	1,224	450	561	214	564	490	3,593
1948-49 ..	1,479	522	704	232	679	558	4,174
1949-50 ..	1,449	615	760	287	697	426	4,234
1950-51 ..	1,730	700	812	404	812	411	4,869
1951-52 ..	1,821	706	835	701	1,225	441	5,729

(a) No deduction has been made for depreciation and maintenance.

LOCAL VALUE OF FISHERIES PRODUCTION—*continued.*

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
LOCAL VALUE PER HEAD OF POPULATION.							
(s. d.)							
Average, 1934-35 to 1938-39 ..	4 5	1 9	5 11	6 3	10 0	6 11	4 6
1947-48 ..	8 2	4 4	10 1	6 7	22 2	37 5	9 3
1948-49 ..	9 8	4 11	12 5	7 0	26 0	41 7	10 9
1949-50 ..	9 2	5 8	13 1	8 4	25 6	30 9	10 7
1950-51 ..	10 7	6 3	13 7	11 4	28 5	28 7	11 9
1951-52 ..	10 10	6 2	13 8	19 3	41 5	29 6	13 6

(a) No deduction has been made for depreciation and maintenance.

3. **Fish Preserving.**—The attempt to establish the fish preserving industry at the commencement of this century met with little success although a bounty was paid to encourage production. The industry, however, continued to operate, but there was no marked development until about 1945-46 when the production of canned fish amounted to 1,700,000 lb. After that year production increased considerably and reached a peak of 10,900,000 lb. in 1948-49, but by 1951-52 it had declined to 6,800,000 lb.

In addition to the canning of fish, other fish products are produced. The quantities produced during 1951-52 were 319,000 lb. of smoked fish and 1,099,000 lb. of fish paste.

In 1939 New South Wales and Tasmania were the only producing States, but by 1941 the industry had been extended to South Australia and Western Australia. Details of production are given in the following table for the years 1938-39 and 1947-48 to 1951-52.

## PRODUCTION OF CANNED FISH : AUSTRALIA.

Particulars.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories operating(a) ..	3	16	16	15	18	17
Quantity .. lb.	603,302	9,731,702	10,886,254	7,442,521	7,000,365	6,754,943
Value .. £	13,700	727,660	973,027	676,812	701,141	884,697

(a) Including factories engaged in the canning of fish loaf.

The varieties canned in the several States differ according to the catch available, but separate details for each variety are not collected. In New South Wales salmon is the principal variety. In South Australia the canned pack includes mullet, salmon, garfish, etc., in Western Australia herrings, crayfish and mullet, and in Tasmania, salmon and crayfish.

4. **State Revenue from Fisheries.**—The revenue from fisheries during the year 1951-52 was £59,769 compared with £48,866 in 1950-51 and £34,273 in 1938-39. Of the total of £59,769 in 1951-52 New South Wales collected £29,004, Victoria £4,164, Queensland £11,124, South Australia £3,839, Western Australia (year ended December, 1951) £7,325, Tasmania £4,238 and Northern Territory £75.

### § 6. Oversea Trade in Fishery Products.

NOTE.—Values of Australian oversea trade shown in this section are expressed in £A. f.o.b., Port of Shipment.

1. Imports of Fish.—The equivalent, in the round, of imported fish consumed in Australia in 1951-52, was 46 per cent. of the total consumption. Particulars of the imports of fish are shown below for the years 1947-48 to 1951-52 in comparison with 1938-39.

#### FISH (INCLUDING SHELL FISH): IMPORTS INTO AUSTRALIA. (Cwt.)

Classification.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Fresh or preserved by cold process .. ..	84,028	73,060	100,902	59,152	103,926	150,972
Potted or concentrated .. ..	9,435	12,909	3,012	1,908	1,959	1,766
Preserved in Tins—						
Fish—						
Herrings .. ..	38,917	47,236	95,994	81,569	95,227	88,149
Pilchards .. ..	(a)	36,329	3,740	735	930	4,041
Salmon .. ..	166,695	12,031	2,544	14,848	14,923	20,387
Sardines (including Sild)	29,372	58,733	61,962	50,253	80,645	70,334
Other .. ..	14,306	24,432	8,682	5,974	4,535	15,455
Shell Fish—						
Crustaceans .. ..	6,829	4,627	1,623	2,386	6,194	3,397
Oysters .. ..	1,939	1	29	59	121	198
Other .. ..	(a)	297	100	201	74	224
Smoked or Dried (not salted)	8,122	26,090	32,331	70,524	64,099	56,235
N.E.I. (including salted) ..	7,987	3,202	3,319	8,577	8,655	11,911

(a) Not recorded separately.

The value of fish and fish products imported during 1951-52 amounted to £4,983,000 as compared with £1,470,854 in 1938-39.

Canned fish (total imports of which in 1951-52 were valued at £3,320,390) constituted the largest proportion of the imports; salmon from the Soviet Union, herrings from the United Kingdom and Norway, pilchards from the Union of South Africa and sardines from Norway were the chief varieties imported. A considerable proportion of the fresh fish imported in 1951-52 came from the United Kingdom and New Zealand, and the potted fish came chiefly from the United Kingdom; the bulk of the remainder came from the United Kingdom and Spain. The small import of oysters was supplied by New Zealand, whilst the bulk of the crustaceans was supplied by the Union of South Africa and the Soviet Union.

2. Exports of Fish.—During 1951-52 the exports of fish of Australian origin were as follows:—oysters in shell, 895 cwt., £6,590; other fresh or preserved by cold process, 30,046 cwt., £1,069,048; potted or concentrated, 297 cwt., £13,705; fish, preserved in tins, 5,240 cwt., £94,600; shell fish in tins, 1,335 cwt., £33,607; smoked or dried, 189 cwt., £3,797; and other fish, 16 cwt., £210.

3. Exports of Pearl and other Shell.—The exports of pearl, tortoise and trochus-shell of Australian origin are shown hereunder for the years 1938-39 and 1947-48 to 1951-52.



## PEARL, TROCHUS AND OTHER SHELL : EXPORTS FROM AUSTRALIA.

Article.			1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Pearl-shell	..	cwt.	52,532	15,915	27,885	33,840	22,877	14,473
		£	244,266	408,681	606,767	624,517	485,685	370,096
Trochus-shell	..	cwt.	9,108	10,096	15,547	10,765	27,460	33,731
		£	34,166	49,888	73,012	49,170	231,580	424,692
Other shell	..	cwt.	4	269	157	1,239	621	2,332
		£	151	1,710	1,599	16,225	6,517	33,199

## CHAPTER XXIV. MANUFACTURING INDUSTRY.

### § 1. General.

1. **Introduction.**—A complete statistical account of the growth of the manufacturing industry in Australia cannot be given owing to the fact that prior to 1906 the necessary statistics were not collected by the several States on a definite and uniform basis. A standard classification of manufacturing industries was formulated at a conference of Australian Statisticians in 1902 and adopted by all States in 1906. Figures on this basis were prepared for 1907 and subsequent years.

Prior to the federation of the Australian States in 1901, the manufacturing industry in Australia was primarily engaged in the production of goods for local use, mainly of food commodities, furniture, bricks, clothing made from imported materials, printing, the repair rather than the manufacture of machinery, and the preliminary treatment of primary products, such as wool-scouring and sawmilling.

After federation, steady expansion of the manufacturing industry resulted from the removal of interstate trade barriers and the operation of a uniform protective tariff. This expansion was quickened as a result of the demands created by the 1914-18 War, the curtailment of imports, and the rapid growth of spending power within the community. New and more advanced development took place, iron and steel works and many related and subsidiary industries were established, extensive manufacture of machinery was begun, and a wide range of high-grade products—textiles, metal manufactures, electrical goods, etc.—was added to the list of commodities made in Australia.

A check was made in this expansion by the world-wide economic depression of 1929-33, but returning general prosperity and the opportunities opened to local manufacturers by import restrictions initiated revival in 1933 and, with depreciation of Australian currency, gave renewed stimulus to manufacturing enterprise. As economic conditions improved, the tariff, revenue duties and primage were reduced, but without materially prejudicing the progress of local manufactures.

When war broke out in September, 1939, Australia became a major source of supply for British countries east of Suez and in meeting these demands, as well as those arising locally because of interruption of oversea importations, existing manufacturing industries expanded, and new enterprises were developed rapidly for the production of all classes of munitions, aircraft, ships, many new kinds of machinery and metal manufactures, scientific equipment, textiles, chemicals, etc. The outbreak of war with Japan, the basing of Allied armed forces in Australia, and Australian responsibilities for supplies in the South-west Pacific Area, gave added impetus to these developments, and manufacturing in Australia outstripped all previous levels.

The cessation of war production and the transition of industry to a peace-time basis temporarily retarded progress, but from 1945-46 onward, there was renewed expansion of the manufacturing industries to which an inflow of capital from overseas contributed.

2. **Decentralization of Manufacturing Industries.**—Following upon a report by the Secondary Industries Commission, the Commonwealth Government called a conference of Commonwealth and State Ministers in August, 1945 to formulate a national policy for the decentralization of secondary industries. It was agreed that the State Governments should seek to promote decentralization along the lines appropriate to each, providing necessary services, assistance and concessions to the full extent of State resources. The Commonwealth undertook to collaborate in all matters of Commonwealth industrial policy affecting the development and location of industry, to investigate in association with the States the prospects of developing secondary industries in selected areas, to advise the States of developments desirable for defence purposes, and to provide financial assistance for projects of national importance where the cost would be great relative to the State's resources.

The Commonwealth has assisted decentralization by allocating to private industry munitions and other defence buildings in decentralized areas and accommodating migrants in provincial centres with prospects of development. Oversea firms contemplating establishment in Australia are encouraged to select locations in rural areas or the less industrialized States.

**3. Commonwealth Division of Industrial Development.**—The Secondary Industries Commission was established in 1943 to investigate post-war uses for munitions factories, to plan for the transition of secondary industries from war-time to peace-time activities, and generally to seek to increase industrial efficiency and to explore opportunities for new industries. The Commission was disbanded in April, 1950.

The functions of the Division of Industrial Development (formed in February, 1945 as the Secondary Industries Division of the Department of Post-war Reconstruction) were extended in August, 1948 to include the encouragement of industrial development, the exercising of Commonwealth responsibilities for the decentralization of industry, the promotion of industrial efficiency (especially the study of technical, production, and managerial problems and the dissemination and application of new knowledge and methods), the encouragement of the development of technological institutes and the publication of studies of the structure and operation of Australian manufacturing industries. The Division was attached to the Ministry of National Development when formed in March, 1950 to plan the development of national resources and to promote decentralization and regional development in conjunction with the States.

**4. Customs and Excise Tariffs and Bounties on Manufactures.**—Particulars of Australian customs and excise tariffs, and the constitution and functions of the Australian Tariff Board in relation to matters affecting the industrial development of Australia, are given in Chapter VIII.—Trade of this volume.

Bounties are paid by the Commonwealth Government to encourage local manufacture of certain products. The Statutory provisions usually fix a term of operation of the bounty, provide for payment at a rate varying according to changes in the corresponding customs duty, specify the annual maximum amount of bounty payable, and require the bounty to be withheld or reduced if a manufacturer's net profit in production of the commodity exceeds a certain rate or if rates of wages and conditions of employment in production of the commodity do not conform to prescribed standards.

**5. Scientific Research and Standardization.**—(i) *The Commonwealth Scientific and Industrial Research Organization.* The function of this Organization, reference to which also appears in Ch. XXIX., is to initiate and conduct research in connexion with industries in Australia, to train research workers, to establish industrial research studentships and fellowships, to make grants in aid of pure scientific research, to establish industrial research associations in various industries, to provide for testing and standardization of scientific equipment, to conduct an information service relating to scientific and industrial matters, and to act for Australia in liaison with other countries in matters of scientific research.

(ii) *The Standards Association of Australia.* This Association, which is referred to also in Ch. XXIX., acts as the national standardizing organization of Australia and issues standard specifications for materials and codes of practice. Specifications and codes are prepared and revised periodically in accordance with the needs of industry, and standards are evolved and accepted by general consent.

(iii) *The National Association of Testing Authorities.* The National Association of Testing Authorities organizes national testing facilities throughout Australia to serve private and governmental needs. Laboratories may register voluntarily in respect of tests within their competence and the Association is to ensure the maintenance of their standards of testing. It is expected that there will be general acceptance of certificates of tests issued in the name of the Association by the registered laboratories.

6. **Definitions in Factory Statistics.**—The statistics relating to factories have been compiled from returns supplied annually by manufacturers to, and tabulated by, the several State Statisticians, in the terms of the Statistical Acts of the States. A return must be supplied in respect of every factory, which is defined for this purpose as an establishment where four or more persons are employed or where power (other than manual) is used in any manufacturing process. This definition includes factories in educational and charitable institutions, reformatories, and other public institutions (except penitentiaries) but does not cover smallgoods makers, laundries, farriers, photography studios, florists and seedsmen, and most abattoirs.

If a manufacturing business is conducted in conjunction with any other activity particulars relating to the manufacturing section only are included in the statistics. Where two or more industries are conducted in the same establishment, a separate return is obtained if practicable for each industry.

Manufacturers are requested to state in their returns particulars as to the number, age, wages, etc., of their employees, the value of premises and equipment, the horse-power of machinery, the value, and in most cases the quantities, of raw materials and fuel used, and quantities and values of principal materials and articles produced. The returns obtained from manufacturers are not intended to show a complete record of the income or expenditure of factories nor to show the profits or losses of factories collectively or individually.

The *average number of persons* employed is quoted on two different bases: the average during the period of operation and the average over the whole year. Of these the former is simply the aggregate of the average number of persons employed in each factory during its period of operation (whether the whole or only part of the year). This average is used only in respect of details relating to classification according to number of persons employed. The latter, which is used in all other instances, is calculated by reducing the average number working in the factories (irrespective of period of operation) to the equivalent number working for a full year.

*Working proprietors* are included in all employment figures other than those relating to monthly employment and age dissections, but salaries and wages paid in all cases exclude drawings by working proprietors.

The *value of factory output* is the value of the goods manufactured or their value after passing through the particular process of manufacture and includes the amount received for repair work, work done on commission and receipts for other factory work. The basis of valuation of the output is the selling value of the goods at the factory, exclusive of all delivery costs and charges and excise duties, but inclusive of bounty and subsidy payments to the manufacturer of the finished article.

The *value of production* is the value added to raw materials by the process of manufacture. It is calculated by deducting from the value of factory output the value (at the factory) of the materials used, containers and packing, power, fuel, and light used, tools replaced, and materials used in repairs to plant (but not depreciation charges).

In the process of manufacture, many goods are treated in several industries, the output of one becoming the raw materials of another, so that such commodities are counted more than once in the aggregate value of output and of raw materials. Examples are raw sugar passing from the mills to the refinery, metals from the smelters which become raw materials in establishments concerned in the production of metal goods, and timber from the sawmills used in furniture factories and in joinery. On the other hand, the aggregate value of production is assessed without duplication, the value added by each industry being taken into account once only. For this reason the value of production, and not the value of the output, is used as a measure of activity in the manufacturing industries as a whole.

In the special case of Government factories and workshops, the value of output is, in most cases, estimated by adding 10 per cent. to the value of materials and fuel used and other factory costs, including salaries and wages paid.

7. **Classification of Factories.**—In the compilation of statistical data relating to factories in Australia, a standard classification of manufacturing industries, formulated at a conference of Australian statisticians in 1902 and revised from time to time, was used until the year 1929-30. A new classification was introduced in 1930-31, and this in turn, was revised and extended (principally in regard to the placement and composition of sub-classes) in accordance with decisions of the Statistician's Conference, 1945.

Owing to limitations of space, details published in general tables in this chapter are confined either to the sixteen classes of industry or total factory activity. Particulars of certain of the sub-classes shown below are published in the latter portion of this chapter and full details for all sub-classes may be found in the *Secondary Industries Bulletin*, published annually.

The principal classes and sub-classes in the current classification of factories are as follows:—

### CLASSIFICATION OF FACTORIES.

#### CLASS I.—TREATMENT OF NON-METALLIFEROUS MINE AND QUARRY PRODUCTS.

Coke Works.  
Briquetting and Pulverized Coal.  
Carbide.  
Lime, Plaster of Paris, Asphalt.  
Fibrous Plaster and Products.  
Marble, Slate, etc.  
Cement.  
Asbestos Cement Sheets, etc.  
Other Cement Goods.  
Other.

#### CLASS II.—BRICKS, POTTERY, GLASS, ETC.

Bricks and Tiles, Fire Bricks and Fire-clay Goods.  
Earthenware, China, Porcelain, Terra-cotta.  
Glass (other than Bottles).  
Glass Bottles.  
Other.

#### CLASS III.—CHEMICALS, DYES, EXPLOSIVES, PAINTS, OILS, GREASE.

Industrial and Heavy Chemicals and Acids.  
Pharmaceutical and Toilet Preparations.  
Explosives.  
White Lead, Paints, Varnish.  
Oils, Vegetable.  
Oils, Mineral.  
Oils, Animal.  
Boiling Down, Tallow Refining.  
Soap and Candles.  
Chemical Fertilizers.  
Inks, Polishes, etc.  
Matches.  
Other.

#### CLASS IV.—INDUSTRIAL METALS, MACHINES, CONVEYANCES.

Smelting, Converting, Refining and Rolling of Iron and Steel.  
Foundries—Ferrous.  
Plant, Equipment and Machinery.  
Other Engineering.  
Extracting and Refining of other Metals, Alloys.  
Electrical Machinery, Cables and Apparatus.  
Construction and Repair of Vehicles (no groups).  
Ship and Boat Building and Repairing, Marine Engineering.  
Cutlery and Small Hand Tools.  
Agricultural Machines and Implements.  
Non-Ferrous Metals—  
Rolling and Extrusion.  
Foundries, Casting, etc.  
Iron and Steel Sheets.  
Sheet Metal Working, Pressing, and Stamping.  
Pipes, Tubes and Fittings—Ferrous.  
Wire and Wire Netting (including Nails).  
Stoves, Ovens and Ranges.  
Gas Fittings and Meters.  
Lead Mills.

#### CLASS IV.—INDUSTRIAL METALS, MACHINES, CONVEYANCES—continued.

Sewing Machines.  
Arms, Ammunition (excluding Explosives).  
Wireless and Amplifying Apparatus.  
Other Metal Works.

#### CLASS V.—PRECIOUS METALS, JEWELLERY, PLATE.

Jewellery.  
Watches and Clocks (including Repairs).  
Electroplating (Gold, Silver, Chromium).

#### CLASS VI.—TEXTILES AND TEXTILE GOODS (NOT DRESS).

Cotton Ginning.  
Cotton Spinning and Weaving.  
Wool—Carding, Spinning, Weaving.  
Hosiery and other Knitted Goods.  
Silk, Natural.  
Rayon, Nylon and other Synthetic Fibres.  
Flax Mills.  
Rope and Cordage.  
Canvas Goods, Tents, Tarpaulins, etc.  
Bags and Sacks.  
Other.

#### CLASS VII.—SKINS AND LEATHER (NOT CLOTHING OR FOOTWEAR).

Furriers and Fur Dressing.  
Woolscouring and Fellmongery.  
Tanning, Currying, and Leather Dressing.  
Saddlery, Harness, Whips.  
Machine Belting.  
Bags, Trunks, etc.

#### CLASS VIII.—CLOTHING (EXCEPT KNITTED).

Tailoring and Ready-made Clothing.  
Waterproof and Oilskin Clothing.  
Dress-making.  
Millinery.  
Shirts, Collars, Underclothing.  
Foundation Garments.  
Handkerchiefs, Ties, Scarves.  
Hats and Caps.  
Gloves.  
Boots and Shoes (not rubber).  
Boot and Shoe Repairing.  
Boot and Shoe Accessories.  
Umbrellas and Walking Sticks.  
Dyeworks and Cleaning.  
Other.

#### CLASS IX.—FOOD, DRINK AND TOBACCO.

Flour Milling.  
Cereal Foods and Starch.  
Animal and Bird Foods.  
Chaffcutting and Corn Crushing.  
Bakeries (including Cakes and Pastry).  
Biscuits.  
Sugar Mills.

CLASS IX.—FOOD, DRINK AND TOBACCO—  
*continued.*

Sugar Refining.  
Sugar Confectionery (including Chocolate).  
Jam, Fruit and Vegetable Canning.  
Pickles, Sauces, Vinegar.  
Bacon Curing.  
Butter Factories.  
Cheese Factories.  
Condensed and Dried Milk Factories.  
Margarine.  
Meat and Fish Preserving.  
Condiments, Coffee, Spices, etc.  
Ice and Refrigerating.  
Salt Refining.  
Aerated Waters, Cordials, etc.  
Breweries.  
Distilleries.  
Wine Making.  
Cider and Perry Making.  
Malting.  
Bottling.  
Tobacco, Cigars, Cigarettes, Snuff.  
Dehydrated Fruit and Vegetables.  
Ice-cream.  
Sausage Skins.  
Arrowroot.  
Other.

CLASS X.—SAWMILLS, JOINERY, BOXES, ETC.,  
WOOD TURNING AND CARVING.

Sawmills.  
Plywood and Veneer Mills.  
Bark Mills.  
Joinery.  
Cooperage.  
Boxes and Cases.  
Basketware and Wickerware (including Sea-grass and Bamboo Furniture).  
Perambulators.  
Wall and Ceiling Boards (not Plaster or Cement).  
Other.

CLASS XI.—FURNITURE OF WOOD, BEDDING, ETC.

Billiard Tables, Cabinet and Furniture Making and Upholstery.  
Bedding and Mattresses.  
Furnishing Drapery, etc.

CLASS XII.—FURNITURE OF WOOD, BEDDING,  
ETC.—*continued.*

Picture Frames.  
Blinds.  
Other.

CLASS XIII.—PAPER, STATIONERY, PRINTING,  
BOOKBINDING, ETC.

Newspapers and Periodicals.  
Printing—  
Government.  
General, including Bookbinding.  
Manufactured Stationery.  
Stereotyping and Electrotyping.  
Process and Photo Engraving.  
Cardboard Boxes, Cartons and Containers.  
Paper Bags.  
Paper Making.  
Pencils, Penholders, Chalks, Crayons.  
Other.

CLASS XIII.—RUBBER.

Rubber Goods and Tyres Made.  
Tyre Retreading and Repairing.

CLASS XIV.—MUSICAL INSTRUMENTS.

Gramophones and Gramophone Records.  
Pianos, Piano-Players, Organs.  
Other.

CLASS XV.—MISCELLANEOUS PRODUCTS.

Linoleum, Leather Cloth, Oil Cloth, etc.  
Bone, Horn, Ivory and Shell.  
Plastic Moulding and Products.  
Brooms and Brushes.  
Optical Instruments and Appliances.  
Surgical and other Scientific Instruments and Appliances.  
Photographic Materials, including Developing and Printing.  
Toys, Games and Sports Requisites.  
Artificial Flowers.  
Other.

CLASS XVI.—HEAT, LIGHT, AND POWER.

Electric Light and Power.  
Gas works.

8. Factory Development since 1901—Australia.—The development of the manufacturing industries in Australia at intervals since 1901 is summarized in the following table :—

FACTORIES : AUSTRALIA.

Year.	Fac-tories.	Employ-ment.(a)	Salaries and Wages Paid.(b)	Value of—				
				Materials and Fuel Used.	Output.	Pro-duction. (c)	Land and Build-ings.	Plant and Mach-inery.
	No.	'000.	£'000. (d)	£'000. (d)	£'000. (d)	£'000. (d)	£'000. (d)	£'000. (d)
1901 .. ..	11,143	198						
1911 .. ..	14,455	312	27,528	81,763	133,022	51,259	32,701	31,516
1920-21 .. ..	17,113	367	62,932	213,579	323,993	110,434	60,831	68,653
1930-41 .. ..	21,751	339	62,455	172,489	290,799	118,310	112,211	124,498
1938-39 .. ..	26,941	565	106,743	297,004	500,420	203,416	130,930	143,662
1945-46 .. ..	31,184	745	205,819	515,325	867,648	354,323	186,939	185,545
1946-47 .. ..	34,768	805	237,174	600,164	1,011,026	410,862	183,152	189,693
1947-48 .. ..	37,356	849	285,765	720,822	1,210,119	480,297	211,143	213,719
1948-49 .. ..	40,070	890	339,287	856,610	1,425,325	568,715	232,740	246,494
1949-50 .. ..	41,596	918	385,896	983,923	1,645,411	661,488	259,549	285,602
1950-51 .. ..	43,147	969	491,857	1,306,963	2,150,568	843,605	303,406	338,930

(a) 1901 and 1911—average employment during period of operation. Later years relate to average employment over whole year. Working proprietors included in all years. (b) Excludes drawings by working proprietors. (c) Value of output less value of materials and fuel, etc., used. (d) Not available.

Single year tables in this issue relate to the year 1950-51 and in the immediately preceding issue to the year 1949-50.

## § 2. Number of Factories.

1. Number of Factories in each State.—The following table shows the number of factories operating in each State in the years 1938-39, 1945-46 and 1947-48 to 1950-51 :—

### FACTORIES : NUMBER.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
1938-39 .. ..	9,464	9,250	3,087	2,067	2,129	944	26,941
1945-46 .. ..	12,287	10,195	2,945	2,395	2,280	1,082	31,184
1947-48 .. ..	15,194	11,642	3,642	2,865	2,788	1,225	37,356
1948-49 .. ..	16,087	12,702	4,083	2,927	2,925	1,346	40,070
1949-50 .. ..	16,346	13,231	4,494	3,046	3,023	1,456	41,596
1950-51 .. ..	17,129	13,504	4,776	3,141	3,111	1,486	43,147

2. Number of Factories in Industrial Classes.—(i) *Australia.* The next table shows the number of factories in Australia during 1938-39, 1945-46 and 1947-48 to 1950-51 classified in the industrial classes agreed upon by the Conference of Statisticians in 1930. This classification, which was introduced during 1930-31, superseded the grouping which had been in use since 1902. Details of some of the principal industries included in the table will be found in § 11 hereunder.

### FACTORIES : NUMBER IN INDUSTRIAL CLASSES, AUSTRALIA.

Class of Industry.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
I. Treatment of Non-metalliferous Mine and Quarry Products .. ..	564	591	933	1,025	1,126	1,235
II. Bricks, Pottery, Glass, etc. .. ..	471	410	517	544	561	583
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease .. ..	666	886	975	1,010	1,006	1,020
IV. Industrial Metals, Machines, Conveyances .. ..	7,255	8,816	10,910	11,801	12,362	13,106
V. Precious Metals, Jewellery and Plate .. ..	290	337	555	623	619	629
VI. Textiles and Textile Goods (not Dress) .. ..	611	383	982	1,065	1,155	1,190
VII. Skins and Leather (not Clothing or Footwear) .. ..	533	651	727	746	751	761
VIII. Clothing (except Knitted) .. ..	4,314	5,215	6,069	6,533	6,620	6,684
IX. Food, Drink and Tobacco .. ..	5,202	5,865	6,475	6,659	6,796	6,865
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving .. ..	2,822	3,148	4,001	4,530	4,893	5,165
XI. Furniture of Wood, Bedding, etc. .. ..	1,149	1,140	1,568	1,726	1,820	1,936
XII. Paper, Stationery, Printing, Book-binding, etc. .. ..	1,816	1,703	1,852	1,942	1,981	2,010
XIII. Rubber .. ..	299	308	371	391	404	411
XIV. Musical Instruments .. ..	34	41	56	64	59	66
XV. Miscellaneous Products .. ..	413	714	899	947	985	1,032
Total, Classes I. to XV. .. ..	26,439	30,708	36,890	39,606	41,138	42,693
XVI. Heat, Light and Power .. ..	502	476	466	464	458	454
Grand Total .. ..	26,941	31,184	37,356	40,070	41,596	43,147

Although not the best index of manufacturing activity, the number of factories affords some indication of the development of secondary industries. Except for the two war years 1941-42 and 1942-43, when there were decreases, the number of factories increased each year from 1931-32 to 1950-51; in the latter year the number of factories in Australia reached the record total of 43,147 or 60.2 per cent. greater than in 1938-39.

(ii) *States, 1950-51.* The following table shows the number of factories in each State classified according to the nature of the industry :—

**FACTORIES : NUMBER IN INDUSTRIAL CLASSES, 1950-51.**

Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metalliferous Mine and Quarry Products ..	438	399	90	140	111	57	1,235
II. Bricks, Pottery, Glass, etc. ..	277	138	49	59	43	17	583
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	513	303	63	69	49	23	1,020
IV. Industrial Metals, Machines, Conveyances ..	5,297	3,966	1,459	1,013	994	377	13,106
V. Precious Metals, Jewellery and Plate ..	265	218	38	52	50	6	629
VI. Textiles and Textile Goods (not Dress) ..	435	630	32	46	35	12	1,190
VII. Skins and Leather (not Clothing or Footwear) ..	346	272	53	44	36	10	761
VIII. Clothing (except Knitted) ..	2,965	2,360	469	397	427	66	6,684
IX. Food, Drink and Tobacco ..	2,376	1,961	1,028	648	552	300	6,865
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving ..	1,942	1,268	874	272	338	471	5,165
XI. Furniture of Wood, Bedding, etc. ..	643	624	273	150	158	88	1,936
XII. Paper, Stationery, Printing, Book-binding, etc. ..	833	725	179	122	123	28	2,010
XIII. Rubber ..	152	122	57	41	23	16	411
XIV. Musical Instruments ..	30	20	4	7	5	..	66
XV. Miscellaneous Products ..	488	393	47	44	50	10	1,032
Total Classes I. to XV. ..	17,000	13,399	4,715	3,104	2,994	1,481	42,693
XVI. Heat, Light and Power ..	129	105	61	37	117	5	454
Grand Total ..	17,129	13,504	4,776	3,141	3,111	1,486	43,147

**§ 3. Classification of Factories according to Number of Persons Employed.**

1. *General.*—The size classification of factories is based on the average weekly number of persons employed during the period of operation (including working proprietors). Prior to 1945-46 there was no dissection of the "over 100 employees" group, but for that and subsequent years this group was subdivided into the seven size groups as shown in the table below.

2. *States, 1950-51.*—The following table shows, for each State, the number of factories classified according to the average number of persons employed :—

**FACTORIES : CLASSIFICATION ACCORDING TO SIZE OF FACTORY, 1950-51.**

Size of Factory (Persons employed).	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Aust.
<b>NUMBER OF FACTORIES.</b>							
Under 4 ..	5,129	4,087	1,469	852	1,251	605	13,393
4 ..	1,438	1,159	454	284	198	162	3,695
5 to 10 ..	4,776	3,372	1,349	859	828	372	11,556
11 to 20 ..	2,525	2,020	658	493	392	153	6,241
21 to 50 ..	1,953	1,723	514	374	278	118	4,960
51 to 100 ..	658	593	153	154	102	45	1,705
101 to 200 ..	362	308	102	68	44	18	902
201 to 300 ..	101	103	46	20	11	4	285
301 to 400 ..	53	50	11	14	3	1	132
401 to 500 ..	25	28	4	5	2	1	65
501 to 750 ..	54	36	9	6	..	3	108
751 to 1,000 ..	19	8	4	4	1	1	37
Over 1,000 ..	36	17	3	8	1	3	68
Total ..	17,129	13,504	4,776	3,141	3,111	1,486	43,147



The relative importance of large and small factories is illustrated by a classification of the average number of persons employed according to the size of factory in which they work :—

**FACTORIES : CLASSIFICATION OF PERSONS EMPLOYED ACCORDING TO SIZE OF FACTORY, 1950-51.**

Size of Factory (Persons employed).	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
AVERAGE NUMBER EMPLOYED DURING PERIOD WORKED.							
Under 4 .. ..	10,543	8,346	3,145	1,812	2,556	1,331	27,733
4 .. ..	5,752	4,636	1,816	1,136	792	648	14,780
5 to 10 .. ..	33,323	23,615	9,322	5,911	5,557	2,570	80,298
11 to 20 .. ..	37,066	29,567	9,625	7,165	5,620	2,190	91,233
21 to 50 .. ..	61,556	53,883	15,558	11,520	8,777	3,721	155,015
51 to 100 .. ..	45,944	42,202	10,865	10,624	6,873	3,098	119,606
101 to 200 .. ..	49,867	42,917	14,347	9,727	6,036	2,468	125,362
201 to 300 .. ..	24,339	25,131	11,052	4,834	2,603	1,088	69,107
301 to 400 .. ..	18,074	17,610	3,622	4,814	1,012	365	45,497
401 to 500 .. ..	11,237	12,413	1,822	2,052	902	493	28,919
501 to 750 .. ..	32,795	21,908	5,601	3,414	..	1,835	65,553
751 to 1,000 .. ..	16,654	6,692	3,443	3,658	858	903	32,208
Over 1,000 .. ..	63,406	29,094	5,358	17,101	2,751	4,064	121,774
Total .. ..	410,556	318,014	95,576	83,768	44,397	24,774	977,085
Average per Factory .. ..	23.97	23.55	20.01	26.67	14.27	16.67	22.65

3. Australia, 1938-39, 1945-46 and 1947-48 to 1950-51.—In the following table factories in Australia are classified according to the number of persons employed in conformity with the practice prior to 1945-46.

**FACTORIES : CLASSIFICATION ACCORDING TO NUMBER OF PERSONS EMPLOYED, AUSTRALIA.**

Year.	Establishments Employing on the Average—							
	20 and under.		21 to 100.		101 and upwards.		Total.	
	Es- tablish- ments.	Persons em- ployed.	Es- tablish- ments.	Persons em- ployed.	Es- tablish- ments.	Persons em- ployed.	Es- tablish- ments.	Persons em- ployed.
1938-39—								
Number .. ..	21,982	129,505	4,013	170,971	946	272,022	26,941	572,498
Average per establish- ment .. ..	5.89	..	42.60	..	287.55	..	21.25	..
Proportion of total %	81.59	22.62	14.90	29.86	3.51	47.52	100	100
1945-46—								
Number .. ..	24,819	154,242	5,080	211,781	1,285	390,538	31,184	756,561
Average per establish- ment .. ..	6.21	..	41.69	..	303.92	..	24.26	..
Proportion of total %	79.59	20.39	16.29	27.99	4.12	51.62	100	100
1947-48—								
Number .. ..	29,947	187,085	6,014	249,858	1,395	419,725	37,356	856,668
Average per establish- ment .. ..	6.25	..	41.55	..	300.88	..	22.93	..
Proportion of total %	80.17	21.84	16.09	29.16	3.74	49.00	100	100
1948-49—								
Number .. ..	32,394	200,889	6,226	257,204	1,450	439,710	40,070	897,803
Average per establish- ment .. ..	6.20	..	41.31	..	303.25	..	22.41	..
Proportion of total %	80.84	22.38	15.54	28.65	3.62	48.97	100	100
1949-50—								
Number .. ..	33,673	207,600	6,442	266,476	1,481	454,900	41,596	928,976
Average per establish- ment .. ..	6.17	..	41.37	..	307.16	..	22.33	..
Proportion of total %	80.95	22.35	15.49	28.68	3.56	48.97	100	100
1950-51—								
Number .. ..	34,885	214,044	6,665	274,621	1,597	488,420	43,147	977,085
Average per establish- ment .. ..	6.14	..	41.20	..	305.84	..	22.65	..
Proportion of total %	80.85	21.91	15.45	28.11	3.70	49.98	100	100

### § 4. Power Equipment in Factories.

1. **General.**—In 1936-37 statistics of power equipment in factories were collected on a basis different from that previously in use. Information now obtained relates to the "rated horse-power" of engines ordinarily in use and of engines in reserve or idle, omitting obsolete engines. In addition, particulars of the power equipment of Central Electric Stations are collected in greater detail. To avoid duplication it is essential that some distinction should be made between Central Electric Stations and other classes of industries. In the following tables Central Electric Stations have been treated separately from other factories.

In par. 2 below, 883 factories are shown in 1950-51 as using no power other than hand-power, the distribution of these factories among the various industries being as follows: Lime, Plaster and Asphalt, 10; Industrial and Heavy Chemicals and Acids and Pharmaceutical and Toilet Preparations, 11; Galvanized Ironworking, Tinsmithing, 39; Tailoring and Ready-made Clothing, 246; Dressmaking, 59; Millinery, 20; Bakeries, 89; Cabinet and Furniture Making, 25; all other industries, 384.

2. **Rated Horse-power of Engines in Factories other than Central Electric Stations.**—The following table shows the number of factories using power-driven machinery, those using manual labour only, and the total rated horse-power of engines and electric motors ordinarily in use and in reserve or idle during 1950-51:—

#### FACTORIES(a): TOTAL RATED HORSE-POWER OF ENGINES AND ELECTRIC MOTORS, 1950-51.

State.	Number of Establishments.(a)			Rated Horse-power of Engines and Motors.	
	Using Power.	Others.	Total.	Ordinarily in use.	In Reserve or Idle (omitting obsolete)
New South Wales ..	16,980	59	17,039	1,451,191	186,003
Victoria ..	13,153	282	13,435	928,163	134,884
Queensland ..	4,518	213	4,731	338,836	40,232
South Australia ..	2,964	143	3,107	251,764	33,336
Western Australia ..	2,840	158	2,998	130,200	20,610
Tasmania ..	1,455	28	1,483	150,804	21,722
Australia ..	41,910	883	42,793	3,250,958	436,787

(a) Excludes Central Electric Stations.

3. **Rated Horse-power of Engines and Electric Motors Ordinarily in Use.**—(i) *According to Type, States.* Particulars of the types of engines, etc., and the total rated horse-power ordinarily in use in each State are given below:—

#### FACTORIES(a): TOTAL RATED HORSE-POWER OF ENGINES AND ELECTRIC MOTORS ORDINARILY IN USE, 1950-51.

State.	Steam.		Internal Combustion.			Water.	Motors driven by electricity.		Total. (b)
	Reciprocating.	Turbine.	Gas.	Light Oils.	Heavy Oils.		Purchased.	Own Generation. (c)	
N.S.W. ..	106,218	77,445	2,704	53,159	68,765	172	1,142,728	66,779	1,451,191
Victoria ..	23,210	39,442	2,917	12,703	17,096	1,508	831,287	34,541	928,163
Queensland ..	83,451	15,100	6,618	10,080	20,338	..	203,249	56,309	338,836
S. Australia ..	5,723	6,011	1,676	3,922	13,920	10	220,502	18,066	251,764
W. Australia ..	9,660	144	1,963	5,354	12,687	..	100,392	6,053	130,200
Tasmania ..	2,402	2,003	1	6,197	2,454	192	137,555	40	150,804
Australia ..	230,664	140,145	15,879	91,415	135,260	1,882	2,635,713	181,788	3,250,958

(a) Excludes Central Electric Stations.

(b) Excludes particulars in column (c).

(ii) *According to Type, Australia.* In the following table details of the total rated horse-power of the various types of engines in use are given for Australia for the years 1938-39, 1945-46 and 1947-48 to 1950-51.

**FACTORIES(a) : TYPES AND TOTAL RATED HORSE-POWER OF ENGINES, ETC., ORDINARILY IN USE, AUSTRALIA.**

Year.	Steam.		Internal Combustion.			Water.	Motors driven by electricity.		Total (b)
	Reciprocating.	Turbine.	Gas.	Light Oils.	Heavy Oils.		Purchased.	Own Generation (c)	
1938-39 ..	268,409	84,149	32,914	17,970	55,800	1,616	1,017,911	179,889	1,478,769
1945-46 ..	236,378	117,736	20,481	23,876	56,189	1,737	1,755,036	226,692	2,211,433
1947-48 ..	235,116	110,646	17,182	33,656	63,728	1,830	2,073,409	177,598	2,535,567
1948-49 ..	229,953	120,289	16,024	55,158	72,165	1,515	2,249,360	177,296	2,744,464
1949-50 ..	232,047	135,217	15,035	67,986	92,151	1,703	2,421,174	186,566	2,965,313
1950-51 ..	230,664	140,145	15,879	91,415	135,260	1,882	2,635,713	181,788	3,250,958

(a) Excludes Central Electric Stations.

(b) Excludes particulars in column (c).

(iii) *In Classes of Industry, 1950-51.* The next table shows the total rated horse-power of engines and electric motors ordinarily in use in the various classes of industry in each State.

**FACTORIES(a) : TOTAL RATED HORSE-POWER OF ENGINES AND ELECTRIC MOTORS ORDINARILY IN USE, 1950-51.**

Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metalliferous Mine and Quarry Products	74,027	39,004	10,753	12,279	7,316	13,350	156,729
II. Bricks, Pottery, Glass, etc.	43,365	26,413	6,001	6,760	5,745	1,792	90,076
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease	87,762	70,860	5,490	13,686	9,346	2,288	189,432
IV. Industrial Metals, Machines, Conveyances	685,905	267,972	75,363	115,013	34,640	44,360	1,223,253
V. Precious Metals, Jewellery and Plate	4,375	5,605	380	970	488	58	11,876
VI. Textiles and Textile Goods (not Dress)	55,195	82,026	4,958	6,650	2,009	4,704	155,542
VII. Skins and Leather (not Clothing or Footwear)	18,372	17,981	4,207	4,648	2,117	1,436	48,761
VIII. Clothing (except Knitted)	27,756	26,970	2,968	2,558	1,728	498	62,478
IX. Food, Drink and Tobacco	171,552	145,016	136,618	44,624	29,596	13,657	541,063
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving	136,707	98,093	70,497	22,348	27,195	25,790	380,630
XI. Furniture of Wood, Bedding, etc.	17,645	15,610	7,143	5,745	3,697	1,713	51,553
XII. Paper, Stationery, Printing, Bookbinding, etc.	57,463	67,386	6,715	11,096	4,278	40,484	187,422
XIII. Rubber	38,910	38,900	5,489	2,230	364	224	86,117
XIV. Musical Instruments	2,422	352	43	13	7	..	2,837
XV. Miscellaneous Products	16,128	16,163	358	1,584	412	339	34,984
Total, Classes I. to XV.	1,437,584	918,351	336,983	250,204	128,938	150,693	3,222,753
XVI. Gas Works	13,607	9,812	1,853	1,560	1,262	111	28,205
Grand Total	1,451,191	928,163	338,836	251,764	130,200	150,804	3,250,958

(a) Excludes Central Electric Stations.

4. Capacity of Engines and Generators installed in Central Electric Stations.—  
(i) *According to Type, Australia.* Particulars of the type and the capacity of engines and generators installed in Central Electric Stations in Australia in 1950–51 are given in the following table :—

CENTRAL ELECTRIC STATIONS : POWER EQUIPMENT, AUSTRALIA, 1950–51.

Particulars.		Capacity of Engines and Generators.						
		Steam.		Internal Combustion.			Water.	Total.
		Recipro- cating.	Turbine.	Gas.	Light Oils.	Heavy Oils.		
Engines installed	Rated H.P.	17,362	2,703,225	19,374	7,116	236,620	393,742	3,377,439
Generators installed—								
Kilowatt capacity—								
Total installed	K.W.	11,291	2,008,583	14,793	4,343	155,199	283,520	2,477,729
Effective capacity	„	10,914	1,725,808	11,357	3,083	143,385	288,862	2,183,409
Horse-power equivalent—								
Total installed	H.P.	15,135	2,692,465	19,830	5,822	208,041	380,053	3,321,346
Effective capacity	„	14,630	2,313,411	15,224	4,133	192,204	387,214	2,926,816

(ii) *States.* Details of the capacity of engines and generators installed in Central Electric Stations in each State in 1950–51 are given in the next table.

CENTRAL ELECTRIC STATIONS : POWER EQUIPMENT, 1950–51.

Particulars.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Engines installed	Rated H.P.	1,353,272	919,345	348,247	281,623	203,902	271,050	3,377,439
Generators installed—								
Kilowatt capacity—								
Total installed	K.W.	1,042,039	642,788	245,776	206,925	145,721	194,480	2,477,729
Effective capacity	„	895,775	585,324	160,573	205,769	135,846	200,122	2,183,409
Horse-power equivalent—								
Total installed	H.P.	1,396,833	861,644	329,458	277,379	195,335	260,697	3,321,346
Effective capacity	„	1,200,768	784,616	215,244	275,829	182,099	268,260	2,926,816

## § 5. Employment in Factories.

1. *Number Employed.*—(i) *General.* All persons employed in the manufacturing activities of a factory, including proprietors who work in their own business and “outworkers” (see par. 4 (ii) hereinafter), are counted as factory employees, while those employed in selling and distributing, such as salesmen, travellers, collectors, carters employed solely on outward delivery of manufactured goods and retailing storemen are excluded. Prior to 1945–46 the occupational grouping collected was (i) working proprietors; (ii) managers and overseers; (iii) accountants and clerks; (iv) enginedrivers and firemen; (v) workers in factory, skilled and unskilled; (vi) carters and messengers; and (vii) persons working regularly at home for the establishment. This grouping did not record separate details for technical staff (e.g., chemists, draftsmen, etc.) and supervisory staff and in 1945–46 the set-up on the collection form was amended to obtain the following groupings :—(i) Working proprietors; (ii) managerial and clerical staff including salaried managers and working directors; (iii) chemists, draftsmen and other laboratory and research staff; (iv) foremen and overseers; (v) skilled and unskilled workers; (vi) carters (excluding delivery only), messengers and persons working regularly at home.

Prior to the year 1928-29 average employment in factories was computed by dividing the sum of the number employed each week by the number of weeks worked. The figures therefore, represented the average number employed over the period worked, which, for many factories, was less than a full year. Commencing with the year 1928-29 the figures represent the equivalent average number employed over a full year of fifty-two weeks. The classification of factories according to the number of persons employed (*see* § 3 *ante*), however, is still based on the old method, but for all other purposes the average number engaged over the full year is used.

(ii) *Australia.* Particulars of the numbers employed, the increase in employment and the rate per cent. of such increase are given for years 1938-39, 1945-46 and 1947-48 to 1950-51 in the following table:—

**FACTORIES : EMPLOYMENT, AUSTRALIA.**

Year.	Males.			Females.			Persons.		
	Number Em- ployed.	Increase on Preceding Year.		Number Em- ployed.	Increase on Preceding Year.		Number Em- ployed.	Increase on Preceding Year.	
		Number.	Per Cent.		Number.	Per Cent.		Number.	Per Cent.
1938-39 ..	412,591	3,989	0.98	152,515	1,957	1.30	565,106	5,946	1.06
1945-46 ..	548,888	12,995	2.42	196,370	-18,316	-8.53	745,258	-5,321	-0.71
1947-48 ..	640,925	36,625	6.06	207,951	7,322	3.65	848,876	43,947	5.46
1948-49 ..	670,076	29,151	4.55	220,156	12,205	5.87	890,232	41,356	4.87
1949-50 ..	689,508	19,432	2.90	228,153	7,997	3.63	917,661	27,429	3.08
1950-51 ..	726,226	36,718	5.33	242,867	14,714	6.45	969,093	51,432	5.60

NOTE.—Minus sign (-) indicates decrease.

(iii) *States.* The following table shows, for the same years (a) the average number of persons employed in manufacturing industries in each State; (b) for each State, the percentage of the total number employed in factories in Australia; and (c) the number so employed per ten thousand of the mean population in each State and Australia.

**FACTORIES : EMPLOYMENT.**

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
AVERAGE NUMBER EMPLOYED DURING FULL YEAR (52 WEEKS).							
1938-39 ..	228,781	201,831	54,110	43,371	23,211	13,802	565,106
1945-46 ..	310,870	256,249	65,460	63,188	30,256	19,235	745,258
1947-48 ..	363,365	278,271	76,754	73,346	35,967	21,173	848,876
1948-49 ..	378,380	292,006	82,945	75,945	38,354	22,602	890,232
1949-50 ..	382,385	303,476	88,963	78,598	40,733	23,506	917,661
1950-51 ..	406,965	316,792	94,579	83,169	43,761	23,827	969,093

**PERCENTAGE OF AUSTRALIAN TOTAL.**

1938-39 ..	40.48	35.72	9.58	7.67	4.11	2.44	100.00
1945-46 ..	41.72	34.38	8.78	8.48	4.06	2.58	100.00
1947-48 ..	42.81	32.78	9.04	8.64	4.24	2.49	100.00
1948-49 ..	42.50	32.80	9.32	8.53	4.31	2.54	100.00
1949-50 ..	41.67	33.07	9.69	8.57	4.44	2.56	100.00
1950-51 ..	41.99	32.69	9.76	8.58	4.52	2.46	100.00

FACTORIES: EMPLOYMENT—*continued.*

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
PER 10,000 OF POPULATION.							
1938-39 .. ..	836	1,078	537	729	497	581	815
1945-46 .. ..	1,060	1,272	604	1,002	617	769	1,003
1947-48 .. ..	1,209	1,345	690	1,124	707	809	1,111
1948-49 .. ..	1,235	1,382	731	1,142	734	843	1,141
1949-50 .. ..	1,206	1,398	765	1,144	746	847	1,140
1950-51 .. ..	1,243	1,416	793	1,170	766	829	1,166

2. Rates of Increase, 1938-39, 1945-46 and 1947-48 to 1950-51.—The percentage increase on the average number of persons employed in the preceding year is shown below for each State:—

## FACTORIES: ANNUAL PERCENTAGE INCREASE OF PERSONS EMPLOYED.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
1938-39 .. ..	1.74	0.02	3.82	-1.62	0.34	4.80	1.06
1945-46 .. ..	-1.21	-0.54	2.07	-3.49	3.81	-1.41	-0.71
1947-48 .. ..	5.90	4.71	7.20	3.73	6.39	6.20	5.46
1948-49 .. ..	4.13	4.94	8.07	3.54	6.64	6.75	4.87
1949-50 .. ..	1.06	3.93	7.26	3.49	6.20	4.00	3.08
1950-51 .. ..	6.43	4.39	6.31	5.82	7.43	1.37	5.60

NOTE.—Minus sign (-) indicates decrease.

3. Persons Employed in Classes of Industry.—(i) *Australia.* The following table shows the average number of persons employed in factories in each industrial class in Australia for the years 1938-39, 1945-46 and 1947-48 to 1950-51:—

## FACTORIES: PERSONS EMPLOYED IN INDUSTRIAL CLASSES, AUSTRALIA.

Class of Industry.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
I. Treatment of Non-metalliferous Mine and Quarry Products .. ..	10,343	9,929	14,263	15,572	16,598	18,436
II. Bricks, Pottery, Glass, etc. ..	15,709	13,466	17,536	18,702	19,241	20,449
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease .. ..	19,816	31,471	31,808	33,355	34,525	36,323
IV. Industrial Metals, Machines, Conveyances .. ..	177,677	292,477	320,948	333,313	344,313	373,798
V. Precious Metals, Jewellery and Plate ..	3,726	3,240	6,069	6,414	6,638	6,344
VI. Textiles and Textile Goods (not Dress)	46,082	55,008	61,911	64,855	65,528	68,280
VII. Skins and Leather (not Clothing or Footwear) .. ..	10,767	14,492	15,624	15,902	16,277	15,801
VIII. Clothing (except Knitted) .. ..	86,092	93,370	111,693	118,133	118,757	122,464
IX. Food, Drink and Tobacco .. ..	83,846	105,878	113,595	118,259	122,783	124,350
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving .. ..	30,739	38,346	47,052	51,206	53,169	56,300
XI. Furniture of Wood, Bedding, etc. ..	15,287	13,107	18,546	20,024	21,021	22,818
XII. Paper, Stationery, Printing, Book-binding, etc. .. ..	39,913	39,905	47,813	50,571	53,002	55,328
XIII. Rubber .. ..	7,502	8,699	10,753	11,808	12,382	13,526
XIV. Musical Instruments .. ..	451	459	887	1,250	1,456	1,614
XV. Miscellaneous Products .. ..	7,727	14,838	18,235	18,123	18,561	19,401
Total, Classes I. to XV. .. ..	555,677	734,685	836,733	877,487	904,251	955,232
XVI. Heat, Light and Power .. ..	9,429	10,573	12,143	12,745	13,410	13,861
Grand Total .. ..	565,106	745,258	848,876	890,232	917,661	969,093

(ii) *States.* Particulars of the numbers employed in each industrial class are shown in the following table for each State :—

**FACTORIES : PERSONS EMPLOYED IN INDUSTRIAL CLASSES, 1950-51.**

Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metalliferous Mine and Quarry Products	7,600	5,418	1,642	1,479	1,584	713	18,436
II. Bricks, Pottery, Glass, etc.	11,106	4,856	1,046	1,922	1,208	311	20,449
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease	17,409	12,619	1,385	2,982	1,628	300	36,323
IV. Industrial Metals, Machines, Conveyances	172,256	105,354	31,496	41,435	15,971	7,286	373,798
V. Precious Metals, Jewellery and Plate	2,138	3,265	315	360	247	19	6,344
VI. Textiles and Textile Goods (not Dress)	25,299	35,320	1,997	2,592	816	2,256	68,280
VII. Skins and Leather (not Clothing or Footwear)	6,252	5,626	1,396	1,451	711	365	15,801
VIII. Clothing (except Knitted)	49,947	49,186	9,999	7,230	5,144	958	122,464
IX. Food, Drink and Tobacco	40,342	38,821	23,570	10,757	6,051	4,809	124,350
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving	19,705	14,279	10,388	3,990	4,864	3,074	56,300
XI. Furniture of Wood, Bedding, etc.	8,574	6,503	3,440	2,131	1,500	670	22,818
XII. Paper, Stationery, Printing, Bookbinding, etc.	24,332	18,039	4,704	3,422	2,267	2,564	55,328
XIII. Rubber	6,431	4,948	1,155	733	138	121	13,526
XIV. Musical Instruments	1,320	187	35	50	22	..	1,614
XV. Miscellaneous Products	8,790	8,527	567	905	404	208	19,401
Total, Classes I. to XV.	401,501	312,948	93,135	81,439	42,555	23,654	955,232
XVI. Heat, Light and Power	5,464	3,844	1,444	1,730	1,206	173	13,861
Grand Total	406,965	316,792	94,579	83,169	43,761	123,827	969,093

4. *Persons Employed According to Occupational Status.*—(i) *General.* In the following table the average number of persons employed in each State during 1950-51 are classified according to their occupational status. As mentioned previously, persons employed in factories are now classified on a basis different from that adopted prior to 1945-46. The nature of this change is indicated in § 5, par. 1.

**FACTORIES : PERSONS EMPLOYED—OCCUPATIONAL STATUS, 1950-51.**

State.	Average Number of Persons Employed.						Total.
	Working Proprietors.	Managerial and Clerical Staff, etc.(a)	Chemists, Draftsmen, etc.	Foremen and Overseers.	Workers in Factory (Skilled and Unskilled).	Carters (excluding Delivery only) and Messengers, etc. (b)	
New South Wales ..	13,503	42,258	5,001	16,258	327,454	2,491	406,965
Victoria ..	11,526	31,089	3,745	13,343	254,555	2,534	316,792
Queensland ..	4,169	8,308	764	3,133	77,386	819	94,579
South Australia ..	2,217	8,814	1,034	3,346	67,397	361	83,169
Western Australia	2,302	3,175	285	1,606	36,254	139	43,761
Tasmania ..	980	2,238	292	974	19,223	120	23,827
Australia ..	34,697	95,882	11,121	38,660	782,269	6,464	969,093

(a) Includes salaried managers and working directors.  
at home.

(b) Includes persons working regularly

(ii) *Outworkers.* The term "outworker" or "homeworker" has acquired a special meaning in connexion with manufacturing industries, and embraces only persons to whom work is given out by factories to be done at home. Owing to the amended employment groupings adopted in 1945-46 (see § 5. 1.) persons working regularly at home for factories are now included with carters, messengers and others and separate details are no longer available. The number of "outworkers" employed by factories in 1944-45 was 1,049.

5. *Monthly Employment, 1938-39, 1945-46 and 1948-49 to 1950-51.*—The following table shows the number of persons (excluding working proprietors) employed in factories on the pay-day nearest to the 15th of each month for years up to 1949-50 and on the last pay-day of the month thereafter.

**FACTORIES : MONTHLY EMPLOYMENT, AUSTRALIA.**  
(EXCLUDING WORKING PROPRIETORS.)

Month.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.
<b>MALES.</b>					
July .. .. .	387,693	518,734	627,384	584,355	682,982
August .. .. .	389,979	519,122	628,814	622,254	685,939
September .. .. .	391,576	511,909	629,426	647,097	686,058
October .. .. .	393,977	505,753	629,671	652,632	687,683
November .. .. .	395,192	503,296	632,557	655,266	692,800
December .. .. .	394,438	489,040	631,782	655,475	690,750
January .. .. .	385,742	513,396	632,979	658,251	692,863
February .. .. .	392,056	533,761	637,181	664,716	694,787
March .. .. .	395,146	543,347	641,432	669,505	696,447
April .. .. .	391,005	547,253	640,693	669,558	700,339
May .. .. .	393,609	553,980	644,806	674,432	702,813
June .. .. .	390,973	558,428	646,383	677,682	704,710
<b>FEMALES.</b>					
July .. .. .	147,282	204,705	209,489	195,017	229,987
August .. .. .	149,294	204,150	210,574	211,520	232,090
September .. .. .	151,159	199,331	212,656	219,868	233,914
October .. .. .	152,473	193,587	214,062	222,681	230,282
November .. .. .	152,806	191,689	215,239	225,064	238,740
December .. .. .	151,165	183,899	214,158	223,895	237,141
January .. .. .	141,853	184,810	211,131	223,214	236,018
February .. .. .	151,883	188,632	215,994	228,233	242,902
March .. .. .	154,854	192,699	218,429	231,239	243,181
April .. .. .	152,614	192,084	218,007	230,355	243,011
May .. .. .	150,693	192,215	218,705	231,346	243,768
June .. .. .	148,601	192,137	219,652	231,207	244,268
<b>PERSONS.</b>					
July .. .. .	534,975	723,439	836,873	779,372	912,969
August .. .. .	539,273	723,272	839,388	833,774	918,029
September .. .. .	542,735	711,240	842,082	866,965	919,972
October .. .. .	546,450	699,340	843,733	875,313	923,965
November .. .. .	547,998	694,985	847,796	880,330	931,540
December .. .. .	545,603	672,939	845,940	879,370	927,891
January .. .. .	527,595	698,206	844,110	881,465	928,881
February .. .. .	543,939	722,393	853,175	892,949	937,689
March .. .. .	550,000	736,046	859,861	900,744	939,628
April .. .. .	543,619	739,337	858,700	899,913	943,350
May .. .. .	544,302	746,195	863,511	905,778	946,581
June .. .. .	539,574	750,565	866,035	908,889	948,978



6. **Distribution of Employees According to Age.**—(i) *States.* The extension of statistics of employment in factories, decided upon at the Conference of Australian Statisticians held in 1945, permits of a distribution of employees (excluding working proprietors) into seven age-groups from 1945-46 onwards, instead of three as in previous years. The particulars are collected as at June. The numbers employed in each age-group in June, 1951, are given below :—

**FACTORIES : DISTRIBUTION OF EMPLOYEES ACCORDING TO AGE, JUNE, 1951.**

(EXCLUDING WORKING PROPRIETORS.)

Age Groups.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
<b>MALES.</b>							
Under 16 years ..	2,184	2,700	1,667	721	755	102	8,219
16 years ..	4,403	2,868	1,581	810	847	328	10,837
17 " ..	5,103	3,295	1,510	927	887	404	12,126
18 " ..	5,670	3,345	1,549	1,003	840	413	12,820
19 " ..	5,408	3,253	1,444	949	763	384	12,201
20 " ..	5,722	3,513	1,527	1,057	733	383	12,935
21 " and over ..	26,441	198,053	65,980	60,253	30,251	16,624	635,572
<b>Total ..</b>	<b>292,901</b>	<b>217,117</b>	<b>75,258</b>	<b>65,720</b>	<b>35,076</b>	<b>18,638</b>	<b>704,710</b>

<b>FEMALES.</b>							
Under 16 years ..	1,767	2,139	1,178	733	378	41	6,236
16 years ..	3,377	2,527	948	620	490	201	8,163
17 " ..	3,743	2,859	998	653	494	253	9,000
18 " ..	4,474	3,136	1,033	705	582	252	10,182
19 " ..	4,417	3,073	882	642	537	253	9,804
20 " ..	4,362	2,955	902	608	525	257	9,699
21 " and over ..	84,014	75,508	11,477	12,268	4,512	3,405	191,184
<b>Total ..</b>	<b>106,154</b>	<b>92,197</b>	<b>17,418</b>	<b>16,319</b>	<b>7,518</b>	<b>4,662</b>	<b>244,268</b>

<b>PERSONS.</b>							
Under 16 years ..	3,951	4,929	2,845	1,454	1,133	143	14,455
16 years ..	7,780	5,395	2,529	1,430	1,337	529	19,000
17 " ..	8,846	6,154	2,508	1,580	1,381	657	21,126
18 " ..	10,144	6,481	2,582	1,708	1,422	665	23,002
19 " ..	9,825	6,326	2,326	1,591	1,300	637	22,005
20 " ..	10,084	6,468	2,429	1,755	1,258	640	22,634
21 " and over ..	348,425	273,561	77,457	72,521	34,763	20,029	826,756
<b>Total ..</b>	<b>399,055</b>	<b>309,314</b>	<b>92,676</b>	<b>82,039</b>	<b>42,594</b>	<b>23,300</b>	<b>948,978</b>

(ii) *Australia.* As comparative details based on the new age grouping are not available for the years prior to 1945-46, the following table shows the age distribution in sexes for Australia in June, 1939, 1946 and 1948 to 1951 on the old basis.

**FACTORIES : DISTRIBUTION OF EMPLOYEES ACCORDING TO AGE, AUSTRALIA.**  
(EXCLUDING WORKING PROPRIETORS.)

In June—	Under 16 Years.		16 and under 21 Years.		21 Years and Over.		Total.	
	No.	Per Cent.	No.	Per Cent.	No.	Per Cent.	No.	Per Cent.
<b>MALES.</b>								
1939 ..	16,109	4.12	76,418	19.55	298,446	76.33	390,973	100.00
1946 ..	9,016	1.61	69,413	12.43	479,999	85.96	558,428	100.00
1948 ..	7,734	1.24	68,818	11.01	548,467	87.75	625,019	100.00
1949 ..	7,791	1.20	66,035	10.22	572,557	88.58	646,383	100.00
1950 ..	7,812	1.15	63,316	9.34	606,554	89.51	677,682	100.00
1951 ..	8,219	1.17	60,919	8.64	635,572	90.19	704,710	100.00
<b>FEMALES.</b>								
1939 ..	15,497	10.43	56,273	37.87	76,831	51.70	148,601	100.00
1946 ..	7,881	4.10	53,018	27.59	131,238	68.31	192,137	100.00
1948 ..	6,549	3.15	52,201	25.09	149,291	71.76	208,041	100.00
1949 ..	6,326	2.88	51,562	23.47	161,764	73.65	219,652	100.00
1950 ..	6,055	2.62	48,021	20.77	177,131	76.61	231,207	100.00
1951 ..	6,236	2.55	46,848	19.18	191,184	78.27	244,268	100.00
<b>PERSONS.</b>								
1939 ..	31,606	5.86	132,691	24.59	375,277	69.55	539,574	100.00
1946 ..	16,897	2.25	122,431	16.31	611,237	81.44	750,565	100.00
1948 ..	14,283	1.71	121,019	14.53	697,758	83.76	833,060	100.00
1949 ..	14,117	1.63	117,597	13.58	734,321	84.79	866,035	100.00
1950 ..	13,867	1.53	111,337	12.25	783,685	86.22	908,889	100.00
1951 ..	14,455	1.52	107,767	11.36	826,756	87.12	948,978	100.00

**§ 6. Sex Distribution in Factories.**

1. *Distribution According to Sex of Persons Employed.*—(i) *General.* In New South Wales the ratio of the number of females engaged in factories to the number of males during 1886 was about one to seven; in 1891 one to six; in 1903 it became about one to four; and in 1950-51 was one to three. In Victoria the ratio of females to males during the year 1886 was about one to five. Five years later (1891) it was somewhat less, but in 1896 had increased to about one to three, and in 1950-51 was about two to five. For Australia as a whole the ratio of females employed in factories was highest in 1943-44 at about two females to five males but by 1946-47 the ratio had declined to the level of one female to three males, where it has since remained.

(ii) *Average Number of Males and Females Employed.* The following table shows the average number of males and females employed in factories in each State for 1938-39, 1945-46 and 1947-48 to 1950-51 :—

**FACTORIES : MALES AND FEMALES EMPLOYED.**

State.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
<b>MALES.</b>						
New South Wales ..	167,172	227,454	272,600	282,312	284,055	301,307
Victoria ..	136,218	178,951	199,003	208,184	216,198	224,919
Queensland ..	43,941	53,587	63,526	68,385	72,948	77,182
South Australia ..	35,406	49,523	59,071	61,005	63,294	67,015
Western Australia ..	18,704	24,268	29,517	31,682	33,711	36,349
Tasmania ..	11,150	15,105	17,208	18,508	19,302	19,454
Australia ..	412,591	548,888	640,925	670,076	689,508	726,226
<b>FEMALES.</b>						
New South Wales ..	61,609	83,416	90,765	96,068	98,330	105,658
Victoria ..	65,613	77,298	79,268	83,822	87,278	91,873
Queensland ..	10,169	11,873	13,228	14,560	16,015	17,397
South Australia ..	7,965	13,665	14,275	14,940	15,304	16,154
Western Australia ..	4,507	5,988	6,450	6,672	7,022	7,412
Tasmania ..	2,652	4,130	3,965	4,094	4,204	4,373
Australia ..	152,515	196,370	207,951	220,156	228,153	242,867

2. **Rate of Variation for each Sex.**—The percentages of increase or decrease on the average numbers of males and females employed in the preceding year are shown below for the years 1938-39, 1945-46 and 1947-48 to 1950-51 :—

**FACTORIES : ANNUAL PERCENTAGE INCREASES OF MALES AND FEMALES EMPLOYED.**

State.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
<b>MALES.</b>						
New South Wales ..	1.69	1.65	6.60	3.56	6.17	6.07
Victoria ..	0.04	2.60	5.43	4.61	3.85	4.03
Queensland ..	3.79	4.09	7.11	7.65	6.67	5.80
South Australia ..	-2.39	0.95	4.11	3.27	3.75	5.88
Western Australia ..	-0.30	8.32	7.04	7.33	6.40	7.83
Tasmania ..	4.40	2.37	6.31	7.55	4.29	0.79
Total ..	0.98	2.42	6.06	4.55	2.90	5.33
<b>FEMALES.</b>						
New South Wales ..	1.88	- 8.24	3.87	5.84	2.35	7.45
Victoria ..	-0.03	- 7.11	2.95	5.75	4.12	5.26
Queensland ..	3.96	- 6.16	7.63	10.07	9.99	8.63
South Australia ..	1.98	-16.76	2.17	4.66	2.44	5.55
Western Australia ..	3.06	-11.18	3.51	3.44	5.25	5.55
Tasmania ..	6.51	-13.14	5.71	3.25	2.72	4.02
Total ..	1.30	- 8.53	3.65	5.87	3.63	6.45

NOTE.—The minus sign (—) indicates decrease.

3. **Masculinity of Persons Employed in Factories.**—The extent to which females are employed in the factories of Australia may perhaps be more clearly shown by giving the masculinity of persons employed in each State. The following table shows particulars for the years 1938-39, 1945-46 and 1947-48 to 1950-51 :—

**FACTORIES : MASCULINITY<sup>(a)</sup> OF PERSONS EMPLOYED.**

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
1938-39 .. ..	271	208	432	445	415	420	271
1945-46 .. ..	273	232	451	362	405	366	280
1947-48 .. ..	300	251	480	414	458	434	308
1948-49 .. ..	294	248	470	408	475	452	304
1949-50 .. ..	289	248	455	414	480	459	302
1950-51 .. ..	285	245	444	415	490	445	299

(a) Number of males per 100 females.

For a number of years prior to 1926-27 there were on the average 300 males employed in factories for every 100 females, but by 1932-33, as a result of the particularly severe effect of the depression on the heavier industries where males predominate in number, there were only 239 males employed to every 100 females. With the subsequent recovery of employment in the heavier industries the proportion of males per 100 females increased to 271 in 1937-38 and 1938-39. The enlistment of men in the armed services and the expansion of industry and the consequential absorption of women brought about by the 1939-45 War caused a decrease in masculinity from 1938-39 to 1943-44. However, following the cessation of hostilities in 1945 and the return of servicemen to civilian life, the number of females employed in factories declined and masculinity increased, and in 1950-51 there were 299 males to every 100 females employed in factories.

4. **Employment of Females in Particular Industries.**—(i) *General.* The greater number of females in manufacturing industries are employed in four classes, namely :— IV., Industrial Metals, Machines, etc.; VI., Textiles; VIII., Clothing; and IX., Food, Drink and Tobacco. In 1950-51 these industries accounted for 80.44 per cent. of all females in factories. In two classes only did the number of females exceed the number of males, namely, in Class VI., Textiles, where there were 125 females to every 100 males and in Class VIII., Clothing, with 251 females per 100 males. The following tables show the average number of males and females employed in each of these classes in 1950-51 :—

**MALES AND FEMALES EMPLOYED IN PARTICULAR INDUSTRIES, 1950-51.**

Class.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
<b>MALES.</b>							
IV. Industrial Metals, etc.	153,165	93,535	29,749	37,348	15,296	6,951	336,044
VI. Textiles and Textile Goods (not Dress)	11,039	15,885	727	1,389	408	920	30,368
VIII. Clothing (except Knitted)	13,363	14,937	2,602	2,082	1,543	366	34,893
IX. Food, Drink and Tobacco	27,937	28,257	19,979	8,023	4,661	3,371	92,228
All Other Classes	95,803	72,305	24,125	18,173	14,441	7,846	232,693
<b>Total</b>	<b>301,307</b>	<b>224,919</b>	<b>77,182</b>	<b>67,015</b>	<b>36,349</b>	<b>19,454</b>	<b>726,226</b>
<b>FEMALES.</b>							
IV. Industrial Metals, etc.	19,091	11,819	1,747	4,087	675	335	37,754
VI. Textiles and Textile Goods (not Dress)	14,260	19,435	1,270	1,203	408	1,336	37,912
VIII. Clothing (except Knitted)	36,584	34,249	7,397	5,148	3,601	592	87,571
IX. Food, Drink and Tobacco	12,405	10,564	3,591	2,734	1,390	1,438	32,122
All Other Classes	23,318	15,806	3,392	2,982	1,338	672	47,508
<b>Total</b>	<b>105,658</b>	<b>91,873</b>	<b>17,397</b>	<b>16,154</b>	<b>7,412</b>	<b>4,373</b>	<b>242,867</b>

(ii) *Females Employed in Clothing Manufacture.* The employment of females in the several industries of Class VIII., Clothing—in which class the largest number of females is employed—and the relation of their number to that of the males so employed are shown in the following table :—

**FEMALES EMPLOYED IN CLOTHING INDUSTRIES, 1950-51.**

Industry.	New South Wales.			Victoria.			Other States.		
	Males.	Fe-males.	Femi-ninity. (a)	Males.	Fe-males.	Femi-ninity. (a)	Males.	Fe-males.	Femi-ninity. (a)
Tailoring and Ready-made Clothing	3,499	16,327	467	3,268	7,634	234	1,829	5,978	327
Waterproof and Oilskin Clothing	119	725	609	155	434	280	15	116	773
Dressmaking, Hemstitching	196	2,661	1,358	1,541	10,686	693	190	3,860	2,032
Millinery	234	1,439	615	217	907	418	43	583	1,356
Shirts, Collars and Under-clothing	553	4,727	855	589	4,602	781	194	2,205	1,137
Foundation Garments	124	1,582	1,276	190	1,204	634	22	212	964
Handkerchiefs, Ties and Scarves	173	983	568	87	408	469	2	6	300
Hats and Caps	657	676	103	399	272	68	25	134	536
Gloves	107	372	348	116	376	324	38	176	463
Boots and Shoes	3,903	4,208	108	5,587	5,718	102	2,333	1,974	85
Boot and Shoe Repairing	1,401	88	6	624	29	5	705	34	5
Boot and Shoe Accessories	235	249	106	389	284	73	28	4	14
Umbrellas and Walking Sticks	49	93	190	26	62	238	18	49	272
Dyeworks and Cleaning (including Renovating and Repairing)	2,063	2,169	105	1,676	1,435	86	1,151	1,407	122
Other	50	285	570	73	198	271	..	..	..
<b>Total</b>	<b>13,363</b>	<b>36,584</b>	<b>274</b>	<b>14,937</b>	<b>34,249</b>	<b>229</b>	<b>6,593</b>	<b>16,738</b>	<b>254</b>

(a) Number of females per 100 males.

### § 7. Child Labour in Factories.

1. *Conditions of Child Labour.*—The employment of young persons in factories in the States is regulated by Acts of Parliament, as is the case with the employment of female labour. The object of the restrictions imposed is to ensure, amongst other things, that a proper period shall be devoted to primary education, and that the early years of labour shall not exhaust the worker before the attainment of full growth.

2. *Number of Children Employed, 1939, 1946 and 1948 to 1951.*—In the returns for the various States, the term "child" denotes any person under sixteen years of age. The decline in the number of children employed from the peak of 33,553 reached in June, 1940 to 14,455 in June, 1951, which is most marked in all States excepting Western Australia, was probably caused by several factors, including (i) the raising of the school leaving age in New South Wales and Tasmania, (ii) fewer children available for employment owing to the decline in the birth rate which occurred about 1929, and (iii) the high level of employment which enabled parents to keep their children at school beyond the statutory leaving age.

The following table shows the number of children of each sex employed in manufacturing industries in June of the years mentioned.

#### FACTORIES : CHILDREN(a) EMPLOYED, JUNE.

State.	1939.	1946.	1948.	1949.	1950.	1951.
MALES.						
New South Wales .. ..	5,759	2,451	2,125	2,115	2,088	2,184
Victoria .. ..	6,167	3,449	2,743	2,806	2,670	2,790
Queensland .. ..	1,790	1,237	1,265	1,336	1,495	1,667
South Australia .. ..	1,296	829	732	722	724	721
Western Australia .. ..	705	739	704	665	716	755
Tasmania .. ..	392	311	165	147	119	102
Australia .. ..	16,109	9,016	7,734	7,791	7,812	8,219
FEMALES.						
New South Wales .. ..	7,084	2,265	1,831	1,736	1,584	1,767
Victoria .. ..	5,005	3,007	2,564	2,354	2,181	2,139
Queensland .. ..	1,334	1,020	955	1,068	1,140	1,178
South Australia .. ..	1,053	885	722	683	716	733
Western Australia .. ..	521	478	357	390	362	378
Tasmania .. ..	500	226	120	95	72	41
Australia .. ..	15,497	7,881	6,549	6,326	6,055	6,236
TOTAL.						
New South Wales .. ..	12,843	4,716	3,956	3,851	3,672	3,951
Victoria .. ..	11,172	6,456	5,307	5,160	4,851	4,929
Queensland .. ..	3,124	2,257	2,220	2,404	2,635	2,845
South Australia .. ..	2,349	1,714	1,454	1,405	1,440	1,454
Western Australia .. ..	1,226	1,217	1,061	1,055	1,078	1,133
Tasmania .. ..	892	537	285	242	191	143
Australia .. ..	31,606	16,897	14,283	14,117	13,867	14,455

(a) Under sixteen years of age.

3. *Proportion of Children Employed to Total Employees.*—The following table shows the proportion of children to total employees (excluding working proprietors) employed in factories in the various States in June of each of the years 1939, 1946 and 1948 to 1951. In 1951 the proportion was highest in Queensland and lowest in Tasmania.

**FACTORIES : PROPORTION OF CHILDREN EMPLOYED TO TOTAL EMPLOYEES,  
JUNE.**

(Per Cent.)

(EXCLUDING WORKING PROPRIETORS.)

State.	1939.	1946.	1948.	1949.	1950.	1951.
New South Wales .. ..	5.85	1.48	1.11	1.06	0.96	0.99
Victoria .. ..	5.81	2.53	1.95	1.82	1.64	1.59
Queensland .. ..	6.01	3.63	2.88	2.91	2.98	3.07
South Australia .. ..	5.78	2.64	2.01	1.87	1.82	1.77
Western Australia .. ..	5.61	3.99	3.04	2.85	2.69	2.66
Tasmania .. ..	6.78	2.77	1.35	1.08	0.83	0.61
<b>Australia .. ..</b>	<b>5.86</b>	<b>2.25</b>	<b>1.71</b>	<b>1.63</b>	<b>1.53</b>	<b>1.52</b>

4. Industries Employing Child Labour.—The distribution of children employed in factories in June, 1951, and the proportion of children employed to total employees is given in the following table according to the class of industry :—

**FACTORIES : CHILDREN EMPLOYED, BY CLASSES, AUSTRALIA, JUNE, 1951.**

Class of Industry.	Children Employed.		Total Employees. (a)		Proportion of Children Employed to Total Employees. (a)	
	Males.	Females.	Males.	Females.	Males.	Females.
I. Treatment of Non-metalliferous Mine and Quarry Products ..	100	15	17,126	702	%	%
II. Bricks, Pottery, Glass, etc. ..	102	25	18,858	1,682	0.58	2.14
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	191	177	27,934	9,152	0.68	1.93
IV. Industrial Metals, Machines, Conveyances .. ..	3,629	644	330,318	39,134	1.10	1.65
V. Precious Metals, Jewellery and Plate .. ..	78	41	4,549	1,208	1.71	3.39
VI. Textiles and Textile Goods (not Dress) .. ..	490	987	30,636	38,818	1.60	2.54
VII. Skins and Leather (not Clothing or Footwear) .. ..	99	42	11,126	3,640	0.89	1.15
VIII. Clothing (except Knitted) ..	496	3,006	30,343	87,608	1.63	3.43
IX. Food, Drink and Tobacco ..	922	609	87,880	31,038	1.05	1.96
X. Sawmills, Joinery, Boxes, etc.; Wood Turning and Carving ..	564	58	50,891	2,374	1.11	2.44
XI. Furniture of Wood, Bedding, etc.	653	65	17,972	3,532	3.63	1.84
XII. Paper, Stationery, Printing, Bookbinding, etc. .. ..	633	410	39,112	15,246	1.62	2.69
XIII. Rubber .. ..	60	41	10,700	3,022	0.56	1.36
XIV. Musical Instruments .. ..	31	3	1,204	357	2.57	0.84
XV. Miscellaneous Products .. ..	136	112	11,948	6,639	1.14	1.69
<b>Total, Classes I. to XV. ..</b>	<b>8,184</b>	<b>6,235</b>	<b>690,597</b>	<b>244,152</b>	<b>1.19</b>	<b>2.55</b>
XVI. Heat, Light and Power .. ..	35	1	14,113	116	0.25	0.86
<b>Grand Total .. ..</b>	<b>8,219</b>	<b>6,236</b>	<b>704,710</b>	<b>244,268</b>	<b>1.17</b>	<b>2.55</b>

(a) Excludes working proprietors.

5. Apprenticeship.—In all the States, acts are in force for the regulation of the age at which children may be employed in gainful occupations. Legislative provision is also made for the regulation of apprenticeship under the various State Factories Acts or Arbitration Acts. These acts, while laying down general principles, leave to the wages tribunals the actual determination of the conditions under which apprentices may be employed.

### § 8. Salaries and Wages Paid and Value of Production.

Note.—In all tables relating to salaries and wages paid in factories the amounts drawn by working proprietors are excluded.

1. **General.**—The importance of the manufacturing industries of Australia is indicated by the fact that the total value of the output for 1950–51 was £2,151,000,000, of which amount £1,235,000,000 represented the value of the materials used, including containers, etc., tools replaced and repairs to plant and buildings, and £72,000,000 the value of the power, fuel and light used. The difference between the sum of the last two amounts and the value of the output, namely £344,000,000, represents the value of production as defined by the Conference of Statisticians at Sydney in 1925, i.e. “the value of consumable commodities produced during the year, deducting, so far as possible, the value of goods consumed in process of production.” The total amount of salaries and wages paid in factories in 1950–51 was £492,000,000. This figure, which excludes amounts drawn by working proprietors, was the highest ever recorded and shows an increase of £106,000,000 or 27.5 per cent. on that for the previous year.

2. **Salaries and Wages Paid.**—(i) *In Classes of Industry, 1950–51.* The amounts of salaries and wages paid in the various classes of industry in each State are shown in the following table:—

FACTORIES : SALARIES AND WAGES PAID, 1950-51.

(£'000.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metalliferous Mine and Quarry Products	4,447	2,921	805	793	709	347	10,022
II. Bricks, Pottery, Glass, etc.	6,299	2,664	507	1,038	597	149	11,254
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease	9,543	7,256	694	1,569	926	184	20,172
IV. Industrial Metals, Machines, Conveyances	98,474	59,462	14,855	23,309	7,518	3,824	207,442
V. Precious Metals, Jewellery and Plate	972	1,741	112	165	106	7	3,103
VI. Textiles and Textile Goods (not Dress)	11,403	16,660	753	1,304	328	997	31,445
VII. Skins and Leather (not Clothing or Footwear)	3,261	2,985	680	803	339	191	8,259
VIII. Clothing (except Knitted)	18,394	19,826	3,166	2,486	1,594	324	45,790
IX. Food, Drink and Tobacco	19,677	20,245	11,723	5,138	2,883	2,282	61,948
X. Sawmills, Joinery, Boxes, etc.; Wood Turning and Carving	9,212	6,981	4,435	1,882	2,110	1,353	25,973
XI. Furniture of Wood, Bedding, etc.	4,048	2,912	1,347	894	589	254	10,044
XII. Paper, Stationery, Printing, Bookbinding, etc.	12,967	9,877	2,154	1,708	1,021	1,575	29,302
XIII. Rubber	4,034	3,115	540	382	65	58	8,194
XIV. Musical Instruments	586	94	15	23	7	..	725
XV. Miscellaneous Products	4,238	4,027	205	407	144	82	9,103
Total, Classes I. to XV.	207,555	160,766	41,991	41,901	18,936	11,627	482,776
XVI. Heat, Light and Power	3,784	2,441	846	1,178	722	110	9,081
Grand Total	211,339	163,207	42,837	43,079	19,658	11,737	491,857

(ii) *Totals and Averages, 1938–39, 1945–46 and 1947–48 to 1950–51.* The following statement shows the total amount of salaries and wages paid, and the average amount paid per employee in each State, for each of the years indicated. The figures exclude working proprietors and the amounts drawn by them

## FACTORIES : TOTAL AND AVERAGE SALARIES AND WAGES PAID.

Year.	Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
1938-39	Total amount paid £'000	44,606	36,027	10,887	8,169	4,574	2,480	106,743
	Average per employee £	201.77	185.64	210.78	195.57	207.90	188.31	196.31
1945-46	Total amount paid £'000	87,647	70,499	18,012	16,770	7,884	5,007	205,819
	Average per employee £	290.75	284.09	285.00	272.71	273.01	269.85	285.17
1947-48	Total amount paid £'000	125,346	93,802	24,163	24,853	10,736	6,865	285,765
	Average per employee £	357.03	349.36	327.72	348.42	316.26	337.45	348.95
1948-49	Total amount paid £'000	146,536	112,410	29,447	29,510	12,928	8,456	339,287
	Average per employee £	401.06	399.86	371.11	399.22	357.18	389.57	395.60
1949-50	Total amount paid £'000	162,147	130,255	34,748	33,807	15,293	9,646	385,896
	Average per employee £	439.04	446.05	408.67	442.05	397.13	428.30	436.59
1950-51	Total amount paid £'000	211,339	163,207	42,837	43,079	19,658	11,737	491,857
	Average per employee £	537.13	534.64	473.80	532.15	474.15	513.74	526.39

In comparing the figures in the preceding table, regard should be paid to the nature of certain industries which are carried on to a greater extent in some States than in others. In Victoria, for instance, there is a large number of hands employed in Class VIII., Clothing, comprising a relatively high percentage of women and children. The highest average wages per employee in 1950-51 were paid in New South Wales, Victoria and South Australia, in that order.

The average earnings per employee rose annually from 1938-39 to 1943-44 when a record high level of £291 was attained as a result of war-time conditions. In 1944-45 the average dropped to £285 and remained at this level in 1945-46. From 1945-46 average earnings rose each year and in 1950-51 reached a new record level of over £526.

(iii) *Earnings of Males and Females, 1950-51.* The following table shows the amount of salaries and wages paid to males and females in each class of industry in each State :—

FACTORIES : SALARIES AND WAGES PAID—MALES AND FEMALES, 1950-51.  
(£'000.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
MALES.							
I. Treatment of Non-metalliferous Mine and Quarry Products	4,360	2,835	786	775	698	342	9,796
II. Bricks, Pottery, Glass, etc.	5,971	2,518	498	1,000	577	146	10,710
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease	7,982	6,131	603	1,386	876	175	17,153
IV. Industrial Metals, Machines, Conveyances	91,768	55,102	14,355	21,889	7,331	3,725	194,170
V. Precious Metals, Jewellery and Plate	812	1,537	106	156	95	7	2,713
VI. Textiles and Textile Goods (not Dress)	6,460	9,815	380	851	218	529	18,253
VII. Skins and Leather (not Clothing or Footwear)	2,629	2,567	625	724	305	137	7,037
VIII. Clothing (except Knitted)	6,487	7,754	1,066	959	599	155	17,020
IX. Food, Drink and Tobacco	15,553	16,571	10,729	4,291	2,500	1,809	51,453
X. Sawmills, Joinery, Boxes, etc.; Wood Turning and Carving	8,929	6,785	4,310	1,819	2,094	1,337	25,274
XI. Furniture of Wood, Bedding, etc.	3,486	2,622	1,246	786	553	240	8,933
XII. Paper, Stationery, Printing, Bookbinding, etc.	10,589	8,364	1,747	1,420	876	1,451	24,447
XIII. Rubber	3,485	2,760	390	348	61	56	7,100
XIV. Musical Instruments	489	91	15	22	7	..	624
XV. Miscellaneous Products	3,269	3,038	171	323	113	69	6,983
Total, Classes I. to XV.	172,269	128,490	37,027	36,749	16,903	10,228	401,666
XVI. Heat, Light and Power	3,762	2,433	843	1,176	717	108	9,039
Grand Total	176,031	130,923	37,870	37,925	17,620	10,336	410,705



FACTORIES: SALARIES AND WAGES PAID—MALES AND FEMALES,  
1950-51—continued.  
(£'000.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
FEMALES.							
I. Treatment of Non-metalliferous Mine and Quarry Products ..	87	86	19	18	11	5	226
II. Bricks, Pottery, Glass, etc. . .	328	146	9	39	19	2	543
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	1,561	1,125	90	184	50	9	3,019
IV. Industrial Metals, Machines, Conveyances ..	6,707	4,360	500	1,419	187	100	13,273
V. Precious Metals, Jewellery and Plate ..	161	204	6	8	12	..	391
VI. Textiles and Textile Goods (not Dress) ..	4,943	6,845	373	453	111	468	13,193
VII. Skins and Leather (not Clothing or Footwear) ..	632	418	56	79	34	4	1,223
VIII. Clothing (except Knitted) ..	11,907	12,072	2,100	1,527	995	169	28,770
IX. Food, Drink and Tobacco ..	4,124	3,674	994	847	383	473	10,495
X. Sawmills, Joinery, Boxes, etc.; Wood Turning and Carving ..	283	196	125	63	15	16	698
XI. Furniture of Wood, Bedding, etc. ..	562	290	101	108	36	13	1,110
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	2,377	1,513	407	287	145	125	4,854
XIII. Rubber ..	549	354	150	34	4	3	1,094
XIV. Musical Instruments ..	96	4	..	1	..	..	101
XV. Miscellaneous Products ..	969	989	34	84	31	13	2,120
Total, Classes I. to XV. ..	35,286	32,276	4,964	5,151	2,033	1,400	81,110
XVI. Heat, Light and Power ..	22	8	3	3	5	1	42
Grand Total ..	35,308	32,284	4,967	5,154	2,038	1,401	81,152

(iv) Total and Average Earnings of Males and Females, 1938-39, 1945-46 and 1947-48 to 1950-51. Particulars for these years are given in the table hereunder:—

FACTORIES: TOTAL AND AVERAGE SALARIES AND WAGES—MALES AND FEMALES.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
MALES.							
1938-39. Amount paid .. £'000	38,272	29,006	9,920	7,488	4,129	2,234	91,049
Proportion of total %	85.80	80.51	91.12	91.66	90.28	90.10	85.30
Average per employee £	239.24	224.47	238.59	220.95	235.49	212.09	231.84
1945-46. Amount paid .. £'000	73,380	56,773	16,178	14,654	7,038	4,353	172,376
Proportion of total %	83.72	80.53	89.82	87.39	89.27	86.96	83.75
Average per employee £	335.34	330.86	314.56	305.70	306.74	301.35	326.99
1947-48. Amount paid .. £'000	105,027	76,312	21,659	22,035	9,630	6,009	241,732
Proportion of total %	84.58	81.35	89.66	88.60	89.70	88.39	84.59
Average per employee £	405.77	401.32	357.14	385.31	349.33	369.39	394.24
1948-49. Amount paid .. £'000	123,263	90,765	26,331	26,140	11,555	7,503	285,557
Proportion of total %	84.12	80.74	89.42	88.58	89.38	88.73	84.16
Average per employee £	455.88	457.85	405.20	442.11	390.29	425.20	446.20
1949-50. Amount paid .. £'000	135,875	105,135	30,948	29,907	13,692	8,538	324,005
Proportion of total %	83.80	80.71	89.06	88.47	89.53	88.51	83.99
Average per employee £	499.33	510.86	446.87	447.71	433.40	465.44	492.23
1950-51. Amount paid .. £'000	176,031	130,923	37,870	37,925	17,620	10,336	410,705
Proportion of total %	83.29	80.22	88.41	88.04	89.63	88.06	83.50
Average per employee £	609.05	610.44	516.83	583.93	515.67	558.67	591.46

FACTORIES: TOTAL AND AVERAGE SALARIES AND WAGES—MALES AND FEMALES—*continued.*

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
FEMALES.							
1938-39. Amount paid .. £'000	6,334	7,021	967	681	445	246	15,694
Proportion of total %	14.20	19.49	8.88	8.34	9.72	9.90	14.70
Average per employee £	103.66	108.25	96.00	86.44	99.58	93.19	103.92
1945-46. Amount paid .. £'000	14,267	13,726	1,834	2,116	846	654	33,443
Proportion of total %	16.28	19.47	10.18	12.61	10.73	13.04	16.25
Average per employee £	172.65	179.26	155.85	156.05	142.62	159.02	171.88
1947-48. Amount paid .. £'000	19,319	17,490	2,504	2,818	1,106	796	44,033
Proportion of total %	15.42	18.65	10.36	11.34	10.30	11.61	15.41
Average per employee £	215.16	222.98	191.38	199.25	173.38	202.32	213.99
1948-49. Amount paid .. £'000	23,273	21,645	3,116	3,370	1,373	953	53,730
Proportion of total %	15.88	19.26	10.58	11.42	10.62	11.27	15.84
Average per employee £	245.02	261.17	216.90	227.81	208.35	234.25	246.83
1949-50. Amount paid .. £'000	26,272	25,120	3,800	3,900	1,601	1,108	61,801
Proportion of total %	16.20	19.29	10.94	11.53	10.47	11.49	16.01
Average per employee £	270.27	291.35	240.93	257.30	231.50	265.32	274.12
1950-51. Amount paid .. £'000	35,308	32,284	4,967	5,154	2,038	1,401	81,152
Proportion of total %	16.71	19.78	11.59	11.96	10.37	11.94	16.50
Average per employee £	338.08	355.57	289.82	322.04	279.55	322.46	338.12

(v) *Managers, Clerical Staff and Other Employees.* A further analysis of salaries and wages paid is given in the following table for 1950-51 and shows the amounts paid to managerial and clerical staff including salaried managers and working directors, chemists, draftsmen and other laboratory and research staff, and those paid to other employees. As previously mentioned, amounts drawn by working proprietors are excluded in all cases:—

FACTORIES: SALARIES AND WAGES PAID TO MANAGERS, CLERICAL STAFF, ETC., AND OTHER EMPLOYEES, AUSTRALIA, 1950-51.,  
(£'000.)

Class of Industry.	Managers, Clerical Staff, Chemists, Draftsmen, etc.		All Other Employees.	
	Males.	Females.	Males.	Females.
I. Treatment of Non-metalliferous Mine and Quarry Products .. .. .	1,136	159	8,660	67
II. Bricks, Pottery, Glass, etc. .. .. .	868	206	9,843	337
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease .. .. .	3,621	881	13,532	2,138
IV. Industrial Metals, Machines, Conveyances .. .. .	25,431	5,302	168,740	7,970
V. Precious Metals, Jewellery and Plate .. .. .	300	107	2,413	283
VI. Textiles and Textile Goods (not Dress) .. .. .	2,375	916	15,878	12,277
VII. Skins and Leather (not Clothing or Footwear) .. .. .	858	149	6,178	1,074
VIII. Clothing (except Knitted) .. .. .	2,567	1,291	14,453	27,479
IX. Food, Drink and Tobacco .. .. .	7,506	1,882	43,946	8,614
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving .. .. .	2,362	439	22,913	259
XI. Furniture of Wood, Bedding, etc. .. .. .	753	239	8,180	871
XII. Paper, Stationery, Printing, Bookbinding, etc. .. .. .	3,397	1,149	21,051	3,706
XIII. Rubber .. .. .	1,072	213	6,028	880
XIV. Musical Instruments .. .. .	88	27	535	74
XV. Miscellaneous Products .. .. .	1,123	371	5,859	1,750
Total, Classes I. to XV. .. .. .	53,457	13,331	348,209	67,779
XVI. Heat, Light and Power .. .. .	843	36	8,196	6
Grand Total .. .. .	54,300	13,367	356,405	67,785
Average paid per employee .. .. .	784.19	354.00	570.12	335.16

3. Power, Fuel and Light Used.—(i) *In Classes of Industry, 1950-51.* The expenditure by factories on power, fuel and light, including the value of lubricants and water, is of considerable importance; in 1950-51 it amounted to a new high level of £71,682,000, an increase of £16,852,000 as compared with the previous year and approximately four and one half times the corresponding value in 1938-39. The following table shows the value of power, fuel and light, etc., used in the different classes of industry:—

FACTORIES : VALUE OF POWER, FUEL AND LIGHT USED(a), 1950-51.  
(£'000.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metalliferous Mine and Quarry Products ..	998	722	276	262	261	136	2,655
II. Bricks, Pottery, Glass, etc. ..	2,349	1,075	143	295	242	66	4,170
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	1,925	1,218	126	433	174	45	3,921
IV. Industrial Metals, Machines, Conveyances ..	12,123	2,547	717	2,593	427	524	18,931
V. Precious Metals, Jewellery and Plate ..	52	65	6	14	5	..	142
VI. Textiles and Textile Goods (not Dress) ..	823	1,195	37	138	25	58	2,276
VII. Skins and Leather (not Clothing or Footwear) ..	270	332	50	99	39	38	828
VIII. Clothing (except Knitted) ..	463	516	79	68	46	17	1,189
IX. Food, Drink and Tobacco ..	3,435	3,041	1,655	894	578	257	9,860
X. Sawmills, Joinery, Boxes, etc.; Wood Turning and Carving ..	662	353	250	75	133	74	1,547
XI. Furniture of Wood, Bedding, etc. ..	86	51	26	24	12	4	203
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	653	640	69	121	37	375	1,895
XIII. Rubber ..	473	533	51	38	7	9	1,111
XIV. Musical Instruments ..	30	3	..	..	..	..	33
XV. Miscellaneous Products ..	233	204	13	26	5	3	484
Total, Classes I. to XV. ..	24,575	12,495	3,498	5,080	1,991	1,606	49,245
XVI. Heat, Light and Power ..	10,806	4,876	2,797	2,187	1,768	3	22,437
Grand Total ..	35,381	17,371	6,295	7,267	3,759	1,609	71,682

(a) Includes value of lubricants and water.

(ii) *Values of Items, 1950-51.* The following table shows the values of the various items of power, fuel and light used in factories in each State, during the year:—

FACTORIES : VALUE OF ITEMS OF POWER, FUEL AND LIGHT USED(a), 1950-51.  
(£'000.)

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Coal, Black .. ..	12,641	2,828	3,363	(b) 2,247	1,135	396	(b) 22,610
"    Brown .. ..	..	2,701	..	..	..	..	2,701
Brown Coal Briquettes .. ..	..	1,336	..	..	..	..	1,336
Coke .. ..	6,301	752	94	(c) 1,313	97	144	(c) 8,701
Wood .. ..	371	742	354	299	580	172	2,518
Fuel Oil .. ..	5,007	3,041	645	1,227	850	224	10,994
Tar (Fuel) .. ..	349	170	5	62	14	9	609
Electricity .. ..	7,292	4,025	1,244	1,563	723	563	15,410
Gas .. ..	1,521	357	72	107	41	13	2,111
Other (Charcoal, etc.) .. ..	77	372	107	151	102	1	810
Water .. ..	1,132	622	165	167	106	33	2,225
Lubricating Oils .. ..	690	425	246	131	111	54	1,637
Total .. ..	35,381	17,371	6,295	7,267	3,759	1,609	71,682

(a) Includes value of lubricants and water. (b) Includes £507,000, the value of 263,000 tons of Leigh Creek coal. (c) Includes £13,000, the value of 15,000 tons of coke breeze.

(iii) *Quantities of Fuel Used, 1950-51.* The following table shows the quantities of fuel used in factories in each State during the year:—

**FACTORIES : QUANTITIES OF FUEL USED, 1950-51.**

Particulars.	Unit.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Coal, Black .. ..	'000 tons	4,569	622	1,149	(a) 699	459	141	(a) 7,639
"   Brown .. ..	"	"	5,779	"	"	"	"	5,779
Brown Coal Briquettes	"	"	505	"	"	"	"	505
Coke .. ..	"	1,734	150	24	(b) 244	22	16	(b) 2,190
Wood .. ..	"	194	657	249	181	435	126	1,842
Fuel Oil .. ..	'000 gals.	86,368	51,590	8,226	21,974	11,210	3,043	182,411
Tar (Fuel) .. ..	"	20,893	4,665	158	1,971	862	405	28,934

(a) Includes 263,000 tons of Leigh Creek coal. (b) Includes 15,000 tons of coke breeze.

(iv) *Total Value, 1938-39, 1945-46 and 1947-48 to 1950-51.* The next table shows the amounts expended on power, fuel and light during these years:—

**FACTORIES : VALUE OF POWER, FUEL AND LIGHT USED.(a)**  
(£'000.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
1938-39 .. ..	7,652	4,000	1,423	1,018	1,169	438	15,700
1945-46 .. ..	12,207	6,941	2,298	2,851	1,836	904	27,937
1947-48 .. ..	17,314	9,015	3,184	4,281	2,285	1,015	37,094
1948-49 .. ..	21,611	11,337	4,086	5,123	2,745	1,160	46,062
1949-50 .. ..	25,536	13,695	5,119	5,942	3,184	1,354	54,830
1950-51 .. ..	35,381	17,371	6,295	7,267	3,759	1,609	71,682

(a) Includes value of lubricants and water.

4. *Value of Materials Used.—(i) In Classes of Industry, 1950-51.* The value of materials used (which includes the value of containers, packing, etc., the cost of tools replaced and repairs to plant) in factories in Australia in 1950-51 reached £1,235,281,000, representing 57.4 per cent. of the value of the final output (see par. 5). The following table shows the value of the materials used in various classes of industry in each State:—

**FACTORIES : VALUE OF MATERIALS USED, 1950-51.**  
(£'000.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metalliferous Mine and Quarry Products .. ..	11,998	5,316	1,714	1,528	1,126	667	22,349
II. Bricks, Pottery, Glass, etc. .. ..	4,578	2,137	345	879	370	89	8,398
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease .. ..	46,735	27,348	3,826	6,413	4,933	604	89,859
IV. Industrial Metals, Machines, Conveyances .. ..	191,880	81,707	21,323	51,862	10,165	9,884	366,821
V. Precious Metals, Jewellery and Plate .. ..	1,034	2,342	61	119	65	4	3,625
VI. Textiles and Textile Goods (not Dress) .. ..	39,183	60,151	3,750	4,722	2,550	4,416	114,772
VII. Skins and Leather (not Clothing or Footwear) .. ..	18,685	14,031	2,977	14,773	2,057	1,961	54,484
VIII. Clothing (except Knitted) .. ..	33,537	34,103	4,770	2,833	2,143	265	77,651
IX. Food, Drink and Tobacco .. ..	92,339	90,040	79,233	22,204	16,206	9,319	309,341
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving .. ..	22,944	14,483	7,723	4,959	3,168	2,564	55,841
XI. Furniture of Wood, Bedding, etc. .. ..	8,433	6,541	2,697	1,932	1,295	362	21,260
XII. Paper, Stationery, Printing, Bookbinding, etc. .. ..	24,547	18,896	3,127	2,648	1,441	1,926	52,585
XIII. Rubber .. ..	13,748	13,731	1,473	712	141	119	29,924
XIV. Musical Instruments .. ..	947	65	5	4	3	"	1,024
XV. Miscellaneous Products .. ..	6,437	7,253	328	990	105	71	15,184
Total, Classes I. to XV. .. ..	517,025	378,144	133,352	116,578	45,768	32,251	1,223,118
XVI. Heat, Light and Power .. ..	5,397	3,858	1,105	969	684	150	12,163
Grand Total .. ..	522,422	382,002	134,457	117,547	46,452	32,401	1,235,281

(ii) *Total Amount, 1938-39, 1945-46 and 1947-48 to 1950-51.* The following table shows the values of materials used in factories for these years:—

**FACTORIES : VALUE OF MATERIALS USED.**  
(£'000.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1938-39 .. ..	120,502	82,971	42,596	20,309	9,604	5,321	281,303
1945-46 .. ..	201,706	159,798	58,633	37,770	18,361	12,019	488,287
1947-48 .. ..	292,557	209,896	79,174	61,620	24,957	15,525	683,729
1948-49 .. ..	336,914	252,741	97,045	75,227	29,199	19,422	810,548
1949-50 .. ..	384,467	293,528	108,682	83,277	34,750	24,390	929,094
1950-51 .. ..	522,422	382,002	134,457	117,547	46,452	32,401	1,235,281

5. *Value of Output.*—(i) *In Classes of Industry, 1950-51.* The value of the output of factories in the various classes in each State in 1950-51 is shown in the following table. It represents the selling value at the factory of goods made or processed during the year, including by-products. In addition, it includes the amount received for other work done such as repair work, assembling and making up for customers. The difference between the sum of the values of the materials and of the power, fuel and light used, and the value of output is the real value of factory production (*see par. 6*).

**FACTORIES : VALUE OF OUTPUT, 1950-51.**  
(£'000.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metalliferous Mine and Quarry Products .. ..	20,285	11,457	3,371	3,127	2,639	1,450	42,329
II. Bricks, Pottery, Glass, etc. .. ..	15,971	7,286	1,226	2,783	1,612	357	29,235
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease .. ..	77,359	45,720	5,340	10,119	6,874	1,072	146,484
IV. Industrial Metals, Machines, Conveyances .. ..	356,042	175,170	49,938	89,340	22,596	19,658	712,744
V. Precious Metals, Jewellery and Plate .. ..	2,701	5,126	256	397	248	17	8,745
VI. Textiles and Textile Goods (not Dress) .. ..	59,927	90,126	5,098	6,674	3,419	6,413	171,657
VII. Skins and Leather (not Clothing or Footwear) .. ..	24,493	19,859	4,102	16,240	2,723	2,616	70,033
VIII. Clothing (except Knitted) .. ..	63,385	65,834	9,604	6,344	4,682	748	150,597
IX. Food, Drink and Tobacco .. ..	137,066	130,329	101,334	32,026	22,945	13,823	437,523
X. Sawmills, Joinery, Boxes, etc.; Wood Turning and Carving .. ..	39,938	26,849	15,361	8,276	6,892	4,952	102,268
XI. Furniture of Wood, Bedding, etc. .. ..	15,196	11,898	4,936	3,494	2,315	761	38,600
XII. Paper, Stationery, Printing, Bookbinding, etc. .. ..	49,904	37,372	7,004	5,983	3,428	5,514	109,205
XIII. Rubber .. ..	19,081	20,772	2,342	1,364	296	245	44,100
XIV. Musical Instruments .. ..	2,050	188	34	31	14	..	2,317
XV. Miscellaneous Products .. ..	14,084	14,146	675	1,741	331	205	31,182
Total, Classes I. to XV. .. ..	897,482	662,132	210,621	187,939	81,014	57,831	2,097,019
XVI. Heat, Light and Power .. ..	26,430	12,901	5,591	4,417	3,417	793	53,549
Grand Total .. ..	923,912	675,033	216,212	192,356	84,431	58,624	2,150,568

(ii) *Total, 1938-39, 1945-46 and 1947-48 to 1950-51.* The following table shows the value of output in each State during these years:—

**FACTORIES : VALUE OF OUTPUT.**  
(£'000.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1938-39 .. ..	218,419	152,968	63,321	35,005	19,549	11,158	500,420
1945-46 .. ..	367,092	286,090	91,201	66,223	34,023	22,119	867,648
1947-48 .. ..	528,482	377,412	125,244	104,571	45,626	28,784	1,210,119
1948-49 .. ..	609,724	446,838	154,670	124,018	53,418	36,657	1,425,325
1949-50 .. ..	693,203	526,466	175,156	141,528	63,978 <sup>3</sup>	45,080	1,645,411
1950-51 .. ..	923,912	675,033	216,212	192,356	84,431	58,624	2,150,568

6. Value of Production.—(i) *In Classes of Industry, 1950-51.* The value of production for any industry was defined at the Conference of Statisticians at Sydney in 1925 as "the value of consumable commodities produced during the year, deducting, so far as possible, the value of goods consumed in process of production".

In accordance with this definition, it was agreed that a deduction consisting of the costs of raw material, containers, power, fuel, light, lubricants, water, tools replaced, repairs to plant and depreciation should be made from the "value of output". All these deductions with the exception of depreciation are included in the items "value of materials used" and "value of fuel used" as defined above. On account of the difficulty experienced in securing accurate figures for depreciation, it was agreed that no deduction should be made on this account for the present. The value of production as given in the following tables is obtained, therefore, by deducting "value of materials used" and "value of fuel used" from the "value of the output".

The figure thus calculated is, however, not the net value of production. The deduction for depreciation, particulars of which are shown in § 9, par. 4, was estimated at £37,014,000 for 1950-51. Many miscellaneous expenses, such as taxation, insurance, advertising and other sundry charges have not been taken into account. Therefore, it must not be inferred that when wages and salaries are deducted from the value of production the whole of the "surplus" is available for interest and profit.

The value of factory production therefore approximates "net value added" in the manufacturing process. It amounted in 1950-51 to £843.6 million to which Class IV., Industrial Metals, etc., with £327 million or more than five times the value of production of this class in 1938-39, made the greatest contribution. This total value of production in 1950-51 represented an increase of £182.1 million over the figure for 1949-50 and £640 million (315 per cent.) over the value of production recorded in 1938-39.

The following table shows the value of production in 1950-51 in each State for the various classes of industry:—

FACTORIES : VALUE OF PRODUCTION, 1950-51.  
(£'000.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metalliferous Mine and Quarry Products .. .. .	7,289	5,419	1,381	1,337	1,252	647	17,325
II. Bricks, Pottery, Glass, etc. . . . .	9,045	4,076	737	1,609	999	201	16,667
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease .. . . .	28,698	17,155	1,388	3,274	1,767	421	52,703
IV. Industrial Metals, Machines, Conveyances .. . . .	152,038	90,916	27,898	34,886	12,005	9,250	326,993
V. Precious Metals, Jewellery and Plate .. . . .	1,616	2,720	189	263	177	13	4,978
VI. Textiles and Textile Goods (not Dress) .. . . .	19,921	28,780	1,311	1,813	844	1,939	54,608
VII. Skins and Leather (not Clothing or Footwear) .. . . .	5,538	5,496	1,075	1,368	627	617	14,721
VIII. Clothing (except Knitted) .. . . .	29,385	31,214	4,756	3,442	2,494	4,667	71,757
IX. Food, Drink and Tobacco .. . . .	41,292	37,248	20,447	8,928	6,161	4,246	118,322
X. Sawmills, Joinery, Boxes, etc.; Wood Turning and Carving .. . . .	16,332	12,012	7,389	3,242	3,591	2,315	44,881
XI. Furniture of Wood, Bedding, etc. .. . . .	6,678	5,304	2,213	1,539	1,008	395	17,137
XII. Paper, Stationery, Printing, Bookbinding, etc. .. . . .	24,705	17,836	3,807	3,213	1,950	3,214	54,725
XIII. Rubber .. . . .	4,859	6,508	818	614	148	118	13,065
XIV. Musical Instruments .. . . .	1,073	121	28	27	11	..	1,260
XV. Miscellaneous Products .. . . .	7,413	6,689	334	725	221	132	15,514
Total, Classes I. to XV. . . . .	355,882	271,494	73,771	66,280	33,255	23,974	824,656
XVI. Heat, Light and Power .. . . .	10,227	4,166	1,689	1,262	965	640	18,949
Grand Total .. . . .	366,109	275,660	75,460	67,542	34,220	24,614	843,605

(ii) *Total and Averages, 1938-39, 1945-46 and 1947-48 to 1950-51.* The value of production and the amount per person employed and per head of population are shown in the following table. For Australia as a whole the value of production per head of population increased from £29.41 per head in 1938-39 to £101.5 per head in 1950-51. For value per person employed, the increase was not quite so pronounced (from £360 per head in 1938-39 to £871 in 1950-51) owing to the considerable increase in the numbers of persons employed in 1950-51 as compared with 1938-39.

**FACTORIES : VALUE OF PRODUCTION.**

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
VALUE. (£'000.)							
1938-39 .. ..	90,266	65,996	19,301	13,679	8,776	5,399	203,417
1945-46 .. ..	153,179	120,250	30,270	25,002	13,826	9,196	352,323
1947-48 .. ..	218,611	158,501	42,886	38,670	18,384	12,245	489,297
1948-49 .. ..	251,199	182,760	53,540	43,668	21,474	16,074	568,715
1949-50 .. ..	283,201	219,244	61,354	52,309	26,044	19,336	661,488
1950-51 .. ..	366,109	275,660	75,460	67,542	34,220	24,614	843,605

**PER PERSON EMPLOYED. (£.)**

1938-39 .. ..	395	327	357	315	378	391	360
1945-46 .. ..	493	469	462	405	457	478	473
1947-48 .. ..	602	579	559	527	511	578	576
1948-49 .. ..	664	626	645	575	560	711	639
1949-50 .. ..	741	722	690	666	639	823	721
1950-51 .. ..	900	870	798	812	782	1,033	871

**PER HEAD OF POPULATION. (£.)**

1938-39 .. ..	32.99	35.25	19.15	22.99	18.79	22.72	29.41
1945-46 .. ..	52.23	59.66	27.92	40.57	28.21	36.74	47.42
1947-48 .. ..	72.71	76.60	38.54	59.28	36.13	46.77	64.04
1948-49 .. ..	81.98	86.48	47.18	65.65	41.12	59.92	72.92
1949-50 .. ..	89.28	101.02	52.75	76.16	47.72	69.70	82.18
1950-51 .. ..	111.82	123.24	63.26	94.99	59.89	85.59	101.50

7. *Value of Output and Cost of Production.*—As the total value of the output for Australia for 1950-51 was estimated at £2,150,568,000, there remained, after payment of £1,235,281,000 for the value of the materials used, £491,857,000 for salaries and wages, and £71,682,000 for power, fuel and light, a balance of £351,748,000 to provide for all other costs and overhead expenses such as rent, interest, insurance, pay-roll tax, income tax, depreciation, etc., as well as drawings by working proprietors and profit. The following table gives corresponding particulars for each State expressed absolutely and as percentages of the total value of the output for the year 1950-51 :—

**FACTORIES : VALUE OF OUTPUT AND COST OF PRODUCTION, 1950-51.**

State.	Materials Used. (a)	Power, Fuel and Light. (b)	Salaries and Wages.	Balance (Output less Materials, Fuel and Wages.)(c)	Total Value of Output.
VALUE AND COST, ETC. (£'000.)					
New South Wales .. ..	522,422	35,381	211,339	154,770	923,912
Victoria .. ..	382,002	17,371	163,207	112,453	675,033
Queensland .. ..	134,457	6,295	42,837	32,623	216,212
South Australia .. ..	117,547	7,267	43,079	24,463	192,356
Western Australia .. ..	46,452	3,759	19,658	14,562	84,431
Tasmania .. ..	32,401	1,609	11,737	12,877	58,624
Australia .. ..	1,235,281	71,682	491,857	351,748	2,150,568

(a) Includes the value of containers, packing, etc., also the cost of tools replaced and repairs to plant.  
 (b) Includes lubricants and water. (c) See paragraph preceding this table.

FACTORIES: VALUE OF OUTPUT AND COST OF PRODUCTION, 1950-51—  
*continued.*

State.	Materials Used. (a)	Power, Fuel and Light. (b)	Salaries and Wages.	Balance (Output less Materials, Fuel and Wages.)(c)	Total Value of Output.
PROPORTION OF COSTS, ETC., TO TOTAL VALUE. (Per Cent.)					
New South Wales ..	56.54	3.83	22.88	16.75	100.00
Victoria ..	56.60	2.57	24.18	16.65	100.00
Queensland ..	62.19	2.91	19.81	15.09	100.00
South Australia ..	61.10	3.78	22.40	12.72	100.00
Western Australia ..	55.02	4.45	23.28	17.25	100.00
Tasmania ..	55.27	2.75	20.02	21.96	100.00
Australia ..	57.44	3.33	22.87	16.36	100.00

(a) Includes the value of containers, packing, etc., also the cost of tools replaced and repairs to plant.  
(b) Includes lubricants and water. (c) See paragraph preceding this table.

**§ 9. Value of Land, Buildings, Plant and Machinery.**

1. **General.**—The following statement shows the value of land and buildings and of plant and machinery used in connexion with manufacturing industries during the year 1950-51:—

FACTORIES: VALUE OF LAND, BUILDINGS, PLANT AND MACHINERY(a), 1950-51.  
(£'000.)

Value of—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
Land and buildings	130,468	101,326	23,958	23,303	13,380	10,971	303,406
Plant and machinery	136,492	107,261	34,235	26,759	14,713	19,470	338,930
Total ..	266,960	208,587	58,193	50,062	28,093	30,441	642,336

(a) Includes estimated value of rented premises and plant.

The values recorded in this section are generally the values apportioned in the books of the individual firms after allowance has been made for depreciation, but they include estimates of the capital value of premises and plant rented. The totals shown in the table consequently do not represent the actual amount of capital invested in the items specified.

2. **Value of Land and Buildings.**—(i) *Total for Australia.* The following table shows for Australia as a whole the approximate value of land and buildings occupied in connexion with manufacturing industries for 1938-39, 1945-46 and 1947-48 to 1950-51.



**FACTORIES : VALUE OF LAND AND BUILDINGS(a), AUSTRALIA.**  
(£'000.)

Class of Industry.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
I. Treatment of Non-metalliferous Mine and Quarry Products ..	2,779	3,020	3,860	4,331	4,851	6,281
II. Bricks, Pottery, Glass, etc. . .	2,953	3,331	3,952	4,246	4,719	5,883
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	7,377	18,461	18,624	20,254	22,076	20,920
IV. Industrial Metals, Machines, Conveyances ..	34,841	59,530	64,868	73,247	81,682	97,021
V. Precious Metals, Jewellery and Plate ..	633	752	1,279	1,515	1,614	1,688
VI. Textiles and Textile Goods (not Dress) ..	6,000	9,112	10,603	11,905	14,838	18,004
VII. Skins and Leather (not Clothing or Footwear) ..	2,096	2,966	3,441	3,777	4,158	4,764
VIII. Clothing (except Knitted) ..	10,624	13,994	16,917	18,440	19,763	22,128
IX. Food, Drink and Tobacco ..	33,273	40,129	45,451	48,075	52,197	60,217
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving ..	4,107	5,441	6,912	8,072	9,442	11,680
XI. Furniture of Wood, Bedding, etc. ..	2,533	2,829	3,835	4,235	4,828	5,776
XII. Paper, Stationery, Printing, Bookbinding, etc. . .	10,639	11,605	13,023	14,517	16,234	20,828
XIII. Rubber ..	1,676	1,865	2,152	2,476	3,038	3,792
XIV. Musical Instruments ..	105	133	234	268	325	387
XV. Miscellaneous Products ..	1,433	2,965	3,680	3,929	4,360	5,035
Total, Classes I. to XV. . .	121,069	176,133	198,831	219,287	244,125	284,404
XVI. Heat, Light and Power ..	9,851	10,806	12,312	13,453	15,424	19,002
Grand Total ..	130,920	186,939	211,143	232,740	259,549	303,406

(a) Includes estimated value of rented premises.

(ii) *In Classes of Industry in States, 1950-51.* The following table gives particulars of the various classes of industry in each State.

**FACTORIES : VALUE OF LAND AND BUILDINGS(a), 1950-51.**  
(£'000.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metalliferous Mine and Quarry Products ..	2,766	1,899	409	383	314	510	6,281
II. Bricks, Pottery, Glass, etc. . .	3,427	1,440	241	411	259	105	5,883
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	9,774	7,830	433	1,633	1,015	235	20,920
IV. Industrial Metals, Machines, Conveyances ..	45,596	30,160	6,901	7,919	3,714	2,731	97,021
V. Precious Metals, Jewellery and Plate ..	555	870	62	104	86	11	1,688
VI. Textiles and Textile Goods (not Dress) ..	6,619	9,985	440	495	205	260	18,004
VII. Skins and Leather (not Clothing or Footwear) ..	1,772	1,863	238	509	165	217	4,764
VIII. Clothing (except Knitted) ..	9,842	8,644	1,276	1,251	940	175	22,128
IX. Food, Drink and Tobacco ..	21,408	19,256	8,616	5,129	3,648	2,160	60,217
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving ..	4,917	3,410	1,241	873	791	448	11,680
XI. Furniture of Wood, Bedding, etc. ..	2,096	1,997	725	442	361	155	5,776
XII. Paper, Stationery, Printing, Bookbinding, etc. . .	8,490	6,692	1,265	1,109	669	2,603	20,828
XIII. Rubber ..	1,249	1,857	382	175	74	55	3,792
XIV. Musical Instruments ..	296	66	3	15	7	..	387
XV. Miscellaneous Products ..	2,445	2,037	125	253	111	64	5,035
Total, Classes I. to XV. . .	121,252	98,006	22,357	20,701	12,359	9,729	284,404
XVI. Heat, Light and Power ..	9,216	3,320	1,601	2,602	1,021	1,242	19,002
Grand Total ..	130,468	101,326	23,958	23,303	13,380	10,971	303,406

(a) Includes estimated value of rented premises.

(iii) *Totals in each State.* The following table shows the value of land and buildings in each State for the years 1938-39, 1945-46 and 1947-48 to 1950-51 :—

**FACTORIES : VALUE OF LAND AND BUILDINGS.(a)**  
(£'000.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1938-39..	57,353	42,026	12,299	8,711	6,814	3,717	130,920
1945-46..	80,308	60,265	14,331	18,447	8,283	5,305	186,939
1947-48..	91,860	66,229	16,609	20,691	9,483	6,271	211,143
1948-49..	101,241	73,384	18,508	22,218	10,054	7,335	232,740
1949-50..	110,597	84,124	20,806	24,317	11,055	8,650	259,549
1950-51..	130,468	101,326	23,958	23,303	13,380	10,971	303,406

(a) Includes estimated value of rented premises.

Prior to 1929-30 the increase in the value of land and buildings was uninterrupted, rising from £23 million in 1903 to £118 million in 1929-30, a growth of £95 million in 27 years. During the three years ended 1932-33, there was a decline of £12 million to £105.8 million, but since that year the value has risen annually and stood at £303.4 million in 1950-51.

3. *Value of Plant and Machinery.*—(i) *Total for Australia, 1938-39, 1945-46 and 1947-48 to 1950-51.* The following table shows for Australia the approximate value of plant and machinery used in factories.

**FACTORIES : VALUE OF PLANT AND MACHINERY(a), AUSTRALIA.**  
(£'000.)

Class of Industry.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
I. Treatment of Non-metalliferous Mine and Quarry Products ..	7,028	4,916	6,061	7,342	8,055	9,239
II. Bricks, Pottery, Glass, etc. ..	3,145	2,968	3,700	4,333	4,991	6,057
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	6,754	17,792	17,516	19,255	23,518	26,247
IV. Industrial Metals, Machines, Conveyances ..	33,938	53,902	61,080	70,155	77,597	90,801
V. Precious Metals, Jewellery and Plate ..	197	253	581	721	770	808
VI. Textiles and Textile Goods (not Dress) ..	6,657	7,737	10,201	12,797	17,485	21,218
VII. Skins and Leather (not Clothing or Footwear) ..	973	1,584	1,864	2,063	2,535	2,994
VIII. Clothing (except Knitted) ..	2,557	4,135	5,905	6,923	7,792	9,294
IX. Food, Drink and Tobacco ..	32,101	33,234	37,999	42,796	48,318	56,489
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving ..	3,908	5,023	6,991	8,481	10,377	12,614
XI. Furniture of Wood, Bedding, etc. ..	728	741	1,190	1,427	1,679	2,035
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	9,188	8,556	11,517	15,027	19,193	27,616
XIII. Rubber ..	1,368	1,219	1,855	2,244	2,754	3,456
XIV. Musical Instruments ..	12	23	80	134	154	227
XV. Miscellaneous Products ..	758	1,856	2,356	2,806	3,275	4,008
Total, Classes I. to XV. ..	108,412	143,939	168,896	196,504	228,493	273,103
XVI. Heat, Light and Power ..	35,250	41,606	44,823	49,990	57,109	65,827
Grand Total ..	143,662	185,545	213,719	246,494	285,602	338,930

(a) Includes estimated value of rented plant and machinery.

Except for the years 1930-31 to 1933-34, when decreases were recorded, there has been a continuous increase in the value of plant and machinery in Australia. The increase in 1950-51 of £53.3 million over 1949-50 extended over all industrial classes. The greatest increase occurred in Class IV., Industrial Metals, Machines, Implements and Conveyances.

(ii) *Totals in each State.* The following table shows the value of plant and machinery in each State during the years 1938-39, 1945-46 and 1947-48 to 1950-51. During 1950-51 increases occurred in all States, New South Wales showing the largest increase, £22.6 million.

FACTORIES : VALUE OF PLANT AND MACHINERY.(a)  
(£'000.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1938-39 ..	62,693	38,627	18,095	9,750	8,095	6,402	143,662
1945-46 ..	72,561	58,537	18,690	19,018	8,508	8,231	185,545
1947-48 ..	86,714	65,829	21,831	20,239	9,190	9,976	213,719
1948-49 ..	99,812	76,080	25,757	22,792	9,800	12,253	246,494
1949-50 ..	113,864	92,748	28,904	24,901	11,457	13,728	285,602
1950-51 ..	136,492	107,261	34,235	26,759	14,713	19,470	338,930

(a) Includes estimated value of rented plant and machinery.

(iii) *Value according to Class of Industry, 1950-51.* The following table shows the value of plant and machinery used in factories in each State during 1950-51 according to class of industry.

FACTORIES : VALUE OF PLANT AND MACHINERY(a), 1950-51.  
(£'000.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metalliferous: Mine and Quarry Products ..	4,832	2,151	555	1,009	390	302	9,239
II. Bricks, Pottery, Glass, etc. ..	3,440	1,432	265	393	340	187	6,057
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	11,595	9,867	485	2,472	1,389	439	26,247
IV. Industrial Metals, Machines, Conveyances ..	46,697	25,367	5,633	8,567	2,488	2,049	90,801
V. Precious Metals, Jewellery and Plate ..	251	462	25	41	25	4	808
VI. Textiles and Textile Goods (not Dress) ..	8,003	11,521	721	353	173	447	21,218
VII. Skins and Leather (not Clothing or Footwear) ..	1,116	1,066	234	302	139	137	2,994
VIII. Clothing (except Knitted) ..	3,794	3,913	579	531	383	94	9,294
IX. Food, Drink and Tobacco ..	16,964	15,723	14,660	4,290	3,243	1,609	56,489
X. Sawmills, Joinery, Boxes, etc.; Wood Turning and Carving ..	4,795	3,238	2,195	599	1,066	721	12,614
XI. Furniture of Wood, Bedding, etc. ..	763	578	271	195	171	57	2,035
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	8,474	9,228	1,476	1,142	698	6,598	27,616
XIII. Rubber ..	1,179	1,636	406	175	34	26	3,456
XIV. Musical Instruments ..	184	38	3	1	1	..	227
XV. Miscellaneous Products ..	1,732	1,937	77	190	46	26	4,008
Total, Classes I. to XV.	113,819	88,157	27,585	20,260	10,586	12,696	273,103
XVI. Heat, Light and Power ..	22,673	19,104	6,650	6,499	4,127	6,774	65,827
Grand Total ..	136,492	107,261	34,235	26,759	14,713	19,470	338,930

(a) Includes estimated value of rented plant and machinery.

4. *Depreciation of Land and Buildings and Plant and Machinery, 1950-51.*—The following table shows the allowance made for the depreciation of land and buildings and plant and machinery used in connexion with the manufacturing industries in each State as recorded by factory proprietors at the annual census of factory production.

FACTORIES : ALLOWANCE FOR DEPRECIATION OF LAND AND BUILDINGS AND PLANT AND MACHINERY, 1950-51.

(£'000.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metalliferous Mine and Quarry Products ..	764	259	109	83	47	31	1,293
II. Bricks, Pottery, Glass, etc. . .	625	240	32	55	46	14	1,012
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	1,273	759	82	232	192	135	2,673
IV. Industrial Metals, Machines, Conveyances ..	5,099	2,975	733	1,244	1,085	717	11,853
V. Precious Metals, Jewellery and Plate ..	39	73	3	7	4	1	127
VI. Textiles and Textile Goods (not Dress) ..	946	1,789	62	111	36	78	3,022
VII. Skins and Leather (not Clothing or Footwear) ..	124	164	25	58	20	39	430
VIII. Clothing (except Knitted) ..	605	498	67	56	44	13	1,283
IX. Food, Drink and Tobacco ..	1,614	2,194	1,385	612	313	195	6,613
X. Sawmills, Joinery, Boxes, etc.; Wood Turning and Carving ..	637	436	254	112	168	69	1,676
XI. Furniture of Wood, Bedding, etc. ..	139	99	40	33	30	6	347
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	1,104	1,022	182	152	98	460	3,018
XIII. Rubber ..	300	295	136	38	6	6	781
XIV. Musical Instruments ..	24	3	..	..	..	..	27
XV. Miscellaneous Products ..	265	289	13	26	5	3	601
Total, Classes I. to XV.	13,858	11,095	3,123	2,819	2,094	1,767	34,756
XVI. Heat, Light and Power ..	919	232	315	507	182	103	2,258
Grand Total ..	14,777	11,327	3,438	3,326	2,276	1,870	37,014

5. Land and Buildings, Plant and Machinery—Values, Additions and Replacements, Depreciation, 1938-39, 1945-46 and 1947-48 to 1950-51.—The following table summarizes the recorded totals for Australia, in this section, and also includes particulars of additions and replacements.

FACTORIES : VALUE OF LAND AND BUILDINGS, PLANT AND MACHINERY, AUSTRALIA.

(£'000.)

Year.	Book Values as at 30th June.(a)		Additions and Replacements during year.		Depreciation allowed during year.	
	Land and Buildings.	Plant and Machinery.	Land and Buildings.	Plant and Machinery.	Land and Buildings.	Plant and Machinery.
1938-39 ..	130,920	143,662	5,578	17,781	1,911	8,736
1945-46 ..	186,939	185,545	6,245	21,766	2,537	14,597
1947-48 ..	211,143	213,719	9,739	35,616	2,537	18,054
1948-49 ..	232,740	246,494	15,030	47,227	2,826	21,880
1949-50 ..	259,549	285,602	18,551	59,562	2,942	26,161
1950-51 ..	303,406	338,930	27,293	83,219	3,775	33,239

(a) Includes estimated value of rented premises, plant and machinery.

## § 10. Principal Factory Products.

The monthly factory production of certain commodities is shown in the monthly and quarterly publications of this Bureau and in the *Secondary Industries Bulletin*.

The following table shows the total recorded production of some of the principal articles manufactured in Australia during the years ended 30th June, 1949 to 1951. A more complete list, together with values, where available, is published in the *Secondary Industries Bulletin*.

## QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES: AUSTRALIA.

Article.	Unit of Quantity.	1948-49.	1949-50.	1950-51.
Acid—				
Nitric .. .. .	Ton	3,292	6,361	7,367
Sulphuric .. .. .	"	585,298	612,245	639,856
Aerated and Carbonated Waters .. .. .	'ooo gal.	44,339	50,190	55,000
Asbestos Cement Building Sheets .. .. .	'ooo sq. yd.	18,559	18,345	21,247
Bacon and Ham .. .. .	'ooo lb.	92,491	89,946	81,863
Bags—				
Leather, Fibre, etc.—				
Handbags—				
Leather .. .. .	No.	1,070,849	1,060,057	903,333
Plastic .. .. .	"	344,218	502,666	565,945
Other .. .. .	"	59,104	88,462	128,498
Kitbags .. .. .	"	94,978	109,246	(a)
School Bags .. .. .	"	73,328	107,222	118,712
Suitcases .. .. .	"	661,592	683,682	(b) 1,185,115
Trunks .. .. .	"	31,768	4,690	4,032
All other .. .. .	"	457,164	611,749	324,877
Textile, Hessian, etc. .. .. .	Doz.	1,597,732	1,594,822	1,895,236
Baking Powder .. .. .	lb.	1,004,984	929,326	951,839
Bath Heaters—				
Electric .. .. .	No.	12,803	13,313	28,361
Gas .. .. .	"	32,954	28,285	33,007
Solid Fuel and Oil .. .. .	"	56,084	70,007	73,291
Bathing Suits .. .. .	Doz.	106,710	97,731	125,334
Baths, all types .. .. .	No.	157,801	172,197	181,103
Batteries, Wet Cell type .. .. .	"	872,224	1,113,875	1,091,830
Beer (excluding Waste Beer) .. .. .	'ooo gal.	144,452	154,189	170,635
Biscuits .. .. .	'ooo lb.	107,088	117,904	130,116
Blankets .. .. .	Fair	689,154	895,586	972,576
Boots, Shoes and Slippers—				
Boots .. .. .	'ooo pair	1,828	1,813	16,902
Shoes .. .. .	"	13,619	13,597	2,004
Sandals .. .. .	"	1,773	1,789	8,641
Slippers .. .. .	"	8,832	6,582	302,222
Bran (Wheaten) .. .. .	Ton (2,000 lb.)	318,705	273,335	369,583
Brassieres .. .. .	Doz.	264,808	318,827	689,431
Bricks, Clay .. .. .	'ooo	617,391	604,066	21,757
Brooms .. .. .	Gross	17,368	19,079	155,861
Brushes .. .. .	"	124,733	126,565	159,631
Butter .. .. .	Ton	161,090	168,075	159,631
Candles .. .. .	Cwt.	15,692	21,245	12,871
Cardigans, Sweaters, etc. .. .. .	Doz.	568,876	604,632	710,141
Cement, Portland .. .. .	Ton	1,031,489	1,167,189	1,234,626
Cheese .. .. .	"	43,160	44,777	44,300
Cigarettes .. .. .	'ooo lb.	9,701	10,341	10,679
Cleansing and Scouring Powders .. .. .	Cwt.	73,062	62,380	90,650
Cloth—				
Cotton .. .. .	'ooo sq. yd.	24,670	32,739	32,357
Woollen .. .. .	"	40,430	36,908	37,026
Coke—				
Metallurgical .. .. .	Ton	1,150,039	1,182,773	1,515,782
Other .. .. .	"	1,181,516	1,094,982	1,111,854
Colours—				
Dry .. .. .	Cwt.	54,153	58,130	81,828
Ground in Oil (c) .. .. .	"	9,934	20,857	11,819
Confectionery—				
Chocolate .. .. .	'ooo lb.	67,612	78,742	69,122
Other .. .. .	"	69,941	70,744	73,429
Coppers—				
Electric .. .. .	No.	24,517	29,995	47,759
Gas .. .. .	"	29,980	36,861	43,394
Inserts (including Oil Coppers) .. .. .	"	105,092	110,670	125,409
Cordials and Syrups .. .. .	'ooo gal.	4,268	4,523	5,349
Corsets and Corsetslets .. .. .	Doz.	133,996	109,814	122,248

(a) Included with Suitcases.

(b) Includes Kitbags.

(c) Excludes Zinc Oxide Paste.

QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES:  
 # AUSTRALIA—continued.

Article.	Unit of Quantity.	1948-49.	1949-50.	1950-51.
<b>Cosmetic Creams and Lotions—</b>				
Face Cream .. .. .	Cwt.	5,010	4,136	5,166
Hand Lotion .. .. .	"	2,326	2,251	1,884
Other Skin Creams .. .. .	"	5,270	6,767	6,945
Custard Powder .. .. .	'000 lb.	8,557	7,135	6,673
Cycles, Assembled .. .. .	No.	91,514	96,282	112,076
<b>Dynamos—</b>				
Alternators .. .. .	"	135	273	334
Generators .. .. .	"	9,563	9,461	14,134
<b>Electricity .. .. .</b>				
Enamels, Natural and Synthetic .. .. .	Mill. k.w.h.	9,053	9,509	10,503
Engines—	'000 gal.	1,717	2,236	1,889
Diesel, other than Marine .. .. .	No.	4,425	4,598	4,200
Petrol, Marine .. .. .	"	3,081	2,470	2,296
Other (a) .. .. .	"	21,598	23,406	27,190
<b>Essences, Flavouring—</b>				
Domestic .. .. .	Gal.	84,002	102,443	97,512
Industrial .. .. .	"	144,605	179,802	278,807
<b>Face Powder .. .. .</b>				
Fans, Electric .. .. .	Cwt.	2,741	2,723	3,268
Fats, Edible—	No.	59,934	48,338	63,629
Dripping .. .. .	Cwt.	219,022	295,744	369,069
Other .. .. .	"	388,234	405,175	312,748
Fibrous Plaster Sheets .. .. .	'000 sq. yd.	13,234	13,258	15,184
Fish, Tinned .. .. .	'000 lb.	10,886	7,079	7,000
<b>Floorboards—</b>				
Australian Timber .. .. .	'000 super. ft.	70,538	71,584	66,997
Imported Timber .. .. .	"	8,781	11,562	11,854
Flour, Wheaten (b) .. .. .	Ton (2,000 lb.)	1,679,190	1,509,023	1,695,559
Flour, Self-raising .. .. .	Cwt.	1,160,981	1,113,203	1,059,968
Fruit Juices .. .. .	Gal.	1,738,759	1,573,689	1,846,047
<b>Gas .. .. .</b>				
Gloves—	Mill. cubic ft.	36,733	34,898	37,875
Dress—				
Leather .. .. .	Doz. pairs	42,199	35,684	28,855
Other .. .. .	"	23,612	35,754	50,178
Work, All types .. .. .	"	157,230	171,611	207,606
Golf Clubs .. .. .	Doz.	16,509	15,378	14,041
<b>Handkerchiefs—</b>				
Men's .. .. .	"	877,873	818,475	881,532
Women's .. .. .	"	922,241	827,118	1,104,526
Hats and Caps .. .. .	"	574,317	480,789	515,818
Rose, Rubber .. .. .	'000 lin. ft.	18,323	17,499	18,167
<b>Ice .. .. .</b>				
Ice Cream .. .. .	Ton	1,039,379	1,061,862	1,083,472
Iron and Steel—	'000 gal.	14,524	15,786	17,385
Pig Iron .. .. .	Ton	1,044,957	1,097,635	1,313,332
Ingot Steel .. .. .	"	1,178,010	1,217,971	1,443,831
Blooms and Billets .. .. .	"	1,101,063	1,103,784	1,297,260
Irons, Electric .. .. .	No.	208,999	178,283	232,206
<b>Jams and Preserves—</b>				
Jams .. .. .	'000 lb.	132,951	134,577	125,288
Fruit, Preserved (c) .. .. .	"	187,145	211,428	233,538
Vegetables, Preserved .. .. .	"	51,279	73,534	79,510
Jelly Crystals .. .. .	"	11,414	14,002	13,999
<b>Kalsomine .. .. .</b>				
.. .. .	"	8,645	9,334	8,860
<b>Lacquer, Clear and Colours .. .. .</b>				
Lard .. .. .	Gal.	829,971	944,725	1,158,465
Lawn Mowers—	'000 lb.	5,838	5,466	5,108
Electric .. .. .	No.	8,935	23,461	29,877
Petrol .. .. .	"	594	1,070	696
Hand .. .. .	"	64,557	88,425	118,437
<b>Leather—</b>				
Sole and Belting .. .. .	'000 lb.	38,716	38,650	38,107
Harness, Skirt, etc. .. .. .	"	1,956	1,966	1,724
Upholstery .. .. .	'000 sq. ft.	9,672	10,318	10,980
Dressed from Hides .. .. .	"	40,443	43,110	43,860
Dressed from Skins .. .. .	"	31,857	29,319	26,675

(a) Excludes Motor Car, Motor Cycle, Tractor and Aero Engines.  
 Baking. (c) Includes Canned Apple, all types.

(b) Includes Wheatmeal for

QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES:  
AUSTRALIA—continued.

Article.	Unit of Quantity.	1948-49.	1949-50.	1950-51.
Lime—Quick .. .. .	ton	77,238	87,501	115,857
Hydrated .. .. .	"	25,943	26,891	26,908
Agricultural .. .. .	"	68,960	70,415	75,315
Linseed Oil .. .. .	'000 gal.	3,488	3,658	4,456
Lubricating Oil .. .. .	"	5,825	9,765	19,849
Malt, Barley .. .. .	'000 bus.	4,989	5,438	5,550
Margarine—				
Table .. .. .	'000 lb.	19,104	14,044	8,542
Other .. .. .	"	46,566	54,261	49,953
Mattresses—Wire .. .. .	No.	171,506	219,923	250,070
Inner Spring .. .. .	"	154,625	206,850	286,856
Soft Filled, etc. .. .. .	"	456,100	501,409	506,265
Meat, Tinned .. .. .	'000 lb.	114,162	127,684	130,024
Milk—				
Condensed .. .. .	'000 lb.	107,012	111,477	113,135
Concentrated (Whole) .. .. .	"	29,517	38,685	41,106
Powdered (Whole) (a) .. .. .	"	59,042	65,347	57,597
Mops, Floor .. .. .	Gross	7,850	9,760	9,836
Motor Bodies .. .. .	No.	63,230	67,097	92,621
Motor Spirit (including Benzol) .. .. .	'000 gal.	71,138	81,329	92,509
Motors, Electric .. .. .	No.	298,854	397,338	523,585
Nails .. .. .	Ton	19,442	18,434	24,752
Neckties .. .. .	Doz.	486,659	439,758	521,065
Newsprint .. .. .	Ton	30,260	30,472	30,967
Oatmeal .. .. .	Cwt.	462,117	432,667	419,677
Paint—Water .. .. .	'000 lb.	11,018	16,209	19,506
Oil .. .. .	'000 gal.	3,606	3,960	5,290
Peanut Butter .. .. .	'000 lb.	3,864	3,737	3,574
Perambulators .. .. .	No.	106,711	107,420	118,824
Pickles .. .. .	'000 pint	8,464	9,427	10,864
Plywood, $\frac{1}{8}$ inch basis .. .. .	'000 sq. ft.	146,285	157,033	153,498
Pollard .. .. .	Ton (2,000 lb.)	354,957	316,795	339,074
Pyjamas—				
Men's .. .. .	Doz.	219,072	218,103	208,818
And Nightdresses, Women's .. .. .	"	270,214	275,617	320,784
Refrigerators—Commercial .. .. .	No.	4,086	5,016	3,901
Domestic .. .. .	"	145,607	162,341	203,928
Rice (Dressed) .. .. .	Cwt.	672,498	707,652	773,068
Ropes and Cables (excluding Wire) .. .. .	"	117,215	117,804	137,438
Sauce .. .. .	'000 pint	32,301	32,300	30,402
Sausage Casings .. .. .	Cwt.	83,786	88,901	89,443
Semolina .. .. .	"	248,984	275,013	131,865
Shirts .. .. .	Doz.	880,045	904,787	1,074,294
Sink Heaters .. .. .	No.	18,556	22,434	32,854
Soap—				
Household .. .. .	Cwt.	651,031	599,422	686,958
Flakes and Chips (b) .. .. .	"	59,484	60,250	86,616
Industrial .. .. .	"	99,235	79,927	118,078
Sand .. .. .	"	51,088	44,981	40,713
Toilet and Hand .. .. .	"	274,279	267,793	292,546
Shaving, including Sticks and Creams .. .. .	"	8,925	8,995	8,845
Soft .. .. .	"	20,199	19,561	23,061
Liquid .. .. .	"	88,274	84,503	100,860
Shampoo .. .. .	"	8,831	9,533	7,992
Soap Extracts and Powders .. .. .	"	609,631	697,848	754,758
Socks and Stockings—				
Men's .. .. .	Doz. pr.	1,275,403	1,192,065	1,536,318
Women's .. .. .	"	1,536,549	1,708,647	1,856,594
Children's .. .. .	"	705,059	656,936	563,093
Soup (Tinned) .. .. .	'000 pint	41,932	32,611	33,841
Spades and Shovels .. .. .	Doz.	31,472	33,394	35,701
Starch—Edible .. .. .	Cwt.	159,391	279,350	306,211
Inedible .. .. .	"	81,769	87,752	91,416
Steel, Structural, Fabricated .. .. .	Ton	77,942	74,909	98,211
Stoves, Ovens and Ranges—				
Domestic Cooking—				
Solid Fuel .. .. .	No.	61,434	61,857	75,010
Gas .. .. .	"	49,556	46,709	55,357
Electric(c) .. .. .	"	101,230	103,048	116,054
Sugar—Raw .. .. .	Ton	943,052	937,119	921,102
Refined .. .. .	"	428,269	422,675	451,170
Suphate of Ammonia .. .. .	"	53,247	48,736	57,893
Superphosphate .. .. .	"	1,423,137	1,483,458	1,547,823

(a) Includes Malted Milk and Infants' Milk Powder.

(b) Includes industrial flakes and chips.

(c) Includes Stovettes, Cookers, etc.

QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES:  
AUSTRALIA—continued.

Article.	Unit of Quantity.	1948-49.	1949-50.	1950-51.
Talcum Powder .. .. .	Cwt.	23,015	25,112	23,425
Tallow—				
Raw .. .. .	"	710,532	742,425	673,181
Refined .. .. .	"	320,064	418,858	365,855
Tennis Racquet Frames .. .. .	Doz.	23,677	19,576	22,727
Tiles, Roofing—				
Cement .. .. .	'000	28,294	40,638	50,764
Terra Cotta .. .. .	"	44,162	45,415	47,012
Timber—				
From Native Logs—				
Hardwood .. .. .	'000 super. ft.	907,704	965,142	1,068,096
Softwood .. .. .	"	276,384	257,918	193,244
From Imported Logs—				
Hardwood .. .. .	"	1,028	1,820	4,996
Softwood .. .. .	"	10,362	18,629	13,924
Toasters, Electric .. .. .	No.	148,273	175,054	154,574
Tobacco .. .. .	'000 lb.	19,256	20,168	20,967
Tomato Juice .. .. .	Gal.	1,845,620	741,995	368,181
Towels .. .. .	Doz.	389,218	418,283	516,493
Transformers and Converters—				
Above 20 k.v.a. .. .. .	No.	1,940	2,560	1,940
Below 20 k.v.a. .. .. .	"	252,359	226,984	289,353
Twine (all types) .. .. .	Cwt.	82,190	85,570	98,578
Tyres, Pneumatic—				
Motor Car and Motor Cycle .. .. .	No.	1,133,893	1,339,072	1,587,201
Truck and Omnibus .. .. .	"	511,766	535,262	557,408
All Other .. .. .	"	1,144,346	1,022,204	1,235,548
Umbrellas .. .. .	"	206,399	262,655	362,820
Underwear .. .. .	'000 doz.	3,168	3,531	3,847
Vacuum Cleaners (Domestic) .. .. .	No.	65,721	70,604	70,096
Varnishes .. .. .	'000 gal.	2,920	3,266	3,634
Washing Machines, Household, Electric .. .. .	No.	6,528	31,638	72,627
Weatherboards—				
Australian Timber .. .. .	'000 super. ft.	17,897	21,116	20,283
Imported Timber .. .. .	"	2,479	2,847	6,600
Wheatmeal (a) .. .. .	Ton (2,000 lb.)	42,077	55,825	62,018
Wheelbarrows (Metal) .. .. .	No.	51,216	71,603	71,996
Wireless—				
Cabinets—				
Wood .. .. .	No.	81,922	75,895	86,352
Other .. .. .	"	174,452	260,719	349,914
Receiving Sets .. .. .	"	294,119	343,323	459,436
Wool Scoured—				
For Sale .. .. .	'000 lb.	42,752	50,559	46,673
For use in own works .. .. .	"	44,038	40,443	36,259
On Commission .. .. .	"	75,325	81,977	69,451
Wool Tops .. .. .	"	35,973	31,475	29,786
Yarn—				
Cotton .. .. .	"	27,095	30,233	35,261
Woollen .. .. .	"	22,392	22,943	21,726
Worsted .. .. .	"	28,292	26,129	24,839
Zinc Oxide .. .. .	Cwt.	254,797	239,462	238,690
Zinc Oxide Paste .. .. .	"	19,930	19,101	22,081

(a) Excludes Wheatmeal for Baking Included with Flour.

## § 11. Individual Industries.

1. General.—Particulars in pages 968-97, §§ 2-9 afford a general view of the magnitude of industries in the sixteen groups adopted by the Conference of Statisticians in 1930. While it is not possible, within the limits of this work, to give a detailed account of each industry, particular industries dealt with hereunder are of special importance because of the employment which they provide for labour and capital or for other features of special interest. Where there are only one or two establishments in a particular industry in the State or the Commonwealth, details of activities are not published, but are combined with some other factory group so that operations of individual concerns will not be disclosed.



The statistics in the following tables should be read in the light of the following definitions.

*Factory.* A factory is taken to be a manufacturing establishment in which four or more persons are employed or in which power other than hand is used.

*Average Number of Persons Employed.* All persons employed in the manufacturing activities of a factory are counted as factory employees, including working proprietors and "out-workers". The average number of persons employed, means in general the average number over the whole year and not the average over the period worked.

*Value of Materials Used.* This item includes the value, in the usual sense, of the materials used, stores used, containers, tools replaced, and materials used in repairs to plant.

*Value of Fuel, etc., Used.* This item includes also the cost of power and light used, of lubricants and of water.

*Value of Output.* The amounts given under this heading represent the selling value at the factory of goods made or processed during the year, including by-products, also the value of other work done.

*Value of Production.* The value of production is obtained by deducting "Value of materials used" and "Value of fuel used", as defined above, from the "Value of output". This method of valuing factory production has been adopted by the Statistical offices throughout Australia.

*Rated Horse-power of Engines Used.* Statistics of power used in factories other than Central Electric Stations relate to the "rated horse-power" of engines ordinarily in use.

For more detailed definitions see § 1, par. 6 of this Chapter, page 965.

Details of some of the principal articles produced in factories in Australia during the years 1948-49 to 1950-51 are shown in the table in the preceding pages (§ 10).

2. **Portland Cement and Cement Goods.**—The manufacture of portland cement and cement goods is an important industry included in Class I. Particulars for the three industries under this general heading are shown for 1950-51 and for a selected number of years in the following table.

**PORTLAND CEMENT, ASBESTOS CEMENT SHEETS, ETC., AND OTHER CEMENT GOODS.**

AUSTRALIA, 1950-51.

Items.	Portland Cement.	Asbestos Cement Sheets and Mouldings.	Other Cement Goods.	Total.
Number of factories .. .. .	11	14	501	526
Number of persons employed .. .. .	2,304	2,195	4,693	9,192
Salaries and wages paid .. .. .	£ 1,336,258	1,237,493	2,286,487	4,860,238
Value of power, fuel, etc., used .. .. .	£ 1,628,846	75,290	89,816	1,793,952
Value of materials used .. .. .	£ 2,277,881	2,588,290	4,159,292	9,025,463
Value of production .. .. .	£ 2,544,403	1,903,026	4,187,050	8,634,479
Total value of output .. .. .	£ 6,451,130	4,566,606	8,436,158	19,453,894
Value of land and buildings .. .. .	£ 1,282,981	746,050	1,221,385	3,250,416
Value of plant and machinery .. .. .	£ 2,617,255	683,440	1,390,697	4,691,392
Horse-power of engines ordinarily in use h.p.	56,960	7,483	11,141	75,584

AUSTRALIA.

Items.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories .. .. .	132	152	328	381	450	526
Number of persons employed .. .. .	3,932	4,582	6,756	7,301	8,033	9,192
Salaries and wages paid .. .. .	£'000 897	1,334	2,426	3,036	3,673	4,860
Value of power, fuel, etc., used .. .. .	£'000 562	593	950	1,192	1,444	1,794
Value of materials used .. .. .	£'000 1,542	2,498	4,373	5,372	6,671	9,025
Value of production .. .. .	£'000 2,385	2,577	4,739	5,394	6,540	8,635
Total value of output .. .. .	£'000 4,489	5,668	10,062	11,958	14,955	19,454
Value of land and buildings .. .. .	£'000 1,350	1,464	1,839	2,087	2,283	3,250
Value of plant and machinery .. .. .	£'000 2,516	2,005	2,918	3,689	3,970	4,691
Horse-power of engines ordinarily in use .. .. .	h.p. 39,617	42,578	57,553	69,975	71,000	75,584

3. **Chemicals, Drugs and Medicines.**—In 1945-46 the classification of factories was amended to provide for the separate tabulation of factories engaged in the production of Industrial and Heavy Chemicals and Acids and those engaged in producing Pharmaceutical and Toilet Preparations, which previously had been combined. Details for each of these industries are given in the next two tables for 1950-51 with comparisons with previous years. However, it should be noted that in order to avoid the publication of confidential information, particulars relating to Industrial and Heavy Chemicals include details for the Explosives industry.

## INDUSTRIAL AND HEAVY CHEMICALS AND ACIDS (INCLUDING EXPLOSIVES).

1950-51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	110	66	16	7	7	1	207
Number of persons employed .. ..	4,255	5,163	226	719	(a)	(a)	10,615
Salaries and wages paid .. .. £	2,554,886	3,020,228	120,606	401,214	(a)	(a)	6,243,097
Value of power, fuel, etc., used .. £	701,858	476,513	30,566	288,344	(a)	(a)	1,545,853
Value of materials used .. .. £	9,218,349	6,772,307	177,461	437,393	(a)	(a)	16,857,405
Value of production .. .. £	6,283,286	5,766,004	235,926	848,138	(a)	(a)	13,373,047
Total value of output .. .. £	16,203,493	13,014,824	443,953	1,573,875	(a)	(a)	31,776,307
Value of land and buildings .. £	2,637,011	4,315,897	74,820	626,850	(a)	(a)	7,769,887
Value of plant and machinery .. £	3,805,046	5,350,637	113,257	1,347,195	(a)	(a)	11,042,539
Horse-power of engines ordinarily in use .. .. h.p.	29,296	38,891	982	2,993	(a)	(a)	74,613

## AUSTRALIA.

Items.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories .. ..	165	182	192	199	207
Number of persons employed .. ..	10,228	8,901	9,137	9,749	10,615
Salaries and wages paid .. .. £'000	3,450	3,614	4,143	4,890	6,243
Value of power, fuel, etc., used .. .. £'000	618	760	908	1,064	1,546
Value of materials used .. .. £'000	6,007	7,863	9,027	10,522	16,857
Value of production .. .. £'000	6,627	6,889	7,887	9,075	13,373
Total value of output .. .. £'000	13,252	15,512	17,822	20,661	31,776
Value of land and buildings .. .. £'000	11,697	10,930	10,199	10,696	7,770
Value of plant and machinery .. .. £'000	10,964	9,313	7,511	9,708	11,043
Horse-power of engines ordinarily in use h.p.	69,399	62,704	63,946	72,183	74,613

(a) Not available for publication; included with total for Australia.

## PHARMACEUTICAL AND TOILET PREPARATIONS.

1950-51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	125	52	4	11	6	3	201
Number of persons employed .. ..	3,115	1,665	(a)	536	111	(a)	5,538
Salaries and wages paid .. .. £	1,356,077	767,745	(a)	216,719	42,288	(a)	2,423,108
Value of power, fuel, etc., used .. £	37,738	32,399	(a)	17,537	1,907	(a)	90,645
Value of materials used .. .. £	4,395,340	2,973,127	(a)	702,000	96,568	(a)	8,291,354
Value of production .. .. £	6,048,713	2,409,795	(a)	285,181	106,060	(a)	8,985,181
Total value of output .. .. £	10,481,791	5,415,321	(a)	1,004,718	204,535	(a)	17,367,180
Value of land and buildings .. £	1,192,082	572,373	(a)	132,206	34,965	(a)	1,963,486
Value of plant and machinery .. £	399,830	338,443	(a)	66,583	12,048	(a)	822,949
Horse-power of engines ordinarily in use .. .. h.p.	3,640	3,035	(a)	1,426	163	(a)	8,357

(a) Not available for publication; included with total for Australia.

PHARMACEUTICAL AND TOILET PREPARATIONS—*continued.*

## AUSTRALIA.

Items.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories .. ..	215	213	216	205	201
Number of persons employed .. ..	5,514	5,491	5,474	5,157	5,538
Salaries and wages paid .. .. £'000	1,699	1,556	1,801	1,840	2,423
Value of power, fuel, etc., used .. .. £'000	57	63	69	73	91
Value of materials used .. .. £'000	5,402	5,751	6,414	6,371	8,291
Value of production .. .. £'000	4,790	5,545	5,851	6,566	8,985
Total value of output .. .. £'000	10,249	11,359	12,334	13,010	17,367
Value of land and buildings .. .. £'000	1,534	1,635	1,718	1,706	1,963
Value of plant and machinery .. .. £'000	598	727	755	767	823
Horse-power of engines ordinarily in use h.p.	6,324	7,408	7,660	7,816	8,357

4. **White Lead, Paint and Varnish.**—The following table shows particulars of this industry for each State during 1950-51 and for Australia for a series of years :—

## WHITE LEAD, PAINTS AND VARNISH.

1950-51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	65	52	12	15	7	3	154
Number of persons employed .. ..	3,048	1,159	251	443	(a)	(a)	4,985
Salaries and wages paid .. .. £	1,715,030	667,741	123,853	234,539	(a)	(a)	2,783,516
Value of power, fuel, etc., used .. .. £	162,172	41,311	8,634	14,451	(a)	(a)	228,586
Value of materials used .. .. £	7,777,953	3,680,772	866,957	1,541,741	(a)	(a)	14,157,124
Value of production .. .. £	3,930,027	1,894,711	270,229	750,251	(a)	(a)	7,010,266
Total value of output .. .. £	11,870,152	5,616,794	1,145,820	2,306,443	(a)	(a)	21,395,976
Value of land and buildings .. .. £	1,556,514	830,639	63,635	327,881	(a)	(a)	2,830,711
Value of plant and machinery .. .. £	779,552	524,048	47,426	168,603	(a)	(a)	1,547,749
Horse-power of engines ordinarily in use .. .. h.p.	12,777	4,900	492	1,274	(a)	(a)	19,875

## AUSTRALIA.

Items.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories .. ..	102	122	143	152	149	154
Number of persons employed .. ..	2,271	3,197	3,980	4,240	4,526	4,985
Salaries and wages paid .. .. £'000	535	1,005	1,566	1,797	2,097	2,784
Value of power, fuel, etc., used .. .. £'000	45	81	109	127	171	229
Value of materials used .. .. £'000	2,275	4,775	8,155	9,048	10,903	14,157
Value of production .. .. £'000	1,585	2,448	3,977	4,376	5,296	7,010
Total value of output .. .. £'000	3,905	7,304	12,241	13,551	16,370	21,396
Value of land and buildings .. .. £'000	761	973	1,474	1,595	2,038	2,831
Value of plant and machinery .. .. £'000	324	524	883	989	1,345	1,548
Horse-power of engines ordinarily in use .. .. h.p.	7,696	12,252	13,787	15,829	17,681	19,875

(a) Not available for publication ; figures are included in the total for Australia.

5. **Soap and Candle Factories.**—The following table shows particulars of factories in the soap and candle industry in each State for 1950-51 and for Australia for a series of years :—

## SOAP AND CANDLES.

1950-51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	51	20	10	5	4	3	93
Number of persons employed .. ..	2,099	792	321	198	(a)	(a)	3,502
Salaries and wages paid .. .. £	1,214,121	480,558	147,229	91,277	(a)	(a)	1,973,984
Value of power, fuel, etc., used .. .. £	146,903	180,345	11,655	10,216	(a)	(a)	353,257
Value of materials used .. .. £	3,722,359	1,895,233	336,469	206,657	(a)	(a)	6,329,593
Value of production .. .. £	2,822,026	1,320,319	290,212	82,225	(a)	(a)	4,609,265
Total value of output .. .. £	6,691,288	3,395,897	638,336	299,098	(a)	(a)	11,292,115
Value of land and buildings .. .. £	609,020	398,531	63,319	83,346	(a)	(a)	1,200,060
Value of plant and machinery .. .. £	571,962	633,776	41,256	72,071	(a)	(a)	1,340,917
Horse-power of engines ordinarily in use .. .. h.p.	4,161	2,183	551	381	(a)	(a)	7,447

(a) Not available for publication ; figures are included in total for Australia.

SOAP AND CANDLES—*continued.*

## AUSTRALIA.

Items.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories .. .. .	65	73	88	91	90	93
Number of persons employed ..	2,620	3,020	3,204	3,578	3,646	3,502
Salaries and wages paid .. £'000	501	860	1,124	1,461	1,605	1,974
Value of power, fuel, etc., used .. £'000	76	123	173	259	285	353
Value of materials used .. £'000	1,568	3,051	4,295	5,277	5,499	6,330
Value of production .. £'000	1,886	2,628	2,935	3,816	4,442	4,609
Total value of output .. £'000	3,530	5,802	7,403	9,352	10,226	11,292
Value of land and buildings .. £'000	666	676	709	715	1,115	1,200
Value of plant and machinery .. £'000	577	373	398	518	1,201	1,341
Horse-power of engines ordinarily in use .. .. . h.p.	5,267	6,630	7,173	7,569	7,515	7,447
Materials used—						
Tallow .. .. . cwt.	535,511	834,057	893,826	972,474	1,008,257	1,123,817
Alkali for Soap (a) .. .. . „	194,869	281,313	293,389	329,974	326,648	343,126
Coconut oil—refined and unrefined .. cwt.	138,954	86,576	80,518	98,751	78,261	90,738
Articles produced—						
Soap (b) .. .. . cwt.	978,113	1,065,439	1,150,774	1,149,868	1,174,605	1,365,669
Soap Extracts and Powders .. .. . „	191,232	469,865	529,971	609,631	697,848	754,758
Candles made .. .. . „	28,649	23,844	13,382	15,692	21,245	12,871

(a) Includes Soda Ash.

(b) Soap made in all factories including those not classified as " Soap and Candle " factories.

6. **Chemical Fertilizers.**—The following table shows particulars of the factories engaged in the manufacture of chemical fertilizers in each State during 1950-51 and for Australia for a series of years. Details of the consumption, imports and exports of fertilizers will be found in Chapter XX.—Agricultural Production.

## CHEMICAL FERTILIZERS.

1950-51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. .. .	14	9	7	7	5	7	49
Number of persons employed ..	801	1,326	251	801	762	71	4,012
Salaries and wages paid .. £	506,658	910,039	133,513	478,105	459,958	51,321	2,539,594
Value of power, fuel, etc., used .. £	166,533	124,970	13,905	61,180	71,286	1,577	439,451
Value of materials used .. £	1,779,393	4,874,745	1,335,136	2,223,076	3,480,258	321,539	14,014,147
Value of production .. .. . £	694,063	1,654,394	264,444	865,947	723,109	110,160	4,312,117
Total value of output .. .. . £	2,639,989	6,654,109	1,613,485	3,150,203	4,274,653	433,276	18,765,715
Value of land and buildings .. £	2,035,513	734,031	91,217	339,037	586,287	113,728	3,899,813
Value of plant and machinery .. £	2,200,830	1,520,218	144,732	696,128	731,350	125,080	5,418,338
Horse-power of engines ordinarily in use .. .. . h.p.	11,945	11,324	1,688	6,510	4,326	481	36,274

## AUSTRALIA.

Items.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories .. .. .	36	38	47	50	51	49
Number of persons employed ..	2,540	3,127	3,621	3,894	3,889	4,012
Salaries and wages paid .. .. . £'000	601	1,091	1,549	1,847	2,051	2,540
Value of power, fuel, etc., used .. £'000	114	181	270	372	407	440
Value of materials used .. .. . £'000	3,231	7,899	9,958	11,910	12,737	14,014
Value of production .. .. . £'000	1,600	1,967	2,880	3,400	3,998	4,312
Total value of output .. .. . £'000	4,945	10,047	13,108	15,682	17,142	18,766
Value of land and buildings .. £'000	1,449	1,572	1,722	3,511	3,633	3,900
Value of plant and machinery .. £'000	2,353	2,409	2,857	4,782	4,849	5,418
Horse-power of engines ordinarily in use .. .. . h.p.	18,165	22,574	25,952	29,164	30,855	36,274

7. **Iron and Steel Works and Engineering.**—(i) *General.* In 1945-46 the classification of factories was amended to provide for the tabulation in four separate groups of those industries previously included under Iron and Steel and Engineering. The first group (Smelting, Converting, Refining and Rolling of Iron and Steel) covers blast furnaces, steel works and rolling mills. The second group, Foundries (Ferrous), covers those engaged in the founding of iron and steel. The third group (Plant, Equipment and Machinery including Machine Tools) covers those industries engaged in the production

of boilers, engines, machines and machinery, machine tools, structural steel fabrications, steel furniture, etc. The fourth group (Other Engineering) includes jobbing and general engineers, not elsewhere included.

(ii) *Smelting, Converting, Refining and Rolling of Iron and Steel.* In the following table particulars are shown for 1950-51 for each State and for Australia in selected years for the group Smelting, Converting, Refining and Rolling of Iron and Steel.

### SMEETING, CONVERTING, REFINING AND ROLLING OF IRON AND STEEL.

1950-51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	17	9	..	3	1	..	30
Number of persons employed ..	12,173	924	..	(a)	(a)	..	13,419
Salaries and wages paid ..	£ 8,369,530	675,078	..	(a)	(a)	..	9,245,432
Value of power, fuel, etc., used ..	£ 6,932,586	144,591	..	(a)	(a)	..	7,895,622
Value of materials used ..	£ 39,713,401	562,510	..	(a)	(a)	..	40,580,191
Value of production ..	£ 15,176,684	1,000,724	..	(a)	(a)	..	16,594,461
Total value of output ..	£ 61,822,671	1,707,825	..	(a)	(a)	..	65,070,274
Value of land and buildings ..	£ 3,029,589	162,805	..	(a)	(a)	..	3,259,007
Value of plant and machinery ..	£ 8,739,296	236,755	..	(a)	(a)	..	9,191,192
Horse-power of engines ordinarily in use ..	h.p. 207,218	6,848	..	(a)	(a)	..	216,617

#### AUSTRALIA.

Items.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories ..	27	31	32	30	30
Number of persons employed ..	10,413	12,503	12,335	11,509	13,419
Salaries and wages paid ..	£'000 4,164	5,772	6,583	6,978	9,245
Value of power, fuel, etc., used ..	£'000 2,777	4,233	4,568	5,516	7,896
Value of materials used ..	£'000 19,134	25,419	26,550	29,747	40,580
Value of production ..	£'000 7,393	12,280	11,950	12,784	16,594
Total value of output ..	£'000 29,304	41,932	43,268	48,047	65,070
Value of land and buildings ..	£'000 2,197	2,379	2,697	2,812	3,259
Value of plant and machinery ..	£'000 5,669	5,670	6,375	7,185	9,191
Horse-power of engines ordinarily in use h.p.	198,317	198,223	202,332	213,529	216,617

(a) Not available for publication; figures are included in the total for Australia.

(iii) *Foundries (Ferrous).* Particulars covering those industries classified as founding of iron and steel are shown for each State for 1950-51 and for Australia in selected years in the following table:—

### FOUNDRIES—FERROUS.

1950-51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	96	201	22	21	18	..	358
Number of persons employed ..	3,137	2,445	574	536	506	..	7,198
Salaries and wages paid ..	£ 1,899,858	1,387,950	291,819	300,510	254,307	..	4,134,444
Value of power, fuel, etc., used ..	£ 190,381	173,818	25,992	35,304	49,252	..	474,747
Value of materials used ..	£ 1,413,956	1,223,409	224,957	181,815	217,754	..	3,261,891
Value of production ..	£ 2,626,123	2,160,184	456,841	433,047	347,593	..	6,023,788
Total value of output ..	£ 4,230,460	3,557,411	707,790	650,166	614,599	..	9,760,426
Value of land and buildings ..	£ 612,834	674,422	125,299	70,731	87,201	..	1,570,487
Value of plant and machinery ..	£ 538,418	482,851	158,823	108,250	69,008	..	1,357,350
Horse-power of engines ordinarily in use ..	h.p. 10,533	7,311	1,780	2,103	2,249	..	23,976

#### AUSTRALIA.

Items.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories ..	312	349	374	353	358
Number of persons employed ..	5,344	6,597	6,910	6,346	7,198
Salaries and wages paid ..	£'000 1,612	2,597	2,986	2,985	4,134
Value of power, fuel, etc., used ..	£'000 161	246	295	341	475
Value of materials used ..	£'000 1,210	1,764	2,142	2,116	3,262
Value of production ..	£'000 2,341	3,667	4,041	4,648	6,024
Total value of output ..	£'000 3,712	5,677	6,478	7,105	9,761
Value of land and buildings ..	£'000 988	1,163	1,237	1,207	1,570
Value of plant and machinery ..	£'000 619	857	1,047	1,063	1,357
Horse-power of engines ordinarily in use h.p.	13,381	17,985	19,600	19,306	23,976

INDIVIDUAL INDUSTRIES.

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(iv) *Plant, Equipment and Machinery (including Machine Tools)*. The next table shows particulars for this group for each State during 1950-51 and for Australia for the years 1945-46 and 1947-48 to 1950-51:—

PLANT, EQUIPMENT AND MACHINERY (INCLUDING MACHINE TOOLS).

1950-51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	770	503	101	114	67	..	1,555
Number of persons employed ..	27,982	18,479	5,264	7,248	2,017	..	60,990
Salaries and wages paid ..	£ 16,624,033	10,816,854	2,572,881	4,201,547	1,000,070	..	35,215,385
Value of power, fuel, etc., used ..	£ 648,423	420,293	106,885	206,174	52,352	..	1,434,127
Value of materials used ..	£ 25,718,418	16,085,863	3,189,407	6,762,385	1,284,261	..	53,040,426
Value of production ..	£ 26,599,215	17,599,248	3,684,587	6,474,837	1,575,557	..	55,933,444
Total value of output ..	£ 52,966,050	34,105,406	6,980,969	13,443,906	2,912,170	..	110,407,997
Value of land and buildings ..	£ 7,446,651	5,527,744	779,850	1,618,638	530,800	..	15,903,683
Value of plant and machinery ..	£ 7,445,158	4,738,827	834,800	1,415,298	534,001	..	14,968,084
Horse-power of engines ordinarily in use .. h.p.	111,145	55,837	13,231	18,510	7,013	..	205,736

AUSTRALIA.

Items.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories ..	1,038	1,286	1,423	1,498	1,555
Number of persons employed ..	49,123	50,909	54,268	56,344	60,990
Salaries and wages paid ..	£ 14,259	19,315	23,096	26,493	35,215
Value of power, fuel, etc. used ..	£ 605	730	906	1,075	1,434
Value of materials used ..	£ 16,455	25,418	30,109	38,457	53,040
Value of production ..	£ 21,044	28,779	34,624	40,958	55,934
Total value of output ..	£ 38,104	54,927	65,639	80,490	110,408
Value of land and buildings ..	£ 7,227	9,106	10,428	12,680	15,904
Value of plant and machinery ..	£ 7,046	8,662	10,554	12,571	14,968
Horse-power of engines ordinarily in use h.p.	101,810	112,935	141,033	158,402	205,736

(v) *Other Engineering*. Details covering jobbing and general engineering works not elsewhere included are shown for each State for 1950-51 and for selected years for Australia in the following table:—

OTHER ENGINEERING.

1950-51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	619	595	100	134	102	77	1,627
Number of persons employed ..	5,187	7,582	1,267	2,600	568	1,283	18,487
Salaries and wages paid ..	£ 2,603,641	4,114,032	560,560	1,316,004	220,886	679,380	9,494,509
Value of power, fuel, etc., used ..	£ 84,211	111,792	16,424	44,697	11,750	21,635	290,509
Value of materials used ..	£ 2,709,465	4,334,325	651,794	1,248,541	278,006	632,649	9,854,780
Value of production ..	£ 4,508,914	6,699,772	838,101	1,861,903	389,602	1,025,067	15,323,359
Total value of output ..	£ 7,392,590	11,145,889	1,506,319	1,555,141	679,358	1,679,351	25,468,648
Value of land and buildings ..	£ 1,647,034	2,121,683	305,240	455,401	150,247	409,515	5,089,120
Value of plant and machinery ..	£ 1,092,388	1,862,602	252,372	491,119	100,100	299,803	4,098,444
Horse-power of engines ordinarily in use .. h.p.	12,396	20,860	2,844	6,464	1,353	3,479	47,396

AUSTRALIA.

Items.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories ..	963	1,267	1,358	1,495	1,627
Number of persons employed ..	13,112	14,232	14,844	16,798	18,487
Salaries and wages paid ..	£ 3,634	4,803	5,741	6,977	9,495
Value of power, fuel, etc., used ..	£ 162	172	193	241	291
Value of materials used ..	£ 3,599	4,507	5,217	6,537	9,855
Value of production ..	£ 5,432	7,425	8,950	11,086	15,323
Total value of output ..	£ 9,193	12,164	14,360	17,964	25,469
Value of land and buildings ..	£ 2,369	3,653	5,128	5,191	5,089
Value of plant and machinery ..	£ 2,091	2,899	3,128	3,515	4,098
Horse-power of engines ordinarily in use h.p.	26,095	31,804	41,577	41,668	47,396

8. **Extracting and Refining of Non-ferrous Metals ; Alloys.**—The following table shows particulars of establishments engaged in metal extraction and ore reduction including secondary recovery of metals, but excluding blast furnaces engaged in production of pig iron from iron ore, for each State during 1950–51 and for Australia for a series of years.

**EXTRACTING AND REFINING OF NON-FERROUS METALS ; ALLOYS.**

1950–51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (a)	Tas.	Australia.
Number of factories ..	29	18	12	3	..	3	65
Number of persons employed ..	2,051	201	1,050	(b)	..	(b)	7,664
Salaries and wages paid .. £	1,554,265	137,370	596,760	(b)	..	(b)	5,267,948
Value of power, fuel, etc., used £	845,165	19,430	210,034	(b)	..	(b)	2,323,138
Value of materials used .. £	25,303,846	1,571,139	4,251,288	(b)	..	(b)	59,734,442
Value of production .. .. £	5,375,449	384,476	5,681,650	(b)	..	(b)	20,435,204
Total value of output .. .. £	31,524,460	1,975,045	10,142,972	(b)	..	(b)	82,492,784
Value of land and buildings .. £	566,132	107,668	389,286	(b)	..	(b)	2,017,095
Value of plant and machinery .. £	1,711,165	31,177	1,111,758	(b)	..	(b)	4,723,478
Horse-power of engines ordinarily in use .. .. h.p.	31,483	372	14,914	(b)	..	(b)	88,410

**AUSTRALIA.**

Items.	1938–39.	1945–46.	1947–48.	1948–49.	1949–50.	1950–51.
Number of factories .. ..	42	49	54	56	62	65
Number of persons employed ..	5,532	6,060	6,843	7,040	7,394	7,664
Salaries and wages paid .. £'000	1,613	2,280	3,379	3,919	4,324	5,268
Value of power, fuel, etc., used .. £'000	598	1,058	1,358	1,712	1,908	2,323
Value of materials used .. .. £'000	16,844	18,042	30,757	41,488	38,993	59,735
Value of production .. .. £'000	3,892	5,527	10,664	16,032	15,718	20,435
Total value of output .. .. £'000	21,334	24,627	42,779	59,232	56,619	82,493
Value of land and buildings .. £'000	1,177	1,385	1,461	1,649	1,861	2,017
Value of plant and machinery .. £'000	3,526	3,795	3,834	4,267	4,605	4,723
Horse-power of engines ordinarily in use .. .. h.p.	54,450	57,345	74,120	77,437	79,320	88,410

(a) In Western Australia the majority of the plants are worked at the mines and are therefore not included. (b) Not available for publication ; figures are included in the total for Australia.

9. **Electrical Machinery, Cables and Apparatus.**—The following table shows particulars of this industry for each State during 1950–51 and for Australia for a series of years :—

**ELECTRICAL MACHINERY, CABLES AND APPARATUS.**

1950–51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	423	249	52	61	66	16	867
Number of persons employed ..	23,753	8,027	1,415	1,378	821	100	35,494
Salaries and wages paid .. £	12,795,703	4,287,536	693,956	641,456	356,754	40,639	18,816,104
Value of power, fuel, etc., used .. £	454,114	133,267	10,503	21,265	10,583	1,335	637,067
Value of materials used .. .. £	21,731,366	7,470,035	1,121,584	810,413	493,940	52,292	31,679,650
Value of production .. .. £	21,308,072	6,700,026	1,232,970	983,924	570,763	71,515	30,867,270
Total value of output .. .. £	43,493,572	14,303,328	2,371,057	1,815,602	1,075,286	125,142	63,183,987
Value of land and buildings .. £	5,268,326	2,143,731	263,727	273,638	212,075	62,523	8,224,020
Value of plant and machinery .. £	3,358,303	1,821,891	305,787	143,677	68,782	20,629	5,719,069
Horse-power of engines ordinarily in use .. .. h.p.	37,123	12,787	3,560	1,358	809	217	55,854

**AUSTRALIA.**

Items.	1938–39.	1945–46.	1947–48.	1948–49.	1949–50.	1950–51.
Number of factories .. ..	360	551	732	791	811	867
Number of persons employed ..	10,666	22,825	27,579	29,961	30,956	35,494
Salaries and wages paid .. £'000	2,031	6,301	9,434	11,703	13,563	18,816
Value of power, fuel, etc., used .. £'000	105	209	291	366	453	637
Value of materials used .. .. £'000	3,195	8,085	14,310	16,510	21,149	31,680
Value of production .. .. £'000	3,655	9,496	13,290	17,834	21,154	30,867
Total value of output .. .. £'000	6,955	17,790	27,801	34,710	42,756	63,184
Value of land and buildings .. £'000	1,627	3,597	4,488	5,382	6,293	8,224
Value of plant and machinery .. £'000	897	2,084	2,988	3,664	4,127	5,719
Horse-power of engines ordinarily in use .. .. h.p.	12,043	26,244	34,661	39,382	43,995	55,854

10. **Railway and Tramway Workshops.**—The railway and tramway workshops, which form an important item in Class IV., are chiefly owned by State Governments and Local Authorities. Workshops (fourteen in 1950-51) controlled by non-public bodies are not included in the figures below :—

## TRAMCARS AND RAILWAY ROLLING STOCK(a).

1950-51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	47	25	11	14	22	7	126
Number of persons employed ..	17,269	6,482	5,901	4,282	3,502	817	38,253
Salaries and wages paid .. £	9,955,429	3,312,731	3,062,802	2,476,310	1,694,253	412,128	20,913,653
Value of power, fuel, etc., used .. £	241,155	115,286	73,345	114,115	58,197	14,329	616,427
Value of materials used .. £	5,384,388	2,054,035	1,037,803	1,412,651	1,526,866	149,041	12,164,784
Value of production .. £	11,805,409	4,352,469	3,463,948	2,861,702	2,808,394	449,416	25,738,338
Total value of output .. £	17,430,952	6,521,790	5,175,096	4,388,468	4,393,457	609,786	38,519,549
Value of land and buildings .. £	4,290,052	1,336,073	566,775	1,179,166	182,036	429,103	7,983,205
Value of plant and machinery .. £	5,371,797	519,207	540,687	1,222,666	321,942	300,607	8,276,906
Horse-power of engines ordinarily in use .. h.p.	38,062	15,079	13,417	16,642	7,255	3,112	95,507

## AUSTRALIA.

Items.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories ..	117	115	128	128	127	126
Number of persons employed ..	27,310	36,962	37,496	37,993	38,432	38,253
Salaries and wages paid .. £'000	6,721	11,657	14,497	16,357	18,057	20,914
Value of power, fuel, etc., used .. £'000	226	372	372	450	500	617
Value of materials used .. £'000	4,976	8,143	9,074	9,533	11,133	12,165
Value of production .. £'000	8,021	13,794	17,387	19,265	21,643	25,738
Total value of output .. £'000	13,223	22,309	26,833	29,248	33,270	38,520
Value of land and buildings .. £'000	6,737	6,960	7,514	7,773	8,051	7,983
Value of plant and machinery .. £'000	5,390	6,034	6,525	7,206	7,925	8,277
Horse-power of engines ordinarily in use .. h.p.	53,671	75,532	82,441	87,391	89,864	93,567

(a) Government and Local Authority only.

A railway workshop in the Northern Territory is chiefly engaged in making repairs to rolling stock, etc., no new goods being manufactured. Particulars of this establishment are not included in any of the tables in this chapter.

11. **Motor Vehicles.**—The industries catering for the motor trade are included in Class IV., Industrial Metals, Machines and Conveyances. In the table below a summary is given of the principal statistics for 1950-51 for each branch of industry associated with the motor trade of Australia.

## MOTOR VEHICLES : CONSTRUCTION, ASSEMBLY, REPAIRS, ETC., AUSTRALIA.

1950-51.

Items.	Construction and Assembly.	Motor Bodies.	Repairs.	Motor Accessories.	Total.
Number of factories ..	78	519	4,998	135	5,730
Number of persons employed ..	13,714	17,708	38,590	5,568	75,580
Salaries and wages paid .. £	8,811,236	10,195,208	16,731,975	3,050,945	38,789,364
Value of power, fuel, etc., used .. £	308,301	274,550	477,963	154,179	1,214,993
Value of materials used .. £	10,616,358	15,967,334	18,220,497	3,737,713	48,541,902
Value of production .. £	18,384,177	13,991,133	25,761,443	5,254,874	60,391,627
Total value of output .. £	26,508,836	30,233,017	44,459,903	9,146,766	110,348,522
Value of land and buildings .. £	2,645,535	3,421,165	14,887,729	2,406,128	23,360,557
Value of plant and machinery .. £	2,136,017	2,542,379	5,031,878	1,784,893	11,495,167
Horse-power of engines ordinarily in use .. h.p.	20,704	34,375	38,167	16,461	109,707

In the next table similar details are shown on a State basis for 1950-51 and for Australia for selected years for these branches combined.



## MOTOR VEHICLES : CONSTRUCTION, ASSEMBLY, REPAIRS, ETC.

1950-51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas. (a)	Australia.
Number of factories	2,205	1,510	860	400	527	228	5,730
Number of persons employed	23,282	25,166	8,443	12,040	5,019	1,630	75,580
Salaries and wages paid	£ 11,599,054	£ 13,967,809	£ 3,442,089	£ 6,827,417	£ 2,291,728	£ 661,267	£ 38,789,364
Value of power, fuel, etc., used	£ 347,747	£ 445,854	£ 109,666	£ 206,765	£ 91,088	£ 13,873	£ 1,214,993
Value of materials used	£ 15,002,314	£ 14,997,134	£ 3,532,028	£ 10,409,001	£ 3,931,930	£ 669,495	£ 48,541,902
Value of production	£ 17,877,315	£ 21,427,753	£ 6,985,457	£ 9,852,173	£ 3,425,667	£ 1,023,263	£ 60,591,627
Total value of output	£ 33,227,376	£ 36,870,741	£ 10,627,151	£ 20,467,939	£ 7,448,685	£ 1,706,630	£ 110,348,522
Value of land and buildings	£ 8,960,823	£ 7,625,326	£ 2,100,341	£ 2,127,434	£ 1,696,629	£ 850,064	£ 23,360,557
Value of plant and machinery	£ 3,705,007	£ 4,040,089	£ 937,165	£ 1,879,768	£ 754,830	£ 178,308	£ 11,495,167
Horse-power of engines ordinarily in use	h.p. 29,868	39,402	8,247	22,835	7,909	1,446	109,707

## AUSTRALIA.

Items.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories	3,592	4,592	5,009	5,330	5,730
Number of persons employed	39,706	55,988	62,020	67,874	75,580
Salaries and wages paid	£'000 10,582	£ 18,884	£ 23,883	£ 28,685	£ 38,789
Value of power, fuel, etc., used	£'000 395	£ 598	£ 744	£ 895	£ 1,215
Value of materials used	£'000 12,143	£ 18,517	£ 23,672	£ 32,427	£ 48,542
Value of production	£'000 15,818	£ 28,751	£ 34,494	£ 45,091	£ 60,592
Total value of output	£'000 28,356	£ 47,866	£ 58,910	£ 78,413	£ 110,349
Value of land and buildings	£'000 9,878	£ 14,052	£ 16,271	£ 18,801	£ 23,361
Value of plant and machinery	£'000 3,758	£ 5,920	£ 8,301	£ 9,464	£ 11,495
Horse-power of engines ordinarily in use	h.p. 56,117	77,031	89,194	95,755	109,707

(a) Includes horse-drawn vehicles.

The table below shows the output of motor bodies and the imports of motor bodies and motor chassis for 1938-39, 1945-46 and 1947-48 to 1950-51 :—

## PRODUCTION AND IMPORTS OF MOTOR BODIES(a) AND IMPORTS OF MOTOR CHASSIS : AUSTRALIA.

Items.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
<b>Motor Bodies—</b>						
Number made	No. 79,436	19,473	58,354	68,230	67,097	92,621
Value	£'000 6,421	£ 2,357	£ 9,210	£ 12,145	£ 14,057	£ 18,441
Number imported	No. 532	223	13,724	34,728	115,484	92,791
Value	£'000 64	£ 34	£ 2,174	£ 5,568	£ 17,994	£ 14,328
<b>Motor Chassis—</b>						
Number imported	No. 76,094	10,113	66,832	101,664	187,363	185,751
Value	£'000 7,315	£ 1,879	£ 15,180	£ 23,636	£ 44,965	£ 46,919

(a) Excludes sidecars.

12. Agricultural Machines and Implements.—Owing to the extensive agricultural activities conducted in Australia and the demand for modern mechanized farm equipment, the manufacture of agricultural implements constitutes an important branch of Australian industry. The articles manufactured include a wide range of implements for tillage, seeding, and planting and the harvesting of crops. Other farm machinery made includes windmills, chaff-cutters and machinery used in the dairying industry.

The following table shows details of agricultural implement works in each State for 1950-51 and for Australia for a series of years :—

## AGRICULTURAL MACHINES AND IMPLEMENTS.

1950-51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories	73	71	30	30	21	..	225
Number of persons employed	2,258	6,240	1,493	1,394	266	..	11,651
Salaries and wages paid	£ 1,376,891	£ 3,920,965	£ 720,418	£ 743,023	£ 133,144	..	£ 6,894,441
Value of power, fuel, etc., used	£ 45,835	£ 286,847	£ 37,821	£ 58,718	£ 3,943	..	£ 433,164
Value of materials used	£ 2,117,611	£ 6,042,755	£ 868,531	£ 803,760	£ 119,537	..	£ 9,952,194
Value of production	£ 1,940,163	£ 5,565,243	£ 1,007,594	£ 1,136,000	£ 204,833	..	£ 9,853,833
Total value of output	£ 4,103,609	£ 11,894,845	£ 1,913,946	£ 1,998,478	£ 328,313	..	£ 20,239,191
Value of land and buildings	£ 675,590	£ 1,430,135	£ 357,809	£ 187,067	£ 163,091	..	£ 2,813,692
Value of plant and machinery	£ 490,084	£ 1,789,330	£ 294,678	£ 262,081	£ 40,913	..	£ 2,877,086
Horse-power of engines ordinarily in use	h.p. 7,268	17,383	3,800	4,523	490	..	33,464

AGRICULTURAL MACHINES AND IMPLEMENTS—*continued.*  
AUSTRALIA.

Items.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories .. .. .	161	172	186	196	208	225
Number of persons employed .. .. .	6,563	9,510	9,185	9,629	10,454	11,651
Salaries and wages paid .. .. . £'000	1,373	2,894	3,499	4,199	5,012	6,894
Value of power, fuel, etc., used .. .. . £'000	82	186	204	233	292	433
Value of materials used .. .. . £'000	1,485	2,717	3,579	4,480	6,910	9,952
Value of production .. .. . £'000	1,836	3,798	4,615	5,671	6,983	9,854
Total value of output .. .. . £'000	3,403	6,701	8,398	10,384	14,185	20,239
Value of land and buildings .. .. . £'000	997	1,200	1,531	1,913	2,201	2,814
Value of plant and machinery .. .. . £'000	911	1,230	1,625	1,938	2,215	2,877
Horse-power of engines ordinarily in use .. .. . h.p.	13,346	21,225	24,383	26,445	28,139	33,464

13. **Wireless and Amplifying Apparatus.**—The introduction of wireless broadcasting in 1923 gave rise to a new industry in Australia. Early statistical details of the industry are not available as they were grouped together with other electrical apparatus. In 1930-31 a new classification of factories was adopted and "Wireless Apparatus" was shown as a separate industry. The industry is confined mainly to New South Wales and Victoria, but is becoming increasingly important in South Australia. The number of broadcast listeners' licences increased from a third of a million in 1930-31 to about two millions at December, 1952, and this increase reflects the advancement of the industry during that period. During the war years considerable expansion took place in the industry to meet the requirements of the fighting services and apart from a slight drop in output in 1945-46, this expansion has continued.

WIRELESS AND AMPLIFYING APPARATUS : AUSTRALIA.

Items.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories .. .. .	72	97	134	136	129	139
Number of persons employed .. .. .	4,828	8,709	9,543	9,213	9,283	10,628
Salaries and wages paid .. .. . £'000	754	2,296	3,071	3,362	3,745	5,140
Value of power, fuel, etc., used .. .. . £'000	23	58	91	103	101	147
Value of materials used .. .. . £'000	1,356	3,446	4,920	5,197	6,409	9,229
Value of production .. .. . £'000	1,123	3,011	4,225	4,612	5,252	7,219
Total value of output .. .. . £'000	2,502	6,515	9,236	9,912	11,762	16,595
Value of land and buildings .. .. . £'000	558	969	1,115	1,106	1,205	1,339
Value of plant and machinery .. .. . £'000	305	712	644	688	770	946
Horse-power of engines ordinarily in use .. .. . h.p.	2,710	4,949	6,813	7,230	10,357	13,565
Domestic receiving sets made .. .. . No.	163,821	93,048	335,203	294,119	343,323	459,436

14. **Cotton.**—(i) *General.* Cotton has been grown in Australia since 1860, but never on a very large scale. The average annual quantity of unginned cotton produced during the five years ended 1938-39 was 18 million lb. and slightly under 1½ million lb. in the five years ended 1950-51. Arising out of the development in the local manufacture of cotton materials and the further expansion following the outbreak of war in 1939, plans were completed for an extension of the area devoted to the cultivation of this crop, but the downward trend which commenced with the war in the Pacific has persisted. The growing of cotton, which is restricted to Queensland, is referred to in some detail in Chapter XX.—Agricultural Production.

(ii) *Ginning.* The ginning and marketing of cotton is controlled by the Queensland Cotton Board. The Board operates ginneries and processes by-products. The production of raw cotton is insufficient for local factory requirements and is supplemented by imports from overseas, chiefly (1950-51) from India, Pakistan, Brazil, Egypt and the United States of America.

(iii) *Spinning and Weaving.* The recent expansion in the spinning and weaving section of the cotton industry marks an important event in its development. New factories have been established and Australia is now producing an extensive range of cotton goods, including duck and canvas from cotton or flax, denims, drill, etc., tyre

cord and tyre cord fabric. The number of establishments engaged in cotton spinning and weaving in Australia and other particulars of the industry are shown in the following table for the years 1938-39, 1945-46 and 1947-48 to 1950-51.

## COTTON SPINNING AND WEAVING : AUSTRALIA.

Items.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories .. .. .	33	78	79	91	93	91
Number of persons employed .. .. .	3,589	7,253	7,702	8,246	8,377	9,233
Salaries and wages paid .. .. . £'000	493	1,715	2,512	2,939	3,306	4,473
Value of power, fuel, etc., used .. .. . £'000	50	150	209	251	308	441
Value of materials used .. .. . £'000	1,357	4,560	6,076	7,857	9,889	16,873
Value of production .. .. . £'000	979	3,227	4,087	4,788	5,991	7,534
Total value of output .. .. . £'000	2,386	7,937	10,372	12,896	16,188	24,848
Value of land and buildings .. .. . £'000	704	1,529	1,868	2,078	2,844	3,215
Value of plant and machinery .. .. . £'000	736	1,914	2,042	2,748	4,118	4,020
Horse-power of engines ordinarily in use .. .. . h.p.	9,128	21,195	23,112	26,078	29,118	31,468

15. Wool Carding, Spinning and Weaving.—The importance of this industry is emphasised by the fact that Australia is the world's chief source of wool and the development of the woollen industry since its establishment at an early period in Australian history is of singular interest. The production consists chiefly of woollen cloth and tweed worsted cloth, rugs, blankets and yarn, all of which have acquired a reputation for purity and durability.

## WOOL CARDING, SPINNING AND WEAVING.

1950-51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. .. .	62	99	4	3	3	5	176
Number of persons employed .. .. .	8,225	12,239	898	626	341	2,004	24,333
Salaries and wages paid .. .. . £	3,758,972	5,916,839	342,832	286,075	155,791	888,964	11,349,473
Value of power, fuel, etc., used .. .. . £	293,713	540,066	25,300	29,391	15,828	48,258	952,496
Value of materials used .. .. . £	15,590,001	29,181,087	1,886,459	1,472,986	1,759,340	3,981,644	53,871,517
Value of production .. .. . £	5,887,337	9,569,533	524,929	432,200	498,315	1,697,457	18,609,771
Total value of output .. .. . £	21,771,051	39,290,626	2,436,688	1,934,577	2,273,483	5,727,359	73,433,784
Value of land and buildings .. .. . £	1,857,939	3,065,142	141,131	35,864	66,470	202,872	5,369,418
Value of plant and machinery .. .. . £	2,164,676	4,008,096	282,105	65,610	89,314	288,411	6,898,212
Horse-power of engines ordinarily in use .. .. . h.p.	21,115	38,571	2,419	1,814	850	4,301	69,070

## AUSTRALIA.

Items.	1938-39. (a)	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories .. .. .	90	114	142	153	168	176
Number of persons employed .. .. .	19,608	21,536	23,480	24,893	24,354	24,333
Salaries and wages paid .. .. . £'000	2,888	5,324	7,165	8,684	9,404	11,349
Value of power, fuel, etc., used .. .. . £'000	393	511	672	787	831	952
Value of materials used .. .. . £'000	7,331	12,315	16,072	23,643	32,741	53,872
Value of production .. .. . £'000	4,791	8,951	12,287	13,598	16,426	18,610
Total value of output .. .. . £'000	12,515	21,777	29,031	38,028	49,998	73,434
Value of land and buildings .. .. . £'000	2,380	3,028	3,460	3,654	4,347	5,369
Value of plant and machinery .. .. . £'000	3,170	2,926	3,527	4,246	5,235	6,898
Horse-power of engines ordinarily in use .. .. . h.p.	42,944	52,739	56,254	58,083	63,669	69,070
Articles Produced—						
Woolen cloth and tweed (b) .. .. . '000 sq. yds.	8,336	16,707	18,812	16,319	13,245	11,126
Worsted cloth .. .. .	17,986	12,644	16,459	18,074	19,074	19,832
Serge (b) .. .. .	792	1,022	828	1,573	817	1,043
Flannel—						
For outer clothing .. .. .	2,144	2,193	3,227	2,937	1,856	2,614
For underwear (pure) .. .. .	1,557	1,567	1,641	1,527	1,659	1,916
For underwear (mixtures) .. .. .	814	656				
Blankets (b) .. .. . '000 pr.	574	981	721	689	896	973

(a) Includes Woollscouring Works in Victoria and Tasmania and Woollscouring Works and Felmongeries in South Australia. (b) Includes production in other factories.

16. **Hosiery and Other Knitted Goods.**—Details for each State for 1950-51 and for Australia for a series of years are shown in the following table:—

**HOSIERY AND OTHER KNITTED GOODS.**

1950-51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	154	328	6	9	9	4	510
Number of persons employed ..	7,095	14,234	551	99	199	90 (a)	22,268
Salaries and wages paid ..	£ 3,014,544	£ 6,254,383	£ 202,305	£ 37,496	£ 63,403	£ 32,623	£ 9,604,754
Value of power, fuel, etc., used ..	£ 110,697	£ 265,236	£ 5,074	£ 1,014	£ 2,598	£ 1,429	£ 386,048
Value of materials used ..	£ 7,822,029	£ 13,703,106	£ 959,732	£ 74,038	£ 192,408	£ 82,121	£ 22,833,434
Value of production ..	£ 5,097,067	£ 10,550,720	£ 401,812	£ 53,628	£ 107,474	£ 46,584	£ 16,257,277
Total value of output ..	£ 13,029,793	£ 24,519,062	£ 1,366,618	£ 128,672	£ 302,480	£ 130,134	£ 39,476,570
Value of land and buildings ..	£ 1,534,042	£ 3,022,222	£ 120,662	£ 25,930	£ 29,882	£ 22,365	£ 4,755,103
Value of plant and machinery ..	£ 1,222,988	£ 3,483,096	£ 148,615	£ 19,509	£ 16,807	£ 14,151	£ 4,905,160
Horse-power of engines ordinarily in use .. h.p.	6,517	9,761	399	43	132	73	16,925

**AUSTRALIA.**

Items.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories ..	313	376	420	465	496	510
Number of persons employed ..	18,159	17,091	20,337	21,116	21,577	22,268
Salaries and wages paid ..	£'000 2,332	£'000 3,687	£'000 5,470	£'000 6,526	£'000 7,382	£'000 9,605
Value of power, fuel, etc., used ..	£'000 133	£'000 185	£'000 235	£'000 272	£'000 315	£'000 386
Value of materials used ..	£'000 4,284	£'000 7,203	£'000 10,898	£'000 14,137	£'000 16,637	£'000 22,834
Value of production ..	£'000 3,809	£'000 5,865	£'000 9,528	£'000 10,542	£'000 12,399	£'000 16,257
Total value of output ..	£'000 8,226	£'000 13,253	£'000 20,661	£'000 24,951	£'000 29,351	£'000 39,477
Value of land and buildings ..	£'000 1,962	£'000 2,444	£'000 2,754	£'000 3,210	£'000 3,877	£'000 4,755
Value of plant and machinery ..	£'000 1,931	£'000 1,358	£'000 1,965	£'000 2,763	£'000 3,815	£'000 4,905
Horse-power of engines ordinarily in use .. h.p.	8,884	11,465	12,569	13,011	14,625	16,925

(a) Includes 15,697 females.

The following quantities of yarn were used in these establishments during 1950-51, viz. :—Worsted, 8,282,599 lb. ; woollen, 124,838 lb. ; cotton, 8,850,834 lb. ; mercerised cotton, 650,967 lb. ; rayon, 8,271,091 lb. ; silk, 122,670 lb. ; nylon, 718,699 lb. ; other, including mixtures, 611,723 lb. Production of garments and stockings is shown in § 10.

17. **Tanning, Currying and Leather Dressing.**—(i) *Details of Industry.* In Class VII. the most import industry is tanning. Formerly the production of tanneries in Australia was confined to the coarser sorts of leathers, but there are now very few kinds which cannot be produced locally, and an export trade has been built up in some varieties.

**TANNING, CURRYING AND LEATHER DRESSING.**

1950-51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	69	46	12	10	5	1	143
Number of persons employed ..	1,845	2,489	562	219	(a)	(a)	3,200
Salaries and wages paid ..	£ 1,173,258	£ 1,483,382	£ 294,763	£ 123,194	(a)	(a)	£ 2,750,579
Value of power, fuel, etc., used ..	£ 107,146	£ 127,264	£ 21,997	£ 10,317	(a)	(a)	£ 275,057
Value of materials used ..	£ 3,568,094	£ 3,302,225	£ 768,667	£ 285,032	(a)	(a)	£ 8,221,157
Value of production ..	£ 1,768,814	£ 2,243,598	£ 492,665	£ 218,806	(a)	(a)	£ 4,949,382
Total value of output ..	£ 5,444,054	£ 5,673,087	£ 1,283,329	£ 514,155	(a)	(a)	£ 13,445,596
Value of land and buildings ..	£ 658,360	£ 778,051	£ 82,134	£ 72,682	(a)	(a)	£ 1,638,382
Value of plant and machinery ..	£ 580,886	£ 555,182	£ 128,367	£ 113,113	(a)	(a)	£ 1,424,696
Horse-power of engines ordinarily in use .. h.p.	11,818	11,075	2,560	1,352	(a)	(a)	27,684

(a) Not available for publication ; figures are included in the total for Australia.

## TANNING, CURRYING AND LEATHER DRESSING—continued.

## AUSTRALIA.

Items.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories .. ..	132	152	149	144	145	143
Number of persons employed .. ..	4,375	5,022	5,361	5,421	5,473	5,302
Salaries and wages paid .. .. £'000	920	1,062	2,183	2,502	2,755	3,200
Value of power, fuel, etc., used .. .. £'000	88	128	166	189	243	275
Value of materials used .. .. £'000	2,983	5,238	6,308	6,466	6,846	8,221
Value of production .. .. £'000	1,522	2,690	3,331	3,871	4,330	4,950
Total value of output .. .. £'000	4,593	8,056	9,805	10,526	11,419	13,446
Value of land and buildings .. .. £'000	814	1,048	1,154	1,271	1,355	1,638
Value of plant and machinery .. .. £'000	524	705	857	980	1,171	1,425
Horse-power of engines ordinarily in use .. .. h.p.	12,345	17,850	21,673	24,032	25,792	27,684

(ii) *Materials Used and Articles Produced.* The quantities of materials used and leather produced in tanneries in each State in 1950-51 are shown in the following table:—

## TANNERIES : MATERIALS USED AND PRODUCTION, 1950-51.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
<b>Materials Used—</b>							
Hides .. .. no.	856,708	1,107,561	293,141	(a)	139,465	(a)	2,538,673
Skins—							
Calf .. .. "	520,508	555,647	156,651	(a)	(a)	..	1,243,430
Goat .. .. "	775,245	(a)	(a)	..	..	..	818,878
Sheep, including Pelts .. .. "	62,706,305	469,073	(a)	(a)(b)	..	(a)	64,089,561
Marsupial .. .. "	31,017	11,587	(a)	(a)	..	..	65,240
Bark used—							
Wattle .. .. tons	3,506	4,911	950	(b) 931	(a)	(a)	(b) 10,382
Mallet and Other .. .. "	(a)	860	(a)	..	(a)	..	1,318
Tanning extract used .. .. "	3,971	3,007	1,637	(a)(b)	(b) 1,031	(a)	(b) 9,974
<b>Articles produced—</b>							
<b>Leather made—</b>							
Sole and Belting .. .. lb.	12,287,501	14,538,206	6,337,215	(a)	3,335,984	(a)	38,106,698
Harness .. .. "	345,449	417,718	849,842	62,300	49,089	..	1,724,398
Upholstery .. .. sq. ft.	4,460,108	6,119,337	(a)	(a)	10,231	..	10,980,389
Dressed and Upper from Hides—							
Sold by Measure-ment—							
Patent .. .. sq. ft.	(a)	(a)	..	..	..	..	1,404,668
All Other .. .. "	13,407,114	18,933,639	5,330,078	3,031,367	(a)	(a)	42,455,447
Sold by Weight (all kinds) .. .. lb.	(a)	104,491	(a)	(a)	9,546	(a)	291,786
Dressed from skins—							
Calf .. .. sq. ft.	3,826,326	4,021,070	1,039,328	42,930	33,612	..	8,963,266
Goat .. .. "	3,472,459	(a)	(a)	..	..	..	3,646,872
Sheep .. .. "	89,162,647	1,017,736	(a)	(a)(b)	..	..	613,431,141
Marsupial .. .. "	158,946	51,540	(a)	..	..	..	321,791

(a) Not available for publication; figures are included in the total for Australia. (b) Includes an amount produced or used in other works.

18. *Tailoring and Ready-made Clothing.*—Statistics showing the distribution of this industry between States in 1950-51 and for Australia for a series of years are shown in the following table:—

## TAILORING AND READY-MADE CLOTHING.

1950-51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	880	558	154	132	146	20	1,890
Number of persons employed .. ..	19,826	10,902	3,352	2,634	1,432	389	38,535
Salaries and wages paid .. .. £	7,311,482	4,429,034	1,003,572	896,317	432,211	133,474	14,206,090
Value of power, fuel, etc., used .. .. £	125,614	79,194	17,368	17,348	7,323	2,070	248,917
Value of materials used .. .. £	14,621,812	9,146,882	1,833,907	1,142,931	666,642	126,092	27,539,266
Value of production .. .. £	11,043,299	6,708,227	1,568,145	1,217,462	642,619	168,616	21,348,368
Total value of output .. .. £	25,791,725	15,934,303	3,419,420	2,377,741	1,316,584	296,778	49,136,551
Value of land and buildings .. .. £	3,428,458	1,900,984	391,325	492,681	268,119	55,995	6,537,562
Value of plant and machinery .. .. £	1,153,439	627,971	95,033	105,324	38,031	10,094	2,030,492
Horse-power of engines ordinarily in use .. .. h.p.	6,403	2,586	443	481	169	55	10,137

TAILORING AND READY-MADE CLOTHING—continued.

AUSTRALIA.

Items.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories .. .. .	1,177	1,420	1,687	1,874	1,902	1,890
Number of persons employed ..	26,499	30,047	35,375	37,958	37,250	38,535
Salaries and wages paid .. .. .	£'000 3,168	5,507	8,186	10,323	11,246	14,206
Value of power, fuel, etc., used ..	£'000 72	116	150	187	204	249
Value of materials used .. .. .	£'000 4,947	9,617	15,233	19,344	20,187	27,539
Value of production .. .. .	£'000 4,812	8,881	12,490	15,668	17,085	21,349
Total value of output .. .. .	£'000 9,831	18,614	27,873	35,199	37,476	49,137
Value of land and buildings .. ..	£'000 3,176	4,142	4,915	5,550	5,872	6,538
Value of plant and machinery ..	£'000 356	829	1,215	1,461	1,666	2,030
Horse-power of engines ordinarily in use .. .. .	h.p. 2,607	5,148	6,341	7,375	8,895	10,137

19. Dressmaking and Millinery Establishments.—Particulars of dressmaking and millinery establishments in Australia for the years 1938-39, 1945-46 and 1947-48 to 1950-51 are shown in the following table :—

DRESSMAKING AND MILLINERY : AUSTRALIA.

Items.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories .. .. .	869	998	1,175	1,270	1,313	1,328
Number of persons employed ..	16,398	18,051	20,893	21,934	22,384	22,557
Salaries and wages paid .. .. .	£'000 1,653	3,038	4,368	5,497	6,244	7,568
Value of power, fuel, etc., used ..	£'000 33	57	77	95	112	130
Value of materials used .. .. .	£'000 2,610	5,281	8,300	10,104	8,996	11,567
Value of production .. .. .	£'000 2,592	5,170	7,288	8,787	9,812	11,868
Total value of output .. .. .	£'000 5,235	10,508	15,665	18,986	18,920	23,565
Value of land and buildings .. ..	£'000 2,052	2,724	3,304	3,421	3,626	4,068
Value of plant and machinery ..	£'000 189	362	510	601	713	903
Horse-power of engines ordinarily in use .. .. .	h.p. 1,732	3,142	3,671	3,898	4,361	4,671

20. Shirts, Collars and Underclothing.—Particulars of this industry are shown below for each State for 1950-51 and for Australia for a series of years :—

SHIRTS, COLLARS AND UNDERCLOTHING.

1950-51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. .. .	196	139	20	31	22	2	410
Number of persons employed ..	5,280	5,191	1,217	531	(a)	(a)	12,870
Salaries and wages paid .. .. .	£ 1,815,867	1,903,515	385,860	160,148	(a)	(a)	4,451,680
Value of power, fuel, etc., used ..	£ 28,725	32,950	5,653	2,670	(a)	(a)	72,437
Value of materials used .. .. .	£ 5,118,373	4,402,821	663,822	236,140	(a)	(a)	10,729,981
Value of production .. .. .	£ 2,932,594	3,479,081	574,762	234,145	(a)	(a)	7,502,681
Total value of output .. .. .	£ 8,079,692	7,914,852	1,244,237	472,955	(a)	(a)	18,305,099
Value of land and buildings .. ..	£ 864,688	1,020,447	128,564	70,555	(a)	(a)	2,154,856
Value of plant and machinery ..	£ 350,916	387,837	42,589	24,714	(a)	(a)	844,537
Horse-power of engines ordinarily in use .. .. .	h.p. 2,241	3,269	188	165	(a)	(a)	6,017

AUSTRALIA.

Items.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories .. .. .	283	347	404	410	397	410
Number of persons employed ..	11,081	9,902	11,880	12,760	12,545	12,870
Salaries and wages paid .. .. .	£'000 1,143	1,729	2,622	3,299	3,515	4,452
Value of power, fuel, etc., used ..	£'000 23	32	46	55	60	72
Value of materials used .. .. .	£'000 2,651	4,446	7,066	9,199	8,915	10,730
Value of production .. .. .	£'000 1,761	2,601	4,354	5,482	5,978	7,593
Total value of output .. .. .	£'000 4,435	7,079	11,466	14,736	14,933	18,305
Value of land and buildings .. ..	£'000 946	1,311	1,632	1,790	1,833	2,155
Value of plant and machinery ..	£'000 231	397	548	608	693	845
Horse-power of engines ordinarily in use .. .. .	h.p. 1,874	2,676	3,346	3,521	3,795	6,017

(a) Not available for separate publication ; figures are included in total for Australia.

21. **Boots and Shoes.**—(i) *Details of Industry.* The boot and shoe factories hold an important place both in regard to employment afforded and extent of output. The following tables refer to boot and shoe factories as distinct from those devoted to repairing. It has been necessary to include details of Boot and Shoe Repairing in Tasmania, in order to conceal confidential information for that State. Factories engaged in the manufacture of rubber boots and shoes are excluded, being classified under Rubber Goods, see par. 38.

### BOOTS AND SHOES.

1950-51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.(a)	Australia.
Number of factories ..	201	242	29	21	12	16	521
Number of persons employed ..	8,111	11,305	1,777	1,540	887	163	23,783
Salaries and wages paid ..	£ 3,393,162	£ 5,045,218	£ 687,241	£ 659,959	£ 368,851	£ 60,175	£ 10,214,606
Value of power, fuel, etc., used ..	£ 50,219	£ 68,675	£ 7,303	£ 8,889	£ 5,323	£ 712	£ 141,121
Value of materials used ..	£ 4,706,199	£ 8,354,985	£ 1,006,042	£ 788,222	£ 459,806	£ 74,652	£ 15,389,906
Value of production ..	£ 5,006,455	£ 7,353,122	£ 846,478	£ 797,292	£ 525,885	£ 81,457	£ 14,610,689
Total value of output ..	£ 9,762,873	£ 15,776,782	£ 1,859,823	£ 1,594,403	£ 991,014	£ 156,821	£ 30,141,716
Value of land and buildings ..	£ 1,080,542	£ 1,304,517	£ 151,577	£ 175,758	£ 83,080	£ 26,563	£ 2,822,037
Value of plant and machinery ..	£ 663,791	£ 1,115,513	£ 137,087	£ 211,990	£ 120,146	£ 17,480	£ 2,265,107
Horse-power of engines ordinarily in use ..	h.p. 6,572	8,544	743	731	512	98	17,200

### AUSTRALIA.

Items.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories ..	383	492	529	510	521
Number of persons employed ..	18,264	22,230	22,906	23,180	23,783
Salaries and wages paid ..	£'000 4,408	£'000 6,483	£'000 7,611	£'000 8,410	£'000 10,215
Value of power, fuel, etc., used ..	£'000 75	£'000 97	£'000 115	£'000 123	£'000 141
Value of materials used ..	£'000 7,520	£'000 9,829	£'000 10,918	£'000 12,353	£'000 15,390
Value of production ..	£'000 6,472	£'000 9,382	£'000 10,758	£'000 11,892	£'000 14,611
Total value of output ..	£'000 14,067	£'000 19,308	£'000 21,791	£'000 24,368	£'000 30,142
Value of land and buildings ..	£'000 1,518	£'000 1,941	£'000 2,087	£'000 2,328	£'000 2,822
Value of plant and machinery ..	£'000 1,222	£'000 1,460	£'000 1,684	£'000 1,877	£'000 2,265
Horse-power of engines ordinarily in use ..	h.p. 9,678	11,011	12,213	15,644	17,200

(a) Includes details of Boot and Shoe Repairing.

(ii) *Quantity and Value of Production.* The number and value of boots, shoes and slippers made in factories producing and repairing boots and shoes in each State are shown for 1950-51 in the following table. Particulars relating to the output of rubber boots and shoes are not included :—

### BOOT AND SHOE FACTORIES : OUTPUT, 1950-51.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Quantity—							
Boots, shoes and sandals pairs	6,287,640	9,091,473	1,359,142	1,341,830	729,983	95,337	18,905,405
Slippers ..	2,754,433	4,257,046	887,836	131,971	600,333	..	8,640,619
Uppers(b) ..	12,300	16,675	(a)	(a)	..	..	31,332
Value—							
Boots, shoes and sandals ..	£ 8,546,307	£ 12,889,480	£ 1,478,988	£ 1,519,259	£ 743,251	£ 108,845	£ 25,286,130
Slippers ..	£ 1,188,205	£ 2,229,455	£ 319,793	£ 55,021	£ 251,761	..	£ 4,044,295
Uppers(b) ..	£ 10,246	£ 8,896	(a)	(a)	..	..	£ 21,942

(a) Not available for publication ; figures are included in total for Australia. (b) Made for sale as such.

22. **Flour-milling.**—(i) *Details of Industry.* The following table shows the position of the grain-milling industry in each State for the year 1950-51 and for Australia for a series of years :—

### FLOUR-MILLING.

1950-51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	56	38	10	30	20	11	165
Number of persons employed ..	1,881	1,279	(a)	532	546	(a)	4,842
Salaries and wages paid ..	£ 1,186,549	£ 777,049	(a)	£ 305,082	£ 346,395	(a)	£ 2,933,120
Value of power, fuel, etc., used ..	£ 218,109	£ 129,101	(a)	£ 72,925	£ 79,031	(a)	£ 544,520
Value of materials used ..	£ 13,948,914	£ 8,918,983	(a)	£ 3,729,131	£ 4,605,556	(a)	£ 34,349,960
Value of production ..	£ 2,433,274	£ 1,459,576	(a)	£ 594,049	£ 656,776	(a)	£ 5,636,588
Total value of output ..	£ 16,600,297	£ 10,507,660	(a)	£ 4,396,105	£ 5,341,363	(a)	£ 40,531,068
Value of land and buildings ..	£ 1,157,476	£ 829,834	(a)	£ 219,919	£ 636,778	(a)	£ 3,177,201
Value of plant and machinery ..	£ 1,477,271	£ 773,480	(a)	£ 330,712	£ 607,935	(a)	£ 3,408,243
Horse-power of engines ordinarily in use ..	h.p. 15,048	11,059	(a)	4,211	4,655	(a)	38,413

(a) Not available for publication ; figures are included in total for Australia.

## FLOUR-MILLING—continued.

## AUSTRALIA.

Items.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories .. .. .	172	170	167	164	161	165
Number of persons employed .. ..	3,783	4,099	4,623	4,768	4,541	4,842
Salaries and wages paid .. .. £'000	896	1,376	1,885	2,272	2,349	2,933
Value of power, fuel, etc., used .. ..	231	300	365	427	444	545
Value of materials used .. .. £'000	10,573	14,180	24,043	29,800	27,837	34,350
Value of production .. .. £'000	2,091	2,367	3,705	4,539	4,277	5,636
Total value of output .. .. £'000	12,895	16,847	28,113	34,766	32,558	40,531
Value of land and buildings .. .. £'000	2,091	2,244	2,505	2,456	2,557	3,177
Value of plant and machinery .. .. £'000	1,814	1,835	2,034	2,330	2,593	3,408
Horse-power of engines ordinarily in use .. .. h.p.	27,795	32,132	34,976	35,573	36,081	38,413

(ii) *Production of Flour and By-products.* The production of flour by the mills in each State (including other than flour mills) for the years 1938-39, 1945-46 and 1947-48 to 1950-51 was as follows:—

## FLOUR-MILLING: PRODUCTION OF FLOUR.

(Tons of 2,000 lb.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1938-39 ..	547,162	436,829	84,314	146,262	138,583	19,582	1,372,732
1945-46 ..	451,895	315,525	96,984	164,986	166,791	22,657	1,218,838
1947-48 (a)	552,784	501,325	108,022	215,155	197,104	23,753	1,598,143
1948-49 (a)	667,645	479,288	110,843	211,787	183,143	26,484	1,679,190
1949-50 (a)	597,491	447,784	112,995	162,259	161,251	27,243	1,509,023
1950-51 (a)	694,036	448,881	116,503	189,962	218,841	27,336	1,695,559

(a) Includes Wheatmeal for Baking.

In addition, 641,296 tons of bran and pollard were made. The quantity of wheat ground was 80,368,016 bushels.

23. *Bakeries.*—Information regarding establishments in which the manufacture of bread, cakes, etc., was carried on is given in the table below. It should be noted, however, that the details refer only to establishments coming within the definition of a factory as explained at the beginning of this section. For that reason the tables do not give complete details of the industry, as a large number of bakehouses not coming within the definition is excluded. This is true of all other industries covered by the statistics of manufacturing production, but, in view of the omission of such a large number of establishments in this instance, special mention is deemed necessary.

## BAKERIES (INCLUDING CAKES AND PASTRY).

1950-51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.(a)	Australia.
Number of factories .. .. .	1,170	958	444	195	266	134	3,167
Number of persons employed .. ..	6,846	4,860	2,603	1,173	967	1,480	17,929
Salaries and wages paid .. .. £	2,745,354	1,873,498	879,988	492,733	320,177	630,668	6,942,418
Value of power, fuel, etc., used .. ..	448,612	306,153	142,831	81,133	56,796	80,115	1,115,640
Value of materials used .. .. £	7,578,225	5,371,636	2,699,748	1,422,867	1,042,848	2,670,574	20,785,898
Value of production .. .. £	5,978,943	4,080,759	1,975,099	1,006,265	734,565	1,117,759	14,893,390
Total value of output .. .. £	14,005,780	9,758,548	4,817,678	2,510,265	1,834,209	3,868,448	36,794,928
Value of land and buildings .. .. £	4,030,803	2,634,362	845,879	648,145	469,056	571,011	9,199,256
Value of plant and machinery .. ..	1,546,673	1,181,057	429,665	352,339	226,595	341,553	4,077,882
Horse-power of engines ordinarily in use .. .. h.p.	7,033	5,047	2,525	1,802	1,114	2,962	20,483

(a) Includes confectionery.



BAKERIES (INCLUDING CAKES AND PASTRY)—*continued.*

## AUSTRALIA.

Items.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories .. ..	1,958	2,494	2,831	2,950	3,064	3,167
Number of persons employed ..	11,715	14,535	16,814	17,420	17,925	17,929
Salaries and wages paid .. £'000	1,993	3,314	4,460	5,182	5,891	6,942
Value of power, fuel, etc., used .. £'000	306	574	665	784	917	1,116
Value of materials used .. £'000	6,651	11,087	13,924	16,477	18,406	20,786
Value of production .. £'000	4,509	7,265	9,067	10,852	12,987	14,893
Total value of output .. £'000	11,466	18,926	23,656	28,113	32,310	36,795
Value of land and buildings .. £'000	4,960	6,222	7,525	7,973	8,817	9,199
Value of plant and machinery .. £'000	1,478	1,804	2,575	3,092	3,635	4,078
Horse-power of engines ordinarily in use .. .. . h.p.	10,855	13,695	16,194	17,622	19,160	20,483

24. *Sugar-mills.*—(i) *General.* Sugar-cane is grown in New South Wales and Queensland and particulars of area, yield, etc., are given in extended detail in Chapter XX.—Agricultural Production.

The products of the sugar-mill are raw sugar and molasses, the former being sent to the refineries in different parts of Australia for further treatment. Particulars of cane crushed and sugar produced embodied in the following table refers to the quantities treated during the years ended 30th June, irrespective of the season in which the cane was grown; consequently the figures relating to cane crushed and sugar produced may differ slightly from those given in Chapter XX.—Agricultural Production, which relate to harvest years.

(ii) *Details for States.* The following table shows details of the operations of sugar mills in New South Wales and Queensland for the years 1938-39, 1945-46 and 1947-48 to 1950-51:—

## SUGAR-MILLS.

Items.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
NEW SOUTH WALES.						
Number of factories .. ..	3	3	3	3	3	3
Number of persons employed ..	212	283	236	223	227	282
Cane crushed .. .. tons	337,038	166,069	267,261	273,974	330,740	(a)
Raw sugar produced (94 net titre) .. .. tons	45,106	21,220	33,560	33,003	40,706	41,258
Molasses produced .. gals.	1,489,090	1,110,000	(a)	1,348,480	1,631,200	(a)
QUEENSLAND.						
Number of factories .. ..	33	32	32	32	32	32
Number of persons employed ..	4,419	4,665	4,762	5,531	5,898	6,394
Cane crushed .. .. tons	5,432,193	4,551,971	4,150,986	6,707,530	6,518,006	6,691,704
Raw sugar produced (94 net titre) .. .. tons	775,064	644,661	571,694	910,049	896,413	879,844
Molasses—						
Sold to distillers and others .. '000 gals	8,276	9,381	8,257	18,233	17,596	15,234
Used as fodder .. .. "	4,237	4,676	5,321	5,846	5,563	5,582
Used as manure .. .. "	3,293	3,075	3,558	5,282	7,517	5,555
Run to waste .. .. "	499	51	15	168	283	50
Burnt as fuel .. .. "	3,749	1,748	1,428	1,677	1,490	2,371
Sold or used for other purposes .. '000 gals.	232	423	313	402	727	581
Total molasses disposed of .. '000 gals	20,286	19,354	18,892	31,608	33,176	29,373

(a) Not available for publication.

25. *Sugar-refining.*—The establishment of the sugar-refining industry considerably antedates the establishment of the sugar-milling industry, the raw material operated on in the earlier years coming chiefly from Mauritius and the East. In 1950-51 there were two sugar refineries in Queensland and one each in New South Wales, Victoria, South Australia and Western Australia. The quantity of raw sugar treated amounted to 470,824 tons, for a yield of 451,170 tons of refined sugar.

26. Confectionery.—The figures for 1950-51 for each State and for Australia for a series of years are shown hereunder:—

## CONFECTIONERY.

1950-51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.(b)
Number of factories ..	99	97	23	23	8	(a)	250
Number of persons employed ..	3,294	3,310	456	400	335	(a)	7,801
Salaries and wages paid .. £	1,534,465	1,510,630	123,910	144,533	117,958	(a)	3,431,496
Value of power, fuel, etc., used £	136,136	122,243	9,373	14,297	17,306	(a)	299,355
Value of materials used .. £	5,218,272	4,077,108	382,442	324,179	368,493	(a)	10,370,494
Value of production .. £	3,365,774	2,752,254	250,317	212,442	228,570	(a)	6,809,357
Total value of output .. £	8,720,182	6,951,605	642,132	550,918	614,369	(a)	17,479,206
Value of land and buildings .. £	994,500	925,754	112,845	214,140	81,452	(a)	2,318,691
Value of plant and machinery .. £	1,107,147	1,072,188	74,245	83,954	83,620	(a)	2,421,154
Horse-power of engines ordinarily in use .. h.p.	12,304	11,645	928	1,133	463	(a)	26,473

## AUSTRALIA.(b)

Items.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories ..	148	198	242	263	267	250
Number of persons employed ..	7,256	5,965	7,061	7,505	8,064	7,801
Salaries and wages paid .. £'000	1,041	1,389	1,978	2,396	2,974	3,431
Value of power, fuel, etc., used .. £'000	107	139	180	215	263	299
Value of materials used .. £'000	3,102	4,669	6,624	8,556	9,571	10,370
Value of production .. £'000	2,418	3,314	4,324	5,686	6,641	6,810
Total value of output .. £'000	5,627	8,122	11,128	14,457	16,475	17,479
Value of land and buildings .. £'000	1,423	1,556	1,710	1,906	2,071	2,319
Value of plant and machinery .. £'000	1,364	1,142	1,393	1,629	2,087	2,421
Horse-power of engines ordinarily in use .. h.p.	16,154	17,939	21,000	22,492	23,463	26,473

(a) Not available for publication.

(b) Excludes Tasmania.

27. Jam, Fruit and Vegetable Canning, Pickles, Sauces, Vinegar.—(i) *Details of Industry.* The following table shows particulars of factories included in this class for each State for 1950-51 and for Australia for a series of years:—

## JAM, FRUIT AND VEGETABLE CANNING, PICKLES, ETC.

1950-51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	66	60	22	19	11	22	200
Number of persons employed ..	3,472	5,223	1,398	1,287	186	1,558	13,124
Salaries and wages paid .. £	1,661,077	2,576,619	644,302	558,827	74,406	782,295	6,297,526
Value of power, fuel, etc., used .. £	156,937	234,068	34,090	41,692	6,882	47,466	521,135
Value of materials used .. £	5,323,671	9,172,148	2,696,114	1,658,757	203,570	2,179,111	21,233,371
Value of production .. £	2,766,967	4,761,989	1,008,967	752,084	169,515	1,225,512	10,685,054
Total value of output .. £	8,247,575	14,168,205	3,739,171	2,452,533	379,967	3,452,089	32,439,540
Value of land and buildings .. £	1,080,396	1,788,135	405,412	386,666	68,780	352,271	4,081,660
Value of plant and machinery .. £	1,024,748	1,719,362	313,145	298,834	51,903	312,003	3,719,995
Horse-power of engines ordinarily in use .. h.p.	7,839	12,952	1,622	1,419	386	2,500	26,718

## AUSTRALIA.

Items.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories ..	123	157	177	182	197	200
Number of persons employed ..	6,476	11,403	11,061	11,447	12,200	13,124
Salaries and wages paid .. £'000	1,149	2,947	3,653	4,147	4,901	6,298
Value of power, fuel, etc., used .. £'000	97	260	284	325	415	521
Value of materials used .. £'000	4,800	12,326	14,475	14,762	17,481	21,234
Value of production .. £'000	3,334	5,079	6,829	7,048	8,374	10,685
Total value of output .. £'000	7,231	17,665	21,588	22,135	26,270	32,440
Value of land and buildings .. £'000	1,382	2,184	2,762	3,051	3,490	4,082
Value of plant and machinery .. £'000	721	1,630	2,333	2,628	3,118	3,720
Horse-power of engines ordinarily in use .. h.p.	7,873	18,234	22,238	23,172	25,314	26,718

(ii) *Production.* During the 1939-45 War, production of jams increased greatly and a high level of output of 171 million lb. was attained in 1943-44. Production afterwards decreased, but attained a new record of 198.5 million lb. in 1947-48. It dropped to 125.3 million lb. in 1950-51. The peak output of preserved fruit occurred in 1950-51 with 233.5 million lb., compared with the previous highest level of 211.4 million lb. attained in the previous year.

There has also been a marked development in the production of canned vegetables. In 1938-39 output totalled 10,255,000 lb. but, as a result of the war-time demand by the armed services, production reached the record level of 119,149,000 lb. in 1944-45. However, it has since declined and in 1950-51 amounted to 79,510,000 lb.

The following table shows the total quantity and value of jams, pickles, sauces and other items manufactured in each State in 1950-51 :—

**JAMS, PRESERVED FRUIT AND VEGETABLES, PICKLES AND SAUCES : OUTPUT, 1950-51.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
<b>Quantity—</b>							
Jams .. '000 lb.	31,096	(a) 70,177	13,660	8,999	1,356	(b)	125,288
<b>Fruit Pulp—</b>							
Consumed in own works							
cwt.	19,851	14,225	(c)	15,952	(c)	36,824	90,411
For sale or addition to stock .. cwt.	17,759	30,186	15,630	5,130	8,010	112,664	189,379
<b>Tomato Pulp—</b>							
Consumed in own works							
cwt.	37,788	135,927	(c)	14,535	8,357	(c)	202,839
For sale or addition to stock .. cwt.	29,465	149,471	..	(c)	17,882	(c)	206,110
Fruit, preserved '000 lb.	35,743	108,632	35,483	21,663	549	31,468	233,538
<b>Vegetables, preserved in liquid .. '000 lb.</b>	31,957	34,498	(c)	4,028	(c)	(c)	79,510
Pickles .. '000 pints	4,425	3,459	(c)	2,413	(c)	..	10,864
Sauces .. "	12,138	13,692	1,375	1,857	(c)	(c)	30,402
<b>Value—</b>							
Jams .. £'000	1,437	(a) 3,123	739	376	76	(b)	5,751
Fruit, preserved £'000	1,891	4,251	2,273	1,055	35	1,285	10,790
<b>Vegetables, preserved in liquid .. £'000</b>	1,876	2,035	(c)	177	(c)	(c)	4,697
Pickles .. £'000	345	226	(c)	235	(c)	..	860
Sauces .. £'000	1,236	1,006	77	134	(c)	(c)	2,536

(a) Includes Tasmania. (b) Included with Victoria. (c) Not available for publication; figures are included in total for Australia.

28. *Bacon-curing.*—(i) *Details of Industry.* The table hereunder shows particulars of factories engaged in bacon-curing in each State for 1950-51 and for Australia for a series of years :—

**BACON-CURING.**

1950-51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	35	15	8	12	4	10	84
Number of persons employed ..	758	719	834	316	258	76	2,961
Salaries and wages paid .. £	412,114	398,620	410,413	180,364	136,888	38,221	1,576,620
Value of power, fuel, etc., used .. £	54,672	42,247	43,060	41,844	18,017	4,347	204,187
Value of materials used .. £	3,624,028	3,176,220	3,882,862	1,441,094	1,541,905	409,772	14,075,881
Value of production .. £	979,242	639,372	676,017	265,496	285,583	83,893	2,929,603
Total value of output .. £	4,657,942	3,857,839	4,601,939	1,748,434	1,845,505	498,012	17,209,671
Value of land and buildings .. £	430,442	259,090	319,385	158,655	66,308	35,936	1,269,816
Value of plant and machinery .. £	167,802	129,370	183,123	80,558	38,749	10,808	610,410
Horse-power of engines ordinarily in use .. h.p.	1,992	2,296	3,258	1,701	901	324	10,472

BACON-CURING—continued.  
AUSTRALIA.

Items.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories .. ..	76	87	90	87	86	84
Number of persons employed ..	2,047	2,879	2,760	2,872	2,907	2,961
Salaries and wages paid .. £'000	480	879	973	1,160	1,318	1,577
Value of power, fuel, etc., used .. £'000	77	126	137	157	170	204
Value of materials used .. £'000	3,768	9,410	9,492	11,146	12,518	14,076
Value of production .. £'000	865	1,628	1,604	1,932	2,283	2,930
Total value of output .. £'000	4,710	11,164	11,233	13,235	14,971	17,210
Value of land and buildings .. £'000	750	890	960	1,069	1,079	1,270
Value of plant and machinery .. £'000	357	395	459	531	537	610
Horse-power of engines ordinarily in use .. h.p.	9,389	10,116	10,929	10,522	10,093	10,472

(ii) *Quantity and Value of Production.* The number of pigs cured and the quantity of bacon and ham and lard produced in factories in each State for 1950-51 are shown in the following table:—

## BACON-CURING FACTORIES : PIGS CURED AND PRODUCTION, 1950-51.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Pigs cured on own account— To finished Bacon .. ..	217,440	153,950 (a)	210,686	70,193	74,221	20,742	785,745
To green Bacon .. ..							
Pigs cured on commission .. ..	39,981	1,301	(a)	401	(a)	(a)	43,813
Total .. ..	257,421	(a)	(a)	70,594	(a)	(a)	829,558
Bacon and Ham produced (b) tons	12,571	7,848	8,725	2,928	3,558	916	36,546
Lard produced (b) .. ..	624	360	821	152	258	66	2,281

(a) Not available for publication; figures are included in total for Australia. (b) Includes particulars of articles produced in other works.

Bacon and ham and other pig products are dealt with more fully in Chapter XXI.—Farmyard, Dairy and Bee Products.

29. *Butter, Cheese and Condensed and Dried Milk.*—(i) *Details of Industry.* The following table shows particulars of butter, cheese and condensed and dried milk factories in each State for 1950-51 and for Australia for a series of years.

## BUTTER, CHEESE AND CONDENSED AND DRIED MILK.

1950-51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	90	142	93	44	16	24	409
Number of persons employed ..	2,259	5,184	1,655	891	343	375	10,707
Salaries and wages paid .. £	1,278,392	3,080,981	822,779	462,070	177,774	197,828	6,019,824
Value of power, fuel, etc., used .. £	383,796	764,430	167,095	94,853	48,296	44,612	1,503,952
Value of materials used .. £	10,978,108	25,762,997	17,007,926	3,693,235	2,075,515	2,062,941	61,580,812
Value of production .. £	1,977,702	5,668,515	1,372,996	782,724	388,830	599,507	10,790,274
Total value of output .. £	13,339,696	32,195,942	18,548,887	4,570,812	2,512,641	2,707,060	73,875,038
Value of land and buildings .. £	1,372,775	2,367,050	960,179	360,305	130,553	208,861	3,399,723
Value of plant and machinery .. £	1,958,280	3,126,754	1,125,344	360,259	205,912	237,659	7,014,208
Horse-power of engines ordinarily in use .. h.p.	21,505	25,971	18,263	5,214	1,552	1,694	74,199

## AUSTRALIA.

Items.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories .. ..	523	462	449	434	428	409
Number of persons employed ..	6,851	8,896	9,642	10,016	10,469	10,707
Salaries and wages paid .. £'000	1,570	2,737	3,578	4,237	4,941	6,020
Value of power, fuel, etc., used .. £'000	390	756	874	1,070	1,340	1,504
Value of materials used .. £'000	29,162	34,991	44,419	52,837	60,762	61,581
Value of production .. £'000	3,543	5,924	7,110	7,335	8,099	10,790
Total value of output .. £'000	33,095	40,771	52,403	61,242	70,201	73,875
Value of land and buildings .. £'000	2,880	3,506	4,073	4,236	4,562	5,400
Value of plant and machinery .. £'000	3,067	3,597	4,156	4,679	5,347	7,014
Horse-power of engines ordinarily in use .. h.p.	45,059	60,611	69,769	66,210	69,809	74,199

(ii) *Quantity and Value of Production.* The next table shows the quantities and values of butter, cheese and condensed milk produced and the quantities of milk used in their production during 1950-51. These details are restricted to factory production and therefore exclude farm output.

**BUTTER, CHEESE AND CONDENSED, ETC. MILK FACTORIES: PRODUCTION, 1950-51.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
<b>MILK USED ('000 GALLONS).</b>							
For the manufacture of—							
Butter .. .. .	159,511	263,138	215,633	32,605	31,459	28,488	730,834
Cheese .. .. .	6,652	49,040	19,286	18,978	1,628	878	96,462
Condensed, Dried and other Milk Products (including Ice Cream)(b) .. .. .	18,260	59,174	(a)	(a)	(a)	(a)	90,254

<b>PRODUCTS.</b>								
Quantity—								
Butter .. .. . tons	34,318	57,982	47,447	7,378	6,796	5,710	159,631	
Cheese .. .. . "	2,960	22,570	(c) 8,678	8,932	748	412	44,300	
Condensed and concentrated milk .. .. . tons	9,634	41,136	(a)	(a)	(a)	(a)	68,857	
Powdered milk—								
Full cream .. .. . "	5,513	11,598	(a)	(a)	..	(a)	17,594	
Skim .. .. . "	1,640	4,480	..	(a)	..	(a)	6,583	
Value—								
Butter .. .. . £'000	8,694	14,794	12,063	2,036	1,790	1,469	40,846	
Cheese .. .. . "	534	3,357	(c) 1,215	1,367	118	63	6,654	
Condensed and concentrated milk .. .. . £'000	731	4,275	(a)	(a)	(a)	(a)	6,885	
Powdered milk—								
Full cream .. .. . "	1,301	2,590	(a)	(a)	..	(a)	3,972	
Skim .. .. . "	115	369	..	(a)	..	(a)	507	

(a) Not available for publication; figures are included in total for Australia. (b) Includes Whole Milk equivalent of cream and butter fat purchased as such. (c) Includes 265 tons of cheese valued at £34,776, made in establishments not classified as factories.

The butter, cheese and condensed milk industries are dealt with more fully in Chapter XXI.—Farmyard, Dairy and Bee Products.

30. *Meat and Fish Preserving.*—The industries included in this group are engaged chiefly in the freezing and preserving of meat. Works have been established at the seaports for the purpose of handling beef, lamb and mutton for export, and insulated space for the carriage of chilled and frozen produce is provided by shipping companies trading between Australia and other parts of the world. The substitution of chilled for frozen meat exported has already been referred to in Chapter XIX.—Pastoral Production. In recent years there has been considerable expansion in the canning of meat and fish.

**MEAT AND FISH PRESERVING.**

1950-51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. .. .	10	16	19	20	14	7	86
Number of persons employed .. .. .	609	1,074	5,267	289	424	277	7,940
Salaries and wages paid .. .. . £	298,708	636,341	3,245,254	135,583	306,700	129,288	4,751,874
Value of power, fuel, etc., used .. .. . £	35,852	80,799	452,103	13,579	44,259	6,975	633,567
Value of materials used .. .. . £	1,426,083	4,118,080	22,537,028	758,377	1,399,408	338,640	30,577,621
Value of production .. .. . £	328,084	793,232	4,343,900	298,530	542,779	221,669	6,528,194
Total value of output .. .. . £	1,790,024	4,992,111	27,333,031	1,070,486	1,966,446	567,284	37,739,382
Value of land and buildings .. .. . £	165,392	465,712	1,785,857	94,531	375,207	136,587	3,223,286
Value of plant and machinery .. .. . £	193,767	428,967	940,622	71,054	539,385	123,582	2,297,377
Horse-power of engines ordinarily in use .. .. . h.p.	1,674	2,524	20,813	835	3,478	757	30,081

## MEAT AND FISH PRESERVING—continued.

## AUSTRALIA.

Items.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories ..	32	57	81	81	86	86
Number of persons employed ..	4,093	6,741	7,883	7,765	8,552	7,940
Salaries and wages paid .. £'000	1,180	2,297	3,232	3,343	4,165	4,752
Value of power, fuel, etc., used .. £'000	134	257	353	421	550	633
Value of materials used .. £'000	6,351	11,800	17,722	18,420	23,640	30,578
Value of production .. £'000	1,601	3,439	4,776	5,431	7,200	6,528
Total value of output .. £'000	8,086	15,496	22,851	24,272	31,390	37,739
Value of land and buildings .. £'000	1,966	2,412	2,784	2,977	3,015	3,223
Value of plant and machinery .. £'000	1,325	1,541	1,706	1,746	1,970	2,297
Horse-power of engines ordinarily in use .. h.p.	13,385	21,696	26,717	27,149	28,668	30,081

Particulars of the quantities and values of beef, mutton and lamb preserved by cold process exported from Australia over a series of years will be found in Chapter XIX.—Pastoral Production.

31. **Breweries.**—(i) *Details of Industry.* The following table gives particulars of breweries in each State for the year 1950-51 and for Australia for a series of years. It should be noted, however, that the data shown are not strictly comparable throughout, owing to the inability or failure of some breweries to furnish a separate return for each branch of activity. Consequently the figures for some States include details of employment, wages, output, etc., not connected with the brewing of beer, although associated with it. These extraneous activities include cooperage, malt works, aerated waters, etc.

## BREWERIES.

## 1950-51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	6	7	6	4	4	2	29
Number of persons employed ..	1,552	1,923	668	645	(a)	(a)	5,517
Salaries and wages paid .. £	1,035,362	1,374,366	367,340	412,719	(a)	(a)	3,665,821
Value of power, fuel, etc., used .. £	334,638	222,961	89,485	78,655	(a)	(a)	849,382
Value of materials used .. £	2,863,980	2,843,521	757,002	1,016,068	(a)	(a)	9,080,926
Value of production .. £	3,018,559	2,210,634	1,133,499	791,683	(a)	(a)	8,457,321
Total value of output(b) .. £	6,217,177	5,277,116	1,979,986	1,886,406	(a)	(a)	18,387,609
Value of land and buildings .. £	1,333,107	2,227,810	789,114	258,508	(a)	(a)	5,162,381
Value of plant and machinery .. £	978,778	1,614,970	674,430	625,028	(a)	(a)	4,488,732
Horse-power of engines ordinarily in use .. h.p.	10,066	7,210	4,824	2,698	(a)	(a)	28,765

## AUSTRALIA.

Items.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories ..	34	33	32	32	30	29
Number of persons employed ..	3,698	4,121	4,677	5,007	5,258	5,517
Salaries and wages paid .. £'000	1,215	1,586	2,030	2,489	2,896	3,666
Value of power, fuel, etc., used .. £'000	251	351	453	571	704	849
Value of materials used .. £'000	3,407	4,256	5,108	6,213	7,584	9,081
Value of production .. £'000	5,372	5,869	6,393	6,743	7,563	8,458
Total value of output(b) .. £'000	9,030	10,476	11,954	13,527	15,851	18,388
Value of land and buildings .. £'000	2,801	3,186	3,242	3,329	3,507	5,162
Value of plant and machinery .. £'000	2,737	2,484	2,796	3,204	3,623	4,489
Horse-power of engines ordinarily in use .. h.p.	23,231	25,927	25,905	25,514	26,512	28,765

(a) Not available for publication; figures are included in total for Australia.

(b) Excludes Excise Duty.

(ii) *Production, Consumption, Materials Used.* The quantity of ale, stout and beer brewed fell from 73.7 million gallons in 1928-29 to 49.8 million gallons in 1931-32, but thereafter increased each year to 109.2 million gallons in 1941-42. Under the Control of Liquor Order which operated between March, 1942 and March, 1946, the production of beer was restricted and consequently output remained static at about 100 million gallons from 1942-43 to 1944-45. Thereafter production increased, and in 1951-52 amounted to 185 million gallons.

The average annual consumption of ale, stout and beer prior to the economic depression of the early thirties exceeded 11 gallons per head of the population: it dropped to 7.32 gallons in 1931-32, increased to 13.76 gallons in 1941-42 and declined again to about 13 gallons during the period of control. The consumption per head had increased to 20.46 gallons by 1951-52.

The table below shows the quantities of raw materials used and the quantity and value of ale, stout and beer (excluding waste beer) brewed in each State during 1950-51 :—

**BREWERIES : MATERIALS USED AND PRODUCTION, 1950-51.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
<b>RAW MATERIALS USED.</b>							
Total—							
Malt .. bus.	1,760,666	1,536,014	545,982	(a)	594,030	(a)	5,125,124
Hops .. lb.	1,614,890	1,073,874	381,639	(a)	385,460	(a)	4,033,239
Sugar .. cwt.	270,740	197,500	70,240	(a)	38,880	(a)	660,620
Per 1,000 gallons of Ale, Stout and Beer brewed—							
Malt .. bus.	28.41	29.04	30.91	29.72	36.05	38.29	30.04
Hops .. lb.	26.06	20.30	21.61	28.38	23.39	21.52	23.64
Sugar .. cwt.	4.37	3.73	3.98	4.32	2.36	2.40	3.87
<b>ALE, STOUT AND BEER BREWED (EXCLUDING WASTE BEER).</b>							
Quantity '000 gals.	61,966	52,897	17,662	(a)	16,479	(a)	170,635
Value(b) '£'000	6,129	5,226	1,974	(a)	2,274	(a)	18,042

(a) Not available for publication; figures are included in total for Australia. (b) Excludes Excise Duty.

32. **Wineries and Distilleries.**—The following table shows particulars of the operations of Wineries and Distilleries for each State during 1950-51 and for Australia for a series of years.

**WINERIES AND DISTILLERIES.**

1950-51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	25	31	5	73	18	I	153
Number of persons employed ..	294	394	146	1,269	(a)	(a)	2,158
Salaries and wages paid .. £	169,767	202,027	78,012	652,171	(a)	(a)	1,121,559
Value of power, fuel, etc., used .. £	63,470	80,371	52,567	96,360	(a)	(a)	294,049
Value of materials used .. £	872,512	661,537	190,328	3,003,694	(a)	(a)	4,809,716
Value of production .. £	409,726	461,113	272,982	1,437,900	(a)	(a)	2,636,977
Total value of output .. £	1,345,708	1,203,021	515,877	4,537,954	(a)	(a)	7,740,742
Value of land and buildings .. £	516,088	232,525	78,511	923,437	(a)	(a)	1,795,178
Value of plant and machinery .. £	401,211	290,648	161,990	668,883	(a)	(a)	1,556,364
Horse-power of engines ordinarily in use .. h.p.	1,369	2,285	305	4,979	(a)	(a)	9,189

**AUSTRALIA.**

Items.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories ..	135	138	143	146	146	153
Number of persons employed ..	1,133	1,771	2,032	2,146	2,130	2,158
Salaries and wages paid .. £'000	246	519	748	870	976	1,122
Value of power, fuel, etc., used .. £'000	58	130	190	240	260	294
Value of materials used .. £'000	1,421	2,982	3,662	4,127	4,484	4,810
Value of production .. £'000	811	1,333	2,132	2,130	2,169	2,637
Total value of output .. £'000	2,290	4,445	5,984	6,497	6,913	7,741
Value of land and buildings .. £'000	1,002	1,065	1,273	1,358	1,500	1,795
Value of plant and machinery .. £'000	916	998	1,138	1,250	1,210	1,556
Horse-power of engines ordinarily in use .. h.p.	4,396	6,185	6,899	7,499	8,175	9,189

(a) Not available for publication; figures are included in total for Australia.

33. **Tobacco, Cigars and Cigarettes.**—Particulars of establishments in which the manufacture of tobacco, cigars or cigarettes was carried on during 1950-51 are shown below for each State and for Australia for a series of years. There are no such factories in Tasmania.

**TOBACCO, CIGARS AND CIGARETTES.**

1950-51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Australia.
Number of factories ..	13	14	8	I	I	37
Number of persons employed ..	2,606	2,044	(a)	(a)	(a)	5,044
Salaries and wages paid .. £	1,246,641	976,331	(a)	(a)	(a)	2,380,244
Value of power, fuel, etc., used .. £	61,055	24,902	(a)	(a)	(a)	89,866
Value of materials used .. £	10,325,135	5,756,389	(a)	(a)	(a)	16,599,236
Value of production .. £	2,381,899	2,194,664	(a)	(a)	(a)	4,897,339
Total value of output .. £	12,768,089	7,975,955	(a)	(a)	(a)	21,586,441
Value of land and buildings .. £	724,198	700,267	(a)	(a)	(a)	1,485,335
Value of plant and machinery .. £	464,770	629,946	(a)	(a)	(a)	1,170,672
Horse-power of engines ordinarily in use .. h.p.	3,875	1,942	(a)	(a)	(a)	6,056

TOBACCO, CIGARS AND CIGARETTES—*continued.*

## AUSTRALIA.

Items.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories .. ..	30	26	33	37	37	37
Number of persons employed .. ..	5,544	5,255	5,470	5,219	5,167	5,044
Salaries and wages paid .. .. £'000	1,096	1,300	1,677	1,828	1,992	2,380
Value of power, fuel, etc., used .. .. £'000	34	52	62	74	89	90
Value of materials used .. .. £'000	7,081	10,602	14,492	13,751	15,016	16,599
Value of production .. .. £'000	2,685	2,389	3,361	3,788	3,869	4,897
Total value of output .. .. £'000	9,800	13,043	17,915	17,613	18,974	21,586
Value of land and buildings .. .. £'000	1,042	959	1,143	1,175	1,276	1,485
Value of plant and machinery .. .. £'000	943	724	933	1,009	1,060	1,171
Horse-power of engines ordinarily in use .. .. h.p.	4,610	5,267	5,946	6,190	4,610	6,056
Leaf used—						
Australian (stemmed) .. .. '000 lb.	4,489	4,685	2,924	3,084	3,313	3,775
Imported (stemmed) .. .. '000 lb.	16,011	18,822	23,675	22,775	24,043	24,558
Tobacco made .. .. '000 lb.	16,305	17,901	19,715	19,256	20,168	20,967
Cigars made .. .. '000 lb.	238	125	163	169	169	179
Cigarettes made .. .. '000 lb.	6,731	8,482	10,147	9,701	10,341	10,679

(a) Not available for publication; figures are included in total for Australia.

For many years the production of locally-grown leaf was comparatively small, and manufacturers were dependent on imported leaf for the supply of their raw material. Increased import duties stimulated local production, and the quantity of Australian leaf used by manufacturers rose from 1.2 million lb. in 1929-30 to over 3 million lb. in 1930-31. During the 1939-45 War about 4.7 million lb. of Australian-grown leaf was used annually, but in subsequent years the figure fell, and the 1950-51 usage was 3.8 million lb. In this connexion, see Chapter XX.—Agricultural Production.

Imports of tobacco during 1950-51 comprised—manufactured tobacco, 540,407 lb.; cigars, 46,413 lb.; cigarettes, 10,594,207 lb.; unmanufactured tobacco, 26,605,311 lb.

34. *Sawmills, etc.*—The most important industry in Class X. is that of sawmilling. Because of difficulties associated with the classifying of sawmills into forest and town, they have been combined in the following table, together with plywood and bark mills.

## SAWMILLS, PLYWOOD AND BARK MILLS.

## 1950-51.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	1,010	620	661	83	206	357	2,937
Number of persons employed .. ..	10,553	6,847	8,140	1,929	3,369	2,140	32,978
Salaries and wages paid .. .. £	4,766,980	3,342,279	3,534,437	924,407	1,472,925	958,121	14,999,149
Value of power, fuel, etc., used .. .. £	342,402	256,314	211,440	40,437	115,720	65,813	1,032,126
Value of materials used .. .. £	13,853,886	7,941,043	5,858,875	3,331,279	2,217,556	1,762,687	34,964,826
Value of production .. .. £	8,760,445	6,049,816	5,901,818	1,773,778	2,601,202	1,659,647	26,746,706
Total value of output .. .. £	22,956,233	14,247,173	11,972,133	5,145,494	4,934,478	3,488,147	62,743,658
Value of land and buildings .. .. £	2,132,195	1,460,730	933,902	555,365	483,635	253,100	5,818,927
Value of plant and machinery .. .. £	2,927,338	2,240,693	1,873,310	352,822	887,900	598,560	8,880,623
Horse-power of engines ordinarily in use .. .. h.p.	92,671	66,108	59,241	14,208	21,507	22,497	276,232

## AUSTRALIA.

Items.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories .. ..	1,660	1,765	2,241	2,541	2,781	2,937
Number of persons employed .. ..	19,104	22,591	27,811	30,067	31,493	32,978
Salaries and wages paid .. .. £'000	3,635	5,842	8,537	10,402	12,031	14,999
Value of power, fuel, etc., used .. .. £'000	226	375	534	657	804	1,032
Value of materials used .. .. £'000	8,523	12,174	19,971	23,428	27,020	34,965
Value of production .. .. £'000	5,789	9,159	14,453	17,505	20,727	26,747
Total value of output .. .. £'000	14,538	21,708	34,958	41,590	48,551	62,744
Value of land and buildings .. .. £'000	2,055	2,523	3,292	3,825	4,477	5,819
Value of plant and machinery .. .. £'000	2,786	3,461	4,677	5,716	7,077	8,881
Horse-power of engines ordinarily in use .. .. h.p.	90,315	132,767	175,822	208,230	243,927	276,232



The sawmill output of native timber, which declined from 740 million super. feet in 1925-26 to the abnormally low figure of 237 million super. feet during the depth of the depression, recovered to 717 million super. feet in 1938-39 and by 1950-51 had risen to 1,261 million super. feet. Further reference is made to the sawmilling industry in Chapter XXII.—Forestry.

35. **Cabinet and Furniture Making and Upholstery.**—These industries constitute the principal manufactures in Class XI. The following table shows particulars for each State in 1950-51:—

**CABINET AND FURNITURE MAKING AND UPHOLSTERY, 1950-51.**

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories . . . . .	441	487	216	114	141	71	1,470
Number of persons employed . .	5,719	5,015	2,792	1,653	1,263	584	17,026
Salaries and wages paid £	2,810,385	2,260,861	1,102,076	699,282	489,751	223,190	7,585,545
Value of power, fuel, etc., used £	62,307	41,458	21,603	18,002	10,691	3,244	157,305
Value of materials used £	5,087,198	3,865,247	1,909,943	1,205,506	883,079	259,364	13,210,337
Value of production . . . . .	4,415,805	3,881,598	1,714,951	1,134,812	791,971	337,797	12,276,934
Total value of output . . . . .	9,565,310	7,788,303	3,646,497	2,358,320	1,685,741	600,405	25,644,576
Value of land and buildings £	1,495,551	1,488,731	536,253	325,110	295,736	129,906	4,271,287
Value of plant and machinery £	511,495	441,810	212,040	155,167	139,755	45,974	1,506,241
Horse-power of engines ordinarily in use . . . . . h.p.	14,853	13,765	6,049	4,933	3,255	1,436	44,291

36. **Printing Works.**—Printing and bookbinding rank high in importance among the industries of Australia, and in 1950-51 afforded employment for 35,292 employees, and paid £18,558,000 in salaries and wages, while the value of output amounted to £61,043,000. The first table below gives particulars of establishments engaged in general printing in each State for 1950-51. These establishments include those engaged in lithographic printing, bookbinding, paper ruling and linotyping and Government printing works. Establishments producing newspapers and periodicals are shown separately in the second table to follow:—

**GOVERNMENT AND GENERAL PRINTING WORKS, 1950-51.**

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories . . . . .	420	436	98	66	73	17	1,110
Number of persons employed . .	8,944	7,658	2,242	1,551	1,335	583	22,315
Salaries and wages paid £	4,704,894	3,887,074	946,158	710,720	550,294	278,606	11,077,746
Value of power, fuel, etc., used £	129,717	81,492	22,175	16,185	14,604	4,686	268,699
Value of materials used £	6,023,463	5,243,758	1,113,618	744,495	703,600	242,872	14,071,860
Value of production . . . . .	7,892,812	6,464,206	1,538,392	1,152,848	1,029,460	413,095	18,400,813
Total value of output . . . . .	14,045,992	11,789,456	2,674,185	1,913,528	1,747,754	660,653	32,831,568
Value of land and buildings £	2,712,347	2,550,601	419,621	336,459	323,710	134,623	6,477,361
Value of plant and machinery £	3,229,646	2,637,317	421,734	520,340	393,975	138,185	7,341,197
Horse-power of engines ordinarily in use . . . . . h.p.	14,618	10,091	1,758	1,677	1,638	657	30,439

**NEWSPAPERS AND PERIODICALS, 1950-51.**

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories . . . . .	179	114	57	32	29	8	419
Number of persons employed . .	8,891	3,363	1,818	931	629	345	12,977
Salaries and wages paid £	3,418,841	2,053,159	932,416	534,482	340,090	201,357	7,480,705
Value of power, fuel, etc., used £	126,709	62,595	28,238	17,330	16,373	4,688	265,933
Value of materials used £	6,797,498	4,259,859	1,356,678	1,039,077	552,512	154,336	14,159,990
Value of production . . . . .	6,670,178	3,408,766	1,684,266	1,068,571	698,055	255,414	13,785,250
Total value of output . . . . .	13,594,385	7,731,250	3,079,182	2,124,978	1,266,940	414,438	28,211,173
Value of land and buildings £	2,728,048	936,415	660,438	498,702	263,972	110,092	5,197,667
Value of plant and machinery £	2,587,679	2,572,702	848,011	172,282	251,922	88,077	6,520,673
Horse-power of engines ordinarily in use . . . . . h.p.	16,100	8,581	4,089	2,402	1,978	556	33,706

37. **Paper Making.**—Although the paper manufacturing industry has been established in Australia for many years it was not until the manufacture of paper pulp from indigenous timber commenced in 1938-39 that any marked development occurred.

Plants producing pulp from eucalypt timber are operating in Victoria and Tasmania, whilst in South Australia pulp is being produced from locally-grown softwoods. The production of pulp rose from 6,000 tons in 1938-39 to 88,000 tons in 1946-47, and remained about this level until 1950-51, when production totalled 95,000 tons.

The number of factories operating in 1950-51 comprised two in New South Wales, seven in Victoria, one in Queensland, South Australia and Western Australia and two in Tasmania. In the latter State, newsprint, writing and printing papers are produced, and in the other States wrappings, other papers and boards. Particulars for this industry are shown in the following table.

## PAPER MAKING, INCLUDING PULP MILLS: AUSTRALIA.

Items.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories .. ..	7	12	12	14	14	14
Number of persons employed .. ..	1,961	4,705	5,260	5,991	6,160	6,336
Salaries and wages paid .. .. £'000	467	1,577	2,350	2,881	3,183	4,231
Value of power, fuel, etc., used .. .. £'000	201	599	849	941	998	1,181
Value of materials used .. .. £'000	1,096	3,802	4,979	5,768	6,154	7,487
Value of production .. .. £'000	1,005	3,017	4,430	5,649	6,581	9,165
Total value of output .. .. £'000	2,302	7,418	10,258	12,358	13,733	17,833
Value of land and buildings .. .. £'000	850	1,525	1,833	2,526	3,331	4,871
Value of plant and machinery .. .. £'000	1,713	2,509	3,585	4,641	5,754	9,814
Horse-power of engines ordinarily in use .. .. h.p.	31,548	68,215	75,453	79,223	95,999	103,098

38. Rubber Goods.—The following table shows particulars of this industry for each State during 1950-51 and excludes establishments engaged primarily in the retreading and repairing of tyres.

## RUBBER GOODS, 1950-51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	24	38	8	8	2	..	80
Number of persons employed .. ..	5,687	4,448	(a)	505	(a)	..	11,454
Salaries and wages paid .. .. £	3,699,571	2,859,043	(a)	268,097	(a)	..	7,218,405
Value of power, fuel, etc., used .. .. £	433,613	500,232	(a)	22,593	(a)	..	984,529
Value of materials used .. .. £	12,965,832	13,082,745	(a)	434,038	(a)	..	27,510,509
Value of production .. .. £	4,104,581	5,875,555	(a)	434,396	(a)	..	10,929,640
Total value of output .. .. £	17,504,026	19,458,532	(a)	891,027	(a)	..	39,424,682
Value of land and buildings .. .. £	849,949	1,501,294	(a)	54,586	(a)	..	2,620,969
Value of plant and machinery .. .. £	980,463	1,468,758	(a)	100,134	(a)	..	2,852,975
Horse-power of engines ordinarily in use .. .. h.p.	37,024	37,584	(a)	1,788	(a)	..	81,315

(a) Not available for separate publication; figures included in total for Australia.

39. Electric Light and Power Works.—(i) *Details of Industry.* The increased demand for electrical energy has been responsible for considerable development in electric light and power works during recent years. For further information on this subject see Chapter XXV.—Electric Power Generation and Distribution. Particulars of the industry for each State during the year 1950-51 and for Australia for a series of years are shown below:—

## ELECTRIC LIGHT AND POWER WORKS.

1950-51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	90	69	45	34	113	3	354
Number of persons employed .. ..	4,976	2,453	1,023	1,290	1,023	125	9,990
Salaries and wages paid .. .. £	2,869,367	1,593,944	606,570	915,378	617,881	76,864	6,680,004
Value of power, fuel, etc., used .. .. £	9,772,784	4,801,372	2,778,329	2,183,492	1,722,616	227	21,258,820
Value of materials used .. .. £	1,413,384	359,315	462,132	201,388	246,000	29,813	2,712,032
Value of production .. .. £	7,762,553	3,140,519	1,207,388	964,571	858,885	588,646	14,522,562
Total value of output .. .. £	18,948,721	8,301,206	4,447,849	3,349,451	2,827,501	618,686	38,493,414
Value of land and buildings .. .. £	8,129,029	2,754,496	1,362,249	2,571,466	927,126	1,187,255	16,931,621
Value of plant and machinery .. .. £	18,982,170	13,629,496	5,666,367	5,228,374	3,345,871	6,588,914	53,441,192

## AUSTRALIA.

Items.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories .. ..	395	372	363	363	358	354
Number of persons employed .. ..	6,508	7,071	8,426	8,937	9,595	9,990
Salaries and wages paid .. .. £'000	1,977	2,588	3,874	4,819	5,466	6,680
Value of power, fuel, etc., used .. .. £'000	3,239	6,398	9,450	12,806	15,491	21,259
Value of materials used .. .. £'000	530	1,029	1,334	1,845	2,180	2,712
Value of production .. .. £'000	8,714	10,563	11,065	12,179	12,841	14,522
Total value of output .. .. £'000	12,483	17,990	21,849	26,884	30,512	38,493
Value of land and buildings .. .. £'000	8,388	9,235	10,497	11,640	13,486	16,932
Value of plant and machinery .. .. £'000	27,751	32,131	34,818	39,083	45,454	53,441

Particulars of the types of engines and generators installed in Electric Light and Power Works and their rated horse-power are given on page 973.

(ii) *Production.* The increase in the production of electric light and power in each of the States since 1938-39 is shown in the following table :—

**ELECTRIC LIGHT AND POWER WORKS : ELECTRICITY PRODUCED.**  
(’000 kWh.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1938-39 .. ..	1,948,490	1,222,505	387,368	256,283	307,002	566,691	4,688,339
1945-46 .. ..	2,831,801	1,904,403	612,672	402,134	338,799	819,958	6,909,767
1947-48 .. ..	3,546,345	2,259,938	759,080	519,531	402,300	872,680	8,359,874
1948-49 .. ..	3,717,030	2,503,981	890,258	566,606	398,594	976,474	9,052,943
1949-50 .. ..	3,758,004	2,706,081	971,630	593,808	417,499	1,061,639	9,508,661
1950-51 .. ..	4,251,442	2,875,866	1,115,348	713,034	469,914	1,077,723	10,503,327

40. *Gas-works.*—(i) *Details of Industry.* Gas-works are in operation in the majority of important towns in Australia. The following table shows particulars of gas-works in each State for the year 1950-51 and for Australia for a series of years :—

**GAS-WORKS.**

1950-51.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories .. ..	39	36	16	3	4	2	100
Number of persons employed ..	1,388	1,391	421	440	(a)	(a)	3,871
Salaries and wages paid .. £	914,957	847,118	238,880	262,758	(a)	(a)	2,400,814
Value of power, fuel, etc., used .. £	1,033,180	75,597	18,531	3,443	(a)	(a)	1,178,908
Value of materials used .. £	3,983,982	3,499,004	642,626	767,325	(a)	(a)	9,450,523
Value of production .. £	2,464,166	1,025,103	482,056	297,063	(a)	(a)	4,425,938
Total value of output .. £	7,481,328	4,599,704	1,143,213	1,067,831	(a)	(a)	15,055,369
Value of land and buildings .. £	1,086,663	565,074	238,522	30,990	(a)	(a)	2,070,523
Value of plant and machinery .. £	3,690,866	5,475,090	983,870	1,270,100	(a)	(a)	12,385,710
Horse-power of engines ordinarily in use .. .. h.p.	13,607	9,812	1,853	1,560	(a)	(a)	28,205

**AUSTRALIA.**

Items.	1938-39.	1945-46.	1947-48.	1948-49.	1949-50.	1950-51.
Number of factories .. ..	107	104	103	101	100	100
Number of persons employed ..	2,931	3,502	3,718	3,808	3,815	3,871
Salaries and wages paid .. £'000	785	1,194	1,643	1,837	2,027	2,401
Value of power, fuel, light, etc., used .. £'000	251	448	595	723	845	1,179
Value of materials used .. £'000	1,872	3,965	5,255	6,734	7,220	9,450
Value of production .. £'000	2,694	3,313	3,672	3,653	3,663	4,426
Total value of output .. £'000	4,817	7,726	9,522	11,110	11,728	15,055
Value of land and buildings .. £'000	1,463	1,571	1,815	1,813	1,939	2,071
Value of plant and machinery .. £'000	7,498	9,475	10,005	10,907	11,656	12,386
Horse-power of engines ordinarily in use .. .. h.p.	17,905	24,053	23,994	26,337	26,225	28,205

(a) Not available for publication ; figures are included in the total for Australia.

(ii) *Coal Used and Production.* The following table shows details for 1950-51 :—

**GAS-WORKS : COAL USED AND PRODUCTION, 1950-51.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Coal used .. tons	878,483	671,020	208,047	125,625	(a)	(a)	1,963,865
Gas produced '000 cubic ft.	19,444,111	11,445,506	2,819,527	2,383,611	(a)	(a)	37,875,418
Gas sold .. tons	16,743,161	9,935,806	2,479,635	2,099,160	(a)	(a)	32,794,896
Coke produced (b) .. tons	586,605	364,925	54,817	70,679	(a)	(a)	1,111,854

(a) Not available for publication ; figures are included in total for Australia. (b) In addition, 1,515,782 tons of metallurgical coke were made in Coke Works in 1950-51.

Since 1938-39, when the output of gas was 21 thousand million cubic feet, production has increased each year and reached 38 thousand million cubic feet in 1950-51.

## CHAPTER XXV.

## ELECTRIC POWER GENERATION AND DISTRIBUTION.

This chapter is based on an article which was dealt with in greater detail in Official Year Book No. 39 and was originally contributed by the Division of Industrial Development of the Commonwealth Ministry of National Development. The chapter is divided into three major parts, viz. :—A.—Introduction, which deals briefly with the resources, generation and distribution, and future developments, of electric power in Australia ; B.—The Snowy Mountains Hydro-electric Scheme ; and C.—The origins, development, present situation and new projects of electrical systems in each Australian State and Territory (internal and external). A Statistical Summary is appended. A Bibliography listing publications dealing with various aspects of the subject, and maps showing the generating capacity installed, under construction and proposed in the several States and for the whole of Australia, were included in Official Year Book No. 39.

It should be noted that the information contained in the chapter relates to situations existing and projects contemplated early in 1953 and that it may be considerably affected by changes in policy or plans, or by developments in the projects themselves.

## A. INTRODUCTION.

1. **Distribution of Population and Location of Power Resources.**—The geographical pattern of electric power generation and distribution in Australia has been affected by two main influences—the distribution of population, with a resulting distribution of industry, and the location of fuel and water resources.

The Australian population between 1939 and 1952 increased by approximately 1,750,000 to reach a total of 8,750,000. The two principal centres of population and industry, the metropolitan areas of Sydney and Melbourne, make the greatest demands for electric power. Their growth has been associated with the development of large deposits of coal located in relatively close proximity to the source of demand. This, together with the fact that the major water resources are also located in the south-eastern portion of the Commonwealth, is of paramount significance in influencing the distribution of industrial population and the location of major electric power stations.

By far the most important source of energy used in the production of electric power in Australia is coal. At 30th June, 1952, thermal power stations represented 81 per cent. of the total installed generating capacity. The balance, 19 per cent., was distributed between hydro and internal combustion equipment in the proportions of 12 per cent. and 7 per cent., respectively.

Most of Australia is poorly supplied with water, only 15.2 per cent. receiving an annual rainfall of 30 inches and over. This is confined largely to the narrow coastal strip on the east coast and to Tasmania. The possibility of establishing large thermal stations in inland areas is therefore strictly limited by the lack of sufficient water for feed and condensing purposes.

The only region on the mainland of Australia where land is high enough to receive reliable winter snowfall, and from which reasonably constant water supplies throughout the year can therefore be expected, is the mountain chain which stretches from the high plateaux of south-eastern New South Wales through to the north-eastern highlands of Victoria. The hydro-electric potential of this area is considerable, and plans have been formulated to develop more than 3,000,000 kW. within the next 25 years. The two major construction schemes in this area are the Snowy Mountains and Kiewa projects. Other hydro-electric potential does exist on the mainland on the rivers of the coastal areas of New South Wales and Queensland, but the amount there available is only a small proportion of the potential of the Alpine region. In Tasmania hydro-electric resources have been estimated at about 50 per cent. of the total Australian hydro-electric potential. Whereas on the mainland the chief source of energy is coal, water occupies this position in Tasmania.

2. **Electric Power Generation and Distribution.**—(i) *Ownership of Undertakings.* At the beginning of this century, Australia's electrical undertakings were carried on mainly by private enterprise, but some measure of governmental control was exercised through various electric light and power Acts. This legislation was designed to provide standards of safety, and to define the scope and obligations of the private organizations engaged in production of electric power for sale. As the demand for power increased, particularly from manufacturing industries, supply facilities were expanded and the industry grew rapidly. A trend towards public ownership commenced during the 1914–18 War and became more pronounced after the 1939–45 War. By 1953, all major generating stations supplying the public were, in varying degrees, under the control of State statutory organizations, constituted with the object of unifying and co-ordinating the generation and distribution of electricity supplies within the various States. There are however, still a large number of small private and municipal enterprises generating power for supply to country towns, but, where practicable, central authorities are extending supply to these places. In many areas, however, it has been and remains the practice for central authorities to sell power in bulk to local distributing organizations who undertake local reticulation.

In addition to the private, local government and statutory organizations who generate and/or distribute electricity for sale, there are numerous firms generating power for use in their own establishments, particularly those engaged in mining pursuits remote from the main centres of population. This chapter, however, is concerned mainly with the activities of central electric stations, and the power regularly produced for such internal consumption is, in any case, a relatively small proportion of total power produced.

(ii) *Power Production and Generating Capacity.* In the twenty year period 1931–32 to 1951–52, production of electric power in Australia increased by about 350 per cent. from 2,507 to 11,304 million kilowatt hours. A comparison of the relative amounts produced in each State is shown in the following table :—

PROPORTION OF ELECTRIC POWER PRODUCED IN EACH STATE.  
(Per Cent.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
1931–32 .. ..	42.9	28.1	4.9	5.3	5.1	13.7	100.0
1951–52 .. ..	41.0	25.9	11.2	7.1	4.6	10.2	100.0

During the 1920's, the demand increased very rapidly as supply was extended to new areas and electricity usage considerably diversified. In that period, consumption increased at a rate of 15 per cent. per annum, which amounted to a doubling of the load about each five years. As the net population increase averaged a little less than 2 per cent. per annum, this was not a significant contribution to the comparatively rapid increase in consumption.

During the depression of the early 1930's demand remained fairly constant, but from 1934 to 1939, as industrial activity regained momentum, consumption increased rapidly each year at a rate of from 8 to 10 per cent. per annum. During the 1939–45 War, power restrictions were imposed on commerce and industry, very few houses were built and, in general, new domestic electric appliances were either in short supply or not available. Despite these conditions, consumption continued to increase, but this was due mainly to rising demand caused by war production.

Since the 1939–45 War, industry and commerce have expanded rapidly, many new houses have been built and the population has increased by approximately 18 per cent. These factors, together with extension of electricity supplies to rural areas and the increased use of domestic electric appliances, have all contributed to bring about a position where the inflated demand for power cannot be satisfied by the existing installed capacity

of central generating stations. During the period 1941-42 to 1951-52 the capacity of electrical machinery installed by secondary industries and utilizing purchased electricity, increased by 100 per cent., namely, from 1.4 million horse-power to 2.8 million horse-power.

At 30th June, 1952, installed generating capacity in Australia totalled approximately 2.6 million kW. compared with 1.6 million kW in 1939, an increase of about 63 per cent. In 1938-39 each kW. of installed capacity produced an average of 3,000 kWh. per annum, compared with an average of 4,300 kWh. in 1951-52. These figures are based on Commonwealth totals; figures for the States vary, depending on such factors as the distribution of demand, number of consumers, and type of equipment employed. In Tasmania, for example, average output per kW. installed was 5,000 kWh in 1938-39 and 5,200 kWh in 1951-52 compared with 2,300 and 3,350 kWh respectively in South Australia.

3. **Future Developments.**—Each central authority has embarked upon constructional programmes to overcome the lag between supply and demand. However, industrial and commercial expansion has continued on a high level, and several projects have been commenced or planned in various parts of the Commonwealth for suburban and main railway line electrification. Other fields directly connected with the demand for power, such as house building, must also be taken into account.

Increases in population, even if unaccompanied by increases in consumption of power per head, would result in overall increases in consumption. The rise in industrial demand, which was very great during the period 1930 to 1952, may be expected to continue, even though the rate of increase slows down; this will further add to the demand for power.

An important factor to be considered in regard to future development is the increasing relative importance of the generation of electric power from water resources.

## B. SNOWY MOUNTAINS HYDRO-ELECTRIC SCHEME.\*

1. **Geography of Area.**—The Snowy country in south-eastern New South Wales is the only part of the continent in which any altitudes exceed 7,000 feet, and in which there is a substantial area over the altitude of 6,000 feet. The precipitation which results from the presence of this barrier on the line of the prevailing winter depressions of Antarctic origin amounts to as much as 120 inches a year in the vicinity of Mt. Kosciuszko, the highest point in Australia. The drainage from the snowfields is practically all to three systems—those of the Murray and Murrumbidgee Rivers, which flow inland, and that of the Snowy, which flows southwards to Bass Strait.

2. **Historical.**—The Murray and Murrumbidgee have been subject to control and intensive development for irrigation for many years; the Snowy, however, flows through mountainous and practically uninhabited country until debouching onto the river flats of East Gippsland, not many miles above its mouth. It has never been controlled in any way, either for the production of power or for irrigation, and a very great proportion of its waters flows to waste into the sea. As a result, attention has long been directed towards this river, which has the highest source of any in Australia and which conducts away a very large proportion of the waters from the south-eastern New South Wales snowfields, and it has been consecutively considered as a means of supplementing the flow of the great inland rivers, a source of water supply to the rapidly growing metropolitan area of Sydney, a means for developing hydro-electric power and, again, as a source of increasing agricultural production in the rich Murray and Murrumbidgee valleys.

The 1939-45 War, and the plans for post-war reconstruction which then originated, led to a proposal by the State of New South Wales for diversion for irrigation and agricultural purposes of the waters of the Snowy to the Murrumbidgee River—a scheme in which little emphasis was placed on the generation of power. The Victorian Government proposed a counter-scheme, involving very much greater generation of power, and involving diversion, not to the Murrumbidgee, but to the Murray.

\* See also Chapter XXVI.—Water Conservation and Irrigation, §3, para. 4.

The Commonwealth Government, however, being seized with the national implications of these proposals, brought about a meeting in 1946 of Commonwealth and State representatives to discuss the general utilization of Snowy waters, and subsequently a Committee was set up to examine the whole question on the broadest possible basis. This Committee, in a report submitted in November, 1948, suggested consideration of a far greater scheme than any previously put forward. It involved not only the simple question of utilization of the waters of the Snowy, but a general consideration of the possible diversion of a number of rivers in the area, tributaries, not only of the Snowy, but of the Murray and Murrumbidgee. The recommendations of the Committee were generally agreed to by a conference of Ministers representing the Commonwealth and States of New South Wales and Victoria, and it was also agreed that the Committee should continue its investigations. A further report was submitted by the Committee in June, 1949, as a result of which the Commonwealth Parliament passed the Snowy Mountains Hydro-electric Power Act. In the next month the Snowy Mountains Hydro-electric Authority was constituted, and thus was inaugurated the greatest engineering scheme in Australian history.

3. Description of Scheme.—(i) *General*. The proposals at present being implemented fall into two groups, Tumut Development and Snowy-Murray Development—each having its associated plans for hydro-electric power production. The features described hereunder may be identified by reference to the map on page 1039. It should be remembered that, as the final designs for practically every element of the scheme have not yet been completed, and in many cases will not be completed for many years, any figures which are now quoted in respect of those elements will undoubtedly be subject to modification in the future.

(ii) *Tumut Development*. The central feature of this part of the plan is diversion to, and regulation of, the waters of the Tumut River, a stream at present completely unregulated, but which contributes approximately half of the flow of the Murrumbidgee River at Gundagai below the existing main storage on the Murrumbidgee at Burrinjuck. To the Tumut will be diverted the waters of the Eucumbene, a major tributary of the Snowy, and the headwaters of the Tooma, a tributary of the Upper Murray. The headwaters of the Murrumbidgee itself will also be diverted to the Tumut, principally to secure desirable electric power.

A major dam is to be constructed on the Eucumbene River at Adaminaby, creating a storage of at least 3.5 million acre feet, and from this, water will be conveyed by a 14-mile tunnel to Tumut Pond on the upper reaches of the Tumut River, where it will be joined by the waters from the Tooma, diverted by racelines and tunnels. From Tumut Pond, another tunnel will convey the water to power station T.1 with an installed capacity of about 320,000 kW., and a further tunnel to power station T.2 with a capacity of 280,000 kW., thence discharging into a smaller storage at Lob's Hole.

To the Lob's Hole Reservoir will also be brought the waters of the Upper Murrumbidgee from another major storage at Tantangara, holding 600,000 acre feet. From it, waters will be led by tunnel to power station T.3 with an installed capacity of 140,000 kW., which will discharge into a pond on the Yarrangobilly River, a tributary of the Tumut, and from Yarrangobilly Pond by further tunnel to power station T.4 with an installed capacity of 160,000 kW. which, in turn, will discharge into the Lob's Hole Reservoir.

Between the foot of the Lob's Hole storage and the top of the Blowering storage will be power stations T.5 and T.6. The total capacity of these stations will be 410,000 kW.

The Blowering storage with its capacity of about 800,000 acre feet, is an adjunct to the Snowy Mountains Hydro-electric Scheme and will be required for the regulation both of the Tumut waters and of the waters diverted into the Tumut. This regulation is essential if the waters impounded are to be fully utilized for irrigation purposes. At the foot of the Blowering Dam will be the last of the Tumut Power stations, T.7, with a capacity of some 50,000 kW., but this station will operate only when water is released for irrigation. The State of New South Wales will be responsible for the construction of the Blowering works.

The total extra new water which will reach the Murrumbidgee is expected to average 528,000 acre feet per annum and the total installed capacity of the various power stations is estimated at 1,310,000 kW. (excluding T.7).

(iii) *Snowy-Murray Scheme.* The central feature of this part of the scheme is the diversion of the waters of the Upper Snowy itself from a major dam to be constructed at Jindabyne on that river, a little below its junction with the Eucumbene and the Crackenback Rivers. This reservoir will have a storage capacity of approximately 1,200,000 acre feet and from it will run right through the Great Dividing Range a tunnel approximately 32 miles in length, finally discharging into Swampy Plains River, not far above its junction with the Murray proper.

Into this tunnel will be collected a considerable quantity of water from the very high altitude country of the Kosciusko area, and from a number of smaller tributaries of the Murray. The collection from the Kosciusko area commences at the Kosciusko Reservoir at an altitude of 5,725 feet, not many miles below the source of the Snowy. A tunnel will convey water from this reservoir to power station M.1.A. with an installed capacity of 60,000 kW., and thence to a pond on the Snowy River, at its junction with the Guthega River.

From the Guthega Pond, a further tunnel and penstock will lead to station M.1.B. with a capacity of 90,000 kW., which discharges into a pond at the junction of the Munyang and Snowy Rivers. Construction of this part of the scheme has already commenced. Munyang Pond will discharge into a tunnel leading to station M.2 H. and L. with installed capacity of 60,000 kW., thence into a reservoir at Island Bend on the main stream of the Snowy.

From the Island Bend reservoir, a vertical shaft, 1,000 feet deep, will lead to the main tunnel from Jindabyne reservoir previously referred to, passing on its way through power station M.3 with installed capacity of 250,000 kW. Into this main tunnel will also be collected waters from the Upper Murray tributary streams previously mentioned.

Of these, the most important is the Windy Creek-Geehi River series. A pond on Windy Creek, a small tributary of the Geehi, situated at an altitude of over 5,000 feet, will provide water through a tunnel to station M.4 with an installed capacity of 50,000 kW., thence by racelines and tunnel to station M.5.H. with an installed capacity of 65,000 kW., discharging into Geehi River Pond.

A vertical shaft will lead this water into the main tunnel, passing through station M.5.L with an installed capacity of 20,000 kW. The combined waters thus collected into the main tunnel will pass through station M.6 with an installed capacity of 540,000 kW., and then discharge into a pond on Bogong Creek, another of the Upper Murray tributaries. At this point, the water is still at an altitude of nearly 2,000 feet, and the main tunnel will thence continue to station M.7 with a capacity of 540,000 kW.

From M.7 the total collected waters will flow into the Swampy Plains River at a point some seven miles, in a direct line, above its confluence with the Murray. It will be necessary, however, to provide on the Murray a further storage for the proper regulation of these waters for irrigation purposes.

The total water flowing to the Murray from these works will amount on the average to 722,000 acre feet per annum, but as 280,000 acre feet which now reaches the Murray from the Tooma will be, as indicated previously, diverted to the Tumut, the total extra water actually reaching the Murray will be, on the average 442,000 acre feet per annum; the total installed capacity of the power stations will be 1,700,000 kW.

An integral part of each development is the construction of hundreds of miles of racelines, to collect and divert water from the many streams in the area into storages and tunnels.

4. *Utilization of Power.*—The total capacity of all stations in the scheme will be of the order of 3,000,000 kW., which is greater than the present total installed capacity of all the generating stations in the Commonwealth.



If, however, the demand for power continues to increase as is expected, the major source of power must still be thermal stations. The operation of the whole scheme is dependent on the appropriate development and integration of these stations, as otherwise there would be a serious loss in ultimate economy; all economic estimates therefore postulate that thermal capacity will be expanded so as to preserve an appropriate ratio.

For the purposes of general comparison, the ratio of 38 per cent. for effective capacity of hydro power to 62 per cent. thermal has been adopted. This, however, is only tentative and may be departed from as the scheme proceeds. It has, however, been estimated with a reasonable degree of probability that the power available from the scheme will save coal to the order of five million tons annually.

The first call on the power generated under the Snowy Scheme will be by the Commonwealth Government for supply to the Australian Capital Territory of power which it needs in that area, particularly for certain projects with defence significance, and no indication can at present be given as to how great that call will be. It is not likely, however, to amount to more than a relatively small fraction of the total power available, and it has been agreed that the balance will be divided between the States of New South Wales and Victoria in a proportion of two-thirds to New South Wales and one-third to Victoria.

The project has not yet proceeded so far that plans can be formulated for the actual scheme of power distribution, but transmission lines from the Australian Capital Territory via Cooma are under construction and, whereas this is primarily to supply power from the existing New South Wales network to the operational sites for construction purposes, it is anticipated that, when station M.r.B. comes into operation, power will then be fed from that station back to the interconnected network. The original estimates for transmission costs in the proposal were based on transmission to load centres at 220,000 volts, but it is probable that much higher voltages will be used.

## C. STATES AND TERRITORIES.

### § 1. New South Wales.

1. **General.**—In the previous issue of this Year Book (No. 39) an account is given in some detail of the origin and development of electricity generation and distribution in New South Wales, describing in particular the growth of the systems of the Sydney County Council, the Department of Railways, the Electric Light and Power Supply Corporation Ltd., the Southern Electricity Supply and the Clarence River County Council. A description is also given of the legislation existing prior to, and that which constituted, the Electricity Authority of New South Wales and the Electricity Commission of New South Wales. At present, the three main Acts governing electricity supply in New South Wales are :—

- (i) The Local Government Act 1919 which lays down the various rights and responsibilities of local government bodies in the establishment and operation of electricity trading undertakings.
- (ii) The Electricity Development Act 1945–1948 which established the Electricity Authority of New South Wales as the body responsible for the co-ordination of electricity supply throughout the State.
- (iii) The Electricity Commission Act 1950 which constituted the Electricity Commission of New South Wales as the major generating authority and not subject to the provisions of the Electricity Development Act.

2. **Organization.**—(i) *The Electricity Commission of New South Wales.*—The Commission, which was constituted under the Electricity Commission Act 1950, consists of five members of whom one is a full-time Chairman. In its administration the Commission is directly responsible to the Minister for Local Government.

When the Commission was established, 93 per cent. of the State's power requirements were generated by four bodies—the Sydney County Council, the Department of Railways, Southern Electricity Supply (a division of the Department of Public Works) and the

privately-owned Electric Light and Power Supply Corporation Ltd. The Electricity Commission Act 1950 and the Electricity Commission (Balmain Electric Light Company Purchase) Act 1950 provided for the acquisition of the power stations and main transmission lines of those bodies. The transfer of the power stations and transmission lines of the Sydney County Council, Southern Electricity Supply and the Department of Railways has now been effected. The date of transfer of the undertaking owned by the Electric Light and Power Supply Corporation Ltd. is dependent upon the determination of the valuation of the undertaking by the Land and Valuation Court.

The main function of the Commission is the generation and transmission of electricity which it sells in bulk to distribution authorities (mainly local government bodies) throughout a large part of the State, to the government railways and tramways and to certain large industrial consumers. As the major generating authority, it is also responsible for the development of new power sources. An important exception is the hydro-electric resources of the Snowy Mountains region which are being developed by the Snowy Mountains Hydro-electric Authority, a Commonwealth Government body.

(ii) *Other Electricity Supply Authorities.* The retail sale of electricity to the public is, in general, carried out by separate electricity supply authorities—municipal and shire councils, electricity county councils (consisting of a grouping of shire and/or municipal councils) or private franchise holders. There are 141 of these supply authorities throughout the State of which 46 also generate part or the whole of their power requirements. A few authorities—the most notable being Tamworth City Council and Northern Rivers County Council—also supply in bulk to other councils. The great majority of country power stations are, however, small oil engine plants which are becoming increasingly costly to operate. Consequently, they are gradually being closed down as the main transmission network is extended further afield.

Over the past few years there has been a distinct trend towards the consolidation of supply areas, many of which have been regarded as being too weak individually to form satisfactory areas for distribution. Generally these consolidations have taken the form of a county district consisting of a number of neighbouring shire and municipal areas grouped for electricity supply purposes only and administered by a county council of representatives elected by the constituent shire and municipal councils.

It is interesting to note that of the 243 shires and municipalities in New South Wales, 121 are included in one or other of the nineteen electricity county districts. Thirteen of these county districts have been constituted since 1945. The largest of the county councils is the Sydney County Council which at the close of the year 1952 was supplying 315,000 consumers in the Sydney Metropolitan Area. Unlike the other county councils, which are constituted under the provisions of the Local Government Act 1919, the Sydney County Council was specially constituted under the Gas and Electricity Act 1935.

(iii) *The Electricity Authority of New South Wales.*—The Electricity Authority was constituted under the Electricity Development Act 1945 for the stated purpose of promoting and regulating the co-ordination, development, expansion, extension and improvement of electricity supply throughout the State. The Authority, which is a regulatory body only, consists of seven members of whom one is a full time Chairman. Like the Commission, it is responsible to the Minister for Local Government.

The main functions of the Authority are as follows :—

- (a) *Distribution.* Under the Act the approval of the Authority is required, *inter alia*, for the establishment or extension of power stations and main transmission lines (except those controlled by the Electricity Commission of New South Wales); for the establishment or acquisition of an electricity trading undertaking by a local government council; for the granting or renewing by such a council of electricity franchise agreements or corresponding agreements with other councils; and for the giving or taking of bulk supplies of electricity. It also has power to formulate proposals for the establishment of county councils.

In exercising these powers the Authority is mainly concerned to see that distributing authorities are sufficiently strong to provide an economical, efficient and satisfactory service. Its most important activities in this regard are in investigating supply areas and in making recommendations to the Minister for the consolidation of such areas into county districts. Many of the new county districts referred to earlier have been formed largely as a result of the Authority's advice.

- (b) *Rural Electrification.* The Authority administers the rural electricity subsidy scheme under which rural electrification throughout the State is progressing very rapidly (see below).
- (c) *Safety.* The Electricity Development Act 1945-1948 contains provisions for the making of regulations relating to most aspects of safety and these powers are being used more and more extensively. Safety regulations now in force cover such matters as inspection of consumer's installations, licensing of electricians and electrical contractors, approval of electrical appliances and safety of linesmen.
- (d) *Generation and Transmission.* The approval of the Authority is required for the establishment of new power stations or the extension of existing power stations (with the exception of those of the Electricity Commission). The Authority may, for example, refuse approval for the establishment of a new power station if it is more economical and in the general interest for the supply authority concerned to purchase in bulk from another body.

3. *Generation and Transmission.*—(i) *General.* Except in the Snowy Mountains district, and in one or two other areas, New South Wales is lacking in major water power potential and for the generation of electricity, the State is, therefore, mainly dependent on steam power stations. Coal-fired stations generate 93 per cent. of the State's requirements, hydro-electric stations 3 per cent. and internal combustion plant 4 per cent.

The proportion of power generated in hydro-electric stations will increase considerably in the future with the development of the Snowy Mountains Scheme by the Commonwealth Government. The possibility of developing the hydro-electric potential of the Clarence River and other rivers is also being investigated. Nevertheless, coal-fired steam power stations will continue to supply the greater part of requirements.

(ii) *Major Generating Stations.* In New South Wales the generation of electricity has followed the general world trend towards large centralized power stations supplying large areas through inter-connected networks. The greater part of the coal-fired generating plant is now concentrated within the bounds of the major coal fields, where the big industrial centres and most of the population are also located.

The major power stations within the main inter-connected system and their installed capacities are as follows:—*Steam*—Bunnerong "A" and "B" (Sydney), 328,000 kW.; White Bay (Sydney), 140,000 kW.; Pyrmont "A" and "B" (Sydney), 98,000 kW.; Ultimo (Sydney), 79,500 kW.; Zarra-street (Newcastle), 79,250 kW.; Balmain (Sydney), 48,000 kW.; Port Kembla, 33,500 kW.; Lithgow, 22,500 kW.; *Hydro*—Burrinjuck (near Yass), 20,000 kW. There are also various other steam, hydro and internal combustion stations aggregating 23,000 kW. The total installed capacity of the main inter-connected system is 871,750 kW.

It will be seen therefore that the greater part of the State's generating plant is concentrated within a hundred mile radius of Sydney—that is, at Sydney itself (five stations), Port Kembla, Newcastle and Lithgow. The largest single station outside this area is located at Tamworth. At present there is only one hydro-electric station in New South Wales with an installed capacity of more than 10,000 kW. This is the Burrinjuck station in south-eastern New South Wales with an installed capacity of 20,000 kW. Other hydro-electric stations are located at Wyangala (near Cowra), Nymboida (near Grafton), Brown Mountain (near Bega), Mullumbimby, Batlow and Tumbarumba. These stations are, however, very small compared with the major steam power stations.

(iii) *Interconnected Network.* About 92 per cent. of electricity consumers in New South Wales are now supplied through the interconnected systems. In this network, transmission lines operating mainly at 66,000 or 33,000 volts interconnect the various power stations and distribute power to load centres throughout most of the south-eastern portion of the State and the north coast region. Three 132,000 volt transmission lines have also been completed—one, completed in 1952, linking Burrinjuck and Port Kembla; one, completed in 1952, between Sydney and Newcastle; and one, just completed, between Sydney and Port Kembla. The totalled installed capacity of the interconnected systems, which includes an aggregated capacity of 36,872 kW. for various stations, including the Northern Rivers County District, linked with the main system, is 908,622 kW.

(iv) *Separate Systems and Total State Installed Capacity.* There are a number of separate systems and isolated plants which have not yet been interconnected with the main network and which have an aggregate installed capacity of 53,788 kW. The most notable are the Tamworth system and that of the Bega Valley County Council on the far south coast. The Tamworth system (18,000 kW.) supplies power to an extensive district in the north-east of the State through 66,000 volt and 33,000 volt transmission lines. Some councils along the Victorian border receive bulk supplies from Victorian authorities.

The aggregate installed capacity for the whole of the New South Wales systems and isolated plants is 962,410 kW.

(v) *Future Development.* The following major power stations in Sydney are at present being extended by the installation of additional generating plant:—Pymont "B", 150,000 kW.; Balmain, 73,000 kW.; Bunnerong, 50,000 kW.; White Bay, 50,000 kW. Construction is also proceeding on new major power stations on the coalfields at Lake Macquarie, near Newcastle (300,000 kW.), Tallawarra, near Port Kembla (120,000 kW.), and Wallerawang, near Lithgow (120,000 kW.). These stations will be linked with Sydney by 132,000 volt transmission lines, and extensive additions to the 132,000 volt system to supply increasing loads at various centres are also planned. A 132,000 volt system will be established around the outer Sydney Metropolitan Area for the supply of load centres at present fed through 33,000 volt circuits direct from the inner Sydney power stations. In order to help overcome the post-war power shortage as quickly as possible, the Electricity Commission ordered the construction of four 20,000 kW. "package" steam power stations, at Port Kembla, Maitland, Penrith and Liverpool respectively. The first units are now in operation and all should be completed in 1953. Future plans provide for the construction of a hydro-electric power station on the Hume Reservoir of 25,000 kW. capacity to be connected to the State network through a 132,000 volt transmission line between Hume and Wagga Wagga.

In addition to the power stations mentioned above which are under construction or planned for the system controlled by the Electricity Commission, a number of local government bodies have plans in hand for the development of independent power stations. Of these the more important are as follows:—The Northern Rivers County Council is constructing a steam power station at Koolkhan (near Grafton). Immediate plans provide for an installed capacity of 25,000 kW. The first unit of 5,000 kW. is now in operation. The Tamworth City Council is planning the construction of a new steam power station at Gunnedah for the augmentation of supply to the separate system now supplied from Tamworth power station. The initial installation will be 30,000 kW. and the ultimate now envisaged will be 75,000 kW. The North-West County Council has made tentative plans for the establishment of a 10,000 kW. steam power station on the Ashford coalfield. The Ulan County Council is constructing a steam power station of 6,250 kW. capacity on the Ulan coalfield. The New England County Council and the Bega Valley County Council are constructing small hydro-electric power stations on the Oakey River (near Armidale), and Georges Creek (near Bega) respectively.

Preliminary investigations have also been made of the possibilities of developing substantial hydro-electric schemes on the Clarence and Shoalhaven Rivers but no concrete proposals have as yet been adopted.

4. **Rural Electrification.**—When the Electricity Authority of New South Wales was constituted in 1946, one of its first tasks was the devising of a scheme for subsidizing

the cost of rural electrification. At that time only 16,000 New South Wales farms were being served with electricity—less than one-third of those within reasonable reach of public electricity supply systems. In August, 1946 a subsidy scheme was approved by the Government and put into immediate operation. The initial objective of the scheme was the connexion of 24,000 farms and 9,500 other rural consumers. It was estimated that this work (to be carried out by local supply authorities) would cost £6,000,000 of which the Electricity Authority of New South Wales would provide nearly half by way of subsidy. The Electricity Authority derives its funds for the payment of subsidies partly from levies on the major electricity supply undertakings and partly from Consolidated Revenue. The amount of subsidy is based on the estimated cost of a proposed extension and the number of consumers able to be served by the new lines. In order that the funds available for subsidy purposes might be used to the best possible advantage, the scheme is designed to encourage local electricity supply authorities to construct the more economic extensions first.

The scheme has given a remarkable stimulus to electrification in rural areas and it is now evident that the initial objective will be reached well within the scheduled ten-year period. In six years the total number of farm connexions has been doubled—an average of 2,500 farms being connected each year, at an annual cost of about £1,000,000. New South Wales now has the highest percentage of electrified farms on the Australian mainland. At 30th June, 1952 an additional 15,231 farms and 13,140 other rural consumers had been connected, the length of line involved being 8,864 miles. The capital cost of these extensions was £4,500,000 and the amount of subsidy paid, £735,000.

Surveys indicate that with the aid of subsidies, it should be possible to supply, from the public mains, about 70 per cent. of the farms in New South Wales. At the moment that appears to be somewhat near the limit of farm connexions on a reasonably economic basis.

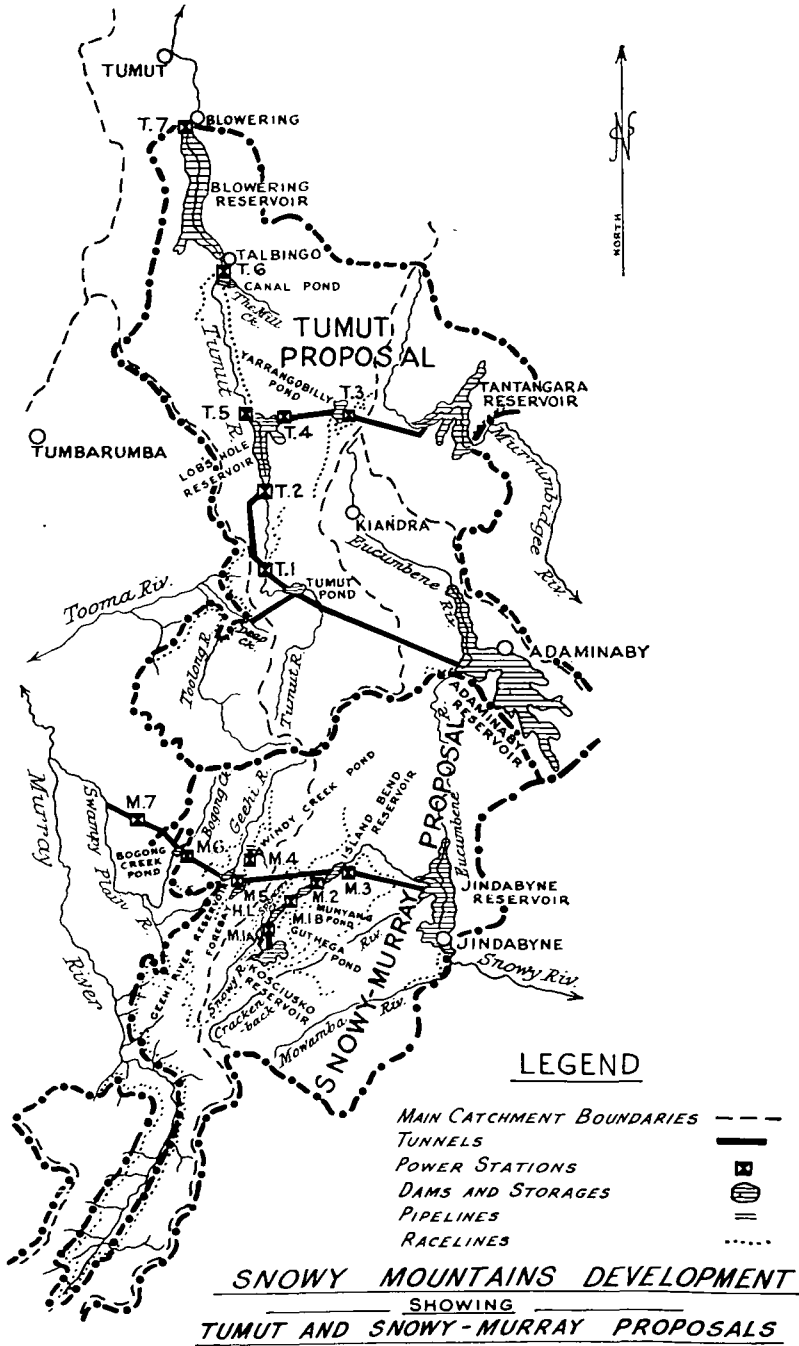
## § 2. Victoria.

1. **General.**—In the previous issue of this Year Book (No. 39) a detailed description is given of the development of electricity generation in the cities of Melbourne, Geelong, Bendigo and Ballarat up to the time of transfer of control of electricity undertakings in these cities to the State Electricity Commission of Victoria. An account is also given of the events culminating in the establishment of the Commission in 1919, and of the early developments in the Commission's undertakings.

2. **The State Electricity Commission of Victoria.**—(i) *Functions of Commission.* Under the terms of the State Electricity Commission Act, three Commissioners were appointed, who took up duty on 4th March, 1919. Their powers authorized them to erect and operate electrical undertakings; to supply electricity in bulk to any corporation; to supply electricity to any person outside any area in which there was an existing undertaking; to carry on any business associated with an electrical undertaking; to make regulations as to precautions to be adopted in the use of electricity and arrange for the licensing of wiremen; and to establish and operate State coal winning projects.

In addition to these powers, the Commissioners were to enquire into and report to the Government as to the steps which should be taken to co-ordinate and concentrate all electrical undertakings in Victoria; to secure the efficient inter-connexion of such undertakings by adopting the necessary standards of plant, voltages, etc.; to encourage and promote the use of electricity for industrial purposes; to report to the Government on the prospects of establishing new industries in Victoria requiring large quantities of electrical energy; and to carry out investigations of coal deposits or hydro-potential that could be used for the generation of electrical energy.

(ii) *Newport and Yallourn Power Stations.* Action was taken to investigate the practicability of utilizing the State's brown coal and water power resources for the production of electricity. In a Report dated 26th November, 1919, the Commissioners concluded, *inter alia*, that the Morwell brown coal field should be developed and a power house established thereon by 1923, with an initial capacity of 50,000 kW. As to water



power, they were of the opinion that consideration of hydro-electric power schemes should be deferred until further investigations then being undertaken were completed. It was further concluded that in order to obtain maximum economy, the proposed station in the neighbourhood of Morwell (known since 1920 as Yallourn Power Station) and any other power house to be erected in connexion with the proposed State electricity supply scheme should be interconnected with the Railways Department power station at Newport and operated under the control of a single authority.

The actual transfer of the Railways Department station at Newport did not take place until 1951, and in the meantime two new stations (and subsequent extensions) had been constructed by the Commission and were in operation. By the early months of 1953, the total installed generator capacity of the Newport power station, consisting of Newport "A" (originally under the control of the Railways Department), Newport "B" and Newport "C", was 311,000 kW., which, added to Spencer Street (44,000 kW.) and Richmond (53,000 kW.), made a total of 408,000 kW. installed in the Melbourne metropolitan area, of which all but the 113,000 kW. in Newport "A" power station were included in the 50-cycle inter-connected State generating system.

To implement one of the main purposes for the establishment of the State Electricity Commission, namely, development of Victoria's brown coal resources, particularly for production of electrical energy, construction commenced in 1920 of the Yallourn power station designed for an initial capacity of 50,000 kW., but increased within a few years by the addition of two further machines. On 24th June, 1924, power was first transmitted on a commercial basis from Yallourn to Melbourne. Main metropolitan terminal stations were constructed at Yarraville and later at Richmond.

The site chosen for the power station on the bank of the Latrobe River, about 6 miles from Morwell, had numerous advantages. Adequate water was available for the station's requirements, land nearby provided a good town site, whilst, most important of all considerations, an area of one square mile, adjacent to the proposed station, contained proved reserves of brown coal totalling about 150 million tons with averages of 174 feet thickness and 33 feet overburden. By the use of mechanized methods for open-cut coal winning, the coal could be extracted and delivered to the power station at a cost of only a few shillings a ton. Development of these resources was designed to ensure to a large degree the State's independence in fuel requirements for the production of electrical energy.

Estimated to contain about 10,000 million tons of brown coal, all capable of being won by mechanized open-cut methods, the Yallourn-Morwell brown coal field forms part of the very large brown coal deposits in the Latrobe Valley, where boring has revealed more than 20,000 million tons of brown coal capable of being won by open-cut methods of extraction.

As the Yallourn station was intended to carry the base load of the system, steps were taken to augment its capacity to keep pace with the anticipated and continually increasing demand for electric power, and by 1938, Yallourn "A" and "B" had a total capacity of 175,000 kW. (In addition, an average of 8,000 kW. of by-product electricity is fed into the system from the Yallourn briquette factory.)

(iii) *Hydro-electric Development.* Development of the State's hydro-electric potential the necessity of which was foreseen in the Commissioners' initial Report of November, 1919, but deferred pending further investigations, commenced in 1922. The project selected was dependent on the waters of the Goulburn River and adjacent mountain streams in the Cerberean Range, about 65 miles north of Melbourne. These two sources of water power provided a distinct advantage in that one was mainly summer flow and the other winter flow, thus permitting the continuous generation of power. Five small stations, namely, Sugarloaf (Eildon Weir, 13,500 kW.), Rubicon (9,100 kW.), Lower Rubicon (2,700 kW.), Royston (840 kW.), and Rubicon Falls (275 kW.), were installed totalling approximately 26,400 kW. The complete project was in service by 1929. In conjunction with the building of the new Eildon Dam, the Sugarloaf station is being replaced by one having a total installed capacity of 135,000 kW. It will comprise two

new generators, totalling 120,000 kW. capacity, while the two 6,750 kW. machines in the former Sugarloaf power station are being re-built and re-installed at the revised rating of 7,500 kW. each.

In a Report to Parliament during 1920, the Commissioners included details of a large-scale project for harnessing the Kiewa River in the valleys and tablelands of the Bogong High Plains area of the Main Dividing Range, located approximately 150 miles north-east of Melbourne. At that time the Commission was not prepared to recommend adoption of the plan, but, on the other hand, suggested further consideration of the smaller Sugarloaf and Rubicon scheme. However, during the following 17 years, hydrological investigations were carried out in the Kiewa area which greatly facilitated the subsequent planning of a major hydro-electric project. On 12th June, 1937, a further Report was submitted to Parliament recommending adoption of a plan to provide an ultimate capacity of 117,000 kW. from the Kiewa project. The plan, which included construction of four power stations with an initial installation comprising 20,000 kW. to be in service by 1942, was approved and its provisions embodied in the State Electricity Commission (Extension of Undertaking) Act 1937. Construction commenced during 1938, but the war delayed progress and it was not until September, 1944 that the first station came into partial operation with 13,000 kW.—a second unit of 13,000 kW. was placed in service in April, 1945.

The 1937 Kiewa project, prior to its submission to the Government, was critically reviewed by a group of oversea consulting engineers, and their report confirmed that an enlarged scheme might be possible after further detailed investigation of the water power resources of the terrain adjacent to the Bogong High Plains. On 21st November, 1947, the Commission submitted proposals for expanding the original Kiewa scheme of 117,000 kW. to one of 289,000 kW. with an annual output, averaged over a typical period of wet and dry years, of about 1,000 million kWh. Approval for the amended scheme was contained in the State Electricity Commission Act 1948. Work was begun on the project, but it has since been drastically curtailed because of the shortage of capital funds, and the design is now likely to be somewhat modified.

(iv) *State Supply System.* (a) *Growth and Extent.* Since its inception, the Commission has gradually extended the State's system of supply so that it now serves two-thirds of the populated area of the State, in which nine-tenths of the population reside, and certain towns in New South Wales, including Albury. The following comparative table indicates the growth of the Commission's State system between 1929 and 1952.

## VICTORIA : STATE ELECTRICITY COMMISSION SYSTEM.(a)

Particulars.	Year ended 30th June—			
	1929.	1939.	1949.	1952.
Installed Capacity .. .. kW.	148,000	(b)281,400	480,300	{ 517,300 (50 cycle) 113,000 (25 cycle) 2,598 (50 cycle) 193 (25 cycle)
Units Generated .. .. m.kWh.	422	898	2,148	
No. of consumers (approx.) (including bulk supply areas) .. ..	230,000	368,000	500,000	590,000
Country and Provincial Centres Served	141	419	699	797
Farms Served .. ..	700	4,985	14,419	19,953

(a) About 98 per cent. of electricity produced in Victoria is now generated by the State Electricity Commission, which also supplies 95 per cent. of consumers. Statistics for 1949 and 1952 include the Commission's regional diesel-electric power station at Hamilton which is not at present connected with the State system. (b) Includes Geelong power station (acquired 1st September, 1930) and Ballarat power station (acquired 1st July, 1934, but not in 1939 connected with the rest of the State system); excludes Spencer Street power station, which was not connected with the State system until 1st January, 1941.



During 1951-52 electricity was reticulated to the various classes of consumers in the following proportions—domestic, 36 per cent.; commercial, 14 per cent.; industrial, 44 per cent.; public lighting, 2 per cent.; and traction (excluding railways), 4 per cent.

Since its inception, the Commission has acquired 79 country undertakings in addition to those acquired in the metropolitan area and in provincial cities, and carries out retail distribution throughout its area of supply, except for part of the metropolitan area where 11 municipal undertakings, operating under Orders-in-Council granted before the foundation of the Commission, purchase their electricity in bulk from the Commission. Bulk supply is also given to five New South Wales border municipalities and shires, Albury, Berrigan, Corcen, Corowa and Moama. There remained, in 1952, 54 independent undertakings in various country towns in Victoria generating and distributing their own supplies. Operations of independent undertakings are governed by the Electric Light and Power Act 1928, which the Commission administers.

(b) *Composition and Control of Inter-connected Generating System.* Included in the inter-connected State generating system there were at 30th June, 1952 fourteen steam-electric, hydro-electric and diesel-electric power stations located at different centres in the State, and all comprised in one State-wide system. The distribution system comprised more than 16,000 miles of high and low voltage power lines, nine terminal receiving stations and nearly 7,600 distribution sub-stations. The Commission's inter-connected generating system comprises three principal groups of power stations, namely:—

*Steam stations.*

Yallourn—burning raw brown coal; Metropolitan and provincial stations—burning mainly briquettes and brown coal. (Newport power station also burns black coal, and oil fuel is consumed in all three Metropolitan power stations.)

*Hydro stations.*

Eildon-Rubicon; Kiewa. (With the closing down of the former Sugarloaf power station, and pending the completion of the new Eildon power station, only the four mountain stream stations in the Eildon-Rubicon group are at present operating.)

*Diesel stations.*

Shepparton; Warrnambool.

In meeting the total demand on the system which, of course, fluctuates throughout the day and from month to month throughout the year, each group of stations is assigned a predetermined function dependent upon the availability of power from each group and the overall economics of generation. The various stations are utilized in a combination that will most economically meet the system load at a given time. For a description of the arrangement of the system thus involved see Official Year Book No. 39, p. 1170.

(c) *Organization.* In the Commission's organization, the functions of generating and distributing electrical energy are under the control of two separate departments—the Production Department in charge of power stations, brown coal winning, briquette manufacture, terminal stations and main substations, and the Electricity Supply Department, responsible for distribution to consumers. The territory covered by the latter Department is divided into nine areas, each constituting a supply branch. The Metropolitan Branch supplies Melbourne and suburbs, with the exception of certain areas supplied by City Councils reticulating Commission electricity. Energy is supplied by the Production Department to the Metropolitan Branch, and those metropolitan municipal supply authorities which purchase electricity in bulk, at metropolitan terminal stations and a number of main transmission substations. Supply to the Eastern Metropolitan Branch (which has its headquarters at Dandenong) is on similar lines.

Headquarters of the Electricity Supply Department's branches outside the metropolis are located at Ballarat, Bendigo, Geelong, Dandenong (Eastern Metropolitan), Traralgon (Gippsland), Castlemaine (Midland), Benalla (North Eastern) and Colac (South Western).

Supply to the Gippsland Branch is obtained from Yallourn power station at 22,000 volts and by 66,000 volt transmission lines extending within the branch to Maffra in the east, Leongatha in southern Gippsland and Warragul in western Gippsland.

Supply to the Geelong Branch is obtained from the two Geelong power stations and Geelong terminal station, the latter being connected with the rest of the system by a 66,000 volt transmission line to Newport power station.

Supply to the South Western Branch is obtained through Geelong terminal station by a 66,000 volt transmission line extending through Colac to Warrnambool, where the new peak load power station to reinforce supply began operating during 1952.

Ballarat Branch obtains its supply from the two Ballarat power stations which are inter-connected, the larger and more modern power station being connected with the rest of the system by a 66,000-volt transmission line from Sunshine terminal station in the Melbourne Metropolitan area.

Both the Midland and Bendigo Branches obtain their supply through the 66,000-volt power line from Thomastown terminal station, one of the major metropolitan terminal stations in the system.

For the North Eastern Branch, supply is obtained through Rubicon "A" terminal station and the Kiewa hydro-electric undertaking, while local reinforcement of supply is provided by Shepparton power station. Inter-connexion with the rest of the system is provided by the 66,000-volt transmission line extending from Thomastown terminal station to Kiewa via Rubicon "A" and Benalla, with branches to Shepparton and Kyabram, Yarrowonga and Mulwala (New South Wales), and via Wangaratta to Wodonga for supply to Albury.

The Commission also operates a diesel station at Hamilton of 3,020 kW., which is not at present part of the inter-connected system.

(v) *New Capacity.* The Commission is to undertake electric power projects which, provided constructional programmes can be maintained, are designed to increase the installed capacity of the State generating system to approximately 1,000,000 kW. by 1958. This total is exclusive of hydrogenerating plant at the Hume and Eildon Reservoirs, since their use is conditioned by irrigation requirements and they cannot, therefore, be counted upon to meet peak loading on the system which occurs in winter-time. The total is exclusive also of by-product electricity, obtained from the power station to be constructed as part of the Commission's Morwell briquette project.

Major works brought into service since 30th June, 1952, or now under construction include—

(a) *Thermal stations.*

Yallourn extension—206,000 kW. (under construction—first set (50,000 kW.) due for completion in 1954).

Morwell—90,000 kW. for the new power station in conjunction with the Morwell briquette project. Of this, approximately 35,000 kW. of by-product electricity will be available to the State system in the first stage (on completion of the first and second factories). A further 35,000 kW. will be available in the second stage (on completion of the third and fourth factories), when an additional 60,000 kW. will be installed.

Metropolitan—83,000 kW. This includes a 38,000 kW. generator at Richmond Power Station completed early in 1953 and 45,000 kW. of new plant at Spencer Street (Melbourne City Council) power station due for completion in 1953 and 1954.

Geelong—30,000 kW. "packaged" units (due for completion, 1953).

Ballarat—20,000 kW. "packaged" units (due for completion, 1953).

Shepparton—10,500 kW. (completed early 1953).

Warrnambool—5,000 kW. (completed early 1953).

(Plant on order also includes a 40,000 kW. steam-electric generator, the location of which has not yet been determined).

(b) *Hydro stations.*

Kiewa—126,000 kW. (62,000 kW. station under construction and tunnelling started for a 64,000 kW. station; further power stations projected at a later date).

Hume—25,000 kW. representing Victoria's share of a 50,000 kW. power station shared equally by Victoria and New South Wales (under construction).

Eildon Dam—121,500 kW.—comprising 120,000 kW. of new plant and an additional 1,500 kW. from re-designed plant (under construction).

(c) *Thermal regional stations.*

Mildura (Red Cliffs)—10,000 kW. This will be a "packaged" power station and is due for completion in 1953. It will not for the present be connected to the State system, but will operate as a regional unit serving the Mildura area.

A 220 kV. transmission line is under construction from the Kiewa project to Thomastown terminal station; and another from Yallourn to Malvern terminal station to reinforce the existing 132,000 volt circuits already linking Yallourn with Metropolitan terminal stations.

The Commission's long-term plans for State-wide extension of electricity supply involve the ultimate construction of a 220 kV. transmission line from Kiewa to Mildura by way of Shepparton—a distance of approximately 350 miles. The new regional station at Mildura will function primarily as a peak-load station when the plan is implemented.

The Commission has submitted to the State Parliament its plan for the final phase of rural electrification of Victoria, extending supply to all populated regions of the State. The plan provides for the extension of State Electricity Commission supply to every home in Victoria except for about 15,000 homes located in the most isolated parts of the State. Implementation of this plan has been deferred on account of finance.

### § 3. Queensland.

1. *General.*—In Official Year Book No. 39 an account is given of the growth of electricity generation in Queensland, with particular reference to the City Electric Light Co. Ltd., of Brisbane (now the Southern Electric Authority of Queensland), the Brisbane City Council and the Toowoomba Electric Light and Power Co. Ltd.

The first of these organizations, which was operating in Brisbane well before the end of the last century, now supplies a large part of Brisbane's electric power requirements and a considerable rural area south-east of the city. By 1933 this organization was operating a modern power station at Bulimba, a suburb of Brisbane, with an installed generator capacity of 37,500 kW., from which it supplied more than 16,000 consumers and generated about 60 million kWh. of energy per annum. Capacity at Bulimba "A" is now 95,000 kW.; with this, 449 million units were generated in 1951, while the number of its consumers at 31st January, 1952 totalled 66,862.

The Brisbane City Council established an electricity supply service after the 1914-18 War, and by 1938 it was supplying an area of about 365 square miles, purchasing energy in bulk from a power station located at New Farm (administered by the Tramways and Power House Department) and from the City Electric Light Co. Ltd. Growth of the Council's electrical undertaking and power production is indicated by the following comparisons between 1937-38 and 1951-52 figures, respectively :—Installed capacity, 56,250 kW. and 75,000 kW.; units purchased and generated, 71 million kWh. and 381 million kWh.; consumers, 57,000 and 99,000. In 1951-52 New Farm power house generated 381 million units and the Department of Transport (Tramways) consumed 39 million units.

During 1905, the Toowoomba Electric Light and Power Co. Ltd. established supply in Toowoomba, and now supplies a considerable area including portion of the Darling Downs. Power is generated at the Company's diesel stations of 3,520 kW. supplemented with bulk supplies purchased from the City Electric Light Co. Ltd. In 1940 the company purchased the power undertakings at Warwick, and in 1946 the Killarney undertaking.

The generation and distribution of electric power in Queensland had, until the last decade, tended to lag behind developments in this field in other States of Australia. The comparatively slow growth in the production and consumption of electricity can be attributed to some extent to the absence, prior to 1938, of a central statutory authority constituted to undertake the functions of co-ordinating, unifying and controlling the production and transmission of electric power. In addition, Queensland's vast area, coupled with a low population density, made large-scale rural electrification, elsewhere than in the south-eastern portion of the State which surrounds the major centres of industry and population, an uneconomic proposition.

Before establishment of the Regional Electricity Board in 1945, no attempts had been made to unify or co-ordinate electricity supplies, and rural electrification, apart from reticulation within certain townships, was practically unknown.

**2. Royal Commission on Generation and Distribution of Electric Power in Queensland, 1936.**—On 5th December, 1935, the Queensland Government, being concerned with the need to develop the State's power resources in the public interest, appointed a Royal Commission to inquire into and make recommendations on matters relating to the generation and distribution of electric power in Queensland. The Commission throughout the inquiry tended to concentrate mainly on proposals for electrification of south-eastern Queensland and establishment of a suitable statutory authority to control and unify the development of electrical undertakings in the State. (An account of the results of its investigations and of the alternative proposals put before it will be found on p. 1182 of Official Year Book No. 39.)

The Commission recommended that, in order to achieve a properly planned scheme for the electrification of the south-eastern area, control of generation and distribution of electric power be vested in the State, or, alternatively, if establishment of an operating commission were not found practicable, that electrification under public control with ultimate public ownership be implemented. The Commission concluded that in areas of Queensland outside the south-eastern portion of the State, except for a section of the country from Townsville north to Mossman and west to Herberton where immediate and detailed investigations should be made, there existed only local problems of generation and distribution, not justifying further consideration at that time.

**3. The State Electricity Commission of Queensland.**—In 1937, the State Government legislated to constitute a State Electricity Commission (legislation administering the generation and distribution of electricity in Queensland prior to the establishment of the Commission is referred to on p. 1181 of Year Book No. 39), which commenced to function during January, 1938—to it was passed administration of the Electric Light and Power Acts 1896–1938. The Commission's main powers were :—to secure a proper and efficient supply of electric power; review tariffs; grant licences to supply electricity; secure the safety of the public; and control and advise electrical undertakings generally. It was thus a controlling authority as distinct from an operating authority. In addition, the Commission was empowered to co-ordinate the industry's development throughout Queensland. Between 1938 and 1952, the number of private companies was reduced by absorption and acquisition from twenty-one to seven, and publicly owned undertakings, by amalgamation into Regional Authorities, from forty-seven to twenty-eight.

By agreement with the Commission in 1939, the City Electric Light Co. Ltd. became co-ordinating authority for provision of electricity in an area of some 10,062 square miles, extending from the New South Wales-Queensland border to Gympie, north of Brisbane. The Company acquired the undertakings at Boonah, Beaudesert, Gympie, Coolangatta, Ipswich, Nambour, Southport, Redcliffe and the Somerset Dam supply and transmission line to Brisbane. Certain restrictions were placed on the Company's

dividend rate, namely, limitation to the rate on Commonwealth bonds plus 2 per cent. During 1940, a similar agreement was made with the Toowoomba Electric Light and Power Co. Ltd. for the supply of electricity in the Toowoomba, Warwick, Killarney and Allora districts, subsequently being extended to cover a comprehensive area of 9,324 square miles, including Stanthorpe and other districts. Transmission line extensions since that year have made supply available to a number of adjacent districts on the Darling Downs. The City Electric Light Co. Ltd. was converted to a public authority by legislation as from 1st February, 1953 (*see* para. 5 below), and the Government has the right to acquire the Toowoomba company in 1954 or later.

Amending legislation, passed by the Queensland Parliament in March, 1948, changed the constitution of the State Electricity Commission from a body corporate to a corporation sole. On 1st July, 1948, a Commissioner for Electricity Supply was appointed in lieu of the previous Commission of four Commissioners. Since its inception in 1938, the Commission has made considerable progress in its task of developing the State's power resources and promoting a more widespread use of electric power. The degree of utilization of electrical energy in Queensland now compares favorably with other States in the Commonwealth.

4. **Regional Electricity Boards.**—With a view to facilitating the control and development of electricity supply in areas of low population density or those having a predominantly primary producing economy, the Government in 1945 passed the Regional Electric Authorities Act. This legislation, as later amended, provides for the creation of regions of electricity supply and constitution of Regional Electricity Boards. The Act provided for transfer to the Boards of local authority electricity undertakings in their regions, and for acquisition by the Boards of privately owned undertakings when purchasing rights fell due. Each Board comprises representatives of local authorities in the region and a representative of the Commission. Financial operations of the Boards are under the control of the Commission.

Soon after passage of the Regional Electric Authorities Act, four regions were defined and four Regional Boards constituted, namely, Wide Bay, Capricornia, Townsville and Cairns. A fifth Board, entitled South Burnett, became an operating authority in October, 1947, but on 1st July, 1951 was absorbed in the Wide Bay Regional Board and the organization is now known as the Wide Bay-Burnett Regional Electricity Board. As power was to be obtained from the Wide Bay Regional Board's station at Howard, the Commission decided that development of the two regions could be planned more effectively by a single authority.

Activities of the four Regional Boards in 1951-52 compared with operations of the stations located in regions in 1945-46, and totals for Queensland as a whole, are shown in the following table:—

**QUEENSLAND : REGIONAL OPERATIONS.**

Region.	1945-46.		1951-52.	
	Units Generated.	No. of Consumers.	Units Generated.	No. of Consumers.
	m.kWh.		m.kWh.	
Wide Bay-Burnett .. .. .	13.7	11,467	34.9	18,687
Capricornia .. .. .	19.5	11,196	41.2	15,777
Townsville .. .. .	25.8	11,612	62.9	16,475
Cairns .. .. .	22.7	9,722	52.2	14,654
<b>Total .. .. .</b>	<b>81.7</b>	<b>43,997</b>	<b>191.2</b>	<b>65,593</b>
<b>Queensland .. .. .</b>	<b>487.0</b>	<b>194,429</b>	<b>1,242.0</b>	<b>257,576</b>

Generator capacity of the four existing Regional Boards installed at 31st December, 1952 was:—Wide Bay-Burnett, 23,541 kW.; Capricornia, 29,729 kW.; Townsville, 14,350 kW.; Cairns, 12,770 kW.; total, 80,390 kW.

5. **Creation of Southern Electric Authority of Queensland.**—A further major step in electrical progress, comparable with that taken when the agreements with the City Electric Light Co. Ltd. and Toowoomba Electric Light and Power Co. Ltd. were first entered into, was taken by the passing of the Southern Electric Authority of Queensland Act of 1952. This Act constituted the City Electric Light Co. Ltd. as a public authority to be known as the Southern Electric Authority of Queensland.

Two Government representatives are included on the Board of the new Authority, whose establishment prepares the way for the complete amalgamation, in due course, of the electrical undertakings serving the south-eastern Queensland area of supply.

An important advantage gained by the creation of this Authority is that on 30th June, 1968, acquisition of the Authority by the State Government can be effected without the necessity of a cash payment as the Government will have the power to convert the Authority's existing stock to inscribed stock. Furthermore, the replacement of the City Electric Light Co. Ltd. by the Southern Electric Authority as a public body relieves electricity consumers in the Authority's area of supply from the burden of taxation which has hitherto been payable by the City Electric Light Co. Ltd., but will not require to be met by the new Authority. An agreement has been signed between the State Government and the Southern Electric Authority giving effect to the principles contained in the new legislation.

6. **New Capacity.**—(i) *Regions.* To provide for development of the electric power resources in the regions, the State Electricity Commission formulated a ten-year programme divided into two five-year periods. In the first, it was planned to erect main transmission systems to connect existing power stations located within the regions and supplement generating capacity by the construction of new stations. Work on this section of the plan is now nearing completion. In the second period, the transmission system will be extended to more sparsely settled areas, the ultimate purpose being the provision of "ring" transmission lines throughout each region and inter-connexion between the regions.

Work has commenced on a number of new generating stations, including Howard (Wide Bay Region), of which 15,000 kW. was placed in service during September, 1951, Rockhampton (Capricornia Region) of which 22,500 kW. was placed in service during September, 1952 and Townsville (Townsville Region). Each of these stations will have an ultimate capacity of 52,500 kW. and be steam-operated. In the Cairns Region, construction has commenced on the Tully Falls hydro-electric scheme, which is designed for an ultimate installed capacity of 92,400 kW. To augment existing capacity, pending operation of Tully Falls, the Cairns Regional Board has installed sixteen diesel units with a total capacity of 10,310 kW. In addition further plant of a capacity of 1,250 kW. has been ordered to meet anticipated demands.

At Mackay, where supply was first given in 1924, and Bowen, both situated on the coast between the Capricornia and Townsville Regions, the local Councils operate power stations of 5,000 kW. and 1,000 kW., respectively. The Mackay City Council is embarking on a scheme for rural development under an arrangement with the State Electricity Commission. To cater for the anticipated growth in demand, the capacity of its station will be increased to 10,000 kW. by 1954. At Bowen, the Town Council, which established the service in 1925, is extending the station's capacity by installation of one 1,000 kW. unit. During 1935, a small (3,800 kW.) power house—Australia's first underground hydro station—was placed in service at Barron Falls near Cairns. When the Cairns Regional Board was established during 1946, operation of the station passed to the Board's control and now comprises part of its generating plant, supplying an area of approximately 42,000 square miles.

(ii) *Western Queensland.* In Western Queensland, where a number of small isolated generating stations supply power to some of the larger towns, the Commission has evolved a plan to increase and modernize existing capacity. It involves installation of small internal combustion units ranging in size from 100 kW. to 600 kW. according to the load likely to be experienced, and conversion from direct to alternating current supply. The Government is assisting the scheme by subsidy—a feature of electrical development in Queensland. In general, the assistance provided comprises subsidies of up to one-third of capital costs on annual loan charges, with special subsidies of up to 50 per cent. for authorities in isolated areas.

In addition to improving supplies to the larger western towns, a scheme has been devised for electricity supplies for smaller towns in the western districts, where consumers range from 50 to 200. Subsidies of 65 and 60 per cent. will apply in those cases where the number of consumers supplied is less than 100 and 200, respectively. This plan is now being implemented and ten townships in the west of Queensland have been provided with the amenities of electricity. Work is at present proceeding on similar schemes for a further four townships and such supply is expected to be available before the close of 1953. The power is being supplied by small oil driven generating sets with automatic controls, which can be run with a minimum of operating attendance.

(iii) *South-eastern Queensland.* To increase the availability of electric power in the south-eastern area of the State, the two major generating authorities, in conjunction with the Commission, have power station projects under construction which are designed to place in service by 1956 new generating units totalling 203,200 kW. The Southern Electricity Authority is building a station known as Bulimba "B" on a site adjacent to Bulimba "A"—the initial installation comprises 60,000 kW. but the ultimate capacity may reach 180,000 kW. A 3,200 kW. unit at Somerset Dam near Brisbane is expected to be in service during 1953. At Tennyson in the Brisbane area the City Council is constructing a new power station—initial capacity 60,000 kW. which may ultimately be increased to 180,000 kW. To supplement capacity pending operations of these projects, "packaged" generating units totalling 20,000 kW. have been obtained from overseas; of these 10,000 kW. has been installed at Tennyson and 10,000 kW. at Ipswich, both of these "packaged" stations being commissioned early in 1953. In addition to catering for the anticipated increase in demand from industrial and domestic sources, this new capacity will be called on to supply energy for the electrified suburban railways—a project upon which preliminary work has commenced.

(iv) *The Burdekin River Hydro-electric Project.* In the vicinity of Townsville, the Commission, acting on behalf of the Burdekin River Authority, has investigated the proposed hydro-electric development of the Burdekin River. This project is linked with the plan to conserve the waters of the river for irrigation, and surveys undertaken indicate that approximately 80,000 kW. could be generated. It has been estimated that a station approaching this size should meet the requirements of Townsville and the adjacent areas, including the coal mines in the region of Collinsville, for at least 20 years, and by obviating the continuous operation of thermal plant, achieve significant savings in fuel. In addition, construction of this hydro station will obviate the need to install new thermal capacity at Townsville within a relatively short time.

#### § 4. South Australia.

1. *General.*—An account referring to the companies generating electric power in South Australia prior to the advent of the Adelaide Electric Supply Co. Ltd., and describing the development of that company's activities, is given in Official Year Book No. 39. Also included in the account is some reference to the early measures of public control over electricity supply in South Australia and the extent to which they were applied, and also to the inquiries into the activities of the Adelaide Electric Supply Co. Ltd. in 1932 and 1935.

Following upon an inquiry instituted by the Government in 1943 relative to measures for increasing electricity supply to the metropolitan area and country districts the Electricity Act 1943 was passed which, *inter alia*, established the South Australian Electricity Commission. However, until the State assumed full responsibility for the supply of electric power, this body was not able to do much more than exercise the formal functions conferred on it by the Act.

Under the provisions of Section 3 of the Adelaide Electric Supply Company Act 1944, a Royal Commission was appointed to inquire into and report upon the supply of electricity by the Company and upon all matters concerning it. The Commission presented its report on 28th August, 1945, the main substance of which was, subject to certain considerations and assumptions, that the Government acquire the assets and liabilities of the Adelaide Electric Supply Co. Ltd., and the responsibility for the generation and transmission of electric power in South Australia be vested in a public authority to be called the South Australian Electricity Trust, or, alternatively, if acquisition were not considered desirable, that prices charged for the supply of electricity by the Company be fixed by regulation and determined from time to time by a Committee appointed by the Governor in Council, giving due regard to the interests of the public and a fair return to the shareholders of the Company. The Commission also recommended that an inquiry be held forthwith by the South Australian Electricity Commission regarding the co-ordination of electricity supplies in the State, and that the Commission have power to veto any proposals for the construction of works to generate and transmit electric power.

2. **The Electricity Trust of South Australia.**—Early in 1946, a Bill was passed transferring the assets of the Adelaide Electric Supply Co. Ltd. to the newly formed Electricity Trust of South Australia, which became responsible for unification and co-ordination of the major portion of the State's electricity supplies. This legislation provided that the Trust should take over the powers vested in the South Australian Electricity Commission under the 1943 Act, which, after establishment of the Trust, would cease to exist. In addition to the powers specified in the Adelaide Electric Supply Company's Acts 1897-1931, the Trust may, *inter alia*, supply electricity direct to consumers within a district or municipality with the approval of the local authority, and by agreement with other persons who generate or supply electricity, arrange to interconnect the mains of the Trust with those of other persons, and give or receive supplies of electricity in bulk.

3. **Capacity and Production.**—There are three main categories of organizations generating electric power in South Australia, namely :—(a) Governmental, which include the Electricity Trust ; (b) Local Authorities, e.g., municipal and district councils, Renmark Irrigation Trust, Municipal Tramways Trust ; and (c) Other, including individuals and firms primarily engaged in generating power for sale, firms generating power primarily for their own use but supplying outside consumers, and firms generating power for their own use.

In 1951-52 total installed capacity in South Australia was 221,450 kW. and units generated totalled 761 million kWh. compared with 361 million kWh. in 1941-42.

Of the total installed capacity, the Electricity Trust of South Australia operated plant with a capacity of 158,700 kW. It is thus the most important single authority supplying electricity in the State. There were approximately 191,200 consumers of electricity, of whom about 165,600 were supplied by the Trust. Its major steam stations were Osborne "A" (79,000 kW.) and Osborne "B" (75,000 kW.—since increased to 120,000 kW.) while the balance of the capacity controlled consists of a number of small internal combustion plants located in rural districts.

No hydro-electric potential exists in South Australia. Steam generating units comprise 92 per cent. of installed capacity and the balance, 8 per cent., is internal combustion equipment. Until recently, all fuel consumed in the thermal stations was obtained from sources outside the State, and at times power restrictions were necessary owing to the inadequacy of supplies.



4. **Leigh Creek and other new Capacity.**—With a view to achieving independence of external sources, steps are being taken to install boilers designed to burn locally-mined fuel. Fairly extensive deposits of low-grade sub-bituminous coal are obtainable at Leigh Creek, about 370 miles north of Adelaide. Under the Electricity Trust of South Australia Act Amendment Act 1946, the Trust was given authority to develop Leigh Creek coal for use in its own undertakings and to sell or otherwise dispose of any surplus production.

In order to cope with the rapidly increasing demand for power, the Electricity Trust is installing two additional 30,000 kW. units at Osborne "B". These will complete the "B" station which will then have a total capacity of 180,000 kW. Another major work under construction is the regional power station at Port Augusta, where three 30,000 kW. units will be installed, the first of which is due to be commissioned in 1954. One of the principal reasons for locating the station at Port Augusta is its proximity to the Leigh Creek coal, thus eliminating a considerable part of the long and costly haul to Adelaide. A new standard gauge line is to connect Leigh Creek with Port Augusta; a system of power transmission lines is to inter-connect the metropolitan stations with Port Augusta by way of Port Pirie; supply to country areas will also be facilitated or increased. The Trust is responsible for electricity supply from Port Lincoln and, as at 30th June, 1952, operated diesel stations with an installed capacity of 1,725 kW. This will be supplemented by further diesel and steam plant in the Trust's new power station at Kirton Point. Extensions are planned to the existing steam station at Leigh Creek, which include the installation of two steam units each of 1,500 kW.

Present works are expected to increase installed capacity to 230,000 kW. by the end of 1954. Total plant installed and on order is 334,000 kW.

5. **The Municipal Tramways Trust.**—In addition to the instrumentalities mentioned above which are engaged in the generation and distribution of electric power in South Australia, the Municipal Tramways Trust operates a power station of 26,000 kW. at Port Adelaide, which supplies energy for traction purposes. In 1943 a 5,500 kW. frequency changer was installed to form a link between the power stations of the Trust and the Electricity Trust of South Australia to permit interchange of power when necessary. In 1952 the service consumed approximately 36 million kWh. of electricity.

## § 5. Western Australia.

1. **General.**—Electrical undertakings in Perth and Fremantle formerly owned by the Perth City Council, the Western Australian Government Electricity Supply, the Fremantle Municipal Tramways and Electric Lighting Board and other metropolitan municipal and road board supply authorities have now been taken over by the State Electricity Commission of Western Australia. For information on the early history of electricity supply in the metropolitan area see Official Year Book No. 39, p. 1189.

2. **Metropolitan Undertaking.**—Statistics relating to activities at the Metropolitan undertaking are shown in the following comparative table:—

WESTERN AUSTRALIA : METROPOLITAN UNDERTAKING.

Particulars.	1928-29.	1938-39.	1951-52.
Plant capacity .. .. kW.	32,000	57,000	103,000
Maximum load .. .. kW.	21,500	33,000	76,000
Units generated .. .. Mill. kWh.	80	137	338
Coal used per unit generated .. .. lb.	3.1	2.77	1.92
Coal used—			
Collie small.. .. tons	110,460	165,355	289,419
Imported .. .. "	427	3,367	..

As a result of a separate inquiry conducted at the same time as the early investigations into the proposed new station at South Fremantle, a recommendation was made favouring conversion of the East Perth 40 cycle system to the British and Australian Standard Frequency of 50 cycles per second. The recommendation was adopted and implemented by making the frequency of generation at South Fremantle 50 cycles and installing at East Perth a frequency changer able to convert 25,000 kW. of energy from one frequency to the other. Change-over of consumers' plant is proceeding and a large number of important loads are now supplied at 50 cycles.

3. **Kalgoorlie.**—In Kalgoorlie, the Municipal Council in 1895 first established electricity supply and by 1945 it was supplying 3,350 consumers with direct current from a diesel station of 1,350 kW. generating capacity. Primarily established to supply power for the gold mines and for traction, the Kalgoorlie Electric Power and Lighting Corporation operates a steam station of 18,750 kW. and maintains a 22 kV. line of 21 miles to the Celebration mine. Alternating current is also supplied to about 1,000 consumers, and bulk supplies are provided to the Kalgoorlie Electric Tramways Limited. The Corporation's undertaking generates approximately 45 million kWh. and consumes about 100,000 tons of wood fuel per annum.

4. **General Pattern of Electricity Supply.**—The pattern of the generation and distribution of electric power in Western Australia consisted until recently of a number of isolated systems each supplying a particular area. Except in the metropolitan area and in the area embraced by the South-West Power Scheme (*See* para. 6 below), where in both cases electricity supply is in the hands of the State Electricity Commission of Western Australia, local authorities are generally responsible for the supply of electricity for domestic, industrial and traction purposes. In the area between the Great Southern Railway from Northam to Albany and the west coast, however, the State Electricity Commission has now constructed transmission lines to give central station supply to the towns and their surrounding rural areas. In addition, there are several mining companies which generate electricity for use in their mines. In order to cater for the expected growth in demand, capacity of the State's major generating stations is being increased and designs are proceeding for the inter-connexion of the Perth-Fremantle system with the south-western area.

The main load centre of the State is, of course, the Perth-Fremantle area into which is concentrated the major portion of the State's population and industry. The pending inter-connexion between the Metropolitan and Country systems is, however, expected to lead to a gradual decentralization of load.

5. **The State Electricity Commission of Western Australia.**—(i) *Origin and Aims.* In order to ensure an organized and co-ordinated future growth of electricity generation and distribution throughout the State, the Government introduced a Bill in 1945 to establish the State Electricity Commission, which, together with an Electricity Bill, became law early in 1946. Under these Acts, the Commission was given power, *inter alia*, to secure the ultimate co-ordination of all State or other electrical undertakings in the State, to construct and operate power stations and transmission lines and purchase as a going concern and carry on the undertaking of any supply authority. Under the Electricity Act, which should be read in conjunction with, and is subject to, the State Electricity Commission Act, no person or organization is permitted to construct or extend an electricity supply undertaking without consent from the Commission. Local authorities are empowered to operate and construct power stations and other works associated with the supply of electricity, provided that authority is first obtained from the Commission and any proposals are not inconsistent with the Commission's plans.

(ii) *New Projects.* Since its inception in 1946, the Commission has proceeded with the task of increasing generating capacity in an endeavour to cater for a greatly increased demand for power. Long-range plans have been formulated to inter-connect the south-western portion of the State with the Perth-Fremantle system. One of its most important and immediate problems was to increase the capacity of the generating equipment serving Perth and Fremantle. During the 1939-45 War years, it became

evident that growth of demand for electric power would necessitate provision of additional generating equipment in the metropolitan area as soon as possible. Accordingly, the Government Electricity Supply authority commenced design work for a new station of 50,000 kW. capacity. Contracts were let in 1945 and construction commenced on a site selected at South Fremantle, on the coast south of Fremantle proper. Responsibility for completion of this project was given to the Commission under the Act of 1946. As it was considered that an even larger station would be required, provision was made for the installation of two additional units giving an ultimate capacity of 100,000 kW. Steam is furnished by eight boilers designed to use pulverized coal from Collie, which is located about 120 miles from the station. By 1951, two units had been placed in service and the output was being fed into the metropolitan system. The Commission plans to have all units in operation during 1953 and 1954.

Most of the plant at the East Perth power station, which passed to the Commission's control in 1946, is due for retirement. Work is now proceeding upon dismantling the oldest boilers and generators in order to make room within the existing buildings for new and modern plant which will possess the merit of high efficiency, yet may be cheaply installed by requiring a minimum of site preparation, building and distribution expenditure. Current contracts provide for the installation of 30,000 kW. of new plant in this station. A new cooling plant is also being provided.

6. *South-west Development.*—At the request of the Government, the Electricity Advisory Committee in 1945 submitted a report recommending, amongst other things, that a National Power Scheme for the south-west be proceeded with (implementation of the recommendation of a previous Committee in 1939 had been prevented by the conditions then prevailing). The plan provided for acquisition of the existing Collie power station and installation of additional generating capacity, construction of a power station at Bunbury and inter-connexion of the south-west scheme with the metropolitan system. On 12th October, 1946, the State Electricity Commission acquired the Collie power station, which prior to 1946 was owned and operated by the Collie Power Company Limited. At the date of acquisition, the station's installed capacity was 5,000 kW., comprising two steam units. The capacity of the station was increased to 12,500 kW. in 1952.

Since 1950, the Commission has acquired a number of electrical undertakings from municipal bodies and private organizations in the south-west area and is proceeding with arrangements for the purchase of others. In August, 1951, the first portion of the South-West Power Scheme was officially opened at Collie, and many of the south-west towns have now been connected by transmission line to the Collie Power Station. When completed, a system of power lines will reticulate electricity over an area of approximately 1,800 square miles. Tenders have been called for the first two 30,000 kW. units for a new power station at Bunbury, which will be inter-connected by transmission lines to the Collie and South Fremantle stations, permitting an interchange of power between the metropolitan and south-west systems.

## §. 6. Tasmania.

1. *General.*—A considerable part of the catchment in Tasmania is at high level, with a substantial natural storage available, and this has made it possible to produce energy at lower cost than elsewhere in Australia, or in most other countries. Other contributing factors to the low costs are that rainfall is distributed fairly evenly throughout the year, with comparatively small yearly variations. The cheap power has caused several large electro-chemical works with high load factor to become established in Tasmania, and as a consequence the system load factor is also very high and at present is 65 per cent.

For information on hydro-electric development in Tasmania prior to the establishment of the Hydro-Electric Commission in 1930 see Official Year Book No. 39, pp. 1192-3.

2. **The Hydro-Electric Commission.**—(i) *Present System.* In 1929 the Government passed the Hydro-Electric Commission Act, under which was established the Hydro-Electric Commission, and which vests in the Commission, with some minor exceptions, the right to use the waters of the State of Tasmania and authorizes it to develop and reticulate electric power for all purposes. In 1930 this corporate body took over the State hydro-electric undertaking and the business of the Hydro-Electric Department.

After the creation of the Commission it was decided to utilize the controlled flow of water from the Great Lake and the fall in the level existing between there and the Waddamana forebay lagoon. An earthen dam was built to divert the water from the Shannon River, first into a canal, and then by two pipelines to the Shannon Power Station 258 feet below, where 10,800 kW. was added to the system in 1934. The water, after passing through Shannon Power Station, discharges into the Waddamana Canal, to be used again at Waddamana Power station. It soon became necessary to consider a larger scheme, and in 1933 it was decided to utilize the run-off of a catchment to the west of the Great Lake nearer the regions of heavy rainfall. Construction was started in 1934 and the initial installation of three 15,700 kW. Pelton Wheel turbines operating under a head of 980 feet was placed in service in February, 1938. This and other works made it economical to increase the turbine capacity of the Tarraleah Station to 94,000 kW.

Before the outbreak of the 1939-45 War, it was decided that in order to make better use of the Great Lake storage it would be necessary to increase the capacity of the Waddamana Station and to duplicate the Waddamana canal. Although the war impeded progress, two units of 12,500 kW. had been installed by its termination, while a third unit was put into commission during 1946.

The power station was brought to its ultimate development by the installation of a fourth unit in 1949, which brought the total capacity to 49,800 kW. at Waddamana "B".

Work on the Clark Dam started in 1939, and is now completed. The Butler's Gorge power station at the foot of the dam was put into commission in September, 1951. The single turbine operates at a maximum rated output of 12,800 kW. and to increase the security of the system and to permit variable seasonal loading of Tarraleah, a second canal will be constructed from the Clark Dam to Tarraleah.

(ii) *New Capacity.* The Hydro-Electric Commission is at present engaged upon the most progressive construction programme in its history, and it is expected that the present generating capacity will be almost doubled in 1955, and nearly trebled by 1960. It is considered that at least 1,865,000 kW. of continuous power can be economically developed. So far 218,700 kW. of generating plant is in commission, while present construction is planned to bring this total to 404,500 kW. by 1955. Further construction which has been approved by Parliament and is about to be commenced will increase this to 566,400 kW. There will remain, however, very considerable resources for future development.

The Trevallyn Power Development is being undertaken primarily to meet the requirements of the aluminium industry. It involves the construction of a power station at sea level—though 30 miles from the sea—together with civil engineering works to divert water from the Second Basin in the South Esk River to a power station on the River Tamar, about two miles from Launceston.

The extensive plateau area between the Great Lake and Lake St. Clair drains into two main catchment areas—the Nive River and the Lake Echo—Dee River Catchments. The Tungatinah Power Development will regulate most of these waters and following its completion practically the whole run-off from the Central Plateau will have been brought under control.

The difference in levels between Lake Echo and Dee Lagoon will be about 600 feet and in order to utilize this head, a power station (to be known as Lake Echo Power Station) will be built on the banks of the New Dee Lagoon. It is proposed to install a single generating set in this station and the turbine will have a capacity of 31,300 kW.

Lake Echo will provide the main storage reservoir for Tungatinah Power Station and it will be drawn upon mainly in times of drought. Lake Echo power station will therefore not operate continuously but only when water is needed to augment the natural run-off from the Nive River Catchment.

The Tungatinah Power Development will regulate the run-off from approximately 400 square miles of country. The safe continuous flow will enable about 48,500 kW. to be generated.

However, in view of the considerable pondage available, the station will be used to provide peak load and spare plant capacity. Turbines with a total capacity of 130,550 kW. will therefore be installed. The first two units each of 26,100 kW. were scheduled to be in operation in mid-1953.

Originally the Wyatinah Power Development Scheme called for one power station to be located on the Derwent River near its junction with the Florentine River. It has recently been decided to vary the original plan and, instead of a single power station on the Derwent River near the junction with the Florentine, there will be two power stations, the first on the Nive River about half a mile downstream from the Nive crossing by the Ouse-Tarralcah Road, and the second near the Derwent River approximately one mile downstream from the Florentine junction. The lower station will have a capacity of 38,300 kW. while the upper station will probably have a capacity of 67,100 kW. so that the total capacity of the development will be about 105,400 kW.

There is every indication that the demand for electric power in Tasmania will increase rapidly. The Commission is conducting extensive surveys and investigation of other schemes with a view to further construction after the completion of the present programme

3. **Power Usage by Secondary Industry.**—After 1930, every effort was made to keep pace with anticipated increases in demand by means of a progressive construction policy. The abundant and comparatively cheap supplies of electricity and other natural resources attracted to Tasmania a number of important secondary industries for which energy costs constitute a significant proportion of the total cost of production. Some of the more important organizations and their continuous power demands when plant is operating are as follows:—Electrolytic Zinc Company of Australasia Ltd., 51,000 kW.; Australian Commonwealth Carbide Company Ltd., 6,500 kW.; Goliath Portland Cement Company Ltd., 1,800 kW.; Associated Pulp and Paper Mills Ltd., 8,600 kW.; Australian Newsprint Mills Ltd., 24,000 kW.; and Australian Aluminium Production Commission, 30,000 kW. (when in production).

## § 7. Commonwealth Territories.

1. **Internal Territories.**—(i) *General.* The electricity supply undertakings at Canberra in the Australian Capital Territory and at Darwin, Katherine, Tennant Creek and Alice Springs in the Northern Territory are operated by the Commonwealth Government. Administration and control of these undertakings is vested in the Commonwealth Department of Works.

(ii) *Australian Capital Territory.* Supply was first established at Canberra during 1915. The Department owns steam stand-by plant of 2,100 kW. capacity which is operated in conjunction with the New South Wales Electricity Commission's generating equipment. The major portion of the Capital City's power requirements are supplied in bulk from the New South Wales inter-connected system. Within the next few years, defence projects at present under construction in Canberra will greatly increase the demand for electrical energy. These requirements will be met from the Snowy Scheme, the first section of which was scheduled for operation in June, 1954, and the power produced is to be fed into the New South Wales inter-connected system at Cooma.

(iii) *Northern Territory.* At Darwin, supply was established by the Town Council in October, 1934, but later, during April, 1937, responsibility for generation and supply was placed in the hands of the Northern Territory Administration. The power station is equipped with diesel generating plant of 2,010 kW. capacity. During 1951, the first

of two new 850 kW. diesel sets was placed in service—it is expected that the second set will be operating in 1953. Small diesel generating units supply the requirements of Katherine, Tennant Creek and Alice Springs.

In 1948 it was announced that the Department of Works and Housing (now the Department of Works) had selected a site for a hydro-electric station on the Adelaide River, 72 miles from Darwin. The scheme is designed to augment supply to Darwin and suburbs when the diesel equipment at present installed is unable to cope with the demand for power. No constructional work has yet been undertaken on the project.

2. **External Territories—Papua and New Guinea.**—Responsibility for the operation and establishment of electrical undertakings in Papua and New Guinea is vested in the Administration of the Territory of Papua-New Guinea, whose headquarters are located at Port Moresby. Diesel equipment totalling 1,372 kW. is in operation at Port Moresby (750 kW.), Samarai (52 kW.), Lae (360 kW.), Madang (50 kW.) and Rabaul (160 kW.). At Wau, New Guinea, supply is provided to a small number of residents in the town by New Guinea Goldfields Ltd., operating under franchise from the New Guinea Administration. At Bulolo, near Wau, Bulolo Gold Dredging Ltd., operates a hydro station of 5,500 kW. Power produced is used to operate the Company's dredges and bulk supplies are provided to the New Guinea Goldfields Ltd.

Vast hydro-electric potential exists in New Guinea—it has been estimated at 15,000,000 kW., but because of the island's location, absence of large load centres and lack of industrialization, only a very small proportion could, at present, be economically developed. However, there are indications that some industrial expansion will be effected in the main centres of population within the next few years.

In 1950 it was announced that the Commonwealth Government had joined with British Aluminium Co. Ltd. of London to locate and develop large capacity hydro-electric schemes in New Guinea. A new company has been formed, known as New Guinea Resources Prospecting Co. Ltd., with a capital of £100,000. The Commonwealth holds 51 per cent. of the shares and has a controlling interest on a board of five members. The agreement for formation and operation of the Company is administered by the Commonwealth Department of Supply, except in matters requiring compliance with the law of New Guinea, when responsibility for administration rests with the Department of Territories. Surveys and comprehensive investigations are in progress.

With a view to providing cheap power in the near future for domestic purposes and also to industry in the Port Moresby, Lae and Rapopo areas, the Department of Territories has drawn up a plan to construct a number of small hydro-electric schemes in Papua and New Guinea. These projects involve expenditure of more than £1,000,000 over the next three years.

The more important projects and estimated costs are as follows:—Port Moresby (Papua), £192,000; Lae (New Guinea), £200,000; Rapopo (New Guinea), £440,000; Madang (New Guinea), £200,000.

Work has commenced on the Port Moresby project which will have a capacity of approximately 10,000 kW. The estimated cost of smaller schemes is £186,000.

#### D. STATISTICAL SUMMARY, 1941-42 AND 1951-52.

The following tables which show statistics for each State separately and for the six States combined, relate to:—(i) the numbers and installed capacity of central electric generating stations, (ii) the values of production and output and the average numbers of persons employed in the electricity supply industry and (iii) the amount of electricity generated in both years and the number of ultimate consumers of electricity in 1951-52.

For further statistics of the electricity supply industry (years 1938-39 and 1945-46 to 1950-51) see Chapter XXIV.—Manufacturing Industry, pp. 1027-8.

**CENTRAL ELECTRIC STATIONS.**

**1. NUMBER ACCORDING TO OWNERSHIP.**

State.	Government.		Local Authority.		Other.		Total.	
	1941-42.	1951-52.	1941-42.	1951-52.	1941-42.	1951-52.	1941-42.	1951-52.
New South Wales ..	6	12	37	36	53	37	96	85
Victoria ..	8	11	36	33	27	24	71	68
Queensland ..	1	..	34	35	13	9	48	44
South Australia ..	1	2	14	13	29	17	44	32
Western Australia ..	2	8	31	37	76	55	109	100
Tasmania ..	1	1	1	..	2	1	4	2
<b>Total ..</b>	<b>19</b>	<b>34</b>	<b>153</b>	<b>154</b>	<b>200</b>	<b>143</b>	<b>372</b>	<b>331</b>

**2. INSTALLED CAPACITY ACCORDING TO OWNERSHIP.**  
(Kilowatts.)

State.	Government.		Local Authority.		Other.		Total.	
	1941-42.	1951-52.	1941-42.	1951-52.	1941-42.	1951-52.	1941-42.	1951-52.
New South Wales ..	297,750	790,300	363,550	59,337	181,010	213,098	842,310	1,062,735
Victoria ..	361,940	584,870	49,969	63,173	5,118	3,645	417,027	651,688
Queensland ..	(a)	..	102,991	147,113	(a)	117,135	171,540	264,248
South Australia ..	(a)	(a)	(a)	(a)	109,356	(a)	144,060	238,675
Western Australia ..	(a)	(a)	(a)	(a)	48,147	(a)	111,795	(a)
Tasmania ..	(a)	(a)	(a)	..	(a)	(a)	125,180	(a)
<b>Total ..</b>	<b>833,792</b>	<b>1,888,975</b>	<b>559,899</b>	<b>312,151</b>	<b>418,221</b>	<b>419,656</b>	<b>1,811,912</b>	<b>2,620,782</b>

(a) Not available for publication; included in total.

**3. INSTALLED CAPACITY ACCORDING TO SOURCE OF ENERGY.**  
(Kilowatts.)

State.	Steam.		Hydro.		Internal Combustion.		Total.	
	1941-42.	1951-52.	1941-42.	1951-52.	1941-42.	1951-52.	1941-42.	1951-52.
New South Wales ..	768,134	960,949	25,570	32,655	48,606	69,131	842,310	1,062,735
Victoria ..	377,337	571,300	26,495	52,419	13,195	27,969	417,027	651,688
Queensland ..	147,431	224,524	4,666	(a)	19,443	(a)	171,540	264,248
South Australia ..	135,588	(a)	..	..	8,472	(a)	144,060	238,675
Western Australia ..	81,562	(a)	45	..	30,188	(a)	111,795	(a)
Tasmania ..	..	..	125,180	(a)	..	..	125,180	(a)
<b>Total ..</b>	<b>1,510,052</b>	<b>2,117,249</b>	<b>181,956</b>	<b>310,634</b>	<b>119,904</b>	<b>192,899</b>	<b>1,811,912</b>	<b>2,620,782</b>

(a) Not available for publication; included in total.

**4. VALUE OF PRODUCTION AND OUTPUT : NUMBER OF PERSONS EMPLOYED.**

State.	Value of Production.(a)		Value of Output.		Persons Employed.(b)	
	1941-42.	1951-52.	1941-42.	1951-52.	1941-42.	1951-52.
	£	£	£	£	No.	No.
New South Wales ..	5,042,236	8,744,683	7,379,960	24,243,068	2,315	4,459
Victoria ..	2,486,413	4,603,839	3,415,892	10,603,024	1,418	2,500
Queensland ..	654,437	1,521,621	1,250,201	6,058,707	627	1,066
South Australia ..	750,926	612,434	1,329,798	4,193,834	618	1,399
Western Australia ..	567,583	(c)	1,365,737	(c)	593	(c)
Tasmania ..	107,021	(c)	117,271	(c)	106	(c)
<b>Total ..</b>	<b>9,608,616</b>	<b>17,226,867</b>	<b>14,858,859</b>	<b>49,432,277</b>	<b>5,677</b>	<b>10,663</b>

(a) Value of production is the value added in the process of generation. (b) Average employment over whole year including Working Proprietors. (c) Not available for publication; included in total

CENTRAL ELECTRIC STATIONS—*continued.*

## 5. ELECTRICITY GENERATED.

State.	Electricity Generated.				Ultimate Consumers 1951-52.(a)
	Total.		Per Head of Population.		
	1941-42.	1951-52.	1941-42.	1951-52.	
	Mill. kWh.	Mill. kWh.	kWh.	kWh.	No.
New South Wales .. ..	2,656	4,628	944	1,379	854,339
Victoria .. ..	1,685	2,964	865	1,288	622,271
Queensland .. ..	481	1,242	464	1,017	257,576
South Australia .. ..	385	788	635	1,080	181,414
Western Australia .. ..	347	530	731	897	114,978
Tasmania .. ..	727	1,145	3,025	3,835	88,234
<b>Total .. ..</b>	<b>6,281</b>	<b>11,297</b>	<b>879</b>	<b>1,323</b>	<b>2,118,812</b>

(a) Approximate figures. An "ultimate consumer" is a person, business, undertaking, etc., that has contracted to receive electric power from a public or private organization supplying this service. The number of ultimate consumers is not synonymous with the number of persons served with electricity because one ultimate consumer may embrace three or four persons, e.g., in a household.



## CHAPTER XXVI.

## WATER CONSERVATION AND IRRIGATION.

## A. RESOURCES, UTILIZATION AND NATIONAL AND INTERSTATE ASPECTS.

## § 1. Introduction.

Official Year Book No. 37, pp. 1096-1141, contained a special article "The Conservation and Use of Water in Australia" prepared by Mr. Ulrich Ellis of Canberra. In subsequent issues much of Mr. Ellis's article of a statistical nature has been advanced, as has the general information on the more important developments in this field, but for details of general, descriptive and historical matter reference should be made to the original article. Appended to the special article was a bibliography of selected books, reports, papers, etc. dealing with the development of the water resources of Australia and their conservation (*see pp. 1140-41*).

For further details on (a) geographical and climatic features determining the Australian water pattern reference should be made to Chapter II.—Physiography; on (b) water supply and sewerage in metropolitan areas, cities and towns to Chapter XV.—Local Government; and on (c) the generation of hydro-electric power to Chapter XXV.—Electric Power Generation and Distribution.

## § 2. Water Resources and their Utilization.

1. **Surface Supplies.**—Though river gaugings have been recorded over considerable periods in some parts of Australia, records elsewhere are intermittent, of short duration, or non-existent. Therefore, it is impossible at present to estimate, with any degree of reliability, the total average annual flow of Australian streams but it has been doubted whether the total average annual flow of all Australian rivers would exceed 60,000,000 acre feet, a figure small in comparison with the flow of rivers in other continents, some examples of which are given below expressed as mean annual discharges in millions of acre feet: Nile, 72; Danube, 228; Amazon, 1,780; Volga, 148; Mississippi, 474; and the ten main rivers of the United States of America, 900 (in the aggregate).

2. **Major Dams and Reservoirs.**—The table below lists existing major dams and reservoirs, together with those under construction or projected, as at the middle of 1952.

## MAJOR DAMS AND RESERVOIRS IN AUSTRALIA.

Name.	Location.	Capacity (Acre feet).	Height of Wall (Feet).	Remarks.
EXISTING DAMS AND RESERVOIRS.				
Humo .. ..	Murray River near Albury	1,250,000	106	Part of Murray River Scheme— storage for domestic, stock and irrigation purposes. To be increased to 2,000,000 acre feet. Hydro-electric power to be developed.
Miena .. ..	Great Lake, Tas- mania	1,125,000	40	Regulates water to Waddamana hydro-electric power station.
Burrinjuck ..	Murrumbidgee River, New South Wales	771,640	247	Storage for irrigation and pro- duction of hydro-electric power.
Lake Victoria	Murray River near South Australian border, in New South Wales	551,700	..	Natural storage for irrigation in South Australia.
Waranga .. ..	Goulburn River, Victoria	333,400	..	Earthen embankment, 23,800 feet long. Irrigation storage.
Eildon .. ..	Upper Goulburn River, Victoria	306,000	..	Rock filled embankment, 2,300 feet long and concrete spillway, 700 feet. Irrigation storage.
Wyangala	Lachlan River, New South Wales	303,900	190	Storage for domestic, stock and irrigation purposes and for generation of hydro-electric power.
Clark .. ..	Derwent River, Tas- mania	243,000	200	Serves Tarraleah hydro-electric power station.
Avon .. ..	Nepean River, New South Wales	173,800	230	Part of Sydney water supply.
Glenmaggie	Gippsland, Victoria	106,000	100	Storage for irrigation.

MAJOR DAMS AND RESERVOIRS IN AUSTRALIA—*continued.*

Name.	Location.	Capacity (Acre feet).	Height of Wall (Feet).	Remarks.
DAMS AND RESERVOIRS UNDER CONSTRUCTION OR PROJECTED.				
Burdekin Falls ..	Burdekin River, North Queensland	6,584,000	150	Projected for generation of hydro- electric power, irrigation and flood mitigation.
Adaminaby ..	Eucumbene River, New South Wales	3,500,000	330	Projected as part of Snowy Mountains Hydro-electric Scheme.
Eildon ..	Upper Goulburn River, Victoria	2,750,000	..	Existing dam being enlarged for irrigation storage and pro- duction of hydro-electric power.
Menindee Lakes Pro- ject	Darling River near Menindee, New South Wales	2,000,000	..	Part of Darling River water conservation scheme—under construction.
Warragamba ..	Warragamba River, New South Wales	1,678,500	415	Under construction for Sydney water supply.
Jindabyne ..	Snowy River, New South Wales	1,200,000	260	Projected as part of Snowy Mountains Hydro-electric Scheme.
Burrendong ..	Macquarie River, near Wellington, New South Wales	914,000	193	Under construction for rural water supplies.
Blowering ..	Tumut River, New South Wales	846,000	300	Projected as part of Snowy diversion scheme.
Somerset ..	Stanley River, Queensland	724,000	130	Under construction for Brisbane- Ipswich water supply.
Tantangara ..	Murrumbidgee River, New South Wales	600,000	150	Projected as part of Snowy Mountains Hydro-electric Scheme.
Warkworth ..	Wollombi Brook (Hunter Valley), New South Wales	400,000	100	Projected as a flood mitigation dam for the Hunter Valley.
Keepit ..	Namoi River, near Gunnedah, New South Wales	345,000	135	Under construction for rural water supplies.
Tinaroo Falls ..	Barron River, North Queensland	320,000	133	Under construction for irrigation purposes in the Mareeba-Dim- bulah area.
Glenbawn ..	Hunter River, near Scone, New South Wales	296,000	240	Under construction as part of Hunter Valley conservation work.
Rocklands ..	Glencg River, Vic- toria	272,000	..	Under construction as part of Wimmera-Mallee domestic and stock water supply system.
Koombooloomba ..	Tully River, North Queensland	146,000	123	Under construction for hydro- electric and possibly irrigation purposes.
Cairn Curran ..	Loddon River, Vic- toria	120,000	..	Under construction as part of Murray-Loddon supply system.
Upper Yarra ..	Yarra River, Vic- toria	110,000	270	Under construction for Melbourne water supply.
Lake Brewster ..	Lachlan River, near Hillston, New South Wales	108,000	..	Storage of rural water supplies for the Lower Lachlan—works almost complete.

The maps on pp. 1073-9 show the positions of the above-mentioned dams and reservoirs.

3. Irrigation.—(i) *History.* For some brief remarks on the history of irrigation in Australia referring to the efforts of the Chaffey Brothers and to the Victorian Irrigation Act in 1886 see previous issues.

(ii) *Extent and Nature of Irrigated Culture.* About half of Australia's irrigated acreage is now in Victoria, and about two-thirds is situated along the Murray and its tributaries (including the Murrumbidgee) in the three States of New South Wales, Victoria and South Australia. In these areas served by the Murray and its tributaries irrigation water is used extensively for vines, orchards, pastures, foddors, and for domestic and stock purposes. Approximately half of Queensland's irrigated acreage is devoted to sugar cane. Western Australia's small irrigated acreage is confined to areas in the south-west where foddors and pastures are served. Irrigation schemes have not been developed in Tasmania or the Northern Territory.

The following table shows the area of land irrigated in each State during the years 1938-39 and 1947-48 to 1951-52 :-

AREA OF LAND UNDER IRRIGATED CULTURE.  
(Acres.)

Season.	N.S.W. (a)	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
1938-39 ..	6183,518	515,357	48,953	43,602	14,278	8,599	50	814,357
1947-48 ..	510,168	636,848	84,052	42,583	19,197	9,908	574	1,353,330
1948-49 ..	376,723	722,968	91,417	48,185	25,381	9,563	539	1,474,776
1949-50 ..	628,610	662,290	99,543	49,089	31,573	7,525	637	1,470,267
1950-51 ..	597,773	716,051	83,150	79,062	28,197	7,242	468	1,511,943
1951-52 ..	596,601	723,797	113,040	58,427	29,106	6,830	656	1,528,457

(a) Source: Water Conservation and Irrigation Commission. (b) Excludes pasture and fallow lands.

The next table shows the area of land irrigated in each State during 1951-52 according to the nature of irrigated culture.

AREA OF LAND UNDER IRRIGATED CULTURE, 1951-52.  
(Acres.)

Crop.	N.S.W. (a)	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Rice ..	35,589	..	(b)	..	..	..	..	35,589
Vegetables ..	18,365	16,276	21,946	7,291	6,119	(b)	173	70,170
Fruit ..	17,986	36,125	3,225	11,161	3,936	803	6	155,744
Vineyards ..	11,719	43,584						
Sugar-cane ..	..	..	54,566	..	..	..	..	54,566
Hops ..	..	..	..	..	..	1,065	..	1,065
Cotton ..	..	..	487	..	..	..	..	487
Other Crops (including Fodder and Fallow land)	127,105	71,504	(c)28,432	2,038	820	642	406	230,947
Total, Crops	210,764	167,489	108,656	47,179	11,385	2,510	585	548,568
Pastures ..	385,837	d 556,308	4,384	11,248	17,721	4,320	71	979,889
Total ..	596,601	723,797	113,040	58,427	29,106	6,830	656	1,528,457

(a) Source: Water Conservation and Irrigation Commission. (b) Included in Other Crops.  
(c) Includes tobacco, 3,996 acres. (d) Includes lucerne for pasture, 23,302 acres.

For the locations of these areas see maps on pp. 1073-9.

(iii) *Irrigation Trends.* In Official Year Book No. 37, p. 1099, the following trends in irrigation practice were described, viz. :-the improvement of irrigation techniques in established areas, a growing appreciation of the benefits and necessity of irrigation in humid and sub-humid areas with a flush annual rainfall, the use of irrigation to stabilize the stock industries, especially on an "extensive" basis, consideration regarding the provision of weirs to prevent the entry of salt water, the increasing quest for cheap electric power to aid pumping operations for stock, domestic and irrigation purposes, and an increase in the extent of spray irrigation.

(iv) *Research.* Comprehensive programmes of research and investigation are being pursued by State water and agricultural authorities and the Commonwealth Scientific and Industrial Research Organization, often in collaboration. Special attention is being given to the following :-high water tables due to the application of water; surface accumulation of salt and other soil changes associated with irrigation; methods of applying water efficiently; increasing density of stock on irrigated pastures which leads to the spread of such diseases as foot rot and fluke in sheep, and mastitis and contagious abortion in cattle; and growth problems affecting plants and trees.

The Commonwealth Scientific and Industrial Research Organization maintains the following research stations:—Merbein (Victoria)—horticultural problems, particularly of the dried vine fruits industry; Griffith (New South Wales)—influence of irrigation on plant life (using horticultural trees and vegetables as test plants), irrigation methods, land drainage and soil structure; Deniliquin (New South Wales)—pastures; Werribee (Victoria)—diseases of dairy cattle; Ayr (Queensland) and the Kimberley Research Station (Western Australia)—tropical crops and pastures. In the maintenance of Merbein and Griffith Stations the Commonwealth is assisted, financially and otherwise, by the New South Wales Water Conservation and Irrigation Commission, by the Dried Fruits Export Control Board and by private organizations.

The Soils Division of the Organization has made detailed surveys of more than a million acres since 1927, with less detailed reconnaissance surveys over many millions of acres. The Division works closely with State authorities. The keynote of soil investigations is relationship between soil and land use, and there is an increasing tendency to seek such surveys before irrigation districts are established.

The Irrigation Research and Extension Committee plays an important part in the agricultural activity of the Murrumbidgee Irrigation areas. It is representative of the State Department of Agriculture, the Commonwealth Scientific and Industrial Research Organization, the Rural Bank of New South Wales, the Soil Conservation Service of New South Wales and certain farmers' organizations (including Extension Groups). Finance is provided by these authorities on an agreed basis. The objectives are:—to enable the agricultural extension services to the farmers in the defined sub-region to be continued and developed; to provide a system for advising on local agricultural policy and organization; to provide means for farmer opinion to have due weight in the consideration of regional agricultural administration and policy; to achieve a unified approach to sub-regional extension in all branches of agriculture; to advise on the research needs of the sub-region and the co-ordination of the agricultural research of the various rural institutions working therein; to achieve close liaison between research and extension; and to conduct research in extension methods.

4. **Preservation of Catchments.**—As water conservation commences on the catchments it is becoming increasingly recognized that anything which interferes with catchment efficiency affects the quantity of water available for all purposes. Active steps are being taken to counteract soil erosion to conserve soil generally, and to minimize effects of floods, overstocking, bush fires, and destruction of vegetative cover. All States and the Commonwealth have initiated forestry policies which provide for reforestation and the preservation of catchments. In recent years efforts to counteract soil erosion have been intensified and there is some evidence of a more unified approach to catchment, water, forestry, and land use factors regarded as parts of a single problem.

5. **Sub-surface Supplies.**—(i) *General.* While a more or less complete general picture of the available and potential surface water resources exists, much remains to be done with regard to the location and development of sub-surface supplies (artesian, sub-artesian and ground water), in view of their importance as the basis of settlement over large areas of Australia.

The extent and potentials of the artesian basins—particularly the Great Artesian Basin—have been fairly accurately determined, and the use of sub-artesian supplies is extensive and more development is possible. The shallower ground-water supplies, however, particularly along alluvium valleys and coastal sandbed areas, have not been investigated and developed in any degree, except in a few localities.

(ii) *Artesian and Sub-artesian Supplies.* Pressure water, variable in quantity and quality, either artesian or sub-artesian, is obtainable in many parts of Australia, the various artesian basins extending over approximately one-third of the continent. A map of Australia showing the extent of the known artesian basins appears on page 1211 of Official Year Book No. 39.

The Great Artesian Basin, the most extensive in the world, underlies an area of approximately 550,000 square miles, comprising about 350,000 in Queensland, 76,000 in New South Wales, 100,000 in South Australia and 24,000 in the Northern Territory. Of the numerous defined major and minor water-bearing basins in Australia, the following are the principal:—

## PRINCIPAL WATER-BEARING BASINS: AUSTRALIA.

Name.	State.	Geological Age.	Area.	Depth of Water.
			Square Miles.	Feet.
Great Artesian..	Queensland, New South Wales, South Australia and Northern Territory	Cretaceous-Jurassic..	550,000	Up to 7,000
Murray ..	Victoria, New South Wales, and South Australia	Miocene .. ..	107,000	100 to 900
Torrens ..	South Australia	Recent Pleistocene ..	4,000	Up to 600
Coastal Plain ..	Western Australia	Recent Jurassic ..	10,000	200 to 2,500
Adelaide ..	South Australia..	Recent Oligocene ..	1,100	100 to 500
Gippsland ..	Victoria ..	Pleistocene-Oligocene	1,800	200 to 1,800
Port Phillip ..	Victoria ..	Pleistocene-Oligocene	300	Up to 600
Eucla ..	Western Australia, South Australia	Pliocene-Miocene ..	68,000	300 to 2,000
North-west ..	Western Australia	Tertiary Permian ..	40,000	400 to 4,000
Collie ..	Western Australia	Permian .. ..	500	..
Desert ..	Western Australia	Permian .. ..	130,000	200 to 3,000

More than 3,000 artesian bores have been constructed within the Great Artesian Basin and the daily free discharge from all bores continuing to flow in Australia has been stated to exceed 350 million gallons, of which the loss by evaporation and seepage has been estimated at more than 90 per cent. Sub-artesian bores and wells throughout Australia number more than 200,000.

Artesian water generally is good stock water, but it is unsuitable for plant life; while in certain areas sub-artesian waters are suitable for all uses including irrigation. In some districts a considerable amount of irrigation is carried out from shallow ground-water supplies.

In common with other countries possessing artesian supplies, Australia has been faced with the problem of flow diminution. It was recognized early that flows were diminishing as more bores were drilled, but it is now considered that while many of the bores will ultimately cease to flow, many will not cease, but will assume a perpetually steady rate of flow, corresponding with the average intake of water from rainfall absorbed by sandstone outcrops. Diminution in flows from artesian bores has emphasized the need to eliminate wastage as much as possible, and investigations have been made regarding wasteful methods of distribution of artesian water by open channels or "bore drains" and the careless use of water. (For greater detail on this subject see Official Year Book No. 37, pp. 1103-4.)

(iii) *Ground Water.* Ground water supplies are used in various parts of Australia for industry, irrigation, stock and domestic purposes, the most notable scheme being that conducted by the Hunter District Water Board where ground water from the Tomago sandbeds near the mouth of the Hunter River, New South Wales, is used to supplement water storages fed from surface sources. For further information on ground water see Official Year Book No. 37, p. 1104.

### § 3. National and Interstate Aspects.

1. *General.*—As the Government of Australia is conducted under a Federal system, and as the Commonwealth Constitution makes special reference to water problems, both the Federal and the State Governments have an interest in the control and conservation of water. As main responsibility for control of water resources resides in the State governments, and as political boundaries sometimes intersect river valleys and catchments, co-operation between governments has been necessary to develop resources in certain cases. Specific examples of Commonwealth-State and interstate co-operation and approach are given in the following sections.

In the Report on Irrigation, Water Conservation and Land Drainage presented to the Commonwealth Government by the Rural Reconstruction Commission in 1945 national aspects of water conservation and use were emphasized. The report recommended the adoption of an all-Australian plan, having the assent of the various governments, to obviate lack of co-ordination, and that the Commonwealth should endeavour to promote interstate co-operation and co-ordinated development generally.

Following a resolution of the Australian Agricultural Council, the Irrigation Production Committee was established in 1938 for the purpose of carrying out comprehensive investigations into the various agricultural activities of lands irrigable by the River Murray and its tributaries in order to co-ordinate developmental activity there but its work was interrupted by the war. Resuscitated in 1946 as the Irrigation Production Advisory Committee, and representative at first of the Commonwealth and the States of New South Wales, Victoria and South Australia, and later also of such other States as desired representation and with the Commonwealth representative, the Assistant Secretary, Division of Agricultural Production, as chairman, its functions are :—(a) to prepare for the consideration of the Australian Agricultural Council, or any Committee of Ministers appointed by the Council, conclusions formed from investigations to be carried out by Commonwealth and State Officers into the various agricultural industries which it is possible to develop on irrigated lands ; (b) to undertake long-term co-ordination of land utilization in irrigable areas served by the River Murray and its tributaries, this involving co-ordination of all available lands and the carrying out of such supplementary investigations as may prove necessary.

2. *Murray River Scheme.*—(i) *General.* The Murray River and its tributaries form the largest river system in Australia. The catchment is approximately 414,000 square miles or one-seventh of the area of the Australian continent, comprising five-sixths of New South Wales, over one-half of Victoria, one-sixth of Queensland and one-fortieth of South Australia. The Murray proper is 1,600 miles long. Its main tributaries are the Murrumbidgee (1,050 miles), the Darling (1,760 miles), and the Goulburn (280 miles). The average annual flow of each of the chief contributory streams is as follows :—Upper Murray, including the Mitta Mitta and Kiewa Rivers, 3,400,000 acre feet ; Murrumbidgee River, 2,600,000 acre feet ; Goulburn River, 2,250,000 acre feet ; Darling River, 2,150,000 acre feet ; and Oxens River, 1,200,000 acre feet. Irrigated production in the River Murray basin is mainly in the form of wine, dried fruits, fresh fruits, dairy produce, wool, fat lambs, rice, vegetables, poultry, eggs and pigs.

For a brief summary of the historical events leading up to the River Murray Agreement (1915) by the Governments of the Commonwealth, New South Wales, Victoria, and South Australia see issues of the Year Book prior to No. 39. The Agreement provided for the construction of works, the allocation of the water between the three States, and the appointment of a Commission to implement the Agreement. The Commission comprises four Commissioners, representing the Commonwealth and the three States respectively. The Commonwealth representative presides.

(ii) *River Murray Waters Agreement.* Under the Agreement construction works are carried out by the States (who are also responsible for maintenance) subject to the approval and direction of the Commission. The Agreement provides that the minimum quantity of water to be allowed to pass for supply to South Australia in each year shall be sufficient to fill Lake Victoria storage once, and with the aid of water returned from Lake Victoria, to maintain certain specified flows in the lower river varying from 47,000 acre feet per month in the winter months to 134,000 acre feet per month in the four summer months of maximum demand—the total amounting to 1,254,000 acre feet over twelve months. These flows are to meet domestic and stock requirements in South Australia, losses of

water in lockages and evaporation losses other than in the lakes at the Murray mouth, together with 603,000 acre feet per annum for diversion from the Murray for irrigation in South Australia. The flow at Albury is shared equally by New South Wales and Victoria, and each of these States has full control of its tributaries below Albury, subject in each case to the fulfilment of the South Australian allocation.

Under the original agreement the major works comprised two large storages—one on the Upper Murray above Albury (the Hume Reservoir) and the other at Lake Victoria in New South Wales near the South Australian border. In addition, provision was made for a number of weirs and locks along the Murray and Murrumbidgee Rivers. In 1934 the Agreement was varied to provide for the construction of a diversion weir at Yarrawonga (145 miles downstream from the Hume Reservoir), and the provision of barrages at the mouth of the River to prevent the entry of salt water. The amendment also limited the original proposal for 26 weirs and locks on the Murray and 9 on the Murrumbidgee to 13 on the Murray and two on the Murrumbidgee. At the same time it was agreed that the Hume Reservoir should be completed to a capacity of 1,250,000 acre feet with provision for later increase to 2,000,000. As a result of the amendment, continuous navigation is limited to a route of 600 miles, extending from the mouth to a point some 50 miles above Mildura. All works authorized under the amended Agreement (except the enlargement of the Hume Reservoir to 2,000,000 acre feet) have been carried out at a total cost of £12,000,000, of which approximately half represents the cost of the Hume Reservoir. Expenditure has been shared equally by the Commonwealth and the three States.

At a Ministerial Conference held in October, 1948, the four parties to the Agreement resolved that the enlargement of the Hume Reservoir to 2,000,000 acre feet and the doubling of the capacity of the inlet channel to Lake Victoria storage should be proceeded with immediately at a further estimated cost of £2,000,000. The resolutions of the Conference were subsequently incorporated in an amending agreement which was ratified by legislation by all parties. Under the terms of the amending agreement, the States of New South Wales and Victoria are required to report annually on the condition of the Hume Reservoir catchment and to take any special action recommended by the River Murray Commission in regard thereto. The River Murray Commission has also power to initiate proposals for the better conservation and regulation of the waters of the Murray, and may cause surveys and investigations concerning such proposals to be undertaken.

At the Conference of Ministers held in July, 1949, to consider the diversion of the Snowy River, Conference decided that, by diversion of streams in the Snowy Mountains area, an average of approximately 400,000 acre feet per annum would be added to the Murray River. Although a minimum storage of 250,000 acre feet would be necessary to regulate this additional water, Conference considered it would be unwise to limit to this capacity any storage which might be constructed, and felt that a storage of not less than 1,500,000 acre feet should be provided, in order to give additional regulation of the Murray River itself as well as to provide for regulation of the diverted waters. Hydro-electric potentialities would also affect the size of the storage.

The River Murray Commission investigated the position and found that an increase in capacity of 500,000 acre feet in storage on the Upper Murray River above Albury is the maximum that is economically justifiable for the regulation for irrigation purposes of the waters of the Upper Murray River and of waters added from the Snowy River. The Commission agreed that this increase could best be provided by increasing the capacity of the Hume Reservoir to 2,500,000 acre feet, but if for hydro-electric purposes additional storages become justified in the future further increases would best be provided at some other site. It subsequently recommended to the Contracting Governments that the River Murray Waters Agreement be amended to provide for this enlargement of the Hume Reservoir to 2,500,000 acre feet.

The total estimated quantity of water diverted in 1951-52 for irrigation and other purposes from the Murray and its tributaries (under the River Murray Agreement) was as follows (in acre feet):—New South Wales, 2,069,000; Victoria, 1,841,000; South Australia, 158,000; a total of 4,068,000 acre feet.

(iii) *River Murray Works.* One of the major works of the Murray River Scheme is the Hume Reservoir, situated just below the junction of the Murray and Mitta Mitta Rivers, 10 miles above Albury, forming a lake of 33,000 acres. The design comprises a

mass concrete spillway and outlet works extending 1,000 feet and an earthen embankment 106 feet high extending for 4,000 feet across the river flats. The length of the total structure is approximately 1 mile. Ultimate plans include provision for hydro-electric generation, and preliminary works associated with the construction of the power station are now in hand. Work is proceeding on the completion of the reservoir to its designed capacity of 2,000,000 acre feet and also on the enlargement of the inlet channel to Lake Victoria, necessary to permit greater storage of periodic flood flows of short duration.

The Yarrowonga Diversion Weir was completed in 1939 to raise the river level so that water could be diverted by gravitation into main channels constructed on either side of the river. Between the Yarrowonga Weir and the Murray mouth, thirteen weirs and locks have been built. Two flood diversion weirs have been constructed on the Murrumbidgee—one between Hay and the Lachlan Junction; and the other below the Lachlan Junction.

The Mulwala Canal, served by the Yarrowonga Weir, has an off-take capacity of 2,500 cubic feet per second, and will serve 1,500,000 acres of land in New South Wales. The Yarrowonga Channel, on the Victorian side, has an off-take capacity of 1,250 cubic feet per second, and is designed to serve 270,000 acres. Only a portion of both these areas will be irrigated.

Adjoining the river in New South Wales and 35 miles from the Murray-Darling Junction, Lake Victoria storage, with a capacity of 551,700 acre feet and a surface area of 27,670 acres, was completed in 1928. The water released from Lake Victoria is used by the South Australian settlements.

Five barrages across channels near the Murray River mouth connecting Lake Alexandrina with the sea were completed in 1940 to prevent ingress of salt water to Lakes Alexandrina and Albert and to the lower river, thereby increasing the productivity of adjacent lands. The structures maintain a sufficiently high level for 50 miles up river to permit watering by gravitation of a considerable area of reclaimed river flats. The total distance across the barrages and intervening islands is 15 miles.

In addition to the works carried out under the auspices of the Commission, the separate States have constructed thousands of miles of distribution channels and provided a number of storages on the tributaries, thereby contributing very materially to the large amount of irrigation development in the Murray Basin. The total capacities of such main storages are: New South Wales—Burrinjuck (Murrumbidgee), 771,640 acre feet; Wyangala (Lachlan), 303,900 acre feet; Victoria—Eildon (Goulburn), 306,000 acre feet (now being increased to 2,750,000 acre feet); Waranga (Goulburn), 333,400 acre feet. No storages exist on the Murray in South Australia. More details of these and other State works on Murray tributaries will be found in the sections dealing with State systems.

**3. New South Wales—Queensland Border Rivers Agreement.**—The New South Wales—Queensland Border Rivers Agreement provides for the construction of certain works on parts of those portions of the Severn, Dumaresq, Macintyre and Barwon Rivers which constitute part of the boundary between New South Wales and Queensland, for the furtherance of water conservation, water supply and irrigation in those States. The Agreement, which was ratified by the Parliaments of both States, was executed on 27th November, 1946 and came into effect on 1st July, 1947. However, the Dumaresq-Barwon Border Rivers Commission, which is charged with the duty of giving effect to the Agreement and the ratifying Acts, was not constituted until 1st May, 1948.

The works to be constructed comprise a dam on the Dumaresq River at a site to be selected by the Commission to give a storage basin with a capacity as large as is reasonably practicable and not less than six nor more than twelve weirs as may be found necessary to meet the requirements of irrigation along the rivers. Provision is also made for the construction of not more than four regulators in the effluents from the carrier rivers and for the taking over of the existing weir in the Macintyre River at Goondiwindi and the existing weir in the Barwon River at Mungindi. The costs of these works and of administration are to be borne by the States in equal shares. The agreement further provides that the water discharged from the Dumaresq storage, whether by regulated or unregulated flow, shall be available to the two States in equal shares.

The Water Conservation and Irrigation Commission of New South Wales, which is the constructing authority for the dam, has for some time past been carrying out investigations of alternate dam sites on the Dumaresq River near Mingoola Station Homestead



which is approximately 39 miles from Tenterfield. Although well advanced, these investigations have not proceeded sufficiently far to enable the Border Rivers Commission to determine the most suitable site, the height of the dam wall or the capacity of the storage.

The Irrigation and Water Supply Commission of Queensland, which is the constructing authority for the new weirs and regulators, has carried out detailed investigations as to sites for such works. The construction of Bonshaw Weir on the Dumaresq River near Bonshaw, which was authorized by the Border Rivers Commission and commenced in June, 1949 was completed in January, 1953.

The Border Rivers Commission also authorized the construction of a further weir, to be known as the Cunningham Weir, at a site at mileage 42.25 in the Dumaresq River, and work commenced in May, 1953. Investigations are proceeding in regard to the remaining weirs and regulators. The existing Goondiwindi and Mungindi Weirs are being maintained, operated and controlled by the Queensland Irrigation and Water Supply Commission.

The catchments for the border streams (2,000 square miles) extend to the granite areas in the vicinity of Tenterfield (New South Wales) and Stanthorpe (Queensland), and elevation rises to 3,000 feet. Average rainfall is 30 inches. The catchments and the areas suitable for irrigation are approximately equal in each State. Climatic conditions are such that it is necessary to supplement rainfall from April to October by irrigation to stabilize and increase production. The capacity of the area to grow lucerne and tobacco under irrigation has already been demonstrated. Irrigation of cotton, root crops, cereals, and citrus fruit, and expansion of the fat stock industry, is being examined.

4. *Snowy Mountains Hydro-electric Scheme.*\*—(i) *General.* Following a comprehensive investigation into both the water and power potential of the Snowy River waters by a Technical Committee representative of the Commonwealth and the States of New South Wales and Victoria in 1947 and 1948, and the submission by the committee of reports in 1948 and 1949, the Commonwealth Parliament in July, 1949 passed the Snowy Mountains Hydro-electric Power Act (No. 25 of 1949) setting up an Authority to implement the proposals agreed upon.

The basis of the proposals is to impound the Snowy River waters at high elevations and, by diverting them into tunnels passing under the Alps, to use their potential power for the generation of electricity and then to discharge them into the Murray and Murrumbidgee River systems for use in the irrigation areas.

The scheme will be constructed in two parts, the first being known as the Snowy-Murray system, where the water is to be diverted by tunnel from a large dam across the Snowy River at Jindabyne, to the Swampy Plains River in the Murray Valley; and the second as the Snowy-Tumut system, the water in which will be diverted by tunnel from a dam on the Eucumbene River—a tributary of the Snowy—at Adaminaby to the Tumut River, a tributary of the Murrumbidgee. The whole scheme will involve the construction of:—seven major dams (with a total storage capacity of approximately 7,000,000 acre feet); sixteen power stations; 86 miles of tunnels varying in diameter from 18 feet to 42 feet—one projected tunnel 30 miles long under the Alps will be one of the largest in the world; nearly 500 miles of racelines at high elevations.

The total expenditure was originally estimated to be £225,000,000 but latest expectations are that the cost will be approximately £422,000,000. The scheme will form the greatest engineering and developmental work ever undertaken in Australia and one of the major engineering projects of the world.

(ii) *Snowy Mountains Hydro-electric Power Act 1949.* The Snowy Mountains Hydro-electric Authority is constituted by a Commissioner; he is assisted by two Associate Commissioners. The functions of the Authority are defined in the Act as follows:—(a) to generate electricity by means of hydro-electric works in the Snowy Mountains area and (b) to supply electricity so generated to the Commonwealth (i) for defence purposes and (ii) for consumption in the Australian Capital Territory. The general powers of the Authority as defined in the Act are as follows:—For the purpose of performing its functions the Authority shall have power to construct, maintain, operate, protect, manage and control works—(a) for the collection, diversion and storage of water in the Snowy Mountains Area; (b) for the generation of electricity in that area; (c) for the transmission of electricity generated by the Authority; and (d) incidental or

\* See also Chapter XXV.—Electric Power Generation and Distribution, pp. 1031-4.

related to the construction, maintenance, operation, protection, management or control of any of the works specified above. The Act provides that the Authority may sell to a State, or to an authority of a State, electricity generated by the Authority which is not immediately required by the Commonwealth for defence purposes or for consumption in the Australian Capital Territory.

(iii) *The Authority's Objectives and Programme.* The two basic objectives are the early production of electricity and the early diversion of water inland.

It is anticipated that the first instalment of power, estimated at approximately 60,000 kW. will be available by 1954 and additional generating capacity is scheduled to become available gradually up to 660,000 kW. by 1962.

The Snowy Scheme will by 1958 or 1959 supply the Murrumbidgee River with 500,000 acre feet per annum of additional water. Ultimately the scheme will provide approximately 1,818,000 acre feet per annum to the two rivers of which 1,020,000 acre feet per annum will go to the Murrumbidgee and 798,000 acre feet to the Murray.

The Department of Public Works, New South Wales, has undertaken the design and construction of Adaminaby Dam on which work has already commenced, and the Department of Main Roads, New South Wales, and the Snowy Shire have undertaken the reconstruction of over 70 miles of existing roads. A contract has been placed with an oversea firm for the design and construction of the complete Guthega Project on the Upper Snowy River. This work is already well advanced and is expected to be completed by 1954. Contracts for the construction of the Adaminaby Tunnel of the dam at Tumut Pond and of the power station on the Tumut River were placed during 1953-54.

## B. STATES AND TERRITORIES.

### § 1. Australian Local Pattern of Water Conservation and Use.

The foregoing sections deal generally with water conservation and irrigation in Australia and with national and interstate projects. The following survey indicates the local pattern of water resources and the steps taken by the State Governments to bring about their development. It will be seen that water policies in the various States tend to assume a distinctive and characteristic pattern closely allied with climatic conditions and specific local needs.

In Victoria almost every form of water scheme is in operation. In New South Wales major emphasis at present is on irrigation and stock development in the dry areas along the Murray and Murrumbidgee Rivers, though a substantial scheme of intensive irrigation is being conducted in the Murrumbidgee Irrigation Areas. In Queensland, up to the present, the predominant emphasis has fallen on water for the stock industries (mainly underground sources), and the development of small irrigation schemes in sub-humid and humid areas, especially to stabilize sugar production.

Apart from regular irrigation practices along the Murray River, South Australian authorities are vitally concerned with reticulated supplies for rural areas and towns. Western Australia has developed unique rock catchments and piped supplies for agricultural areas and towns in dry districts. Tasmanian interest appertains to hydro-electric generation almost exclusively. The Northern Territory is primarily concerned with stock supplies and the safeguarding of long stock routes.

### § 2. New South Wales.

1. *General.*—(i) *Rainfall and History.* In issue No. 37 of this publication (p. 1110) information on the pattern of rainfall and the history of irrigation in New South Wales preceded the description of water conservation and use in that State, but it has now been omitted. Chapter II.—*Physiography*, of this issue, however, contains particulars of climatic conditions in each State.

(ii) *Administration.* Under the amendment of the Irrigation Act, made by the Conservation Authority of New South Wales Act, 1949, which came into force on 1st July, 1949, the Water Conservation and Irrigation Commission of New South Wales now consists of three members appointed by the Governor, one of whom is appointed as Chairman. The operations of the Commission cover water conservation, control of irrigation areas, establishment, operation and maintenance of works for domestic and stock water supply, irrigation districts, flood control districts, sub-soil drainage districts,

constitution of water trusts, the issue of licences for private irrigation, artesian and shallow boring, and a farm water supply scheme.

Under the Water Act the right to the use and flow, and the control of water in all rivers and lakes which flow through, or past, or are situated within, the land of two or more occupiers, is vested in the Crown. A system of licences also operates for the protection of private works of water conservation, irrigation, water supply, drainage, and prevention of inundation.

For particulars of the New South Wales-Queensland Border Rivers Agreement ratified by Acts of both States in 1947 *see* page 1066 *ante*.

2. Schemes Summarized.—(i) *Location and Type*. The bulk of irrigated land is along the Murray and its tributary the Murrumbidgee. Smaller areas are served by the Wyangala Dam and Lake Brewster on the Lachlan, another tributary. (*See* maps on pp. 1073-4.) None of the other rivers is regulated by large head storages, though weirs and dams have been provided for town supplies, etc., in many places, and head storages have been commenced on the Macquarie, Namoi and Hunter Rivers. Substantial use is made of artesian and sub-artesian water in pastoral areas.

New South Wales legislation provides for the constitution and control of various schemes having different characteristics and including Irrigation Areas, Irrigation Districts, Water Trust Districts, and Flood Control and Irrigation Districts. There are five Irrigation Areas:—The Murrumbidgee Irrigation Areas consisting of 403,256 acres served with water through a channel system off-taking from the river at Berembded Weir; the Coomealla Irrigation Area of 35,450 acres, served by pumping from the Murray; the Curlwaa Irrigation Area of 10,243 acres, supplied from the Murray by pumping; the Hay Irrigation Area of 6,806 acres, supplied with water pumped from the Murrumbidgee; and the Tullakool Irrigation Area of 16,305 acres supplied from the Edward River at Stevens Weir. All these areas are administered by the Commission, and details of the various schemes are given in sub-section (iii) below.

(ii) *Works*. The capacities of the main storages (in acre feet) are:—

*Murray*:—Half share of Hume Reservoir, weirs and locks to Wentworth (736,420); Stevens Weir, Edward River (7,165).

*Murrumbidgee*:—Burrinjuck Dam (771,640); Berembded Weir (10,000); Maude Weir (6,740); Redbank Weir (7,360).

*Lachlan*:—Wyangala Dam (303,900); Lake Cargelligo (29,435); Jemalong Weir (1,790); Lake Brewster (108,000).

Water from the Hume Reservoir is used for domestic and stock purposes, to provide bulk supplies for country towns, for the irrigation of vines, fruits and fodder in the Curlwaa and Coomealla areas, for rice and other cereals and for pastures in the Tullakool Irrigation Area, for domestic and stock supply and irrigation in the Berriquin, Wakool and Denimein Districts, and for water trusts for domestic and stock purposes and/or irrigation.

The Wyangala Dam is 30 miles upstream from Cowra in the Central West. It has a catchment of 3,200 square miles. Water from the dam, supplemented by the unregulated flow of the Belubula River, provides for domestic and stock purposes along the full length of the river (over 700 miles) and also for irrigation by land holders operating licensed pumps. The towns of Cowra, Forbes, Condobolin, Hillston and Booligal are supplied. Balance storages at Lake Cargelligo and at Lake Brewster conserve water during periods of high flow for release as required. Water from the Lachlan, diverted at Jemalong Weir, supplies the districts of Jemalong and Wyld's Plains, serving an area of 225,196 acres. Wyangala is now producing hydro-electric power. Proposals for future development include provision of a head storage at Belubula River.

The approximate total length of channels (including main canals) in New South Wales is 2,630 miles. The approximate length of drains and escape channels is 930 miles, and the approximate total length of pipe lines is 10 miles, making a grand total of 3,570 miles of channels and pipe lines, etc.

(iii) *Extent of Systems and Nature of Irrigated Culture*. The following table shows the areas of the various irrigation systems and the areas under irrigated culture in New South Wales during 1951-52, the latter according to the nature of irrigated culture.

## AREAS OF SYSTEMS AND OF LAND UNDER IRRIGATED CULTURE : NEW SOUTH WALES, 1951-52.

(Acres.)

## Area under Irrigated Culture.

System, etc.	Total Area.	Area under Irrigated Culture.									Total.	
		Rice.	Other Cereals Grown for Grain.	Lucerne. (a)	Other Fodder Crops.	Pastures.		Vineyards.	Orchards. (c)	Vegetables.		Fallow and Miscellaneous.
						Sown. (b)	Natural.					
<b>Irrigation Areas—</b>												
Murrumbidgee (within the Areas) ..	403,256	22,695	15,866	5,080	2,169	45,703	5,234	5,447	13,518	3,618	37,335	156,665
Lands adjacent supplied under agreement ..	(d)	..	..	..	..	4,437	2,218	..	..	..	300	6,955
Coomecalla ..	35,450	..	..	23	15	..	..	2,991	259	18	..	3,306
Curlwaa ..	10,243	..	..	22	70	..	..	696	952	2	..	1,794
Hay ..	6,806	..	..	60	206	985	12	..	..	..	13	1,276
Tullakool ..	16,305	2,130	1,465	30	..	1,040	20	..	..	..	925	5,610
<b>Total ..</b>	<b>6 472,060</b>	<b>24,825</b>	<b>17,331</b>	<b>5,215</b>	<b>2,460</b>	<b>52,165</b>	<b>7,536</b>	<b>9,134</b>	<b>14,729</b>	<b>3,638</b>	<b>38,573</b>	<b>175,606</b>
<b>Irrigation Districts—</b>												
Benerambah ..	111,586	3,275	4,181	1,864	1,205	21,237	1,257	..	..	..	5,830	38,849
Tabbita ..	5,980	59	260	150	20	865	10	..	..	1	160	1,525
Wah Wah ..	583,111	..	810	925	350	4,546	1,060	..	..	..	2,100	9,791
Berriquin ..	654,050	..	1,958	11,254	2,133	79,311	6,574	..	..	258	3,512	105,000
Wakool ..	486,192	7,430	3,092	1,116	1,748	27,371	3,005	..	..	85	1,750	45,597
Jemalong and Wylde's Plains ..	225,196	..	616	660	323	1,607	5,599	..	..	..	730	9,535
Denimein (f) ..	156,830	..	579	372	310	2,469	1,140	..	..	26	377	5,273
Gumly ..	345	..	4	19	..	17	..	..	6	30	4	80
<b>Total ..</b>	<b>2,223,290</b>	<b>10,764</b>	<b>11,500</b>	<b>16,360</b>	<b>6,089</b>	<b>137,423</b>	<b>18,645</b>	<b>..</b>	<b>6</b>	<b>400</b>	<b>14,463</b>	<b>215,650</b>
<b>Flood Control Districts—</b>												
Lowbidgee ..	375,000	..	..	..	..	..	994,828	..	..	..	..	(g)94,828
Medgun ..	272,800	..	..	..	..	..	958,960	..	..	..	..	(g)58,960
<b>Total ..</b>	<b>647,800</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>1,953,788</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>153,788</b>
<b>Irrigation Trusts—</b>												
Pomona ..	1,241	..	..	..	..	..	..	409	125	..	..	534
Blairmore ..	315	..	..	..	..	..	..	..	..	..	..	(d)
Bringan ..	4,933	..	100	200	..	195	725	..	50	2	..	1,272
Bunginyah-Koraleigh ..	1,804	..	..	..	..	..	..	1,057	64	95	..	1,216
Glenview ..	661	..	..	62	..	..	336	..	71	..	..	469
Goodnight ..	1,167	..	..	..	4	..	..	545	41	7	..	597
Bama ..	3,446	..	..	..	..	..	..	..	..	..	..	(d)
<b>Total ..</b>	<b>13,567</b>	<b>..</b>	<b>100</b>	<b>262</b>	<b>4</b>	<b>195</b>	<b>1,061</b>	<b>2,011</b>	<b>351</b>	<b>104</b>	<b>..</b>	<b>(e)4,088</b>
<b>Water Trusts—Domestic and stock supplies ..</b>	<b>2,945,097</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>
Licensed Diversions(h)—To irrigate ..	(d)	..	..	8,901	5,685	11,093	3,931	574	2,900	14,223	(i) 162	47,469
<b>Grand Total(e) ..</b>	<b>(d)</b>	<b>35,589</b>	<b>28,931</b>	<b>30,738</b>	<b>14,238</b>	<b>200,876</b>	<b>118,496</b>	<b>11,719</b>	<b>17,986</b>	<b>18,305</b>	<b>53,198</b>	<b>596,601</b>

(a) Includes grazing and cutting. (b) Perennial and annual self-seeding. Perennial amounted to 20,149 acres of which 8,629 acres were in the Berriquin Irrigation District. (c) Citrus and deciduous. Deciduous amounted to 7,954 acres, of which 7,451 acres were in the Murrumbidgee Irrigation Area. (d) Not available. (e) Incomplete. (f) Works incomplete. (g) Area irrigable; details of area actually irrigated are not available. (h) Excludes domestic and stock supplies for which particulars are not available. (i) Tobacco. (j) Includes Flood Control Districts—see (g). For the locations of the foregoing irrigation areas, districts, etc., see maps on pp. 1073-4.

3. **Murrumbidgee Irrigation Areas.**—(i) *Description.* These areas comprise about a third of the State's irrigated acreage and in 1951-52 received 287,479 acre feet of the total water allocated for stock, domestic supply and irrigation (811,827 acre feet). They are served by the Burrinjuck Dam (capacity 771,640 acre feet), 40 miles north-west of Canberra, on the Murrumbidgee. The catchment above the dam is 5,000 square miles. The river rises on the high plateau north of Mount Kosciusko where rainfall exceeds 60 inches. Flow for the irrigation districts is supplemented by unregulated flow below the dam from the Tumut River. The dam also provides town supplies for Gundagai, Wagga, Narrandera, Hay, Balranald, and for towns served by the South-West Tablelands scheme.

Domestic and stock water and water for irrigation are supplied for the Irrigation Districts of Tabbita, Benerembah and Wah Wah and the Flood Control and Irrigation District of Lowbidgee. Flood flows are relied on to serve the Lowbidgee district and water is not released from the dam for that purpose. For the other undertakings, however, water is stored during the winter and spring freshets, fed by melting snows, and is released during the September-April irrigation season. It passes along the river channel to Berembed Weir, 240 miles westward, where it is diverted to the main canal with an off-take capacity of 1,600 cubic feet per second. The main canal has been completed to beyond Griffith, 96½ miles from the off-take. Reticulation channels aggregate 840 miles and drainage channels 810 miles.

In addition, 380 miles of supply channel run through adjacent irrigation districts in which the water supply is operated and maintained by the Commission, but land transactions are not under its control. The land on which the Murrumbidgee Irrigation Areas are situated originally comprised large sheep stations with a sparse population.

Population was 12,000 in 1923, 15,000 in 1929 and 20,000 at the 1947 Census. The population of the Yanco district (with Lecton as the centre) was then 9,000; and the population of the Mirrool Area (with Griffith as the centre) was 11,000.

(ii) *Administration.* The Water Conservation and Irrigation Commission controls land transactions and water supplies for the Murrumbidgee Irrigation Areas, also the distribution of electricity throughout those areas. Other local government services, including town water supply, are provided by Shire Councils. Land is disposed of by the Commission under freehold or perpetual lease tenure or leased for short terms for grazing or cultivation. The area under occupation at 30th June, 1952 was 353,117 acres, including 42,150 held for short lease grazing, agriculture, etc.

(iii) *Production.* Since the scheme was inaugurated in 1911 the value of total production has aggregated approximately £68,000,000. During the year ended 30th June, 1952, production was valued at £7,763,350.

Livestock contributed £935,000 (comprising sheep, £656,000; cattle, £222,200; pigs, £56,800); wool, £1,170,000; and other pastoral and dairying products, £148,300.

Rice (£1,572,000) and wheat and oats (£453-100) contributed a total of £2,025,100. Horticulture accounted for £2,766,400, comprising almonds, apricots, citrus, drying grapes, table grapes, wine grapes, figs and olives, peaches and nectarines, pears, plums and prunes, quinces and apples. The greatest individual contributions were made by grapes, £563,200, peaches and nectarines, £625,300 and citrus £725,300.

The total value of all vegetables was £606,950, including root crops, £213,900, tomatoes, £192,200, peas and beans, £106,000, cabbages, cauliflowers, onions and other products. A total of £111,600 represented the value of miscellaneous products.

Rice growing was initiated on the Murrumbidgee Irrigation Areas in 1924. Since then, aggregate production from those areas and from the other localities mentioned hereunder has been approximately 1,076,300 tons, valued at about £15,330,000 to the grower. In 1951-52 total area sown was 35,589 acres, including 26,029 acres on the Murrumbidgee Irrigation Areas and adjoining districts, 7,430 acres at Wakool and 2,130 acres at Tullakool. The total quantity of water delivered for the rice crops during the 1951-52 season was 210,702 acre feet. Water supplied for rice represents about two-thirds of the total delivered in the areas and a quarter of the water artificially supplied for

irrigation in New South Wales. Before the war the rice crop was more than sufficient for Australian requirements. During and after the war the area planted was increased to the limit of water available. Rice has also been grown in the adjoining districts of Benerembah and Tabbita and in each of the years 1944, 1945 and 1946 some 4,000-odd acres were sown by the Water Conservation and Irrigation Commission at Wakool as a war-time project. Approval has been given for some rice to be grown by individual landholders within the Wakool Irrigation District during and since the 1948-49 season; this arrangement, however, is of a temporary nature only. On Tullakool Irrigation Area rice growing is expected to become a regular feature of primary development; 2,130 acres were sown during the 1951-52 season.

Co-operation is a prominent feature in the Murrumbidgee Areas. Co-operative organizations in the Mirrool section handle 300,000 bushels of fruit per year (compared with 54,600 in 1927-28). Sales turnover of the Leeton cannery in each of the past five years was over £1,000,000. Settlers and government agencies co-operate extensively in all matters relating to irrigation practice.

4. **Other Irrigation Areas.**—The Curlwaa, Coomealla, Hay and Tullakool Irrigation Areas follow the same administrative pattern as the Murrumbidgee Areas—that is, land transactions are administered by the Water Conservation and Irrigation Commission which also is responsible for operation and maintenance of works to supply water at rates determined by the Commission.

Curlwaa Area, on the Murray near Wentworth, consists of 10,243 acres of which 2,534 acres at 30th June, 1952, comprised irrigated holdings. Production consists of dried vine fruits, deciduous fruits and fodder crops of a total estimated value in 1951-52, of £283,800.

Coomealla Area, 9 miles upstream from Curlwaa, comprises 35,450 acres of which 4,229 acres at 30th June, 1952 comprised irrigated holdings. Other land in the undeveloped part is leased for grazing. Production consists of vines and citrus of an estimated value, in 1951-52 of £436,200. Works are now under construction to provide 100 horticulture farms for ex-servicemen, 74 of whom were in occupation of their new holdings towards the end of 1952.

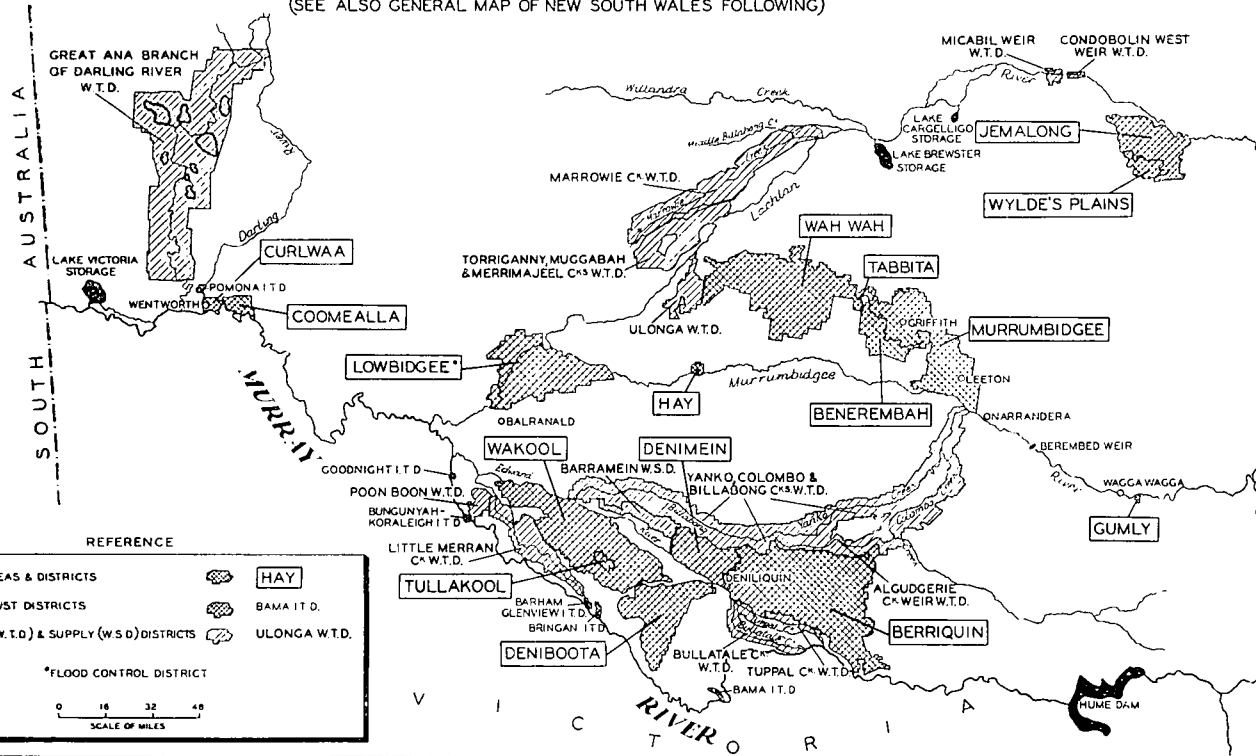
Hay Area, on the lower Murrumbidgee, consists of 6,806 acres, of which 1,164 acres are occupied as irrigated holdings. Annual production, valued in 1951-52 at £32,000, comprises dairy products, fat lambs, sheep, wool and fodders.

5. **Irrigation Districts.**—These Districts are set up under the Water Act for (a) domestic and stock water supply and (b) irrigation. They differ from water trusts as the cost of the works is not required to be repaid over a period, but annual charges are made by the State for water supplied to landholders. The following are the districts or provisional districts constituted and the areas of land benefited:—*Murray River*—Wakool District (completed) 486,192 acres, Berriquin Provisional District (almost complete) 654,050 acres, Denibootea Provisional District (in progress) 303,064 acres, Denimein Provisional District (in progress) 156,830 acres, Jernargo Provisional District (now to be included within the Berriquin District) 130,850 acres, Barramein Provisional District (domestic and stock supply only—works not yet commenced) 88,651 acres; *Murrumbidgee River* (completed)—Benerembah District 111,586 acres, Tabbita District 5,980 acres, Wah Wah Provisional District 583,111 acres, Gumly Provisional District 345 acres; *Lachlan River* (completed)—Jemalong and Wylde's Plains District 225,196 acres.

Since the completion of the Hume Reservoir several such districts have been established along the Murray to utilize the New South Wales share of the storage. Water is not available for the whole of the 5,000,000 acres adjacent to the Murray in New South Wales, and therefore the schemes are based on "extensive" irrigation—that is, water rights are allotted to holdings on the basis that only a portion of each holding (one acre in three, five or ten, according to the district, etc.) will be irrigated, but additional water, when available, may be obtained by landholders. "Water right" means right to such a quantity annually of water, 12 inches deep, as will cover an area of one acre.

# WATER SUPPLY AND IRRIGATION AREAS AND DISTRICTS - NEW SOUTH WALES, 1952

(SEE ALSO GENERAL MAP OF NEW SOUTH WALES FOLLOWING)

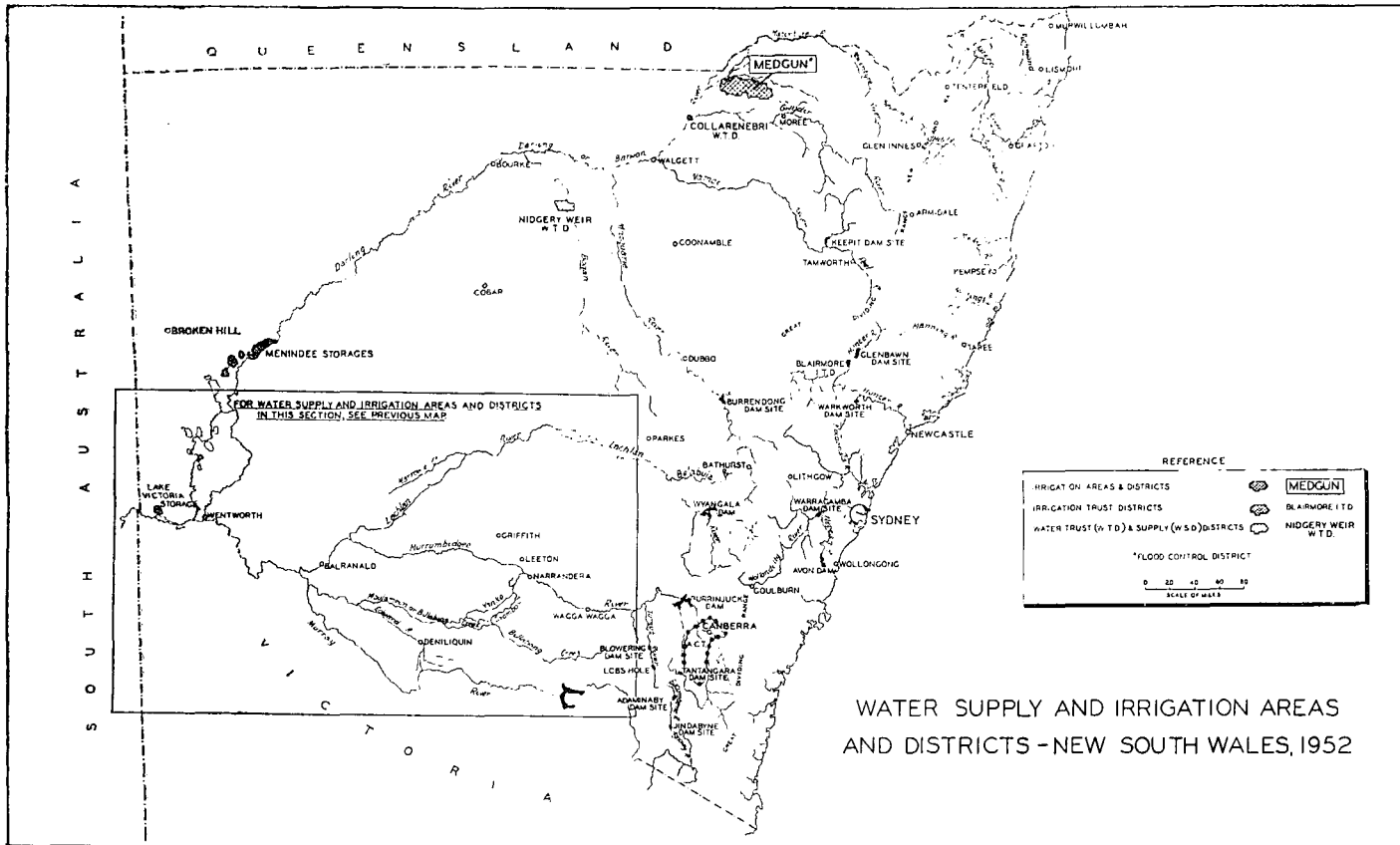


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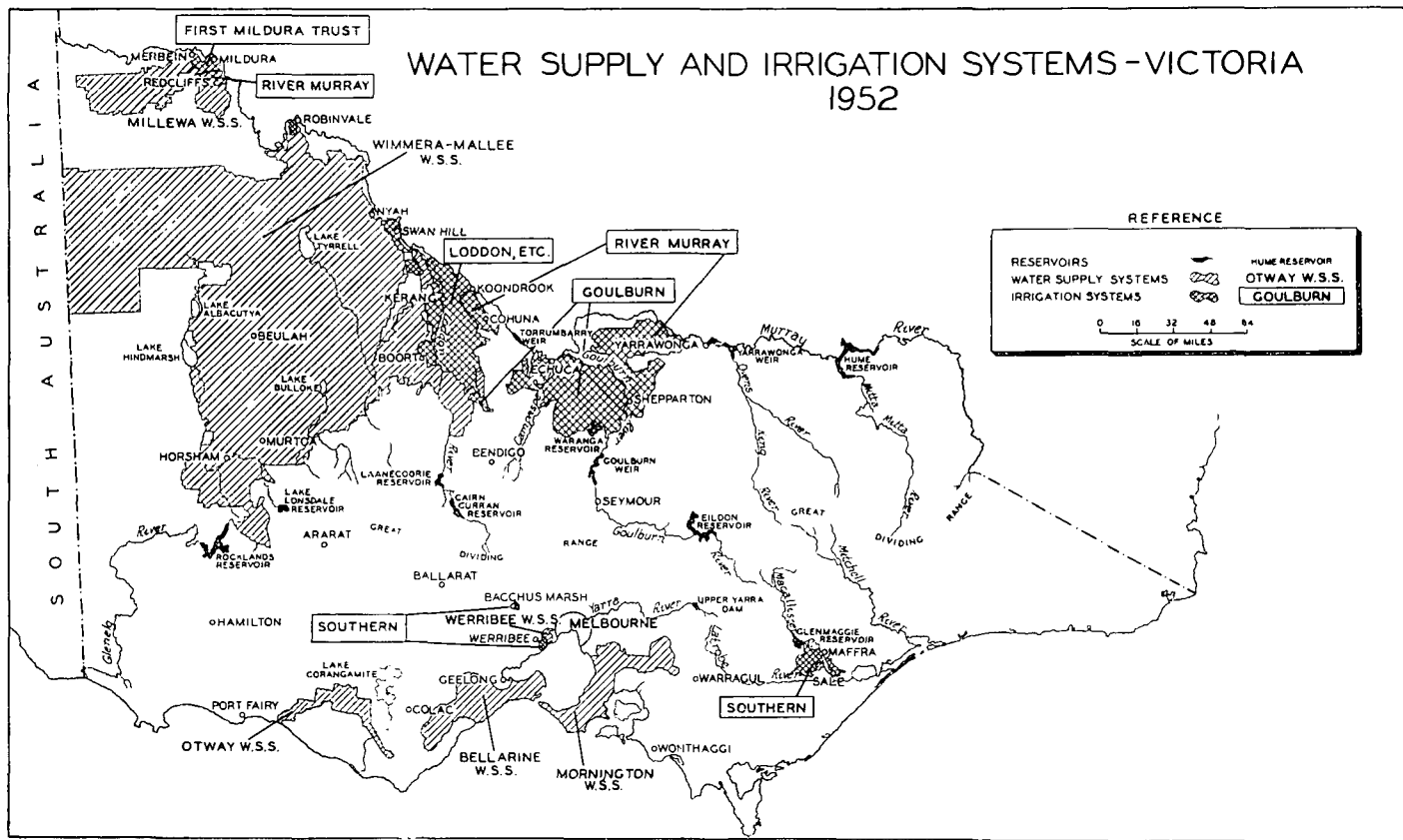
IRRIGATION AREAS & DISTRICTS		HAY
IRRIGATION TRUST DISTRICTS		BAMA I.T.D.
WATER TRUST (W.T.D.) & SUPPLY (W.S.D.) DISTRICTS		ULONGA W.T.D.
*FLOOD CONTROL DISTRICT		

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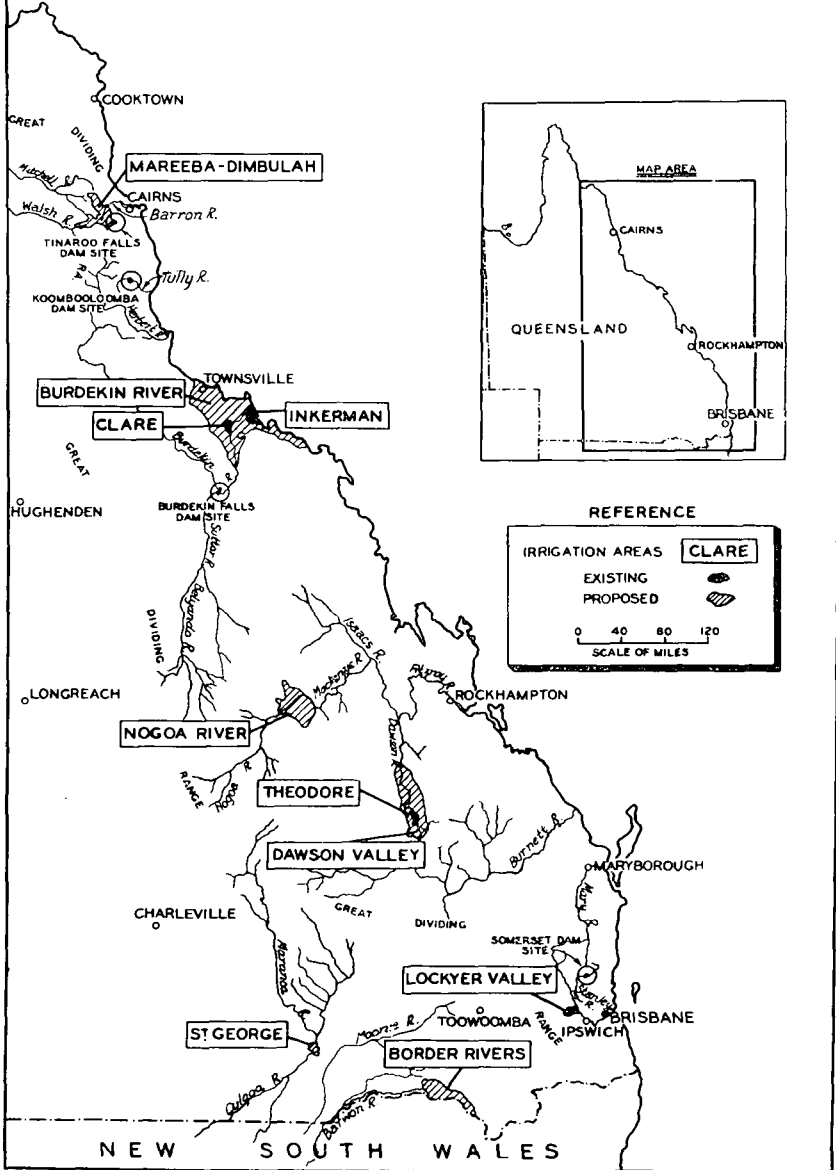
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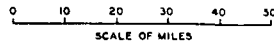
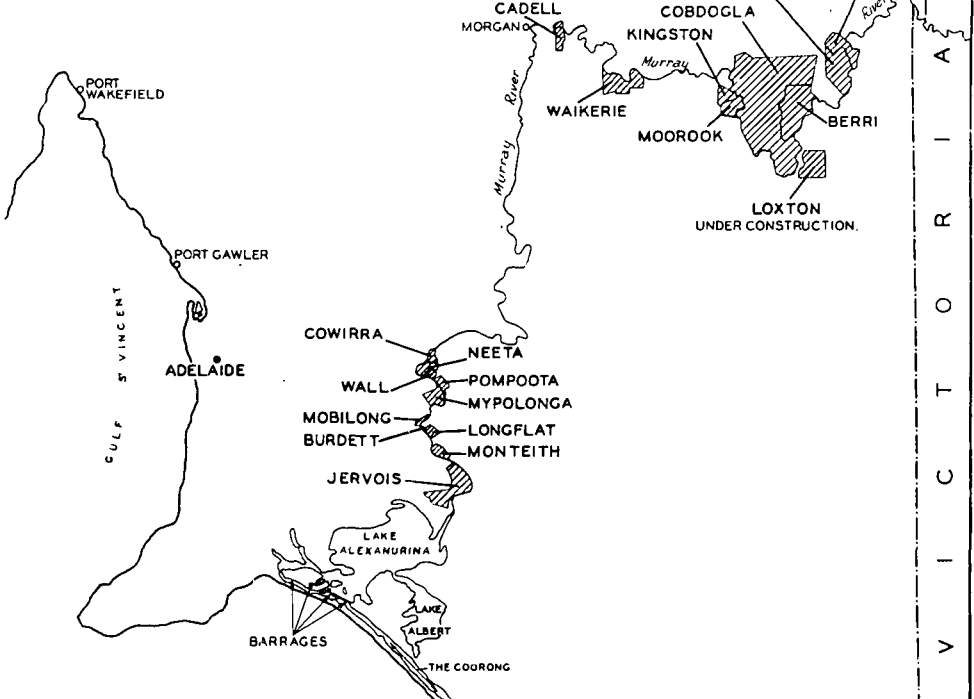
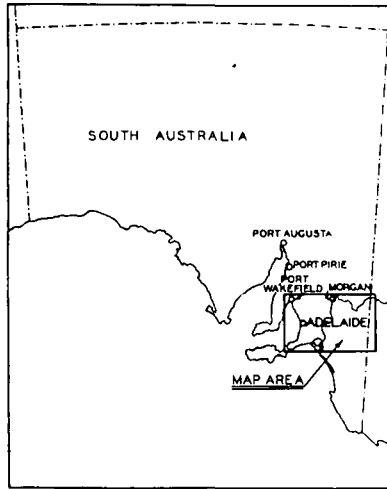




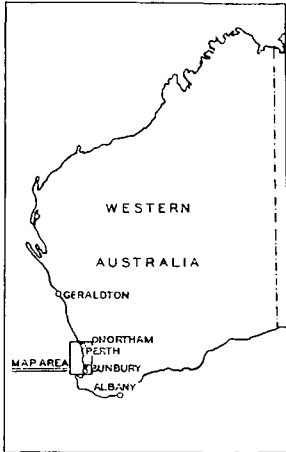
# IRRIGATION AREAS-QUEENSLAND 1952



# IRRIGATION AREAS- SOUTH AUSTRALIA, 1952



# IRRIGATION DISTRICTS WESTERN AUSTRALIA, 1952



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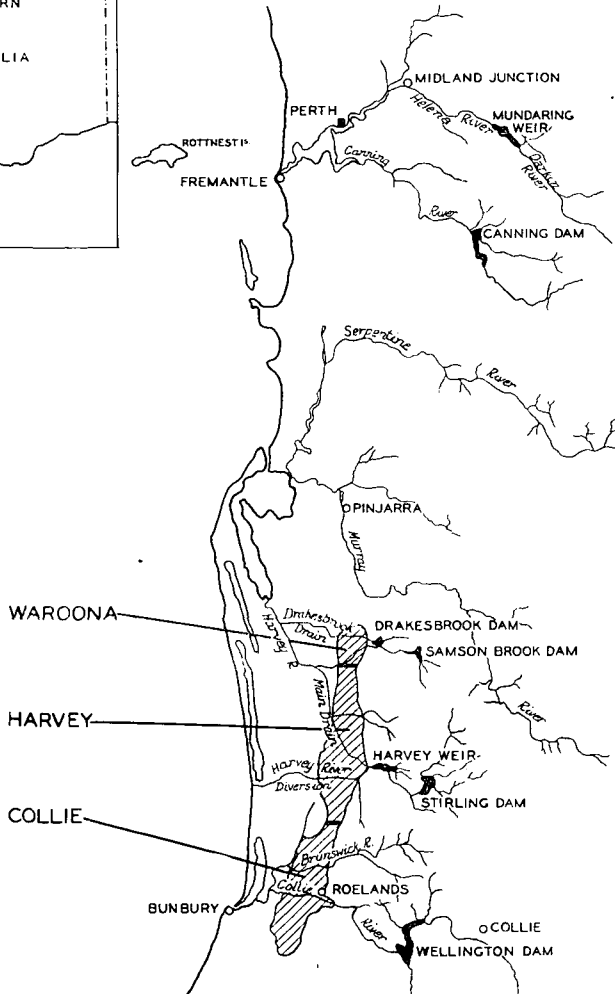
DAMS AND WEIRS

IRRIGATION DISTRICTS

0 5 10 15 20

SCALE OF MILES

Detailed description: A legend box containing symbols for dams/weirs and irrigation districts, a scale bar from 0 to 20 miles, and the title 'REFERENCE'.





Water to serve Berriquin and Wakool Districts is diverted through a main canal which will be 100 miles long when completed. At 30th June, 1952 the total length of completed canal and channels was 780 miles, including Mulwala Canal 75 miles, Berrigan channel 22 miles, subsidiary channels 641 miles, escape channels 33 miles and cross drainage channels 9 miles. Off-take capacity of the Mulwala Canal is 5,000 acre feet per day. Ultimately the water will serve Deniboota and other districts for which works have yet to be completed.

Wakool, with 361 miles of channel, contains 251 holdings and it is expected that the area developed by irrigation will comprise about one acre in 13 of the total area. The total area irrigated in 1951-52 was 45,597 acres and water supplied was 75,230 acre feet. Crops comprised fodders, pastures, rice, cereals and vegetables, but sheep raising is the main industry.

Considerable subdivision has occurred within the Berriquin District and it is expected that the proportion of total area to be developed for irrigation will be considerably higher than in the case of Wakool. Total irrigated acreage was 105,000 at 30th June, 1952. Sheep and wheat growing are the main industries. The fat lamb industry is well developed and expanding. Dairying is making headway, and a butter factory has been established at Finley.

In the Benerembah, Tabbita and Wah Wah Districts, supplied from the channels of the Murrumbidgee Irrigation Areas, the quantity of water supplied during the 1951-52 season for irrigation, etc. was 60,226 acre feet, and the area irrigated was 50,165 acres, including rice and other cereals, pastures and fodder crops. The estimated value of production, included in the amount (viz., £7,763,350) for the Murrumbidgee Irrigation Area, was £822,900 including wool, livestock, wheat and oats and rice.

For the same season 9,787 acre feet of water were supplied from the Lachlan River to irrigate a total area of 9,535 acres within the Jemalong and Wylde's Plains Districts. The total estimated value of production was £1,657,800 including wool and lambs £1,342,200, bullocks £104,400, wheat £74,900 and lucerne £29,800.

#### 6. Water Trust Districts, Irrigation Trusts and Flood Control and Irrigation Districts.—

The Water Act provides for the constitution of Trust Districts for domestic and stock water and irrigation and empowers the Commission to construct, acquire or utilize necessary works. When the works are completed they are handed over to trustees to administer. The trustees are elected by the occupiers of the land and act with a representative of the Commission. They are empowered to levy and collect rates covering the cost of the works repayable to the Crown by instalments and also the cost of operation and maintenance of the works. The rates are struck according to the area of land which benefits. The following water trusts—other than irrigation—have been constituted (the area in acres of each district is shown in parentheses)—*Murray River*—Tuppall Creek (78,080), Bullatole Creek (68,320), Little Merran Creek (157,440), Poon Boon (32,985), Minnie Bend Flood Prevention (2,190); *Murrumbidgee River*—Yanko, Colombo and Billabong Creeks (1,001,210); *Lachlan River*—Torrigan, Muggabah and Merrimajeel Creeks (170,240) Condobolin West Weir (4,480), Marrowie Creek (295,040), Ulonga (71,655), Micabil Weir (11,500); *Miscellaneous*—Algdudgerie Creek (9,760), Nidgerly Weir (46,880), Great Ana Branch of Darling River (995,200), Collarenebrri town water supply (117)—making in all a total area of 2,945,097 acres. Thirteen of these trusts have been formed for the provision of water for domestic and stock purposes, one for a town supply and one for flood prevention.

Irrigation Trusts are established under the same Act and are administered by trustees in a similar way. The following are the Trust Districts (area in acres is shown in parentheses):—*Hunter River*—Blairmore (315); *Murray River*—Bama (3,446), Goodnight (1,167), Bungunyak—Koraleigh (1,804), Glenview (661), Bringan (4,933); *Darling River*—Pomona (1,241)—making in all a total area of 13,567 acres.

The Lowbidgee Provisional Flood Control and Irrigation District (375,000 acres) was constituted in 1945, being the first of its kind. Its purpose is to provide flood irrigation for pasture lands on the lower Murrumbidgee by water diverted from the Maude and Redbank Weirs. There are 49 holdings. Another district (Medgun near Moree in the North-West) is in operation. Its total area is 272,800 acres, and a levee is being constructed to extend flood irrigation to an area larger than that commanded by the original works.

7. **River and Lake, and Farm Water Supplies.**—During recent years the numbers of licences and permits issued to individuals to draw water from rivers and lakes for irrigation have increased substantially, especially along the coastal streams in sub-humid districts where the value of supplementary irrigation is becoming more recognized as a means of stabilizing production in lean months. There has also been a considerable increase along the Murrumbidgee and Lachlan.

The Farm Water Supplies Act was passed in 1946. Technical advice and assistance, and also financial assistance, are made available to aid individual farmers and groups of farmers to provide and improve water supplies for domestic, stock and irrigation purposes by means of wells, bores, excavated tanks, weirs or dams.

8. **Underground Water.**—Extensive use is made of artesian, sub-artesian, and shallow underground water. Eighty thousand square miles in the northern and western portions are covered by the Great Artesian Basin. Eighty-one Bore Water Trusts and twelve Artesian Wells Districts have been constituted. The Bore Trusts are administered in the same way as Water Trusts, but in Artesian Wells Districts settlers maintain the drains. Bore Trusts and Artesian Districts cover about 5,000,000 acres and water is distributed through 3,378 miles of open earth drains. The number of artesian bores giving a flowing or pumping supply at 30th June, 1952 was 953 and the estimated total daily flow from 541 flowing bores was 62,578,000 gallons. The estimated flow in 1914–15 was 99,350,000 gallons per day for 372 bores. The deepest bore is Boronga No. 2 (4,570 feet), which also has the greatest flow, namely, 1,115,000 gallons per day. Of the total number of bores sunk, 222 have been installed by the Government in connexion with public watering places, Bore Water Trusts or Artesian Wells Districts.

Since 1912 the Government has assisted settlers in shallow boring operations for which repayments are required over a period. To 30th June, 1952, the total constructed by the Commission's plants was 4,260 and their average depth was 299 feet.

9. **Future Programme.**—The programme of post-war development already in hand includes the provision of eighteen dams and storages, eight diversion weirs and flood mitigation and river protection works in various parts of the State. Construction has been commenced on head storages at Keepit on the Namoi, Glenbawn on the Hunter and Burrendong on the Macquarie, while legislation has been passed authorizing the construction of a flood control dam at Warkworth in the Hunter Valley and a conserving dam at Blowering on the Tumut River. The Menindee Lakes storage project—part of the scheme for conserving the waters of the Darling River—is well advanced. The Hunter River development concerns an exceptionally fertile coastal valley, forming the hinterland to Newcastle, where the annual rainfall is not heavy and variations from month to month are considerable. This is the first coastal scheme initiated in New South Wales. Total estimated capacity of all proposed new storages is 5,500,000 acre feet.

10. **Hydro-electricity.\***—The largest hydro-electric installation in New South Wales, of 20,000 kW., is that located at Burrinjuck Dam on the Murrumbidgee River. The output of this plant is dependent on the release of waters for irrigation purposes.

The Nymboida hydro-electric scheme, controlled by the Clarence River County Council was opened in 1924 to supply Grafton, South Grafton and Ulmarra. The power station is situated on a tributary of the Clarence River in northern New South Wales and now has a capacity of 5,600 kW.

\* See also Chapter XXV.—Electric Power Generation and Distribution, pp. 1031–7.

The Bega Valley scheme was opened in 1944 to supply an area of 2,700 square miles extending from Bermagui to Eden. The power is derived from the waters of Rutherford Creek, a tributary of the Bembooka River, and the capacity of the present installation is 500 kW. Two 750 kW. generating units are also being installed in conjunction with a further development on George's Creek, another tributary of the same river. This system is controlled by the Bega Valley County Council.

The New England County Council is constructing a small hydro-electric power station on the Oakey River near Armidale.

Wyangala Dam power station was brought into operation in 1947. This station utilizes the irrigation waters released from the dam to generate electricity, and in addition is designed to provide an essential stabilizing feature in the transmission system between Burrinjuck and Lithgow to which the station is inter-connected. The output of the station at any time is dependent on the release of water for irrigation purposes.

Major projects which are being investigated by the New South Wales Government include the hydro-electric development of the Clarence River at the Gorge and other locations, the hydro-electric development of the Shoalhaven River and the hydro-electric development of the Styx River, a tributary of the Macleay River.

The Clarence Gorge Scheme, situated 140 miles from Brisbane and 240 miles from Newcastle, embraces not only hydro-electric development, but also may offer considerable benefits by reason of the flood mitigation effects of a large dam built at this location.

Investigations have shown that a dam 245 feet high would impound 4,500,000 acre feet of water and would enable the production of more than 100,000 kW. of power. It is expected that eventually some 400,000 kW. of power might be obtained from the Clarence River and its tributaries.

The Commonwealth and States agreed in 1945 on hydro-electric development at the Hume Reservoir on the Murray River near Albury. The New South Wales Public Works Department is installing at this site two 25,000 kW. water turbines and generators, half the output from which will be fed into the State system.

Investigations are also taking place into the possibilities of developing hydro-electric power in association with the Warragamba Dam which is being built for water supply purposes for the Sydney metropolitan area, at Keepit Dam which is being constructed for irrigation purposes on the Namoi River near Gunnedah, and at the Burrendong Dam which is to be constructed for irrigation purposes on the Macquarie River near Dubbo.

### § 3. Victoria.

1. *General.*—(i) *Rainfall.* Particulars of the rainfall pattern of Victoria were given on page 1117 of Official Year Book No. 37, while Chapter II.—Physiography, of this issue, contains information on climatic conditions in each State.

(ii) *Administration.* Although practical steps were taken to organize Victoria's water resources before the turn of the century, the passage of the Water Act in 1905 marked the commencement of sustained progress. The State Rivers and Water Supply Commission established by this Act is vested with the control of all irrigation, rural domestic and stock supplies, town water supplies and flood protection and drainage undertakings outside the Metropolitan area, with the exception of the irrigation area operated by the First Mildura Irrigation Trust and the town water supplies operated by locally constituted Waterworks Trusts or local governing bodies.

The operations of the First Mildura Irrigation Trust and the various Waterworks Trusts and local governing bodies, as well as the various Sewerage Authorities which control sewerage undertakings in country towns, are also subject to general supervision by the Commission.

2. *Systems Summarized.*—(i) *Works.* Since 1902, when a great drought emphasized the need for a concerted attack on water problems, the total capacity of water storages has increased from 172,000 to 1,977,320 acre feet (including Victoria's share of the Hume Reservoir). By means of channels, bores, etc., one-fourth of the State is artificially supplied for stock and domestic purposes. Large areas, which would be largely unproductive without water, are now contributing to the State's wealth. The area actually irrigated has increased from 110,000 acres in 1906 to 723,797 in 1951-52, and irrigation channels command 2,086,565 acres.



The Commission controls 35 large reservoirs and 238 subsidiary storages. The capacities of the storages in acre feet within the various systems at 30th June, 1952 were as follows :—

*Goulburn System* :—Eildon Reservoir, 306,000; Goulburn Weir, 20,700; Waranga Basin, 333,400; *Murray-Loddon System* :—Half share of River Murray Commission storages including Hume, Yarrowonga, Torrumbarry, Euston, Mildura and Wentworth, 736,420; Kow Swamp, Laanecoorie, Kerang-North-West Lakes, Lake Boga and Lake Cullulleraine, 148,210; total, 884,630; *Wimmera-Mallee* :—206,860; *Maffra-Sale* :—106,040; *Coliban* :—62,730; *Werribee* :—34,900; *Bellarine Peninsula* :—10,850; *Mornington Peninsula* :—5,800; *Otway* :—1,080; *Miscellaneous* :—4,330; *Total* :—1,977,320.

Irrigation channels extend 4,745 miles, domestic and stock channels 8,027 miles and drainage and flood protection channels 2,087 miles, a total of 14,859 miles. In addition, the Commission controls 1,180 miles of piping, comprising 264 miles of mains and 916 miles of reticulation. Farm holdings served with water total 42,401. Urban districts supplied by the Commission's channels and pipelines have a population of 155,310 persons in 130 towns, and a further 138 towns with a total population of 356,310 persons are supplied by Trusts under the supervision of the Commission.

To 30th June, 1952, the total capital expenditure on irrigation, rural water supply, country town water supply, and flood protection and drainage works amounted to £59,328,000, one-half of which was in respect of irrigation.

The total capital liability in respect of works under the control of the Commission at 30th June, 1952 was £56,649,000 of which £50,133,000 was borne by the State and £6,516,000 by water-users. Waterworks Trusts and local governing bodies had a total capital liability of £6,333,000 at 30th June, 1952, of which £3,473,000 was borne by the State and £2,860,000 by the Authorities.

(ii) *Extent of Systems and Nature of Irrigated Culture.* Although the area irrigated is less than 2 per cent. of the State, it yields approximately 11 per cent. of Victoria's rural production. The following table shows the areas of the various irrigation systems and the areas under irrigated culture during 1951-52. For the locations of water supply and irrigation systems see map on p. 1075.

#### AREAS OF SYSTEMS AND OF LAND UNDER IRRIGATED CULTURE: VICTORIA. 1951-52.

(Acres.)

System.	Total Area.	Area under Irrigated Culture.									Total.
		Cereals.	Lucerne.	Other Fodder Crops.	Pastures.		Vineyards.	Orchards.	Market Gardens.	Fallow and Miscellaneous.	
					Sown.	Natural.					
Goulburn .. ..	1,256,575	8,051	23,062	3,575	243,830	34,189	399	19,254	4,199	2,797	339,356
Murray—											
Torrumbarry Weir .. ..	377,805	7,083	5,622	3,735	113,839	47,947	5,283	1,895	1,810	5,791	192,405
Yarrowonga Weir .. ..	267,310	126	11,197	165	28,650	2,863	38	2,792	604	20	46,455
By Pumping .. ..	50,754	102	239	278	286	135	22,769	1,463	273	20	25,563
Total .. ..	695,869	7,311	17,058	3,578	142,775	50,945	28,090	6,150	2,687	5,831	264,423
Loddon and other Northern Systems .. ..	(a) 19,736	402	1,100	131	4,351	1,475	1	4,382	1,152	3,522	16,516
Southern Systems .. ..	70,789	34	2,105	313	28,332	1,009	..	547	4,113	1,237	37,690
Mildura and Private Diversions .. ..	(b) 45,000	4,836	5,221	2,161	23,080	3,020	15,094	5,792	4,125	2,481	65,810
Grand Total .. ..	2,087,969	20,634	48,546	9,758	442,368	90,638	43,584	36,125	16,276	15,868	723,797

(a) Area of Campaspe District only.

(b) Area of First Mildura Trust District only.

(iii) *Production.* The influence of irrigation on Victorian production is illustrated by the following estimates, prepared by the Commission, of the value of production from irrigated areas :—1905–6, £500,000 ; 1925–26, £5,000,000 ; 1949–50, £22,500,000, 1950–51, £29,250,000. Detailed classification of the 1950–51 irrigation production estimates is as follows :—*Livestock* :—Dairying, beef and veal meats, etc., £6,600,000 ; Wool, lamb and mutton, £9,720,000 ; Pigmear, poultry and eggs, £2,750,000 ; total Livestock, £19,070,000. *Horticulture* :—Vine fruits, £3,650,000 ; Fresh and canning fruits, £2,620,000 ; total Horticulture, £6,270,000. *Vegetables and other primary products*, £3,910,000.

3. **Goulburn System.**—The Eildon and Waranga Reservoirs on the Goulburn River supply half the irrigated acreage, and form the largest system in Victoria. Annual rainfall in the valley is only 18 inches and the annual discharge has varied from 567,000 acre feet in a drought year to 6,202,171 acre feet in a particularly wet season. Total regulated supply is 960,100 acre feet which will be practically doubled on completion of the Eildon Reservoir Enlargement programme.

Water from Eildon Reservoir flows down the Goulburn for 150 miles to the Goulburn Weir, which raises the summer level of the river about 45 feet to 408 feet above sea level, and where water is diverted to two main channels. The eastern main channel conveys water to four irrigation districts surrounding Shepparton and the western main channel fills Waranga Basin in addition to supplying the eastern portion of the Rodney Irrigation District.

Two main outlet channels issue from the Waranga Reservoir, one serving the Western part of the Rodney district ; while the other serves districts as far west as Boort, and continuing to Beulah East, about 230 miles by channel from Waranga Basin or some 400 miles from Eildon, supplements the Wimmera-Mallee system.

Districts served comprise 196,225 acres east of the Goulburn ; 600,720 acres between the Goulburn and Campaspe ; 379,395 acres between the Campaspe and Loddon Rivers ; and 80,235 acres west of the Loddon—a total of 1,256,575 acres. Main channels of the system have a total length of 213 miles and in addition there are 2,344 miles of distributaries, a total of 2,557 miles for the whole system.

The development of the fruit-canning industries in the Goulburn Valley is an index of the results of irrigation policy. Annual production from the Shepparton, Kyabram and Mooroopna canneries, together with that of city canneries—from Goulburn Valley fruit—amounts to an aggregate which represents 70 per cent. of Australia's total production of canned peaches, pears and apricots. Other main products of the Goulburn districts are fat lambs, foddors, wine and table grapes and dairy products.

4. **Murray River System.**—The waters of the River Murray are used to supply an area of more than 600,000 acres between Yarrawonga and Merbein, and channels totalling 1,450 miles are in service. The districts between Yarrawonga and Swan Hill, except Tresco, are supplied by gravitation and those down the river (Red Cliffs, Merbein, Nyah and Mildura) are supplied by pumping.

The Murray Valley Irrigation District, supplied from Yarrawonga, will serve 280,000 acres when completed. At 30th June, 1951, 450 miles of main and distributary channels were completed and supplied 267,400 acres west of Yarrawonga.

The gravitation system based on Torrumbarry Weir (52 miles downstream from Echuca) serves an area of 415,500 acres with 846 miles of supply channels. The weir raises the level of the river some 16 feet and enables water to be diverted throughout the year.

Red Cliffs Irrigation District comprising 31,000 acres, of which, at present, 12,000 acres are irrigated, ranks first in importance among Victoria's pumping schemes. A system of main and distributary channels commands every holding in the district. The district, originally for soldier settlement, has been subdivided into 700 blocks. The area planted is composed mainly of vines and citrus. The first harvest (1924) returned 570 tons of dried fruit in addition to table grapes. The average harvest is now 18,000 tons of raisins, currants and sultanas as well as large quantities of grapes for dessert and distillation.

Merbein Irrigation District comprises 10,526 acres and contains 436 holdings averaging 24 acres each. A reticulated pipe system supplies the town of Merbein, and the pumps also supply the Yelta Waterworks District of 51,200 acres.

Nyah Irrigation District is supplied with water diverted from the Murray by a high-lift pumping plant, serving 3,840 acres in 220 holdings devoted mainly to orchards and vineyards.

5. **First Mildura Trust District.**—The First Mildura Irrigation Trust—which is the only Irrigation Trust operating in Victoria—controls an area of 45,000 acres, of which 15,000 acres are irrigated. This area irrigated includes 12,000 acres of vines, 960 acres of citrus trees and small areas of apricots, peaches, prunes, figs, almonds, olives, lucerne and other fodders. It produces approximately 15,000 tons of raisins, currants and sultanas each year. The irrigation water is pumped from the River Murray and distributed through 168 miles of channels.

6. **Wimmera-Mallee System.**—The Wimmera-Mallee scheme is regarded as the most extensive domestic and stock supply system in the world. The main supply is drawn from the Grampians storages with a capacity of 206,860 acre feet. Supplementary water is drawn from the Goulburn channels and the Loddon River. The system serves an area of 11,000 square miles or nearly one-eighth of the State, which is largely devoted to wheat and pastoral industries. Without the artificial supply of water, development would be meagre.

Once a year, in the winter or spring, a volume of 75,000 acre feet of water is distributed through 6,600 miles of open channel and some 3,000 miles of farm channels. It is the responsibility of farmers to provide storages sufficient in size to meet their stock and domestic requirements for the ensuing year. At least 16,000 tanks are served. In addition, forty-five towns with a total population of 40,000 obtain their water from the system. A total population of 80,000 depends upon the scheme. In the vicinity of Horsham and Murtoa, near the main storages, 3,000 acres are irrigated for soft fruits and pastures, but the limited water resources at present available will not permit any extension of irrigation.

The northern part of the system is affected by sand drifting into the channels, particularly in years of dry weather conditions, and the Commission is involved in substantial annual expenditure to remove this sand drift before the annual water distribution can be made. It is considered that this expenditure could be reduced by better farming methods, and efforts in this direction such as the sowing of rye-corn, and including the use of compulsory powers to prohibit the fallowing of land or burning of stubble within three chains of channels in light sandy country, have resulted in marked savings in maintenance costs.

7. **Farm Water Supplies.**—The Rural Finance Corporation Act 1949 is designed, *inter alia*, to give farmers an opportunity of establishing or improving domestic and stock water supplies on their farms. Water may be obtained from underground sources, from catchment and gully dams by diversion from existing streams and channels, by storage of sufficient water to meet a year's requirements and by installation of windmills or hydraulic rams.

A Farm Water Supplies Branch has been set up by the State Rivers and Water Supply Commission to advise farmers on farm water supply matters even if finance is not required. Comprehensive booklets entitled "Farm Water Supplies for Domestic and Stock Purposes" and "Farm Irrigation and Drainage" prepared by this Branch have been widely circulated to landholders.

8. **Underground Resources.**—A comprehensive survey of the underground water resources of Victoria has been commenced. It will provide records of bores in the Mallee, Wimmera and Glenelg regions, and also a detailed description of the Murray Artesian Basin. Investigations have also been made into the underground water resources of local areas such as Orbost Flats, Llowalong Estate on the Avon River and at Bacchus Marsh where a number of observation bores have been installed.

The Murray Artesian Basin underlies an area of 107,250 square miles, of which 26,808 square miles are in Victoria, 28,269 square miles in South Australia and 52,173 square miles in New South Wales. The quality of the water varies in different parts of the basin. Over 300 bores exist in Victoria, with an average daily flow of 3,000,000 gallons. Bores range in depth from 50 to 3,000 feet.

9. **Future Programme.**—Victoria has now reached the stage when the demand for water is far greater than the supply, and a programme which envisages an expenditure of £25,000,000 has been launched. This includes the Rocklands storage on the Glenelg River (272,000 acre feet) and the Cairn-Curran Reservoir on the Loddon (120,000 acre feet). Work has been commenced on the enlargement of the Eildon Reservoir on the Goulburn from 306,000 to 2,750,000 acre feet by the building of a large earthen embankment 260 feet high and 3,300 feet long at an estimated cost of £12,000,000.

10. **Hydro-electricity.\***—The Kiewa (the Kiewa River is a tributary of the Murray) project in the Australian Alps, to comprise a series of power stations with a total installed capacity of 289,000 kW., will be one of the largest hydro-electric developments in Australia. The authority responsible for its construction and operation is the State Electricity Commission of Victoria. Work is now in progress on this undertaking, but in view of prevailing financial conditions, the project is likely to be somewhat modified. The first of the Kiewa power stations has been operating since 1944. Its installed capacity is 26,000 kW. and it is contributing annually between 40 and 50 million kWh. of electricity to the State system.

Further utilization is to be made by the State Electricity Commission of irrigation waters from the Goulburn River by the erection of a very much larger power station of 135,000 kW. capacity, which will operate on the increased flow of water from the new Eildon Reservoir now being constructed by the State Rivers and Water Supply Commission of Victoria (*see above*).

Irrigation waters from the existing Eildon Reservoir have been utilized for approximately 25 years to operate Sugarloaf power station which, until it was closed down in the latter months of 1953, was the largest power station in the State Electricity Commission's Sugarloaf-Rubicon group of five hydro-electric power stations. With a total installed capacity of 26,400 kW., this group had been in operation since 1928, and contributed on the average between 130 and 150 million kWh. of electricity per annum to the State system. Power is generated at Eildon during the summer months when water is being released for irrigation, and at other times of the year when storage is full. The four associated mountain stream stations on the Rubicon and Royston Rivers generate maximum power in the winter and spring, when water flow is at its greatest. They will continue to operate in conjunction with the new Eildon power station.

Irrigation water will also be utilized at the Hume Reservoir where a new power station being erected by the New South Wales Public Works Department will serve both Victoria and New South Wales. Initially, the installed capacity of the power station will be 50,000 kW. Output of electricity, averaging about 200 million kWh. a year, will be shared equally by the two States, each contributing its quota of the annual cost. Victoria's share of the electricity generated will be fed into the State system.

## § 4. Queensland.

1. **General.**—(i) *Rainfall.* Particulars of the rainfall pattern of Queensland were given in Official Year Book No. 37, page 1122, while Chapter II.—Physiography, of this issue, contains information on climatic conditions in each State.

(ii) *Administration.* The first comprehensive Water Act in Queensland was the Water Act of 1926 which vested in the Crown the right to the use and flow of all streams, lakes, watercourses, etc. which flowed through or were within the boundaries of two or more occupiers, and also vested in the Commissioner of Irrigation and Water Supply the bed and banks of all boundary streams. The Irrigation Act of 1922 provided for the

\* *See also* Chapter XXV.—Electric Power Generation and Distribution pp. 1041-5.

establishment of Irrigation Areas in approved localities. From 1922 to 1931 the Commissioner of Irrigation and Water Supply administered the Acts, but in 1931 the Land Administration Board was appointed to act as the Commissioner and continued to act until the Irrigation and Water Supply Commission Act of 1946 was proclaimed in 1947. Under this Act the Corporation of the Commissioner of Irrigation and Water Supply was reconstituted. The Commissioner is responsible for carrying out the provisions of the Irrigation Acts 1922 to 1949 and the Water Acts 1926 to 1942. He is also responsible for investigations into, and the planned development of, water resources of Queensland under the Land and Water Resources Development Acts 1943 to 1946. For particulars of the New South Wales-Queensland Border Rivers Agreement ratified by Acts of both States in 1947 see page 1066.

(iii) *Water Utilization in Queensland.* Queensland's predominant interest in the past in the field of water conservation has been the provision of stock and domestic water supplies in its great pastoral areas which contain nearly half the Commonwealth's cattle, a seventh of the sheep and a third of the horses. More than half the State's rural production is derived from cattle and sheep. The cattle are distributed throughout the State, but most thickly between the east coast and the 20-inch average annual isohyet. Sheep are mainly pastured on the inland areas west of this isohyet, whilst dairying is concentrated in the south-eastern quarter of the State. In addition to the stabilization of water supplies in the pastoral areas and the provision of water along stock routes for travelling stock, the development of irrigated pastures on the eastern seaboard for fattening stock adjacent to meat works and markets has lately received much attention.

The State's agricultural crops differ from those of other States in that a large proportion is tropical. Sugar-cane is the greatest individual crop, representing in value some 40 per cent. of total agricultural production. Approximately 12 per cent. of the sugar-cane acreage is irrigated and represents some 54 per cent. of the total irrigated area in Queensland. Queensland is Australia's major tobacco-producing State, and plans are in hand to increase greatly annual production of this crop by means of development under irrigation.

2. **Great Artesian Basin.**—(i) *General.* Western Queensland beyond the 22 inch rainfall belt is predominantly pastoral and is mainly dependent for water supplies on artesian and sub-artesian bores and, where surface storage is not readily available, on excavated tanks. The Great Artesian Basin in Queensland corresponds approximately with the area lying west and south of the Great Dividing Range, but excluding the Cloncurry Mineral Field and the Barkly Tableland. It comprises 350,000 square miles of the total State area of 670,500 square miles. Statistics of bores and flow as at 31st December, 1951 are:—Artesian bores drilled, 2,271; artesian bores still flowing, 1,546; total depth drilled, 3,321,610 feet; deepest bore, 7,009 feet; total estimated flow, 231,000,000 gallons per day. Artesian pressure and flow are both steadily diminishing despite new bores drilled. The rate of diminution varies widely throughout the basin. Present general average rates of diminution are:—pressure, 1-2 feet/head, total flow,  $1\frac{1}{2}$ -2 per cent. per annum.

There are some 19,000 miles of bore drains and the greatest length served by one bore is 121 miles. This method of watering is somewhat wasteful, owing to evaporation and soakage, but it is the most economical in first cost. Not more than 5 per cent. of the water is actually used by stock, and present policy is to restrict working flows to serve limited drain systems of smaller dimensions and reduce evaporation and soakage losses. The average loss per mile of drain is 10,000 gallons per day; with smaller drains this is reduced to 7,000 gallons per day. Pipe lines are very rarely used for distribution owing to high initial cost.

Although artesian beds underlie such a large area of the State, only 87,500 square miles are primarily watered by bore drains. The remaining area is watered by artesian bores (with small or no flow and limited drains), sub-artesian bores, excavated tanks, dams and natural waterholes. In many districts, artesian bores are not economical watering facilities, because of depth, limited area to be watered, and difficult terrain, for distribution of water by drains. High costs have restricted deep drilling. Very few new bores exceed 2,000 feet in depth, and a new bore greater than 3,000 feet in depth is exceptional.

Shallow sub-artesian supplies, of variable quality and volume, are available at depths less than 1,000 feet over a large area of the basin. These beds are not connected with the artesian beds. An essential practical consideration is that the main artesian beds are continuous and the sub-artesian beds are not continuous.

In 1939, a special Committee was appointed to inquire into the geology and hydrology of the Basin and economic use of artesian supplies. A first progress report has been issued by this Committee and its final report is now being prepared. It has been established that the rate of diminution of flow is declining.

In the past, many excavated tanks failed in dry seasons, because of insufficient original depth and capacity, and subsequent silting. Mechanical plant is now almost exclusively in use and much larger tanks are being excavated, even in areas where artesian water may be obtained at a reasonable depth. New tanks with capacities of 20,000 cubic yards and depths of 25 feet are not uncommon. Two tanks with capacities of 65,000 cubic yards each, and depths of 42 feet and 46 feet have recently been completed for watering stock in an area where a good artesian flow may be obtained at a depth less than 2,000 feet.

(ii) *Bore Water Areas.* The Constitution of Bore Water Areas was inaugurated in 1913 to aid pastoral settlement in districts where large flows were available at a cost beyond individual capacity and to conserve artesian supplies by fully utilizing the flows from existing bores resumed with the land for closer settlement. Bores and drains are constructed from loan funds repayable over a period of years. The areas are administered by Local Boards or by the Commissioner of Irrigation and Water Supply, acting as a Board. Rates are levied to meet interest, redemption, maintenance and administration costs. Statistics for the year 1951-52 are:—Areas constituted, 65; administered by Commissioner, 54; administered by Local Boards, 11; area benefited, 4,934,552 acres; average rate per acre, 1.2d.; number of flowing bores, 58; total flow, 27,815,000 gallons per day; drains served, 2,872 miles.

3. *Stock Route Watering.*—During 1935, a scheme was inaugurated to water adequately stock routes in the western portion of the State including main trunk routes connecting Eromanga to Burketown, Charleville to Normanton, and Clermont to Einasleigh, with branches to railheads, a total distance of 3,117 miles. Watering facilities were also provided on subsidiary routes. Under the Stock Routes and Rural Lands Protection Act of 1944 a co-ordinating board was constituted, representative of Government departments and pastoral interests, under the direction of the Minister for Lands, and with an officer of that Department as superintendent, whose duty was, *inter alia*, to investigate and implement a long-range, co-ordinated plan for adequate watering of all stock routes throughout the State. Natural waters are being supplemented by artificial facilities at intervals of about 9 miles. Construction is supervised by the Irrigation and Water Supply Commission and by local authorities. Completed facilities are vested in local authorities for control and maintenance. From 1935 to 30th June, 1952, 251 facilities had been completed and at 30th June, 1952, 209 facilities were under construction or investigation.

4. *Irrigation.*—(i) *General.* Irrigation as a means of stabilizing and increasing agricultural production is receiving growing attention in Queensland. However, with the exception of the Theodore Irrigation Area, orthodox projects served by a channel system have not so far been developed, though construction of the Clare Irrigation Area on the Burdekin River is well advanced and investigations of several schemes are being carried out. Because of the large variations in both monthly and annual river flows, major developments cannot be undertaken until large storage works are provided. Most irrigation in Queensland is performed by private farmers operating under licence, and obtaining water by pumping from streams or from natural underground storages. Where available, electricity is the most popular source of power for pumping; the principal areas supplied with electricity comprise the Burdekin Delta and the Lockyer Valley.

Furrow irrigation is used for cotton, sugar-cane, most tobacco and some other crops. Spray irrigation is adopted to a considerable extent for fruit, vegetables, fodder

crops and a small part of the tobacco. Spraying is well suited to the application of water on deep soils by small pumping plants, particularly when the quantity of water available is limited. Experimental use of the border check method in the irrigation of pasture and fodder crops during the last three years has proved successful and may supersede other methods.

The following table shows for each division of the State the number of irrigators and the areas under irrigated culture for the year ended 31st March, 1952.

AREA OF LAND UNDER IRRIGATED CULTURE : QUEENSLAND. 1951-52.(a)

Division.	No. of Irrigators.	Area under Irrigated Culture (Acres).							Total.
		Vegetables.	Fruit.	Sugarcane.	Tobacco.	Cotton.	Other Crops.	Pastures.	
Southern Queensland ..	3,495	17,864	2,491	10,366	1,188	24	21,743	3,698	57,374
Central Queensland ..	330	812	132	50		398	2,324	548	4,264
Northern Queensland ..	1,354	3,270	662	44,150	2,808	65	369	138	51,402
Total .. ..	5,179	21,946	3,225	54,566	3,996	487	24,436	4,384	113,040

(a) Year ended 31st March, 1952.

For the locations of existing and projected irrigation areas see map on p. 1076.

The growth of irrigation is illustrated by the following figures for the total area of irrigated land :—1906, 9,922 acres ; 1916, 10,886 acres ; 1926, 24,250 acres ; 1936-37 44,509 acres ; 1946-47, 79,030 acres ; 1951-52, 113,040 acres.

The pattern of irrigation in Queensland is unlike that in southern States ; the more important developments in tropical and sub-tropical areas are therefore discussed briefly in the sub-sections following. It should be noted that the spring to autumn " irrigation season " of the temperate southern irrigated lands is not applicable, and that round-the-year irrigation is required throughout most of the State, the timing and duration of the summer " wet " season being too variable to enable a definite non-irrigation season to be fixed.

(ii) *Lockyer Valley.* West of Brisbane and within 50 miles of that metropolitan market is the Lockyer Valley, which is portion of the Brisbane River Basin. The Valley comprises an extensive flood plain where heavy black alluvial soil thickly overlies gravels and sands carrying water suitable for irrigation. Despite a mean rainfall of 30 inches the variation is great, and irrigation is necessary for continuous agricultural production. Surveys suggest that some 60,000 acres of land highly suitable for irrigation are available. Of this area only about 30 per cent. is under irrigation, the number of pumps operating from wells and open water exceeding 550 and 500 respectively. Over 60 per cent. of the farmers operate electric pumps for irrigation purposes and a special policy designed to encourage such development is fostered by the Southern Electric Authority of Queensland which serves the Valley. The Irrigation and Water Supply Commission has constructed a number of small weirs on Lockyer Creek with a total storage of 1,370 acre feet. These also tend to augment and conserve underground supplies. To study local problems, an Irrigation Research Station was established at Gatton in 1946 by the Bureau of Investigation.

The Lockyer Valley produces a substantial proportion of Queensland's onions, potatoes, pumpkins, lucerne, hay, green fodder, maize and dairy products.

(iii) *Burdekin River.* The Burdekin River, which joins the sea between Townsville and Bowen, is a major factor in the life of North Queensland. In most years heavy floods from a catchment twice the size of Tasmania cause extensive damage and traffic disabilities. On the other hand, the fertile Delta Area with its underground water supplies at shallow depth has contributed greatly to the agricultural prosperity of North Queensland. The projected irrigation, hydro-electric and flood mitigation scheme, together with the high level railway bridge at present under construction, will change the Burdekin from a mixed blessing to one of the Commonwealth's greatest resources for agricultural

and industrial production. Present development is confined to the Delta Area. The average annual rainfall of this area is some 41 inches, but the major part falls in the months December to March. Consequently sugar growers and other farmers have tapped the underground water resources of the Delta to obtain supplies in the dry periods. Sugar is the main irrigated crop, though citrus, pineapples, vegetables and tobacco are also irrigated. The irrigated area is in excess of 30,000 acres, up to 1,000 acre feet of water being drawn daily from underground sources.

In the Home Hill-Inkerman areas on the south side of the Burdekin, water is obtained from shallow wells by electric pumps supplied from a local power station now controlled by the Townsville Regional Electricity Board. Around Ayr, on the north side of the river, electric power from the mains of the Townsville Regional Electricity Board is now being adopted in place of the individual internal combustion engines previously used. At both Home Hill and Ayr water for domestic supply is raised by a windmill on each property.

In 1940 the Burdekin River Trust was formed to safeguard the sugar areas of the Delta from erosion and floods. An Irrigation Research Station has recently been established to study the development of pastures and irrigated crops under local conditions.

A major multi-purpose scheme, involving irrigation, flood control and hydro-electric power generation, is being investigated by the various interested Government Departments under the general supervision of the Burdekin River Authority. The development envisaged would include a dam storing 6,584,000 acre feet, which would make water available for the irrigation of at least 250,000 acres. The principal industries anticipated are tobacco-growing, dairying and cattle fattening, with sorghum, sunflowers, peanuts, cotton and sugar-cane as other possible forms of production.

The Clare Irrigation Area, constituted in 1949, and the Millaroo Irrigation Area, constituted in 1952, are at present being developed for tobacco production. Located from 25 to 65 miles upstream from the mouth of the Burdekin these areas comprise 12,000 acres and will obtain irrigation waters from central pumping stations drawing initially on the unregulated flow of the Burdekin. A temporary storage of 6,700 acre feet capacity is at present under construction about 79 miles upstream from the mouth of the Burdekin. To 1st January, 1953, 68 farms had been opened for selection in the Clare Area.

(iv) *Dawson Valley.* The Dawson River, a 392-mile long tributary of the Fitzroy River, rises in the Carnarvon Range and joins the Mackenzie River to form the Fitzroy 50 miles west of Rockhampton. Lands bordering the river in its northerly course of about 170 miles before its confluence with the Mackenzie River are commonly termed the Dawson Valley. A scheme for the development of the Dawson Valley under irrigation was inaugurated in 1923, providing for the irrigation of 70,000 acres. Storage for the scheme was to be provided by a dam at Nathan Gorge of 2,000,000 acre feet capacity. Much investigational and survey work on the scheme was carried out, but the general financial depression and limited loan funds brought about the cessation of this work. However, the initial step in construction had been completed, comprising a weir on the river at Theodore and irrigation works to serve an area of 3,500 acres supplied from a central pumping station. Two additional weirs have since been built, giving a total storage of 12,000 acre feet. Pasture, vegetables, cotton, fruit and dairying products are the principal produce. The cheese factory established at Theodore has been closed, but there is a ready market for all cream produced, and with the increase in dairying based on irrigated lucerne and pasture, the future of the area appears assured. Attention has recently been given to the former plans for the Valley and earlier work is now under close scrutiny as a prelude to future development.

(v) *Mareeba-Dimbulah Area.* The existence of large areas of sandy soils suitable for tobacco production in the valleys of the Walsh and Barron Rivers in the neighbourhood of Mareeba and Dimbulah has led to large-scale investigations into possible irrigation development in the area. Surveys indicate that 40,000 acres of land suitable for irrigated culture, including 32,000 acres suitable for tobacco, are available. At present some 800 acres of high-grade tobacco are grown annually. Six weirs of combined capacity of 1,800 acre feet have been completed on a number of streams to store



water for irrigation and a seventh, to store an additional 800 acre feet, is now under construction. During 1952 a report on the utilization of waters of the Barron and Walsh Rivers was prepared and establishment of an irrigation undertaking approved by the Queensland Government. The projected undertaking provides for construction of a major storage at Tinaroo Falls on the Barron River to store 320,000 acre feet, and construction of irrigation works to serve 78,000 acres commanded by this storage. Further development by construction of a second storage at Nullinga on the Walsh River has been deferred for the present. Tobacco will be the basic crop while peanuts, vegetables, maize, cotton and stock fattening also appear suitable.

(vi) *Border Rivers Project.* The development of the rivers constituting portion of the border between Queensland and New South Wales is under the authority of the Dumaresq-Barwon Border Rivers Commission on which each State is represented. For information on the project see page 1066.

5. **Bureau of Investigation.**—Under the Land and Water Resources Development Act of 1943 a Bureau of Investigation has been set up for the co-ordinated investigation of land and water resources development.

The Bureau consists of representatives from the authorities controlling water resources, lands and agriculture, under the chairmanship of the Co-ordinator-General of Public Works. Among notable work carried out by the Bureau of Investigation since its inception has been the trial planting of irrigated pastures with a view to developing mixtures suited to the special conditions of each part of the State. Other valuable work has included the mapping of the ultimate land uses of the State, and the detailed investigation of the agricultural and pastoral potentialities of many regions.

6. **Channel Country.**—Extensive investigations of the Channel Country fed by inland rivers in the south-western corner of the State have been made by the Bureau of Investigation. This country is intersected by shallow and irregular flood channels through which huge volumes of flood waters pass in favourable seasons; consequent on the flooding, a heavy growth of natural pastures is produced on the flooded lands, providing feed in quantities far in excess of that required for the normal stock population of the area. If the occurrence of flooding could be made more reliable by means of storages to create artificial floods, the pastoral resources of the area would be enormous. However, inquiries directed on these lines have revealed that little can be done to increase or stabilize the turn-off of fat cattle by artificial storage, but that improved transport facilities are essential.

At 30th June, 1952, 41 watering facilities, at an estimated cost of approximately £277,000, had been proposed under a Federal-State agreement for stock routes through, and in the approaches to, the Channel Country. Two had been completed, progress in general having been delayed by wet weather and lack of contractors for bore drilling.

7. **Hydro-electricity.\***—Behind the coastal plain of the Cairns-Ingham area is an extensive plateau, the elevation ranging from 2,000 to 3,000 feet, although isolated peaks exceed 4,000 feet. The short coastal streams which rise on the plateau descend rapidly into deep gorges, which they have cut through the old divide. With heavy monsoonal rainfall on their catchments and concentrated fall, these streams represent a considerable potential source of power, but storage, which can in most cases be provided, is essential to control the very variable flow.

The Barron Falls Scheme, 14 miles north-west of Cairns, came into operation in 1935. The installed plant operates under a head of 410 feet and comprises three 2,000 h.p. turbines each connected to a 1,320 kW. generator. Average rainfall varies from 80-150 inches along the ranges to less than 35 inches in the western portion of the catchment. There is extreme variation from year to year, resulting in great fluctuation of stream flow which, at Kuranda, has varied from a maximum of 117,000 cusecs in 1911 to a minimum of 30 in 1915. Storage to regulate the flow is possible but has not yet been provided. During periods of low flow the supply of electricity is supplemented by fuel plants at Cairns, Atherton and Innisfail. Power is distributed over 22,000 volt transmission lines serving the tableland and extending southward along the coast to Tully.

\* See also Chapter XXV.—Electric Power Generation and Distribution, pp. 1048-9..

A small hydro-electric scheme on the Mossman River, 5 miles from Mossman, North Queensland, comprises two 120 h.p. turbines operating under a head of 200 feet.

A hydro-electric power scheme at Tully Falls is being constructed. Water controlled by Koombooloomba Dam to be built on the upper Tully River will be diverted, a short distance above Tully Falls, through a tunnel and steel penstocks to Pelton-driven generators under a head of 1,485 feet. Ultimate installation will be four 18,000 kW. sets, two of which will be installed initially. Future automatic power plants upstream and downstream from Tully Falls will consist of two 7,500 kW. sets under 405 feet head and one 5,400 kW. set under 230 feet head. The combined peak load for the three plants will be 69,000 kW.

Other northern schemes which have been investigated include Freshwater Creek (3,900 kW.); North Johnstone-Russell Rivers (32,000 kW.); Beatrice-North Johnstone Rivers (9,000 kW.); South Johnstone River (25,000 kW.); extension of Barron Falls scheme (22,000 kW.); Herbert River (90,000 kW.). The total potential of the plateau region is therefore about 250,000 kW. at 50 per cent. load factor.

A power plant immediately below the Burdekin Falls Dam of the proposed Burdekin River Irrigation Scheme will operate under an average head of 225 feet. The output of firm power will depend upon the varying demand for water for irrigation, but it is expected to average about 50,000 kW.

South of the Burdekin River no appreciable hydro-electric development is practicable. A plant of 3,200 kW. capacity is being installed to utilize the outflow from Somerset Dam on the Stanley River a few miles above its confluence with the Brisbane River.

## § 5. South Australia.

1. *General.*—(i) *Rainfall.* Brief particulars of the climatic conditions in South Australia were given on page 1129 of Official Year Book No. 37, while Chapter II.—*Physiography*, of this issue, contains information on the climatic conditions in each State.

(ii) *Administration.* Water supplies, other than irrigation works, are under the control of the Engineering and Water Supply Department, which administers the Waterworks Act governing the supply of water through mains in water districts for townships and farm lands. The Water Conservation Act provides for the construction of storages in non-reticulated areas and authorizes the Minister to “divert and impound the water from any streams or springs or alter their courses, and take water therefrom, or any other waters as may be found in, under or on any land entered upon for the purpose of supplying water to the inhabitants of any water district”.

(iii) *Methods of Catchment and Conservation.* Early steps were taken to vest all running streams, springs and “soaks” in the Crown. Since the Water Conservation Act was passed in 1886 more than 550 dams, tanks and “rainsheds” have been built or acquired by the State, in addition to 460 wells and 340 bores, at a total cost of £1,271,552. The rainsheds comprise timber frameworks roofed with galvanized iron to catch precipitation which is delivered to storage tanks. Rainshed catchments vary from a few hundred square feet to four acres, discharging water into tanks ranging in capacity from 2,000 to 500,000 gallons. Over most of the State extraordinary precautions are taken to counteract evaporation. Pipelines in preference to open channels are used to reduce seepage and evaporation. Meters are attached to practically all services to check usage by individual consumers.

2. *Irrigation.*—In South Australia irrigation is almost exclusively confined to the Murray Valley. Except for that held in various lock pools, no water from the Murray is stored in South Australia. Water is either pumped on to the land or gravitated from the river. The upper Murray of South Australia and the Mildura area of Victoria formed the cradle of Australian irrigation. South Australian irrigation commenced with an agreement between the Government and the Chaffey Brothers in 1837 whereby 250,000 acres at Renmark were made available for irrigation settlement. Including land allotted for War Service Land Settlement purposes, the Department of Lands administers an area of 31,343 acres of irrigable high land, together with 9,422 acres of reclaimed swamp and

167,062 acres of non-irrigable land in the irrigation areas and 33,750 acres of land temporarily leased and reserved for commonage or other purposes, amounting in all to 241,577 acres. In addition, the Renmark Irrigation Trust controls 20,557 acres, of which more than 8,800 are irrigated. Water used for irrigation purposes in 1951-52 in the high land irrigation areas controlled by the Department of Lands was approximately 100,000 acre feet, in addition to which approximately 60,000 acre feet were used on reclaimed areas by gravitational watering. In the Renmark area water used for irrigation in 1951-52 was 24,215 acre feet. The production of the upper Murray areas is almost exclusively fruit and vines. Principal crops are sultanas, currants, lexiacs, apricots, peaches, nectarines, pears and figs (mainly for dried fruit), wine grapes and citrus fruits. Before irrigation, these semi-arid lands were of little productive value. The following tables show the acreage devoted to various crops in the government-controlled and Renmark Irrigation Trust areas on the upper Murray, and in the government-controlled reclaimed swamp districts near the mouth of the Murray, which are devoted to dairying.

**IRRIGATION AREAS ADMINISTERED BY DEPARTMENT OF LANDS AND  
REMARK IRRIGATION TRUST, SOUTH AUSTRALIA : AREA OF LAND UNDER  
IRRIGATED CULTURE, 1951-52.**

(Acres.)

Area. (a)	Vine Fruits.	Tree Fruits.	Citrus Fruits.	Lucerne.	Other Fodders.	Total.
<b>Orchard Land—</b>						
Berri .. ..	5,581	740	1,172	40	..	7,533
Cadell .. ..	614	113	103	31	..	861
Waikerie .. ..	2,044	416	1,063	19	..	3,542
Cobdogla.. ..	4,024	106	172	9	..	4,311
Moorook .. ..	408	107	166	10	..	691
Kingston.. ..	243	73	172	1	..	489
Mypolonga .. ..	26	328	465	2	..	821
Chaffey .. ..	810	30	8	..	..	848
<b>Total .. ..</b>	<b>13,750</b>	<b>1,913</b>	<b>3,321</b>	<b>112</b>	<b>..</b>	<b>19,096</b>
<b>War Service Land Settlement—</b>						
Cooltong .. ..	357	202	470	..	..	1,029
Loxton .. ..	1,682	414	1,106	9	..	3,211
Loveday .. ..	235	46	22	..	..	303
<b>Grand Total .. ..</b>	<b>16,024</b>	<b>2,575</b>	<b>4,919</b>	<b>121</b>	<b>..</b>	<b>23,639</b>
<b>Renmark Irrigation Trust .. ..</b>	<b>7,310</b>	<b>650</b>	<b>880</b>	<b>..</b>	<b>..</b>	<b>8,840</b>
<b>Reclaimed Swamp Land—</b>						
Monteith .. ..	..	..	..	..	967	967
Mypolonga .. ..	..	..	..	42	1,309	1,351
Wall .. ..	..	..	..	9	420	429
Burdett .. ..	..	..	..	..	104	104
Mobilong.. ..	..	..	..	36	381	417
Long Flat .. ..	..	..	..	7	309	316
Neeta .. ..	..	..	..	..	425	425
Pompoota .. ..	..	..	..	2	417	419
Cowirra .. ..	..	..	..	22	545	567
Jervois .. ..	..	..	..	47	3,446	3,493
<b>Total .. ..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>165</b>	<b>8,323</b>	<b>8,488</b>

(a) For the locations of these Irrigation areas see map on p. 1077.

The expenditure incurred by the Government to 30th June, 1952, in purchase of land, reclamation of swamps, preparation of irrigable lands for fruit growing, and purchase of pumping plants for drainage and water supply is approximately £5,081,000. Further irrigation development is being undertaken as a part of the Commonwealth-wide War Service Land Settlement Scheme. South Australia's share of horticultural plantings under the Scheme is 13,000 acres, comprising citrus 3,500 acres, vines 5,300 acres, and deciduous tree fruits 1,200 acres. Schemes already approved and under construction will absorb between 7,000 and 8,000 acres, and further areas are being selected to take up the balance. Holdings will be provided for about 500 settlers, and annual production from the 13,000 acres of plantings mentioned is estimated at :—Citrus, 750,000 bushels; deciduous tree fruits—fresh, 6,000 tons; dried vine fruits, 2,500 tons; wine grapes, 11,000 tons. On present-day prices, the value of this production would approximate £1,500,000.

Renmark Irrigation Trust is administered by a local board of management consisting of seven members. This area differs from other South Australian irrigation areas in that the land is freehold instead of leasehold, self-contained and self-controlled. Every settler is entitled to vote for the election of Trust members. The Trust maintains 80 miles of channel for the reticulation of 8,800 acres.

3. **Water Supply Schemes.**—(i) *Summary.* Water conservation and distribution works in South Australia have cost £28,574,140 (exclusive of river control and irrigation works on the River Murray which are dealt with above). A summary of statistical information concerning country supplies in 1951–52 follows :—Length of water mains, 5,639 miles; capacity of storages, 9,517 million gallons; approximate population served 260,000; area served, approximately 4,500,000 acres; and total capital cost, £17,961,538.

Areas extending for a distance of 90 miles north of Adelaide are supplied from the Warren and Barossa Reservoirs in the Barossa Ranges, and agricultural towns and areas further north are supplied from Beetaloo, Bundaleer and Baroota Reservoirs, with a connexion to the Warren system. Eyre Peninsula has, up to the present, been supplied from the Tod River Reservoir (9,167 acre feet) and three small reservoirs near the Franklin Harbour District, but demands have increased to such an extent in recent years that further sources of supply are necessary, and with this end in view a water-bearing area known as the Uley-Wanilla Basin has been developed, and water from it is now being used in the Tod River system.

(ii) *Morgan-Whyalla Water Supply Scheme.* For particulars of the construction and works of the 223-mile pipe line bringing water from the Murray at Morgan to Whyalla on Spencer Gulf see Official Year Book No. 37, page 1132. The Morgan-Whyalla Water Supply Scheme forms part of the South Australian Country Water Supply system referred to above.

4. **Underground Water.**—The occupied portion of South Australia is, on the whole, well endowed with underground water. The extent of the several artesian basins is tolerably well-known. There are also considerable areas, notably in the south-east of the State, in which ground water occurs. Quality varies widely, but a great deal is at least useful for watering stock, the major use to which it is put. Apart from numerous boreholes and wells tapping underground water for farms, stations and towns, two notable basins are being developed on Eyre Peninsula—one at Flinders (Streaky Bay) and the other at Uley-Wanilla, near Port Lincoln. Leigh Creek coalfield, some 350 miles north of Adelaide, derives its supply from a borehole at Sliding Rock mine, the water being pumped through a pipeline 25 miles long.

The deepest portion of the Great Artesian Basin (in the north-east) is not extensively developed because development costs are large in proportion to the carrying capacity of the arid land. Deep boreholes have been drilled by the Government, however, to provide watering places along stock routes, and pastoralists rely largely on supplies in suspended basins at shallower depths.

The use of the waters of the Murray Basin is essential to settlement in the Murray Mallee country and in the south-east, especially for farms, but also for township supplies for Mount Gambier, Naracoorte, Bordertown and Pinnaroo. The maximum depth of boreholes is 235 feet and the minimum 71 feet. Average tested yield is 14,808 gallons per day.

Pastoralists, farmers, market gardeners and others have been assisted with expert advice on drilling, for which the Government maintains about 40 drills. A large area within the Murray River Basin has been examined critically to ascertain the extent of land which could be used for lucerne, and an examination of a large part of Kangaroo Island and Southern Eyre Peninsula has been completed in connexion with Soldier Settlement schemes. Examination of large areas in the Upper South-East has been undertaken in connexion with land development schemes.

The results of comprehensive surveys of underground supplies undertaken by geologists of the South Australian Government have been published in the State's geological survey bulletins in recent years.

5. **Farm Water Schemes.**—While the Department of Mines and the Engineering and Water Supply Department give assistance to individual farmers in the provision of supplies from underground sources, a great part of the farming areas derive water supply under pressure from the extensive distribution systems connected to various reservoirs or the Murray River.

6. **South-Eastern Drainage.**—For some information on the drainage schemes necessary for the disposal of surplus water in areas in the south-east of South Australia see Official Year Book No. 37, page 1133.

## § 6. Western Australia.

1. **General.**—(i) *Rainfall.* Brief particulars of the climatic conditions in Western Australia were given on page 1133 of Official Year Book No. 37, while Chapter II.—Physiography, of this issue, contains information on the climatic conditions in each State.

(ii) *Administration.* Irrigation districts are administered under the Rights in Water and Irrigation Act 1914-1945 and the Government is advised by an Irrigation Commission representing the local irrigationists and government technical and financial branches. The Goldfields Water Supply is administered by a branch of the Public Works Water Supply Department and its responsibilities include control of water from this scheme for agricultural purposes. The metropolitan water supply is controlled by a separate department under the control of the Minister for Water Supply, Sewerage and Drainage. Under the Water Boards Act 1904-1953 twelve towns are administered by local water boards and 36 are under direct Ministerial control. The Minister also controls three District Farming Schemes. Water rights over water flowing in streams and water courses are vested in the Crown unless specifically appropriated for irrigation purposes under the irrigation legislation.

2. **Irrigation.**—The main irrigation districts—Harvey, Waroona and Collie—are along the south-west railway line between Waroona (70 miles from Perth) and Dardanup (116 miles from Perth) (see map on p. 1078). The total area irrigated in these districts during 1951-52 was 19,842 acres and the total water used was 62,472 acrefeet. The total acre waterings (i.e., the number of acres watered multiplied by the average number of waterings) was 95,831. Investigations are being carried out with a view to irrigating a further 30,000 acres south of the existing Collie Irrigation District.

Harvey Districts (Nos. 1 and 2—32,663 acres) are supplied from the Harvey Weir (8,300 acrefeet) and Stirling Dam (44,344 acre-feet), Waroona District (10,325 acres) from Drakesbrook Dam (1,855 acrefeet) and Samson Brook Dam (6,540 acrefeet), and Collie District (28,762 acres) from Wellington Dam (27,800 acrefeet).

The following table, which shows acre waterings supplied to crops in the irrigation districts of Harvey, Waroona and Collie during the seasons 1938-39 and 1947-48 to 1951-52 illustrates the growth of these irrigation schemes.

IRRIGATION, WESTERN AUSTRALIA : ACRE WATERINGS.

Year.	Pasture.	Fodd.r.	Potatoes.	Vegetables.	Orchard.	Flax and Broom Millet, etc.	All Crops.
1938-39 .. ..	31,049	934	3,142	602	922	..	36,739
1947-48 .. ..	57,450	508	3,714	3,433	1,190	..	66,295
1948-49 .. ..	71,687	640	2,692	3,562	1,448	..	80,029
1949-50 .. ..	79,373	685	4,591	4,207	1,369	4	90,319
1950-51 .. ..	76,431	793	2,946	4,090	1,180	..	85,440
1951-52 .. ..	88,091	1,417	2,793	2,442	1,088	..	95,831

3. *Water Supply Schemes.*—(i) *Goldfields Scheme.* Western Australia has one of Australia's most spectacular water supply schemes, and a brief account of its development will be found on page 1134 of Official Year Book No. 37, and an account in greater detail on page 576 of No. 6. Mundaring reservoir on the Helena River, 26 miles from Perth, is the source of water supplied to the goldfields, and has a capacity of 15,100 million gallons and a catchment of 569 square miles. The water now passes through 346 miles of steel main, mostly of 30-inch diameter, aided by eight pumping stations and one booster station, involving a total net lift of 1,280 feet.

Maximum pumping capacity from No. 1 Pumping Station at Mundaring is now 9,500,000 million gallons per day. The total capacity of all receiving and regulating tanks, etc., along the pipe line is 129 million gallons, which includes two standby reservoirs at Kalgoorlie having a combined capacity of 35 million gallons.

Hundreds of miles of branch mains and pipes have been laid to mining districts, towns and farming districts, the most important being the Norseman extension of 101 miles. The system serves 50 towns and water is reticulated to 1,500,000 acres of farming lands. Total length of mains is 1,802 miles and the population served is 65,000. Total quantity of water pumped from Mundaring in 1951-52 was 2,677 million gallons. Total cost of system to the end of 1951-52 was £7,700,000.

(ii) *South-West Scheme (Comprehensive).* The Commonwealth Government has agreed to assist a scheme to extend water for agricultural areas and towns in the south-west of Western Australia, which will be administered by the State Government. Twenty-three towns and over 4,000,000 acres of agricultural country will benefit. The original estimated cost of this scheme was £4,300,000 of which the Commonwealth Government agreed to contribute 50 per cent., £2,150,000. The revised estimate at 1953 is £9,000,000. These estimates exclude the cost of the raising of Mundaring and Wellington Dams, which works form the headworks of the scheme and are financed solely by the State Government.

The work of raising Mundaring Weir 32 feet in height giving a total capacity of 15,100 million gallons was completed in 1951 and preparations are well in hand for commencing work in the raising of Wellington Dam 50 feet in height, increasing storage to 42,000 million gallons capacity. Thirty-seven miles of 30-inch pipe line from Wellington Dam to Narrogin have been laid, i.e., about half the total distance, and contracts let for the new electric pumping station at Mundaring, having a maximum capacity of 16 million gallons per day and two electric stations on the Wellington Dam-Narrogin pipe line with a maximum capacity of nearly 7 million gallons per day.

(iii) *Rock Catchments.* An interesting feature of the State's conservation system is found in the Barbalin, Narembeen and Kondinin District Farming Land Schemes in the wheat belt, where extensive granite outcrops have been used as catchments. The rain is caught at the foot of the rocks, and pumped to tanks from which the water is reticulated to farms and to a number of small towns. For further particulars see Official Year Book No. 37, page 1135.

4. *Underground Water.*—Individual farmers, orchardists, market gardeners and others derive water from wells using windmills or, where power is available, pumps and

motors are used to tap such supplies. The Department of Public Works has twelve boring plants which are lent out to farmers to facilitate boring operations to an average depth of 150 feet. The Department also contracts with private firms to bore for communal farm supplies. During the past 59 years 301 artesian and sub-artesian bores have been sunk, mostly for private purposes. The total depth of all recorded bores in Western Australia is 246,775 feet; daily flow is 88,692,500 gallons; and the average depth at which water is struck is 819 feet. Maximum depth of any bore is 4,006 feet and minimum 21 feet.

5. *Ord River Scheme.*—The Ord River in the north-west of Western Australia traverses a tropical area served with monsoonal rains of irregular incidence and quantity, varying from 20 inches in the south to 30 in the north. The hottest months (December to March) are also months of highest rainfall. Communications and population are sparse. The Western Australian Government is considering a proposal to build a dam to conserve 2,000,000 acre feet of water, equipped with hydro-electric plant, which might supply irrigation water for an area of 100,000 acres, if investigations show that the climate and soil conditions are suitable for vegetables, tropical fruits and rice. The economic production of these and other crops, as well as the possible use of such irrigation areas for interim fattening of cattle, is being examined at the Kimberley Research Station on the Ord River.

## § 7. Tasmania.

1. *General.*—(i) *Rainfall.* Brief particulars of the rainfall pattern in Tasmania were given on page 1136 of Official Year Book No. 37, while Chapter II.—Physiography, of this issue, contains information on the climatic conditions in each State.

(ii) *Main Purposes of Conservation and Utilization.* Owing to its fortunate rainfall position, scarcity of water is not a serious problem in normal seasons. Conservation of water for hydro-electric generation is the predominant interest, and conservation for domestic and industrial purposes is more important than irrigation. Conservation of water on farms is not practised to the same extent as on the mainland, probably because running streams and good rainfall are on a more generous scale. Provision of artificial storages (apart from house tanks) is rare, but progressive landowners are beginning to take advantage of modern plant, such as bulldozers, to provide small excavated storages on their properties. Underground water is of poor quality and a small quantity exists over an area in the Midlands which has been exploited to a limited extent only by bores and windmills. Geological conditions do not appear to favour the utilization of ground water except on a minor scale. There is only one known flowing bore—at Spreyton—which yields 1,690 gallons per hour.

(iii) *Administration.* The State does not own all natural waters as in Victoria, and consequently the subject of water rights is a difficult one. The Mines Department has power to grant certain rights for mining operations, and the Hydro-Electric Commission must approve the abstraction of water from any stream or lake of potential value for power generation. Legislation was enacted during 1952, empowering Local Authorities to take water from specific sources of supply and to construct waterworks. The Act does not cover irrigation which is practised to a limited extent only by private interests. Provision has been made in the Act for the protection of riparian rights, but there is no general legislation for the control of water courses.

2. *Hydro-electricity.\**—Tasmania depends entirely on water for power development. The Hydro-Electric Commission, the authority controlling the generation of electricity in Tasmania, conducts a continuous survey of the water power resources of the State assisted by modern methods such as aerial photography and geophysical exploration. Although the survey is not yet conclusive it is considered that at least 1,865,000 kW. of continuous power can be economically developed. At present only 218,700 kW. of generating plant is in commission, but plant under construction will raise this total to 404,500 kW. by 1955. Further construction, approved by Parliament, is about to be commenced and will increase this to 566,400 kW.

\* See also Chapter XXV.—Electric Power Generation and Distribution, pp. 1053-5.

Most of the water potential is located on the Central Plateau (*see map on p. 1079*) with an area of about 1,500 square miles at an altitude of from 2,000 to 4,000 feet and subject to rainfall of from 30 inches a year in the east to 80 inches on the western perimeter. On the plateau are a large number of lakes which provide the means for storage at low cost. These include Great Lake with an area of 58 square miles, Lake St. Clair and Lake Echo, each more than 12 square miles, and others of smaller area.

The Derwent River and its tributaries which flow south-easterly carry off by far the greater part of the water which falls on the plateau and these rivers are therefore the most abundant source of power. They have been the cheapest to develop to date and most of the existing generating stations are located on them.

The three main rivers running westerly from the plateau—the Arthur, Pieman and Gordon—have only a small portion of their catchment areas at high level, but they run through regions of high rainfall and their power potentials are considerable. However, because of inaccessibility and climate, development of these rivers may be rather expensive and has been deferred in favor of more convenient schemes.

Rivers draining from the plateau towards the north and north-west coast, including the Emu, Forth and Mersey, have small catchments at high levels and no natural storages.

Two other important water power sources, independent of the Central Plateau, are the Esk River in the north and the Huon River in the south. A power station now under construction at Trevallyn, near Launceston, will utilize water from the Esk. The Huon has a large low-level catchment in the high-rainfall area near the west coast. Storage could be provided on it at a reasonable cost and because of the proximity to Hobart of a future power station, it has considerable value for peak load development.

3. **Industrial.**—Three principal industrial schemes have been installed privately. The Australian Newsprint Mills pump approximately 6,000,000 gallons a day from the Derwent River at Lawitta for the Boyer Mills. Associated Pulp and Paper Mills pump several million gallons a day from Emu River at Burnie, and Titan Products Pty. Ltd. reticulate water from Chasm Creek to their factory at Weybridge. In addition the State is actively engaged in the construction of a regional water scheme which will serve the Australian Aluminium Production Commission's plant at Bell Bay on the River Tamar. Potential sources capable of greater development without storage exist on the Derwent, South Esk, Huon, Lake, Mersey and Forth Rivers. There is also a great reserve of untapped permanent streams in the western half of the State, at present largely unsettled. Diversion to the eastern side of the watersheds is not regarded as practicable.

4. **Irrigation.**—There are no State irrigation projects, but preliminary inquiries as to the possibility of establishing one in the Coal River Valley have been made and legislation is under consideration. All systems operating are privately owned, and with one exception (at Bushy Park), are single-farm units. At Bushy Park a small system serves a group of properties. The larger proportion of the area under irrigation is watered by gravitational systems and the remainder comprises areas devoted to vegetables and served by municipal water supplies. Irrigation, as practised in Tasmania, was applied in 1951-52 to 6,830 acres devoted to: hops (1,065 acres); fruit (803 acres); pastures (4,320 acres); green fodder, etc. (154 acres) and other crops (488 acres).

## § 8. Northern Territory.

1. **Climate and Topography.**—Some particulars of the climate and main topographical features of the Northern Territory were given on page 1138 of Official Year Book No. 37, and in this issue information on climatic conditions will be found in Chapter II.—Physiography, and a brief outline of contour and physical characteristics in Chapter VII.—The Territories of Australia.

2. **Administration.**—Under the Control of Waters Ordinance (1938) of the Northern Territory natural waters are vested in the Crown. Where a watercourse or lake forms a boundary of any land alienated by the Crown, the beds and banks are deemed to remain the property of the Crown (except in special cases) and diversion of water is prohibited except under conditions prescribed.



3. **Underground Water.**—Artesian water is found mainly in the south-east where the Great Artesian Basin enters the Territory. Pastoral (beef) production accounts for the bulk of the Territory's income, and the marked seasonal conditions affect the industry's economy. During the wet summer season there is adequate water, but during the winter most natural watering points disappear, and pastures dry. Bores supplement the permanent watering points, which are mainly along river frontages. The cattle industry is concentrated in the area in which the feed retains an appreciable nutritive value during the winter despite the dry conditions. This area is not in the wetter coastal regions, but in the inland belt of 15 to 25 inch rainfall and to the north of Alice Springs. Lack of bores is a limiting factor in the industry's economy, as cattle are able to thrive only within certain distances of reliable water.

Some 600 bores have been recorded, but complete records are not available. Maximum depth is more than 600 feet. For further information see Official Year Book No. 37, p. 1139.

4. **Irrigation.**—There are no large-scale water conservation projects in the Territory with the exception of the Manton Dam (80,350 acre feet) which serves Darwin with a reticulated supply. Irrigation has therefore assumed no current importance. For particulars of present activity and potentialities see p. 1138 of Official Year Book No. 37.

## § 9. Papua and New Guinea.

1. **Rainfall.**—When all localities (32 stations) where gauges are kept are taken into consideration, the average annual rainfall over periods varying from two to ten years is about 159 inches. This figure includes both inland and coastal stations.

2. **General.**—For a general description of these territories see Chapter VII.—The Territories of Australia, pp. 244–5, 250 and 255 of this Year Book. Irrigation has not been developed on any organized basis owing to the availability of high rainfall and the nature of agricultural development. The main water conservation interest in New Guinea at present is the hydro-electric potential.

Those portions of New Guinea administered by Australia are well served with large rivers deriving their water from heavy tropical rains and high mountains which rise to 13,000 feet. Complete data concerning water resources are not available, but it is known that the opportunities for production of hydro-electric power are extensive. Some authorities estimate that 20,000,000 h.p. could be generated. Present investigations have been limited to those areas where a demand for power is likely to arise. New Guinea has a substantial native population and few major industries.

Explorations over the southern portion, known as Papua, have resulted in the collection of much information concerning water resources. The largest stream is the Fly River, at least 500 miles long, which is situated in the western division. Its large tributaries extend to the northern boundary of the Territory rising among lofty mountain ranges. Records show that at a point above the tidal influence, where the river is 600 yards wide and 40 feet deep, the stream travels at a rate of  $3\frac{1}{2}$  miles per hour and discharges 105,200,000 gallons per minute. All the principal rivers flow from the main range in a southerly direction. Most of them carry a large volume from a great height over relatively short distances. They have a total catchment of about 50,000 square miles having an elevation between 2,000 and 13,000 feet. The Government Geologist has estimated that if only 50 per cent. of the annual rainfall were utilized through a height of only 500 feet a total of 8,500,000 h.p. would be produced.

## CHAPTER XXVII.

## DEFENCE.

## § 1. Department of Defence.

1. **Introduction.**—At the outbreak of the 1939–45 War, the Department of Defence comprised the three Fighting Services and a Central Secretariat. In November, 1939, separate Departments, each with its own Minister, were created for the control and administration of the Navy, Army and Air Force. The Defence Department as then reconstituted retained responsibility for over-all defence policy and for the conduct during the war of the business of the War Cabinet, set up in September, 1939, and the Advisory War Council, set up in October, 1940. These bodies ceased to function after the war.

2. **Functions and Organization.**—(i) *The Cabinet.* The determination of defence policy is the responsibility of Cabinet.

(ii) *Functions of Department of Defence.* Subject to the authority of Cabinet, the Minister and Department of Defence are responsible for :—

- (1) The formulation and general application of a unified defence policy relating to the Defence Forces and their requirements, including :—(a) co-operation in British Commonwealth and regional defence and the defence aspect of the Charter of the United Nations ; (b) the supply aspect of defence policy, including the review of production programmes and capacity ; (c) the scientific aspect of defence policy ; and (d) the financial requirements of defence policy, and the allocation of funds made available.
- (2) The defence aspect of Armistice and Peace Terms, Control Commissions, and Forces of Occupation.
- (3) Matters of policy or principle and important questions having a joint service or inter-departmental defence aspect.
- (4) The higher defence machinery, and the control of the joint service machinery.
- (5) The defence aspect of questions relating to the organization and machinery for :—(a) co-operation in British Commonwealth defence ; (b) co-operation in regional security, including obligations under the United Nations Charter ; (c) higher direction in war ; and (d) higher direction of the Services.
- (6) The Commonwealth War Book, which is a summary of national plans for an emergency as developed in Departmental War Books.
- (7) The administration of inter-service organizations, such as the joint intelligence machinery.
- (8) The defence aspect of :—the strength and organization of the Forces, higher appointments in the Services, Honours and Awards.
- (9) Advice on the military aspect of civil defence.

(iii) *Joint Service and Inter-departmental Machinery.* The joint service and inter-departmental advisory machinery of the Department consists of various committees headed by the Defence Committee, the Chiefs of Staff Committee and the Joint War Production Committee. The Defence Committee is a statutory body consisting of the Secretary, Department of Defence, who is Chairman, and the Chiefs of Staff of the three Services. In general, its function is to advise on defence policy as a whole, and on matters of policy or principle and important questions having a joint service or inter-

departmental-defence aspect. The main responsibility of the Chiefs of Staff Committee in peace is the preparation of strategic appreciations and military plans. The function of the Joint War Production Committee is, briefly, to examine the relation between strategic plans and their requirements to ensure that the war potential for them exists. The major committees subordinate to the Defence Committee and/or the Chiefs of Staff Committee comprise the Principal Administrative Officers Committee (Maintenance and Materials), the Principal Administrative Officers Committee (Personnel), the Defence Research and Development Policy Committee, the Joint Planning Committee, the Joint Intelligence Committee and the Joint Administrative Planning Committee.

(iv) *Defence Business Board.* In view of the heavy defence expenditure, the Government, in July, 1953, established the Defence Business Board in the Department of Defence. The Board will deal with joint Service matters of common interest to the three Services, or important subjects on which the collective advice of the Board is desired. The Board comprises businessmen who serve in a part-time honorary capacity and consists of an independent chairman and the business advisers of the three Service Departments.

3. **Basis of Current Defence Policy.**—The principal strategic considerations influencing the Government's defence policy as described by the Minister for Defence include the following features :—

(i) *Cold War.* It is essential to check the form of aggression that has occurred in Korea and Malaya, and an adequate Australian contribution to the "cold war" is essential both to our relations with our powerful friends and to the Allied strategic starting point should war occur.

(ii) *Global War.* If there is war on a global scale, it will be won or lost outside Australia. Since no one country can win without the co-operation of all the others, Australia must, in its own and the general interest, play a full part in its allotted place in the general Allied strategy, and the employment of its forces must be planned in advance, in co-operation with these Allies.

(iii) *Local Defence.* The local security of Australia, at least during the next two decades, is likely to depend on the control of sea and air communications in the Pacific and Indian Oceans and in the seas joining them.

4. **The Defence Programme.**—(i) *Financial.* The total provision made for Defence in 1952-53, £216,000,000 (including £10,000,000 transferred to the Korean Operations Pool Trust Account), is a peace-time record for Australia. The following table gives details of the expenditure incurred against this provision :—

## DEFENCE EXPENDITURE, 1952-53.

( £'000.)

Service or Department.	Maintenance.	Material Requirements, Machinery, Plant and Equipment.	Buildings, Works and Sites.	Miscellaneous Non-Programme Expenditure.	Total.
Defence .. ..	598	46	27	..	671
Navy .. ..	32,905	12,298	2,082	..	47,285
Army .. ..	(a) 70,218	14,211	6,038	1,067	91,534
Air .. ..	33,309	17,439	4,521	..	55,269
Defence Production .. ..	4,644	2,591	1,501	412	9,148
Supply .. ..	7,663	701	2,200	821	11,385
<b>Total .. ..</b>	<b>149,337</b>	<b>47,286</b>	<b>16,369</b>	<b>2,300</b>	<b>215,292</b>

(a) Includes £10,000,000 transferred to the Korean Operations Pool Trust Account.

(ii) *Personnel Strengths.* The personnel strengths of the Services at 30th June, 1953, were :—

Category.	Navy.	Army.	Air Force.	Total.
Permanent Forces .. .. .	(a) 14,273	27,180	15,517	56,970
Citizen Forces—				
Volunteers .. .. .	5,009	15,640	2,595	23,244
National Service Personnel .. .. .	2,080	54,644	(b) 9,584	66,308
Total Citizen Forces .. .. .	7,089	70,284	12,179	89,552
Total Strength .. .. .	21,362	97,464	27,696	146,522

(a) Excludes 110 Cadet Midshipmen not in receipt of pay. personnel who have completed training and are on the reserve.

(b) Includes 7,118 National Service

5. *Australian Participation in Korea, Malaya and the Middle East.*—(i) *Korea.* In accordance with the resolutions of the Security Council calling on members of the United Nations to assist the Republic of Korea in resisting aggression, Australia has furnished forces as follows :—

*Navy*—Since 29th June, 1950, a Royal Australian Naval Force of two ships has been engaged in operations. This force has consisted from time to time either of two destroyers or a frigate and a destroyer. In addition, H.M.A.S. *Sydney* relieved H.M.S. *Glory* in October, 1951, for a period of three months.

*Army*—At 30th June, 1953, the forces in Korea consisted of :—

- (i) 2 and 3 Infantry Battalions, The Royal Australian Regiment.
- (ii) A proportion of a Brigade Headquarters and of the Headquarters 1st Commonwealth Division
- (iii) An element of the British Commonwealth Communications Zone.

3 Infantry Battalion, with necessary reinforcements, had been on active service in Korea since September, 1950, and during March, 1953, 2 Battalion relieved 1 Battalion, which had been in the Korean theatre since March, 1952.

*Air Force*—No. 91 (Composite) Wing, formed of No. 77 (Fighter) Squadron (which had been in Korea since June, 1950), and No. 36 (Transport) Squadron, together with the necessary administrative and maintenance units for their support.

Over-all operational control of the United Nations Forces in Korea is the responsibility of the American Unified Command which was established by the Security Council. The Commander-in-Chief, British Commonwealth Forces, Korea, is responsible for the non-operational control and administration of the British Commonwealth Forces in Korea, the land forces of which comprise 1st Commonwealth Division, United Nations Forces.

The number of Australian personnel serving in the Japan-Korea area at 30th June, 1953, was 5,113.

(ii) *Malaya.* No. 1 (Bomber) Squadron and No. 38 (Transport) Squadron of the R.A.A.F. were engaged in anti-bandit operations in Malaya from June, 1950. At the end of 1952 the Transport Squadron was withdrawn, but No. 1 (Bomber) Squadron is continuing operations in Malaya.

(iii) *Middle East.* In June, 1952, No. 78 (Fighter) Wing left Australia for service as part of the peace-time Air Force garrison in the Middle East.

For further details see sections relating to the respective Services.

6. **National Service Training.**—(i) *Liability.* Compulsory military training under the Defence Act was in operation from January, 1911 to November, 1929, when the Citizen Forces were re-constituted on the basis of voluntary enlistment. In March, 1951, the National Service Act was passed to enable effect to be given to the Government's policy of National Service training.

Under the National Service Scheme, every male person ordinarily resident in Australia, who attains the age of 18 years or who has attained the age of 18 years since 1st November, 1950, is required to register when called upon to do so by notice published in the *Gazette*. The only exceptions are certain officials in the service of international bodies, diplomatic personnel, men already serving in the Permanent Forces and aboriginal natives of Australia.

Every registrant who complies with the standards of fitness laid down is liable to be called up for service unless he is exempt from service. The exempt classes, apart from persons subject to prescribed physical or mental disabilities, are theological students, ministers of religion, members of religious orders and conscientious objectors. There is provision for call up of conscientious objectors for non-combatant duties only, and for deferment of call up, while the ground of deferment continues, for such cases as apprentices, students, and individual cases of exceptional hardship.

(ii) *Conditions of Service.* Service under the National Service Scheme is with the Citizen Naval Forces, the Citizen Military Forces or the Citizen Air Force. In determining in which part of the Citizen Forces a person is to serve, effect is given as far as possible to the personal preferences indicated. No person is called up for service with the Citizen Naval Forces or the Citizen Air Force unless he has volunteered for service beyond the limits of Australia. Originally the National Service scheme provided for members of all Services to perform a total period of 176 days' training. Following a review of the scheme, changes in the periods of training were announced in September, 1953. In the Navy and Air Force, the total period is now 154 days, which is performed in one continuous period except in the case of students, who may complete their service in two periods of 77 days in successive years. In the case of the Army, the total period of training is 140 days, consisting of 98 days' continuous training and 21 days' training in camps or week-end bivouacs in each of the following two years. (See also sections dealing with the respective Services.)

(iii) *Strength.* To 30th June, 1953, 69,700 trainees had been called up for training.

## § 2. Naval Defence.

1. **State Systems.**—Information regarding naval defence systems prior to 1901 will be found in Official Year Book No. 2, p. 1084.

2. **The Present System.**—(i) *General.* (a) *Royal Australian Navy up to end of 1939-45 War.* An outline of the development of Australian Naval policy was given in Official Year Book No. 3, p. 1060 and No. 12, p. 1012. Some account of the building of the Australian Navy, the proposed and modified cost thereof, the compact with the Imperial Government, etc., appears in Official Year Book No. 15, pp. 921 *et seq.* An account of the growth and activities of the Royal Australian Navy during the 1939-45 War is given in Official Year Book No. 36, pp. 1023 *et seq.*

(b) *Post-war Programme.* The following is a summary of the Naval Programme :—

(1) Ships in Commission—The Fleet consists of :—

Carrier Force : 2 Light Fleet Carriers, 1 Cruiser, 4 Destroyers.

Escort Forces : 4 Frigates.

Surveying Duties : 2 Survey ships and their tenders.

Training Ships : 2 Frigates, 6 Ocean Minesweepers.

Auxiliary Vessels : 3 Boom Defence Vessels, 1 Ocean-going Tug, 1

Armament Store Carrier, 3 Patrol Vessels, 2 General Purpose Vessels,  
5 Search and Rescue Vessels.

(2) In addition to the ships in Commission, a substantial reserve fleet will be maintained in good condition against any future emergency.

(3) Personnel—The strength of the Royal Australian Navy has been pegged at 14,550, comprising 1,400 Officers and 13,150 ratings.

(4) Reserve and National Service Training—Reserve training was resumed as from 1st January, 1950, for members of the Royal Australian Naval Reserve. Training consists of 45 two-hourly drill attendances at night or on Saturdays in naval training establishments in each of the capital cities, plus 13 days' continuous training each year in H.M.A. ships or training establishments, including special schools. In addition, payment is made for further voluntary home training up to a maximum of 12 days. Selected members may undergo special courses up to a limit of six months during the whole of their service in the Reserve, whilst up to 12 months, training or service may be performed in H.M.A. ships or establishments with similar qualifications. Engagements are for three years. Rates of pay have been aligned (with minor modifications) with those applicable to the Permanent Naval Forces. The training for members of the Royal Australian Naval Reserve (Sea-going) is normally 28 days every two years whilst members of the Royal Australian Naval Volunteer Reserve are under no training obligations.

Naval National Service personnel commenced training on 30th July, 1951. On completion of their 154 days' initial training in naval establishments and H.M.A. ships, personnel will be attached to the Naval Reserve Training Establishment in their State and will carry out annual continuous training within the next four years in a manner similar to the members of the Royal Australian Naval Reserve, in order to comply with their National Service liability of five years. The present annual intake of National Servicemen is 1,200.

Revised post-war conditions of service in the Royal Australian Fleet Reserve were introduced as from 13th December, 1950. This Reserve is comprised of two classes, viz. :—(a) former ratings who receive full benefits under the Defence Forces Benefits Act and are required to serve five years in the Royal Australian Fleet Reserve as a consideration for receipt of these benefits, and (b) former ratings who have previously served in the Permanent Naval Forces of the Royal Australian Navy, Royal Navy, or a Dominion Navy subject to a minimum period of three years' service and an absence of not more than five years. No retainer is payable to members under (a) and no training is carried out. Members under (b) receive an annual retainer of £24 subject to completing 14 days' annual training. Ratings receive pay applicable to Royal Australian Navy personnel whilst under training.

- (5) **Fleet Air Arm**—The Fleet Air Arm of the Royal Australian Navy consists of two Naval Air Stations, H.M.A.S. *Albatross* at Nowra, New South Wales and H.M.A.S. *Nirimba* at Schofields, New South Wales; and two light fleet aircraft carriers, H.M.A.S. *Sydney* and H.M.A.S. *Vengeance*. In May, 1953, H.M.A.S. *Sydney* carried the Commonwealth Coronation Contingent to the United Kingdom and was present at the Spithead Coronation Review in June, returning to Australia via the United States in August, 1953.
- (6) **Ship Construction and Repair**—Provision is made for the maintenance in Australia of a nucleus ship construction and repair industry capable of rapid expansion in time of war. The present approved programmes provide for the construction of four destroyers (three being built) and six anti-submarine frigates (work on four in progress); the conversion of five "Q" class destroyers to fast anti-submarine frigates (one completed and work on four in progress); the modernization of three "Tribal" class destroyers (one completed and work on one in progress); and an extensive refit of H.M.A.S. *Hobart*.

(c) *The Relation of New Weapons.* Careful consideration has been given to the implications of new weapons, and the decisions in regard to the Navy are based on the broad conclusions of great naval powers that these weapons should be introduced by the normal process of evolution, first into existing ships, and later perhaps into an entirely new form of fighting ship. The same authoritative opinion is of the view that there will be no rapid development which will render vessels such as carriers, cruisers and destroyers obsolete within the near future.

(ii) *Naval Board.* The Australian Navy is administered by a Board consisting of the Minister for the Navy with four Naval Members, and the Secretary, Department of the Navy; the seat of administration is at Melbourne.

(iii) *Naval College.* Sixty-four Cadet Midshipmen (including five from the Royal New Zealand Navy) entered the Naval College for training in the year commenced January, 1953. At 30th June, 1953, there were 141 Cadet Midshipmen undergoing training.

(iv) *Training Establishments.* Flinders Naval Depot, Victoria, remains the principal training establishment for ratings in the permanent forces, while several advanced training schools are established in Port Jackson, New South Wales. Air training is carried out at Nowra, New South Wales.

(v) *The Australia Naval Station.* Defined limits of the Australia Station are as follows :—

Eastern—

From 3° 30' North 169° East, south to 1° South, thence east to 170° East, thence south along this meridian to 30° South, thence to 45° South, 160° East, thence south along this meridian.

Northern—

From 3° 30' North 169° East, west to 125° East, thence south to the Coast of Celebes, thence west along the Coast of Celebes to 120° East, thence south to 11° 30' South, thence west to 11° 30' South 95° 15' East.

Western—

From 11° 30' South 95° 15' East, south along this meridian to 30° South, thence west along this parallel to 80° East, thence south along this meridian.

(vi) *Foreign Service.* The R.A.N. is represented in Japan by H.M.A.S. *Commonwealth* base establishment in Kure. During the year ended June, 1953, the following ships of the R.A.N. served in Korean waters :—H.M.A. Ships, *Warramunga*, *Bataan*, *Anzac*, *Condamine* and *Culgoa*.

(vii) *Papua and New Guinea Division of the Royal Australian Navy.* A Papua and New Guinea Division of the Royal Australian Navy, consisting of native ratings, was inaugurated in July, 1951, as a separate part of the Permanent Naval Forces, for employment in Papua and New Guinea and waters adjacent thereto.

3. Ships of the Royal Australian Navy.—The following ships were in commission or in reserve in June, 1953 :—

## SHIPS OF THE ROYAL AUSTRALIAN NAVY, JUNE, 1953.

Vessel.	Description.	Displacement.
<b>In Commission—</b>		<b>Tons.</b>
<i>Sydney</i> .. .. .	Aircraft Carrier .. .. .	14,000
<i>Vengeance</i> .. .. .	" " .. .. .	14,000
<i>Australia</i> .. .. .	Cruiser .. .. .	10,000
<i>Anzac</i> .. .. .	Destroyer .. .. .	2,325
<i>Tobruk</i> .. .. .	" " .. .. .	2,436
<i>Bataan</i> .. .. .	" " .. .. .	1,870
<i>Arunta</i> .. .. .	" " .. .. .	1,870
<i>Quadrant</i> .. .. .	Frigate .. .. .	1,760
<i>Shoalhaven</i> .. .. .	" " .. .. .	1,544
<i>Culgoa</i> .. .. .	" " .. .. .	1,420
<i>Murchison</i> .. .. .	" " .. .. .	1,544
<i>Macquarie</i> .. .. .	" " .. .. .	1,420
<i>Condamine</i> .. .. .	" " .. .. .	1,420
<i>Hawkesbury</i> .. .. .	" " .. .. .	1,420
<i>Barcoo</i> (Surveying Ship)	" " .. .. .	1,544
<i>Warrego</i> (Surveying Ship)	" " .. .. .	1,060
<i>Wagga</i> .. .. .	Ocean Minesweeper .. .. .	650
<i>Cootamundra</i> .. .. .	" " .. .. .	650
<i>Junee</i> .. .. .	" " .. .. .	650
<i>Fremantle</i> .. .. .	" " .. .. .	650
<i>Gladstone</i> .. .. .	" " .. .. .	650
<i>Mildura</i> .. .. .	" " .. .. .	650
<i>Lachlan</i> (Surveying Ship), on loan to the New Zealand Navy .. .. .	Frigate .. .. .	1,420
<b>In Reserve—</b>		
<i>Shropshire</i> .. .. .	Cruiser .. .. .	9,870
<i>Quality</i> .. .. .	Destroyer .. .. .	1,760
<i>Barwon</i> .. .. .	Frigate .. .. .	1,420
<i>Burdekin</i> .. .. .	" " .. .. .	1,420
<i>Diamantina</i> .. .. .	" " .. .. .	1,420
<i>Gascoyne</i> .. .. .	" " .. .. .	1,420
<i>Swan</i> .. .. .	" " .. .. .	1,060
<i>Ararat</i> .. .. .	Ocean Minesweeper .. .. .	650
<i>Bunbury</i> .. .. .	" " .. .. .	650
<i>Bowen</i> .. .. .	" " .. .. .	650
<i>Bundaberg</i> .. .. .	" " .. .. .	650
<i>Benalla</i> .. .. .	" " .. .. .	650
<i>Castlemaine</i> .. .. .	" " .. .. .	650
<i>Deloraine</i> .. .. .	" " .. .. .	650
<i>Dubbo</i> .. .. .	" " .. .. .	650
<i>Glenelg</i> .. .. .	" " .. .. .	650
<i>Gympie</i> .. .. .	" " .. .. .	650
<i>Horsham</i> .. .. .	" " .. .. .	650
<i>Katoomba</i> .. .. .	" " .. .. .	650
<i>Kapunda</i> .. .. .	" " .. .. .	650
<i>Lithgow</i> .. .. .	" " .. .. .	650



SHIPS OF THE ROYAL AUSTRALIAN NAVY, JUNE, 1953—*continued.*

Vessel.	Description.	Displacement.
<i>In Reserve—continued.</i>		Tons.
<i>Parkes</i> .. .. .	Ocean Minesweeper .. .. .	650
<i>Rockhampton</i> .. .. .	" " .. .. .	650
<i>Strahan</i> .. .. .	" " .. .. .	650
<i>Shepparton</i> .. .. .	" " .. .. .	650
<i>Townsville</i> .. .. .	" " .. .. .	650
<i>Platypus</i> .. .. .	Depot Ship .. .. .	3,455
<i>Under Dockyard Control—</i>		
<i>Hobart</i> .. .. .	Cruiser .. .. .	7,100
<i>Warramunga</i> .. .. .	Destroyer .. .. .	1,870
<i>Queenborough</i> .. .. .	" .. .. .	1,760
<i>Quiberon</i> .. .. .	" .. .. .	1,760
<i>Quickmatch</i> .. .. .	" .. .. .	1,760
<i>Latrobe</i> .. .. .	Ocean Minesweeper .. .. .	650
<i>Colac</i> .. .. .	" " .. .. .	650
<i>Cowra</i> .. .. .	" " .. .. .	650
Miscellaneous vessels in commission and reserve—sixty-one		

4. **Strength of Royal Australian Navy.**—The serving strength of the Royal Australian Naval Forces, both permanent and reserves, at 30th June, 1953, was 1,178 officers and 12,767 ratings including 60 native ratings of the Papua and New Guinea Division of the Royal Australian Navy. In addition, ten officers and 248 ratings of the Women's Royal Australian Naval Service were serving and 180 Cadet Midshipmen were undergoing training, including 141 at the Naval College. Reserve strength comprised 1,200 Officers and 5,722 ratings.

### § 3. Military Defence.

1. **State Systems.**—A detailed historical account of the Australian defence forces prior to Federation will be found in Official Year Book No. 2, pp. 1075–1080. *See also* Official Year Book No. 12, p. 999.

The strength of the military forces of the States on 31st December, 1900 (the eve of Federation) was:—New South Wales, 9,338; Victoria, 6,335; Queensland, 4,028; South Australia, 2,932; Western Australia, 2,696; Tasmania, 2,024; total for Australia, 27,353. This total is exclusive of cadets, reservists and rifle club members.

2. **Commonwealth Systems.**—(i) *General.* Under the terms of the Constitution Act 1900, the Commonwealth took over control of defence matters in March, 1901. The growth of the Commonwealth Military Forces may be considered to have taken place in sixteen phases. For particulars of the phases which cover the period from the welding together of the military forces of the States into one homogeneous army in 1902 up to the decision to increase the training strength of the militia to 70,000 in the year before the 1939–45 War (phases 1–7), *see* Official Year Book No. 36 and earlier issues.

Phases 8–10, covering the period immediately prior to, and just following, the outbreak of the 1939–45 War, relate to the initial steps necessary to put the Australian Military Forces on a war-time basis, and to its organization into commands.

The eleventh phase, in January, 1942, was the division of Northern, Eastern and Southern Commands into separate commands and base headquarters to handle operational and administrative matters respectively, and the twelfth phase was the revision of the

machinery for command administration of lines of communication areas. The thirteenth phase was the appointment of Lieutenant-General Sir Iven Mackay as G.O.C.-in-C. Home Forces commanding the forces in Northern, Eastern and Southern Commands. The fourteenth phase covers the period following the outbreak of war with Japan and the entry of United States of America Forces into the South-West Pacific Area, and relates to the appointment of General Sir Thomas Blamey as Commander-in-Chief, Australian Military Forces, the cessation of the Military Board, and the replacement of the system of commands and bases by the field army and lines of communication areas. In March, 1943, First and Second Armies took over from Queensland, New South Wales and Victoria Lines of Communication Areas the command of all coast and static anti-aircraft artillery defences and training establishments. On 16th June, 1944, Western Command was re-established and took over the combined responsibilities of Third Australian Corps and Western Australia Line of Communication Area.

The fifteenth phase was the re-introduction in March, 1946, of the Military Board and the organization of commands and military districts, and the sixteenth phase was the commencement of the National Service Training Scheme in August, 1951 (see § 1, para. 6 *ante* and sub-para. (iv) (c) following).

For greater detail on phases 8-14 see Official Year Book No. 38 and earlier issues.

(ii) *Estimated Population of Military Age, 30th June, 1952.* The following particulars show the estimated numbers of males of military age in the population of Australia as at 30th June, 1952. The total number of cadet age, 14 and over, and under 18, was 235,648; of citizen soldier age, 18 and over, and under 26, 519,130; and 26 and over, and under 35, 638,534; making a total of 1,157,664, 18 and over, and under 35, which is considered the best period for military service. In addition to the above-mentioned it was estimated that there were 1,337,775 males 35 and over, and under 60, in Australia at 30th June, 1952.

(iii) *Allotment of Units.* Under the Command Organization (*see above*) units are raised on a territorial basis, each State supplying its proportion of the personnel required for the fighting services, the organization at 30th June, 1953 being as follows:—

COMMAND ORGANIZATION.

Army Headquarters.

Northern Command	Eastern Command	Southern Command	Central Command	Western Command	Tasmania Command	Northern Territory Command
All formations and units in 1st Military District and New Guinea.	All formations and units in 2nd Military District.	All formations and units in 3rd Military District.	All formations and units in 4th Military District.	All formations and units in 5th Military District.	All formations and units in 6th Military District.	All formations and units in 7th Military District.

Military Districts conform generally to State or Territory areas, as follows:—1st Military District, Queensland; 2nd, New South Wales; 3rd, Victoria; 4th, South Australia; 5th, Western Australia; 6th, Tasmania; 7th, Northern Territory. Third Military District includes a considerable portion of Southern New South Wales, and 4th includes Broken Hill.

(iv) *Military Training Systems.* (a) *General.* Particulars of the military training systems in operation prior to the 1939-45 War, first on a compulsory basis and later voluntary, will be found in Official Year Book No. 38 and earlier issues.

The present plan for the raising of the Australian Regular Army envisages a total of 26,000 soldiers and 5,000 civilians. The plan for the Citizen Military Force contemplates a strength of 72,000 including National Servicemen, by December, 1954.

(b) *The Australian Cadet Corps.* The Australian Cadet Corps is a voluntary organization comprised of School Cadet units and Regimental Cadet units. It serves as a training ground to provide, to some extent, the future officers and non-commissioned officers of the Australian Military Forces, and, as such, occupies an important position in the scheme of national defence. School Cadet units are raised at educational establishments in all States of the Commonwealth. The minimum age for enrolment is the year in which the applicant reaches the age of 14 years, and cadets, who in the large majority of schools receive a free issue of A.M.F. pattern uniform, may remain in the Cadet Corps until they cease to be pupils of the educational establishments concerned. A few units retain their own pattern school uniform and are not issued with A.M.F. pattern uniforms. Provision is made for the appointment of officers, warrant and non-commissioned officers on an authorized establishment scale from within school units. School cadet units are not affiliated with Citizen Military Force Units.

Regimental Cadet units have been raised in close affiliation with Citizen Military Force units, whose uniform they wear with the addition of the word "Cadets" directly under the title of the parent unit. These units are manned by boys who have either left school or are students at schools where no School Cadet unit has been raised. However, Regimental Cadet units were being disbanded late in 1953.

The establishment for the whole Corps is 35,000 all ranks, and by April, 1953, comprised 272 School Cadet units with a posted strength of 32,492 all ranks and 3,067 Regimental Cadets posted to Citizen Military Force units.

(c) *National Service Training Scheme.* Under the National Service Scheme (see § 1, para. 6 above) the Army is required to train 29,250 trainees per year, effected by three intakes each of 9,750 trainees. The first intake commenced training in August, 1951.

(v) *Women's Services.* In November, 1950, approval was given for the enlistment of women into the Australian Regular Army, on a limited scale. Enlistment commenced immediately into the Australian Women's Army Corps. During June, 1950, the Australian Women's Army Corps was re-designated the Women's Royal Australian Army Corps (W.R.A.A.C.). Members are employed in establishments in direct substitution for male soldiers. The Women's Services in the Australian Regular Army now comprise two Corps only:—(a) Royal Australian Army Nursing Corps; (b) Women's Royal Australian Army Corps.

Women's Services have been incorporated in the Citizen Military Forces; it is proposed to raise sixteen companies of the Women's Royal Australian Army Corps and twelve companies of the Royal Australian Army Nursing Corps, a total of 3,900 all ranks, within the C.M.F.

(vi) *Korea.* On 2nd August, 1950, the Commonwealth Government announced its decision to raise and despatch to Korea one infantry battalion as part of Australia's contribution of military assistance to the United Nations. 3 Battalion, the Royal Australian Regiment, stationed in Japan, brought up to strength by special enlistments flown to Japan from Australia, became the Special Korean Force, and on 27th September, 1950, sailed from Japan for Korea where it joined 27 British Brigade. For its gallantry on 24th and 25th April, 1951, 3 Battalion was awarded the United States Presidential Citation by the United States of America. On 4th October, 1951, the Commonwealth Government announced that a second infantry battalion would be sent to Korea to join 3 Battalion. On 3rd March, 1952, 1 Battalion, The Royal Australian Regiment, which had been brought up to strength at Ingleburn, New South Wales, embarked for Japan where it was equipped before moving to Korea. 1 Battalion joined 3 Battalion, under operational control of 28 British Brigade, 1st Commonwealth Division, on 1st June, 1952. 2 Battalion, The Royal Australian Regiment, after training at Puckapunyal, Victoria, relieved 1 Battalion in Korea on 21st March, 1953, the latter battalion returning to Australia.

(vii) *The Staff College.* Until 1938 the training of staff officers was carried out in the various Military Districts throughout Australia, except in cases where officers were selected from time to time to attend courses abroad. In 1938 an Australian Command and Staff School, located in the original Officers' Mess at Victoria Barracks, Sydney,

was established. Between 1939 and 1945 the training of staff officers was carried out under varying conditions by different schools in accordance with the changing needs of the war.

Early in 1946 the Staff School (Australia) was established at Seymour in Victoria and re-designated the Staff College in conformity with other Empire training establishments for training officers for command and staff appointments. The College was later moved to Queenscliff, Victoria, where it is at present situated. The courses are of ten months' duration and are held from January to November each year. The normal intake is 30 students and, on successfully completing the course, an officer is awarded the symbol "psc". The course is designed to train selected officers for war, and in so doing to fit them for Command or Grade II. staff appointments. Each course includes among the students, Army representatives of the United Kingdom and other Dominions and countries. Included in the 1953 course were students from the United Kingdom, Canada, New Zealand, India, Pakistan, the United States of America and Burma. Vacancies on each course are reserved also for officers who may be nominated by the Royal Australian Navy, the Royal Australian Air Force and the Commonwealth Public Service.

In order to ensure common standards in tactical doctrine and staff and command training throughout the Empire, liaison is maintained with other Staff Colleges; and to this end there is also a reciprocal exchange of instructors. To this extent it may be said that the Staff College is imperial in character.

(viii) *Royal Military College.* The Royal Military College was established in 1911 at Duntroon in the Australian Capital Territory for the purpose of providing trained officers for the Army. The conditions of entry are laid down in the Royal Military College Regulations and provide for admission by "normal", "service" and "special" entries. The length of the normal course is four years; "service" entry cadets attend for three years; and "special" entries for one year.

While at the College, cadets receive pay and allowance of 14s. 1d. per day in their first year, rising to 22s. 9d. per day in their fourth. Uniform maintenance allowance of 1s. 9d. per day is additional, and a further 6d. per day is paid to cadets on attaining the age of 18 years. The course of instruction is organized into military and civil departments and the instructional staff comprises officers of the army and civilian professors. On graduation, cadets are appointed lieutenants in the Australian Regular Army. The College also trains New Zealand cadets for commissions in the New Zealand Permanent Forces under an agreement made with the Government of that Dominion.

(ix) *The Officer Cadet School.* The Officer Cadet School was established in 1951 at Portsea, Victoria, for the purpose of speeding up the supply of junior regimental officers for the Australian Regular Army. Serving members of the Australian Regular Army, the Citizen Military Forces, National Servicemen, and civilians between the ages of 18 and 23 years, are eligible to apply for entrance. The course is of six months' duration, and on graduation, cadets are appointed second-lieutenants in the Australian Regular Army. They then normally proceed to further training at the Army School of the Arm or Service to which they have been allotted before being posted to regimental duties.

(x) *The Women's Royal Australian Army Corps School.* The W.R.A.A.C. School was established in 1952 at Mildura, Victoria. It has two wings, one whose primary task is the training of Officer Cadets for the W.R.A.A.C., the other being for the training of non-commissioned officers at all levels and for other special courses. The Officer Cadets are selected from eligible applicants, who may be serving members between 21 and 32 years of age, or civilians between 21 and 30 years of age. The course is of six months' duration, and on graduation, cadets are appointed lieutenants in the Women's Royal Australian Army Corps.

(xi) *The Army Apprentices' School.* The Army Apprentices' School was opened in 1948 at Balcombe, Victoria, with the aim of training youths as skilled tradesmen for the Australian Regular Army, and to form a background for an Army career with prospects of promotion. The course is open to boys between the ages of 15 and 17 years

and provides training in a number of highly skilled trades. A three-year course of intensive theoretical and practical work at the Apprentices' School is followed by one year in an appropriate Army workshop or technical unit. At the end of their third year, boys are given their Army trade test and also take the Victorian Apprenticeship Commission final grade public examinations, which ensures that they will be accepted as qualified tradesmen in civil life when they eventually leave the Army. In addition to trade training, the Apprentices' School provides general educational facilities up to the School Leaving Standard.

(xii) *Army Schools.* Army Schools have been established for the major Arms and Services for the purpose of training officers and other ranks in the up-to-date techniques of their own Arm or Service, to qualify them for promotion requirements, and to produce trained instructors. In addition, a School of Tactics and Administration which has been established at Seymour, Victoria, provides qualifying and instructional courses in current tactical and administrative doctrine for members of all Arms and Services. Courses at Army Schools are conducted for members of both the Australian Regular Army and the Citizen Military Forces.

The following Army Schools have been established :—School of Tactics and Administration; Armoured School; School of Artillery; School of Military Engineering; School of Survey; School of Signals; School of Infantry; Royal Australian Army Medical Corps School of Army Health; Royal Australian Army Service Corps School; Royal Australian Army Ordnance Corps School; Royal Australian Electrical and Mechanical Engineers Training Centre; Transportation Training Centre.

(xiii) *Rifle Clubs.* The Australian Rifle Club movement, which had its origin in 1888, is provided for in the Defence Act and comprises an Australian Council of State Rifle Associations (which functions in an advisory capacity to the Minister and in the promotion of inter-empire and interstate rifle competitions), State Rifle Associations, District Rifle Club Unions and Rifle Clubs. When placed in recess, the efficient strength of the rifle club movement was 1,018 clubs and 36,478 members. Approximately 20 per cent. of this number served overseas and a further 60 per cent. performed home service duties during the recent war. Rifle shooting activities were resumed in 1946 and the strength of the movement as at 31st December, 1953 was 1,077 clubs and 50,000 members.

(xiv) *The Australian Battles Nomenclature Committee.* The Minister for the Army gave approval on the 25th July, 1947 for the formation of the Australian Battles Nomenclature Committee to tabulate and classify the operations fought in the Pacific Zones in the 1939-45 War which involved the Australian Military Forces, to define their geographical and chronological limits and to advise the United Kingdom Battles Nomenclature Committee regarding operations in zones other than the Pacific Zone in which the Australian Military Forces participated. Sub-committees were later appointed to study the various campaigns in order to classify the operations into battles, actions and engagements.

3. **Strength of Australian Military Forces.**—The effective strength of the Australian Military Forces at 31st December, 1953 was as follows :—Australian Regular Army, 21,327; Regular Army Special Reserve, 4,256; Citizen Military Force (including National Service Trainees), 69,928; Australian Cadet Corps, 29,509.

## § 4. Air Defence.

1. **General.**—A statement respecting the preliminary steps taken in connexion with the development of air defence will be found in Official Year Book No. 18, p. 610, and one on the expansion and development and zones and operations of the Royal Australian Air Force during the 1939-45 War appears in Official Year Book No. 36, p. 1027.

2. **Operations in Korea and Malaya.**—At the conclusion of the 1939-45 War, the R.A.A.F. provided part of the air component of the British Commonwealth Occupation Forces in Japan. Soon after the 38th parallel was violated by the North Koreans on 25th June, 1950, No. 77 Squadron in Japan was made available as part of the United Nations Forces opposing this aggression. Within one week from the commencement of

hostilities, No. 77 Squadron R.A.A.F. already operationally trained and equipped, had completed its first mission. From that date until 27th July, 1953, the Squadron, operating continuously from different bases in Korea, carried out 21,032 individual sorties.

The Squadron is equipped with Meteor aircraft and is based in Korea.

Australian assistance has been provided, in the form of two R.A.A.F. Squadrons (one transport and one bomber), to the Malayan authorities against Communist bandit action. The first Australian aircraft, a Dakota of No. 38 Squadron, left Darwin on 18th June, 1950. The Lincolns of No. 1 Squadron arrived in July, 1950, and both Squadrons were soon in action. On 2nd December, 1952, the transport squadron was withdrawn from Malaya. Up to this date it had flown 14,792 hours. Up till January, 1954, No. 1 Squadron had dropped more than 18,356,000 lb. of bombs during these operations. Working in close co-operation with the ground forces, this bombing was mainly on jungle hideouts frequented by the insurgents. Such bombing and strafing of bandit hideouts calls for extreme accuracy.

**3. Administration and Organization.**—The Department of Air is responsible for policy for organization and control of the Royal Australian Air Force. The Air Board is responsible, subject to approved policy, for the control and administration of the Royal Australian Air Force, and is constituted as follows:—Chief of the Air Staff, Air Member for Personnel, Air Member for Technical Services, Air Member for Supply and Equipment, Citizen Air Force Member and the Secretary, Department of Air.

Headquarters of the Royal Australian Air Force is located at Melbourne. An Overseas Headquarters is located at London and an Air Attaché at Washington, United States of America.

The units of the Royal Australian Air Force are organized in three functional Commands throughout Australia and its territories.

The Commands are:—

**Home Command.**—Home Command is responsible for the command of operational units and the conduct of their operations within Australia and its territories.

**Training Command.**—Training Command is responsible for the command of training units, recruitment and individual training in the R.A.A.F.

**Maintenance Command.**—Maintenance Command is responsible for the command of supply and servicing units, and supply and servicing, including technical services, of the R.A.A.F. in Australia.

The organization of the Royal Australian Air Force includes the following types of formations and units:—

- (a) Area Headquarters. There are three Area Headquarters (North Eastern, North Western and Western) responsible to Home Command for the command of units within their geographical areas.
- (b) Sub-formations, comprising a headquarters unit to control the activities of a number of units at one location. Each formation has a base squadron which provides common services to all units at the location.
- (c) Flying Squadrons. These bomber, fighter, transport, target-towing and maritime reconnaissance squadrons undertake the operational and operational training flying commitments of the R.A.A.F.
- (d) Aircraft Depots. These units specialize in major overhauls, etc., of aircraft and equipment and relieve flying unit ground staff of these commitments.
- (e) Stores Depots. Stores and equipment ordered by the R.A.A.F. are delivered to these centrally located depots for distribution to units.
- (f) Flying Training, Ground Training, Navigation, Radio and Air Armament Training Units, which specialize in the aircrew and ground training required by the R.A.A.F.

- (g) Airfield Construction Squadrons. These units specialize in the construction of R.A.A.F. aerodromes and associated buildings and works services.
- (h) Royal Australian Air Force College. This unit is the training college for officer cadet entrants to the R.A.A.F.
- (i) Telecommunications Units. These units are responsible for the communications services of the R.A.A.F.
- (j) R.A.A.F. Staff College. This college trains specially selected R.A.A.F. officers for higher staff and command posts.

4. **National Service Training Scheme.**—Under the National Service Training Scheme, 3,330 personnel undergo training each year (*see also* § 1, para. 6 above).

5. **Aircraft.**—Some of the aircraft which are at present being used in the Royal Australian Air Force are : bomber squadrons—Lincoln and Canberra ; fighter squadrons—Mustang, Vampire and Meteor ; transport squadrons—Dakota ; maritime reconnaissance squadrons—Lincoln and Neptune ; tactical reconnaissance—Mustang and Auster ; training—Tiger Moth, Wirraway, Mustang, Dakota, Lincoln, Beaufighter and Winjeel.

6. **Establishment.**—The Royal Australian Air Force establishment, as proposed, comprises—(a) a Home Defence Organization, (b) Task Force elements and (c) a Training Organization, consisting in all of approximately 16,450 personnel.

7. **Strength of Royal Australian Air Force.**—At 1st January, 1954, the strength of the Royal Australian Air Force was as follows :—Permanent Air Force, 14,831 ; Active Citizen Air Force, 330 ; Active Reserve, 1,790 and General Reserve, 17,541. In addition, 3,330 National Service Trainees undergo 154 days' training each year and are then transferred to the Reserve.

## § 5. Casualties : Australian Services, 1939-45 War.

1. **General.**—This section contains revised information, in detail similar to that published in Official Year Book No. 37, on casualties to members of each of the Australian Fighting Services during the 1939-45 War. The information is dissected into nature of casualty, theatre of war and zone of operations. A separate table is devoted to each of the following classes of casualties—(i) Battle Casualties, (ii) Non-battle Casualties on Operations or in Operational Areas, and (iii) Casualties not on Operations or in Operational Areas. A summary table is also included, showing all casualties in each Service according to the nature of casualty. The figures for the respective Services are as comparable as inherent differences in the nature of the Services, their methods of operation and their systems of records will permit. The letterpress accompanying each table contains such explanation as is considered necessary to amplify or qualify the figures shown.

All casualties to servicemen and women during the 1939-45 War are included in these tables. Deaths and illnesses, etc., from natural causes are *not* included, and complete information for all Services is not available. Deaths, however, numbered 3,725 (R.A.N., 145 ; A.M.F., 3,216 ; R.A.A.F., 364) and illnesses for the A.M.F. alone numbered 1,557,651 cases.

It should be noted that while the figures for "Killed" and "Prisoners-of-war escaped, etc." refer to *persons*, those for "Wounded and injured" refer to *cases*. Thus totals represent the number of casualties, and not the number of persons who suffered therein.

2. **All Casualties, Australian Services, 1939-45 War.**—The following table is a summary of all casualties to members of the Fighting Services during the 1939-45 War.

## ALL CASUALTIES : AUSTRALIAN SERVICES, 1939-45 WAR.(a)

Particulars.	Royal Australian Navy.	Australian Military Forces.	Royal Australian Air Force.	All Services.
Killed, died of wounds, injuries, etc. . .	2,077	21,929	10,277	34,283
Prisoners-of-war escaped, recovered or repatriated . . . . .	263	20,746	1,255	22,264
Wounded, injured, etc. (cases) . . . . .	579	177,312	3,236	181,127
<b>Total . . . . .</b>	<b>2,919</b>	<b>219,987</b>	<b>14,768</b>	<b>237,674</b>

(a) Excludes deaths and illnesses from natural causes.

3. **Battle Casualties, Australian Services, 1939-45 War.**—The table hereunder shows particulars of battle casualties under the headings of "War against Germany" and "War against Japan". The following brief explanations are considered necessary for the sake of preciseness.

R.A.N. : "Wounded and injured" includes all cases of wounded and injured in action *and on service*. Separation into operational and non-operational areas is not practicable.

A.M.F. : Figures include 222 deaths and 34 wounded in sinking of A.H.S. *Centaur* off the east coast of Australia and 15 deaths and 138 wounded in air raids on Darwin and Port Hedland.

R.A.A.F. : Figures refer to casualties incurred in operations against the enemy.

## BATTLE CASUALTIES : AUSTRALIAN SERVICES, 1939-45 WAR.(a)

Particulars.	Royal Australian Navy.	Australian Military Forces.	Royal Australian Air Force.	All Services.
<b>WAR AGAINST GERMANY.</b>				
<b>Killed—</b>				
Killed in action and missing, presumed dead . . . . .	900	2,610	5,036	8,546
Died of wounds . . . . .	3	700	58	761
Died of wounds while prisoner-of-war . . . . .	..	56	9	65
Died of sickness, disease and injury while prisoner-of-war . . . . .	..	95	} 14	200
Presumed died while prisoner-of-war . . . . .	..	(b) 91		
<b>Total killed . . . . .</b>	<b>903</b>	<b>3,552</b>	<b>5,117</b>	<b>9,572</b>
Prisoners-of-war escaped, recovered or repatriated . . . . .	25	6,874	1,020	7,919
Wounded and injured in action (cases)	26	8,925	529	9,480
<b>Total . . . . .</b>	<b>954</b>	<b>19,351</b>	<b>6,666</b>	<b>26,971</b>

(a) Excludes deaths and illnesses from natural causes.

(b) Includes 79 "Killed in action".



## BATTLE CASUALTIES: AUSTRALIAN SERVICES, 1939-45 WAR(a)—continued.

Particulars.	Royal Australian Navy.	Australian Military Forces.	Royal Australian Air Force.	All Services.
WAR AGAINST JAPAN.				
Killed—				
Killed in action and missing, presumed dead .. .. .	840	6,294	1,140	8,274
Died of wounds .. .. .	41	1,090	65	1,196
Died of wounds while prisoner-of-war	116	50	138	8,031
Died of sickness, disease and injury while prisoner-of-war .. .. .		5,336		
Presumed died while prisoner-of-war		(b) 2,391		
Total killed .. .. .	997	15,161	1,343	17,501
Prisoners-of-war escaped, recovered or repatriated .. .. .	238	13,872	235	14,345
Wounded and injured in action (cases) ..	553	13,191	253	13,997
Total .. .. .	1,788	42,224	1,831	45,843

## ALL THEATRES OF WAR.

Killed—				
Killed in action and missing, presumed dead .. .. .	1,740	8,904	6,176	16,820
Died of wounds .. .. .	44	1,790	123	1,957
Died of wounds while prisoner-of-war	116	106	161	8,296
Died of sickness, disease and injury while prisoner-of-war .. .. .		5,431		
Presumed died while prisoner-of-war		(c) 2,482		
Total killed .. .. .	1,900	18,713	6,460	27,073
Prisoners-of-war escaped, recovered or repatriated .. .. .	263	20,746	1,255	22,264
Wounded and injured in action (cases) ..	579	22,116	782	23,477
Total .. .. .	2,742	61,575	8,497	72,814

(a) Excludes deaths and illnesses from natural causes.  
(c) Includes 551 "Killed in action".

(b) Includes 472 "Killed in action".

4. Non-Battle Casualties on Operations or in Operational Areas, Australian Services, 1939-45 War.—The next table shows particulars of casualties, other than in battle, incurred on operations or in operational areas, classified according to theatre of war.

R.A.N.: "Killed, etc." represents mainly fatal accidents on service, including drownings. All personnel injured on service are included in the previous table.

A.M.F.: Figures include all casualties in operational areas other than actual battle casualties.

R.A.A.F. : Figures represent casualties in operational areas, but not directly the result of operations. They include all casualties in the United Kingdom other than those incurred in operations.

**NON-BATTLE CASUALTIES ON OPERATIONS OR IN OPERATIONAL AREAS :  
AUSTRALIAN SERVICES, 1939-45 WAR.(a)**

Particulars.	Royal Australian Navy.	Australian Military Forces.	Royal Australian Air Force.	All Services.
<b>WAR AGAINST GERMANY.</b>				
Killed, died of injuries, etc. . .	42	343	1,496	1,881
Wounded, injured, etc. (cases)	..	9,196	845	10,041
<b>Total</b>	<b>42</b>	<b>9,539</b>	<b>2,341</b>	<b>11,922</b>
<b>WAR AGAINST JAPAN.</b>				
Killed, died of injuries, etc. . .	57	822	689	1,568
Wounded, injured, etc. (cases)	..	24,200	633	24,833
<b>Total</b>	<b>57</b>	<b>25,022</b>	<b>1,322</b>	<b>26,401</b>
<b>ALL THEATRES OF WAR.</b>				
Killed, died of injuries, etc. . .	99	1,165	2,185	3,449
Wounded, injured, etc. (cases)	..	33,396	1,478	34,874
<b>Total</b>	<b>99</b>	<b>34,561</b>	<b>3,663</b>	<b>38,323</b>

(a) Excludes deaths and illnesses from natural causes.

5. Casualties not on Operations or in Operational Areas, Australian Services, 1939-45 War.—The figures hereunder relate to all casualties other than those in paras. 3 and 4 above.

R.A.N. : "Killed, etc." represents fatal accidents mainly ashore. All personnel injured on service are included in Battle Casualties.

A.M.F. : Figures include all casualties during training and from traffic accidents, etc.

R.A.A.F. : Figures for "Australia" include all training casualties in Australia ; those for "Overseas" include all casualties incurred in Canada and Rhodesia. Only the more serious cases which were reportable to next-of-kin are represented. Figures for others are not available.

## CASUALTIES NOT ON OPERATIONS OR IN OPERATIONAL AREAS : AUSTRALIAN SERVICES, 1939-45 WAR.(a)

Particulars.	Royal Australian Navy.	Australian Military Forces.	Royal Australian Air Force.	All Services.
AUSTRALIA.				
Killed, died of injuries, etc. . .	58	2,049	1,441	3,548
Wounded, injured, etc. (cases) . .	..	121,800	873	122,673
Total . . . . .	58	123,849	2,314	126,221
OVERSEAS.				
Killed, died of injuries, etc. . .	20	2	168	190
Wounded, injured, etc. (cases) . .	..	..	60	60
Total . . . . .	20	2	228	250
TOTAL.				
Killed, died of injuries, etc. . .	78	2,051	(b) 1,632	(b) 3,761
Wounded, injured, etc. (cases) . .	..	121,800	(c) 976	(c) 122,776
Total . . . . .	78	123,851	2,608	126,537

(a) Excludes deaths and illnesses from natural causes. (b) Includes 23 members of the W.A.A.A.F. not allocated between Australia and Overseas. (c) Includes 42 members of the W.A.A.A.F. and one of the R.A.A.F.N.S. not allocated between Australia and Overseas.

## § 6. War Gratuities.

1. 1914-18 War.—Reference is made in earlier issues of the Official Year Book (*see* No. 15, p. 930) to the bonus payable in accordance with the War Gratuity Acts of 1920 as a war service gratuity to soldiers and sailors who served in the 1914-18 War. Owing to limitations of space this information cannot be repeated, but it may be noted that the gratuity was paid in Treasury Bonds, maturing not later than 31st May, 1924, and bearing interest at 5½ per cent. In necessitous cases payment was made in cash when desired by the person entitled. The first gratuities were made available about the beginning of June, 1920. The total amount paid to 30th June, 1953 was £27,515,036 and bonds amounting to £11,780 had not been redeemed at that date.

2. 1939-45 War.—Briefly the War Gratuity Act 1945-1947 provided for payment to members of the Forces of war gratuity (a) at the rate of £3 15s. per month of oversea service, subject to a qualifying period of 90 days continuous or 180 days in the aggregate in twelve months, and of certain subsequent periods in Australia, and (b) at the rate of 15s. per month of Australian service after 6th December, 1941, subject to a qualifying period of six months' service, other than that for which payment at the oversea rate was made. All members who performed oversea qualifying service were paid a minimum of twelve months' gratuity at the oversea rate, irrespective of whether the full period of twelve months had been completed or not.

In cases of death due to war service either overseas or in Australia, where members of the family were totally dependent on the deceased member, a minimum payment equivalent to three years' gratuity calculated at the overseas gratuity rate could be made. In respect of all other cases of death, overseas and in Australia, due to war service, gratuity at the rate accruing to the member at the date of notification of his death was continued for a further seven months.

The period of entitlement to gratuity terminated at the date of discharge or on 30th June, 1947, whichever was the earlier. The bulk of the payments were made on 3rd March, 1951, but in certain circumstances payments were made at earlier dates. Compound interest was allowed at the rate of 3.25 per cent. per annum on the yearly credit balances. For greater detail of the provisions of the Act *see* Official Year Book No. 36, pp. 1073-4.

A Registrar of War Gratuities controls the register in which are kept the accounts of all persons entitled to war gratuity. Provision was made for financing the Act by appropriation from Consolidated Revenue Fund and by borrowing. The War Gratuity Appropriation Act 1948 created a trust account for the payment of gratuities. Particulars of the operations of this fund during the years 1948-49 to 1952-53 were as follows:—

**WAR (1939-45) GRATUITY TRUST FUND.**  
(£'000.)

Particulars.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Balance brought forward ..	..	30,051	36,751	5,934	4,545
Receipts .. ..	33,249	9,943	30,630	..	..
Expenditure .. ..	3,198	3,243	61,447	1,389	194
Balance carried forward ..	30,051	36,751	5,934	4,545	4,351

### § 7. Department of Defence Production.

1. **General.**—On 11th May, 1951, a Department of Defence Production and a Department of Supply were established by a decision of the Government. These Departments took over the functions previously undertaken by a joint Supply Department. The Department of Defence Production is responsible broadly for the production of munitions (including aircraft) required by the Services in government-operated factories and in industry under contract to the Government. It is also responsible for all those matters incidental to production, including the planning of production capacity to meet expected future Service requirements. References to previous operations of the various sections and establishments of the Department are given in Official Year Book No. 38, pp. 1200-9.

2. **Functions of the Department and Acts Administered.**—The functions of the Department of Defence Production, as defined in the Administrative Arrangements approved by the Governor-General, are:—

- (i) **Manufacture, acquisition, provision and supply of munitions for the defence forces, that is to say, armaments, aircraft, arms, ammunition, weapons, machine tools, war chemicals, radar (and such other items as may be mutually agreed with the Department of Supply as falling within the definition of munitions), including the materials and plant necessary for the production of those things and all matters incidental thereto, including:—**

The receipt from the Service Departments and other authorities or Departments, of orders and forecasts of requirements of munitions; appropriate liaison with the Higher Defence Machinery Service Departments and the Department of Supply to deal with Service

munitions programmes; operation and management of factories, workshops and undertakings concerned in the production of munitions; arrangements and all action necessary to secure the manufacture, processing and delivery of munitions; investigations and development of Australian sources of munitions production, including the establishment of annexes or special capacity in industry for that purpose; acquisition by the Commonwealth and the establishment of factories and workshops for the purpose of producing munitions; provision and maintenance of stocks of materials and goods for the purpose of producing munitions.

- (ii) Employment and training of technicians, workmen and others for the purpose of producing munitions.
- (iii) Formation of Industry Advisory Committees to advise the Minister for Defence Production regarding :—

The allocation to industry of production programmes of munitions; the establishing of additional munitions production facilities, including annexes and undertakings; the obtaining of appropriate details of Australian industrial capacity required by the Department of Defence Production in allocating munitions production to industry; any other matters associated with munitions production as specified by the Minister.

- (iv) Provision and control of stores, magazine and similar undertakings required in connexion with production of munitions and for other purposes as required.
- (v) Arrangements for ascertaining costs and the control and limitation of profits in connexion with the production of munitions.
- (vi) Development of inventions originating in Government factories in the interests of defence production.

The Act administered by the Department is the Supply and Development Act 1939-1948.

3. **Defence Production Planning.**—A Defence Supply Planning Branch was established in July, 1950, within the (then) Department of Supply to co-ordinate the planning of expansion of production capacity in government-owned factories and in industry. When the Department of Defence Production was created, the Branch was transferred to that Department as the Defence Production Planning Branch.

Broadly, the functions of the Branch are :—(i) to arrange production of requirements for the Defence Services on mobilization; (ii) to plan the expansion of production capacity to meet such requirements in war.

The following production and related sections exist within the Branch :—(a) Ammunition; (b) Radar and Telecommunications; (c) Materials; (d) Chemicals and Chemical Engineering; (e) Weapons and their Equipment including equipment involving optics; (f) Engineer Stores including Mobile Equipment and Small Craft; (g) Production Plant and Equipment; (h) Instruments; (i) Electrical. The production sections have a particular reference to the manufacture of defence stores and components by industry.

The Defence Production Planning Branch is the executive instrument of a Committee of the same name. The three Defence Services, the Departments of Defence, Defence Production, Supply and National Development are represented on the Committee. This enables a close liaison to be maintained with the Departments concerned directly and indirectly with defence in the formation of defence production planning policy.

4. **Munitions Factories.**—Munitions factories now in operation are :—Ammunition—Footscray, Victoria; Explosives—Maribyrnong, Victoria, Mulwala and St. Mary's, New South Wales; Ordnance—Maribyrnong, Bendigo, Echuca, Port Melbourne Marine Engine Works, all located in Victoria; Small Arms—Lithgow, New South Wales.

5. **Aircraft Production.**—(i) *General.* Matters relating to the production in Australia of military types of aircraft and aero engines and of other aircraft components required by the Royal Australian Air Force and the Royal Australian Navy are administered by the Division of Aircraft Production of the Department of Defence Production. Aircraft, repair and overhaul activities carried out for those Services in civilian establishments as distinct from Service workshops, are also the function of the Division, together with the responsibility of supplying aircraft and engine spare parts and airborne equipment generally.

(ii) *Aircraft, Engine and Other Production.* As at 1st July, 1953, the approved production programme for the major aircraft manufacturing organizations in Australia comprised Canberra jet-engined bombers, Lincoln heavy bombers and small radio-controlled jet-propelled target aircraft at the Government Aircraft Factory, Avon Sabre jet-engined fighters, C.A. 25 basic trainers and Rolls Royce Nene and Avon turbo-jet engines at Commonwealth Aircraft Corporation Pty. Ltd., and Vampire jet-trainers at De Haviland Aircraft Pty. Ltd.

Associated concurrent activities included the production and repair of retractable undercarriages at the Aircraft Engine Factory, the repair and overhaul of propellers at the Propeller Annexe and the production of heavy forgings at the Heavy Forge Annexe.

(iii) *Design and Development Projects.* Concurrently with the production programmes, projects involving original design studies in aircraft and aero engine fields were advanced during the year at the Government Aircraft Factory and at the works of Commonwealth Aircraft Corporation Pty. Ltd.

At the former, the first stage of the design and production of radio-controlled target aircraft for use at the Rocket Range, Woomera, South Australia, covering both piloted and unmanned versions of the aircraft, had been completed at 1st July, 1953, and the design and production of an improved version of the unmanned aircraft was in progress.

At the works of Commonwealth Aircraft Corporation Pty. Ltd., the design and development of a basic type of trainer aircraft and the construction of two prototypes had been successfully completed and arrangements were in hand for the manufacture of production aircraft to the same design. A light radial type aero engine—also designed and produced by the Company—for use as a power unit for the basic trainer was under test.

(iv) *Repair and Overhaul.* During the year the broad policy was continued by the R.A.A.F. of returning to the factories in which they were produced all Australian-made aircraft and aero engines requiring major overhaul and the incorporation of modifications. Repair and overhaul of R.A.A.F. aircraft of other types and of carrier-based aircraft operated by the R.A.N. were undertaken by civilian personnel in the aircraft factories or in the works of contractors specially equipped to handle this type of work.

Lincoln aircraft were repaired and extensively modified at the Government Aircraft Factory. Mustang and Wirraway aircraft and single and twin-row Wasp radial engines and Rolls Royce Nene turbo-jet engines were overhauled by Commonwealth Aircraft Corporation Pty. Ltd. in Melbourne, while Rolls Royce Merlin engines from the R.A.A.F. and Rolls Royce Griffon and Bristol Centaurus engines from the R.A.N. were overhauled at the Aircraft Engine Factory in Sydney.

At De Haviland Aircraft Pty. Ltd., Vampire, Mosquito and Tiger Moth aircraft and Gipsy Major engines were repaired and overhauled and at the Government workshops at Parafield, South Australia, Dakota transport and Wirraway aircraft were repaired and overhauled.

(v) *Naval Aircraft.* The repair and overhaul of carrier-based Fairey "Firefly" and Hawker "Sea Fury" aircraft operated by the R.A.N. were handled by the Fairey-Aviation Company of Australasia Ltd., in Sydney.

6. **Finance and Accounts.**—The expenditure on munitions, munitions factories, aircraft production, etc., during 1951–52 is shown in the following table :—

**DEFENCE PRODUCTION : TOTAL EXPENDITURE, 1951–52.**  
(£'000.)

Particulars.	Expenditure.
Parliamentary Appropriations .. .. .	(a) 7,140
Trust Fund Accounts—	
Government Factories and Establishments .. .. .	13,762
Manufacture of Munitions .. .. .	6,782
Munition Materials .. .. .	88
Defence Production Materials .. .. .	345
Aircraft .. .. .	12,036
 Total Trust Fund Accounts .. .. .	 33,013
 Total Expenditure .. .. .	 40,153

(a) Includes contribution under Superannuation Act.

### § 8. Department of Supply.

1. **General.**—Reference to the creation of the Department of Supply is contained in Official Year Book No. 39, p. 1257.

2. **Functions of the Department and Acts Administered.**—The functions of the Department include (a) the manufacture, acquisition, provision and supply of services and goods other than “munitions” (that is to say foodstuffs, textiles, clothing, hardware, boots and other like supplies) required by Service and other authorities; (b) research and scientific development in relation to war *matériel*, including the operation of the Long Range Weapons and other defence science establishments; (c) design and associated technical development and inspection of war *matériel*; (d) planning for and procurement of strategic materials; (e) planning and establishment of manufacturing facilities for production of goods other than munitions; (f) formation of industry advisory committees in respect of production and procurement matters; (g) arranging contracts for supply of goods and performance of services; (h) acquisition, maintenance and disposal of stocks; (i) sale or disposal of surplus or unserviceable property (except buildings or land); (j) provision of Commonwealth transport facilities (k) security service for Supply and Defence Production Departments; (l) arrangements for ascertaining costs and control and limitation of profits on production contracts; (m) co-ordinating estimates, allocation and commitment of resources for Defence Supply needs (including munitions) and liaison with the National Security Resources Board; (n) provision and control of stores required for or in connexion with matters administered by the Department of Supply; general storage for other Departments as required and to the extent facilities are available.

Acts administered by the Minister for Supply are the Aluminium Industry Act 1944–1952; Atomic Energy Act 1953; Supply and Development Act 1939–1948.

3. **Research and Development Branch.**—(i) *General.* Considerable success has been achieved in all fields of research undertaken by Research and Development Establishments. A number of new projects have been commenced and others are being planned. Progress has also been made in other directions of defence science. Considerable benefit continues to accrue from the Scientific Trainee Scheme adopted by this Department with the object of providing experienced and capable scientific and experimental personnel.

(ii) *Long Range Weapons Establishments, South Australia.* At Salisbury, work on missiles has proceeded in accordance with programmes agreed with the United Kingdom Government. The recruitment of scientific and technical staff is being pressed forward

urgently. A twice-monthly Hastings Ferry Aircraft Service between the United Kingdom and Australia has been introduced by the United Kingdom Ministry of Supply to facilitate the carriage of personnel and freight for the Project, and a radio-teleprinter link has been opened for communication between the two countries. Several United Kingdom industrial firms under contract to the Australian Government have established subsidiary sections at Salisbury for the purpose of assembling rounds preparatory to trials at the Range and reporting to their parent organizations in the United Kingdom regarding trials, results, etc.

Trials are being conducted at Woomera at regular and frequent intervals and the ranges are in constant use. An important stage will shortly be reached when trials of prototype weapons will commence. In addition the rate of firings will increase considerably. The construction of housing accommodation is almost completed and the majority of houses planned for the Village are occupied.

The Long Range Weapons Air Component, Mallala, continues to operate from the R.A.A.F. Station at Mallala but satisfactory progress is being made on the construction of the new airfield at Salisbury and the Air Component will ultimately be transferred to this new location.

(iii) *Aeronautical Research Laboratories and Defence Standards Laboratories (formerly Defence Research Laboratories)*. The Aeronautical Research Laboratories at Fishermen's Bend have continued investigations according to their approved programme with particular attention to defence problems. In addition these laboratories collaborate with the United Kingdom on aeronautical matters of mutual interest.

The title of Defence Research Laboratories, Maribryngong has been altered to Defence Standards Laboratories. The broad function is the application of scientific knowledge and research to the problems arising in design, development, manufacture, inspection, storage, and use of war material. Research is done on the development of new and improved materials, methods and equipment of known or potential interest.

(iv) *Electronics Research, Propulsion Research, and High Speed Aerodynamics Laboratories, Salisbury*. These newly-established laboratories now have a small staff of experienced scientific and experimental personnel and recruitment of additional staff is proceeding. The necessary equipment is being progressively installed to enable these laboratories to carry out their specialized functions, and they have now embarked actively on defence science investigations and are available for advice to the other laboratories in the Defence Group.

4. **Design and Inspection Branch.**—Since the previous issue of the Official Year Book the title of "Army Branch" has been changed to "Design and Inspection Branch". The word design is used here in the wider sense of a design authority. For instance, armament production in Australia is based on British designs, but it is necessary to have in Australia a design authority to which the production agencies can refer problems arising out of differences in British and Australian manufacturing practices, techniques, skills, materials and tooling. A high percentage of Army stores is of commercial or near-commercial pattern. Examples of these are trucks, earth-moving equipment, electrical and general engineering equipment, and general stores. In many of these items the amount of design may be small, or may be carried out by their manufacturers, but selection of types, makes and models, and their variation if necessary, calls for the existence of a design authority with facilities for testing, reporting and making recommendations to guide selection. In each field different problems arise for the design authority. For example, radio development for the Army is carried out by the trade, but a design authority is required as an executive link between the users and the designers and manufacturers.

To meet its responsibilities as a design authority, the Design and Inspection Branch is gradually setting up a design establishment with the following elements:—

Four design sections to deal with design problems relating to the selection and the manufacture of armaments, vehicles, signal equipment, and general engineering plant and equipment.



Common facilities for dealing with defects, standards, rationalization and standardization, production drawings, specifications, publications, testing of components and complete electrical and mechanical units, and the construction of mock-ups and models.

The ultimate objective of the design authority is to ensure, on mobilization, that selection has been made of each one of the many thousands of types of armament, vehicles, telecommunications equipment, general engineering equipment, general stores, and clothing and that up-to-date specifications, drawings or sealed samples of each type are always available to the Army to support its demands and orders on mobilization and so allow production to start without delay.

To meet its inspection responsibilities the Design and Inspection Branch includes an Inspection Service. This Inspection Service whilst primarily intended for the inspection of supplies for the Army, also undertakes inspection on behalf of other Departments—notably Air, Labour and National Service and External Affairs (inspection of items supplied under the Colombo Plan). It also undertakes all proof of armament stores on behalf of the three Services.

The Inspection Service is divided into three main Groups for Engineering, Ammunition and Small Arms. and General Stores and Clothing inspection. A Proof and Experimental Group and an Equipment Information Section are also included. The latter holds and issues a complete range of Army drawings and specifications and many others including United Kingdom and Australian Joint Service Specifications. It provides the data on which production is based.

Inspection and proof activities increased during 1951-52 owing to large Service orders for equipment being placed under the expanded Defence Programme. Orders for stores to the value of £39,900,000 were received for the attention of the Army Inspection Service during this period, representing an increase of £25,147,000 over the orders placed in the previous year. Examination staff increased from 445 to 650.

5. **Contract Board**—(i) *General.* The Contract Board and its State Organization under the Supply and Development Act 1939-1948 and Regulations is the authority responsible for purchasing supplies or arranging services for the Military, Naval and Air Forces of the Commonwealth. Under this Act and Regulations it is also charged with the responsibility of arranging for the sale or disposal on behalf of Commonwealth Departments of all surplus or unserviceable war matériel, goods and services approved for disposal.

(ii) *The Board and its Administrative Organization.* The Contract Board meets in Melbourne, and comprises representatives of the Departments of Supply, Defence Production, Navy, Army and Air. The Board's administrative organization is the Directorate of Contracts. In each State other than Victoria there is a District Contract Board with an administrative organization similar to the Directorate of Contracts. The table following shows, in respect of the Contract Board Organization, the purchases and realizations from disposals for the years 1950-51 and 1951-52.

**CONTRACT BOARD ORGANIZATION: PURCHASES AND REALIZATIONS FROM DISPOSALS.**

(£.)

State.	Purchases.		Realizations from Disposals.	
	1950-51.	1951-52.	1950-51.	1951-52.
Contract Board, Victoria .. ..	40,514,989	44,908,560	1,106,299	781,520
District Contract Board—				
New South Wales .. ..	5,546,928	10,957,545	467,496	708,278
Queensland .. ..	751,613	1,962,003	169,118	103,632
South Australia .. ..	1,303,990	2,166,286	99,082	102,906
Western Australia .. ..	671,855	1,228,132	81,695	70,864
Tasmania .. ..	86,473	101,172	23,262	12,441
Total .. ..	48,875,848	61,323,698	1,946,952	1,779,641

6. **Tinplate.**—An account of this Section was given in Official Year Book No. 39, pp. 1259–60. Since then the services of the Tinplate Advisory Committee have been retained but the appointment of a Controller of Tinplate has been terminated.

Australia's tinplate supplies are drawn from the United Kingdom and the United States of America, but the system of country-wise allocation was discontinued by both sources early in 1953. During the ten years ended 30th June, 1952, Australian consumption of tinplate averaged 112,000 tons per annum.

7. **Stores and Transport Branch.**—This Branch now functions as the central authority which is responsible for providing all storage and transport facilities necessary to meet the official requirements of Commonwealth Departments and authorities. It has branches in all States and agents in Canberra and Darwin.

At the 30th June, 1952, it had under its control land, buildings, plant and machinery valued at over £5,030,000 and 4,500,000 square feet of storage space, of which 4,000,000 square feet was Government-owned and the balance held under tenancy.

8. **Finance Branch.**—The expenditure for Department of Supply activities during the year 1951–52 is shown in the following table. Expenditure for previous years appearing in Year Book No. 39, p. 1257 covered both the Department of Defence Production and the Department of Supply.

**SUPPLY : TOTAL EXPENDITURE, 1951–52.**  
(£'000.)

Particulars.	Expenditure.
Parliamentary Appropriations .. .. .	(a) 19,915
Trust Fund Accounts—	
Aluminium Production .. .. .	2,710
Minerals Production .. .. .	141
Government Factory (Clothing) .. .. .	1,306
Stores and Transport .. .. .	4,279
Strategic Stores and Equipment Reserve .. .. .	7,830
Total Trust Fund Accounts .. .. .	16,266
Other .. .. .	91
Total Expenditure .. .. .	36,272

(a) Includes amount appropriated for Strategic Stores and Equipment Reserve Trust Account, and audit, superannuation and debt charges.

9. **Australian Aluminium Production Commission.**—Basic plans for the manufacture of aluminium ingot in Australia were approved by the Commonwealth Government in April, 1941 as a defence measure designed to make this country independent of overseas supplies. In April, 1944 an agreement was made between the Commonwealth and Tasmanian Governments for the establishment of the industry in Tasmania. The Australian Aluminium Production Commission, consisting of representatives of each of the two Governments, was constituted on 1st May, 1945. By legislation passed in 1952, the original fund of £3,000,000 to finance the undertaking was increased to £7,250,000 of which the Commonwealth Government will contribute £5,750,000 and the Tasmanian Government £1,500,000.

Workable deposits of bauxite (aluminium ore) have been proved in New South Wales, Victoria and Tasmania. The largest deposits are located in the Inverell district of northern New South Wales, where reserves exceeding 8,000,000 tons have been brought under Commission control. In the Wessel Islands, off the coast of Arnhem Land, the recent discovery of bauxite led to the proving of approximately 10,000,000 tons of ore of good grade, and extensive bauxite areas have been found on the Northern Territory mainland. Sufficient local reserves for the establishment of a permanent aluminium industry are now assured. The combined Bayer-Hall alumina and reduction plant being erected at Bell Bay, Northern Tasmania, will be supplied with power from a new

generating station at Trevallyn, near Launceston. The main portions of the works have now been erected, and installation of plant is proceeding with the object of bringing the project into production in 1954. The design capacity of the plant is 13,000 tons of aluminium ingot annually.

### § 9. Australian Atomic Energy Commission.

In November, 1952, a Commission of three members was appointed to control the Commonwealth's activities in relation to uranium and atomic energy, and in April, 1953, upon the enactment of the Atomic Energy Act 1953, the Commission was established as a statutory authority, with powers and functions as defined in the Act. The Commission is a corporate and autonomous body, controlling its own service. It functions under the direction of the Minister for Supply.

Commonwealth arrangements for securing collective advice on atomic energy matters date from 1949, when the Industrial Atomic Energy Policy Committee was established to study possible industrial applications of atomic energy, and to recommend a programme of development. This committee functioned until 1952, when it was disbanded at its own suggestion and succeeded by the Atomic Energy Policy Committee, a re-constituted body with enlarged terms of reference. In the light of recommendations by the 1952 Committee, and scientific and organizational developments overseas in relation to atomic energy, the Government decided on the establishment of the Commission, and legislation was enacted in 1953 to give effect to this decision.

The functions of the Commission are broadly as follows:—Firstly, it is responsible for promoting the search for and production of uranium, and it has wide powers to take action to this end. Secondly, it is given authority to develop the practical uses of atomic energy, by constructing and operating plant for this purpose, carrying out research, and generally fostering the advancement of atomic energy technology. These powers and functions are set out in detail in Part II. of the 1953 Act. In general, and subject to the Commonwealth's defence powers and particular provisions of the Act, they are to be exercised in or in relation to the Territories of the Commonwealth. The development of the uranium resources of the States is a State matter, and it is likewise open to the States to take such action as they wish to develop the peaceful uses of atomic energy.

On the mining side of its activities the Commission has the co-operation of the Bureau of Mineral Resources of the Department of National Development, and under these arrangements the Bureau is carrying out a vigorous programme of exploration in the Northern Territory. The object of this programme, which is being carried out by geophysical, geological and radiometric surveys, is to distinguish the areas in which there are indications of the presence of uranium ores, with a view to making these areas available for development by private enterprise. One large ore deposit at Rum Jungle, discovered by a private prospector in 1949, is already being worked, finance for the project having been provided by the Combined Development Agency, a joint United States-United Kingdom authority operating from Washington. While this is a governmental project, the Commission's objective is to interest private capital in developing other prospects which have been located elsewhere in the Territory. The response of private enterprise has been active and is growing rapidly, and there are good grounds for the hope that the industry will grow to large dimensions.

As regards developmental work on the scientific side, the Commission has been carrying out investigations overseas, and is laying the foundations of a research and development programme. As part of this programme a group of Australian scientists who have been doing research at the United Kingdom Atomic Energy Research Establishment at Harwell is being taken on to the Commission's staff, and research groups who have been working in Australia are likewise being recruited. Arrangements for having research carried out by universities and other institutions are also envisaged. The general object in view is a full participation by Australia in the advancement of atomic energy technology, in order that it may be possible to take advantage of the expected practical uses of this new source of power as soon as they are realizable.

## CHAPTER XXVIII.

### REPATRIATION.

#### § 1. General.

An outline of the activities leading up to the formation of the Commonwealth Repatriation Commission was given in Official Year Book No. 15, p. 931. Some account was given also in the Official Year Book referred to, and in subsequent issues, of the policy and general activities of the Department, while detailed information was incorporated in regard to such matters as sustenance rates and pensions to members of the Forces and dependants. (See Official Year Book No. 17, pp. 598-601.) In 1943 the Australian Soldiers' Repatriation Act was amended by the incorporation of the recommendations of the Parliamentary Committee appointed to inquire into pensions and repatriation benefits. A general increase was made of approximately 20 per cent. in the rates of war pensions and increases were also made in other repatriation benefits.

Under the Australian Soldiers' Repatriation Act 1950, rates of pension and medical sustenance were increased, and pensions and benefits under the Act were extended to those members of the Forces (and their dependants) engaged in operations in Korea and Malaya. Provision was also made for payment to a war widow, on re-marriage, of a gratuity equal to one year's war pension. In addition, an important amendment was a change in the basis of war pensioning. Previously, the basis was the daily rate of service pay, but under this legislation the rank, not the pay, of the service man or woman became the basis. This change was brought about as the result of the increased rates of pay of members of the Forces under the new pay code from 1st July, 1947, and the further increases since then. The constantly rising rates of pay made it evident that the basis of pensioning on the daily rate of pay would be unworkable; for example, the rates of pay of more or less senior officers of the 1914-18 War and of the 1939-45 War, discharged before 1st July, 1947, were less than the new rates of pay for present day lower ranks, with a consequent disparity in the rates of pension. To avoid this disparity, the daily rate of pay basis—which had been in operation since the original war pension legislation of 1914—was abandoned in favour of the basis of pensioning according to the rank of the member, the basis adopted by other countries.

Under the Statute Law Revision Act 1950 the title "Australian Soldiers' Repatriation Act 1920-1950" was amended to "Repatriation Act 1920-1950".

The main activities of the Repatriation Commission at 30th June, 1953 were confined to the grant, review and assessment of war and service pensions, the provision of medical treatment, vocational training of the more seriously disabled members, the renewal and repair of artificial replacements and surgical appliances, the grant and review of sustenance and living allowances and the administration of the Soldiers' Children Education Scheme.

## § 2. War Pensions.

1. **General.**—The first provision for the payment of war pensions to members of the Forces and their dependants was made by the Commonwealth Parliament in the War Pensions Act 1914, which came into operation on 21st December, 1914. This Act was repealed in 1920 by the Australian Soldiers' Repatriation Act (amended from 31st December, 1950 to the Repatriation Act). Owing to limitations of space, only some of the main features relating to war pensions under the Repatriation Act 1920–1953 are shown in the following paragraphs :—

(i) *Eligibility for Pension.* There has been a considerable widening of the provision in this respect, to the benefit, mainly, of members of the Citizen Military Forces who have not served outside Australia. These provisions are summarized as follows :—

- (a) A member of the Forces who served (1) outside Australia, (2) in the Territories of Australia, such as Papua and New Guinea, or (3) within Australia in circumstances which can be regarded as actual combat against the enemy, is covered for war pension purposes in respect of incapacity or death which may result from any occurrence happening during the whole period of service.
- (b) In other cases where a member served only in Australia, incapacity or death to be pensionable must have been attributable to service.
- (c) There is a third ground applicable to all in (a) and (b) who have had at least six months' camp service. This provides that, where a condition pre-existed enlistment, a pension may accrue if it is considered that such condition was aggravated by service.

(ii) *Pensions for Incapacity.* From 2nd October, 1952 the 100 per cent. pension rate for a member's incapacity was increased from £7 to £8 per fortnight (higher rates were payable in respect of certain commissioned ranks) and the rates for wives and children of such members were increased to £3 11s. and £1 7s. 6d. per fortnight respectively. From 5th November, 1953 a further increase of 5s. was made in the member's 100 per cent. incapacity rate to £8 5s. per fortnight (or higher according to rank). The rates for wives and children were unchanged.

(iii) *Supplementation of Pension.* Where a member in receipt of a pension at the maximum rate is, because of his war disability, temporarily (for at least three months) precluded from earning, an additional pension may be granted to bring the total pension to the member up to £18 10s. per fortnight.

(iv) *Women's Nursing and Auxiliary Services.* Members of Women's Services are entitled to pensions and other benefits as prescribed in the Act on the same basis as male members of the Forces.

(v) *Tuberculosis.* In the case of a member of the Forces who served in a theatre of war, and, at any time after discharge became or becomes incapacitated, or died or dies, from pulmonary tuberculosis, war pension is payable, and medical treatment is provided on application as if the incapacity or death resulted from an occurrence on service. (*See also* § 3. Service Pensions.)

(vi) *Special Rates.* Those who have been totally blinded as the result of war service and those who are permanently totally incapacitated receive as from 5th November, 1953, special pensions of £18 10s. per fortnight. The rates for Tuberculars, Class "B" (fit for light employment) were increased from £12 to £13 per fortnight. In addition to the special pension from 2nd October, 1952, an attendant's allowance of £3 10s. per fortnight may be granted to the war-blinded and to certain others who are deemed to be

in need of an attendant. A war-blinded member who is also affected with total loss of speech or total deafness is entitled from 2nd October, 1952 to an attendant's allowance of £7 per fortnight in lieu of that referred to above. The wife and any children under 16 years of age receive the same rates as shown in sub-para. (ii).

(vii) *Specified Disabilities.* Where the disability is amputation of a limb or limbs or total loss of vision in one eye, amounts ranging from 17s. to £10 5s. per fortnight in addition to the statutory rate of pension are payable as from 5th November, 1953. In addition, allowances of either £3 10s. or £7 per fortnight are payable in certain double amputation cases.

(viii) *Time Limit for Wives and Children Removed.* Prior to the 1950 amending Act, wives who were married and children who were born after 1st July, 1938 were ineligible to receive a war pension. This time limit was removed as from 2nd November, 1950.

(ix) *Rates of Pensions for Death.* (a) *Widows.* As already indicated, rates of pension, which were previously based on the daily rate of pay of the member, are now based on the rank of the member. From 5th November, 1953 the rates were increased by 5s. per fortnight, the minimum rate being increased from £7 to £7 5s. per fortnight. In addition to the pension, the widow receives an allowance if she has dependent children, if she is permanently unemployable, or if she is over 50 years of age; this allowance was increased to £3 9s. per fortnight.

(b) *Children.* From 2nd October, 1952, the rate of pension for the eldest child (under 16 years of age) was increased to £2 13s. per fortnight, and that of each younger child to £1 17s. In addition to the pension, an amount of 12s. per fortnight may be paid in certain circumstances. Where both parents are dead each child is pensioned at the rate of £4 16s. per fortnight.

(x) *Widowed Mother on Death of Member.* A pension ranging from £4 10s. to £8 6s. per fortnight, according to the rank of the member, may be granted to a widowed mother of a deceased unmarried son, provided widowhood occurred either prior to or within three years after the death of the member. The pension may be supplemented by payment of an additional amount constituting the difference between the statutory pension and £9 15s. per fortnight or part thereof, according to the extent of other income of the pensioner. The value of property possessed by the widowed mother does not affect the issue. This rate, which took effect from 5th November, 1953, represents an increase of £1 per fortnight on the previous rate of £8 15s. which operated from 2nd October, 1952.

2. *Appeals Tribunals.*—The principal Act was amended as from 1st June, 1929 to create tribunals to hear appeals in regard to war pensions. The War Pensions Entitlement Appeal Tribunal is empowered to hear and decide any appeal by or on behalf of ex-members of the Forces or their dependants against a decision of the Repatriation Commission that an incapacity or the death of an ex-member did not arise out of war service. Assessment Appeal Tribunals were created to hear and decide any appeal against a current assessment or a "Nil" assessment of war pension made by the Repatriation Commission in respect of an incapacity of an ex-member of the Forces which had been accepted as arising out of war service. Provision was made by subsequent legislation to enable the Tribunals to hear appeals by certain members for service pensions.

3. *Summary of War Pensions, 1952-53.*—At 30th June, 1953, the number of war pensions for the 1914-18 War was 143,496, for the 1939-45 War, 399,734, and for the Korea and Malaya Operations 744, making a total of 543,974 with a liability of £34,230,567 per annum. The amount paid in pensions during the year 1952-53 was £34,355,795. The outstanding features for 1952-53 for each war were as follows:—

## WAR PENSIONS : SUMMARY, AUSTRALIA, 1952-53.

Particulars.	1914-18 War.	1939-45 War.	Korea and Malaya Operations.	Total.
New claims granted .. ..	3,090	33,944	399	37,433
Restorations .. ..	587	1,478	5	2,070
Claims rejected (gross) .. ..	1,136	8,034	241	9,411
Pensions reviewed .. ..	18,109	82,492	152	100,753
Pensions cancelled or discontinued .. ..	2,553	12,172	21	14,746
Deaths of pensioners .. ..	3,887	1,705	5	5,597
Number of pensions in force at 30th June, 1953 .. ..	143,496	399,734	744	543,974
Annual pension liability at 30th June, 1953 .. .. £	15,674,373	18,502,675	53,519	34,230,567
Amount paid in pensions during the year 1952-53 .. .. £	(a)	(a)	(a)	34,355,795

(a) Not available.

4. Classes of War Pensions, Australia, 1952-53.—(a) *New Claims Granted.* The following is an analysis of the total number of new claims granted during 1952-53 :—

## WAR PENSIONS : NEW CLAIMS GRANTED, AUSTRALIA, 1952-53.

Class.	1914-18 War.	1939-45 War.	Korea and Malaya Operations.	Total.
Members .. ..	885	6,419	179	7,483
Wives of members .. ..	1,322	7,449	85	8,856
Children .. ..	757	19,650	102	20,509
Other dependants .. ..	126	426	33	585
Total .. ..	3,090	33,944	399	37,433

(b) *Pensions in Force.* The following table shows the number of pensions in force at 30th June, 1953 for each war and for each class of pensioner :—

## WAR PENSIONS IN FORCE, AUSTRALIA, 30th JUNE, 1953.

Class.	Number of Pensioners at 30th June, 1953.			
	1914-18 War.	1939-45 War.	Korea and Malaya Operations.	Total.
Orphan children—				
Children of deceased members .. ..	879	10,271	53	11,203
Double orphans .. ..	57	213	..	270
War widows .. ..	17,020	9,184	45	26,249
Members .. ..	62,703	125,366	327	188,396
Children .. ..	6,629	148,615	146	155,390
Wives .. ..	52,702	99,237	124	152,063
Parents .. ..	3,214	6,653	46	9,913
Brothers and sisters .. ..	106	116	3	225
Others .. ..	186	79	..	265
Total .. ..	143,496	399,734	744	543,974

(c) *Special Rate Pensions.* At 30th June, 1953 special rate pensions of £17 ros. per fortnight were being paid to the following classes of members of the Forces :—

## WAR PENSIONS : MEMBERS ON SPECIAL RATES, AUSTRALIA, 30th JUNE, 1953.

Class.	1914-18 War.	1939-45 War.	Korea and Malaya Operations.	Total.
Blinded members .. ..	194	192	2	388
Tubercular members .. ..	834	1,131	1	1,966
Totally and permanently incapacitated members .. ..	8,296	2,397	2	10,695
Tuberculars, Class "B" (a) .. ..	231	604	..	835

(a) Rate £12 per fortnight.

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5. Number of War Pensioners and Annual Liability, States, etc., 30th June, 1953.—The following table shows the number of pensions in force and annual liability for each war at 30th June, 1953 according to place of payment. (The amount paid is shown on page 1133).

WAR PENSIONS : NUMBER OF PENSIONERS AND ANNUAL LIABILITY, 30th JUNE, 1953.

Where Paid.	Number of War Pensions in Force at 30th June, 1953.				Annual Pension Liability. (£.)
	Incapacitated Members of the Forces.	Dependants of Incapacitated Members.	Dependants of Deceased Members.	Total.	
<b>1914-18 WAR.</b>					
New South Wales .. .. .	20,636	19,591	7,038	47,265	5,279,961
Victoria .. .. .	20,905	19,526	6,748	47,239	4,992,450
Queensland .. .. .	7,247	6,760	1,851	15,858	1,707,575
South Australia .. .. .	4,410	4,413	1,601	10,544	1,271,798
Western Australia .. .. .	5,248	5,294	1,583	12,125	1,197,732
Tasmania .. .. .	2,789	2,977	848	6,614	833,772
<b>Total, Australia .. .. .</b>	<b>61,325</b>	<b>58,561</b>	<b>19,759</b>	<b>139,645</b>	<b>15,283,288</b>
London Office .. .. .	1,149	1,273	937	3,359	346,155
Other Oversea Countries .. .. .	229	166	97	492	44,930
<b>Total .. .. .</b>	<b>62,703</b>	<b>60,000</b>	<b>20,793</b>	<b>143,496</b>	<b>15,674,373</b>
<b>1939-45 WAR.</b>					
New South Wales .. .. .	46,022	86,157	9,716	141,895	6,568,528
Victoria .. .. .	31,731	61,878	7,033	100,642	4,743,477
Queensland .. .. .	10,014	33,233	3,317	52,564	2,413,892
South Australia .. .. .	13,696	29,531	2,213	45,440	2,091,190
Western Australia .. .. .	12,468	25,558	2,386	40,412	1,710,206
Tasmania .. .. .	4,994	11,508	822	17,324	866,629
<b>Total, Australia .. .. .</b>	<b>124,925</b>	<b>247,865</b>	<b>25,487</b>	<b>398,277</b>	<b>18,393,922</b>
London Office .. .. .	287	405	343	1,035	84,369
Other Oversea Countries .. .. .	154	213	55	422	24,384
<b>Total .. .. .</b>	<b>125,366</b>	<b>248,483</b>	<b>25,885</b>	<b>399,734</b>	<b>18,502,675</b>
<b>KOREA AND MALAYA OPERATIONS.</b>					
New South Wales .. .. .	129	100	52	281	18,840
Victoria .. .. .	89	60	36	185	13,572
Queensland .. .. .	43	59	16	118	6,497
South Australia .. .. .	21	23	3	47	4,360
Western Australia .. .. .	31	25	14	70	5,636
Tasmania .. .. .	12	7	9	28	2,327
<b>Total, Australia .. .. .</b>	<b>325</b>	<b>274</b>	<b>130</b>	<b>729</b>	<b>51,232</b>
London Office .. .. .	1	..	12	13	2,036
Other Oversea Countries .. .. .	..	..	2	2	251
<b>Total .. .. .</b>	<b>326</b>	<b>274</b>	<b>144</b>	<b>744</b>	<b>53,519</b>



6. Summary of War Pensions, 1930-31, 1938-39 and 1944-45 to 1952-53.—  
 (i) *Australia*. The following table shows, for each war, the number of pensions granted, claims rejected, pensions in force, and the annual liability for pensions in each of the years ended 30th June, 1945 to 1953, and the total annual liability for war pensions for each of the years ended 30th June, 1931, 1939 and 1945 to 1953 :—

## WAR PENSIONS : SUMMARY, AUSTRALIA.

Year ended 30th June—	Pensions Granted.	Claims Rejected.	Number of War Pensions in Force at 30th June.				Annual Pension Liability at 30th June. (£.)
			Incapaci- tated Members of the Forces.	Depend- ants of Incapaci- tated Members.	Depend- ants of Deceased Members.	Total.	
1914-18 WAR.							
1945 ..	681	954	70,980	87,048	21,175	179,203	8,298,185
1946 ..	650	552	69,640	79,964	20,381	169,985	8,168,492
1947 ..	811	572	68,375	73,825	19,759	161,959	8,163,025
1948 ..	1,378	717	67,116	68,323	19,863	155,302	8,475,915
1949 ..	1,902	768	66,264	63,937	20,137	150,338	9,654,011
1950 ..	2,547	1,201	65,622	60,141	20,509	146,272	10,103,752
1951 ..	8,567	1,480	64,889	62,918	20,709	148,516	13,271,144
1952 ..	4,090	1,386	63,800	61,775	20,684	146,259	14,447,983
1953 ..	3,090	1,136	62,703	60,000	20,793	143,496	15,674,373
1939-45 WAR.							
1945 ..	50,649	41,610	35,766	49,460	16,650	101,876	3,430,679
1946 ..	92,986	66,766	68,097	95,829	25,479	189,405	5,604,964
1947 ..	51,019	31,266	83,995	122,205	26,478	232,678	6,841,567
1948 ..	39,188	13,614	91,657	142,112	26,530	260,299	7,759,793
1949 ..	39,016	8,192	99,852	163,504	26,421	289,777	9,522,250
1950 ..	44,392	7,312	108,922	189,413	26,649	324,984	10,638,011
1951 ..	39,866	8,387	115,942	211,735	26,434	354,111	14,483,436
1952 ..	36,259	8,864	120,889	231,068	26,232	378,189	15,862,473
1953 ..	33,944	8,034	125,366	248,483	25,885	399,734	18,502,675
KOREA AND MALAYA OPERATIONS.							
1951 ..	48	..	5	1	42	48	6,265
1952 ..	312	153	159	109	99	367	30,873
1953 ..	399	241	326	274	144	744	53,519
TOTAL.							
1931 ..	11,555	920	75,316	172,389	35,617	283,322	7,274,806
1939 ..	6,794	7,541	77,151	144,571	27,571	249,293	7,681,095
1945 ..	51,330	42,573	106,746	136,508	37,825	281,079	11,728,864
1946 ..	93,636	67,318	137,737	175,793	45,860	359,390	13,773,456
1947 ..	51,830	31,838	152,370	196,030	46,237	394,637	15,004,592
1948 ..	40,566	14,331	158,773	210,435	46,393	415,601	16,235,708
1949 ..	40,918	8,960	166,116	227,441	46,558	440,115	19,176,261
1950 ..	46,939	8,513	174,544	249,554	47,158	471,256	20,741,763
1951 ..	48,481	9,867	180,836	274,654	47,015	502,675	27,760,845
1952 ..	40,661	10,403	184,848	292,952	47,015	524,815	30,341,329
1953 ..	37,433	9,411	188,395	308,757	46,822	543,974	34,230,567

(ii) *Amount Paid and Place of Payment.* The following table shows for the years 1947-48 to 1952-53 the amounts paid in pensions and place where paid :—

## WAR PENSIONS : AMOUNT PAID.

(£.)

Place of Payment.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
New South Wales(a) ..	5,984,610	6,713,900	7,392,793	9,446,734	11,046,938	11,769,571
Victoria .. .. .	4,436,021	5,249,295	5,857,536	7,303,282	9,184,196	9,918,742
Queensland .. .. .	1,793,996	2,074,951	2,381,093	3,016,499	3,777,019	4,109,763
South Australia(b) ..	1,402,474	1,717,225	1,947,536	2,452,245	3,046,575	3,349,467
Western Australia ..	1,499,821	1,758,028	1,887,885	2,272,533	2,714,606	2,921,367
Tasmania .. .. .	782,474	908,734	1,017,889	1,297,490	1,560,560	1,714,609
Oversea .. .. .	363,377	332,359	379,447	402,935	515,119	572,276
<b>Total .. .. .</b>	<b>16,262,773</b>	<b>18,754,492</b>	<b>20,864,179</b>	<b>26,191,718</b>	<b>31,845,013</b>	<b>34,355,795</b>

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

## § 3. Service Pensions.

1. **General.** The payment of service pensions is provided for in the Repatriation Act 1920-1953 and has operated since 1st January, 1936.

Originally fixed on a lower scale, the rate of service pension for a member of the Forces now conforms to the rate of the age or invalid pension, which from 5th November, 1953 was £7 per fortnight. The maximum rate for the wife of a member is £3 10s. per fortnight; the rate for the first child under 16 years of age is 23s. per fortnight and 5s. per fortnight is payable for each of the younger children up to three in number. The actual rate payable in any case is determined after taking into consideration all other income received and property (apart from the home and certain other exemptions) owned by the pensioner, and no service pension can be paid where the other income and/or property exceeds certain specified limits. From 5th November, 1953 the "allowed income" was £286 per annum for a single man and £572 per annum in the case of a member and eligible wife. If a member has property (apart from the home and certain other exemptions) exceeding in value £1,250 (£2,500 for a member and eligible wife), that alone precludes payment of a pension. Pension is assessed according to the amount of income; if the income from all sources is less than the amount shown above, service pension is assessed at such rate as will, with that other income, bring the total income (including service pension) of the pensioner up to the "allowed income" provided that the pension cannot exceed the maximum rate specified for the particular class of case. If assessable property is held, then a deduction is made from the pension assessed according to income only, the deductions being made at so much for each complete £10 of property in excess of £150 (or £300 in the case of member and eligible wife). The deductions are as follows:—for each £10 from £150 to £450, 9d. per fortnight; for each £11 of the portion from £450 to £1,250, 1s. 6d. per fortnight.

Female members of the forces were made eligible in 1936 for consideration of service pensions if they embarked for service abroad; previously they must have served in a theatre of war. In the same year an institutional rate of service pension not exceeding 12s. per fortnight was made available. This pension rate from 5th November, 1953 was £2 9s. per fortnight, and benefits particularly inmates of mental hospitals.

Eligibility for service pensions may be established on the following grounds :—

- (a) Sixty years of age or more, provided the member served in a theatre of war, but eligibility on this ground applies only to the member and not to his wife or children. In the case of a female member of the forces, the qualifying age is 55 years, and service abroad, not necessarily in a theatre of war, is sufficient.
- (b) Permanently unemployable, provided the member served in a theatre of war (or, in the case of a female member, served abroad). Under this class pensions may be paid to the member, his wife and children up to four in number.
- (c) Pulmonary tuberculosis, whether the member served in a theatre of war or not. Under this class, also, pensions are payable to the wife and children up to four in number.

Only those members who qualify under Class (c) are entitled to receive both service and invalid pensions at the same time.

From 1st November, 1941, service pensions were extended to veterans of the South African War 1899–1902, and in 1943 to members of the Forces of the 1939–45 War.

2. Operations, 1952–53.—The following table gives a summary relating to service pensions during 1952–53 :—

Claims granted during year—

Members of the Forces .. .. .	2,804
Wives .. .. .	880
Children .. .. .	392
<b>Total .. .. .</b>	<b>4,076</b>

Claims rejected during year—

Members of the Forces .. .. .	643
Wives .. .. .	342
Children .. .. .	226
<b>Total .. .. .</b>	<b>1,211</b>

Service pensions cancelled or discontinued during year ..	1,608
Deaths of pensioners during year .. .. .	950
Pensions in force at 30th June, 1953 .. .. .	19,177
Annual pension liability on 30th June, 1953 .. .. .	£2,405,744
Amount paid in pensions during the year .. .. .	£2,225,044

3. *Number of Service Pensioners and Amount Paid.*—(i) *Summary, Australia, 1943-44 to 1952-53.* The following table shows the number of service pensions in force and the amount paid in pensions for the ten years 1943-44 to 1952-53 :—

## SERVICE PENSIONS : SUMMARY, AUSTRALIA.

Year ended 30th June—	Number of Service Pensions in Force at 30th June—						Amount Paid in Pensions.
	Age-Members of Forces.	Permanently Unemployable.		Suffering from Pulmonary Tuberculosis.		Total.	
		Members of Forces.	Dependants.	Members of Forces.	Dependants.		
1944 ..	4,235	3,628	4,025	290	406	12,584	£ 652,534
1945 ..	4,437	3,702	3,807	258	362	12,566	648,996
1946 ..	4,971	3,896	3,633	244	345	13,089	804,880
1947 ..	5,894	4,312	3,657	254	358	14,475	904,120
1948 ..	6,610	4,660	3,791	271	358	15,690	1,238,112
1949 ..	7,070	4,613	3,699	271	365	16,018	1,328,955
1950 ..	7,448	4,608	3,598	299	385	16,338	1,431,687
1951 ..	7,456	4,492	3,911	279	374	16,512	1,507,258
1952 ..	7,587	4,561	4,270	269	389	17,076	1,778,380
1953 ..	8,703	4,971	4,780	291	432	19,177	2,225,044

(ii) *Amount Paid and State where Paid.* The following table shows for the years 1948-49 to 1952-53 the amounts paid in pensions and the State where paid :—

## SERVICE PENSIONS : AMOUNT PAID.

(£.)

State Where Paid.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
New South Wales(a) ..	441,541	477,845	515,730	609,432	764,803
Victoria .. .. .	322,659	347,274	332,924	382,584	503,946
Queensland .. ..	226,079	247,842	265,754	325,546	396,090
South Australia (b) ..	142,015	142,339	155,384	174,303	215,626
Western Australia ..	150,375	165,639	184,744	224,558	278,115
Tasmania .. .. .	46,286	50,748	52,722	61,957	66,464
Total .. .. .	1,328,955	1,431,687	1,507,258	1,778,380	2,225,044

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

#### § 4. Medical Treatment of Returned Soldiers Suffering from War Service Disabilities.

At 30th June, 1953 there were 5,745 in-patients, including a number whose care was undertaken by the Repatriation Commission on behalf of other countries or Commonwealth Departments. There were 305,820 out-patient attendances for treatment during the year, excluding 606,401 treatments by the 3,127 local medical officers resident in metropolitan and country areas and New Guinea. The expenditure to 30th June, 1953 was £54,215,910.

#### § 5. General Benefits and Miscellaneous.

1. **Other Departmental Activities.**—(i) *General.* During the 1939–45 War, the ordinary activities of the Department in the way of general benefits for the welfare of members and dependants were carried on without interruption. They were mainly education and training of children under the Soldiers' Children Education Scheme, medical benefits for widows and children of deceased members and for widowed mothers of deceased unmarried members, funeral expenses for certain classes of members and dependants, and allowances to certain classes of dependants in lieu of pension.

By legislation passed in June, 1940, these benefits were extended to members engaged in the 1939–45 War and in November, 1950 to those engaged in the Korea and Malaya Operations and new benefits designed for the re-establishment of members after discharge from the Forces were made available. The re-establishment benefits administered by the Repatriation Commission are:—payments of re-employment allowance while awaiting employment; provision of tools of trade and equipment where such are necessary to the member's employment; transportation expenses to meet the cost of fares and removal of household belongings, where a member, or member and family, take up training, employment, a business, or settle on the land; supplementation of wages of apprentices whose apprenticeships were interrupted by war service; re-establishment loans to enable members and widows to establish themselves in businesses, practices or other occupations, including (until the Division of War Service Land Settlement began operations early in 1946) agricultural occupations; payment of re-establishment allowance during the early stages of establishment in business; gifts up to £75 for furniture to members who are blinded or totally and permanently incapacitated, also to widows with children under 16 years of age; and free passages to Australia for wives, widows and children of members who married abroad (and passages outward from Australia in certain cases of members and dependants).

In 1949 the Commission took over the functions of the Re-establishment Division of the former Department of Post-war Reconstruction, and is responsible for the co-ordination of all matters relating to training under the Commonwealth Reconstruction Training Scheme. Re-establishment of the more seriously disabled where ordinary training is not sufficient continues to be a function of the Commission, and special means have to be found to overcome each problem.

(ii) *Review of General Benefits.* The following paragraph gives particulars of the more important general benefits for each war (those for Korea and Malaya Operations are included under the 1939–45 War) for the period from 8th April, 1918 to 30th June, 1953.

(a) *Employment*—

1914-18 War : Number of applications, 251,200 ; Expenditure—sustenance while awaiting employment, £1,768,000 ; tools of trade and fares, etc. (gift), £554,000 ; tools of trade (loan), £21,800.

1939-45 War : The placing of members in employment was carried out by the Commission for only a short period prior to the inauguration of the Department of Labour and National Service, but the Commission has the responsibility of payment of re-employment allowance, provision of tools of trade and payment of fares and removal expenses. Number of cases and expenditure to 30th June, 1953 were as follows :—Re-employment allowances—66,653, £1,027,402 ; tools of trade (gift)—260,914, £1,889,794 ; (loan)—19,394, £290,062 ; fares and removal expenses, 16,328, £232,093.

(b) *Vocational Training*—

1914-18 War : Number of members completed training in full-time courses, 27,696 ; expenditure, £4,849,600.

1939-45 War : Wages paid by way of supplementation to apprentices £3,872,899.

(c) *Business Loans*—

1914-18 War : 6,130, £421,800.

1939-45 War : 27,485, £7,223,954. Allowances pending productivity of business—1,382, £83,884. Fares and removal expenses to member proceeding to a business, £495.

(d) *Furniture Grants*—

1914-18 War : Expenditure—gift (to members blinded or totally and permanently incapacitated and to widows), £75,190 ; loan (to other classes of members), £1,031,570 ; total number of cases, 35,400.

1939-45 War : Gift (no loan cases)—widows, 5,675, £392,347 ; members, 372, £22,883.

(e) *Free Passages*—

1914-18 War : £509,120.

1939-45 War : To Australia—4,749, £310,582 ; from Australia—67, £10,134.

(f) *Soldiers' Children Education Scheme*—

*Main Scheme* : Full-time training as from 12 years of age.

Particulars.	1914-18 War.	1939-45 War.
Applications .. .. .	32,461	13,249
Approved .. .. .	30,779	12,948
Completed training .. .. .	24,699	5,210
Withdrawn during training .. .. .	4,068	462
Awaiting next stage of training .. .. .	48	125
In training .. .. .	1,964	7,151
Expenditure .. .. .	£4,048,076	

*Minor benefits prior to entrance to main scheme* : For all Wars, £88,094.

(iii) *Total Expenditure on General Benefits.* The total expenditure on general benefits, apart from war and service pensions, from 8th April, 1918 to 30th June, 1953, for all wars since 1914 was £88,672,322 (including loan £9,200,335). Of this total the largest amounts were absorbed by medical treatment with £54,215,910, vocational training with £8,797,652, and expenses in providing employment, £5,859,574.

2. *Expenditure of Repatriation Commission, 1952-53.*—The expenditure of the Commission for the year ended 30th June, 1953 was £50,515,138, distributed as follows :—

Repatriation benefits—	£
Loans to members .. .. .	269,352
Grants to members and general expenditure (including maintenance of training schools, medical institutions, etc.) ..	10,550,086
Assistance to members in necessitous circumstances .. ..	2,251
	<hr/>
Total .. .. .	10,821,689
	<hr/>
Soldiers' Children Education Scheme .. .. .	287,283
War and Service Pensions .. .. .	36,577,056
Administrative costs—	£
Salaries .. .. .	2,375,293
Contingencies .. .. .	453,817
	<hr/>
	2,829,110
	<hr/>
Grand total .. .. .	50,515,138
	<hr/>

3. *Settlement on the Land of Returned Service Personnel.*—Reference to the settlement on the land of returned service personnel will be found in Chapter IV.—Land Tenure and Settlement.

## CHAPTER XXIX.

## MISCELLANEOUS.

This chapter comprises miscellaneous statistics and other descriptive information not directly related to the subjects of the preceding chapters, arranged in sections as follows:—

1. Valuation of Australian Production; 2. Indexes of Production; 3. New Building; 4. Consumption of Foodstuffs and Beverages; 5. Retail Trade; 6. Patents, Trade Marks and Designs; 7. Copyright; 8. Australian Ship-building Board; 9. War Service Homes Division; 10. Commonwealth Scientific and Industrial Research Organization; 11. Australian Institute of Anatomy; 12. Commonwealth Observatory; 13. Standards Association of Australia; 14. Film Censorship Board; 15. Australian National Film Board and the Film Division; 16. National Safety Council of Australia; 17. Australian Road Safety Council; 18. Lord Howe Island; 19. The United Nations; 20. Diplomatic and other Representatives Overseas and in Australia.

## § 1. Valuation of Australian Production.

1. **General.**—The value of production for Australia is computed in accordance with the decisions reached at the Conferences of Australian Statisticians and principally at the Conference held in 1935. The figures published below have been compiled by the State Statisticians from the best data available, and relate to 1951–52. Comparable details for 1950–51 may be found in *Primary Industries Bulletin No. 45, Part II.—Non-Rural Industries and Value of Production*. The adoption of substantially uniform methods of valuing production and of estimating elements of costs of production and marketing renders the results comparable as between States.

Attention is directed to the fact that the values shown in the tables herein refer only to *recorded* production and exclude the building and construction industry, those industrial establishments not classified as factories, and agricultural and farmyard produce obtained from areas of less than one acre.

The following is a brief explanation of the terms used:—

- (a) *Gross Value* is the value placed on recorded production at the wholesale price realized in the principal markets. (In cases where primary products are consumed at the place of production or where they become raw material for a secondary industry, these points of consumption are presumed to be the principal markets.)
- (b) *Local Value* is the gross production valued at the place of production and is ascertained by deducting marketing costs from the gross value. (Marketing costs include freight, cost of containers, commission and other charges incidental thereto.)
- (c) *Net Value* represents the net return to the producer after deducting from the gross value costs of marketing and of materials used in the process of production. Materials used in the process of production include seed, power, power kerosene, petrol and other oils, fodder consumed by farm stock, manures, dips, sprays and other costs. No deduction has been made for depreciation and maintenance costs.



It should be noted that costs of maintenance of farm buildings and fences have not been deducted from the value of production of rural industries, as particulars are not available for all States. In addition, there is an overstatement in the net value of production for New South Wales and Tasmania by the inclusion of power costs in rural industries. These costs, which amounted to £1,892,000 in New South Wales in 1940-41 and £86,510 in Tasmania in 1941-42 have not been ascertained in later years. The value shown for Mines and Quarries in Tasmania is understated owing to the omission of Quarries. This understatement, however, is more or less offset by the inclusion of production costs in Mining. Production costs are not available for all States in respect of Fisheries, and local values have been used for this industry with consequent overstatement.

2. **Value of Production, Australia, 1951-52.**—The following table shows particulars of the gross, local and net values of production in Australia by industries during the year 1951-52 :—

**GROSS, LOCAL AND NET VALUE OF RECORDED PRODUCTION : AUSTRALIA, 1951-52.**  
(£'000.)

Industry.	Gross Production valued at Principal Markets.	Local Value—Gross Production valued at Place of Production.	Net Value of Production (without deduction of depreciation or maintenance).
Agriculture .. .. .	332,147	288,689	246,685
Pastoral .. .. .	449,820	420,294	400,493
Dairying .. .. .	130,307	122,642	103,776
Poultry .. .. .	48,519	43,920	31,554
Bee-farming .. .. .	862	774	774
<b>Total, Rural .. .. .</b>	<b>961,655</b>	<b>876,319</b>	<b>783,282</b>
Trapping .. .. .	7,406	6,713	6,713
Forestry .. .. .	41,356	37,905	37,905
Fisheries .. .. .	6,638	5,729	(a) 5,729
Mines and Quarries .. .. .	116,205	114,712	97,199
<b>Total, Non-rural .. .. .</b>	<b>171,605</b>	<b>165,059</b>	<b>147,546</b>
<b>Total, All Primary .. .. .</b>	<b>1,133,260</b>	<b>1,041,378</b>	<b>930,828</b>
Factories .. .. .	(b) 1,023,976	(b) 1,023,976	1,023,976
<b>Total, All Industries .. .. .</b>	<b>2,157,236</b>	<b>2,065,354</b>	<b>1,954,804</b>

(a) Local Value. Production costs not available for all States.

(b) Net value.

3. **Net Value of Production, States, 1951-52.**—The following tables show the total net value of production, and the net value per head of population, for each industry and State during the year 1951-52 :—

**NET(a) VALUE OF RECORDED PRODUCTION, 1951-52.**  
(£'000.)

Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Agriculture .. .. .	58,333	64,084	35,622	46,903	31,027	10,716	246,685
Pastoral .. .. .	154,386	99,808	67,080	38,965	34,442	5,812	400,493
Dairying .. .. .	30,525	39,152	18,176	8,858	4,003	3,062	103,776
Poultry .. .. .	13,729	12,570	1,208	2,021	1,147	879	31,554
Bee-farming .. .. .	254	213	28	150	115	14	774
<b>Total, Rural .. .. .</b>	<b>257,227</b>	<b>215,827</b>	<b>122,114</b>	<b>96,897</b>	<b>70,734</b>	<b>20,483</b>	<b>783,282</b>
Trapping .. .. .	2,069	3,327	345	551	244	177	6,713
Forestry .. .. .	12,461	8,479	7,040	3,179	3,689	3,057	37,905
Fisheries(b) .. .. .	1,821	706	835	701	1,225	441	5,729
Mines and Quarries .. .. .	59,385	4,209	8,632	4,664	9,775	10,552	97,199
<b>Total, Non-rural .. .. .</b>	<b>75,736</b>	<b>16,721</b>	<b>16,852</b>	<b>9,077</b>	<b>14,933</b>	<b>14,227</b>	<b>147,546</b>
<b>Total, All Primary .. .. .</b>	<b>332,963</b>	<b>232,548</b>	<b>138,966</b>	<b>105,974</b>	<b>85,667</b>	<b>34,710</b>	<b>930,828</b>
Factories .. .. .	443,391	334,360	91,329	82,409	42,693	29,794	1,023,976
<b>Total, All Industries .. .. .</b>	<b>776,354</b>	<b>566,908</b>	<b>230,298</b>	<b>188,383</b>	<b>128,360</b>	<b>64,504</b>	<b>1,954,804</b>

(a) See letterpress on page 1139.

(b) Local value.

NET(a) VALUE OF RECORDED PRODUCTION PER HEAD OF POPULATION,  
1951-52.  
(£ s. d.)

Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Agriculture ..	17 7 8	27 16 11	29 3 5	64 6 2	52 9 8	35 17 10	29 0 8
Pastoral ..	46 0 1	43 7 4	54 18 8	53 8 6	58 5 3	19 9 4	47 2 7
Dairying ..	9 1 11	17 0 3	14 17 8	12 2 11	6 15 5	10 5 1	12 4 3
Poultry ..	4 1 10	5 9 3	0 19 9	2 15 5	1 18 10	2 18 11	3 14 3
Bee-farming ..	0 1 6	0 1 10	0 0 6	0 4 1	0 3 11	0 0 11	0 1 10
Total, Rural ..	76 13 0	93 15 7	100 0 0	132 17 1	119 13 1	68 12 1	92 3 7
Trapping ..	0 12 4	1 8 11	0 5 8	0 15 1	0 8 3	0 11 10	0 15 10
Forestry ..	3 14 3	3 13 8	5 15 4	4 7 2	6 4 10	10 4 9	4 9 3
Fisheries(b)	0 10 10	0 6 2	0 13 8	0 19 3	2 1 5	1 9 6	0 13 6
Mines and Quarries	17 13 11	1 16 7	7 1 5	6 7 5	16 10 8	35 6 10	11 8 9
Total, Non-rural	22 11 4	7 5 4	13 16 1	12 8 11	25 5 2	47 12 11	17 7 4
Total, All Primary Factories ..	99 4 4	101 0 11	113 16 1	145 6 0	144 18 3	116 5 0	109 10 11
Total, All Industries	132 2 5	145 5 6	74 15 11	112 19 9	72 4 5	99 15 10	120 10 0
	231 6 9	246 6 5	188 12 0	258 5 9	217 2 8	216 0 10	230 0 11

(a) See letterpress on page 1139.

(b) Local value.

4. Net Value of Production, Australia, 1938-39 and 1947-48 to 1951-52.—The following table shows the estimated net value of production for Australia during the years 1947-48 to 1951-52 compared with 1938-39.

ESTIMATED NET(a) VALUE OF RECORDED PRODUCTION : AUSTRALIA.  
(£'000.)

Industry.	1938-39.	1947-48.	1948-49.	1949-50.	1950-51.	1951-52.
Agriculture ..	41,679	225,803	164,372	218,703	208,130	246,685
Pastoral ..	63,820	193,870	240,855	337,121	704,809	400,493
Dairying ..	33,782	60,540	67,552	81,102	89,352	103,776
Poultry ..	7,302	16,744	20,196	22,228	24,614	31,554
Bee-farming ..	123	737	1,509	743	831	774
Total, Rural ..	146,706	497,694	494,484	659,897	1,027,736	783,282
Trapping ..	1,422	7,303	7,786	5,716	6,629	6,713
Forestry ..	7,811	17,768	20,305	23,195	28,428	37,905
Fisheries(b)	1,654	3,503	4,174	4,234	4,869	5,729
Mines and Quarries	27,375	42,581	48,353	52,327	71,150	97,199
Total, Non-rural ..	38,262	71,155	80,618	85,472	111,076	147,546
Total, All Primary Factories ..	184,958	568,849	575,102	745,369	1,138,812	930,828
Total, All Industries	203,417	489,296	568,715	661,488	843,605	1,023,976
	388,385	1,058,145	1,143,817	1,406,857	1,982,417	1,954,804

(a) See letterpress on page 1139.

(b) Local value.

In the chapters dealing with the respective industries (except trapping and mines and quarries) tables will be found showing the total and *per capita* values of production for the industry by States for a series of years ended 1951-52.

On page 878 of this issue is a graph showing the Net Value of Production, Australia for all recorded industries for the years 1928-29 to 1951-52.

## § 2. Indexes of Production.

In the tables below, indexes of price and quantity production are given for the following industrial groups, namely:—Agriculture, Pastoral, Farmyard and Dairying, and All Farming combined (including separate indexes for Wool and Products other than Wool). Indexes previously published in respect of Gold and Other Minerals, and All Mining combined, are under review and pending completion of investigations the publication of these results has been temporarily discontinued.

1. Farm Production Price Index-Numbers.—The Farm Production Price Index-Numbers shown in the following table relate to average "prices" of agriculture, pastoral, farmyard and dairying products realized in the principal markets of Australia. The "price" data used are average unit values for the total quantities of the relevant commodities produced or marketed in each year and the index-numbers therefore measure both the effects of changes in prices (as such) and of variations in the quality, type, usage, etc. of products marketed. The index-numbers for any year relate to the average values of products produced or marketed in that year, irrespective of the periods in which payment is received by producers.

The indexes have been calculated by the fixed-base weighted aggregative method. "Prices" for each commodity in any year are obtained by dividing gross value of production by the quantity produced in that year. In the original published series of Production Price Index-Numbers the average quantities of the relevant commodities produced in the period 1923-24 to 1927-28 were used as fixed weights. This series has been retained for years up to 1935-36, but re-computed to the base, average 1936-37 to 1938-39 = 100. For 1936-37 and later years, the original series was replaced in December, 1952 by a revised series in which average quantities of each product marketed during the period 1946-47 to 1950-51 are used as fixed weights. In the revised series, the regimen was extended and modified to include farm products (as defined by Australian Statisticians) in all cases. Certain other refinements were also incorporated in the revised indexes, the principal of which was the omission from the weights used for the All Farming Index of quantities of crops marketed for livestock feeding in Australia.

**FARM PRODUCTION: INDEX-NUMBERS OF PRICES AT PRINCIPAL MARKETS, AUSTRALIA.**

(Base: Average 1936-37 to 1938-39 = 100.)

Year.	Agri- culture.	Pastoral.	Farm- yard and Dairying.	All Farming.	Wool (Shorn and Dead).	Products other than Wool.
1911-12 .. .. .	92	66	70	76	..	..
1912-13 .. .. .	86	77	78	81	..	..
1913-14 .. .. .	85	76	74	79	..	..
1914-15 .. .. .	143	85	80	105	..	..
1915-16 .. .. .	100	113	98	106	..	..
1916-17 .. .. .	96	127	103	112	..	..
1917-18 .. .. .	112	139	101	123	..	..
1918-19 .. .. .	133	139	111	132	..	..
1919-20 .. .. .	197	146	134	161	..	..
1920-21 .. .. .	170	137	170	155	..	..
1921-22 .. .. .	130	96	118	112	..	..
1922-23 .. .. .	136	127	125	130	..	..
1923-24 .. .. .	119	161	120	139	..	..
1924-25 .. .. .	139	159	105	142	(a) 206	..
1925-26 .. .. .	145	130	120	133	126	..
1926-27 .. .. .	129	125	120	125	129	..
1927-28 .. .. .	129	146	120	136	148	..
1928-29 .. .. .	117	129	122	123	125	..
1929-30 .. .. .	110	104	116	108	78	..
1930-31 .. .. .	76	82	93	82	65	..
1931-32 .. .. .	84	71	83	78	64	..
1932-33 .. .. .	79	69	74	74	66	..
1933-34 .. .. .	79	103	73	89	120	..
1934-35 .. .. .	88	77	79	81	74	..
1935-36(b) .. .. .	94	99	87	95	107	..
1936-37 .. .. .	114	115	93	109	126	(a) 104
1937-38 .. .. .	98	98	102	99	95	100
1938-39 .. .. .	88	87	105	92	79	96
1939-40 .. .. .	100	105	105	104	102	105
1940-41 .. .. .	106	107	105	107	102	108
1941-42 .. .. .	111	108	107	110	102	112
1942-43 .. .. .	131	123	130	128	118	132
1943-44 .. .. .	151	128	147	140	118	147
1944-45 .. .. .	151	129	152	142	118	150
1945-46 .. .. .	175	133	159	157	118	169
1946-47 .. .. .	194	181	158	186	187	185
1947-48 .. .. .	267	262	183	247	301	230
1948-49 .. .. .	234	312	197	260	366	225
1949-50 .. .. .	274	396	228	316	483	269
1950-51 .. .. .	(c) 292	815	258	(e) 502	1,099	(c) 302
1951-52(d) .. .. .	(c) 346	(c) 492	(c) 341	404	552	356
1952-53(d) .. .. .	352	523	375	427	623	364

(a) Not available for previous years.  
(d) Subject to revision.

(b) See letterpress preceding table.

(c) Revised.

2. **Farm Production Quantity Index-Numbers.**—The Farm Production Quantity Index-Numbers shown in the following table relate to gross output of farm products. They have been calculated by the fixed-base weighted aggregative method, the weights used being weighted average unit values obtained by dividing total gross value by total quantity produced for each commodity for the base period.

In the original published series of Farm Production Quantity Index-Numbers, the period 1923-24 to 1927-28 was adopted as the base for weighting purposes. This series has been retained for years up to 1935-36, but the index-numbers have been re-computed to the base, average 1936-37 to 1938-39 = 100. For 1936-37 and later years, the original series was replaced in December, 1952 by a revised series in which average unit values for the period 1936-37 to 1938-39 are used as fixed weights. The regimen used for the revised series was extended and modified to include farm products (as defined by Australian Statisticians) in all cases. Certain other refinements were incorporated in the revised indexes, the principal of which was the omission, in calculating the All Farming Index, of quantities of crops fed to live-stock in Australia.

**FARM PRODUCTION : INDEX-NUMBERS OF QUANTITY PRODUCTION, AUSTRALIA.**  
(Base : Average 1936-37 to 1938-39 = 100.)

Year.	Agri- culture.	Pastoral.	Farm- yard and Dairying.	All Farming.	Wool (Shorn and Dead).	Products other than Wool.
1911-12 .. .. .	51	76	52	63	71	..
1912-13 .. .. .	64	70	50	64	62	..
1913-14 .. .. .	67	79	52	70	68	..
1914-15 .. .. .	30	77	50	57	62	..
1915-16 .. .. .	99	63	40	71	53	..
1916-17 .. .. .	80	61	49	65	54	..
1917-18 .. .. .	67	61	57	62	58	..
1918-19 .. .. .	53	69	56	61	73	..
1919-20 .. .. .	44	77	52	61	73	..
1920-21 .. .. .	87	62	57	69	62	..
1921-22 .. .. .	78	72	67	73	71	..
1922-23 .. .. .	74	76	61	73	71	..
1923-24 .. .. .	80	68	62	71	67	..
1924-25 .. .. .	95	80	76	84	81	..
1925-26 .. .. .	73	84	71	78	86	..
1926-27 .. .. .	90	89	68	86	95	..
1927-28 .. .. .	75	86	73	80	90	..
1928-29 .. .. .	91	92	75	89	99	..
1929-30 .. .. .	79	87	75	82	95	..
1930-31 .. .. .	111	84	82	93	92	..
1931-32 .. .. .	100	92	89	94	102	..
1932-33 .. .. .	110	99	94	102	106	..
1933-34 .. .. .	102	95	100	98	98	..
1934-35 .. .. .	88	98	104	96	102	..
1935-36(a) .. .. .	91	95	99	94	98	..
1936-37 .. .. .	97	(b)	(b)	(b)	(b)	(c) 96
1937-38 .. .. .	107	98	97	97	99	105
1938-39 .. .. .	96	103	101	104	103	99
1939-40 .. .. .	120	99	102	99	98	105
1940-41 .. .. .	74	107	108	107	115	91
1941-42 .. .. .	104	109	107	97	115	99
1942-43 .. .. .	104	112	104	104	118	98
1943-44 .. .. .	97	114	103	102	116	94
1944-45 .. .. .	86	115	100	100	119	84
1945-46 .. .. .	68	101	99	88	101	92
1946-47 .. .. .	100	86	103	92	92	90
1947-48 .. .. .	84	92	103	91	95	111
1948-49 .. .. .	122	98	107	109	101	109
1949-50 .. .. .	108	105	111	109	108	115
1950-51 .. .. .	117	112	111	115	115	107
1951-52(b) .. .. .	108	109	(b) 106	109	116	100
1951-52(b) .. .. .	103	105	97	103	112	118
1952-53(d) .. .. .	119	122	109	119	126	118

(a) See letterpress preceding table.  
(d) Subject to revision.

(b) Revised.

(c) Not available for previous years.

### § 3. New Building.

1. **General.**—The statistics in this section relate to the operations of private contractors, Government authorities and owner-builders, with the exception of those relating to employment, which exclude the numbers of persons working on owner-built houses. In general, they relate to *new building only*, and data on alterations, additions, renovations and repairs to buildings are excluded, because of the difficulty in obtaining complete lists of persons who engage in these operations. Figures for houses exclude converted military huts, flats and shop dwellings. Some houses built on farms are excluded but these do not affect the figures materially.

These statistics are available for the quarter ended 30th September, 1945 and onward.

The following definitions of terms used in this section are necessary for interpretation of the data presented:—

*Owner-Builder.* A person who is actually building his own house or is having his house built under his own direction without the services of a contractor.

*Commenced.* A building is regarded as having been commenced when work on foundations has begun. Owing to the difficulty of defining the exact point that this represents in building operations, it is probable that interpretations placed upon it by informants are not entirely uniform.

*Completed.* A building is regarded as having been completed when the builder has fulfilled the terms of the contract. As with commencements, the interpretations placed upon this definition may vary.

*Under Construction.* A building remaining uncompleted at the end of a period is regarded as being under construction, regardless of whether construction was actively proceeding on that particular date.

*Employment.* The figures of employment relate to persons actually working on new buildings on a specified day. They include working principals, employees, men working as, or for, sub-contractors and men temporarily laid off on account of weather. In addition, they include some employees engaged on alterations, additions, renovations or repairs to buildings *when these jobs are undertaken by a contractor who builds new buildings*. The figures exclude persons working on owner-built houses.

*Values.* All values shown exclude the value of land and represent the estimated value of buildings on completion.

2. **Value of New Buildings.**—(i) *Completed, 1952-53.* The following table shows the value of all new buildings completed in each State during 1952-53, according to the kind of building. It should be remembered that all values shown exclude the value of land and represent the estimated value of buildings on completion.

#### NEW BUILDINGS COMPLETED : VALUE, 1952-53.

(Including Estimated Value of Owner-built Houses.)

(£'000.)

Kind of Building.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Houses—								
Brick, Brick Veneer								
Concrete and Stone..	23,185	22,193	2,484	14,494	9,001	2,675	1,061	75,093
Wood (Weatherboard, etc.) .. .. .	14,848	30,836	14,646	4,765	2,344	4,506	1,093	73,038
Fibro Cement .. ..	24,366	3,044	2,171	2,252	7,512	404	16	39,765
Other .. .. .	181	475	757	604	137	5	..	2,159
Total Houses .. ..	62,580	56,548	20,058	22,115	18,994	7,590	2,170	190,055
Flats .. .. .	4,000	2,088	83	105	167	36	157	6,636
Shops with Dwellings ..	966	1,180	93	16	14	56	24	2,349
Shops without Dwellings	871	488	315	117	151	84	31	2,057
Hotels, Guest Houses, Boarding Houses, etc.	346	34	85	38	240	470	..	1,213
Factories .. .. .	9,682	6,938	1,187	631	834	516	..	19,788
Other New Buildings ..	10,604	8,831	4,412	2,860	2,518	1,913	493	40,631
Total Other Buildings ..	35,469	19,559	6,175	3,767	3,924	3,075	705	72,674
Total New Buildings ..	98,049	76,107	26,233	25,882	22,918	10,665	2,875	262,729

(ii) *Commenced, Completed and Under Construction, 1945-46 to 1952-53.* The following table summarizes the values of all new buildings commenced, completed and under construction for each State for the years 1945-46 to 1952-53.

**NEW BUILDINGS : VALUE.**  
(Including Estimated Value of Owner-built Houses.)  
(£'000).

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
<b>COMMENCED.</b>								
1945-46	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1946-47	b 30,458	20,422	9,319	4,848	3,036	2,718	749	b 71,550
1947-48	b 36,196	27,891	12,093	5,341	4,420	3,607	2,066	b 92,154
1948-49	b 45,154	37,935	13,194	7,599	5,825	5,371	1,792	b 116,868
1949-50	b 51,277	44,218	16,994	11,301	8,459	8,379	1,492	b 142,120
1950-51	b 79,750	74,750	21,082	17,827	14,166	10,336	2,439	b 220,370
1951-52	b 83,460	78,740	27,605	22,606	18,724	11,004	2,559	b 244,698
1952-53	71,005	60,244	25,680	25,819	20,919	6,611	2,788	213,066
<b>COMPLETED.</b>								
1945-46	b 9,305	5,471	3,320	1,682	974	627	112	b 21,491
1946-47	b 17,097	11,067	7,257	2,744	2,117	1,417	310	b 42,009
1947-48	b 24,305	17,891	10,390	4,080	3,328	2,279	509	b 62,782
1948-49	b 33,737	27,357	12,199	6,483	4,707	3,810	757	b 89,050
1949-50	b 40,920	34,684	13,953	9,074	5,352	5,342	1,462	b 110,787
1950-51	b 49,466	52,058	17,286	12,042	8,948	8,403	1,717	b 149,920
1951-52	b 76,207	68,615	25,339	18,123	14,426	10,511	2,723	b 215,944
1952-53	98,049	76,107	26,233	25,882	22,918	10,665	2,875	262,729
<b>UNDER CONSTRUCTION AT END OF YEAR.</b>								
1945-46	b 14,614	9,817	3,164	2,387	1,571	1,403	430	b 33,886
1946-47	b 30,041	19,333	5,337	4,774	2,872	2,759	884	b 66,000
1947-48	b 44,461	30,623	7,234	6,170	4,452	4,146	3,013	b 100,097
1948-49	b 59,172	44,267	8,479	7,735	6,416	5,872	4,026	b 135,967
1949-50	b 75,006	56,096	11,805	10,519	10,022	8,989	4,396	b 176,833
1950-51	b 102,708	85,058	15,653	17,272	15,942	12,178	5,302	b 254,113
1951-52	b 125,674	102,670	18,728	23,813	22,302	13,770	6,208	b 313,165
1952-53	b 105,261	94,017	17,838	25,253	23,189	10,494	7,161	b 283,213

(a) Not available.

(b) Partly estimated.

3. *Numbers of New Houses.*—(i) *Completed, 1952-53.* The following table shows the numbers of new houses completed in each State during 1952-53, according to the material of their outer walls.

**NEW HOUSES COMPLETED : NUMBER, 1952-53.**  
(Including Owner-built Houses.)

Material of Outer Walls.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Brick, Brick Veneer, Concrete and Stone	6,325	6,400	931	5,977	3,075	876	265	23,849
Wood (Weatherboard, etc.)	6,396	12,752	7,897	1,539	921	2,189	320	32,014
Fibro Cement	12,102	1,692	1,447	1,246	3,898	247	5	20,637
Other	67	189	323	178	71	2		830
<b>Tota</b>	<b>24,890</b>	<b>21,033</b>	<b>10,598</b>	<b>8,940</b>	<b>7,965</b>	<b>3,314</b>	<b>590</b>	<b>77,330</b>

(ii) *Commenced, Completed and Under Construction, 1945-46 to 1952-53.* The next table provides a summary, by States, of the numbers of new houses commenced, completed and under construction for the years 1945-46 to 1952-53.

**NEW HOUSES : NUMBER.**  
(Including Owner-built Houses.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
<b>COMMENCED.</b>								
1945-46	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1946-47	b 17,720	12,981	8,925	3,269	2,405	1,642	323	b 47,265
1947-48	b 19,807	15,478	9,528	3,580	3,075	2,062	393	b 53,923
1948-49	b 21,291	16,487	9,361	4,561	3,843	2,849	534	b 58,926
1949-50	b 22,055	19,643	10,009	6,109	5,031	3,664	389	b 66,900
1950-51	b 25,162	26,949	10,698	7,966	6,970	4,122	877	b 82,744
1951-52	b 24,364	23,506	11,995	8,510	7,730	3,584	312	80,001
1952-53	b 21,030	16,254	9,381	7,967	7,012	2,285	528	64,457
<b>COMPLETED.</b>								
1945-46	5,596	3,666	3,385	1,332	860	479	58	b 15,376
1946-47	b 12,187	7,436	7,746	2,227	1,792	1,070	149	b 32,607
1947-48	b 14,858	11,846	9,204	3,009	2,771	1,544	271	b 43,503
1948-49	b 17,864	14,278	9,354	3,909	3,244	2,287	323	b 51,339
1949-50	b 18,766	15,611	9,447	4,994	3,599	2,852	404	b 55,493
1950-51	b 19,771	21,161	10,275	6,725	5,160	3,914	574	b 67,580
1951-52	b 23,351	23,951	11,803	7,711	6,577	3,999	584	b 77,976
1952-53	b 24,890	21,033	10,598	8,940	7,955	3,314	590	b 77,330
<b>UNDER CONSTRUCTION AT END OF YEAR.</b>								
1945-46	b 9,200	6,135	2,441	1,559	865	1,013	188	b 21,401
1946-47	b 14,737	11,680	3,627	2,654	1,521	1,557	368	b 36,144
1947-48	b 19,686	15,312	3,951	3,203	1,841	2,065	491	b 46,549
1948-49	b 23,113	17,521	3,958	3,940	2,439	2,575	696	b 54,242
1949-50	b 26,402	21,553	4,520	5,241	3,957	3,357	678	b 65,708
1950-51	b 31,793	27,341	4,943	6,529	5,764	3,558	981	b 80,909
1951-52	b 32,806	26,896	5,135	7,395	6,917	3,143	708	b 83,000
1952-53	b 28,946	22,053	3,918	6,404	5,951	2,114	646	b 70,092

(a) Not available.

(b) Partly estimated.

4. Numbers of New Flats.—The figures in the foregoing two tables do not include particulars of new flats. The summary below shows the numbers of new flats commenced, completed and under construction in Australia for the years 1947-48 to 1952-53, together with State details for 1952-53. It should be noted : (i) that the figures are additional to the numbers of houses shown in other tables, (ii) that each flat is counted as a separate unit, and the numbers shown therefore relate to individual flats, and (iii) that new flats only are included, i.e., the conversions of old buildings into flats are omitted.

**NEW FLATS : NUMBER.**  
(Individual Flats.)

State or Territory.	Commenced during Period.	Completed during Period.	Under Construction at end of Period.
1952-53—			
New South Wales (a) .. .. .	291	1,664	949
Victoria .. .. .	490	692	721
Queensland .. .. .	101	53	75
South Australia .. .. .	2	58	56
Western Australia .. .. .	168	100	235
Tasmania .. .. .	3	14	1
Australian Capital Territory .. .. .	..	46	..
<b>Total (a)</b> .. .. .	<b>1,055</b>	<b>2,627</b>	<b>2,037</b>
<b>Total, 1951-52(a)</b> .. .. .	<b>1,811</b>	<b>2,006</b>	<b>3,426</b>
„ 1950-51(a) .. .. .	2,096	1,684	3,621
„ 1949-50 .. .. .	2,292	1,494	3,210
„ 1948-49 .. .. .	2,021	1,345	2,416
„ 1947-48 .. .. .	1,581	768	1,734

(a) Subject to revision. °

5. Persons engaged in New Building.—The following table shows, by States, the number of persons (including contractors and sub-contractors actually working on jobs) engaged on jobs carried out by builders of new buildings at 30th June of the years 1948 to 1953. Particulars for 30th June, 1953 show the numbers of tradesmen, contractors, sub-contractors and wage earners engaged. For an explanation of the field of employment covered see para. 1 of this section.

**PERSONS ENGAGED IN NEW BUILDING.**  
(Excluding Persons working on Owner-built Houses.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
30th June, 1953—								
Carpenters .. .. .	13,000	11,727	8,130	3,001	3,527	2,544	672	42,601
Bricklayers .. .. .	2,930	2,078	732	1,422	638	276	147	8,223
Painters .. .. .	2,555	2,154	1,418	854	732	396	158	8,207
Electricians .. .. .	1,641	897	821	336	272	175	43	4,185
Plumbers .. .. .	2,700	1,729	1,152	707	570	236	166	7,200
Builders' Labourers .. .. .	5,478	5,205	2,393	1,781	1,770	1,063	438	18,128
Other .. .. .	3,486	2,774	1,428	1,270	1,311	490	248	11,007
Contractors(a) .. .. .	3,379	2,260	2,375	751	535	400	44	9,744
Sub-contractors(a) .. .. .	3,826	2,743	1,503	1,049	705	477	99	10,402
Wage earners .. .. .	24,585	21,561	12,196	7,571	7,580	4,303	1,669	79,465
<b>Total .. .. .</b>	<b>31,790</b>	<b>26,564</b>	<b>16,074</b>	<b>9,371</b>	<b>8,820</b>	<b>5,180</b>	<b>1,812</b>	<b>99,611</b>
Total 30th June, 1952 .. .. .	39,779	31,653	17,037	10,371	8,654	5,267	2,229	114,990
.. .. . 1951 .. .. .	45,470	34,420	16,623	10,168	7,985	6,700	2,075	123,441
.. .. . 1950 .. .. .	42,393	31,684	15,643	8,743	6,908	5,700	2,022	113,093
.. .. . 1949 .. .. .	41,982	28,442	14,030	7,727	6,220	4,920	1,389	104,710
.. .. . 1948 .. .. .	41,131	26,728	12,766	7,120	5,591	3,798	918	98,052

(a) Actually working on jobs.

**§ 4. Consumption of Foodstuffs and Beverages.**

1. Quantities Consumed.—Previous issues of the Official Year Book up to No. 36 included a statistical survey of the movement in the consumption in Australia, in total and per head of population, of a selected number of commodities over a period of years up to 1940-41 (see Official Year Book No. 36, pp. 1098-1100). In issue No. 37 these long-term comparisons were replaced by more detailed information covering consumption of the principal foodstuffs and beverages in annual periods since 1944 in comparison with average annual consumption during the three years ended 1938-39. In this issue the annual periods extend from 1948-49 to 1952-53.

The estimates of total consumption and consumption per head of population in Australia in the two tables following have been compiled by deducting net exports from production and allowing for recorded movements in stocks of the respective commodities. While the estimates may generally be accepted as reasonably accurate, there are some deficiencies to which attention should be directed. These relate chiefly to the quantities of poultry, game and fish (fresh and shell) and the quantities of visible oils and other fats entering consumption. In addition, little information is available on the quantities of vegetables, fruit, eggs, etc., which householders produce for their own requirements and the extent of wastage occurring in the marketing of foodstuffs. In all these cases careful estimates have been compiled from the best available data, and the quantities shown as entering consumption in Australia have been adjusted to allow for these circumstances. Other difficulties occur in the compilation of statistics of consumption for which no allowance has been made. These include (i) the absence of particulars of stock movements in a limited number of cases, and (ii) the purchase of foodstuffs for despatch overseas as gifts in bulk and by parcel post. These deficiencies, however, do not seriously impair the accuracy of the estimates compiled.



The estimates of consumption per head of population shown in the second table following have been checked, wherever possible, with data from other sources which confirm the reliability of the methods used. The data were obtained principally from the Food Consumption Survey conducted in 1944 by the Nutrition Committee of the National Health and Medical Research Council.

There has been a general upward movement in the consumption per head of population of most foodstuffs and beverages in Australia from the levels of consumption during the three years immediately preceding the 1939-45 War, but there are some notable exceptions, viz., mutton, pig-meats and cream.

More detailed information on the consumption of foodstuffs and beverages is contained in the publication, *Report on Food Production and the Consumption of Foodstuffs and Nutrients in Australia*, issued by this Bureau.

### ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE FOR CONSUMPTION ANNUALLY: AUSTRALIA.

Commodity.	Unit of Quantity.	Average	1948-49.	1949-50.	1950-51.	1951-52.	1952-53. (a)
		1936-37 to 1938-39.					
<b>Milk and Milk Products—</b>							
Fluid Whole Milk .. ..	Mil. gals.	161	242	241	236	240	243
Fresh Cream .. ..	'ooo tons	19.7	3.5	3.5	8.9	7.6	7.8
Condensed Milk (Sweetened and Unsweetened) .. ..	"	9.9	15.5	16.9	15.8	21.4	13.2
Concentrated Whole Milk .. ..	"	3.4	13.2	17.3	18.3	16.8	13.0
<b>Powdered Milk—</b>							
Full Cream .. ..	"	8.1	13.2	11.7	9.9	10.8	9.3
Skim .. ..	"						
Infants' and Invalids' Foods (including Malted Milk) .. ..	"	3.0	2.8	4.3	6.8	6.6	5.6
Cheese .. ..	"	13.4	17.7	22.7	24.2	22.8	23.2
Total (in terms of Milk Solids) .. ..	"	120.5	173.3	176.1	176.7	179.8	175.2
<b>Meat—</b>							
Beef (bone-in weight) .. ..	"	442.0	422.4	446.9	488.2	464.3	462.7
Mutton (bone-in weight) .. ..	"	183.4	156.4	164.2	142.5	156.4	191.7
Lamb (bone-in weight) .. ..	"	46.1	98.1	98.3	91.2	91.6	112.2
Pork (bone-in weight) .. ..	"	31.8	25.8	26.0	25.2	27.9	24.0
Offal .. ..	"	25.7	29.1	34.4	32.5	34.7	40.4
Canned Meat (canned weight) Bacon and Ham (cured weight)	"	(b)	8.4	12.9	11.8	8.2	5.2
	"	31.4	36.1	34.6	30.8	27.5	27.4
Total (in terms of carcass weight) .. ..	"	776.1	794.0	836.8	840.8	825.4	880.2
<b>Poultry, Game and Fish—</b>							
Poultry and Rabbits (carcass weight) .. ..	"	29.8	52.7	54.4	56.2	57.7	59.1
<b>Fish(c)—</b>							
Fresh .. ..	"	19.7	18.8	20.2	18.6	21.0	19.6
Cured (including Smoked and Salted) .. ..	"	(d)	(d)	(d)	3.7	3.5	3.3
Crustaceans and Molluscs .. ..	"	2.1	2.7	3.0	2.7	2.2	2.3
Canned—Australian origin .. ..	"	12.4	10.8	10.1	2.9	2.7	2.7
Imported .. ..	"						
Total(c) .. ..	"	51.5	62.9	64.7	70.2	72.7	64.5
<b>Eggs and Egg Products—</b>							
Shell Eggs .. ..	"	78.7	84.6	83.9	84.7	82.4	80.4
Liquid Whole Egg(e) .. ..	"	2.9	9.6	8.9	7.9	8.2	6.4
Egg Powder(e) .. ..	"	..	0.1	0.2	0.2	0.3	0.2
Total (Shell Egg equiva- lent) .. ..	"	81.6	94.3	93.0	92.8	90.9	87.0
	Mil. doz.	139.3	160.9	158.7	158.4	155.1	148.5
<b>Fats and Oils—</b>							
Butter .. ..	'ooo tons	101.0	84.6	90.8	114.6	118.9	114.6
<b>Margarine—</b>							
Table .. ..	"	2.8	2.6	2.1	1.9	5.2	7.0
Other .. ..	"	12.2	20.6	23.5	22.4	24.9	21.7
Lard .. ..	"	5.2	4.5	4.0	3.8	3.9	3.8
Vegetable Oils and Other Fats	"	14.4	14.1	14.4	14.8	15.2	15.6
Total (Fat Content) .. ..	"	115.5	108.2	115.1	133.8	142.8	138.4

See next page for notes.

ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE FOR CONSUMPTION ANNUALLY: AUSTRALIA—*continued.*

Commodity.	Unit of Quantity.	Average 1936-37 to 1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53. (a)
<b>Sugar and Syrups—</b>							
Refined Sugar—							
As Sugar .. .. .	'000 tons	216.5	236.6	242.6	251.9	264.1	232.3
In manufactured products ..	"	110.1	172.9	167.7	194.1	215.2	162.9
Honey, Glucose and Syrups ..	"	21.9	24.4	24.6	28.9	21.4	22.1
<b>Total (Sugar Content) ..</b>	<b>"</b>	<b>343.9</b>	<b>428.8</b>	<b>429.4</b>	<b>468.9</b>	<b>496.2</b>	<b>412.7</b>
<b>Potatoes—</b>							
White .. .. .	"	318.5	376.9	391.8	341.7	412.9	365.1
Sweet .. .. .	"	7.4	5.0	5.0	5.2	5.3	5.5
<b>Total .. .. .</b>	<b>"</b>	<b>325.9</b>	<b>381.9</b>	<b>396.8</b>	<b>346.9</b>	<b>418.2</b>	<b>370.6</b>
<b>Pulse and Nuts—</b>							
Dried Pulse .. .. .	"	4.5	9.1	15.9	14.8	18.4	10.2
Peanuts (weight without shell)	"	2.8	9.2	5.5	5.8	5.5	5.3
Edible Tree Nuts (weight without shell) .. .. .	"	2.6	5.0	6.8	8.6	5.1	5.6
Cocoa (Raw Beans) .. .. .	"	6.3	12.1	13.6	12.3	11.2	9.0
<b>Total .. .. .</b>	<b>"</b>	<b>16.2</b>	<b>35.4</b>	<b>41.8</b>	<b>41.5</b>	<b>40.2</b>	<b>30.1</b>
<b>Tomatoes and Fruit—</b>							
Tomatoes (f) .. .. .	"	(g) 48.0	74.6	94.4	83.5	95.7	87.3
Citrus Fruit (f) .. .. .	"	97.8	136.7	121.8	138.7	97.7	90.0
Other Fresh Fruit .. .. .	"	288.2	290.3	279.1	281.9	300.5	240.8
Jams .. .. .	"	35.1	38.2	42.1	41.7	37.8	33.3
Dried Fruit .. .. .	"	24.8	35.5	30.3	35.1	31.6	25.8
Canned Fruit .. .. .	"	31.9	46.5	43.8	44.7	60.6	40.5
<b>Total (Fresh Fruit equivalent) .. .. .</b>	<b>"</b>	<b>556.0</b>	<b>713.5</b>	<b>684.5</b>	<b>714.3</b>	<b>702.8</b>	<b>581.5</b>
<b>Vegetables—</b>							
Leafy, Green and Yellow Vegetables .. .. .	"	(h)	175.6	163.6	182.6	175.4	173.4
Other Fresh Vegetables .. .. .	"	(h)	278.6	255.7	260.4	273.5	249.4
Canned Vegetables .. .. .	"	(h)	14.1	15.9	18.3	22.8	10.1
<b>Total .. .. .</b>	<b>"</b>	<b>(h)</b>	<b>468.3</b>	<b>435.2</b>	<b>461.3</b>	<b>471.7</b>	<b>432.9</b>
<b>Grain Products—</b>							
Flour .. .. .							
White .. .. .	"	} 574.0	{ 671.0	675.3	694.8	735.4	721.4
Wheatmeal for baking .. .. .	"						
Breakfast Foods (t) .. .. .	"	27.8	31.3	32.7	32.5	31.9	34.3
Rice (Milled) .. .. .	"	12.2	2.9	3.9	14.7	17.9	13.3
Tapioca, Sago, etc. .. .. .	"	3.7	2.0	2.9	2.9	2.3	1.9
Pearl Barley .. .. .	"	3.0	1.2	2.6	2.3	2.4	2.2
Barley Meal and Polished							
Wheat (Rice substitute) .. .. .	"		1.7	1.0	1.1	0.8	0.6
Edible Starch (Cornflour) .. .. .	"	4.3	5.2	5.7	5.7	3.5	3.3
<b>Total .. .. .</b>	<b>"</b>	<b>625.0</b>	<b>753.6</b>	<b>763.6</b>	<b>788.0</b>	<b>826.9</b>	<b>808.4</b>
<b>Beverages—</b>							
Tea .. .. .	"	21.1	22.1	24.3	27.8	24.8	25.3
Coffee .. .. .	"	2.0	3.3	3.7	2.7	3.2	2.6
Beer .. .. .	Mil. gals.	77.9	139.4	146.7	163.9	174.7	184.1
Wine .. .. .	"	4.2	10.8	12.1	13.4	15.3	12.5

(a) Subject to revision. (b) Included with fresh meat at its carcass weight. (c) Edible weight. (d) Included with fresh. (e) In terms of weight of shell eggs. (f) Includes fresh equivalent of manufactured products. (g) Probably understated owing to lack of complete data. (h) Not available. (i) Excludes breakfast foods from maize and rice.

## ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE FOR CONSUMPTION ANNUALLY PER HEAD OF POPULATION: AUSTRALIA.

Commodity.	Unit of Quantity.	Average 1936-37 to 1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53. (a)
<b>Milk and Milk Products—</b>							
Fluid Whole Milk .. .. .	Gallon	23.4	31.1	29.9	28.4	28.1	27.8
Fresh Cream .. .. .	lb.	6.4	1.0	1.0	2.4	2.0	2.0
Condensed Milk (Sweetened and Unsweetened) .. .. .	"	3.2	4.4	4.8	4.2	5.6	3.3
Concentrated Whole Milk .. .. .	"	1.1	3.8	4.8	4.9	4.4	3.3
Powdered Milk—							
Full Cream .. .. .	"	2.6	3.7	3.3	2.7	2.8	2.4
Skim .. .. .	"						
Infants' and Invalids' Foods (including Malted Milk) .. .. .	"	1.0	0.8	1.2	1.8	1.7	1.4
Cheese .. .. .	"	4.4	5.1	6.3	6.5	6.0	5.9
Total (in terms of Milk Solids) .. .. .	"	39.3	49.8	48.9	47.8	47.2	44.0
<b>Meat—</b>							
Beef (bone-in weight) .. .. .	"	144.1	121.3	124.3	131.6	121.8	118.5
Mutton (bone-in weight) .. .. .	"	59.8	44.9	45.7	38.4	41.0	49.1
Lamb (bone-in weight) .. .. .	"	15.0	28.2	27.4	24.6	24.0	28.7
Pork (bone-in weight) .. .. .	"	10.4	7.4	7.2	6.8	7.3	6.1
Offal .. .. .	"	8.4	8.4	9.6	8.8	9.1	10.3
Canned Meat (canned weight) .. .. .	"	(b)	2.4	3.6	3.2	2.1	1.3
Bacon and Ham (cured weight) .. .. .	"	10.2	10.4	9.6	8.3	7.2	7.0
Total (in terms of carcass weight) .. .. .	"	253.0	228.1	232.9	226.6	216.5	225.4
<b>Poultry, Game and Fish—</b>							
Poultry and Rabbits (carcass weight) .. .. .	"	9.7	15.1	15.1	15.1	15.1	15.1
Fish (c)—							
Fresh .. .. .	"	6.4	5.5	5.6	5.0	5.5	5.0
Cured (including Smoked and Salted) .. .. .	"	(d)	(d)	(d)	1.0	0.9	0.9
Crustaceans and Molluscs .. .. .	"	0.7	0.8	1.0	0.7	0.6	0.6
Canned—							
Australian origin .. .. .	}	4.1	3.1	2.8	0.8	0.7	0.7
Imported .. .. .							
Total (c) .. .. .	"	16.8	18.1	18.1	18.9	19.0	16.5
<b>Eggs and Egg Products—</b>							
Shell Eggs .. .. .	"	25.7	24.3	23.3	22.9	21.6	20.6
Liquid Whole Egg (e) .. .. .	"	0.9	2.8	2.5	2.1	2.2	1.6
Egg Powder (e) .. .. .	"	..	..	0.1	0.1	0.1	0.1
Total (Shell Egg equivalent) .. .. .	{ No.	26.6	27.1	25.9	25.1	23.9	22.3
		243	248	236	229	219	204
<b>Fats and Oils—</b>							
Butter .. .. .	lb.	32.9	24.3	25.3	30.9	31.2	29.3
Margarine—							
Table .. .. .	"	0.9	0.7	0.6	0.5	1.4	1.8
Other .. .. .	"	4.0	5.9	6.5	6.0	6.5	5.6
Lard .. .. .	"	1.7	1.3	1.2	1.0	1.0	1.0
Vegetable Oils and other Fats .. .. .	"	4.7	4.1	4.0	4.0	4.0	4.0
Total (Fat Content) .. .. .	"	37.6	31.0	32.1	35.9	37.5	35.5
<b>Sugar and Syrups—</b>							
Refined Sugar—							
As Sugar .. .. .	"	70.6	68.0	67.4	67.9	69.3	59.5
In manufactured products .. .. .	"	35.9	49.7	46.7	52.3	56.4	41.7
Honey, Glucose and Syrups .. .. .	"	7.1	7.0	6.8	7.7	5.6	5.7
Total (Sugar Content) .. .. .	"	112.0	123.2	119.5	126.2	130.1	105.7

See next page for notes.

ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE FOR CONSUMPTION ANNUALLY PER HEAD OF POPULATION: AUSTRALIA—*continued.*

Commodity.	Unit of Quantity.	Average 1936-37 to 1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53. (a)
Potatoes—							
White .. .. .	lb.	103.8	108.3	109.0	92.1	108.3	93.5
Sweet .. .. .	"	2.4	1.4	1.4	1.4	1.4	1.4
Total .. .. .	"	106.2	109.7	110.4	93.5	109.7	94.9
Pulse and Nuts—							
Dried Pulse .. .. .	"	1.5	2.6	4.5	4.0	4.8	2.6
Peanuts (weight without shell)	"	0.9	2.6	1.5	1.6	1.4	1.3
Edible Tree Nuts (weight without shell)	"	0.8	1.4	1.9	2.3	1.3	1.4
Cocoa (Raw Beans) .. .. .	"	2.1	3.5	3.8	3.3	2.9	2.3
Total .. .. .	"	5.3	10.1	11.7	11.2	10.4	7.6
Tomatoes and Fruit—							
Tomatoes (f) .. .. .	"	(g) 15.7	21.4	26.3	22.5	25.1	22.4
Citrus Fruit (f) .. .. .	"	31.9	39.3	33.9	37.4	25.6	23.0
Other Fresh Fruit .. .. .	"	94.0	83.4	77.7	76.0	78.8	61.7
Jams .. .. .	"	11.4	11.0	11.7	11.2	9.9	8.5
Dried Fruit .. .. .	"	8.1	10.2	8.4	9.5	8.3	6.6
Canned Fruit .. .. .	"	10.7	13.3	12.2	12.1	15.9	10.4
Total (Fresh Fruit equivalent) .. .. .	"	189.4	204.9	190.5	192.5	184.4	148.9
Vegetables—							
Leafy, Green and Yellow Vegetables .. .. .	"	(h)	50.5	45.5	49.2	46.1	44.4
Other Fresh Vegetables .. .. .	"	(h)	80.0	71.2	70.1	71.8	63.9
Canned Vegetables .. .. .	"	(h)	4.0	4.4	4.9	6.0	2.6
Total .. .. .	"	(h)	134.5	121.1	124.2	123.9	110.9
Grain Products—							
Flour—							
White .. .. .	"	187.1	192.7	187.9	187.3	192.9	184.7
Wheatmeal for baking .. .. .	"						
Breakfast Foods (i) .. .. .	"	9.0	9.0	9.1	8.7	8.4	8.8
Rice (milled) .. .. .	"	4.0	0.8	1.1	4.0	4.7	3.4
Tapioca, Sago, etc. .. .. .	"	1.2	0.6	0.8	0.8	0.6	0.5
Pearl Barley .. .. .	"	1.0	0.4	0.7	0.6	0.6	0.6
Barley Meal and Polished Wheat (Rice substitute) .. .. .	"	..	0.5	0.3	0.3	0.2	0.1
Edible Starch (Cornflour) .. .. .	"	1.4	1.5	1.6	1.5	0.9	0.8
Total .. .. .	"	203.7	216.5	212.5	212.3	216.9	206.9
Beverages—							
Tea .. .. .	"	6.9	6.3	6.8	7.5	6.5	6.5
Coffee .. .. .	"	0.6	0.9	1.0	0.7	0.8	0.7
Beer .. .. .	Gallon	11.3	17.9	18.2	19.7	20.5	21.0
Wine .. .. .	"	0.6	1.4	1.5	1.6	1.8	1.4

(a) Subject to revision. (b) Included with fresh meat at its carcass weight. (c) Edible weight. (d) Included with fresh. (e) In terms of weight of shell eggs. (f) Includes fresh equivalent of manufactured products. (g) Probably understated owing to lack of complete data. (h) Not available. (i) Excludes breakfast foods from maize and rice.

2. Level of Nutrient Intake.—The table below shows details of the estimated supplies of nutrients available for consumption in Australia during annual periods since 1948-49 in comparison with the annual average for the three years 1936-37 to 1938-39. The table has been compiled by the Nutrition Section of the Commonwealth Department of Health and is based on the estimates of quantity consumption per head of population shown in the preceding table.

**ESTIMATED SUPPLIES OF NUTRIENTS AVAILABLE FOR CONSUMPTION :  
AUSTRALIA.  
(Per Head per Day.)**

Nutrient.	Unit.	Average 1936-37 to 1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53. (a)
Calories ..	No.	3,114	3,284	3,201	3,252	3,268	3,050
Protein—							
Animal ..	gm.	58.7	59.6	60.8	59.9	57.6	57.2
Vegetable ..	..	30.8	34.7	33.7	33.5	34.2	31.7
Total ..	..	89.5	94.3	94.5	93.4	91.8	88.9
Fat ..	..	133.5	124.5	125.1	128.0	125.6	124.8
Carbohydrate ..	..	376.8	424.6	401.9	408.6	421.6	372.7
Calcium ..	mgm.	642	783	804	790	784	735
Iron ..	..	15.3	15.3	15.5	15.3	14.9	14.2
Vitamin A ..	I.U.	4,949	4,579	4,581	4,912	4,903	4,675
Ascorbic Acid ..	mgm.	85.6	90.1	88.1	85.6	83.2	73.7
Thiamin ..	..	1.4	1.5	1.4	1.4	1.4	1.3
Riboflavin ..	..	1.7	1.9	1.9	1.9	2.0	2.0
Niacin ..	..	18.2	17.9	18.3	18.0	19.9	19.6

(a) Subject to revision.

### § 5. Retail Trade.

1. **General.**—The statistics in this section relate to the operations of all types of retail establishments throughout the Commonwealth.

Information of this nature was first collected in respect of the year ended 30th June, 1948 by a full Census of all retail establishments. As this was the first Census of its type in Australia its scope and the data sought were the minima consistent with the objective of securing a record of the number of such establishments, their type, their geographical distribution, their aggregate sales of goods and a simple commodity dissection together with a record of the value of certain services provided. This Census was followed by a second Census of all retail establishments trading during the year ended 30th June, 1949, and a third Census has been taken for the year ended 30th June, 1953. In this recent Census, retailers were asked to furnish more detailed information concerning the dissection of their turnover into commodity groups and question: were asked about stocks of goods on hand, the number of persons engaged in the business and credit sales. A summary of the results of the 1953 Census will be found in the Appendix.

In general terms, the Censuses covered those establishments which normally sell goods at retail in shops, rooms, kiosks and yards. Certain types of establishments which sell services at retail (including repairs and materials therein) were also included, e.g., boot repairers, hairdressers, motor garages and service stations and cafes. The Censuses included the retail sales of those factories or wholesalers who conducted a regular retail business, but excluded those who only occasionally sold goods at retail. Both new and second-hand goods were included in sales recorded by relevant retail establishments.

In 1953, figures on turnover were also collected from licensed premises such as clubs, canteens, etc., laundry and dry cleaning plants and bread delivery businesses without retail premises. These businesses were excluded from the Census by definition, but supplementary collections were made to increase the data available concerning consumer expenditure.

In order to maintain up to date records of retail trade conducted in Australia, it is proposed to take Censuses of retail establishments periodically. During the periods intervening between Censuses, the nature, extent and periodic variations in retail trade are being measured by means of sample surveys. Consequently, for the year ended 30th June, 1950 and subsequent quarterly periods, collections have been made on a sample basis. In the initial sample approximately 6,500 establishments were chosen from the total of over 100,000 retail businesses and the number in the sample was increased approximately 9,000 in September, 1952. By the use of sampling techniques, including

the scientific selection of these establishments of representative size and type, estimated figures of the total sales of all retail businesses have been calculated for each period. The sales of businesses from which these totals have been calculated represent approximately 40 per cent. of all retail sales in Australia. The figures obtained in the 1953 Census will be used as a new base for the sample survey.

2. Value of Retail Sales, 1947-48 to 1952-53, and Quarters ended 30th September, 1950 to 30th June, 1953.—(i) States. The following table shows the total value of goods sold by retail establishments in each State during the years 1947-48 to 1952-53 and the quarters ended 30th September, 1950 to 30th June, 1953.

**TOTAL VALUE OF RETAIL SALES : STATES.**  
(£ million.)

Period	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total (a)
1947-48 .. .. .	385.5	270.3	130.5	80.4	65.1	29.8	961.6
1948-49 .. .. .	458.2	320.1	154.2	97.9	79.3	35.4	1,145.1
1949-50 .. .. .	533.4	387.5	183.1	121.2	96.7	41.2	1,363.1
1950-51 .. .. .	668.9	475.4	226.1	148.6	118.6	51.7	1,689.3
1951-52 .. .. .	754.7	540.8	256.1	175.3	141.1	61.8	1,929.8
1952-53 .. .. .	761.3	545.4	268.4	176.7	146.2	64.1	1,962.1
Quarter ended—							
30th September, 1950 .. .. .	152.3	108.1	51.8	33.1	26.3	11.6	383.2
31st December, 1950 .. .. .	171.3	122.6	58.3	37.6	30.5	13.3	433.6
31st March 1951 .. .. .	164.1	117.1	55.8	36.9	29.9	12.7	416.5
30th June, 1951 .. .. .	181.2	127.6	60.2	41.0	31.9	14.1	456.0
30th September, 1951 .. .. .	182.3	126.8	62.7	41.0	32.3	14.4	459.5
31st December, 1951 .. .. .	206.4	147.2	69.2	46.0	37.2	16.5	522.5
31st March, 1952 .. .. .	180.7	132.9	61.4	44.0	35.3	15.4	469.7
30th June, 1952 .. .. .	185.3	133.9	62.8	44.3	36.3	15.5	478.1
30th September, 1952 .. .. .	179.5	127.7	62.6	41.0	34.3	14.9	460.0
31st December, 1952 .. .. .	209.6	148.8	72.6	47.1	39.4	17.7	535.2
31st March, 1953 .. .. .	180.1	130.3	64.0	42.8	35.5	15.1	467.8
30th June, 1953 .. .. .	192.1	138.6	69.2	45.8	37.0	16.4	499.1

(a) Excludes Australian Capital Territory and Northern Territory, for which the latest available information is in respect of the year ended 30th June, 1949. In that year retail sales in the Australian Capital Territory were £2.4 million and in the Northern Territory £2.0 million

(ii) *Commodity Groups.* In the following table the total value of retail sales for the years 1948-49 to 1952-53 is classified according to commodity groups. Completely comparable figures are not available for the year 1947-48, which has therefore been omitted from the table.

**VALUE OF RETAIL SALES : COMMODITY GROUPS, AUSTRALIA.(a)**  
(£ million.)

Commodity Group	Year ended 30th June—				
	1949.	1950.	1951.	1952.	1953.
Groceries .. .. .	143.4	160.3	184.7	229.7	257.4
Butchers' Meat .. .. .	65.3	74.4	89.1	113.2	120.1
Other Food .. .. .	116.6	131.7	155.8	188.5	207.7
Total Foodstuffs .. .. .	325.3	366.4	429.6	531.4	585.2
Beer, Wine and Spirits .. .. .	95.3	104.4	121.8	150.8	169.1
Clothing, Drapery, Piece-goods and Footwear .. .. .	237.8	261.4	322.8	342.7	343.4
Hardware .. .. .	72.5	83.1	110.2	128.0	128.5
Electrical Goods .. .. .	33.8	41.0	58.2	66.1	61.8
Furniture .. .. .	46.4	53.5	74.4	72.3	68.2
Motor Vehicles, Parts, Petrol, etc. .. .. .	166.1	255.2	334.7	357.5	325.1
Other Goods(b) .. .. .	167.9	198.1	237.6	281.0	280.8
Total(a) .. .. .	1,145.1	1,363.1	1,689.3	1,929.8	1,962.1

(a) Excludes Australian Capital Territory and Northern Territory, cigarettes, etc., newspapers, books and stationery, chemists' goods, etc.

(b) Includes tobacco,

In the table below, the value of retail sales, by commodity groups, is shown for the quarters ended 30th September, 1951 to 31st December, 1953. Because of the seasonal nature of retail trade, sales made in one quarter should not be compared with those made in the previous quarter without making allowance for seasonal influences.

VALUE OF RETAIL SALES: COMMODITY GROUPS, AUSTRALIA.(a)

(£ million.)

Commodity Group.	Quarter ended—									
	30th Sept., 1951.	31st Dec., 1951.	31st Mar., 1952.	30th June, 1952.	30th Sept., 1952.	31st Dec., 1952.	31st Mar., 1953.	30th June, 1953.	30th Sept., 1953.	31st Dec., 1953.
Groceries ..	52.5	59.1	57.2	60.9	61.9	67.9	62.3	65.3	66.6	71.9
Butchers' Meat ..	26.7	28.2	28.7	29.6	30.1	30.2	29.2	30.6	31.3	31.6
Other Food ..	43.3	49.0	48.7	47.5	48.7	54.4	52.1	52.5	53.0	58.2
<b>Total Foodstuffs</b>	<b>122.5</b>	<b>136.3</b>	<b>134.6</b>	<b>138.0</b>	<b>140.7</b>	<b>152.5</b>	<b>143.6</b>	<b>148.4</b>	<b>150.9</b>	<b>161.7</b>
Beer, Wine and Spirits ..	31.6	41.1	40.3	37.8	37.9	46.5	43.8	40.9	40.9	50.1
Clothing, Drapery, Piecegoods and Footwear ..	81.7	95.4	75.8	89.8	78.0	97.5	73.9	94.0	84.8	105.7
Hardware ..	31.1	34.9	30.8	31.2	30.2	35.2	30.4	32.7	33.3	38.4
Electrical Goods ..	17.8	19.1	15.3	13.9	13.9	18.5	14.9	14.5	16.2	22.5
Furniture ..	19.8	19.5	16.4	16.6	16.4	18.6	16.2	17.0	18.3	21.2
Motor Vehicles Parts, Petrol, etc. ..	89.2	96.0	89.0	83.3	75.8	86.7	78.5	84.1	88.1	96.6
Other Goods(b) ..	65.8	80.2	67.5	67.5	67.1	79.7	66.5	67.5	69.8	85.8
<b>Total(a)</b> ..	<b>459.5</b>	<b>522.5</b>	<b>469.7</b>	<b>478.1</b>	<b>460.0</b>	<b>535.2</b>	<b>467.8</b>	<b>499.1</b>	<b>502.3</b>	<b>582.0</b>

(a) Excludes Australian Capital Territory and Northern Territory. (b) Includes tobacco, cigarettes, etc., newspapers, books and stationery, chemists' goods, etc.

## § 6. Patents, Trade Marks and Designs.

1. Patents.—(i) *General* The granting of patents is regulated by the Commonwealth Patents Act 1903-1950, which, in regard to principle and practice, has the same general foundation as the Imperial Statutes, modified to suit Australian conditions. The Act is administered by a Commissioner of Patents. Fees totalling £10 are sufficient to obtain letters patent for the Commonwealth of Australia and the Territories of Papua, New Guinea and Norfolk Island. Renewal fees are payable as follows:—£1 before the expiration of the fifth year and an amount progressively increasing by ten shillings before the expiration of each subsequent year up to the fifteenth, when the fee becomes £6. If a renewal fee is not paid when it becomes due, an extension of time up to twelve months may be granted on grounds specified in the Act, and subject to the payment of prescribed fees. An amendment to the Act in September, 1946 permits the public to inspect an application, complete specification and provisional specification (if any) after the complete specification has been lodged. Previously, specifications were made public only after an application had been accepted, in many cases as much as a year after the date of lodgment.

(ii) *Summary.* The number of separate inventions in respect of which applications were filed, the number of letters patent sealed, and revenue of the Commonwealth Patent Office during the years 1939 and 1948 to 1952 are shown in the following table.

PATENTS : AUSTRALIA.

Particulars.	1939.	1948.	1949.	1950.	1951.	1952.
Applications .. ..	5,740	7,709	6,724	7,051	7,135	8,073
Applications accompanied by provisional specifications ..	3,161	3,302	3,174	3,359	2,894	3,406
Letters patent sealed ..	3,141	3,381	3,550	3,115	4,291	5,248
Revenue—						
Fees collected under Patents Act .. .. £	45,581	92,500	85,972	95,089	107,899	121,927
Receipts from publications .. .. £	1,828	2,000	1,826	1,260	1,889	4,361
Total Revenue £	47,409	94,500	87,798	96,349	109,788	126,288

2. *Trade Marks and Designs.*—(i) *Trade Marks.* Under the Trade Marks Act 1905–1948 the Commissioner of Patents is also Registrar of Trade Marks. This Act has been amended from time to time, the last amendment having been made in 1948. Special provisions for the registration of a “Commonwealth Trade Mark” are contained in the Act of 1905, and are applicable to all goods included in or specified by a resolution passed by both Houses of Parliament that the conditions as to remuneration of labour in connexion with the manufacture of such goods are fair and reasonable. The Act of 1948 provides for the registration of users of trade marks, and also for assignment of trade marks with or without the goodwill of the business concerned.

(ii) *Designs.* Under the Designs Act 1906–1934 the Commissioner of Patents is also Registrar of Designs.

(iii) *Summary.* The following table shows the applications for trade marks and designs received and registered, together with the revenue of the Trade Marks and Designs Office, during the years 1939 and 1948 to 1952.

TRADE MARKS AND DESIGNS : AUSTRALIA.

Particulars.	1939.	1948.	1949.	1950.	1951.	1952.
Trade Marks—						
Received .. ..	1,992	3,724	3,732	3,796	3,583	3,988
Registered .. ..	1,580	2,386	1,165	1,003	2,649	4,044
Designs—						
Received .. ..	865	990	948	1,187	773	1,186
Registered .. ..	736	1,005	962	304	579	1,388
Fees collected under Commonwealth Acts—						
Trade Marks .. .. £	15,951	28,708	20,673	24,472	27,955	47,365
Designs .. .. £	1,082	1,228	1,386	1,371	1,521	2,165
Publications .. .. £	19	20	18	10	4	8

No fees in respect of trade marks have been collected under State Acts since 1922.



### § 7. Copyright.

1. **Legislation.**—Copyright is regulated by the Commonwealth Copyright Act 1912–1935 wherein, subject to modifications relating to procedure and remedies, the British Copyright Act of 1911 has been adopted and scheduled to the Australian law.

Reciprocal protection of unpublished works was extended in 1918 to citizens of Australia and of the United States of America, under which copyright may be secured in the latter country by registration at the Library of Congress, Washington. The Commonwealth Government promulgated a further Order in Council which came into operation on 1st February, 1923, and extended the provisions of the Copyright Act to the foreign countries of the Copyright Union, subject to the observance of the conditions contained therein.

2. **Applications and Registrations.**—The following table shows under the various headings the number of applications for copyright received and registered, and the revenue obtained for the years 1939 and 1948 to 1952 :—

#### COPYRIGHT : AUSTRALIA.

Particulars.	1939.	1948.	1949.	1950.	1951.	1952.
Applications received—						
Literary .. ..	1,438	1,585	1,380	1,476	1,399	1,434
Artistic .. ..	53	30	36	57	38	34
International .. ..	3	..	..	..	..	..
Applications registered—						
Literary .. ..	1,359	1,272	1,229	1,372	766	1,337
Artistic .. ..	38	20	28	68	..	36
International .. ..	1	..	..	..	..	..
Revenue .. .. £	411	404	339	373	368	577

### § 8. Australian Shipbuilding Board.

1. **Constitution.**—Previous reference to the constitution of the Australian Shipbuilding Board appeared in Official Year Book No. 37, page 1170. Originally established in 1941 under National Security Regulations, the Board has been reconstituted a number of times since its inception and in 1948 was constituted on a permanent basis under the Supply and Development Act. At present it operates under the control of the Minister for Shipping and Transport. In order to link the activities of the Board more closely with the Department of Shipping and Transport, the constitution of the Board was altered in April, 1952, to provide for representation by senior departmental officers. The present membership of the Board consists of a Chairman who is General Manager of Shipbuilding, a Deputy Chairman, a Finance Member and two other members, one of whom represents the Naval Board.

2. **Functions.**—The functions of the Board relate to merchant shipping. Originally, they were to (i) report on the capacity of the industry; (ii) control building, repair and maintenance of ships and shipyards, etc.; (iii) arrange construction of vessels and yards, etc.; (iv) order and direct repair and docking of vessels and; (v) arrange supply of engines and other equipment for ships.

The first actions of the Board were to survey existing shipbuilding potentials and decide upon a construction programme. (See Official Year Book No. 37, p. 1170).

The Board also established facilities for the manufacture of marine engines at Rocklea in Queensland, and Port Melbourne. The Rocklea plant, which produced engines for "A", "B" and "D" class freighters, was closed in 1949, but the Port Melbourne works are still in operation and in August, 1953, had eleven Doxford diesel engines under construction.

Since its establishment the Board has become the ordering authority for all vessels to be constructed on behalf of the Commonwealth Government and private shipowners and has also undertaken the preparation of plans and drawings for the various yards, as the level of ship construction in Australia does not warrant each yard employing specialists in naval architecture. In this way the Board has increased the efficiency of the industry as a whole and has assisted in the development of individual yards.

The Board is now responsible for—(i) the design of vessels; (ii) calling of tenders and placement of orders; (iii) co-ordination of the Board's supplies to shipbuilders, e.g., machinery and certain equipment; (iv) supervision of construction; (v) acceptance of vessels after sea trials; and (vi) administration associated with ship repairs, marine engines, spare parts, etc.

To bring the cost to purchasers of Australian tonnage more into line with the cost of comparable vessels built in the United Kingdom the Board is empowered to sell new Australian-built tonnage to private owners at prices up to 25 per cent. below their total construction cost.

3. **Construction Programme.**—At 30th June, 1953, the Board had 23 vessels under construction or on order in Australian shipbuilding yards. These comprised: 5 "M.B.C." class, 10,000 d.w.t. motor bulk carriers; 3 "S.B.C." class, 10,000 d.w.t. steam bulk carriers; 4 "B.H.T." class, 10,000 d.w.t. steam iron-ore carriers; 3 "M.C." class, 7,000 d.w.t. motor colliers; 2 "S.C.O. 4" class, 4,000 d.w.t. steam colliers; 3 "B" class, 6,000 d.w.t. freighters; 1 "D/A" class, 3,000 d.w.t. freighter; and 2 "M.G.C." class 2,000 d.w.t. motor bulk grain carriers. At the same date, 40 vessels exceeding 300 gross tons had been built to the order of the Board, as follows:—13 "A" class, 9,000 d.w.t. freighters, 8 "B" class, 6,000 d.w.t. freighters; 10 "D" class, 3,000 d.w.t. freighters; 5 "E" class, 700 d.w.t. freighters; 2 "U/S" class, 3,000 d.w.t. freighters; 1 "D/A" class, 3,000 d.w.t. freighter; and 1 "M/M" class, 2,000 d.w.t. motor collier. The Board has been responsible also for the construction of 24 wooden vessels of 300 tons gross, together with a 1,000 ton floating dock.

## § 9. War Service Homes Division.

The provision of War Service Homes is a function of the Department of Social Services, and the administration of the War Service Homes Act is under the control of the Director of War Service Homes.

The War Service Homes Act 1918–1951 is a measure for the provision of homes for Australian ex-servicemen who served during the 1914–18 War or during any war in which His Majesty became engaged on or after 3rd September, 1939, including, subject to the statutory provisions of the Act, service in Korea or Malaya. Provision is also made for assistance to the female dependants of Australian ex-servicemen and other classes of eligible persons as defined in the Act. Assistance may be granted to an eligible person and the wife or husband of that person, as the case may be, as joint tenants.

The maximum amount of loan or advance which may be granted under the Act is £2,750 for homes built under the Act and £2,000 in respect of other classes of available assistance. Periods of repayment may be approved up to 45 years. In the case of a widow or widowed mother of an Australian ex-serviceman the period may be extended to a maximum of 50 years.

The War Service Homes Division does not provide homes for occupation on a purely tenancy basis.

Since the inception of operations under the War Service Homes Act (figures in parenthesis indicate cases where eligibility has been established and assistance granted as a result of service during the 1939-45 War or in Korea or Malaya) 106,377 (58,640) applications have been approved; 37,232 (15,218) homes have either been built, or assistance to build them has been given; 41,344 (27,074) homes have been purchased; and 12,327 (8,981) mortgages have been discharged. The total number of homes provided under the War Service Homes Act to 30th June, 1952 was 90,903, including 51,273 to persons who served during the 1939-45 War or in Korea or Malaya.

In addition, the Division had approved 9,379 transfers and resales, of which 1,421 were in respect of persons whose eligibility had been established as a result of service during 1939-45 or in Korea or Malaya.

During 1951-52, 14,108 (13,413) applications were approved; 4,205 (4,032) homes were either built or assistance to build them was given; 8,281 (7,876) homes were purchased; and 2,902 (2,841) mortgages were discharged. The total number of homes provided during the financial year 1951-52 was 15,388 (14,749). Transfers and resales approved numbered 429 (340).

At 30th June, 1952, 3,801 homes, including 1,368 group projects, were in course of construction; 883 contracts, of which 235 were for group homes, had been let but work had not started; and 1,246 tenders, including 458 for group homes, had been called but not finally dealt with. The majority of these homes are being provided for persons who served during the 1939-45 War.

The total capital expenditure from inception to 30th June, 1952, was £114,481,967, including £27,607,279 for 1951-52. Receipts from inception to 30th June, 1952 amounted to £55,551,456, including £6,473,954 during 1951-52. Of the total receipts, £28,092,833 has been paid to the National Debt Sinking Fund, including £4,045,907 for 1951-52.

At 30th June, 1952, the total amount of insurances in force, including cover notes, amounted to £119,568,792. From 1st May, 1951 to 31st October, 1952 the premium income amounted to £87,601, and expenditure from the War Service Homes Insurance Trust Account to £33,849.

At 30th June, 1952, arrears of instalments outstanding amounted to £245,181 or 0.48 per cent. of the total instalments due.

## § 10. Commonwealth Scientific and Industrial Research Organization.

1. **General.**—By the Science and Industry Research Act 1949, the previously existing Commonwealth Council for Scientific and Industrial Research was reorganized under the title of the Commonwealth Scientific and Industrial Research Organization. An account of the organization and work of the former Council, and of the earlier Commonwealth Institute of Science and Industry from which the Council was formed, was given in earlier issues of the Official Year Book. (See No. 14, p. 1061 and No. 37, p. 1183).

2. **Science and Industry Research Act 1949.**—This Act provides for—

- (a) an Executive of the Organization consisting of five members to be appointed by the Governor-General, at least three of whom shall be persons possessing scientific qualifications; and
- (b) an Advisory Council of the Organization, consisting of the members of the Executive, the Chairman of each State Committee constituted under the Act, and such other members as the Advisory Council, with the consent of the Minister, co-opts by reason of their scientific knowledge.

The powers and functions of the Organization are as follows :—(a) To initiate and carry out scientific researches in connexion with primary or secondary industries in Australia ; (b) to train research workers and to establish industrial research studentships and fellowships ; (c) to make grants in aid of pure scientific research ; (d) to establish and make grants to industrial research associations in any industry ; (e) to test and standardize scientific apparatus and instruments ; (f) to collect and disseminate scientific and technical information ; (g) to publish scientific and technical reports and periodicals ; and (h) to act as a means of liaison between Australia and other countries in matters of scientific research.

3. **Science and Industry Endowment Act 1926–1949.**—Under this Act, the Government established a fund of £100,000, the income from which is used to provide assistance (a) to persons engaged in scientific research ; and (b) in the training of students in scientific research. Provision is made for gifts or bequests to the fund, which is controlled by a trust consisting of the Executive of the Organization. In accordance with the Act, arrangements have been made to send a number of qualified graduates abroad for training in special fields of work.

4. **Work of the Organization.**—The activities of the Commonwealth Scientific and Industrial Research Organization have necessitated a widespread and adaptable arrangement of its research laboratories. Undesirable centralization has been avoided mainly in two ways. In the first place, the policy has been followed of establishing laboratories in different places in the Commonwealth wherever the necessary facilities, contacts and other suitable conditions could best be found. Secondly, the Act provides for the establishment of a State Committee in each of the six States. These Committees are widely representative of scientific and industrial interests, and advise the Executive or the Advisory Council on general matters and on particular questions of investigation and research.

For about twelve years after its establishment, the work of the previous Council was devoted mainly to the solution of problems affecting the agricultural and pastoral industries. Unlike manufacturing concerns, which can often employ their own scientific staffs, the farmers and the pastoralists are dependent on outside help for the solution of their problems which require research. It was a recognition of the greater need of the primary producer which directed the Council's early policy. However, in 1937, the Commonwealth Government decided to extend the activities of the C.S.I.R. so as to provide assistance to secondary industries, and several laboratories have been established for work in that field ; it was thus in the fortunate position of being able to render to these industries assistance of vital importance almost immediately after the outbreak of war. In fact, the remarkable technological advances and developments in secondary industrial production during the war would to a large extent have been impossible had it not been for the assistance rendered by scientific research, and this may well serve as a forceful illustration of what may be accomplished in times of peace.

For the purpose of carrying out its research work there are established within the Organization a number of Divisions and Sections. The Divisions, of which there are now fifteen, comprise the major establishments for which special laboratory buildings have been erected and equipped ; the Sections generally include establishments which have not reached a stage of development, so far as the scope and magnitude of their operations are concerned, to justify their designation as Divisions. As the Organization's investigations extend on a Commonwealth-wide basis and as many of the investigations which are being conducted—particularly those concerned with problems affecting the agricultural and pastoral industries—necessitate experimental work in the field, a number of field stations have been established in various parts of Australia.

The Divisions which have been established are as follows :—

- (1) Plant Industry, with main laboratories at Canberra and field stations.
- (2) Entomology, with main laboratories at Canberra and field stations.
- (3) Animal Health and Production, with main laboratories in Melbourne, Sydney and Brisbane and field stations.

- (4) Biochemistry and General Nutrition, with main laboratories at Adelaide and field stations.
- (5) Soils, with main laboratories at Adelaide and extensive operations in the field.
- (6) Forest Products, with main laboratories in Melbourne and field experiments.
- (7) Food Preservation and Transport, with main laboratories at Homebush, New South Wales, and a subsidiary laboratory in Brisbane.
- (8) Fisheries, with main laboratories at Cronulla, New South Wales, subsidiary laboratories in Perth (Western Australia) Dunwich (Queensland) and Thursday Island, and experimental work in coastal waters of Australia.
- (9), (10), (11) Metrology, Physics and Electrotechnology, comprising the National Standards Laboratory at Sydney.
- (12) Radiophysics, with main laboratory at Sydney.
- (13) Industrial Chemistry, with laboratories in Melbourne.
- (14) Tribophysics, with laboratories in Melbourne.
- (15) Building Research, with laboratories in Melbourne.

The following are the Sections :—

- (1) Commonwealth Research Station, Murray Irrigation Area, Merbein, Victoria.
- (2) Irrigation Research Station, Griffith, New South Wales.
- (3) Radio Research Board, Sydney.
- (4) Dairy Research, Melbourne.
- (5) Mathematical Statistic, Adelaide.
- (6) Mineragraphic Investigations, Melbourne.
- (7) Ore-dressing Investigations, Melbourne and Kalgoorlie.
- (8) Plant Fibre, Melbourne.
- (9) Physical Metallurgy, Melbourne.
- (10) Meteorological Physics, Melbourne.
- (11) Wool Textile Research Laboratories, Geelong, Melbourne and Sydney.
- (12) Oenological Research, Adelaide.
- (13) Coal Research, Sydney.
- (14) Mathematical Instruments, Sydney.
- (15) Wildlife Survey, with main laboratory in Canberra, subsidiary laboratory at Albury, and field experiments.
- (16) Land Research and Regional Survey, with head-quarters in Canberra, and field stations at Ayr (Queensland), Katherine (Northern Territory) and Ivanhoe (Kimberley, Western Australia).

In addition to its investigational work, the Organization deals with inquiries covering a wide range of scientific and technical subjects and maintains Scientific Research Liaison Offices in London and Washington.

An Agricultural Research Liaison Section established at the Organization's Head Office assists in making results in agricultural research speedily available to State Departments of Agriculture for use in their extension work.

The Organization's Head Office, with administrative and executive staff, is in Melbourne, and associated with it are the Organization's Central Library, Agricultural Research Liaison Section and Central Experimental Workshops. The funds for the Organization are provided from two main sources, viz., from Commonwealth revenue by Parliamentary appropriation, and from industry directly or indirectly by way of contributions and special grants. The fact that contributions and grants account for over one-eighth of the total annual expenditure indicates that C.S.I.R.O. has succeeded in a very large measure in gaining the confidence of the public.

The activities of C.S.I.R.O. are now so comprehensive in their scope and so widely distributed that it is not an easy matter to present in a concise form an adequate picture of them. For details of the investigations in progress, reference should be made to the Annual Report of the Organization.

## § 11. Australian Institute of Anatomy.

1. **Foundation of Institute.**—The Australian Institute of Anatomy, situated in Canberra, occupies a monumental building erected by the Commonwealth Government under the Zoological Museum Agreement Act of 1924. Prior to the passing of this Act, the Commonwealth Government had expressed regret that the Australian nation possessed neither a collection of specimens of the unique and fast disappearing fauna of Australia, nor a museum in which such specimens could be preserved for future generations. Comparative anatomy is the basis of medical science, and while the importance of a study of Australian animals in the solution of various medical problems had for years been recognized by other countries and steps taken by them to procure specimens for their museums, rational effort in this direction was neglected in Australia. The late Sir Colin MacKenzie, the first Director of the Institute of Anatomy, however, very kindly presented to the Commonwealth Government his entire private collection, and this magnificent gift was acquired and provision was made for its proper housing under special legislation by the Commonwealth Government. In 1931 the Institute became an integral part of the Commonwealth Department of Health.

2. **Additions to Original Collection.**—The original collection has been greatly augmented. A list of gifts to the Australian nation may be found in Official Year Book No. 39, p. 1277.

3. **Endowments for Orations and Lectures.**—In addition to the aforementioned donations of material, there have been several endowments for orations and lectures, particulars of which are shown in previous issues of the Official Year Book.

4. **The Scope of the Institute.**—The building occupies a site which adjoins that reserved for the Australian National University.

The Institute consists of two separate and distinct entities. Portion of the original collection of anatomical specimens assembled by the late Sir Colin MacKenzie is arranged in two large museums which are open to the general public. The material in these museums has been arranged so as to present simple lessons in human hygiene as well as to display the anatomical features and especially the peculiarities of Australian fauna.

The remainder of the building houses research units which are studying problems in the biological and medical sciences. The large collections of bony anatomical material donated by Murray Black have provided most interesting and valuable data on aboriginal diseases.

In 1938, following upon the retirement due to ill-health of Sir Colin MacKenzie, the activities of the Institute were extended to interpret more fully the ideas of the founder. In the later years of his life Sir Colin had been keenly interested in the relationship of nutrition to the development of the child. In recent years the work of the staff has developed in laboratory and field research in problems of nutrition, and this work is being continued and developed, particularly in association with the Institute of Child Health of the Commonwealth Department of Health, situated at the Sydney University.

## § 12. Commonwealth Observatory.

1. **Foundation of Observatory.**—The Observatory was founded primarily to prosecute astrophysical research, including the study of the relations between solar and terrestrial phenomena. A short history of the foundation of the Observatory appears in Official Year Book No. 19, p. 979.

2. **Site of Observatory.**—The Observatory is situated on Mount Stromlo, which forms part of a ridge of hills about seven miles west of Canberra. The highest point in the ridge is 2,560 feet above sea level, that is about 700 feet above the general level of the surrounding country.

3. **Equipment.**—Some of the major items of astrophysical equipment have been obtained through the generosity of private donors. Thus a 30-inch reflector was donated by the late J. H. Reynolds, Esq.; a 9-inch refractor was presented by the late Mr. James

Oddie; and the trustees of the late Lord Farnham made available a 6-inch refractor. Other major equipment comprises a solar tower telescope with an 18-inch coelostat and a 3-inch reversible transit instrument. The Observatory was the successful tenderer at a public sale for the purchase from the Victorian Government of the long-disused 48-inch reflector of the now closed Melbourne Observatory. This instrument is being modernized by conversion into a Schmidt Gregorian telescope with a 50 inch primary mirror. A 74-inch reflector has been nearly completed in the works of Sir Howard Grubb Parsons and its installation at Mount Stromlo will be completed shortly.

4. **Functions of Observatory.**—Investigations in the fields of stellar spectroscopy, stellar photometry, and variable stars are being carried out. In addition to covering the type of astrophysical research for which the Observatory was founded, the field of work has been extended to include experimental and theoretical investigations of the ionosphere, and the determination of time. The observatory is now responsible for the accuracy of the Australian Time Service. Considerable attention is being given to the development of this work, and a highly accurate quartz clock system has been installed.

### § 13. Standards Association of Australia.

The Standards Association of Australia is the national standardizing organization of Australia, and issues Australian standard specifications for materials and codes of practice.

The Association was established in July, 1929 by the amalgamation of the Australian Commonwealth Engineering Standards Association and the Australian Commonwealth Association of Simplified Practice. It is an independent body in close touch with modern industrial requirements and has the full recognition and support of the Commonwealth and State Governments and industry.

The sole executive authority of the Association is vested in the Council, on which industry is fully represented, together with official representatives of the Commonwealth and State Governments and their technical departments, and of scientific, professional and commercial organizations. Voluntary assistance is rendered in the drafting of specifications and codes by more than 4,500 individuals who are experts in their particular fields, and are organized into more than 500 committees. These committees are grouped under an internationally established classification, covering civil engineering and building construction, mechanical engineering, electrical engineering, automotive industry (including aircraft), transportation, naval architecture and marine engineering, ship-building, ferrous metallurgy, non-ferrous metallurgy, chemical industry, textile industry, mining, agriculture, wood industry, pulp and paper industry, glass and pottery, dairying industry, medical and dental, household and domestic economy, miscellaneous and general.

These committees are comprised of nominated representatives of manufacturing, distributing and purchasing organizations, and of scientific and other expert authorities in the particular field of the project being dealt with. The operations of these committees are co-ordinated and supervised by committees broadly representative of the whole industry, according to the foregoing classification, within which the respective projects are included.

The specifications of the Association provide a suitable standard of performance, quality and dimension and an equitable basis for tendering. They help to eliminate redundant qualities and sizes. They enable purchasers to obtain their requirements with greater assurance of satisfaction, with more rapid delivery and without the necessity of drafting individual specifications.

The underlying principles covering the preparation of the specifications and codes are that they shall be in accordance with the needs of industry; that the common interests of producer and consumer be maintained; that periodical revision should keep the work abreast with progress; and that standardization be arrived at by general consent without coercion.

Organizations, companies, firms and individuals interested in the work of the Association are eligible for subscription membership. Members are entitled to free copies of the publications of the Association and to the use of the library and its Special Information Service. Bibliographical research is undertaken for committees, members of the Association, and industry in general. Many hundreds of inquiries are answered each year.

The Association has international affiliations and the standards of all British and foreign countries are filed in the library and are accessible to members. It also administers the Australian National Committees of the International Electrotechnical Commission, the World Power Conference and the International Commission on Large Dams. The Association is also a member, representing Australia, of the International Organization for Standardization (I.S.O.).

The Association is also the representative of the British Standards Institution, and all British standards may be purchased from headquarters and branch offices in the various States.

The headquarters of the Association are at Science House, Gloucester-street, Sydney, and branches of the Association are situated at Temple Court, 422 Collins-street, Melbourne; School of Arts Building, 162 Ann-street, Brisbane; Alliance Building, Grenfell-street, Adelaide; Gledden Building, Hay-street, Perth; c/o Engineering Department, Hobart Technical College, Hobart; Department of Works, Canberra; and Howard Smith Chambers, Watt-street, Newcastle.

## § 14. Film Censorship Board.

1. **Legislation.**—The censorship of imported films derives its authority from Section 52 (g) of the Customs Act which gives power to prohibit the importation of goods. Under this section, regulations have been issued prohibiting the importation of films except under certain conditions and with the consent of the Minister. The regulations provide, *inter alia*, that no film shall be registered which in the opinion of the Censor is (a) blasphemous, indecent or obscene; (b) likely to be injurious to morality, or to encourage or incite to crime; (c) likely to be offensive to the people of any friendly nation; (d) likely to be offensive to the people of the British Empire; or (e) depicts any matter the exhibition of which is undesirable in the public interest.

The regulations governing the exportation of Australian-made films are similar with the addition that no film may be exported which in the opinion of the Censorship is likely to prove detrimental or prejudicial to the Commonwealth of Australia.

The Censorship consists of a Censorship Board of three persons and an Appeal Censor, the headquarters being in Sydney. There is also a right of appeal to the Minister.

In addition to the censorship of moving pictures, the Censorship may refuse to admit into Australia any advertising matter proposed to be used in connexion with the exhibition of any film. In regard to films and advertising matter produced in Australia, legislation of a uniform nature is now operative in all States except South Australia. Under the State legislation the Commonwealth Film Censorship Organization acts as censor for the States concerned by virtue of agreements entered into between the Commonwealth and the respective State Government.

2. **Import of Films.**—Imported standard size (35-millimetre) films dealt with by the Censorship for the year 1952 were as follows:—1,289 films of 3,417,222 feet passed without eliminations and 76 films of 547,757 feet passed after eliminations and 2 films of 18,292 feet rejected in the first instance, making a total of 1,367 films of 3,983,271 feet. Of the films rejected, one of 9,649 feet was passed after reconstruction; there was no appeal against the other rejection. The countries of origin were as follows:—United States of America, 754 films of 2,739,665 feet; United Kingdom, 358 films of 755,466 feet; and other countries, 255 films of 488,140 feet.

The films which chiefly concern the Censorship are the feature or dramatic films. Of these, 390—3,103,696 feet were imported during 1952 (290—2,291,081 feet from the United States of America and 72—584,888 feet from the United Kingdom). Three hundred and twenty-four—2,581,867 feet were passed without eliminations, 65—512,180



feet were passed with eliminations and one film of 9,649 feet was rejected in the first instance but subsequently passed after reconstruction. During 1951, 427 feature films were dealt with, 340 being passed without eliminations and 86 passed with eliminations, while there was one absolute rejection.

There were also imported, during 1952, 4,406 miniature films (16 millimetres) of 2,948,508 feet and 3,691 miniature films (9.5 and 8 millimetres) of 1,233,876 feet. Seven 8-millimetre films and eleven 16-millimetre films were rejected; one rejected 16-millimetre film was passed after cuts had been made.

3. **Export of Films.**—The number of films exported for the year 1952 was 1,365 of 1,290,175 feet, of which 872 films of 910,203 feet were sent to British countries, including Trust Territories.

### § 15. Australian National Film Board and the Film Division.

1. **The Australian National Film Board.**—The Australian National Film Board was inaugurated in April, 1945, on the recommendations of a Commonwealth Government inter-departmental committee which considered the suggestions of a conference of interested individuals and Commonwealth and State officials, including Directors of Education, called in November, 1944 by the Ministers for Information and Post-war Reconstruction. It was attached, for administrative purposes, to the Department of Information.

With the abolition of the Department of Information, in March, 1950, administration of the Board was transferred to the News and Information Bureau, Department of the Interior.

In November, 1950, the Board was reconstituted as an advisory body to the Minister for the Interior on matters concerned with the production, distribution and acquisition of film required by Commonwealth departments for the following purposes :—

- (a) for use within Australia on important matters of national interest and welfare, such as school and adult education, rehabilitation, social development, international understanding, trade and tourist expansion, and immigration;
- (b) for dissemination abroad to expand trade and commerce with other countries, encourage tourist traffic with Australia, improve Australia's relations with other countries and, where necessary, to explain Australia's national policies, and to encourage immigration.

The constitution provides for a membership of ten, with the Secretary of the Department of the Interior, Chairman, the Director of the News and Information Bureau, Deputy Chairman, and the remainder representative of Commonwealth Departments, State Government instrumentalities and organizations interested in the production, distribution or utilization of films for national publicity.

2. **The Film Division of the News and Information Bureau.**—Production and distribution of all films required by Commonwealth Departments is undertaken by the staff of the Film Division, News and Information Bureau, Department of the Interior, or by commercial enterprises under the supervision of officers of the Film Division. Theatrical distribution in Australia, and both theatrical and non-theatrical distribution overseas, of all Film Division productions are organized by the News and Information Bureau's home office or its oversea representatives. Non-theatrical distribution in Australia is organized by the National Library, Canberra, in co-operation with State film distribution agencies.

The first Australian Government organization for the production of motion pictures for national publicity purposes was the Cinema and Photographic Branch of the Department of Commerce, set up in Melbourne in 1920. Early in the 1939-45 War, the newly-established Department of Information was made responsible for the operation of the Cinema Branch and for an Official War Photography Unit.

Since 1946, the Film Division has produced 184 films for general exhibition, as well as training and special purpose films. Prints are dispatched to 32 overseas centres where distribution is arranged by News and Information Bureau officers or other Australian representatives. In Britain, there is regular distribution through more than a thousand theatres, and a large non-theatrical and educational series of circuits. By arrangement with the British Broadcasting Corporation, items of topical interest photographed by the Film Division are flown to London for television. In the United States of America there is wide non-theatrical distribution and considerable use of the films by television networks. An exchange arrangement with the National Film Board of Canada secures extensive distribution in Canada. French versions, prepared in Paris under the supervision of the Australian Embassy, circulate through France and French-speaking countries. Selected films have also been recorded in Dutch, German, Italian, Japanese, Hindustani, Tamil and other Indian dialects.

In addition to films made on the initiative of the News and Information Bureau, the Film Division has produced, or is producing, films under the sponsorship or with the co-operation of Commonwealth Departments and many other bodies such as the Commonwealth Bank of Australia, the Road Safety Council, Overseas Telecommunications Commission, Snowy Mountains Hydro-electric Authority, Australian Wine Board, the Australian National University and the Australian Broadcasting Commission.

The co-operation of the Australian motion picture industry with the Commonwealth, spontaneously offered at the outset of the 1939-45 War, continues. Special films for urgent national appeals are planned, produced and distributed with the assistance of the National Films Council of the motion picture industry and its Film Production Advisory Committee.

### § 16. National Safety Council of Australia.

The National Safety Council of Australia was founded in Melbourne in 1927 for the purposes of developing, mainly by means of education, safety on the road, at work and in the home, and its activities have developed in other directions wherever the need for reducing the toll of accidents has been shown. To this end it conducts continuous propaganda through the press and in other ways. It also forms Junior Safety Councils in the schools for developing a safety conscience among children. The children themselves are officers of these Councils and patrol the roads in the neighbourhood of the schools and conduct the scholars across in safety. Posters are available to schools in connexion with Health and Safety lessons. Films specially taken are available for children's and home safety instruction.

A "Safe Driving" campaign for individual motor drivers is conducted as well as a "Freedom from Accidents" competition among employee drivers, those completing a year free from any accident for which they are responsible being given a certificate to that effect. An industrial service of four posters per month, together with slips for pay envelopes, constitutes a regular service for the dissemination of safety advice, and was supplied to over 100,000 workers in factories last year. Committees deal with specific problems regarding traffic, films, safety in industry, air safety and home dangers. The Air Safety Committee has issued a 32-page booklet "Air Sense" for distribution with pilots' private licences through the Civil Aviation Department, and has a plan for assistance to aircraft in distress which is being implemented throughout Australia.

The Council is supported by Government grants, public subscription and sales of service, and is a non-profit organization. Its work is carried on by a small paid staff controlled by committees and governed by an executive. The following committees whose work is of an entirely honorary nature, are in operation, namely, Executive, Traffic, Industrial Safety, Home, Air Safety and Propaganda.

### § 17. Australian Road Safety Council.

1. *Origin and Organization.*—The Australian Road Safety Council was formed in June, 1947, through the instrumentality of the Australian Transport Advisory Council.

The prime movers for the establishment of the Council were the Australian Automobile Association, which submitted a comprehensive plan; the New South Wales Minister for Transport, who advocated expansion, on a nation-wide basis, of road safety activities on lines similar to those of the Road Safety Council of New South Wales; and the National Safety Council of South Australia, which conveyed recommendations from a Special Safety Convention held in Adelaide in 1946.

At that time, in addition to the above-mentioned organizations in New South Wales and South Australia, there was also a road safety organization in Victoria. Steps were immediately taken to form Councils in Queensland, Western Australia and Tasmania, and subsequently for the internal Territories.

The Australian Road Safety Council is the composite body of Road Safety Councils of the following States and Territories (internal) of Australia :—

*Governmental.*—New South Wales, Road Safety Council of New South Wales; Queensland, Road Safety Council of Queensland; Tasmania, Road Safety Council of Tasmania; Australian Capital Territory and Northern Territory, Road Safety Councils of Australian Capital Territory and Northern Territory respectively.

*Non-Governmental.*—Victoria, Victorian Road Safety Division, National Safety Council of Australia; South Australia, Road Safety Division, National Safety Council of South Australia; Western Australia, Road Safety Division, National Safety Council of Western Australia.

The Council is representative, geographically and technically, of the whole Commonwealth, and comprises nominees of practically all classes of road users, together with representatives of road transport, the Department of Defence and police administrations from each State. National organizations represented on the Council are :—The Federal Chamber of Automotive Industries, Council of Fire and Accident Underwriters, Australian Road Transport Federation, Australian Automobile Association, Transport Workers' Union of Australia, Federation of Motor Cycle Importers and Distributors of Australia, and Auto Cycle Council of Australia.

The Council meets annually, and an Executive Committee operates between conferences. Special committees on education, public relations and films meet as required.

An annual grant of £100,000 is made available by the Commonwealth Government under the Commonwealth Aid Roads Act. Of this £60,000 is allocated to the State road safety councils for local activities, and the remaining £40,000 is applied to the national campaign. This is supplemented by assistance, financial and otherwise, by State Governments, and indirectly by commercial organizations.

2. *Mode of Operation.*—The role of the Australian Road Safety Council is primarily in the field of education and public relations. Its task is to increase public awareness of the seriousness of the road accident problem, which, in the year ended December, 1952, resulted in 71,075 accidents involving casualties or damage in excess of £10 to property, the deaths of 1,983 persons and injuries to 38,027 persons. (For further information on the subject of Traffic Accidents see pp. 141-3 of this Year Book.)

The Council works in close collaboration with two other committees also established by the Australian Transport Advisory Council, namely, the Australian Motor Vehicle Standards and the Australian Uniform Road Traffic Code. All three committees are administered by the Commonwealth Department of Shipping and Transport, which is the executive department for the Australian Transport Advisory Council. The Australian Motor Vehicle Standards Committee develops essential basic motor vehicle standards, such as maximum lengths, weights, height, carrying capacity of vehicles, and minimum lighting, braking and other mechanical efficiencies. In addition to ensuring a greater safety factor, these standards will eliminate many conflicting State requirements

which had an adverse effect on design and production costs. The Australian Uniform Road Traffic Code Committee is charged with the responsibility of progressively preparing a "blue print" uniform national traffic code for incorporation in State legislation. Speed limits, right hand turns, rules governing approaches to intersections, qualifications of drivers, pedestrian behaviour, are a few of the numerous aspects which come within its purview.

The campaign for road accident prevention resolves broadly into three main elements relating to (i) the Road User, (ii) the Road, and (iii) the Vehicle. Similarly, the attack falls into three main divisions—(i) Education, (ii) Enforcement, and (iii) Engineering. The link between the components is, broadly:—

The Road User	{	Education (public relations media, instruction in schools, homes, etc.).
		Enforcement (of correct road usage—through the police and the courts, uniform traffic laws, etc.).
The Road	{	Engineering (technical improvements of all kinds, safer roads and vehicles, improved illumination, uniform vehicle standards, etc.).
The Vehicle		

In addition to the foregoing activities, the Council convenes special national conferences, as required by the Australian Transport Advisory Council, to consider specific road safety problems. Typical of these have been the special committee appointed in 1951 to discuss level crossing accidents which recommended, among other measures, the appointment in each State of a committee to investigate level crossings and report on safety provisions, the elimination of some railway level crossings and the closure of others where practicable and desirable, and a special meeting held in June, 1953, to discuss methods of reducing the high incidence of motor cycle accidents, at which various measures to offset the greater vulnerability of motor cyclists were recommended.

### § 18. Lord Howe Island.

Lord Howe Island is situated in latitude  $31^{\circ} 30'$  south, longitude  $159^{\circ} 5'$  east, about 436 miles north-east of Sydney, and has an area of 3,220 acres. The climate is mild and the rainfall abundant, but on account of the rocky formations of its surface only about 300 acres are suitable for cultivation, most of which are devoted to the production of *Kentia palm* seed. The land belongs to the Crown and is occupied *rent-free on sufferance*.

Discovered in 1788, the Island was first settled by a small party of Maoris in 1853; afterwards a colony was settled from Sydney. Constitutionally the Island is a dependency of New South Wales and is included in King, one of the electorates of Sydney. A Board of Control at Sydney manages the affairs of the Island and supervises the palm seed industry. The population was 179 at the Census of 30th June, 1947.

### § 19. The United Nations.

1. *General*.—The Moscow Declaration of 1943 concerning a new international organization for the maintenance of international peace and security marked the end of the League of Nations. The dissolution of the League, and the transfer of certain of its functions to the new body, the United Nations, took place over subsequent years. Information concerning the League of Nations was given in issue No. 35 and earlier issues of the Official Year Book.

The Charter of the United Nations was drawn up by the delegates of fifty nations at the United Nations Conference on International Organization at San Francisco from 25th April to 26th June, 1945. Australia's ratification was deposited on 1st November, 1945. There are now\* 60 member states: Afghanistan, Argentina, Australia, Belgium, Bolivia, Brazil, Burma, Byelorussia, Canada, Chile, China, Colombia, Costa Rica, Cuba, Czechoslovakia, Denmark, Dominican Republic, Ecuador, Egypt, El Salvador, Ethiopia, France, Greece, Guatemala, Haiti, Honduras, Iceland, India, Indonesia, Iran, Iraq, Israel, Lebanon, Liberia, Luxembourg, Mexico, Netherlands, New Zealand, Nicaragua,

\* January, 1954.

Norway, Pakistan, Panama, Paraguay, Peru, Philippine Commonwealth, Poland, Saudi Arabia, Siam, Sweden, Syria, Turkey, Ukraine, Union of South Africa, Union of Soviet Socialist Republics, United Kingdom, United States of America, Uruguay, Venezuela, Yemen, Yugoslavia.

The full record of the Conference is contained in the Report by the Australian Delegates on the United Nations Conference on International Organization held at San Francisco, United States of America, from 25th April to 26th June, 1945.

At San Francisco an Executive Committee and a Preparatory Commission were established, and when these bodies had completed their work of preparation for the first meeting of the United Nations, the General Assembly met in London on 10th January, 1946.

The principal organs of the United Nations are the General Assembly, the Security Council, the Economic and Social Council, the Trusteeship Council, the International Court of Justice, and the Secretariat.

2. **General Assembly.**—This is the forum of the United Nations. In it each member state is represented and has one vote. It meets in regular annual sessions and has provision for special sessions. With the exception of disputes which are before the Security Council and matters essentially within the domestic jurisdiction of any State, it has power to discuss any matter within the scope of the Charter and to make recommendations upon it. The Assembly elects the non-permanent members of the other major organs and considers annual reports from them. Upon the recommendation of the Security Council, it may expel a member which has persistently violated the principles of the Charter.

3. **The Security Council.**—This has the primary responsibility for the maintenance of international peace and security. It is composed of five permanent members, namely China, France, the United Kingdom, the Union of Soviet Socialist Republics and the United States of America, and six non-permanent members with two-year periods of office, of whom three retire at the end of each year. At the initial election three countries, including Australia, were elected for a term of two years and three others for a term of one year only. The following are the non-permanent members of the Security Council at present\* : Lebanon, Colombia and Denmark (retiring at the end of 1954) and New Zealand, Brazil and Turkey (retiring at the end of 1955). On procedural matters, decisions are taken by an affirmative vote of any seven members. But on all other matters decisions can only be made on the affirmative vote of seven members, including the concurring votes of all the permanent members. However, the powers which are parties to a dispute for peaceful settlement do not vote.

The Security Council is assisted by a Military Staff Committee consisting of the Chiefs of Staff of the permanent members of the Council or their representatives.

4. **The Economic and Social Council.**—This body consists of eighteen members, each elected for a period of three years. Its main functions are to make, or initiate, studies and reports, and to make recommendations to the General Assembly or to members of the United Nations, upon international, economic, social, cultural, educational, health and related matters. It may make recommendations for the purpose of promoting respect for, and observance of, human rights and fundamental freedoms for all.

The present\* members of the Economic and Social Council are : Belgium, China, France, Egypt, Cuba, Argentina (retiring 1954), Australia, Yugoslavia, Turkey, Venezuela, India, United States (retiring 1955), United Kingdom, Union of Soviet Socialist Republics, Ecuador, Pakistan, Czechoslovakia and Norway (retiring 1956).

5. **The Trusteeship Council.**—The Charter declares the political, social, cultural and economic advancement of the Trusteeship Territories to be a sacred trust. A Trusteeship Council has been set up composed of those members of the United Nations who are administering trust territories and an equal number of members who are not administering trust territories (including any permanent members of the Security Council who are not administering trust territories). Territories which may be placed under

\* January, 1954.

trusteeship in accord with individual trusteeship agreements are those previously held under mandate, those detached from enemy states as a result of the second World War and those dependent territories placed under the system by the states responsible for their administration. Australia is automatically a member of the Trusteeship Council, as the Power administering the Trust Territories of New Guinea and Nauru. The present\* members of the Trusteeship Council are: Australia, Belgium, France, New Zealand, United Kingdom and the United States of America (administering States), and China, Haiti, Union of Soviet Socialist Republics, El Salvador, Iraq and India (non-administering states). China and the Union of Soviet Socialist Republics are eligible for permanent membership of the Trusteeship Council by virtue of their permanent membership of the Security Council.

The Council has among its duties the consideration of annual reports submitted by the trustee state, the carrying out of periodic inspections by agreement with it, and the formulation of questionnaires on the welfare and advancement of the dependent peoples.

**6. The International Court of Justice.**—This consists of fifteen judges, no two of whom may be nationals of the same state. Its jurisdiction comprises all cases which the parties refer to it, and all matters especially provided for in the Charter or in treaties and conventions in force. Provision exists in the Statute of the Court whereby States parties to the Statute may accept the jurisdiction of the Court as compulsory, either conditionally, or unconditionally in certain international disputes.

The present\* members of the Court are: Judges Alvarez (Chile), Basdevant (France), Guerrero (El Salvador), Sir Archibald McNair (United Kingdom), Carniero (Brazil)—all retiring in 1955; Judges Badawi (Egypt), Hsu Mo (China), Read (Canada), Winiarski (Poland), Zoricitch (Yugoslavia)—all retiring in 1958; and Judges Hackworth (United States of America), Klaested (Norway), Koshernikov (U.S.S.R.), and Ugon (Uruguay)—all retiring in 1961. Sir Benegal Rau (India) died in 1953 and a special election is to be held for the appointment of a successor.

**7. The Secretariat.**—The Secretary-General is the head of the Secretariat of the organization. He is appointed by the General Assembly upon the recommendation of the Security Council, and he appoints his staff in accordance with the rules approved by the General Assembly. M. Trygve Lie (Norway) was appointed first Secretary-General, and at the Sixth Session of the General Assembly in 1950 was re-appointed for three further years as from 1st February, 1951. In November, 1952 Mr. Lie announced his intention of retiring and in April, 1953, Mr. Dag Hammarskjöld (Sweden) was appointed in his place.

**8. Specialized Agencies.**—In addition to these organs of the United Nations there are thirteen specialized agencies which co-operate closely with the United Nations in many fields on economic and social questions.

Those already in operation are: The International Labour Organization; Food and Agricultural Organization; United Nations Educational, Scientific and Cultural Organization; International Civil Aviation Organization; International Bank for Reconstruction and Development; International Monetary Fund; Universal Postal Union; World Health Organization; International Telecommunications Union; World Meteorological Organization.

To enable co-ordination of the work of the specialized agencies, arrangements have been made for them to submit reports on their activities and budgets to the United Nations where they are discussed by the Economic and Social Council and the General Assembly.

## § 20. Diplomatic and other Representatives Overseas and in Australia.

**1. General.**—The following statements show particulars of the various diplomatic and other representatives overseas and in Australia. Full details of British and foreign representation in Australia—diplomatic and consular—and of permanent Australian missions overseas may be obtained from publications issued by the Department of External Affairs, Canberra. A statement is issued each quarter by the Department of Commerce and Agriculture, showing the latest particulars of the Australian Trade Commissioner Service overseas.

\* January, 1954.

## 2. Australian Representation Overseas.—

## AUSTRALIAN DIPLOMATIC AND OTHER REPRESENTATIVES OVERSEAS.

## Her Majesty's Australian Ambassador Extraordinary and Plenipotentiary to—

*France*—Sir Keith Officer, O.B.E., M.C.

*German Federal Republic*—J. D. L. Hood.

*Indonesia*—(Vacant); Minister, J. C. G. Kevin (Chargé d'Affaires *ad interim*).

*Ireland*—(Vacant); W. T. Doig (Chargé d'Affaires *ad interim*).

*Japan*—Dr. E. R. Walker.

*Netherlands*—A. T. Stirling, C.B.E.

\* *Union of Soviet Socialist Republics*—(Vacant); B. C. Hill (Chargé d'Affaires *ad interim*).

*United States of America*—The Hon. Sir Percy Spender, K.B.E., Q.C.

## Her Majesty's Australian Envoy Extraordinary and Minister Plenipotentiary to—

*Brazil*—(Vacant); J. E. Ryan (Chargé d'Affaires *ad interim*).

*Burma*—(Vacant); H. D. White (Chargé d'Affaires *ad interim*).

*Egypt*—H. A. McClure-Smith.

*Indo-China*—J. P. Quinn.

*Israel*—(Vacant); H. W. Bullock (Chargé d'Affaires *ad interim*).

*Italy*—C. V. Kellway.

*Philippines*—Rear-Admiral G. D. Moore, C.B.E.

*Thailand*—B. C. Ballard.

## High Commissioners for Australia in—

*Canada*—Sir Douglas Copland, K.B.E., C.M.G.

*Ceylon*—A. R. Cutler, V.C.

*India*—W. R. Crocker.

*New Zealand*—P. R. Heydon.

*Pakistan*—L. F. Beavis, C.B., C.B.E., D.S.O.

*Union of South Africa*—Lt.-Col. W. R. Hodgson, C.M.G., O.B.E.

*United Kingdom of Great Britain and Northern Ireland*—The Hon. Sir Thomas White, K.B.E., D.F.C., V.D.

## Australian Military Mission—

*Berlin*—Head, J. D. L. Hood.

## Australian Mission—

*United Nations* (New York)—Minister, W. D. Forsyth.

*United Nations* (Geneva)—Permanent Delegate, R. L. Harry.

## Australian Commissioner in—

*Malaya*—A. S. Watt, C.B.E.

## Consuls-General—

*Switzerland*—(Geneva) R. L. Harry.

*United States of America* (New York)—Lieut.-General E. K. Smart, D.S.O., M.C.

*United States of America* (San Francisco)—S. W. Jamieson.

## Consuls—

*New Caledonia* (Noumea)—Dr. J. S. Cumpston, E.D.

*Portuguese Timor* (Dili)—F. J. A. Whittaker.

\* Mission withdrawn on 29th April, 1954.

## Trade Commissioner Service of the Commonwealth of Australia—

- British West Indies*—J. B. Todd (Port of Spain).  
*Canada*—C. L. Steel (Montreal); J. Payne (Vancouver).  
*Ceylon*—H. W. Goodger (Colombo).  
*Egypt*—S. D. Shubart, Commercial Counsellor and Trade Commissioner (Cairo).  
*France*—A. N. Wootton, Commercial Counsellor and Trade Commissioner (Paris).  
*Germany*—R. R. Ellen, Commercial Counsellor and Trade Commissioner (Bonn).  
*Hong Kong*—H. C. Menzies (Hong Kong).  
*India*—W. R. Hudspeth (Calcutta); H. Wrigley (Bombay).  
*Indonesia*—B. T. Connolly, Commercial Counsellor and Trade Commissioner (Djakarta).  
*Italy*—A. L. Senger, Commercial Counsellor and Trade Commissioner (Rome).  
*Japan*—C. J. Carne, Commercial Counsellor and Trade Commissioner (Tokyo).  
*Malaya*—G. S. Anderson, Commercial Counsellor and Trade Commissioner (Singapore).  
*New Zealand*—S. F. Lynch (Wellington).  
*Pakistan*—E. E. Jarvis (Acting), Commercial Secretary and Trade Commissioner (Karachi).  
*Union of South Africa*—A. J. S. Day (Johannesburg).  
*United Kingdom of Great Britain and Northern Ireland*—G. R. B. Patterson, Senior Trade Commissioner; H. K. H. Cook (London).  
*United States of America*—C. E. Critchley, O.B.E., Commercial Counsellor and Trade Commissioner (Washington, D.C.); F. R. Gullick (New York); Miss F. B. Cowie (temporarily in charge) (San Francisco).

3. **Oversea Representation in Australia.**—Consular representatives are not included in the following statement. Particulars of these are contained in a publication *Consular Representatives and Trade Commissioners in Australia*, issued by the Department of External Affairs, Canberra. There are more than 150 such representatives in Australia, and 39 countries are represented.

## DIPLOMATIC REPRESENTATIVES IN AUSTRALIA.

## Ambassador Extraordinary and Plenipotentiary of—

- China*—(Vacant); Dr. Chen Tai-chu (Chargé d'Affaires *ad interim*) (Canberra B 945).  
*France*—L. Roche (Canberra F 345).  
*German Federal Republic*—Dr. Walther Hess (Sydney FM 1041).  
*Indonesia*—(Vacant); Dr. Tamzil (Chargé d'Affaires *ad interim*) (Canberra B199).  
*Ireland*—Dr. the Hon. T. J. Kiernan (Canberra F 275).  
*Japan*—Haruhiko Nishi (Canberra B 290).  
*Netherlands*—A. M. L. Winkelman (Canberra X 1236).  
*\* Union of Soviet Socialist Republics*—N. I. Generalov (Canberra B 863).  
*United States of America*—Amos J. Peaslee (Canberra 655).

## Envoy Extraordinary and Minister Plenipotentiary of—

- Austria*—Dr. O. Eiselsberg (Chargé d'Affaires) (Canberra U 1367).  
*Belgium*—F. F. A. Jansen (Sydney FB 3934).  
*Brazil*—J. Cochrane de Alencar, O.B.E. (Canberra F 380).  
*Chile*—Juan Domeyko (Chargé d'Affaires) (Sydney FM 6356).  
*Denmark*—(Vacant); F. H. Hergcl, O.B.E., (Chargé d'Affaires *ad interim*) (Sydney BW 3547).  
*Finland*—P. I. Simelius (Chargé d'Affaires) (Sydney FM 3116).  
*Greece*—Dimitri N. Lambros (Canberra 543).  
*Ieract*—M. Nurock (Sydney BW 2082).  
*Italy*—Silvio Danco (Sydney FB 3639).  
*Philippines*—Dr. R. Rega'a (Sydney FA 1938).  
*Sweden*—J. M. Kastengren (Canberra F 306).  
*Thailand*—Nai Konthi Suphamongkhon (Canberra 676).

\* Mission withdrawn on 25th April, 1954.



**High Commissioner for—**

*Canada*—W. A. Irwin (Canberra 665).

*Ceylon*—J. A. Martensz. C.B.E. (Canberra F 623).

*India*—General K. M. Cariappa, O.B.E. (Canberra F 383).

*New Zealand*—G. E. L. Alderton (Canberra B 953).

*Pakistan*—Habibur Rahman (Sydney BL 3395).

*Union of South Africa*—(Vacant); G. C. Nel (Acting) (Canberra F 927).

*United Kingdom of Great Britain and Northern Ireland*—Sir Stephen Holmes, K.C.M.G., M.C. (Canberra F 451).

**Commissioner for—**

*Malta*—Captain G. F. L. Stivala, O.B.E. (Melbourne MU 1291).

**TRADE COMMISSIONERS OF OVERSEA GOVERNMENTS IN AUSTRALIA.**

*Canada*—Senior Canadian Government Trade Commissioner—C. M. Croft (Sydney BW 9351).

Canadian Government Trade Commissioner—R. W. Blake (Melbourne MU 4716).

Assistant Canadian Government Trade Commissioner—C. M. Forsyth-Smith (Sydney BW 9351).

*New Zealand*—Senior New Zealand Government Trade Commissioner—J. A. Malcolm (Sydney BL 3941).

New Zealand Government Trade Commissioner—R. Inglis (Melbourne MU 8111).

Assistant New Zealand Government Trade Commissioners—E. J. Sutch (Sydney BL 3941); G. F. Knowles (Melbourne MU 8111).

*United Kingdom of Great Britain and Northern Ireland*—United Kingdom Senior Trade Commissioner—Sir John Greaves, C.M.G., O.B.E. (Canberra F 188).

United Kingdom Trade Commissioners—J. N. McKelvie (Canberra F 188); J. R. Adams, C.B.E., A. Hartland (Sydney BW 8086); A. W. Burton, M.B.E., J. D. Leithead (Melbourne MU 5556); P. Ingleson, C.M.G., M.B.E., M.C. (Brisbane B 8588).

Assistant United Kingdom Trade Commissioners—A. Kitchen, W. Johnston (Sydney BW 8086); E. J. E. Newbold (Melbourne MU 5556); E. J. Jewesson (Brisbane B 8588).

## CHAPTER XXX.

## STATISTICAL ORGANIZATION AND SOURCES OF INFORMATION.

## § 1. Statistical Organization in Australia.

1. Development of Australian Statistics.—(i) *Crown Colony Blue Books*. Statistical organization in Australia was founded in the "Blue Books" which, in the Crown Colony days, were prepared annually for the information of the Colonial Office. Although primarily intended for administrative purposes, these documents have been important sources of statistical data, even though some important matters are not covered, and others only partially so. These Blue Books form the basis from which later statistical publications were developed. This led to an element of uniformity in statistical compilation within the British Empire.

(ii) *Statistical Registers*. Following the advent of Responsible Government which was granted during the period 1851-1860 to all Australian States except Western Australia—and to that State in 1890—the "Blue Book" was succeeded in all Australian States by "Statistical Registers". These were in many respects the old Blue Books in a new form, and were largely confined to summaries of the "by-product" statistics of Government administrative departments.

The first example of extensive Governmental organization for purely statistical purposes was the taking of periodic population censuses, which were initiated in all States under the Crown Colony régime. The growing need for quantitative data concerning the progress of the several young communities of Australia eventually led to the appointment of official Statisticians commissioned to prepare and publish such data.

(iii) *Statistical Conferences*. To enable the interchange of ideas between States, and to obtain uniform State Statistics which could be aggregated to Australian totals, conferences were held in the several States from as early as 1861. Altogether, six conferences were held prior to the formation of the Commonwealth Bureau of Census and Statistics in 1906. These were held in 1861, 1875, 1890, 1900, 1902 and 1903. The holding of these conferences has been continued subsequently to the formation of the Commonwealth Bureau, and a representative from New Zealand attended up to 1928.

2. Commonwealth Bureau of Census and Statistics.—(i) *Origin and Aims*. Under the provisions of section 51 of the Commonwealth Constitution, power is conferred on the Commonwealth Parliament "to make laws for the peace, order and good government of the Commonwealth with respect to—" (*inter alia*) "(XI.) Census and statistics". In compliance with this provision, the Census and Statistics Act 1905 was passed, and in 1906 the Commonwealth Bureau of Census and Statistics was created. A conference of Statisticians in 1906 defined the relations between the Commonwealth and State Bureaux, and in each case the State Statistician became the representative in his own State of the Commonwealth Statistician for the purpose of administering the Commonwealth Act. In addition, each State has its own "Statistics Act", and although these are not identical in all States, they embody common principles. With the establishment of the Commonwealth Bureau, the movement towards uniformity in information collected and statistical methods employed received a great stimulus. The Commonwealth Bureau did not attempt to duplicate the existing statistical organization, but endeavoured to use the services of the State statistical offices whenever possible, and to undertake the initial collection of statistics only in fields not already occupied by the States, or in which efficiency demanded complete centralization. Frequent statistical conferences (*see above*) have assisted the uniform development of existing statistics, and have facilitated expansion into new fields.

The scope of the Commonwealth Bureau has constantly been widened, more particularly during the 1939-45 War, when the Bureau responded to the urgent demands of administration for immediate and accurate statistical information in various fields. Since the war, requirements in the administrative, industrial, financial and scientific spheres have led to the development of many new statistical collections. All the activities of the Bureau are covered by the Census and Statistics Act, which confers authority to collect information and contains stringent provisions to ensure that the information obtained is treated in strictest secrecy.

(ii) *Organization.* For administrative purposes the Commonwealth Bureau is divided into a number of Divisions. These are:—Census, Compiling, Publications, Research and Analysis, and Administrative.

(a) *Census Division.* This Division of the Bureau is responsible for the taking of Population Censuses, and for all machine tabulation work in connexion therewith.

(b) *Compiling Division.* The Compiling Division is responsible for the compilation of all statistics other than those relating to the Census of Population. It is divided into the following Branches which deal with specific fields of statistical activity :—

Trade and Transport Branch—Responsible for the original compilation, tabulation and analysis of statistics relating to imports and exports, and for the compilation of statistics relating to road and rail transport, aviation, shipping, posts and telegraphs, telephones and wireless.

Prices Branch—Deals with the collection of retail and wholesale prices and the compilation of retail and wholesale price index-numbers. A staff of trained field officers is maintained in the several States to facilitate the collection of accurate information.

Employment and Labour Branch—Compiles all employment estimates, wage and labour statistics.

Primary Production Branch—Deals with statistics relating to agricultural and pastoral activities, mining, forestry and fishing. Original data are largely supplied by State Statisticians.

Secondary Production Branch—Compiles all factory statistics both annual and monthly. Collates on a Commonwealth basis original annual data supplied by State Statisticians.

Finance and Taxation Branch—Compiles statistics of private finance (banking, insurance, exchange rates, etc.), public finance (Commonwealth, State and Local and Semi-Governmental authorities), and statistics relating to all aspects of Commonwealth taxation.

Demography Branch—Concerned with statistics of births, deaths, marriages and migration, and is responsible for periodic estimates of population.

Social Statistics Branch—Compiles all statistics relating to education, unemployment and sickness benefits, public health and welfare, and public justice.

Development Branch—This Branch was created in 1947 in order to develop new statistical collections to meet post-war demands for more adequate and up-to-date statistics, and also to examine current collections in the light of such requirements. To date the activities of the Branch have been concerned with three major projects, quarterly building statistics, retail sales statistics (including hire purchase statistics) and all new monthly production statistics. In addition, research is undertaken into the applicability of sampling methods to statistical collections. A number of collections in the Bureau are now being done on a sample basis, the most important being Retail Sales and Taxation Statistics.

(c) *Publications Division.* This Division is responsible for the scrutiny, editing and graphical illustration of all Bureau publications, and, in collaboration with other Divisions, for the initiation, development and co-ordination of statistical publications. It also maintains a regular flow of statistical series to certain international organizations, and revises statistical material in certain oversea and local publications.

(d) *Research and Analysis Division.* This Division undertakes research into the theoretical and practical problems of statistical collection and interpretation. It is responsible for the development of new statistical series in particular fields. Statistics on Australia's balance of international payments and estimates of national income and expenditure are two important fields of its work. In this Division is the Bureau's own specialized library of official and unofficial publications on statistics and economics.

(e) *Administrative Division.* The Administrative Division is responsible for all aspects of staff recruitment and direction, supplies, payment of accounts, etc. The Reproduction Section of the Division is equipped with multilith and duplicating machines for processing statistical statements for more immediate requirements. In addition, a special section of this Division is responsible for the examination of statistical methods and systems, and the co-ordination of all statistics, in Commonwealth Departments (*see par. 3 below*). The Mechanical Tabulation Branch has now been transferred from the Census Division of the Bureau to the Administrative Division. This Branch is equipped with modern tabulating equipment and is responsible for all machine tabulating work required by other Divisions of the Bureau with the exception of Census.

3. *Relation of the Bureau to other Commonwealth Departments.*—In October, 1950 the Commonwealth Public Service Board issued a circular relative to the compilation of statistics in other Commonwealth Departments, in which it stated that the Commonwealth Statistician should be the co-ordinating authority on all statistics in Commonwealth Departments, and that, as a general principle, where any new statistical field is to be established involving the regular collection of statistics, the Commonwealth Statistician should be consulted to ensure that they are necessary and that they are based on sound statistical methods; furthermore, that the Commonwealth Statistician should make a regular inspection, at least once every twelve months, of all statistical work done by Departments to ensure that their needs are met by the most economical means and without duplication of effort.

This project of co-ordination is being implemented as time and circumstances permit.

## § 2. Statistical Publications of Australia.

1. *General.*—The official statistical publications of Australia may be divided bibliographically into two main divisions, namely:—(1) Commonwealth publications dealing both individually and collectively with the several States of Australia; and (2) State publications dealing with individual States only.

2. *Commonwealth Publications.*—Commonwealth publications may be grouped under two heads, namely:—(i) Publications issued by the Commonwealth Statistician; and (ii) Parliamentary and Departmental Reports and Papers.

(i) *Publications issued by the Commonwealth Statistician.* The following is a list of the principal statistical publications issued from the Commonwealth Bureau of Census and Statistics since its inauguration to February, 1954:—

- Australian Balance of Payments.*—Statements Nos. 1 and 2, 1928–29 to 1949–50.  
*Australian Life Tables, 1901–1910. Australian Joint Life Tables, 1901–1910.*  
*Australian Life Tables, 1920–1922.*  
*Australian Life Tables, 1932–1934. Australian Joint Life Tables, 1932–1934.*  
*Australian Life Tables, 1946–1948.*  
*Australian Primary Industries.*—Report prepared for the Empire Producers Conference, Sydney, March, 1938.

- Census (1911) Results.*—Bulletins. Vols. I. (Statistician's Report), II., and III., with Appendix "Mathematical Theory of Population."
- Census (1921) Results.*—Bulletins, Nos. 1 to 26. Parts I. to XVI., forming Vol. I., and Parts XVII. to XXIX., forming, with the Statistician's Report, Vol. II.  
NOTE.—Part XXVII., Life Tables.
- Census (1933) Results.*—Bulletins, Nos. 1 to 25. Parts I. to XIV., forming Vol. I., Parts XV. to XXVIII., forming Vol. II., and Parts XXIX. to XXXVII., forming, with Statistician's Report and Australian Life Tables 1932-1934, Vol. III.
- Census (1947) Results.*—Bulletins, Nos. 1 to 25. Parts I. to XVI., forming Vol. I., Parts XVII. to XIX., forming Vol. II., and Parts XX. to XXVIII., forming, with Statistician's Report and Australian Life Tables 1946-1948, Vol. III.
- \**Census of Retail Establishments (1947-48) Results.*—Bulletins, Nos. 1 to 7.
- \**Census of Retail Establishments (1948-49) Results.*—Bulletins, Nos. 1 to 7.
- \**Dairying Industry (formerly Summary of Dairying Industry).*—Statistical Bulletin, monthly; first issue, September, 1937.
- \**Factories, Principal Statistics, Summary.*—Annually, 1948-49 to 1951-52.
- Finance.*—Bulletins 1907 to 1916-17 annually; 1917-18 and 1918-19 (one vol.); 1919-20 and 1920-21 (one vol.); 1922-23 to 1951-52 annually.
- \**Food Production and the Consumption of Foodstuffs and Nutrients in Australia, Report.* Half-yearly, 1946-47 to 1947-48; annually, 1948-49 to 1951-52.
- \**Fruit Growing Industry Summary.*—Annually, 1944-45 to 1951-52.
- Labour and Industrial Statistics.*—Memoranda and Reports, various, to 1913.
- Labour Report.*—Annually, 1913 to 1952.
- \**Live-stock Numbers (formerly Summary of Live-stock Statistics).*—Statistical Bulletin, annually, 1943 to 1953.
- Local Government in Australia.*—July, 1919.
- \**Manufacturing Industries.*—Bulletins on Individual Industries, annually, 1936-37 to 1939-40, 1940-41 (issue incomplete), and 1944-45 to 1951-52.
- \**Monthly Review of Business Statistics.*—First issue, October, 1937.
- \**Occupation Survey (1945) Results.*—Detailed tables.
- Official Year Book of the Commonwealth of Australia.*—Annually, 1907 to present issue (No. 40). Issue No. 40 also published in parts.
- Oversea Trade.*—Bulletins, annually, 1906 to 1951-52.
- \**Oversea Trade.*—Preliminary Bulletin, 1952-53.
- \**Oversea Trade Statistics : Imports Cleared for Home Consumption classified according to Individual Items of the Customs Tariff 1950-51 to 1952-53.*
- Pocket Compendium of Australian Statistics (formerly Statistical Digest).*—1913, 1914, 1916, and 1918 to 1953 annually.
- Population and Vital Statistics.*—Bulletins and Reports, various, 1906-1910.
- Demography, 1911 to 1951 annually.*
- Primary Industries*—Bulletin, annual, 1950-51 first issue in two parts: Part I. Rural Industries; Part II. Non-Rural Industries and Value of Production.
- Production.*—Bulletin, annually, 1906 to 1947-48. From 1936-37 to 1949-50 issued in two parts.—Part I. Secondary Industries; Part II. Primary Industries (including Total Recorded Production); thereafter separate Bulletins (see *Primary Industries* and *Secondary Industries*).
- Professional Papers.*—Various. A full list appears in Official Year Book No. 13, p. 3.
- Quarterly Summary of Australian Statistics.*—First issue, No. 70, December, 1917, replacing *Monthly Summary of Australian Statistics* (Bulletins Nos. 1 to 69).
- \**Report of Proceedings of the Conference of British Commonwealth Statisticians, 1951.*

\* Obtainable from Commonwealth Statistician—for methods of obtaining other publications still in print see back page of this volume.

- \* *Rural Land Use and Crop Statistics* (formerly Summary of Crop Statistics).—Statistical Bulletin, annually, 1943-44 to 1951-52.
- Secondary Industries*.—Bulletin, annual, 1950-51.
- Social Insurance*.—Report to the Hon. the Minister of Trade and Customs, 1910.
- Social Statistics*.—Bulletins, 1907 to 1915 annually, and 1918.
- Superannuation for the Commonwealth Public Service*.—Report to the Hon. the Minister for Home Affairs, 1910.
- \* *Survey of Motor Vehicles (1947-48) Results*.—Bulletins Nos. 1 to 7.
- Transport and Communication*.—Bulletins, 1906, 1908 to 1916 annually, 1919 to 1930 annually, and 1932 to 1951-52 annually.
- \* *Vegetables Grown on Farms for Human Consumption*.—Statistical Bulletin, annually, 1942-43 to 1951-52.
- Wages and Prices*.—January, 1932.
- Wealth*.—The Private Wealth of Australia and its Growth as ascertained by various methods, together with a Report on the War Census in 1915.
- \* *Wheat Industry* (formerly Summary of the Wheat Situation).—Statistical Bulletin, periodically; first issue, July, 1936.

The foregoing list includes all the printed publications issued from the Bureau, and certain more important mimeographed publications issued for the most part annually. Other mimeographed statements, obtainable on application to the Commonwealth Statistician and dealing with a wide variety of subjects, are issued as follows:—

*Annually*—Bee Farming; Commonwealth and State Taxation Collections; Companies with Oversea Affiliations; Factory Statistics (Preliminary); Meat Production and Utilization; Milking Machines on Rural Holdings; Oversea Trade between Australia and Eastern Countries; Registrations of New Motor Vehicles; Social Services, Expenditure by States; Tractors on Rural Holdings; University Statistics; Value of Production; Wheat Forecast and Estimate.

*Half-yearly*—Australian Balance of Payments; Trade of Australia with United Kingdom.

*Quarterly*—Building; Minerals and Metals; Quarterly Business Survey; Retail Sale of Goods; Retail Price Variations—All Items ("C" Series) Index.

*Monthly*—Banking; Demographic Review; Employment; Exports of Wool from Australia; Export Prices Index; Gold Mining Industry; Life Assurance; Oversea Trade; Production Statistics; Registrations of New Motor Vehicles; Savings Bank Deposits and Savings Certificates.

A recent addition to the mimeographed publications refers to Wool Production\*. This statement will be issued periodically as data become available.

(ii) *Commonwealth Parliamentary and Departmental Reports and Papers*. Lists of the principal official reports and other documents containing statistical information issued from the inauguration of the Commonwealth appear in the Official Year Books up to No. 13, but it is not now practicable to undertake the preparation of such lists.

3. *State Publications*.—The chief statistical publications of each State are set out hereunder. As with the Commonwealth Parliamentary and Departmental Reports and Papers, it is not practicable to enumerate the various Departmental Reports, statements of accounts, etc., issued by officials, boards, local and semi-governmental authorities, etc., in each State.

- (a) New South Wales—Statistical Register (annual); Official Year Book of New South Wales (annual); Pocket Year Book (annual); Statistical Bulletin (monthly to December, 1919, quarterly to June, 1943, then discontinued to September, 1948); Monthly Summary of Business Statistics.

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\* Obtainable from Commonwealth Statistician—for methods of obtaining other publications still in print see back page of this volume.

- (b) Victoria—Statistical Register (annual to 1916, then discontinued); Victorian Year-book (annual); Statistical Abstracts (quarterly to 1917, then discontinued to December, 1946).
- (c) Queensland—Statistical Register (annual); Official Year Book, 1901; A.B.C. of Queensland Statistics (annual to 1936, then discontinued); the Queensland Year Book (annual 1937 to 1941, then discontinued to 1945); Queensland Pocket Year Book (annual).
- (d) South Australia—Statistical Register (annual); Official Year Book, 1912 and 1913; Statesman's Pocket Year Book of South Australia (annual); Quarterly Summary of Statistics.
- (e) Western Australia—Statistical Register (annual); Statistical Abstracts (quarterly, previously issued monthly to July, 1917); Pocket Year Book of Western Australia (annual).
- (f) Tasmania—Statistical Register (annual); Pocket Year Book of Tasmania (annual); Monthly Review of Business Statistics.

### § 3. The Third Conference of British Commonwealth Statisticians, Canberra, 1951.

Conferences of the Government Statisticians of the British Commonwealth were held first in London in 1920 and then in Ottawa in 1935. The Third Conference was held in Canberra from 12th to 23rd November, 1951. Delegates were present from Australia, Canada, Ceylon, India, New Zealand and the United Kingdom (including a representative of the Colonial Office). Ireland, the Commonwealth Economic Committee and the United Nations were represented by observers, and the Australian State Government Statisticians were also present.

The Conference reviewed statistical requirements and modern practice on many aspects of the following matters:—Labour Statistics, Production Statistics, Agricultural Statistics, External Trade Statistics, Retail Trade and Census of Distribution, Application of Sampling Methods, Statistical Co-ordination, National Income, Indexes of Prices, Family Budget Inquiries, Road Transport Statistics, Recent Developments in Census Taking, Mineral Statistics.

Whereas the earlier conferences prepared reports and passed series of resolutions aiming at improving and co-ordinating statistics throughout the Commonwealth, the report prepared by the Third Conference aimed at reaching as firm an expression of views as was consistent with unanimity whilst at the same time mentioning different views which were expressed if unanimous conclusions were not possible.

The Conference provided an opportunity for an exchange of views which should lead to statistical improvements in all countries represented, and its report should be of assistance to the Statistical Office of the United Nations and other organizations in their work of improving statistics on an international scale. In view of the advantages to be gained from meetings of these Statisticians, Conference decided that Commonwealth conferences should be held every five years and a co-ordinating committee was appointed to make plans for the Fourth Conference.

### § 4. Select List of Works about, or published in, Australia.

(Compiled by the Librarian of the Commonwealth National Library.)

This list aims to meet the growing need, in Australia as publishing develops, and overseas as interest in Australia widens, for an authoritative current reference and reading list of books dealing with Australia or of Australian authorship, wherever published.

Australians will find these books in the National Library and in their State Libraries as well as in leading bookshops. Oversea readers may have access to them in the collections which the National Library maintains at 36 Australian posts abroad. They will be found also, increasingly, in leading libraries and bookshops in many countries. In the United States, for example, Australian books are included in the Farmington Plan in which 52 libraries and research institutions co-operate to ensure that at least one copy of all material published in any part of the world and likely to be required for a serious purpose will be available promptly somewhere in the country.

The list is classified broadly by subject and under each heading there is first a list of the principal standard books still in print, then a list of selected books and official publications (excluding annual reports) which were published during 1952. A few books published earlier, but received too late for inclusion in the previous list, are also included. Where known the retail price in the country of publication is given, but this is subject to fluctuation.

The Library also issues a series of select lists which include *Australian Public Affairs Information Service* (monthly): subject index of material in new books, pamphlets, current periodicals and government publications from English speaking countries, with an important bearing on investigations in Australian political, economic, cultural and social affairs, and the following full bibliographies:—

*Monthly list of Australian Government Publications*, covering both the Commonwealth and the States;

*Books published in Australia*: a monthly list of books supplied to the National Library under copyright.

The two last-mentioned publications are cumulated annually as the *Annual Catalogue of Australian Publications* which includes also a list of books published overseas of Australian interest or by authors resident in Australia, a select list of the more important Australian periodical and serial publications and a directory of publishers.

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#### General and Descriptive.

- ABBOTT, C. L. A. Australia's frontier province [the Northern Territory]. Syd., Angus & Robertson [1950]. 7s. 6d.
- AUSTRALIA: the *Herald* year book: a reference work of world wide range: [No. 1] to date. Melb., Herald and Weekly Times, 1949 to date. 17s. 6d. Latest issue: 1950.
- AUSTRALIAN ENCYCLOPAEDIA: ed. by A. W. Jose, H. J. Carter and T. G. Tucker: 3rd ed. 2v. Syd. Angus & Robertson, 1926-27. (O.p., but new ed. in preparation).
- GRATTAN, C. H. Introducing Australia: 2nd Aust. ed. Syd., Angus & Robertson, 1949. 7s. 6d.
- LODEWYCKX, A. Australie waarheen? Meppel, J. A. Boom [1950]. 25s.
- MADIGAN, C. T. Central Australia: 2nd ed. Melb., Oxford Univ. Press, 1944. 15s.
- NOBLE, N. S., ed. The Australian environment: 2nd ed. Melb., C.S.I.R.O., 1950. 10s. 6d.
- OFFICIAL YEAR BOOK OF THE COMMONWEALTH OF AUSTRALIA: no. 1 to date. Canb., Govt. Pr., 1908 to date, 5s. *per issue*; after no. 33, 10s. Latest issue: no. 40, 1954.
- RATCLIFFE, F. N. Flying fox and drifting sand: the adventures of a biologist in Australia: introd. by Julian Huxley. Syd., Angus & Robertson, 1951. 15s. First published in 1938.
- TAYLOR, T. G. Australia: a study of warm environments and their effect on British settlement: 6th ed. Lond., Methuen, 1951. 30s.
- WALKABOUT: Australian geographical magazine: v. 1 to date. Melb., Australian Geographical Society, 1934 to date. Monthly, 24s. *per annum*.



## General and Descriptive—continued.

## RECENT PUBLICATIONS.

- AUSTRALIA. Commonwealth of Australia Jubilee celebrations 1901-1951: an official record. [Canb., 1952].
- AUSTRALIA—*News and Information Bureau*. Canberra: a guide to the national capital. Syd., Angus & Robertson [1952]. 6s.
- AUSTRALIAN AND NEW ZEALAND ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE. *Handbook of Queensland*: prepared for the use of members . . . on the occasion of the 28th meeting held in Brisbane, May, 1951. [Brisb., Govt. Pr. 1951].
- EMMETT, E. T. Tasmania by road and track. Melb., Melbourne Univ. Press [1952]. 12s. 6d.
- FARWELL, G. Australian setting. Lond., Evans [1952]. 12s. 6d.
- FINLAYSON, H. H. The red centre: man and beast in the heart of Australia [2nd ed.]. Syd., Angus & Robertson [1952]. 21s.
- FLATTELY, S. The Australian snow pictorial. Melb., Georgian House, 1952. 25s.
- GENTILI, J. Australia: terra promessa. Firenze, Valmartira [1952].
- GRIFFITHS, G. NESTA. Some southern homes of New South Wales. Syd., Shepherd Press, 1952. 35s.
- HAUSER, H. Australien: der fünfte Kontinent. Berlin, Safari [1952]. 8.90 glds.
- HURLEY, J. F. Sydney from the sky: a camera study. Syd., Angus & Robertson [1952]. 15s.
- HULLY, J. F. ed. The Blue Mountains and Jenolan Caves: a camera study. Syd., Angus & Robertson, 1952. 25s.
- PALMER, NELLIE. The Dandenongs. Melb., National Press [1952]. 10s. 6d.
- PINNEY, P. Dust on my shoes. Syd., Angus & Robertson [1952]. 21s. Travel notes of an Australian abroad.
- RIEL, A. P. M. VAN. Australie: land en volk. Amsterdam, N.V. de Technische Vitgeverij in opdracht van *Internationaal Technisch Studiecentrum* [1951].
- SHARLAND, M. S. R. Stones of a century. Hobart, Oldham, Peddome & Merdith, 1952. 3cs. Historical notes on early colonial architecture in Tasmania.
- TAUSSIG, H. J. C. Australien ein anderes land. Zürich, Stauffacher [1952]. DM16.60.

## Territories Outside Australia.

- AUSTRALIA—*External Affairs, Department of*. Handbook and index to accompany a map of Antarctica produced by the Department of the Interior, 1939: by E. P. Bayliss and J. S. Cumpston. Canb., 1940. 2s. 6d.
- GORDON, D. C. The Australian frontier in New Guinea 1870-1885. N.Y., Columbia Univ. Press, 1957. \$1.25.
- HOGBIN, H. I. Transformation scene: the changing culture of a New Guinea village. Lond., Routledge, 1951. 3cs.
- MEAD, Margaret. From the South Seas: studies of adolescence and sex in primitive societies. 3 v. in 1. N.Y., Morrow, 1939. 81.
- OFFICIAL HANDBOOK OF THE TERRITORY OF NEW GUINEA. Canb., Prime Minister's Department, 1943. 7s. 6d.
- RIFKINFIELD, A. Megalithic culture of Melanesia. Leiden, Brill, 1950. 35 glds.
- WILLIAMS, F. E. Orokaiva magic. Oxf., Oxford Univ. Press, 1928. 12s. 6d.
- Orokaiva Society. Oxf., Oxford Univ. Press, 1930. 25s.
- Papuans of the Trans-Fly. Oxf., Oxford Univ. Press, 1936. 30s.
- See also the annual reports of the Administrators of the various Territories, and reports to the General Assembly of the United Nations on trusteeship territories, the anthropological reports of the Governments of Papua and New Guinea, and material appearing in *Oceania*.

## RECENT PUBLICATIONS.

- AUSTRALIAN NATIONAL ANTARCTIC RESEARCH EXPEDITION, 1947-1949. [Reports]. Melb., Antarctic Division, Department of External Affairs, 1951 to date.
- DERRICK, R. A. Vocational training in the South Pacific. Melb., Oxford Univ. Press, 1952. 30s.
- NEW ZEALAND ANTARCTIC SOCIETY. The Antarctic to-day: a mid-century survey: ed. by Frank A. Simpson. [Well.] Reed [1952]. 47s. 6d.
- WURN, S. Studies in the Kivial languages, Fly Delta, Papua, New Guinea. Wien, Herold, 1951. (Acta ethnologica et linguistica: no. 2)

## History.

- CLARK, C. M. H., ed. Select documents in Australian history 1788-1850: selected and ed. by C. M. H. Clark with the assistance of L. S. Pryor. Syd., Angus & Robertson [1950]. 30s.
- FITZPATRICK, B. C. British Empire in Australia: an economic history 1834-1939: 2nd ed. Melb., Melbourne Univ. Press, 1949. 17s. 6d.
- HISTORICAL RECORDS OF AUSTRALIA: [ed. by J. F. Watson]. Syd., Commonwealth National Library, 1914 to date. 12s. 6d. *per v.* 34 v. have so far appeared. Publication has been suspended since 1923.
- HISTORICAL STUDIES: Australia and New Zealand: no. 1 to date. Melb., Melbourne Univ. Press, 1940 to date. Bi-annual. 16s. *per annum*.
- LA NAUZE, J. A. Political economy in Australia: historical studies. Melb., Melbourne Univ. Press, 1949. 9s. 6d.
- O'BRIEN, E. M. The foundation of Australia (1786-1800): a study in English criminal practice and penal colonization in the eighteenth century: foreword by John M. Ward: 2nd ed. Syd., Angus & Robertson, 1950. 25s.
- SHANN, E. O. G. An economic history of Australia. Melb., Georgian House, 1948. 18s. First published in 1930.
- SHAW, A. G. L. Economic development of Australia: rev. ed. Melb., Longmans, 1946. 8s. 6d.

## History—continued.

## RECENT PUBLICATIONS.

- BROWN, L. P. *ed.* Clyde Company papers: v. 2: 1836-40. Lond., Oxford Univ. Press, 1952.
- COOPER, H. M. French exploration in South Australia with especial reference to Encounter Bay, Kangaroo Island, the two gulfs and Murat Bay, 1802-1803. [Adel., Author, 1952]. 378. 6d.
- CRAWFORD, R. M. Australia. Lond., Hutchinson's Univ. Library [1952]. 88. 6d.
- HAWSON, J. The journal of a journey from New South Wales to Adelaide . . . performed in 1838. Melb., Georgian House, 1952. 218.
- HENNING, RACHEL B. Letters: forty pen drawings by Norman Lindsay. Syd., Bulletin Newspaper Co., 1952. 78. 6d.
- Letters written during the years 1853 to 1882 describing both town and country life in New South Wales and Queensland.
- INGLETON, G. C., *comp.* True patriots all; or, News from early Australia, as told in a collection of broadsides: garnered and decorated by Geoffrey Chapman Ingleton. Syd., Angus & Robertson [1952]. 428.
- MOYLE, JEAN V. Portrait of a village: Watervale 1851-1951. [Adel., Author, 1952]. 128. 6d.
- SKEMP, J. R. Memories of Myrtle Bank: the bush-farming experiences of Rowland and Samuel Skemp in north-eastern Tasmania, 1883-1948. Melb., Melbourne Univ. Press, 1952. 218.
- TOWNSLEY, W. A. Struggle for self-government in Tasmania, 1842-1852. Hobart. Govt. Pr., 1951.

## Military and Naval History.

- AUSTRALIA—Army, Department of—Public Relations Directorate. The Australian army at war: an official record of service in two hemispheres, 1939-1945. Melb., 1947.
- BEAN, C. E. W. Anzac to Amiens: a shorter history of the Australian fighting services in the first world war. Canb., Australian War Memorial, 1946. 258.
- FEAKES, H. J. White ensign—southern cross: a story of the King's ships of Australia's navy: (foreword by Admiral Lord Mountbatten of Chelsea). Syd., Ure Smith [1951]. 428.
- MACANDIE, G. L. The genesis of the Royal Australian Navy: a compilation. Syd., Govt. Pr., 1949. 258.
- MCGUIRE, Francis M. The Royal Australian Navy: its origin, development and organization. Melb., Oxford Univ. Press, 1948. 168.
- OFFICIAL HISTORY OF AUSTRALIA IN THE WAR OF 1914-1918: ed. by C. E. W. Bean. 12 v. Canb., Australian War Memorial 1921-42. 218. *per v.* v. 8, 10, 11, 188.
- OFFICIAL HISTORY OF THE AUSTRALIAN ARMY MEDICAL SERVICES IN THE WAR OF 1914-1918: ed. by Col. A. G. Butler. 3 v. Canb., Australian War Memorial, 1930-43. 218. *per t.*

## RECENT PUBLICATIONS.

- BRADDON, R. The naked island. Lond., W. Laurie [1952]. 158.
- CHARLOTT, R. *ed.* The unofficial history of the 29/46 Australian infantry battalion A.I.F. September, 1939-September, 1945. Melb. [R. B. Eames], 1952.
- GOODHART, D. The history of the 2/7 Australian Field Regiment. Adel., Rigby Ltd., 1952. 478. 6d.
- HASLUCK, Hon. P. M. C. The Government and the people 1939-41. Canb., Australian War Memorial [1952]. 258.
- (Australia in the war 1939-1945: series 4 (civil) v. 1)
- JONES, T. M. The silent service: action stories of the Anzac Navy: by T. M. Jones and I. L. Idriess: [2nd ed.]. Syd., Angus & Robertson [1952]. 218.
- LEE, J. E. Dunroon: the Royal Military College of Australia 1911-1946. Canb., Australian War Memorial, 1952. 308.
- LONG, G. M. To Benghazi. Canb., Australian War Memorial [1952]. 258.
- (Australia in the war of 1939-1945: series 1 (army) v. 1)
- MACDONNELL, J. E. Valiant occasions. Lond., Constable [1952]. 158.
- A record of the Royal Australian Navy in World War II.
- ODGERS, G. J. Across the parallel: the Australian 77th squadron with the United States Air Force in the Korean War. Melb., Heinemann [1952]. 198. 6d.
- WALKER, A. S. Clinical problems of war. Canb., Australian War Memorial [1952]. 258.
- (Australia in the war of 1939-1945: series 5 (medical) v. 1)

## Church History.

## RECENT PUBLICATIONS.

- ARMOUR, J. The story of Christianity. Syd., Angus & Robertson [1952]. 358.
- DALE, H. P. Salvation chariot: a review of the first seventy-one years of the Salvation Army in Australia 1880-1951. [Melb., Salvation Army Press, 1952]. 158. 9d.

**Biography.**

- BIOGRAPHICAL HANDBOOK AND RECORD OF ELECTIONS FOR THE PARLIAMENT OF THE COMMONWEALTH [no. 1] to date. Camb., Commonwealth National Library, 1915 to date. 10s. 6d. *per issue*.  
 Latest issue: 11th, 1953.  
 PALMER, V. National portraits: 2nd ed. Melb., Melbourne Univ. Press, 1948. 12s. 6d.  
 SERLE, P. Dictionary of Australian biography: 2 v. Syd., Angus & Robertson, 1949. 105s.  
 WHO'S WHO IN AUSTRALIA: 1906 to date. Melb., Herald Press, 1906 to date. 50s. *per issue*.  
 Latest issue: 14th, 1950.

**RECENT PUBLICATIONS.**

- BOWDEN, K. M. George Bass, 1771-1803: his discoveries, romantic life and tragic disappearance. Melb., Oxford Univ. Press [1952]. 21s.  
 CAMPBON, H. C. Sir Joseph Banks, K.B., P.R.S.: the autocrat of the philosophers. Lond., Batchworth, 1952. 25s.  
 ELLIS, M. H. Lachlan Macquarie: his life, adventures, and times: 2nd ed. Syd., Angus & Robertson, 1952. 50s.  
 JUDD, B. G. He that doeth: the life story of Archdeacon R. B. S. Hammond. Lond., Marshall, Morgan & Scott, 1951. 15s.  
 TYRRELL, J. R. Old books, old friends, old Sydney. Syd., Angus & Robertson [1952]. 42s.

**Constitution and Administration.**

- AUSTRALIA—*Laws, Statutes, etc.* The acts of the Parliament of the Commonwealth of Australia passed from 1901 to 1935 and in force on 1st January, 1936: to which is prefixed the Commonwealth of Australia Constitution Act. 4 v. and supplements. Camb., Govt. Pr., 1936. 126s., supplements 10s. *per annum*.  
 AUSTRALIA—*Prime Minister's Department.* The federal guide: a handbook of the organization and functions of Commonwealth government departments, Sept., 1951. Camb., 1951.  
 AUSTRALIA—*Royal Commission on the Constitution of the Commonwealth.* Report. Camb., 1929. 10s. 6d.  
 AUSTRALIAN DIGEST, 1825-1933: being a digest of the reported decisions of the Australian courts and of Australian appeals to the Privy Council: with table of cases, ed. by B. Sugerman and others: supplements, 1934 to date. Syd., Law Book Co., 1934 to date. 60s. *per v.*, supplements, 28s. *per annum*.  
 COMMONWEALTH LAW REPORTS: v. 1 to date. Syd., Law Book Co., 1903 to date. Annual. 52s. *per v.*  
 CRISP, L. F. Parliamentary government of the Commonwealth of Australia. Melb., Longmans Green, 1949. 21s.  
 FOENANDER, O. de R. Industrial regulation in Australia: a study of awards, method of remuneration fixation and the status of trade unions under the Australian regulative system. Melb., Melbourne Univ. Press, 1947. 17s. 6d.  
 FRIEDMANN, W. G. Principles of Australian administrative law. [Melb.] Melbourne Univ. Press [1950]. 12s. 6d.  
 KNOWLES, Sir George S. The Commonwealth of Australia Constitution Act (as altered to 1st July, 1936), and the acts altering the constitution: with notes, tables, indexes and appendices. Camb., Govt. Pr., 1937. 15s.  
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- AUSTRALIAN JOURNAL OF SCIENCE: v. 1 to date. Syd., Australian National Research Council, 1938 to date. Monthly. 15s. per annum.
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- OCEANIA : a journal devoted to the study of the native peoples of Australia, New Guinea and the islands of the Pacific Ocean : v. 1 to date. Syd., Australian National Research Council, 1930 to date. Quarterly. 20s. *per annum*.
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- Review of education in Australia 1940-1948 : by D. M. Waddington, W. C. Radford [and] J. A. Keats. Melb., Melbourne Univ. Press [1950]. 25s.
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- CUNNINGHAM, K. S. Children need teachers : a study of the supply and recruitment of teachers in Australia and overseas by K. S. Cunningham and E. A. Morey. Melb., Melbourne Univ. Press, 1947. 5s. od.
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- ONE HUNDRED YEARS OF THE FACULTY OF ARTS : a series of commemorative lectures given in the Great Hall, University of Sydney, during April and May, 1952. Syd., Angus & Robertson, 1952. 7s. 6d.
- NICHOLSON, G. H., *ed.* First hundred years : Scotch College Melbourne 1851-1951. [Melb., Old Scotch Collegians' Association, 1952].
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- JOSKE, P. E. The laws of marriage and divorce in Australia and New Zealand : 3rd ed. Syd., Butterworth, 1952. 146s.
- MACKENZIE, W. K. S. Practice in divorce : the law and practice in divorce and matrimonial causes in New South Wales : 6th ed. Syd., Law Book Co., 1952. 137s. 6d.
- MAZENGARB, O. C. The law and practice relating to actions for negligence on the highway : 2nd ed. [Syd.] Butterworth, 1952. 65s.
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- WOODWARD, P. M. District court practice and procedure (N.S.W.) : by P. M. Woodward and J. A. Friendship : [2nd ed.] Syd., Law Book Co., 1952. 150s.
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- ANNUAL CATALOGUE OF AUSTRALIAN PUBLICATIONS: no. 1 to date. Caub., Commonwealth National Library, 1936 to date. 2s. per issue.  
 AUSTRALIAN POETRY: no. 1 to date. Syd., Angus & Robertson, 1941 to date. Biennial. Various prices.  
 BAKER, S. J. The Australian language: an examination of the English language and English speech as used in Australia, from convict days to the present, with special reference to the growth of indigenous idiom and its use by Australian writers. Syd., Angus & Robertson, 1945. 21s.  
 COAST TO COAST: Australian stories. Syd., Angus & Robertson, 1943 to date. Biennial. Various prices.  
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 RODERICK, C. An introduction to Australian fiction. Syd., Angus & Robertson, 1950. 12s. 6d.  
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## DIARY OF PRINCIPAL ECONOMIC EVENTS, 1950 to 1953.

The principal economic events for the years 1931 to 1938 were shown on pp. 968 to 977 of the Official Year Book No. 33, those for the years 1939 to 1944 on pp. 1129 to 1141 of the Official Year Book No. 36 while those for the years 1945 to 1949 were included in the range of years—1945 to 1951—covered by the three Official Year Books following (Nos. 37 to 39). For reasons of space some of the items originally shown for the years 1950 and 1951 have been omitted from this issue. Previous issues should be consulted for additional information for these years.

### 1950.

Favorable economic conditions were maintained throughout the year. Employment rose every month with the exception of October, when a railway dispute started in Victoria, later extending to South Australia. The total increase in employment (other than rural, household domestic, and defence forces) was approximately 100,000 (70,000 males and 30,000 females). Again the bulk of the increase was due to immigration. Permanent arrivals exceeded permanent departures by about 154,000, 4,000 more than in the previous year. Average earnings per head continued to increase and in December quarter were approximately 15 per cent. higher than in the corresponding quarter of the previous year. Towards the end of the year the Commonwealth Court of Conciliation and Arbitration gave a judgment which brought about an increase of £1 per week in the male basic wage. This operated from the beginning of December, and so had little effect on conditions in 1950. Retail prices increased by about 12 per cent. and wholesale prices by about 16 per cent.

Secondary production continued to expand, and increases in production as compared with 1949 (affected by the coal strike) were recorded in such basic materials as coal (17 per cent.), pig-iron (29 per cent.), cement (22 per cent.) and electricity (14 per cent.). Home production, however, was inadequate and imports of the first three commodities increased. In the case of electricity, black-outs and other restrictions continued, particularly in New South Wales. House building activity continued to increase, with 76,000 houses started, and 62,000 finished. Substantial orders for prefabricated houses were placed overseas by various governmental authorities.

The run of good seasons continued, although exceptionally heavy rainfall several times caused serious flooding in parts of eastern Australia with damage to farm properties, particularly dairy and vegetable farms in coastal areas. Average export prices of wheat remained above the maximum under the International Wheat Agreement (16s. 1d.), ensuring a high return from the large 1949-50 crop, and the year closed with the harvesting of a crop which was well above average although less than the previous year. The 1949-50 wool selling season closed with firm prices, giving an average for the year of more than 63d. The 1950-51 season opened with prices about 50 per cent. higher than at the end of the previous season, and the year closed with prices still tending to rise. Production for 1950-51 was slightly lower than in 1949-50. Meat production in 1950, also, was about 5 per cent. lower, but the production of milk and butter was well maintained.

*2nd January.*—Uranium production to commence in South Australia. Mining operations already in progress at Radium Hill.

*8th February.*—Petrol rationing abolished for second time since the end of war.

Committee of experts appointed to review Commonwealth taxation legislation, particularly in relation to income tax.

*7th March.*—Bill introduced in New South Wales Legislative Assembly to create a Transport and Highways Commission to control all State transport services. (Act assented to 27th April.)

*15th March.*—Social Services Consolidation Bill introduced into Senate, providing for the endowment of the first or only child under 16 years of age, in each family at the rate of 5s. per week. (Act assented to 28th June.)

*16th March.*—Commonwealth Bank Bill introduced in House of Representatives to amend Banking Act 1945, to repeal Banking Act 1947, and to re-establish Commonwealth Bank Board. (Houses failed to agree on measure—*see* 4th October.)

*22nd March.*—Severest floodings for twenty-five years in south-east corner of New South Wales.

*30th March.*—Electricity Commission Bill, to acquire major electricity organizations in State, introduced in New South Wales Legislative Assembly. (Act assented to 12th July.)

*31st March.*—Decision at London Wool Conference to continue Joint Wool Organization scheme on present basis for time being. Principle of reserve price plan to replace Joint Organization accepted.

*13th April.*—Coal Industry Tribunal, after three months' hearing, granted permission to colliery proprietors in New South Wales, Victoria and Queensland to remove pillar coal by mechanical means.

*22nd April.*—Commonwealth Government to admit, duty free, all types of pre-fabricated houses and accessories imported during 1950, irrespective of country of origin.

*15th-19th May.*—British Consultative Committee meeting in Sydney to consider ways of assisting development of south and south-east Asia in co-operation with other interested countries.

*13th June.*—Bills introduced into House of Representatives providing for a scheme of reserve prices for wool to replace present Joint Organization system—to be financed by a levy on wool. (Act assented to 1st July. Validity challenged in High Court on 24th August, but hearing postponed pending result of referendum of wool-growers on wool levy. *See* 23rd August, 1951.)

*16th June.*—Abolition of butter rationing.

*25th June.*—Disastrous floods on north coast of New South Wales.

*30th June.*—Australian forces in vicinity of Korea placed at disposal of United Nations in Korean conflict.

*3rd July.*—Tea rationing abolished—end of retail rationing in Australia.

*6th July.*—Queensland Government to proceed with plans to build Burdekin Dam (to cost £30,000,000) and the Tully Falls Hydro-electric Scheme (£7,000,000).

*9th July-23rd August.*—Prime Minister visited Malaya, Egypt, Italy, Britain, United States of America, Canada, Japan and New Zealand. In Britain he had informal talks on defence, finance, and foreign policy and Commonwealth co-operation in these fields. In America he negotiated a \$100,000,000 loan for Australia with the International Bank for Reconstruction and Development. Loan will be used to finance capital goods and equipment to enable expansion of specific development projects.

*2nd August.*—Operations of Snowy Mountains Hydro-electric Scheme for first year have cost £2,500,000. Staff numbered 1,400 and progress up to expectations.

*22nd August.*—Contract with American company to construct Eildon Dam on Goulburn River, Victoria, at a cost of £11,400,000.

29th August.—Bill introduced in Victorian Legislative Assembly to constitute a Gas and Fuel Corporation to establish, purchase, acquire and operate gas undertakings and to co-ordinate gas production and distribution in Victoria. (Act assented to 6th December.)

7th September.—Loan programme approved by Loan Council for 1950-51 comprised Government loans, £175,400,000, and Local and Semi-Governmental loans, £70,700,000.

28th September.—Commonwealth Government to pay subsidy of up to £300 on each prefabricated house, to a maximum number of 3,000, imported by State Governments after 12th October, 1949.

4th October.—Commonwealth Bank Bill 1950 (No. 2) introduced in House of Representatives. (Referred by Senate to Select Committee on 14th March, 1951. Double dissolution of Parliament granted 17th March on grounds that Senate had failed to pass Bill. See 16th March, 1950.)

12th October.—Commonwealth Court of Conciliation and Arbitration ruled that male basic wage should be increased by £1 and female basic wage from 54 per cent. to 75 per cent. of male rate. Applications must be made to Court for new awards or alterations to existing awards.

Introduction of 1950-51 Budget. (For details, see Official Year Book No. 39, p. 1336.)

16th October.—Railway services in Victoria ceased following breakdown in discussions on abolition of passive time and payment of overtime on a daily basis. (Dispute extended to South Australia 23rd October; services resumed in South Australia 20th November; and in Victoria 9th December, after A.C.T.U. Disputes Committee had called off the stoppage.)

27th October.—Agreement announced for Britain to buy all surplus meat produced in Australia during next fifteen years.

29th November.—Australia allocated trade with Japan to value of £46,000,000 in 1950-51 under trade agreement with a number of sterling area countries and Japan.

Governor of Commonwealth Bank announced that Banks will be required to adopt a more selective advance policy in order to limit the inflationary effect of expenditure financed from bank advances.

6th December.—Defence (Transitional Provisions) Bill to extend for one year a number of national security regulations and orders introduced in Senate. (Act assented to 16th December.)

8th December.—Announcement of functions and personnel of National Security Resources Board, to advise Government on best use of Australia's resources in interests of national security.

20th December.—Commonwealth Government to contribute £31,250,000 to Colombo Plan for Co-operative Economic Development in South and South-East Asia, and £3,500,000 to technical assistance programme.

## 1951.

The year opened with exceedingly favorable economic conditions, wool prices rising to an all-time record of about 17s. per lb. in March. Towards the end of the season these prices fell sharply from this extreme but the average for the season was 12s. per lb. Wool prices were still lower at the beginning of the 1951-52 selling season, but even so maintained the high average of 7s. per lb. over the first half of the season. Export prices for wheat remained steady at the high level of more than 16s. throughout the year. Weather conditions generally were favorable except in Queensland and northern New South Wales, where droughts and, towards the end of the year, fires caused damage to pastures and losses of stock. The average wheat yield (1951-52) was estimated at about 15.5 bushels per acre, but the total crop was considerably lower than in the previous year, owing to the

reduced acreages sown. Milk production in 1951 declined by about 10 per cent. Beef production increased slightly, but there was a further sharp reduction in mutton and lamb production, which was below the pre-war level. Total meat production fell very slightly.

These trends in primary production and the general inflationary conditions were reflected in the balance of payments. The trade year 1950-51 ended with an excess of exports of about £240,000,000 (imports, £740,000,000, exports, £980,000,000), but the succeeding trade year opened with the usual excess of imports of the early months continuing, until by December the trend in the balance of payments showed imports running at more than £1,000,000,000 per year and exports at only about £700,000,000. Oversea reserves had been reduced by about £300,000,000 during the last six months.

To help counter inflation, a rigid control of new capital issues was re-imposed in February. A slight increase in bond rate was brought about in May by the issue of a loan at a discount of 1 per cent.; and in August a further increase was made to 3½ per cent. The Commonwealth Budget was designed to counter inflation and provided for increases in direct and indirect taxes and a surplus of £115,000,000, although at the same time the Commonwealth undertook to provide money out of this surplus to finance State works if sufficient loan money was not forthcoming. Despite the instructions issued late in 1950 about a more restrictive advance policy (see 29th November, 1950) bank advances increased by about 25 per cent. during the year.

The increase in employment slowed down during the first half of the year and practically ceased in the second half, despite continued net permanent migration of about 110,000 for the whole year. Prices and earnings, however, continued to increase. Wholesale and retail prices both increased by about 25 per cent. and cost of living adjustments added 38s. to the basic wage in addition to the increase of £1 at the end of 1950. Average earnings per head rose 30 per cent.

A series of one-day stoppages in the coal mines early in the year caused some temporary falling off in production in industries heavily dependent on coal, such as iron and steel and cement, but over the year production of these commodities was higher than, or up to, the level of the previous year, and black coal production was an all-time record of 17,600,000 tons. Eighty-five thousand houses were started, and 72,000 completed, 12 per cent. and 16 per cent., respectively, higher than in the previous year. About 9,000 imported pre-fabricated houses were delivered out of total orders for 21,000 placed by governmental authorities.

*8th January.*—Commonwealth Government decision to close down shale oil plant at Glen Davis, New South Wales; production to continue temporarily. (Tenders were called on 14th February, 1952 for the purchase of assets, in whole or part.)

*2nd February.*—Control of capital issues re-introduced in an effort to reduce inflationary pressure. (See 28th May and 2nd August.)

*5th February.*—Coal miners in eastern States began one day per week stoppages in protest against provisions of the Coal Industry Tribunal's award (20th December, 1950) for payments over and above the ordinary wage rate to employees who worked the full ten days of a pay-period. (Stoppages were discontinued in mid-March, see 3rd May.)

Meeting of Governors of central banks of Australia, Ceylon, Ireland, New Zealand, Pakistan, South Africa and the United Kingdom to discuss general banking problems and the international economic situation.

*3rd March.*—Commonwealth War Gratuities amounting to £52,800,000 paid to ex-service personnel of the 1939-45 War.

*15th March.*—Commonwealth Government to grant to States special financial assistance of £15,000,000 for 1950-51.

*4th April.*—Victorian Government acquired land in Gippsland as the site for the Lurgi Brown Coal Gasification Plant to supply Melbourne with gas.

9th April.—Appreciable drop in wool prices at Sydney after post-war rise to record levels.

30th April.—Electricity zoning commenced in New South Wales, a complete ban on the use of electricity for commerce and industry to apply between 7 a.m. and 9 p.m. on one day each week in five zones. (Subsequently modified, in general, to blackouts within previously specified zones.)

3rd May.—The Coal Industry Tribunal, in a review of certain portions of its decisions on a log of claims covering members of the Australian Coal and Shale Employees' Federation, rejected a claim for a wage increase, and directed that the "attendance allowance" was to stand. (See 5th February.)

15th May.—Industrial Arbitration (Amendment) Bill 1951 introduced into New South Wales Legislative Assembly providing for the inclusion in New South Wales industrial awards of three months' long-service leave on full pay after 20 years' continuous service. (Act assented to 12th September.)

28th May.—Capital Issues Control Regulations (see 2nd February) challenged in High Court. (On 12th September, 1952 the High Court declared the Regulations valid.)

17th June.—Announcement of signing of a trade agreement with Western Germany.

21st June.—Commonwealth Bank Bill 1951 providing for the restoration of the Commonwealth Bank Board, introduced into the House of Representatives. (Act assented to 16th July; operated from 21st August.)

29th June.—Conciliation and Arbitration Bill 1951, providing for secret union ballots in elections and on strike issues, greater control by the Arbitration Court, etc., introduced into House of Representatives. (Act assented to 19th July.)

5th July.—Defence Preparations Bill, providing authority until 31st December, 1953 for the Government to make regulations necessary for defence preparations and to adjust the economy to meet the threat of war, introduced into House of Representatives. (Act assented to 19th July.)

17th July.—Large upward cost of living adjustments in the basic wage announced by Commonwealth Court of Conciliation and Arbitration—increase of 13s. in the average weekly wage for the six capital cities.

19th July.—All States except Queensland fixed prices of controlled goods and services at levels ruling on 18th July. (The order was extended in New South Wales on 24th July to cover a wide variety of goods and services, but was relaxed on 20th August and removed on 9th October.)

20th July.—Final liquidation of the stock of the United Kingdom Dominion Wool Disposals Ltd. (Joint Organization) at London Wool Sales.

24th July.—Announcement of letting to a Norwegian firm of the first contract for the design and construction of a dam in the Snowy Mountains Hydro-electric Scheme. (The project, at Guthega, is to cost £5,800,000 and is to be completed by June, 1954.)

28th July.—Commonwealth Government to sell, for 45s. per share, its holdings of 863,596 ordinary shares in Amalgamated Wireless (Australasia) Ltd., comprising 51 per cent. of the issued capital.

30th July.—Conference of representatives of Commonwealth and State Governments, employers and trade unions, and other sections of the community, called by the Prime Minister, met in Sydney to discuss means of combating inflation.

2nd August.—New Capital Issues Control Regulations gazetted under the Defence Preparations Act 1951 to replace those operating under the Defence (Transitional Provisions) Act. (See 2nd February and 28th May.)

9th August.—The Prime Minister called a conference in Canberra of the Governor of the Commonwealth Bank, the heads of commercial banks, and the Secretary to the Treasury, to discuss bank credit policy.

10th August.—Conference in Canberra between the Government and representatives of insurance companies to consider general financial and investment policy.

14th August.—Announcement by Vacuum Oil Co. Pty. Ltd. that it will build a new oil refinery at Altona, near Melbourne, to be completed in about three years at a cost of £7,500,000.

15th August.—A new company to be formed to develop deposits of pyrites at Nairne, South Australia, for the production of sulphur.

16th–17th August.—The Loan Council approved a rise in the long-term bond rate from  $3\frac{1}{2}$  per cent. to  $3\frac{3}{4}$  per cent., to apply to the Thirteenth Security Loan for £40,000,000 to be opened on 22nd August. The loan programme for 1951–52, after State works programmes had been reduced by approximately 25 per cent., was decided as follows:—Commonwealth, £23,000,000; States, £202,000,000; Local Authorities, £96,000,000.

21st August.—The Commonwealth Government issued instructions for the reduction of the staff of Commonwealth Departments by 10,000 (5 per cent.).

The Victorian State Electricity Commission's loan, calling for £6,000,000 at  $3\frac{1}{2}$  per cent. interest, was closed, under-subscribed by £3,350,000.

23rd August.—Wool-growers rejected by referendum the proposal for a reserve price plan for wool. (See 13th June, 1950.)

27th–30th August.—New season's wool auctions in Sydney realize prices about 25 per cent. below those of June.

1st September.—Major hire purchase finance companies in New South Wales and South Australia announced new conditions for hire purchase agreements, increasing deposit rates and reducing repayment periods. (See also 8th November.)

11th September.—Interest rates on loans to local and semi-governmental authorities raised from  $3\frac{1}{2}$  per cent. to  $4\frac{1}{2}$  per cent.

26th September.—Commonwealth Budget for 1951–52 introduced into the House of Representatives. (For details, see Official Year Book No. 39, p. 1340.)

—October.—Extensive bush fires in Queensland, Northern Territory and northern New South Wales damaged wide areas of country.

7th October.—Announced that Australia is to spend about £700,000,000 on defence during next three years.

12th October.—Details announced of a fifteen-year meat agreement with the United Kingdom to commence on 18th July, 1952.

18th October.—The Victorian Industrial Appeals Court ruled that dairy farm employees would work a 48-hour week instead of the 40-hour week granted in August by the Dairy Farm Workers' Wages Board. The Court increased the basic rates of pay by 10s. to £10 19s. per week, and increased the annual leave granted by the Board from two to three weeks.

Australia signed the Torquay Protocol to the General Agreement on Trade and Tariffs.

Further large upward adjustments in the basic wage announced by the Arbitration Court—average weekly wage for the six capitals increased by 11s. (See 17th July.)

8th November.—The Commonwealth Bank ceased to make credit available for the purchase of cars other than new cars for commerce. Private hire purchase firms also restricted credit and shortened repayment periods. (See also 1st September.)

12th–23rd November.—The Third Conference of Government Statisticians of the British Commonwealth held in Canberra.

20th November.—Announcement that current Australian gold output may be sold on "premium markets overseas", providing that it is sold for dollars.

—December.—Serious bush fires in the Blue Mountains area of New South Wales.

21st December.—British Commonwealth Sugar Agreement signed in London; Australian export quota fixed at 600,000 tons of raw sugar per annum. The agreement is to operate until 31st December, 1959, prices to be negotiated annually.

## 1952.

Migration continued on a reduced scale during 1952, making a net addition to the population of 94,000, compared with 111,000 in 1951 and a post-war peak of 153,000 in 1950.

The decline in immigration was associated with unsettled employment conditions in Australia, which were reflected in the fall in employment, the total numbers employed (excluding rural and household domestic workers and the defence forces) dropping from 2,637,000 in December, 1951, to 2,533,000 in December, 1952. Except for small increases in February and December, this decline in the level of employment continued throughout each month of 1952, with the largest falls in the manufacturing, building and retail industries. The number of persons on unemployment benefit increased from 2,000 to 40,000.

New houses numbering 68,000 were started and 79,000 completed during the year, compared with 85,000 and 72,000 respectively in the previous year. Production of coal, gas, electricity, pig-iron and steel was maintained or increased, and electricity restrictions were much less severe than in recent years.

In the early part of the year continuing drought and bushfires, particularly in New South Wales, Queensland and Northern Territory, seriously affected pastures and restricted meat and butter production. Conditions improved during the year and meat and milk production increased quickly. For crops, weather conditions generally were favorable and wheat production in 1952-53 was considerably higher than in 1951-52, despite a slightly reduced acreage. Average yield per acre reached an all-time record of about 19 bushels. Wool production is estimated to have reached an all-time record in 1952-53, being 19 per cent. above 1951-52. More effective control of the rabbit pest through the spread of myxomatosis in recent years appears to have contributed to both an increase in sheep numbers and an increase in average clip per sheep.

Due to generally easier supply conditions the high level of imports reached in the latter half of 1951 continued into 1952. This increase in imports, together with a drop in the receipts for exports, had resulted in a balance of payments deficit on current account for the latter half of 1951 of £316 million, and the continuation of these conditions in 1952 led to the imposition of severe import restrictions (on 8th March) to safeguard overseas reserves. Licences to import goods from dollar areas were also recalled and reviewed. The value of imports was slightly lower in the first half of 1952 and fell by more than 50 per cent. in the second half of the year. There was a slight increase in the value of exports and the balance of payments deficit of £269 million in the first half of the year was changed to a surplus of £75 million in the second half of the year.

Average earnings per employee continued to rise and in the December quarter were about 11 per cent. above the corresponding level of the previous year. Retail prices increased by about 10 per cent. and wholesale prices by about 9 per cent. during the year. Proportionately, these price and wage increases were about one-third as great as those in the previous year.

During 1952 uncertainty about the future of interest rates for public authority borrowing resulted in a number of loan failures until some stability in interest rates was reached towards the end of the year. A Commonwealth Government cash and conversion loan of £75 million at  $3\frac{1}{2}$  per cent. was under-subscribed by £14 million. Later in the year a further loan of £20 million was raised at  $4\frac{1}{2}$  per cent. Semi-Government authorities floated a number of loans at  $4\frac{1}{8}$  per cent. with varying but frequently unsuccessful results and later in the year the rate was raised to  $4\frac{3}{4}$  per cent. in line with the trend in Commonwealth bond rates. Bank overdraft and deposit rates were also raised from the beginning of August.

*2nd January.*—The Australian Mutual Provident Society to take over a large low-rainfall area in the Mallee-Wimmera District for development and improvement for settlement under the Victorian Land (Development Leases) Act 1951. (*See also* 18th August, 1949, Official Year Book No. 39.)

*5th January.*—Australia and Pakistan signed a one-year trade agreement.



*17th January.*—Commonwealth Conciliation Commissioner Galvin refused an application by eleven metals trades unions for marginal wage increases. The decision affected more than 250,000 metal trades workers throughout Australia. (*See* 29th February, 1st March, 1952, and 14th–11th November, 1953.)

*18th January.*—Commonwealth Government to subsidize Air Beef Pty. Ltd. (operators of an inland slaughter works at Glenroy, Western Australia, transporting meat to the coast by air) to the extent of £10,000 a year.

*21st January.*—A conference of British Commonwealth Finance Ministers, attended by the Treasurer of Australia, issued a statement on the measures considered necessary to correct the sterling area situation.

*22nd January.*—Increase of 10s. in cost of living adjustment to the average weekly wage for the six capital cities announced by Commonwealth Court of Conciliation and Arbitration.

Publication of a report of Mr. H. B. Basten, a United Kingdom authority on ports and harbours, on "The Turn-round of Ships in Australian Ports".

*25th January.*—Widespread bushfires in New South Wales, Victoria and the Australian Capital Territory.

*19th February.*—Good rains in the northern areas of New South Wales end the worst drought experienced for many years, during which extensive areas of pastures and crops were destroyed by bushfires. Drought conditions continued in Queensland and Northern Territory.

*21st February.*—Announcement of a reduction in Commonwealth Public Service employment by 12,500 during the six months ended 31st December, 1951.

*23rd February.*—Conversion of all Australian sulphuric acid plants from the use of imported sulphur to the use of locally-produced pyrites projected by the end of 1953.

Discovery announced of important high-grade uranium deposits at Rum Jungle in the Northern Territory.

*26th February.*—Introduction into the House of Representatives of the Fisheries and Pearl Fisheries Bills to conserve swimming and sedentary fisheries in Australian waters. (Acts assented to 13th March.)

*29th February.*—Welders employed by Australian Iron and Steel Ltd. at Port Kembla protested against the Galvin award (*see* 17th January). (By 16th May about 3,500 workers were directly involved in the dispute, which resulted in the closing down of the Australian Iron and Steel Ltd. plant, while many in associated industries were also affected. Work was resumed on 6th June).

*1st March.*—Industrial dispute, involving maintenance workers of the State Electricity Commission of Victoria protesting against the Galvin award (*see* 17th January), caused the introduction of power restrictions in Victoria. (The dispute ended on 12th April. Severe restrictions were imposed on the use of power from 15th April, but were eased on 18th April.)

*6th March.*—Price control lifted from clothing and textiles in South Australia and Western Australia.

*7th March.*—The Commonwealth Bank prohibited the establishment of further import credits until licences had been obtained for the goods involved.

*8th March.*—Imposition of severe restrictions on imports from all sources and on amounts available for Australians travelling overseas.

*11th March.*—Arrival of the President of the International Bank for Reconstruction and Development to survey development progress and to discuss loan prospects with the Commonwealth Government.

*1st April.*—Agreement between the Commonwealth and South Australian Governments and the combined Development Agency of the British and American Governments on the development of uranium deposits at Radium Hill, South Australia.

9th April.—The Waterside Workers' Federation, in connexion with its claim for higher margins, imposed an Australia-wide ban on overtime. (Ban continued until 9th July.)

20th April.—Wages of about 50,000 workers in the pastoral industry in all States, except Queensland (where a State award is in operation), reduced by Commonwealth Conciliation Commissioner because of a decline in wool prices.

3rd May.—A special Loan Council meeting approved programmes amounting to £247,500,000 for Government loans and £128,000,000 for local and semi-governmental authorities loans, the Commonwealth Government being prepared to guarantee subscriptions to an extent of £125,000,000 (subsequently increased to £135,000,000) from Commonwealth sources.

7th May.—Introduction into the House of Representatives of the Aluminium Industry Bill, an amending bill designed to increase by £4,250,000 the capital originally contributed in 1944 (£3,000,000) for the establishment of the industry at Bell Bay, Tasmania, and provide for the annual production of 13,000 tons of aluminium ingots. (Act assented to 30th May.)

22nd May.—Modification of the Commonwealth Bank's advance policy to secure greater flexibility and to enable individual banks to apply the policy appropriately in individual cases.

The Conciliation and Arbitration Bill introduced into House of Representatives providing for a limited right of appeal from decisions of Conciliation Commissioners to a court of three Arbitration Court Judges, and an increase in the number of Arbitration Court Judges to at least seven, so that two full courts may sit at once. (Act assented to 17th June.)

23rd May.—Good rains brought relief to north and central Australia which had suffered from prolonged drought causing heavy losses in cattle industry.

29th May.—Bill introduced to approve agreement between the Commonwealth Government and the Bulolo Gold Dredging Ltd. to form a joint company to cut 10,000,000 super. feet of timber annually from pine forests at Bulolo, New Guinea. (Act assented to 17th June.)

10th June.—Announcement of New South Wales Government's conditional agreement to the establishment by Caltex Oil (Aust.) Pty. Ltd. of a £25,000,000 oil refinery at Kurnell, Botany Bay.

17th June.—Myxomatosis campaign against rabbits to be intensified during the following spring and summer.

18th June.—During one of the worst floods in the history of central and south-west New South Wales, Wagga, Forbes, Cowra and many other towns were badly flooded by water from the Murrumbidgee and Lachlan Rivers and their tributaries.

24th June.—Employers' organizations lodged a claim with the Commonwealth Court of Conciliation and Arbitration seeking the following adjustments to awards of 25 metal trades unions, affecting about 250,000 workers in all States except Western Australia:— (i) Reduction in basic wage by amounts of from £2 5s. to £2 7s. per week; (ii) Reduction of the female rate from 75 per cent. to 60 per cent. of the male rate; (iii) An increase in working hours from 40 to 44 hours per week, to be worked in either 5 or 5½ days; (iv) Abandonment of the system of automatic quarterly cost of living adjustments to the basic wage. (See 5th August, 1952 and 12th September, 1953.)

1st July.—New five-year Dairy Industry Stabilization Scheme commenced to operate.

7th July.—At a conference of the Prime Minister and State Premiers a total of £135,900,000 was decided on as tax reimbursement grant to the States for 1952-53, plus Special Grants to Victoria and Tasmania of £800,000 and £70,000 respectively. Announcement of the Commonwealth Government's intention to return powers for taxing incomes to the States at the end of 1952-53, provided agreement could be reached concerning the technical problems involved.

9th July.—The International Bank for Reconstruction and Development announced the granting of a further loan to Australia of \$50,000,000 for a twenty-year term at 4½ per cent. interest. (See 9th July, 1950.)

14th July.—Relaxation of bank advance policy to provide hire-purchase finance for farm equipment announced.

24th July.—Announced that as a result of present economic situation Australia would accept only 80,000 immigrants in 1953, and that the migration programme for 1952 would also be reduced.

28th July.—Price control removed from clothing and textiles in New South Wales and Victoria.

1st August.—Revocation of the order made by the Commonwealth Bank under National Security Regulations fixing maximum rates of interest. This was followed by a general increase in interest rates.

5th August.—Victorian State Government discontinued almost all building controls in Victoria.

Commonwealth Court of Conciliation and Arbitration commenced the Basic Wage and Standard Hours Inquiry in Melbourne. (See 24th June, 1952 and 12th September, 1953.)

6th August.—The Commonwealth Budget for 1952-53 introduced into the House of Representatives, providing for estimated expenditure of £959,430,000 and revenue of £959,890,000, allowing an estimated surplus of £460,000. Estimated expenditure from Consolidated Revenue Fund included:—Defence Services, £200,000,000; War and Repatriation Services, £111,000,000; National Welfare Fund, £164,000,000; Payments to or for the States, £178,000,000; Capital Works and Services, £107,000,000. In addition, an estimated £6,000,000 was provided for War Service Land Settlement from Loan Fund. The Budget included proposals for increases in Repatriation benefits (£2,400,000) and Social Service Benefits (£27,000,000). The special levy of 10 per cent. of income tax assessed, imposed on individual taxpayers in 1951-52, was discontinued, reducing income tax payable by individuals by £23,000,000 for the year. Other taxation reductions included:—Companies (£15,000,000) and Sales Tax (£5,000,000). In addition the Commonwealth Land Tax was discontinued.

26th August.—Arrival of Santa Gertrudis cattle from King Ranch, Texas, U.S.A., to start the breed on the Darling Downs, Queensland.

27th August.—The new blast furnace lit at Port Kembla, New South Wales, expected to increase output of pig iron at that centre by 1,500 tons daily.

1st September.—The Commonwealth Government to seek oversea markets for Australian coal.

11th September.—Announced that Consolidated Zinc Pty. Ltd. would develop the Rum Jungle, Northern Territory, uranium deposits on behalf of the Commonwealth Government, the United States of America Atomic Energy Commission to supply uranium refining plant to begin operating in 1954.

25th September.—The Joint Coal Board recommended the closing of several coal mines producing poor quality coal, because of lack of markets.

30th September.—New South Wales Building Operations and Building Materials Control Act 1945 expired, ending all controls over building operations and materials in New South Wales.

6th October.—The Commonwealth Bank announced the cessation of restrictions on bank advances for any purpose, except where the control of capital issues is involved. (See 29th November, 1950.)

14th October.—The Navigation Bill, proposing the transfer of jurisdiction over maritime industrial disputes from the Maritime Industry Commission to a single judge of the Commonwealth Court of Conciliation and Arbitration and the abolition of the Maritime Industry Commission, introduced into the House of Representatives. (Act assented to 8th December.)

Broken Hill Proprietary Steel Industry Agreement Bill introduced into the Western Australian Legislative Assembly to ratify an agreement for the establishment of a steel rolling mill and fence post factory at a cost of approximately £4,000,000 at Kwinana, near Fremantle, Western Australia. (Act assented to 18th December.)

16th October.—A Bill to provide for the sale of the Commonwealth's holding of shares in Commonwealth Oil Refineries Ltd. to the Anglo-Iranian Oil Co. Ltd. introduced into the House of Representatives. (Act assented to 6th November.) The Anglo-Iranian Oil Co. Ltd. is to construct an oil refinery with a capacity of about 3,000,000 tons a year, to cost about £40,000,000, at Kwinana, near Fremantle, Western Australia.

22nd October.—Owing to the increased production of coal, the Coal Industry Tribunal granted an application to advance the date for commencement of the long service leave scheme from 1st January, 1954 to 1st January, 1953. (See 7th September, 1949, Official Year Book No. 39.)

17th and 23rd November.—Export controls lifted from large number of primary and secondary products.

27th November–11th December.—The Prime Minister and other Australian Ministers attended the British Commonwealth Economic Conference in London. All subjects were discussed in the light of the necessity to curb inflation and rises in the cost of living, to encourage sound economic development, and to extend a multilateral trade and payment system over the widest possible area.

A group of financial, industrial and commercial concerns in the United Kingdom proposed to form a company to further development throughout the Commonwealth.

5th December.—The Coal Industry Stabilization Plan was announced by the Commonwealth Government, its main features being the financing by the Commonwealth of the stockpiling of surplus production, and of the sale of coal on a credit basis to major consumers; the forgoing by the Commonwealth of interest charges on mining plant which might become idle, and the daily review of production and demand.

31st December.—The first good rains for many months were recorded in Northern Territory drought-stricken areas.

### 1953.

The immigration programme was cut further during the year and net migration amounted to only about 43,000, compared with 94,000 in 1952 and over 100,000 in each of the preceding three years.

After the almost continuous decline in employment in 1952 there was an almost continuous increase in 1953 and total employment (excluding rural and household domestic employment and the defence forces) rose from 2,533,000 in December, 1952 to 2,612,000 in December, 1953—still below the peak of 2,643,000 in November, 1951. Numbers on unemployment benefit dropped to less than half the level of 41,600 reached in January.

Production of coal was down slightly from the 1952 level, but production of gas and electricity and of many basic materials (pig-iron and steel, lead, cement, superphosphate) continued to increase. Production of refrigerators, washing machines, radios and other domestic electrical goods, many clothing and textile lines and sporting goods increased substantially after the set back of the previous year. There was also some revival in house building, but the number of houses started, although some 3,000 higher than in the previous year, did not regain the 1951 level.

Seasonal conditions were satisfactory. Meat production was substantially increased. The average wheat yield was lower than the previous year's record but still high at 17 bushels per acre. Acreage was somewhat greater and total production was estimated at about 199 million bushels compared with 195 million bushels in the 1952–53 harvest. The wool clip for 1953–54 was only 3 per cent. under the record of the previous year.

After some weakness at the close of the 1952–53 season, wool prices firmed again at the opening sales in September and during the first half of the 1953–54 season averaged 85d. compared with 81.8d. in 1952–53. With rising wool, wheat, butter and meat prices offsetting other reductions, export prices generally remained above the previous year's level. The value of exports was considerably higher than in 1952. During the second half of the year imports also increased substantially over the low level of the previous twelve months, and the balance of payments credit on current account which reached about £100 million in the first half of the year dropped to about £20 million in the second half.

Rises in internal prices and earnings were much smaller. Average earnings per employee rose by 4 per cent., the basic wage by 2 per cent., retail prices by 4 per cent., and wholesale prices by 5 per cent. before falling towards the close of the year, compared with increases of about 10 per cent. in 1952.

Interest rates were kept stable during the year at  $4\frac{1}{2}$  per cent. on Commonwealth bonds,  $4\frac{3}{4}$  per cent. on local and semi-governmental securities and 5 per cent. on bank advances. Both Commonwealth loans raised during the year at  $4\frac{1}{2}$  per cent. were over-subscribed (the October one by £15 million), and during the second half of the year there was some speculation about a possible drop in interest rates.

*5th January.*—Announced that new deposits of coal, bauxite, tin and zinc had been discovered as a result of surveys carried out by the Bureau of Mineral Resources, Geology and Geophysics.

*8th January.*—Ten-year agreement signed with the Combined Development Agency for sale to the United States of America of uranium from deposits at Rum Jungle, Northern Territory.

*10th January.*—Announced that United Kingdom and Queensland Governments had agreed to abandon the Queensland-British Food Corporation's farming project in Central Queensland.

*22nd January.*—For first time since 1945, basic wage adjustment for December quarter showed no change in average for six capital cities.

*18th February.*—Television Bill introduced into House of Representatives to permit the establishment of both National and Commercial television transmitting stations. (Act assented to 20th March.)

*19th February.*—Commonwealth Bank Bill 1953 and Banking Bill 1953 introduced into House of Representatives. The Commonwealth Bank Bill sets up the Commonwealth Trading Bank under a General Manager, in place of the General Banking Division of the Commonwealth Bank. The Banking Bill provides for a new method of determining the maximum amounts which the trading banks may be required to lodge with the Commonwealth Bank as the central bank and requires the Commonwealth Bank to conform to the special accounts provisions of the Banking Bill. (Both Acts assented to 28th March.)

*20th February.*—Premiers' Conference in Canberra to discuss return of income tax powers to the States. No agreement reached.

*10th March.*—Prime Minister announced that a Census of Australia would be taken in 1954.

*1st April.*—Further relaxation of import restrictions to allow additional imports to the value of £50,000,000 during the next twelve months other than from the dollar area and Japan.

*13th April.*—New International Wheat Agreement signed in Washington fixing Australia's annual wheat export quota at 75,000,000 bushels—Australian signature not to be effective unless agreement also signed by United Kingdom and India. (Later legislation introduced into House of Representatives, 11th October.)

*17th April.*—Basic wage rise of 3s. per week announced.

*18th April.*—Commonwealth Scientific and Industrial Research Organization announced that, after ten years' research, a process had been developed to prevent shrinkage in wool.

*15th May.*—Australia and United States of America signed conventions to end double taxation between the two countries. (Acts ratifying these conventions were assented to 11th December.)

*19th May.*—Australian Loan Council meeting at Canberra adopted programme of £231,000,000 for State Government works during 1953-54 (Commonwealth will contribute, however, only on a basis of a £200,000,000 programme). Borrowing programme of £90,486,000 by Local Government and Semi-governmental authorities also approved. Loan Council decided to retain ruling interest rates on public loans for at least twelve months.

*8th June.*—Britain and Australia signed agreement for reciprocity in social services benefits.

*9th June.*—Conference of Commonwealth Prime Ministers on defence, economic and political issues concluded in London.

*24th June.*—Contract prices for sale of Australian butter and cheese to the United Kingdom Ministry of Food during 1953-54 increased by approximately  $3\frac{3}{4}$  per cent.

1st July.—Commonwealth Medical Benefits Scheme commenced, under which persons who are contributors to an approved medical benefits organization are entitled to receive part reimbursement by the Commonwealth of payments made for medical services to themselves or their dependants.

Conditions of purchase by Australian Atomic Energy Commission of acceptable uranium ores and concentrates from 1st July announced, including guaranteed minimum prices for five years.

Further relaxation of restrictions on imports from sterling countries came into operation. Some increases in imports from Japan also to be allowed.

10th July.—Price of petrol reduced by 1½d. per gallon.

15th July.—Announced that the United Kingdom Government would pay higher prices, representing increases of 7½ and 5½ per cent. respectively, for Australian lamb and mutton in 1953-54.

Export controls removed from further Australian products.

22nd July.—Announced that the United Kingdom Ministry of Food had declined to enter into a long-term contract for the purchase of Australian canned fruits. (Later in the year the Ministry agreed to the bulk purchase of the exportable surplus of canned apricots, peaches and pears for 1954 only. It was made clear, however, that it was the policy of the United Kingdom Government to return to open trading in all imported foodstuffs as rapidly as circumstances permit.)

7th August.—Shipping freights to United Kingdom rose by 7½ per cent.

13th August.—Commonwealth Government rejected a Japanese request for a conference to discuss trade relations between Australia and Japan.

5th September.—Drilling for oil began at Exmouth Gulf in Western Australia.

9th September.—The Commonwealth Budget for 1953-54 introduced into the House of Representatives, providing for an estimated expenditure of £986,542,000, revenue of £986,757,000 and an estimated surplus of £215,000. The major items of estimated expenditure from Consolidated Revenue Fund were:—Defence Services, £200,000,000; War and Repatriation Services, £116,000,000; National Welfare Fund, £184,000,000; Payments to or for the States, £189,000,000; Capital Works and Services, £101,500,000. Estimated expenditure from Loan Fund includes £7,000,000 for War Service Land Settlement and £7,000,000 for redemption of War Savings Certificates. The Budget included proposals for increases in expenditure on repatriation benefits (£1,000,000) and social services benefits (£18,500,000); and reductions in taxation of an estimated annual value to taxpayers of £82,000,000. Proposals for reductions in taxation included reduced rates of income tax with increased allowances and exemptions (£40,000,000), company tax (£23,000,000), sales tax (£9,000,000), increased annual exemption from pay-roll tax (£4,000,000), and the abolition of entertainments tax (£5,000,000).

10th September.—Pearl Fisheries Bill introduced, providing for a licensing system and other measures to control pearl fisheries (Act assented to 17th September). *See also* 11th September.

11th September.—Australian sovereignty proclaimed over sea-bed, subsoil, and continental shelf adjoining Australia and Australian territories. (Australia subsequently agreed to submit issues arising from the Pearl Fisheries Act to the International Court of Justice for adjudication.)

12th September.—Commonwealth Court of Conciliation and Arbitration in a judgment, refused applications by employers for reduction of current basic wages and for an increase of standard hours of work and also refused applications by unions for increases of basic wages. The employers' applications for abandonment of the system of automatic adjustment of the basic wage in accordance with retail price indexes were, however, granted. Later, the extension by the Court, on its own motion, of this decision to awards not the subject of an application before the Court was challenged in the High Court by the unions concerned but the power of the Arbitration Court to so vary awards was upheld.

24th September.—Australian Council of Trade Unions Congress withdrew its policy of unqualified opposition to incentive payments, leaving individual unions free to accept incentive payment schemes if they so desire.

*30th September.*—Announced that Commonwealth Finance Ministers would confer in Sydney in January, 1954, on such subjects as the balance of payments, world trade and the development of economic resources.

*1st October.*—Announced that Australia would receive an increase of 5½ per cent. in the price of beef and veal shipped to the United Kingdom during 1953-54 under the fifteen-year meat agreement with United Kingdom.

Further relaxation of import restrictions on goods from sterling areas came into operation, allowing additional annual imports valued at £45 million.

*7th October.*—All States agreed to a price of 14s. per bushel for wheat sold in Australia for the three years ending 1955-56.

*13th October.*—Wheat Marketing Bill providing for orderly marketing of wheat for next three harvests introduced into House of Representatives. (Act assented to 26th October.) All States have agreed to introduce complementary legislation but have not yet done so.

Bill providing for ratification of the International Wheat Agreement, under which portion of Australia's crop for the next three seasons will be exported within certain price limits, introduced into House of Representatives. (Act assented to 26th October.)

Queensland State Full Industrial Court rejected application by employers' organizations to end basic wage adjustments.

*15th October.*—First atomic weapon exploded at a proving ground north of Woomera.

*22nd October.*—Commonwealth Court of Conciliation and Arbitration refused New South Wales transport authorities permission to withdraw applications for relief from basic wage adjustments.

*26th October.*—Factories and Shops (Wages Boards) Bill 1953 introduced in Victoria to pay latest cost-of-living increase in basic wages. (Act assented to 25th November.)

*30th October.*—Tasmanian Government abolished price control on all goods other than copper.

*11th November.*—Commonwealth Court of Conciliation and Arbitration completed hearing of evidence by Australian Engineering Union and other organizations in the margins case and reserved its decision. (On 26th February, 1954, the Court announced that the case had been adjourned until November, 1954, for further hearing and determination.)

*12th November.*—Industrial Arbitration (Amendment) Bill, giving absolute preference to unionists, introduced in New South Wales Parliament. (Act assented to 17th December.)

*3rd December.*—Commonwealth Trading Bank of Australia commenced operations.

*4th December.*—Oil discovered at Exmouth Gulf, 680 miles north of Perth. The oil, discovered at a depth of approximately 3,600 feet, was stated to be a very high grade crude oil.

*31st December.*—With the expiration of the Defence Preparations Act, control of Capital Issues ceased.

Price control abandoned in Western Australia.

# CHRONOLOGICAL TABLE.

## CHRONOLOGICAL TABLE OF CHIEF EVENTS SINCE THE ESTABLISHMENT OF SETTLEMENT IN AUSTRALIA.

NOTES.—For each earlier year this Table contains rarely more than two or three items; for recent years, however, in order to provide a wide cover of events, etc., it includes a much greater number. Both the nature of the Table and considerations of space render necessary a continual reduction in these items, and for more information the reader should therefore consult earlier issues.

The Government was centralized in Sydney, New South Wales, up to 1825, when Tasmania (Van Diemen's Land) was made a separate colony. In the Table the names now borne by the States serve to indicate the localities.

Year.

- 1788 N.S.W.—Arrival of “First Fleet”, under Captain Arthur Phillip, at Botany Bay. Land in vicinity being found unsuitable for settlement, the expedition moved to Sydney Cove, and formal possession of the colony was taken on 26th January. Formal proclamation of colony and establishment of regular government on 7th February. Branch Settlement established at Norfolk Island. French navigator Lapérouse visited Botany Bay. First cultivation of wheat and barley. First grape vines planted.
- 1789 N.S.W.—First wheat harvest at Parramatta, near Sydney. Discovery of Hawkesbury River.
- 1790 N.S.W.—Scarcity of provisions. “Second Fleet” reached Port Jackson. Landing of the New South Wales Corps.
- 1791 N.S.W.—Arrival of “Third Fleet”. Territorial seal brought by Governor King.
- 1792 N.S.W.—Visit of *Philadelphia*, first foreign trading vessel.
- 1793 N.S.W.—First free immigrants arrived in *Bellona*. First Australian church opened at Sydney. Tas.—D’Entrecasteaux discovered the Derwent River.
- 1794 N.S.W.—Establishment of settlement at Hawkesbury River.
- 1795 N.S.W.—Erection of the first printing press at Sydney. Descendants of strayed cattle discovered at Cowpastures, Nepean River.
- 1796 N.S.W.—First Australian theatre opened at Sydney. Coal discovered by fisherman at Newcastle.
- 1797 N.S.W.—Introduction of merino sheep from Cape of Good Hope.
- 1798 Tas.—Insularity of Tasmania proved by voyage of Bass and Flinders.
- 1800 N.S.W.—Hunter River coal-mines worked. First Customs House in Australia established at Sydney. Flinders’ charts published.
- 1801 N.S.W.—First colonial manufacture of blankets and linen.
- 1802 Vic.—Discovery of Port Phillip by Lieut. Murray. Q’land.—Discovery of Port Curtis and Port Bowen by Flinders. S.A.—Discovery of Spencer’s and St. Vincent Gulfs by Flinders.
- 1803 N.S.W.—First Australian wool taken to England by Capt. Macarthur. Issue of “The Sydney Gazette”, first Australian newspaper. Vic.—Attempted settlement at Port Phillip by Collins. Discovery of Yarra by Grimes. Tas.—First settlement formed at Risdon by Lieut. Bowen.
- 1804 Vic.—Abandonment of settlement at Port Phillip. Tas.—Foundation of settlement at Hobart by Collins.
- 1805 N.S.W.—First extensive sheep farm established at Camden by Capt. Macarthur.
- 1806 N.S.W.—“The great flood” on the Hawkesbury. Shortage of provisions. Tas.—Settlement at Launceston.
- 1807 N.S.W.—First shipment of merchantable wool (245 lb.) to England.
- 1808 N.S.W.—Deposition of Governor Bligh.
- 1809 N.S.W.—Free school established.
- 1810 N.S.W.—Post Office officially established at Sydney.
- 1813 N.S.W.—Passage across Blue Mountains discovered by Wentworth, Lawson and Blaxland. Macquarie River discovered by Evans.
- 1814 N.S.W.—Flinders suggested the name “Australia”, instead of “New Holland”. Creation of Civil Courts.



- Year.
- 1815 N.S.W.—First steam engine in Australia erected at Sydney. Lachlan River discovered by Evans. Tas.—Arrival of first immigrant ship with free settlers. First export of wheat to Sydney.
- 1816 N.S.W.—Sydney Hospital opened.
- 1817 N.S.W.—Oxley's first exploration inland. Discovery of Lakes George and Bathurst and the Goulburn Plains by Meehan and Hume. First bank in Australia—Bank of New South Wales—opened at Sydney.
- 1818 N.S.W.—Liverpool Plains, and the Peel, Hastings and Manning Rivers discovered by Oxley, and Port Essington (N.T.) by Captain King.
- 1819 N.S.W.—First Savings Bank in Australia opened at Sydney.
- 1820 Tas.—First importation of pure merino sheep from Camden Park (N.S.W.) flocks.
- 1821 Tas.—Establishment of penal settlement at Macquarie Harbour.
- 1822 N.S.W.—Formation of Agricultural Society of New South Wales.
- 1823 N.S.W.—New South Wales Judicature Act passed. Discovery of gold at Fish River by Assistant-Surveyor McBrien. Qld.—Brisbane River discovered by Oxley.
- 1824 N.S.W.—Constituted a Crown Colony. Executive Council formed. Establishment of Supreme Court at Sydney, and introduction of trial by jury. First Australian Enactment (Currency Bill) passed by the Legislative Council. Proclamation of freedom of the press. First manufacture of sugar. Vic.—Hume and Hovell, journeying overland from Sydney, arrived at Corio Bay. Qld.—Penal settlement founded at Moreton Bay (Brisbane). Port Dundas Settlement formed at Melville Island, N. Terr.
- 1825 Tas.—Van Diemen's Land (Tasmania) proclaimed a separate colony. Qld.—Major Lockyer explored Brisbane River to its source and discovered coal.
- 1826 N.S.W.—Settlement in Illawarra District. Vic.—Settlement at Corinella, Western Port, formed by Captain Wright.
- 1827 Qld.—Darling Downs and the Condamine River discovered by Allan Cunningham. W.A.—Military settlement founded at King George's Sound by Major Lockyer. First official claim of British Sovereignty over all Australia.
- 1828 N.S.W.—Second constitution. First Census. Sturt's expedition down Darling River. Gas first used at Sydney. Richmond and Clarence Rivers discovered by Captain Rous. Vic.—Abandonment of settlement at Western Port. Qld.—Cunningham discovered a route from Brisbane to the Darling Downs, and explored Brisbane River.
- 1829 N.S.W.—Sturt's expedition down Murrumbidgee River. W.A.—Foundation of settlement at Swan River. Foundation of Perth.
- 1830 N.S.W.—Sturt, voyaging down Murrumbidgee and Murray Rivers, arrived at Lake Alexandrina. Tas.—Black line organized to force aborigines into Tasman's Peninsula, but failed. Small remnant subsequently (1830 to 1835) persuaded to settle on Flinders Island.
- 1831 N.S.W.—Crown lands first disposed of at auction. Mitchell's explorations north of Liverpool Plains. SS. *Surprise*, first steamship built in Australia, launched at Sydney. First coal shipped from Australian Agricultural Company's workings at Newcastle, N.S.W. First assisted immigration to N.S.W. S.A.—Wakefield's first colonization committee. W.A.—Appointment of Executive and Legislative Councils.
- 1832 N.S.W.—State Savings Bank established.
- 1833 N.S.W.—First School of Arts established at Sydney.
- 1834 N.S.W.—First settlement at Twofold Bay. Vic.—Settlement formed at Portland Bay by Henty Brothers. S.A.—Formation of the South Australian Association. W.A.—Severe reprisals against Murray River natives at Pinjarrah for continued attacks on settlers.
- 1835 Vic.—John Batman arrived at Port Phillip; foundation of Melbourne.
- 1836 N.S.W.—Mitchell's overland journey from Sydney to Cape Northumberland. Vic.—Proclamation of Port Phillip district as open for settlement. S.A.—Settlement founded at Adelaide under Governor Hindmarsh.

- Year.
- 1837 N.S.W.—Appointment in London of Select Committee on Transportation. Vic.—First overlanders from Sydney arrived at Port Phillip.
- 1838 N.S.W.—Discontinuance of assignment of convicts. Qld.—Settlement of German missionaries at Brisbane—first free colonists. S.A.—“Overlanding” of cattle from Sydney to Adelaide along the Murray route by Hawden and Bonney. Settlement at Port Essington, Northern Territory, formed by Captain Bremer.
- 1839 N.S.W.—Gold found at Vale of Clwydd by Count Strzelecki. S.A.—Lake Torrens discovered by Eyre. Port Darwin discovered by Captain Stokes. W.A.—Murchison River discovered by Captain Grey.
- 1840 N.S.W.—Abolition of transportation to New South Wales. Land regulations—proceeds of sales to be applied to payments for public works and expenditure on immigration. Vic.—Determination of northern boundary. Qld.—Penal settlement broken up and Moreton Bay district thrown open. S.A.—Eyre began his overland journey from Adelaide to King George’s Sound.
- 1841 N.S.W.—Gold found near Hartley. W.A.—Completion of Eyre’s overland journey from Adelaide to King George’s Sound. New Zealand proclaimed a separate colony.
- 1842 N.S.W.—Incorporation of Sydney. Vic.—Incorporation of Melbourne. S.A.—Discovery of copper at Kapunda.
- 1843 N.S.W.—First Representative Constitution (under Act of 1842). Qld.—Moreton Bay granted legislative representation as a distinct electoral division.
- 1844 Qld.—Leichhardt’s expedition to Port Essington (N.T.). S.A.—Sturt’s last expedition inland.
- 1845 N.S.W.—Mitchell’s explorations on the Barcoo. Qld.—Explorations by Mitchell and Kennedy. S.A.—Discovery of the Burra copper deposits. Sturt discovered Cooper’s Creek.
- 1846 N.S.W.—Initiation of meat-preserving. Qld.—Foundation of settlement at Port Curtis. S.A.—Proclamation of North Australia.
- 1847 N.S.W.—Iron-smelting commenced near Berrima. Overland mail established between Sydney and Adelaide. Qld.—Explorations by Leichhardt, Burnett and Kennedy.
- 1848 N.S.W.—National and Denominational School Boards established. Qld.—Leichhardt’s last journey. Kennedy speared by the blacks at York Peninsula. Chinese brought in as shepherds.
- 1849 N.S.W.—Indignation of colonists at arrival of convict ship *Hashemy*. Exodus of population to gold-fields of California. Vic.—*Randolph* prevented from landing convicts. Qld.—Assignment of *Hashemy* convicts to squatters on Darling Downs. W.A.—Commencement of transportation to Western Australia.
- 1850 N.S.W.—Final abolition of transportation. First sod of first Australian railway turned at Sydney. Sydney University founded. Vic.—Gold discovered at Clunes. Representative government granted. S.A.—Representative government granted. W.A.—Pearl oysters found by Lieut. Helpman at Saturday Island Shoal. Tas.—Representative government granted.
- 1851 N.S.W.—Payable gold discovered by Hargraves at Lewis Ponds and Summerhill Creek. Vic.—Port Phillip created an independent colony under the name of Victoria. Discovery of gold in various localities. W.A.—Proclamation of Legislative Council Act.
- 1852 N.S.W.—Arrival of *Chusan*, first P. and O. mail steamer from England. S.A.—First steamer ascended the Murray River to the junction with the Darling. Tas.—Meeting of first elective Council protested against transportation. Payable gold discovered at The Nook, near Fingal, and at Nine Mile Springs.
- 1853 Tas.—Abolition of transportation. Vic.—Melbourne University founded.
- 1854 Vic.—Opening of first Victorian railway—Flinders Street to Port Melbourne. Riots on Ballarat gold-fields. Storming of the Eureka Stockade, 3rd Dec. Telegraph first used.

- Year.
- 1855 N.S.W.—Opening of railway—Sydney to Parramatta. Mint opened.
- 1856 N.S.W.—Pitcairn Islanders placed on Norfolk Island. W.A.—A. C. Gregory's expedition in search of Leichhardt.  
Responsible Governments in N.S.W., Vic., S.A. and Tas. (Act of 1855).
- 1857 N.S.W.—Select Committee on Federation. Vic.—Manhood suffrage and vote by ballot. S.A.—Passage of Torrens' Real Property Act.
- 1858 N.S.W.—Establishment of manhood suffrage and vote by ballot. Telegraphic communication between Sydney, Melbourne and Adelaide. Qld.—Canoona gold rush.  
Population of Australia reached 1,000,000.
- 1859 Qld.—Proclamation of Queensland as separate colony. Tas.—First submarine cable, via Circular Head and King Island to Cape Otway.
- 1860 Vic.—Burke and Wills left Melbourne and crossed to Gulf of Carpentaria. S.A.—Copper discoveries at Wallaroo and Moonta. McDouall Stuart reached centre of continent and named "Central Mount Stuart".
- 1861 N.S.W.—Anti-Chinese riots at Lambing Flat and Burrangong gold-fields. Opening of first tramway in Sydney. Regulation of Chinese immigration. Vic.—Burke and Wills perished at Cooper's Creek, near Innamincka, S.A.
- 1862 N.S.W.—Abolition of State aid to religion. Real Property (Torrens) Act passed. S.A.—Stuart crossed the Continent from south to north. W.A.—First export of pearl-shell.
- 1863 Vic.—Intercolonial Conference at Melbourne. S.A.—Northern Territory taken over. W.A.—Initiation of settlement in the north-west district. Henry Maxwell Lefroy discovered and traversed area now comprised in the Coolgardie-Kalgoorlie gold-field.
- 1864 Qld.—First sugar made from Queensland cane.
- 1865 N.S.W.—Destruction by fire of St. Mary's Cathedral, Sydney.
- 1866 N.S.W.—Passage of Public Schools Act of (Sir) Henry Parkes. S.A.—Introduction of camels for exploration, etc.
- 1867 Vic.—Imposition of protective tariff. Qld.—Discovery of gold at Gympie.
- 1868 W.A.—Arrival of *Hougomont*, last convict ship.
- 1869 Vic.—Record gold nugget "Welcome Stranger" 2,284 oz. found near Dunolly. W.A.—First telegraph line opened from Perth to Fremantle.
- 1870 N.S.W.—Intercolonial Exhibition opened at Sydney. Imperial troops withdrawn. Vic.—Intercolonial Congress at Melbourne. S.A.—Commencement of transcontinental telegraph.
- 1871 N.S.W.—Permanent military force raised. W.A.—Forrest's explorations. Tas.—Discovery of tin at Mount Bischoff.
- 1872 Vic.—Mint opened. S.A.—Cable from Java to Port Darwin. Completion of transcontinental telegraph line.
- 1873 N.S.W.—Intercolonial Conference at Sydney. First volunteer encampment. Inauguration of mail service with San Francisco.
- 1874 N.S.W.—Triennial Parliaments Act passed. Intercolonial Conference. S.A.—University of Adelaide founded. W.A.—John and Alexander Forrest arrived at Overland Telegraph from Murchison.
- 1875 Qld.—Transfer of Port Albany Settlement to Thursday Island.
- 1876 N.S.W.—Completion of cable—Sydney to Wellington. W.A.—Giles crossed colony from east to west. Tas.—Death of Truganini, last representative of Tasmanian aborigines.
- 1877 W.A.—Opening of telegraphic communication with South Australia.  
Population of Australia reached 2,000,000.
- 1878 Qld.—Restriction of Chinese immigration.  
Introduction of telephone into Australia.
- 1879 N.S.W.—First artesian bore at Kallara Station, near Bourke. First steam tramway. W.A.—A. Forrest's explorations in the Kimberley district, and discovery of the Fitzroy pastoral country.

- Year.
- 1880 N.S.W.—Public Instruction Act passed. Vic.—First Australian Telephone Exchange opened in Melbourne.  
Federal Conference at Melbourne and Sydney.
- 1881 N.S.W.—Further restrictions on Chinese immigration.  
First Australia-wide censuses on same date taken.
- 1882 W.A.—Nugget of gold found between Roebourne and Cossack.
- 1883 N.S.W.—Discovery of silver at Broken Hill. Completion of railway between New South Wales and Victoria. Qld.—Annexation of New Guinea—repudiated by Imperial authorities.  
Federal Conference held at Sydney. Federal Council created.
- 1884 Federation Bill passed in Victoria and rejected in New South Wales. British protectorate declared over New Guinea.
- 1885 N.S.W.—Military contingent sent to the Sudan. Opening of the Broken Hill Proprietary Silver Mines. W.A.—Gold found by prospectors on the Margaret and Ord Rivers in the Kimberley district. Tas.—Silver-lead discovered at Mount Zeehan.
- 1886 Tas.—Discovery of gold and copper at Mount Lyell.  
First session of Federal Council held at Hobart on 26th January.
- 1887 W.A.—Gold discovered at Southern Cross.  
First "Colonial" Conference in London. Australasian Naval Defence Force Act passed.
- 1888 N.S.W.—Restrictive legislation against Chinese, imposing poll-tax of £100. Qld.—Railway communication opened between Sydney and Brisbane.  
Conference of Australian Ministers at Sydney to consider question of Chinese immigration. First meeting of the Australasian Association for the Advancement of Science held in Sydney.
- 1889 Qld.—Railway communication established between Brisbane and Adelaide.  
W.A.—Framing of new Constitution. Tas.—University of Tasmania founded.  
Population of Australia reached 3,000,000.
- 1890 W.A.—Responsible Government granted.  
Meeting at Melbourne of Australasian Federation Conference.
- 1891 N.S.W.—Arrival of Australian Auxiliary Squadron. Cessation of assisted immigration. W.A.—Discovery of gold on the Murchison.  
First Federal Convention in Sydney, draft bill framed and adopted.
- 1892 W.A.—Discovery of gold at Coolgardie.
- 1893 Financial crisis, chiefly affecting the eastern States.
- 1894 S.A.—Women's suffrage granted—first State to do so.
- 1895 N.S.W.—Free-trade tariff. Land and income taxes introduced.  
Conference of Premiers on Federation at Hobart.
- 1896 N.S.W.—People's Federal Convention at Bathurst. Vic.—Wages Board system established by Act of Parliament.
- 1897-8 Sessions of Federal Convention at Adelaide, Sydney and Melbourne.
- 1898 Draft Federal Constitution Bill submitted to electors in Victoria, New South Wales, South Australia and Tasmania. Requisite statutory number of votes not obtained in New South Wales.
- 1899 First contingent of Australian troops sent to South Africa. Conference of Premiers in Melbourne to consider amendments to Federal Constitution Bill. Referendum—Bill accepted by New South Wales, Victoria, Queensland, South Australia and Tasmania. First Labour Government (Queensland).
- 1900 N.S.W.—Old-age pensions instituted.  
Contingents of naval troops sent to China. Commonwealth Constitution Act received Royal Assent, 9th July. Proclamation of Commonwealth signed 17th September. Mr. (afterwards Sir) Edmund Barton formed first Federal Ministry.

## Year.

- 1901 Proclamation of the Commonwealth at Sydney. First Federal Parliament opened at Melbourne by the Duke of Cornwall and York. Interstate free-trade established.
- 1902 Completion of Pacific Cable (all-British). First Federal Tariff.
- 1903 Coolgardie and Kalgoorlie Water Supply Scheme completed. Inauguration of the Federal High Court.
- 1904 Commonwealth Conciliation and Arbitration Act.
- 1905 Population of Australia reached 4,000,000. Re-introduction of assisted immigration in New South Wales.
- 1906 Wireless telegraphy installed between Queenscliff, Vic., and Devonport, Tas. Papua taken over by Commonwealth. Excise Tariff Act imposed duties on agricultural machinery except when manufactured "under conditions as to the remuneration of labour which are declared . . . . . to be fair and reasonable . . . . ."
- 1907 First telephone trunk line service between Capital Cities, i.e., Sydney and Melbourne. Imperial Conference in London. Declaration of first basic wage in "Harvester Judgment".
- 1908 Canberra chosen as site of Australian Capital.
- 1909 Imperial Defence Conference in London. Visit of Lord Kitchener to report and advise on Australian military defence. Queensland University founded.
- 1910 Penny Postage. Arrival of *Yarra* and *Parramatta*, first vessels built for the Royal Australian Navy. Australian Notes Act passed and first Commonwealth notes issued. Admiral Sir R. Henderson visited Australia to advise on naval defence.
- 1911 First Federal Census. Transfer of Australian Capital Territory and Northern Territory to Commonwealth. Introduction of compulsory military training. University of Western Australia founded.
- 1912 Opening of Commonwealth Bank. First payments of Maternity Bonus. First sod turned at Port Augusta of Trans-Australian Railway.
- 1913 Australian Capital named Canberra and foundation stone laid. Appointment of Interstate Commission.
- 1914 Visit of General Sir Ian Hamilton to report on military defence scheme. Double dissolution of Federal Parliament. Transfer of Norfolk Island to Commonwealth.
- European War declared 4th August. Australian Navy transferred to British Navy. Australian offer to equip and furnish 20,000 troops accepted. German possessions in South-West Pacific seized by Australian Naval and Military Expeditionary Force. German cruiser *Emden* destroyed by H.M.A.S. *Sydney* at Cocos Islands, 9th November. First contingent landed in Egypt. Australian and New Zealand Army Corps (A.N.Z.A.C.) formed under Sir William Birdwood.
- 1915 Opening of Broken Hill Proprietary's Ironworks at Newcastle, N.S.W.  
Australian and New Zealand troops landed at Gallipoli, 25th April. Evacuation, 18th-20th December. Australian warships with Grand Fleet.
- 1916 Purchase of steamships by the Commonwealth.  
Australian and New Zealand mounted troops organized in mounted divisions and camel corps, operating thereafter in Egypt, Palestine and Syria. Other troops transferred to France. First proposal for compulsory military service overseas defeated by referendum.
- 1917 National Ministry formed under Rt. Hon. W. M. Hughes. Transcontinental (Kalgoorlie-Port Augusta) Railway completed.  
Australian Flying Corps operating with R.F.C. in Palestine and France. Second proposal for compulsory military service overseas defeated by referendum.
- 1918 Population of Australia reached 5,000,000. Australia House (Strand, London) opened by the King.  
Five Australian divisions in France formed into army corps, 1st January. Armistice with Germany, 11th November. Repatriation Commission created.

- Year.
- 1919 Peace Conference. Return of Australian troops. Flight England to Australia by Capt. (Sir) Ross Smith and Lieut. (Sir) Keith Smith. Peace Treaty signed at Versailles, 28th June.
- 1920 Visit to Australia of H.R.H. the Prince of Wales. Imperial Statistical Conference in London.
- 1921 Mandate given to Australia over Territory of New Guinea. First direct wireless press message, England to Australia. Second Federal Census.
- 1922 First lock on River Murray opened at Blanchetown, South Australia. Queensland Legislative Council abolished.
- 1923 First sod turned on the site of Federal Parliament House at Canberra.
- 1924 Directorate of Commonwealth Bank appointed. Australian Loan Council formed.
- 1925 Population of Australia reached 6,000,000. Solar Observatory established at Canberra.
- 1926 Council for Scientific and Industrial Research established. Imperial Conference. Dominion Status defined.
- 1927 Transfer of Seat of Commonwealth Government from Melbourne to Canberra. Beam wireless established.
- 1928 Financial agreement of Commonwealth and States: State Debts referendum carried.
- 1929 Commonwealth Bank empowered to mobilize gold reserve. Abolition of peacetime compulsory military training in favour of voluntary system
- 1930 Effects of world-wide severe economic depression felt throughout Australia. Brisbane—Grafton (N.S.W.) railway, first step towards uniform gauge railway communication between capitals of mainland States, opened. First Australian—Rt. Hon. Sir Isaac Alfred Isaacs, G.C.M.G., Chief Justice of the High Court—appointed Governor-General of Australia.
- 1931 Depression continues. Initiation of Premiers' Conference plan to meet the financial situation. Commonwealth Bank Act amended to provide for temporary lower reserve against notes. England departed from gold standard. Commonwealth Bank assumed control of exchange rate and lowered it to 125 (previously 130).
- 1932 Sydney Harbour Bridge opened. Australian Broadcasting Commission established. Legislation passed enabling note reserve to be held in sterling securities. Imperial Economic Conference at Ottawa.
- 1933 World Economic Conference in London. Secession Referendum carried (Western Australia). Antarctica and Ashmore and Cartier Islands taken over by the Commonwealth. Third Federal Census.
- 1934 Inauguration of England—Australia Air Mail Service.
- 1935 Empire Statistical Conference at Ottawa.
- 1936 Joint Commonwealth and State Marketing Schemes invalidated by decision of the Privy Council in the James case. Tasmania linked with mainland by submarine telephone cable.
- 1937 Imperial Conference in London. Report of the Royal Commission on Monetary and Banking Systems in Australia.
- 1938 New Defence Programme involving expenditure of £63,000,000 over three years. New Trade Treaty with Japan.
- 1939 Population of Australia reached 7,000,000.  
War declared on Germany, 3rd September. Royal Australian Navy placed at disposal of Great Britain. Advance party of Australians embarked for Middle East, 15th December.
- 1940 Exchange of Ministers between Australia and United States of America marked Australia's entry into field of direct diplomatic representation with countries other than the United Kingdom.  
First Australian convoy (6th Australian Division) sailed for Middle East. Cruiser *Sydney* crippled Italian cruiser *Bartolomeo Colleoni*.

## Year.

- 1941 Establishment of Commonwealth Child Endowment Scheme. United States Congress passed Lend-Lease Bill.  
Arrival of units of Eighth Australian Division in Malaya. Australian destroyers in "Tobruk Ferry Run". *Sydney* lost after fight with *Steiermark*. R.A.A.F. in defence of Britain, in Middle East and at Singapore. Australian forces engaged in Middle East, Greece, Crete and Syria. Japanese attack on Pearl Harbour. Australia declared war on Japan, 9th December
- 1942 Federal uniform taxation adopted. Commonwealth widows' pensions introduced. Rationing of commodities.  
Japanese landed at Rabaul. Fall of Singapore. Darwin bombed. United States armed forces landed in Australia. Headquarters of South-west Pacific Command set up by General Douglas MacArthur in Melbourne. Coral Sea Battle. Japanese midget submarines in Sydney Harbour. Australian cruisers in attack on Solomon Islands. Australians withdrew from Kokoda. Japanese forced to withdraw from Milne Bay. Owen Stanley Ranges offensive. Ninth Australian Division at El Alamein (North Africa). Kokoda recaptured. Further Australian successes in New Guinea.
- 1943 Price Stabilization Scheme. Mortgage Bank Department of Commonwealth Bank opened. National Works Council formed.  
Australian forces combined with American forces to recapture many places in New Guinea. Commencement of long series of amphibious operations in which R.A.N. ships took part. R.A.A.F. from 1943 till end of war operated on all fronts.
- 1944 Pay-as-you-earn taxation operated from 1st July. Referendum refused Commonwealth Government increased powers in post-war period.  
Australian advances in Northern New Guinea. Allied invasion of France. Australians landed on New Britain; took over from Americans in Bougainville, Solomon Islands, and at Aitape, New Guinea.
- 1945 Captain Cook Dock opened by Governor-General, the Duke of Gloucester. Re-establishment and Employment Act. Banking Act to regulate banking and to protect the currency and public credit. Australia ratified United Nations Charter. General demobilization commenced.  
Cessation of hostilities in Europe, 8th May. Cessation of hostilities against Japan, 15th August. Australian forces operating in New Guinea, Solomon Islands and Borneo.
- 1946 Cessation of man-power controls. Commonwealth Government accepted responsibility for supply and maintenance of B.C.O.F. in Japan. Inauguration of Commonwealth Employment Service. United Kingdom—Dominion Wool Disposals Ltd. (Joint Organization) commenced operations. Act to establish National University at Canberra. Coal Industry Act providing, *inter alia*, for a joint Commonwealth—State authority. Commonwealth and State agreement on housing. Commonwealth Trans-Australia Airlines began operations. Constitution Alteration Referendum granted powers in regard to social services to Commonwealth. Double taxation relief agreement between Australia and Britain. Approval for establishment of guided missile range in Central Australia. Defence (Transitional Provisions) Act. Expiry of National Security Act.
- 1947 End of demobilization. Post-war defence programme to extend over five years approved. Census of Australia—first since 1933. Full High Court declared invalid section of Banking Act 1945 prohibiting banks from conducting business for State authorities. Legislation to nationalize trading banks enacted (*see* 1948). Australian National Antarctic Research Expedition to establish scientific research station at Heard Island. First "displaced persons" reached Australia.

Year.

- 1948 Forty-hour week effective throughout Australia. Membership of Commonwealth Parliament increased. Constitution Alteration (Rents and Prices) proposal defeated. High Court declared invalid certain vital sections of Banking Act 1947. Tuberculosis Act. International Trade Organization Act (General Agreement on Tariffs and Trade and Havana Charter for International Trade Organization).
- 1949 Nationality and Citizenship Act operative. Broadcasting Control Board came into operation. New Guinea placed under international trusteeship and administrative union of Papua and New Guinea established. Certain Australian aborigines for first time granted franchise at Federal elections. Agreement reached on arrangements for increasing meat exports from Australia to United Kingdom (subsequent legislation to assist in facilitating movement of livestock in Australia). Establishment of New South Wales University of Technology. Ratification completed by all Governments concerned of Murray River Agreement for enlarging of Hume Weir. Dispute over claims for 35-hour week, 30s. a week wage increase, and long-service leave rendered all Australian black coal mines idle from 27th June until 15th August, causing restrictions in dependent services and unemployment. Australia ratified International Wheat Agreement. Conciliation and Arbitration Act amended to prevent irregularities in elections for offices in organizations registered under Act. Establishment of Australian Whaling Commission. Reduction of 25 per cent. in Australia's imports from dollar areas. Devaluation of sterling against American dollar, and commensurate devaluation of Australian pound to two dollars twenty-four cents. Establishment of Immigration Planning Council to assist in assimilation of migrants into industry and the community. Commencement of Snowy Mountains Hydro-electric Power Scheme. Agreement on rail standardization, replacing original agreement of 1946, ratified by Commonwealth and South Australian Governments. Australia's population reached 8,000,000.
- 1950 Projected commencement announced of uranium production in South Australia. Petrol rationing abolished for second time since end of war. Senate and House of Representatives failed to agree on Commonwealth Bank Bill. Severest flooding for twenty-five years in south-east corner of New South Wales. Appointment of first Australian Ambassador to United States (now Republic) of Indonesia. British Consultative Committee meeting in Sydney on ways of assisting development of south and south-east Asia in co-operation with other interested governments. Appointment of first Australian Minister to Philippines. Australian Dakota Transport Squadron to assist United Kingdom forces in Malaya; later decided to send squadron of heavy bombers also. Sir Thomas Blamey first Australian to be elevated to rank of Field-Marshal. Arrival of Field-Marshal Sir William Slim, Chief of Imperial General Staff, for defence talks. First Minister for Israel in Australia arrived. Abolition of butter rationing. Disastrous floods on north coast of New South Wales. Following attacks by forces of North Korea on forces of Republic of Korea and failure of Security Council's call for immediate cessation of hostilities, the Council called on members to furnish assistance to Republic of Korea. Australian naval and air forces in vicinity of Korea placed at disposal of United Nations, and decision to withdraw Australian troops with BCOF in Japan countermanded. Scheme of reserve prices for wool to replace existing Joint Organization system enacted (*see below*). Abolition of tea rationing ended retail rationing in Australia. Arrival of first Ambassador for United States (now Republic) of Indonesia. Loan of \$100,000,000 for Australia by International Bank for Reconstruction and Development. Validity of Commonwealth wool levy scheme challenged in High Court, but hearing subsequently postponed pending result of referendum of woolgrowers (*see 1951*). Inauguration of modified free medicine scheme. All volunteers in Australian Regular Army



Year.

1950—  
*contd.*

and Citizen Military Forces to be liable for service anywhere in the world (*see* below). Australian ground troops joined British Commonwealth Brigade in Korean conflict. Introduction of Commonwealth Bank Bill 1950 (No. 2) in House of Representatives (referred to Select Committee 14th March, 1951). Adult franchise for Victorian Legislative Council replaced existing franchise dependent on property qualifications. Commonwealth Court of Conciliation and Arbitration ruling of increase of £1 in male basic wage, and increase in female basic wage from 54 to 75 per cent. of male rate. Railway dispute caused cessation of railway services in Victoria from 16th October to 8th December, and in South Australia from 23rd October to 19th November. Communist Party Dissolution Bill 1950 (No. 2) assented to. Validity of Act challenged in High Court (declared invalid on 9th March, 1951). National Service Bill to establish a system of national training for defence forces of Australia introduced in House of Representatives—provides for compulsory registration and call-up at 18 years of age of all male British and certain non-British subjects resident in Australia (extended in 1954 to every male person ordinarily resident in Australia who attains, or who has attained, the age of 18 years since 1st November, 1950.) Volunteers in Australian Citizen Military Forces to be liable for oversea service only in the event of a major war. National Security Resources Board appointed to advise Government on best use of Australia's resources in interests of national security. Defence (Transitional Provisions) Act extending for one year a number of national security regulations and orders. Commonwealth Government to contribute £31,250,000 to Colombo Plan for Co-operative Economic Development in South and South-east Asia and £3,500,000 for technical assistance programme. Conference of Commonwealth Prime Ministers in London.

1951 Opening of Jubilee celebrations to mark the fiftieth year of Australian federation. Meeting of Governors of central banks of Australia, Ceylon, Ireland, New Zealand, Pakistan, South Africa and the United Kingdom to discuss general banking problems and the international economic situation. British Government's confirmation of transfer of Heard Island and the Macdonald Islands (Southern Indian Ocean) to Australia as from 26th December, 1947. Arrival in Canberra of President Truman's special Envoy, Mr. John Foster Dulles, for talks on a Japanese peace treaty. Governor-General granted double dissolution of nineteenth Parliament on the grounds that the Senate had "failed to pass" the Commonwealth Bank Bill (*see* 1950). Return of Menzies-Fadden Government after general election following double dissolution (*see* above). The Governor-General opened the twentieth Parliament with special Jubilee ceremonies. Melbourne became an international airport. Official cessation of hostilities with Germany. Large upward adjustments in federal basic wage (13s. in six capital cities average). Defence Preparations Act to adjust the nation's economy to meet the threat of war. Final liquidation of the stock of the United Kingdom—Dominion Wool Disposals Ltd. (Joint Organization). Conference of representatives of the Commonwealth and State Governments, employers and trade unions, and other sections of the community, called by the Prime Minister to discuss means of combating inflation. The Governor of the Commonwealth Bank, the heads of commercial banks and the Secretary to the Treasury in conference called by the Prime Minister to discuss bank credit policy. General financial and investment policy considered at conference between the Government and representatives of insurance companies. Woolgrowers at a referendum rejected the proposal for a reserve price plan for wool (*see* 1950). Security Treaty signed in Washington by the United States of America, Australia and New Zealand for action in the event of an armed attack in the Pacific. Japanese Peace Treaty signed at San Francisco by 49 nations, including Australia. Constitution Alteration (Powers to deal with Communists and Communism)

Year.

1951—  
*contd.*

referendum resulted in a decision against the proposed Act. Australia to provide an additional infantry battalion for United Nations forces in Korea. The Prime Minister announced that Australia would spend about £700,000,000 on defence during the next three years. Further large upward adjustments (*see above*) in federal basic wage—11s. for six capital cities' average. Third Conference of Government Statisticians of the British Commonwealth held in Canberra. Opening of new Legislative Council of Papua and New Guinea, which included, for the first time in the history of Australian Legislature, representatives of the native peoples. New mace presented to the House of Representatives by a delegation from the House of Commons, to commemorate the Jubilee of the Australian Commonwealth. Act to re-establish Commonwealth Joint Parliamentary Committee of Public Accounts.

1952 Nuclear experiments commenced at National University, Canberra. Refusal by Commonwealth Conciliation Commissioner of an application by eleven metal trades unions for marginal wage increases ("Galvin" Award) affected more than 250,000 metal trades workers throughout Australia. Widespread bushfires in New South Wales, Victoria and Australian Capital Territory. Prototype of first unmanned radio-controlled jet aircraft designed and built in Australia successfully tested. Death of His Majesty, King George VI; Princess Elizabeth proclaimed Queen. Third British Commonwealth Scientific Official Conference held in Canberra and Melbourne. Good rains in northern areas of New South Wales ended the worst drought experienced there for many years. Announcement that locally-produced pyrites would replace imported sulphur in Australian sulphuric acid industry by the end of 1953. Important high-grade uranium deposits discovered at Rum Jungle, Northern Territory. Japanese Peace Treaty ratified. 1st Battalion, The Royal Australian Regiment, sailed from Sydney for service in Korea (the second battalion of Australian troops to serve there). Australia ratified the Pacific Pact between United States of America, New Zealand and Australia. Commonwealth Bank prohibited the establishment of further import credits until licences had been obtained for the goods involved. Imposition of severe restrictions on imports from all sources and on amounts available for Australians travelling overseas. Agreement between the Commonwealth and South Australian Governments and the Combined Development Agency of the British and American Governments, on the development of uranium deposits at Radium Hill, South Australia. Sir Owen Dixon appointed Chief Justice of the High Court of Australia to succeed Sir John Latham. Australian ambassadors to Japan and West Germany appointed. At Berala, near Sydney, in the first collision between two electric trains in New South Wales to result in fatalities, ten persons were killed and more than 100 injured. Proclamation of termination of the war which commenced on 3rd September, 1939. Good rains brought relief to north and central Australia, which had suffered from prolonged drought conditions. Nine people died and 22 were injured in a level-crossing smash at Boronia in Victoria. An amendment to the Conciliation and Arbitration Act provided for a limited right of appeal to the Commonwealth Court of Conciliation and Arbitration from decisions of Conciliation Commissioners, and for an increase in the number of Judges. Agreement between the Commonwealth Government and Bulolo Gold Dredging Ltd. to cut timber from pine forests at Bulolo, New Guinea. Wagga, Forbes, Cowra and many other towns in central and south-west New South Wales experienced one of the worst floods in their history. In the Basic Wage and Standard Hours Inquiry before the Commonwealth Court of Conciliation and Arbitration, employers' organizations sought reductions in wages, longer hours and abandonment of the system of automatic quarterly cost of living adjustments to the basic wage. No. 78 Fighter Wing,

Year.

1952—  
*contd.*

R.A.A.F., departed for Malta to assist the R.A.F. in garrison duties in the Middle East. Reductions announced in Australia's 1952 and 1953 immigration programmes. Representatives of New Zealand, the United States of America and Australia met at Honolulu to consider the Pacific defence pact (A.N.Z.U.S.). Tenth General Assembly of the Union Radio Scientifique Internationale held in Sydney—the first meeting of an international scientific body outside Europe or America. Purchase by Commonwealth Government of one of the fourteen known authentic copies of "Magna Carta". Qantas Empire Airways began first direct service between Sydney and Johannesburg, South Africa, via Perth, Cocos Islands and Mauritius. Commonwealth legislation requiring employers to give preference in employment to ex-servicemen extended for three years. Consolidated Zinc Pty. Ltd. to begin development in 1954 of the Rum Jungle uranium deposits on behalf of the Commonwealth Government, using refining plant supplied by the United States Atomic Energy Commission. Commonwealth Government disposed of shares in Commonwealth Oil Refineries to the Anglo-Iranian Oil Co. which is to construct a £40,000,000 oil refinery at Kwinana, near Fremantle, Western Australia. Britain's first atomic weapon detonated on the Monte Bello Islands, near the north-west coast of Australia. Ratification by Western Australian Parliament of an agreement for the establishment at Kwinana, near Fremantle, by the Broken Hill Proprietary Co. Ltd., of a steel rolling mill and fence post factory at a cost of approximately £4,000,000. Announcement of projected visit to Australia and New Zealand by Queen Elizabeth and the Duke of Edinburgh early in 1954. Death of Rt. Hon. W. M. Hughes. Agreement between the Commonwealth Government and Australian National Airways Pty. Ltd. guaranteeing the latter a loan to purchase new aircraft and an equal share with Trans-Australia Airlines in government business and reducing air route charges. British Commonwealth Economic Conference in London attended by Prime Minister of Australia. Death of Sister Kenny, world renowned for treatment of poliomyelitis. Good rains in Northern Territory terminated prolonged drought there.

1953 Ten-year agreement signed with Combined Development Agency for sale to the United States of America of uranium from deposits at Rum Jungle, Northern Territory. First Minister to Australia for Thailand and First Japanese Ambassador to Australia presented credentials to Governor-General. For first time since 1945, basic wage adjustment for December quarter showed no change in six capitals' average. Inquiry by Royal Commission into the establishment of television in Australia. Television Bill introduced to permit the establishment of both National and Commercial television transmitting stations (Act assented to 20th March). Commonwealth Bank Bill 1953 and Banking Bill 1953 introduced (both Acts assented to 28th March). Premiers' Conference in Canberra failed to reach agreement on return of income tax powers to States. 2nd Battalion, The Royal Australian Regiment, sailed from Sydney for service in Korea. Prime Minister announced that a Census of Australia would be taken in 1954. Bill introduced into Northern Territory Legislative Council to give citizenship rights to Northern Territory aborigines, except those committed to State care (assented to 17th April). Atomic Energy Bill 1953, establishing Atomic Energy Commission, introduced (Act assented to 15th April). H.M.A.S. *Sydney* sailed from Melbourne for England with Coronation Contingent. National Health Bill 1953 introduced, consolidating legislation relating to pharmaceutical, medical and hospital benefits and other health services (Act assented to 18th December). Import restrictions further relaxed. New International Wheat Agreement signed in Washington. Commonwealth Scientific and Industrial Research Organization developed a process to prevent shrinkage in wool. Australian designed and

Year.

1953—  
*contd.*

built radio-controlled jet plane for use in guided missile research successfully tested. Field-Marshal Sir William Slim sworn in as Governor-General of Australia. Senate election resulted in Government parties retaining majority. Australia and United States of America signed conventions to end double taxation between the two countries. (Acts ratifying these conventions assented to 11th December.) Australian Loan Council adopted programme of £231,000,000 for 1953-54 (Commonwealth will contribute, however, only on basis of a £200,000,000 programme). Borrowing programme of £90,486,000 by Local Government and Semi-Governmental Authorities also approved. Loan Council decided to retain ruling interest rates on public loans for at least twelve months. Full Court of Victoria upheld validity of Electoral Reform Bill providing for two State seats for each Commonwealth Electorate. Coronation of Her Majesty Queen Elizabeth the Second. Britain and Australia signed agreement for reciprocity in social services benefits. First Australian-built Canberra bomber successfully tested. Conference of Commonwealth Prime Ministers on defence, economic and political issues held in London. New South Wales Parliament to introduce legislation to make New England University College a separate university, devoted mainly to agricultural studies and research. Commonwealth Medical Benefits Scheme commenced, under which persons who are contributors to an approved medical benefits organization are entitled to receive part reimbursement by the Commonwealth of payments made for medical services to themselves or their dependents. Korean armistice signed by United Nations and Communist Forces at Panmunjom, bringing to an end over three years of fighting. First Australian-built jet fighter made initial test flight. Pearl Fisheries Act providing for stricter control of pearl fisheries. Australia proclaimed sovereignty over sea-bed, subsoil and continental shelf adjoining Australia and Australian territories but agreed to submit issues arising from the Pearl Fisheries Act to the International Court of Justice for adjudication. Commonwealth Court of Conciliation and Arbitration refused applications by employers for reduction of current basic wages and for an increase of standard hours of work, and also refused applications by unions for increases of basic wages. The employers' applications for abandonment of the system of automatic adjustment of the basic wage in accordance with retail price index-numbers were, however, granted. Later, the extension by the Court, on its own motion, of this decision to awards not the subject of an application before the Court was challenged in the High Court by the unions concerned but the power of the Arbitration Court to so vary awards was upheld. Arrangements made with United Kingdom for sharing cost of guided missile research at Woomera, South Australia. Atomic weapons exploded north of Woomera. Commonwealth Trading Bank of Australia commenced operations. Oil, stated to be a very high grade crude oil, discovered at Exmouth Gulf, about 680 miles north of Perth.

# STATISTICAL SUMMARY, AUSTRALIA.

NOTE.—(1) In most cases where figures are available back to 1861, these were shown in Official Year Book No. 39, pp. xxviii-xxix.

(2) Most of the statistics in this Summary relate to the periods shown in the table headings. In those comparatively few cases where the statistics relate to other periods, this is indicated in footnotes.

Item.	Year ended 30th June—								
	1892.	1902.	1912.	1922.	1932.	1942.	1952.	1953.	
<b>Demography(a)—</b>									
Population(b)	{ '000 Males ..	1,737	2,005	2,382	2,799	3,333	3,599	4,318	4,434
	{ '000 Females ..	1,504	1,820	2,192	2,712	3,220	3,545	4,221	4,319
	{ '000 Persons ..	3,241	3,825	4,574	5,511	6,553	7,144	8,539	8,753
Net Oversea Migration	{ '000	26.9	3.0	74.4	17.5	-10.1	5.2	111.4	94.0
Marriages	{ '000	24	28	39	47	39	75	77	74
Divorces(d) and Judicial Separations	{ Rate(e)	7.5	7.3	8.8	8.6	6.0	10.6	9.2	8.6
Births	{ '000	190	399	522	1,502	1,955	3,330	7,327	7,106
	{ Rate(e)	110	103	122	136	119	135	193	202
Deaths	{ '000	34.5	27.2	27.2	25.0	18.2	18.9	22.9	23.3
	{ Rate(e)	47	46	48	54	57	71	82	82
Infant Deaths	{ '000	14.8	12.2	10.7	9.9	8.7	10.0	9.7	9.4
	{ Rate(e)	12.7	10.7	8.4	9.0	5.0	5.3	4.9	4.8
	{ Rate(e)	115.3	103.6	68.5	65.7	42.1	39.7	25.2	23.8
<b>Wages (Adult Males)—</b>									
Nominal Weekly Wage Index Numbers	{ (f)	(f)	1,000	1,826	1,752	1,997	4,495	5,241	
Real Wage Index Numbers(g)	{ (f)	(f)	1,000	1,087	1,210	1,194	1,439	1,438	
<b>Production—</b>									
<b>Agricultural—</b>									
Wheat	{ Area mill. acs.	3.3	5.1	7.4	9.7	14.7	12.0	10.4	10.2
	{ Yield mill. bus.	26	39	72	129	191	167	160	195
	{ Av. Yield bus.	7.7	7.5	9.6	13.3	12.9	13.9	15.4	19.1
	{ Area '000 acs.	246	461	617	733	1,085	1,460	2,365	2,764
Oats	{ Yield mill. bus.	5.7	9.8	9.6	12.1	15.2	22.3	34.5	43.6
	{ Av. Yield bus.	23.3	21.2	15.5	16.6	14.0	15.3	14.6	15.8
	{ Area '000 acs.	68	75	116	299	342	784	1,118	1,377
Barley	{ Yield mill. bus.	1.2	1.5	2.1	6.1	6.3	18.0	21.9	35.0
	{ Av. Yield bus.	17.3	20.4	17.7	20.4	18.4	23.0	19.6	25.5
	{ Area '000 acs.	284	295	340	305	269	301	170	174
Maize	{ Yield mill. bus.	9.3	7.0	8.9	7.8	7.1	7.4	4.0	5.0
	{ Av. Yield bus.	32.6	23.9	26.3	25.7	26.2	24.7	23.7	28.5
	{ Area '000 acs.	942	1,688	2,518	2,995	2,635	2,758	1,549	1,761
Hay	{ Yield '000 tons	1,067	2,025	2,868	3,902	3,167	3,575	2,345	2,765
	{ Av. Yield tons	1.13	1.20	1.14	1.30	1.20	1.30	1.51	1.57
	{ Area '000 acs.	113	110	130	149	145	99	118	135
Potatoes	{ Yield '000 tons	380	323	301	388	397	333	509	431
	{ Av. Yield tons	3.37	2.94	2.31	2.50	2.74	3.35	4.31	3.18
	{ Area '000 acs.	45	87	101	128	242	255	282	280
Sugar-cane	{ Yield '000 tons	738	1,368	1,682	2,437	4,213	5,154	5,327	6,967
	{ Av. Yield tons	16.2	15.7	16.7	19.0	17.4	20.3	18.9	24.9
	{ Area '000 acs.	49	64	61	92	113	130	136	136
Vineyards	{ Wine mill. gals.	3.4	5.3	5.0	8.5	14.2	16.0	35.3	30.0
Total Area of Crops mill. acs.		5.4	8.4	12.1	15.4	21.2	20.5	19.8	20.4
<b>Pastoral, Dairying, etc.—</b>									
Livestock	{ Horses mill.	1.6	1.6	2.3	2.4	1.8	1.6	0.9	0.9
	{ Cattle ..	11.1	8.5	11.8	14.4	12.3	13.6	14.9	15.2
	{ Sheep ..	106	72	97	86	111	125	118	123
	{ Pigs ..	0.9	0.9	1.1	1.0	1.2	1.5	1.0	1.0
Wool(i)	{ mill. lb.	(a) 634	(a) 539	(a) 798	(a) 723	1,007	1,167	1,080	1,281
Butter	{ '000 tons	(a) 19	(a) 46	(a) 95	(a) 119	175	165	135	168
Cheese	{ ..	(a) 4.5	(a) 5.3	(a) 7.1	(a) 14.6	14.0	30.1	40.6	46.8
Meat(j)—									
Beef and Veal	{ ..	(f)	(f)	(f)	339	350	534	582	675
Mutton and Lamb	{ ..	(f)	(f)	(f)	218	307	372	282	394
Pork	{ ..	(f)	(f)	(f)	11.1	22.7	58.1	35.0	31.8
Bacon and Ham	{ ..	(a) 7.5	(a) 15.2	(a) 23.8	26.2	31.8	42.5	36.6	38.7
Total Meat	{ ..	(f)	(f)	(f)	608	727	1,027	949	1,154

(a) Year ended previous December. (b) At 31st December of previous year. (c) Number per 1,000 of mean population. (d) Decreases made absolute, including decreases for nullity of marriage. (e) Number per 1,000 live births. (f) Not available. (g) Index of nominal weekly wage rates for adult males divided by the "C" Series Retail Price index number. (h) Productive cana. (i) In terms of greasy. (j) Bone-in weight in terms of fresh meat; cured weight, bacon and ham.

STATISTICAL SUMMARY, AUSTRALIA—continued.

NOTE.—See headnotes on page 1216.

Item.	Year ended 30th June—							
	1892.	1902.	1912.	1922.	1932.	1942.	1952.	1953.
<b>Production—continued.</b>								
<b>Mineral(a)(b)—</b>								
Copper(c) .. .. '000 tons	(d)	(d)	(d)	(d)	13.5	20.9	17.9	18.6
Gold(c) .. .. '000 fine oz.	1,243	3,300	2,484	758	595	1,497	896	980
Lead(c) .. .. '000 tons	(d)	(d)	(d)	(d)	150.8	289.4	212.0	228.2
Zinc(c) .. .. ..	(d)	(d)	(d)	(d)	66.1	232.6	189.2	196.5
Black Coal .. .. mill. tons	4.4	6.9	10.6	12.8	8.4	14.2	17.6	19.4
Brown Coal .. .. ..	..	..	(e)	0.1	2.2	4.6	7.8	8.1
<b>Forestry—</b>								
Sawn output of native timber mill. sup. ft.	(d)	(a) 452	(a) 605	590	237	914	1,396	1,308
<b>Factories—</b>								
Number of factories .. '000	(f)	(f)	{ 14.5	.8.0	21.7	27.0	45.8	47.7
Persons employed .. ..	(f)	(f)	{ 312	379	337	725	978	933
Salaries and wages paid £m.	(f)	(f)	{ 28	68	56	180	612	635
Net value of production(g)—								
Chemicals, etc. .. ..			{ 1.1	3.2	7.9	24.8	63.7	67.8
Industrial metals, etc. ..			{ 12.0	23.6	22.8	119.9	413.1	421.3
Textiles, etc. .. ..	(d)	(d)	{ 7.5	19.2	{ 6.9	21.0	56.6	64.8
Clothing .. .. ..					{ 11.1	23.6	81.1	82.8
Food, etc. .. .. ..			{ 11.8	27.2	28.7	53.2	141.1	164.3
Paper, etc. .. .. ..			{ 4.2	9.0	9.6	17.1	68.2	68.3
All groups .. .. ..	23.3	29.1	{ 47.5	112.5	111.0	316.5	1,024.0	1082.8
Value of plant and machinery	(d)	(d)	{ 31.4	78.1	121.5	169.2	412.5	493.5
Value of land and buildings	(d)	(d)	{ 32.5	67.3	106.6	156.3	360.2	414.4
<b>Net value of production(h)—</b>								
Agriculture .. .. £m.	17.0	23.8	38.8	81.9	49.7	64.0	246.7	(d)
Pastoral .. .. ..	31.3	27.2	52.7	75.1	43.0	85.4	400.5	(d)
Dairying .. .. ..	6.0	7.6	16.1	35.3	22.6	34.3	103.8	(d)
Poultry .. .. ..	1.9	2.0	4.0	9.0	5.7	6.5	31.5	(d)
Bee-farming .. .. ..	0.1	0.1	0.1	0.1	0.1	0.4	0.8	(d)
Total, Rural .. ..	56.3	60.7	111.7	201.4	121.1	190.6	783.3	(d)
Trapping .. .. ..	(d)	(d)	{ 4.8	9.1	1.5	5.0	6.7	(d)
Forestry .. .. ..	(d)	(d)	{ 1.1	1.4	3.9	10.2	37.9	(d)
Fisheries .. .. ..	4.4	2.8	{ 4.8	9.1	3.9	1.8	5.7	(d)
Mines and Quarries(i)	12.1	22.0	23.3	30.0	13.5	33.4	97.2	109.6
Total, Non-Rural ..	16.5	24.8	29.2	30.5	20.3	50.4	147.5	(d)
Total, Primary .. ..	72.8	85.5	140.9	231.9	144.4	241.0	930.8	(d)
Factories(j) .. ..	23.3	29.1	47.5	112.5	111.0	316.5	1,024.0	1082.8
Total All Industries	96.1	114.6	188.4	344.4	252.4	557.5	1,954.8	(d)
<b>Building(j)—</b>								
Permits, New Dwellings { '000	(d)	(d)	(d)	(d)	{ 2.1	9.7	32.8	30.1
.. All Buildings(k) { £m.	(d)	(d)	(d)	(d)	{ 1.5	9.6	80.4	77.7
.. All Buildings(k) { £m.	(d)	(d)	(d)	(d)	{ 4.6	13.5	116.4	120.5
<b>Overseas Trade—</b>								
Imports .. .. £m. f.o.b.	(a) 34	(a) 38	(a) 61	94	52	174	1,053	514
Exports .. .. ..	36	50	79	128	108	169	675	871
<b>Principal Exports (l)—</b>								
Wool .. .. { mill. lb.(m) ..	641	529	734	946	903	938	1,036	1,216
.. .. { £m. f.o.b. .. ..	20	15	26	48	32	58	323	403
Wheat .. .. { '000 tons .. ..	258	543	1,477	2,677	3,413	593	1,685	1,594
.. .. { £m. f.o.b. .. ..	1.9	2.8	9.6	28.6	19.2	4.6	55.3	52.3
Flour .. .. { '000 short tons	33	97	176	360	611	414	789	866
.. .. { £m. f.o.b. .. ..	0.3	0.6	1.4	5.5	3.8	4.2	33.0	37.4
Butter .. .. { mill. lb. .. ..	4	35	102	127	202	130	25	111
.. .. { £m. f.o.b. .. ..	0.2	1.4	4.6	8.0	10.3	8.1	4.6	20.2

(a) Year ended previous December. (b) Breaks in the continuity of the series occurred in 1931 and 1951. (c) Mine production, i.e., metal content of minerals produced. (d) Not available. (e) Less than .05. (f) Owing to variation in classification, effective comparison is impossible. (g) For definition see page 991. (h) Gross value from 1891 to 1921-22. Prior to 1922 figures are for years ended previous December. For definitions of gross and net value see page 1139. (i) Incomplete. (j) Six capital cities and suburbs. (k) Includes additions and alterations. (l) Australian produce except gold, which includes re-exports. (m) In terms of greasy.

## STATISTICAL SUMMARY, AUSTRALIA—continued.

NOTE.—See headnotes on page 1216.

Item.	Year ended 30th June—							
	1892.	1902.	1912.	1922.	1932.	1942.	1952.	1953.
<b>Oversea Trade—continued.</b>								
<b>Principal Exports(b)—continued.</b>								
Hides and Skins .. Em. f.o.b.	0.9	1.3	3.2	3.1	2.3	6.0	17.1	20.2
Meats .. .. .	0.5	2.6	4.3	5.5	6.4	14.1	35.5	65.8
Fruit (c) .. .. .	..	0.2	0.5	3.0	4.8	4.0	19.5	27.7
Sugar .. .. .	..	(d)	(d)	(d)	2.5	2.6	6.9	21.7
Gold .. .. .	5.7	14.3	12.0	3.5	11.0	9.2	7.0	20.4
Silver and Lead ..	1.9	2.3	3.2	2.7	2.9	7.4	32.1	30.5
Ores and Concentrates ..	..	(d)	3.7	0.8	0.2	1.3	20.4	20.3
<b>Principal Imports—</b>								
Vegetable foodstuffs, etc. ..	..	3.6	3.7	4.0	2.6	6.1	25.0	18.5
Apparel, etc. .. .. .	..	10.9	16.2	31.0	15.4	32.7	203.6	48.2
Oil, etc. .. .. .	..	1.2	1.6	4.7	5.5	16.2	87.5	74.3
Metals, etc. .. .. .	..	7.8	14.0	22.8	7.4	71.8	392.9	225.9
Rubber, etc. .. .. .	..	0.5	1.4	1.7	0.8	3.2	35.1	9.0
Paper, etc. .. .. .	..	1.6	2.6	4.4	4.4	4.3	68.8	22.4
<b>Transport and Communication—</b>								
<b>Shipping—</b>								
Oversea Vessels, { No. ..	3,778	4,028	4,174	3,111	3,057	2,544	1,136	4,041
Entrances and { mill. tons	4.7	6.5	10.0	9.1	11.4	10.8	18.2	17.6
<b>Clearances</b>								
Oversea Cargo—								
Discharged .. mill. tons(f)			(e)	2.4	3.0	5.5	14.4	9.7
Shipped .. .. .			(e)	5.8	6.7	4.2	5.7	7.5
Interstate Vessels, { No. ..	(e)	(e)	9,605	9,782	7,957	9,100	7,524	9,121
Entrances and { mill. tons			13.1	12.8	11.1	12.9	15.8	18.5
<b>Clearances</b>								
Interstate Cargo Shipped			(g)	5.5	4.0	10.0	9.0	9.7
mill. tons(f)								
<b>Government Railways—</b>								
Route-miles .. '000	10.4	12.8	16.8	23.5	27.0	27.2	26.8	26.8
Passenger-journeys .. mill.	84	115	228	335	393	475	501	498
Goods and livestock carried								
mill. tons	9.4	15.5	25.5	31.5	26.1	38.9	44.8	44.4
mill.	29.7	38.2	55.2	56.1	63.8	88.5	93.4	92.6
<b>Tramways and Omnibuses—</b>								
<b>Passenger-journeys—</b>								
Trams .. .. mill.	(e)	(e)	360	569	589	874	686	647
Omnibuses .. .. .			(e)	(e)	(e)	264	555	555
<b>Motor vehicles on the register—</b>								
Cars .. .. '000	..	..	(e)	102	420	451	1,032	1,109
Commercial vehicles ..	..	..	..	..	96	251	583	582
<b>Civil Aviation (Internal)—</b>								
Plane-miles flown .. mill.	..	..	..	..	2.5	7.8	41.8	30.1
Passengers carried .. '000	..	..	..	..	57	152	1,829	1,706
Passenger-miles .. mill.	..	..	..	..	(e)	76	722	667
Freight car- { '000 short tons	..	..	..	..	0.1	1.2	57.5	57.6
ried .. .. .	..	..	..	..	(e)	0.9	26.7	27.2
<b>Postal—</b>								
Postal matter dealt with(h)	(a)	(a)	(a)					
mill. articles	242	324	595	702	(i) 871	(i) 1,100	(i) 1,485	(i) 1,483
Telegrams and cablegrams mill.	10.0	9.9	13.3	16.8	13.9	26.1	29.8	25.8
<b>Telephones—</b>								
Instruments .. .. '000	..	29	103	259	485	739	1,301	1,384
Lines .. .. .	(a)	25	85	196	364	531	927	985
Calls—Trunk .. .. mill.	(a)	(a)	(a)	14.0	28.9	45.3	69.4	75.0
Local .. .. .	(a)	(a)	(a)	221	369	664	968	973
Broadcast Listeners' Licences	..	..	..	(j) 36	369	1,320	1,961	1,986
<b>Public Finance—</b>								
<b>Commonwealth—</b>								
<b>Consolidated Revenue Fund—</b>								
Revenue .. .. Em.	..	11	21	64	72	210	1,017	1,040
Expenditure .. .. .	..	4	15	64	70	210	1,017	1,027
Net loan fund expenditure	..	..	1	5	4	213	56	54
Taxation collections ..	..	9	16	50	54	180	934	895

(a) Year ended previous December. (b) Australian produce except gold, which includes re-exports.  
(c) Excludes fruit juices. (d) Less than .05. (e) Not available. (f) Tons weight plus tons measurement. (g) Year ended 30th June. (h) Letters, postcards, letter-cards and newspapers.  
(i) Includes packets. (j) Year 1923-24.

STATISTICAL SUMMARY, AUSTRALIA—continued.

NOTE.—See headnotes on page 1216.

Item.	Year ended 30th June—							
	1892.	1902.	1912.	1922.	1932.	1942.	1952.	1953.
<b>Public Finance—continued.</b>								
<b>State—</b>								
Consolidated Revenue Funds—								
Revenue .. £m.	(a)	28	41	85	100	152	387	436
Expenditure .. ..	(a)	29	41	87	121	149	390	436
Net loan expenditure ..	(a)	9	16	34	6	9	198	161
Taxation collections ..	(a)	3	5	18	33	57	63	71
<b>Public Debt(b)—</b>								
Commonwealth .. £m.	..	..	6	354	319	638	1,869	1,888
State .. ..	e 155.1	213	279	519	789	911	1,396	1,544
Total .. ..	e 155.1	213	285	873	1,108	1,549	3,265	3,432
Overseas .. ..	(a)	(a)	194	412	522	516	406	413
In Australia .. ..	(a)	(a)	91	461	586	1,033	2,859	3,019
<b>Private Finance—</b>								
Commonwealth Note Issue(d) £m.	(a)	(a)	8	54	51	103	303	329
Cheque-paying banks(e)—								
Advances .. ..	125	94	109	183	261	270	677	597
Deposits .. ..	98	91	143	289	319	387	1,180	1,260
Bank clearings .. ..	(a)	338	662	1,702	1,581	2,828	12,160	11,476
Savings bank deposits(f) ..	15	31	59	154	198	274	892	947
Life Assurance(g)(h)—								
Ordinary—								
Policies .. '000	(a)	414	484	730	871	1,340	2,553	2,731
Sum assured .. £m.								
Industrial—								
Policies .. '000	(a)	236	467	973	1,550	2,780	3,843	3,873
Sum assured .. £m.								
Total—								
Policies .. '000	(a)	650	951	1,703	2,421	4,120	6,396	6,604
Sum assured .. £m.								
<b>Social Statistics—</b>								
Commonwealth Social Services—								
Age and Invalid .. '000(b)	..	..	90	144	256	336	420	445
Pensions .. £m.	..	..	2.2	5.4	11.1	19.3	59.8	72.4
Child Endowment, .. '000 (b)								
Claims in force .. £m.	..	..	..	..	..	488	1,205	1,247
Total Commonwealth Health and Social Services(h) £m.								
War Pensions .. '000(b)	..	..	..	225	274	220	524	544
Service Pensions .. '000(b)	..	..	..	7.0	7.4	7.5	31.8	34.4
State Social Services(t)—	..	..	..	..	..	14	17	19
Education(c)—	..	..	..	..	..	0.6	1.8	2.2
Government Schools—								
Schools .. '000	6.2	7.0	8.0	9.4	10.1	9.5	7.6	(a)
Staff .. ..	12.6	14.5	17.0	26.1	33.8	32.1	36.7	(a)
Students .. ..	561	638	639	819	937	887	1,013	(a)
Non-government Schools—								
Schools .. '000	2.0	2.5	1.9	1.7	1.8	1.9	1.9	(a)
Staff .. ..	6.0	8.3	7.8	8.8	10.0	11.4	13.3	(a)
Students .. ..	125	149	161	199	221	257	326	(a)
Universities(f)—								
Number .. ..	4	4	5	6	6	8	9	9
Staff(k) .. ..	(a)	(a)	249	482	703	1,416	3,082	2,998
Students .. '000	1.6	1.8	3.4	8.0	9.8	13.9	31.7	29.6
Public Hospitals—								
Number .. ..	(a)	285	355	404	513	566	675	(a)
Staff—Medical .. '000	(a)	(a)	1.1	1.5	3.2	3.9	6.9	(a)
Nursing .. ..	(a)	(a)	5.1	6.8	9.3	15.4	24.6	(a)
In-patients, cases treated ..	(l)(m)54	(m) 91	134	215	371	595	896	(a)
<b>Police and Prisons(c)—</b>								
Police .. ..	'000	5.3	5.8	6.4	6.9	8.6	9.7	12.3
Prisons .. ..	(a)	(a)	104	91	85	70	69	70
Prisoners .. ..	'000	(a)	4.3	3.1	2.9	4.2	4.4	5.0
<b>Prices(c)—</b>								
"C" Series Retail Price Index ..	..	..	1,000	1,680	1,448	1,673	3,124	3,645
Melbourne Wholesale Price Index	945	974	1,000	1,903	1,429	1,796	5,098	5,647

(a) Not available. (b) At 30th June. (c) Year ended previous December. (d) At end of June. (e) Figures for 1891 are averages of weekly balances for the December quarter; the remainder are for the June quarter. All cheque-paying banks to 1931-32, Private Trading Banks thereafter. (f) 1891 at 31st December, thereafter at 30th June. (g) Existing business in Australia. (h) Excludes war and service pensions. (i) Includes Northern Territory and Australian Capital Territory. (j) Excludes Australian National University. (k) Teaching and research staff. Includes part-time. (l) Year 1891-92 for Victoria. (m) Adelaide Hospital only included in South Australia.



## APPENDIX.

(Some recent information which has come to hand since the various chapters were sent to press is given hereunder in summarized form. For further or more detailed information, as also the latest available statistics, reference should be made to other publications issued by this Bureau (see pages 1175-7), notably the *Monthly Review of Business Statistics* and the *Quarterly Summary of Australian Statistics*.)

## CHAPTER II.—PHYSIOGRAPHY.

## § 2. Climate and Meteorology of Australia.

**Rainfall : Australian Capital Cities, p. 28.**—Rainfall recorded in Australian capital cities during 1953 (1952 in parentheses) was as follows :—Canberra, 19.40 ins. (37.87 ins.); Perth, 37.14 ins. (39.28 ins.); Adelaide, 20.00 ins. (19.99 ins.); Brisbane, 43.60 ins. (33.49 ins.); Sydney, 40.86 ins. (59.19 ins.); Melbourne, 28.38 ins. (34.39 ins.); Hobart, 28.06 ins. (30.35 ins.).

## CHAPTER III.—GENERAL GOVERNMENT.

## § 1. Scheme of Parliamentary Government.

**The Sovereign, p. 49.**—On 3rd February, 1954, Her Majesty Queen Elizabeth the Second, accompanied by His Royal Highness the Duke of Edinburgh, arrived in Australia on a visit to all States and the Australian Capital Territory, the first occasion on which the reigning Sovereign has visited Australia. Foremost amongst the official acts performed by Her Majesty was the opening of the Commonwealth Parliament in Canberra on 15th February, 1954.

**Number and Salary of Members of the Legislatures, p. 52.**—From 1st July, 1953, the annual salary of members of the South Australian Legislature was increased to £1,425-£1,500 for both Houses, according to distance of electorate from Adelaide. From April, 1953, the annual salary of members of the Western Australian Legislature was increased to £1,340 for both Houses, subject to adjustment in accordance with variations of the State basic wage (on every £20 per annum rise). As formerly, an allowance of £50 is also payable where any part of the electorate is more than 50 miles from Perth.

## § 2. Parliaments and Elections.

**Commonwealth Elections, p. 55.**—A Commonwealth election for the Senate was held on 9th May, 1953. Particulars of electors and voting in the several States are shown below :—

## COMMONWEALTH ELECTION : SENATE, 9th MAY, 1953.

State.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
N.S. Wales ..	966,830	1,012,764	1,979,594	921,432	952,089	1,873,521	95.30	94.01	94.64
Victoria ..	683,483	728,028	1,411,511	653,787	686,324	1,340,111	95.66	94.27	94.94
Queensland ..	367,872	357,592	725,464	346,932	340,297	687,229	94.31	95.16	94.73
South Australia	220,518	232,978	453,496	213,446	224,137	437,583	96.79	96.21	96.49
W. Australia ..	164,652	164,540	329,192	155,872	154,587	310,459	94.67	93.95	94.31
Tasmania ..	83,634	84,862	168,496	80,729	81,332	162,061	96.53	95.84	96.18
Total ..	2,486,989	2,580,764	5,067,753	2,372,198	2,438,766	4,810,964	95.38	94.50	94.93

State Elections, pp. 56-7.—(a) *Upper Houses.* The following table shows particulars of the voting at the most recent elections for the Upper Houses or Legislative Councils in the States of South Australia and Western Australia :—

## STATE UPPER HOUSE ELECTIONS.

State.	Year of Latest Election.	Electors Enrolled— Whole State.			Contested Electorates.					
					Electors who Voted.			Percentage of Electors who Voted.		
		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Fe- males.	Total.
S. Aust. ..	1953	(a)	(a)	168,758	(a)	(a)	79,373	(a)	(a)	81.02
W. Aust. ...	1952	56,854	22,650	79,504	11,677	4,005	15,682	36.16	31.38	34.80

(a) Not available.

Particulars of voting at the latest contested elections for the Legislative Council in Tasmania in 1953 are as follows, the figures representing combined totals for the Divisions of Pembroke, West Devon, Queenborough and Meander :—Number of electors on the roll, 15,117; number of votes recorded, 12,461; percentage of enrolled voters who voted, 82.43.

(b) *Lower Houses.* The following table shows particulars of the voting at the most recent elections for the Lower Houses in the States of New South Wales, Victoria, Queensland, South Australia and Western Australia.

## STATE LOWER HOUSE ELECTIONS.

State.	Year of Latest Election.	Electors Enrolled— Whole State.			Contested Electorates.					
					Electors who Voted.			Percentage of Electors who Voted.		
		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Fe- males.	Total.
N.S. Wales	1953	954,966	997,987	1,952,953	779,186	809,107	1,588,293	94.05	93.42	93.73
Victoria ..	1952	678,955	723,750	1,402,705	506,736	540,935	1,047,671	93.75	93.43	93.59
Q'land ..	1953	a 372,121	a 365,458	737,579	310,425	306,186	616,611	93.88	93.72	93.80
S. Aust. ..	1953	(b)	(b)	449,630	(b)	(b)	336,592	(b)	(b)	95.01
W. Aust. ...	1953	160,151	159,790	319,941	93,307	98,918	192,225	93.68	93.27	93.47

(a) Approximate.

(b) Not available.

State Parliaments, pp. 58-61.—The dates of dissolutions and openings, respectively, of State Parliaments which have occurred since those recorded on pp. 58-61 are as follows (the number of the Parliament concerned being shown in parentheses) :—New South Wales, 14th January, 1953 (thirty-sixth), 11th March, 1953 (thirty-seventh); Victoria, 31st October, 1952 (thirty-eighth), 22nd December, 1952 (thirty-ninth); Queensland, 6th February, 1953 (thirty-second), 4th August, 1953 (thirty-third); South Australia, 28th February, 1953 (thirty-third), 25th June, 1953 (thirty-fourth); Western Australia, 15th January, 1953 (twentieth), 6th August, 1953 (twenty-first).

### § 3. Administration and Legislation.

**Governors-General, p. 62.**—The list of Governors-General on page 62 includes some but not all persons appointed to administer the Government of the Commonwealth. The complete list of Governors-General and persons appointed to administer the Government of the Commonwealth up to 31st December, 1953 is as follows :—

	Term of Office.
Rt. Hon. John Adrian Louis, Earl of Hopetoun (afterwards Marquis of Linlithgow), K.T., G.C.M.G., G.C.V.O.	1st January, 1901 to 9th January, 1903
Rt. Hon. Hallam, Baron Tennyson, G.C.M.G. (Acting Governor-General)	17th July, 1902 to 9th January, 1903
Rt. Hon. Hallam, Baron Tennyson, G.C.M.G. . .	9th January, 1903 to 21st January, 1904
Rt. Hon. Henry Stafford, Baron Northcote, G.C.M.G., G.C.I.E., C.B.	21st January, 1904 to 9th September, 1908
Rt. Hon. William Humble, Earl of Dudley, G.C.B., G.C.M.G., G.C.V.O.	9th September, 1908 to 31st July, 1911
Rt. Hon. Frederic John Napier, Baron Chelmsford, K.C.M.G. (Administrator of the Government of the Commonwealth)	21st December, 1909 to 27th January, 1910
Rt. Hon. Thomas, Baron Denman, G.C.M.G., K.C.V.O.	31st July, 1911 to 18th May, 1914
Rt. Hon. Sir Ronald Craufurd Munro Ferguson (afterwards Viscount Novar of Raith), G.C.M.G.	18th May, 1914 to 6th October, 1920
Rt. Hon. Henry William, Baron Forster of Lepe, G.C.M.G.	6th October, 1920 to 8th October, 1925
Rt. Hon. John Lawrence, Baron Stonehaven, G.C.M.G., D.S.O.	8th October, 1925 to 22nd January, 1931
Lieut.-Colonel the Rt. Hon. Arthur Herbert Tennyson, Baron Somers, K.C.M.G., D.S.O., M.C. (Administering the Government of the Commonwealth)	3rd October, 1930 to 22nd January 1931
Rt. Hon. Sir Isaac Alfred Isaacs, G.C.B., G.C.M.G.	22nd January, 1931 to 23rd January, 1936
Brigadier-General the Rt. Hon. Alexander Gore Arkwright, Baron Gowrie, V.C., G.C.M.G., C.B., D.S.O., K.G.St.J.	23rd January, 1936 to 30th January, 1945
Captain the Rt. Hon. William Charles Arcedeckne Vanneck, Baron Huntingfield, K.C.M.G., K.St.J. (Administrator of the Government of the Commonwealth)	29th March, 1938 to 24th September, 1938
Major-General Sir Winston Joseph Dugan, G.C.M.G., C.B., D.S.O. (Administrator of the Government of the Commonwealth)	5th September, 1944 to 30th January, 1945
His Royal Highness Prince Henry William Frederick Albert, Duke of Gloucester, Earl of Ulster and Baron Culloden, K.G., K.T., K.P., P.C., G.C.B., G.C.M.G., G.C.V.O., General in the Army, Air Chief Marshal in the Royal Air Force, One of His Majesty's Personal Aides-de-Camp	30th January, 1945 to 11th March, 1947
Major-General Sir Winston Joseph Dugan, G.C.M.G., C.B., D.S.O (Administrator of the Government of the Commonwealth)	18th January, 1947 to 11th March, 1947
Rt. Hon Sir William John McKell, G.C.M.G. . .	11th March, 1947 to 8th May, 1953

General\* Sir John Northcott, K.C.M.G., C.B., M.V.O. 19th July, 1951 to 14th December, 1951  
(Administrator of the Government of the Commonwealth)

Field-Marshal Sir William Joseph Slim, G.C.B., From 8th May, 1953  
G.C.M.G., G.B.E., D.S.O., M.C., K.St.J.

\* Lieutenant-General Sir John Northcott was granted honorary rank of General whilst administering the Government of the Commonwealth.

**Commonwealth Ministries, p. 63.**—At 31st December, 1953, the Menzies Ministry, as shown on p. 63, remained unaltered. The Hon. Harold Edward Holt and the Hon. John McEwen were created Privy Councillors on the occasion of the celebration of Her Majesty's Birthday on 1st June, 1953.

**State Ministers, pp. 64-6.**—The composition of the Ministry in each State at 31st December, 1953, was as shown on pp. 64-6, with the following exceptions:—

*Ministries.*

NEW SOUTH WALES (from 23rd February, 1953).

*Premier and Colonial Treasurer—*  
THE HON. J. J. CAHILL.

*Deputy Premier and Minister for Education—*  
THE HON. R. J. HEFFRON.

*Minister of Justice and Vice-President of the Executive Council—*  
THE HON. R. R. DOWNING, M.L.C.

*Minister for Housing and Minister for Co-operative Societies—*  
THE HON. C. R. EVATT, Q.C.

*Chief Secretary and Minister for Immigration—*  
THE HON. C. A. KELLY.

*Minister for Health—*  
THE HON. M. O'SULLIVAN.

*Minister for Agriculture and Minister for Food Production—*  
THE HON. E. H. GRAHAM.

*Attorney-General—*  
THE HON. W. F. SHEAHAN, Q.C.

*Secretary for Lands—*  
THE HON. F. H. HAWKINS.

*Secretary for Public Works and Minister for Local Government—*  
THE HON. J. B. RENSHAW.

*Minister for Conservation—*  
THE HON. A. G. ENTICKNAP.

*Minister for Labour and Industry and Minister for Social Welfare—*  
THE HON. A. LANDA.

*Minister without Portfolio—*  
THE HON. J. F. McGRATH.

*Secretary for Mines—*  
THE HON. F. P. BUCKLEY, M.L.C.

*Minister for Transport—*  
THE HON. E. WETHERELL.

*Minister without Portfolio—*  
THE HON. W. M. GOLLAN.

QUEENSLAND (from 16th March, 1953).

*Premier and Chief Secretary and Vice-President of the Executive Council—*  
THE HON. V. C. GAIR.

*Minister for Transport—*  
THE HON. J. E. DUGGAN.

*Secretary for Public Lands and Irrigation—*  
THE HON. T. A. FOLEY.

*Treasurer—*  
THE HON. E. J. WALSH.

*Secretary for Agriculture and Stock—*  
THE HON. H. H. COLLINS.

*Secretary for Labour and Industry—*  
THE HON. A. JONES.

*Secretary for Health and Home Affairs—*  
THE HON. W. M. MOORE.

*Attorney-General—*  
THE HON. W. POWER.

*Secretary for Public Works and Housing—*  
THE HON. P. J. R. HILTON.

*Secretary for Public Instruction—*  
THE HON. G. H. DEVRIES.

*Secretary for Mines and Immigration—*  
THE HON. E. J. RIORDAN.

## SOUTH AUSTRALIA (from 15th May, 1944).

<i>Premier, Treasurer and Minister of Immigration—</i>	<i>Minister of Works and Minister of Marine—</i>
THE HON. T. PLAYFORD.	THE HON. M. MCINTOSH.
<i>Chief Secretary, Minister of Health and Minister of Mines—</i>	<i>Minister of Agriculture and Minister of Forests—</i>
THE HON. A. L. MCEWIN, M.L.C.	THE HON. SIR GEORGE F. JENKINS, K.B.E.
<i>Attorney-General and Minister of Industry and Employment—</i>	<i>Minister of Education—</i>
THE HON. R. J. RUDALL, M.L.C.	THE HON. B. PATTINSON.
<i>Minister of Lands, Minister of Repatriation and Minister of Irrigation—</i>	<i>Minister of Local Government, Minister of Roads and Minister of Railways—</i>
THE HON. C. S. HINCKS.	THE HON. N. L. JUDE, M.L.C.

## WESTERN AUSTRALIA (from 23rd February, 1953).

<i>Premier, Treasurer and Minister for Child Welfare and Industrial Development—</i>	<i>Minister for Railways, Transport and Police—</i>
THE HON. A. R. G. HAWKE.	THE HON. H. H. STYANTS.
<i>Minister for Education, Works and Water Supplies—</i>	<i>Minister for Health and Justice—</i>
THE HON. J. T. TONKIN.	THE HON. E. NULSEN.
<i>Minister for Native Welfare, Labour and Prices—</i>	<i>Minister for Housing and Forests—</i>
THE HON. W. HEGNEY.	THE HON. H. E. GRAHAM.
<i>Chief Secretary and Minister for Local Government and Town Planning—</i>	<i>Minister for Mines and Fisheries—</i>
THE HON. G. FRASER, M.L.C.	THE HON. L. F. KELLY.
<i>Minister for Lands and Agriculture—</i>	<i>Minister for the North-West and Supply and Shipping—</i>
THE HON. E. K. HOAR.	THE HON. H. C. STRICKLAND, M.L.C.

The foregoing lists show the complete ministries as reconstituted following, respectively, the Legislative Assembly elections in New South Wales on 14th February, 1953, and in Queensland on 7th March, 1953, the appointment of two additional members to the South Australian Ministry on 15th December, 1953, and the Legislative Assembly election in Western Australia on 14th February, 1953. The following particulars refer to changes involving certain Ministers only :—

## VICTORIA.

Following the resignation of the Hon. R. W. Holt, the Hon. J. H. Smith, Minister without Portfolio, was elevated to the position of Commissioner of Crown Lands and Survey, Minister of Soldier Settlement, Minister for Conservation and President of the Board of Land and Works, and was succeeded as Minister without Portfolio by the Hon. M. J. Gladwin.

## § 5. Cost of Parliamentary Government, p. 71.

The cost of Parliamentary Government, Commonwealth and individual States, for the year 1951-52 was as follows :—

Commonwealth, £1,853,709 (4s. 4d. per head); New South Wales, £508,024 (3s.); Victoria, £407,278 (3s. 6d.); Queensland, £298,401 (4s. 11d.); South Australia, £215,673 (5s. 11d.); Western Australia, £294,441 (10s.); Tasmania, £156,982 (10s. 6d.); and total, £3,734,508 (8s. 9d.).

The amounts expended under the major headings for all Governments during 1951-52 were :—Governor-General or Governor, £356,865; Ministry, £245,540; Parliament, £2,384,205; Electoral, £707,816.

## CHAPTER IV.—LAND TENURE AND SETTLEMENT.

## § 9. Settlement of Returned Service Personnel: 1939-45 War.

War Service Land Settlement Scheme, pp. 82-5.—At 30th June, 1953, an area of 13,944,944 acres had been submitted by the several States for land settlement. Of this, 11,498,123 acres had been approved by the Commonwealth as suitable for soldier settlement and 9,294,722 acres had actually been acquired by the States. The acreages and holdings allotted to ex-servicemen by the States at 30th June, 1953 were as follows:—New South Wales, 5,603,961 (2,002); Victoria, 789,846 (1,847); Queensland, 216,480 (442); South Australia, 204,457 (536); Western Australia, 1,061,565 (679); Tasmania, 91,363 (136); total, 7,967,672 (5,642).

The total expenditure of the War Service Land Settlement Division to 30th June, 1953, £43,837,805, includes War Service Land Settlement, £33,112,502; agricultural loans, £6,201,644; agricultural allowances, £2,260,115; administrative expenses, £855,300; rural training, £1,408,244. Aggregate expenditure in the States and Territories to 30th June, 1953, was as follows:—New South Wales, £4,757,966; Victoria, £2,726,683; Queensland, £1,471,186; South Australia, £11,374,865; Western Australia, £17,962,304; Tasmania, £5,528,006; Northern Territory, £10,748; New Guinea, £6,047.

After deducting repayments of expenditure to 30th June, 1953, £4,890,309 and miscellaneous receipts, £3,597,987, the net expenditure to 30th June, 1953 was £35,349,509.

## § 11. Alienation and Occupation of Crown Lands.

Summary, p. 96.—The alienation and occupation of Crown lands in Australia at 31st December, 1952, were as follows:—

Private Lands—149,897,000 acres (7.87 per cent.) alienated; 33,296,000 acres (1.75 per cent.) in process of alienation.

Crown Lands—1,011,788,000 acres (53.15 per cent.) leased or licensed; 708,751,000 acres (37.23 per cent.) other Crown lands.

## CHAPTER V.—TRANSPORT AND COMMUNICATION.

## A. SHIPPING.

## § 2. Oversea Shipping and § 5. Interstate Shipping.

Summary of Movements, pp. 98, 105.—The following table summarizes the entrances of oversea and interstate shipping in the several States during the years 1951-52 and 1952-53:—

## OVERSEA AND INTERSTATE SHIPPING: ENTRANCES OF VESSELS, 1951-52 AND 1952-53.

State or Territory of Entry.	1951-52.						1952-53.					
	Oversea.				Interstate.(a)		Oversea.				Interstate.(a)	
	Direct.		Via other States.				Direct.		Via other States.			
	No.	Net Tons ('000).	No.	Net Tons ('000).	No.	Net Tons ('000).	No.	Net Tons ('000).	No.	Net Tons ('000).	No.	Net Tons ('000).
N.S.W. ..	633	2,617	502	2,840	1,189	3,516	600	3,456	494	2,759	1,469	4,141
Victoria ..	446	1,997	548	3,440	1,322	3,612	314	1,370	585	3,322	1,549	3,934
Queensland ..	251	805	194	1,081	413	1,034	305	1,095	233	1,263	494	1,162
S. Australia ..	163	643	286	1,681	807	3,203	242	975	315	1,871	859	3,054
W. Australia ..	494	2,705	33	168	512	2,603	469	2,579	39	186	497	2,573
Tasmania ..	45	183	62	334	795	866	51	211	97	510	864	759
N. Territory ..	6	21	4	10	27	44	7	18	1	7	29	40
Total ..	2,038	8,973	1,629	9,254	5,065	14,818	1,988	8,704	1,764	9,918	5,761	15,665

(a) Includes oversea vessels on interstate voyages.

Total overseas shipping entrances into Australia during 1952-53 (1951-52 in parentheses) numbered 1,988 (2,038) with an aggregate capacity of 8,704,000 (8,973,000) net tons. Of these 1,546 (1,880) for 7,312,000 (8,580,000) net tons were entrances with cargo. Total overseas clearances numbered 2,053 (2,098) for 8,867,000 (9,252,000) net tons, and clearances with cargo 1,582 (1,423) for 6,504,000 (6,118,000) net tons.

### § 6. Shipping Cargo.

Overseas and Interstate Cargo, p. 107.—The table hereunder shows particulars of overseas and interstate cargo discharged at and shipped from each State during the years 1951-52 and 1952-53.

#### CARGO DISCHARGED AND SHIPPED, 1951-52 AND 1952-53. (<sup>'000</sup> Tons.)

State or Territory.	Discharged.				Shipped.			
	Overseas.		Interstate.		Overseas.		Interstate.	
	Tons Weight.	Tons Meas.	Tons Weight.	Tons Meas.	Tons Weight.	Tons Meas.	Tons Weight.	Tons Meas.
1951-52.								
New South Wales	2,981	1,646	3,371	329	861	391	3,359	382
Victoria ..	3,093	1,724	2,128	243	1,040	372	444	298
Queensland ..	923	374	367	320	456	93	544	111
South Australia ..	1,223	559	1,436	173	1,073	107	2,862	206
Western Australia	1,275	291	261	254	988	150	133	73
Tasmania ..	196	88	386	319	68	118	347	255
Northern Territory	36	..	23	..	1	..	8	..
Total ..	9,727	4,682	7,972	1,638	4,487	1,231	7,697	1,325
1952-53.								
New South Wales ..	2,290	731	4,124	339	1,339	403	3,419	371
Victoria ..	2,474	630	2,274	189	1,016	505	404	263
Queensland ..	725	155	284	283	1,017	124	634	98
South Australia ..	945	236	1,577	203	1,554	137	2,962	205
Western Australia	1,067	118	258	254	1,008	175	628	108
Tasmania ..	200	59	446	224	111	108	395	230
Northern Territory	32	..	32	..	..	..	5	..
Total ..	7,733	1,929	8,995	1,492	6,045	1,452	8,447	1,275

### B. GOVERNMENT RAILWAYS.

Summary of Operations, p. 116.—The following table gives a summary of the operations of all Government railways open for general traffic during the year 1952-53 :—

#### GOVERNMENT RAILWAYS : SUMMARY OF OPERATIONS, 1952-53.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.	Aust.
Mileage open (route)								
30th June, 1953	6,113	4,660	6,560	2,553	4,108	613	2,201	26,808
Gross revenue ..	£'000. 72,676	31,864	23,985	11,891	7,667	2,039	2,710	154,832
Working expenses ..	£'000. 66,452	34,008	27,979	15,013	12,510	2,864	2,728	161,554
Net revenue ..	£'000. 6,224	2,144	1,993	3,122	4,844	825	18	6,722
Interest ..	£'000. 6,342	2,128	1,874	1,076	841	222	290	(a) 12,855
Train-miles run ..	'000. 40,193	17,690	18,564	7,199	5,255	1,900	1,738	92,629
Passenger-journeys	'000. 271,699	162,857	33,819	17,565	6,339	3,151	190	497,620
Goods, etc., carried	'000 tons 19,121	9,192	7,351	4,543	2,619	897	660	44,383

(a) Includes £82,375 Commonwealth proportion of Grafton-South Brisbane Line.  
(c) Partly estimated.

(b) Estimated.

NOTE.—Minus sign (—) denotes loss.

At 30th June, 1952, route mileage open was 26,847 and during the year 1951-52 gross revenue was £139,518,000, working expenses £148,174,000, net revenue —£8,656,000, interest £12,180,000, train-miles run 93,363,000, passenger-journeys 500,510,000 and goods, etc., carried 44,841,000 tons.

### C. TRAMWAYS.

**Summary of Operations, p. 130.**—The following is a summary of the operations of all electric tramways in Australia during the year 1952-53 (1951-52 in parentheses):—Route-mileage open for traffic at 30th June was 544 (560); gross revenue, £15,968,000 (£15,121,000); working expenses, £18,420,000 (£17,109,000); net revenue, —£2,452,000 (—£1,988,000); interest, £628,000 (£536,000); car-miles run, 65,895,000 (67,923,000); passenger-journeys, 647,417,000 (685,724,000).

### D. MOTOR OMNIBUS SERVICES.

**Government and Municipal Services, p. 133.**—The following is a summary of the operations of government and municipal motor omnibus services in Australia during 1952-53 (1951-52 in parentheses):—Length of route, 4,533 miles (4,458 miles); gross revenue, £9,320,000 (£8,542,000); working expenses, £11,465,000 (£10,298,000); bus-mileage run, 55,672,000 (54,124,000); passenger-journeys, 336,462,000 (333,200,000).

**Private Services, p. 134.**—The following is a summary of the operations of motor omnibus services under the control of private operators during 1952-53 (1951-52 in parentheses) in the States of New South Wales, Victoria, South Australia and Western Australia respectively:—Gross revenue, £2,347,000 (£2,342,000); £1,839,000 (£1,601,000); £633,000 (£593,000); £1,576,000 (£1,432,000); bus-mileage run, 20,613,000 (17,358,000); 17,548,000 (17,985,000); 5,972,000 (5,926,000); 11,976,000 (12,331,000); passenger-journeys, 87,274,000 (94,917,000); 84,006,000 (79,928,000); 12,816,000 (12,516,000); 34,592,000 (34,546,000)

### F. MOTOR VEHICLES.

**Motor Vehicle Registrations, pp. 139-40.**—Motor vehicles registered at 30th June, 1953 and new motor vehicles registered during 1952-53 were as follows:—

#### MOTOR VEHICLES : REGISTRATIONS, 1952-53.

(Excluding Defence Service Vehicles)

State or Territory.	Number of Motor Vehicles Registered at 30th June, 1953.(a)				Number of New Motor Vehicles Registered, 1952-53.(a)			
	Motor Cars.(b)	Com-mercial Vehicles.(c)	Motor Cycles.	Total.	Motor Cars.(b)	Com-mercial Vehicles.(c)	Motor Cycles.	Total.
New South Wales ..	364,982	203,472	45,100	613,554	31,340	18,717	3,042	53,099
Victoria ..	376,123	130,172	33,533	539,828	28,598	12,011	2,523	43,132
Queensland ..	132,704	110,117	23,400	266,221	12,163	9,243	1,966	23,372
South Australia ..	124,127	57,796	23,779	205,702	10,204	5,447	1,819	17,470
Western Australia ..	69,917	56,463	15,565	141,945	6,891	4,976	1,416	13,283
Tasmania ..	35,431	19,391	5,723	60,545	3,368	1,724	474	5,566
Northern Territory ..	1,580	2,881	691	5,152	139	247	(e)	(f) 386
Aust. Capital Territory ..	4,375	2,033	539	6,947	414	225	49	688
<b>Total ..</b>	<b>1,109,239</b>	<b>582,325</b>	<b>148,330</b>	<b>1,839,894</b>	<b>93,117</b>	<b>52,590</b>	<b>(f) 11,289</b>	<b>156,996</b>

(a) Excludes trailers, road tractors, etc., and dealers' plates. (b) Includes taxis and hire cars.  
 (c) Includes lorries, vans, buses and utilities. (d) Includes vehicles registered as primary producers' vehicles.  
 (e) Not available. (f) Excludes motor cycles, Northern Territory.



Drivers' and riders' licences in force at 30th June, 1953 numbered 2,288,370.

Gross revenue derived during 1952-53 from vehicles' registration and motor tax amounted to £18,779,761, and from licences, etc., £1,403,019, from miscellaneous receipts, £3,708,435—total, £23,891,215.

At 30th June, 1952 there were 1,032,358 motor cars, 583,247 commercial vehicles and 154,579 motor cycles on Australian registers—a total of 1,770,184 vehicles. New vehicles registered in Australia during 1951-52 numbered:—Motor cars, 125,319; commercial vehicles, 73,461; motor cycles, 22,155; total, 220,935.

During 1951-52 gross revenue derived from vehicles' registration and motor tax amounted to £15,995,554, from licences, etc., £1,336,530 and from miscellaneous receipts, £3,607,266—total, £20,939,350.

At 30th June, 1952 drivers' and riders' licences in force numbered 2,194,167.

### G. TRAFFIC ACCIDENTS.

**Total Accidents Reported, p. 141.**—The following table is a summary of the total number of accidents (known to the police) which occurred in public thoroughfares during the years 1951-52 and 1952-53, the number involving casualties and the number of persons killed or injured in each State and the Commonwealth excluding the Northern Territory.

#### ACCIDENTS (KNOWN TO THE POLICE) WHICH OCCURRED IN PUBLIC THOROUGHFARES: ACCIDENTS RECORDED AND CASUALTIES, 1951-52 AND 1952-53.

State or Territory.	1951-52.				1952-53.			
	Total Accidents Reported. (a)	Accidents Involving Casualties.	Casualties.		Total Accidents Reported. (a)	Accidents Involving Casualties.	Casualties.	
			Persons Killed.	Persons Injured. (b)			Persons Killed.	Persons Injured. (b)
N.S. Wales ..	22,662	10,292	741	12,637	24,382	9,944	663	12,459
Victoria ..	16,559	10,111	603	12,531	16,351	10,098	515	12,564
Queensland ..	12,545	5,214	251	6,561	14,916	5,748	301	7,152
South Australia	8,373	2,114	172	2,497	8,154	1,998	136	2,449
W. Australia(c)	4,552	2,265	194	2,771	7,510	2,688	182	3,373
Tasmania ..	3,162	1,027	87	1,215	3,664	1,028	56	1,246
Aust. Cap. Terr.	257	121	6	164	318	131	3	162
Total ..	68,110	31,144	2,054	38,376	75,295	31,635	1,856	39,405

(a) Total accidents causing death or injury to persons or damage exceeding £10 to property. (b) Persons injured to an extent requiring surgical or medical treatment. (c) Includes, for the metropolitan area, all accidents causing death or injury to persons or damage exceeding £10 to property. For the remainder of the State, prior to 1st January, 1953, only those accidents causing fatal or "near-fatal" injuries are included. Since that date, statistics have been collected on a basis comparable with that for the other States.

### H. AVIATION.

**International Activity.**—(ii) *International Air Services*, p. 144. On 16th March, 1954, the British, Australian and New Zealand Governments jointly announced major changes in the organization of trans-Pacific and trans-Tasman airline operations. The following is a summary of the proposed changes:—

Qantas Empire Airways and British Overseas Airways Corporation will continue in parallel partnership on the Kangaroo route. British Commonwealth Pacific Airlines' trans-Pacific services between Australia and North America will be taken over by Q.E.A., and when B.O.A.C.'s services are extended to San Francisco, these Q.E.A. services will connect with them. (Q.E.A. took over the services to North America on 15th May, 1954.) Tasman Empire Airways will connect with these world routes at both Sydney and Nadi (Fiji). The services between Australia and New Zealand and between Auckland and

Nadi will be operated by Tasman Empire Airways, which is now owned by the Australian and New Zealand Governments as equal partners, the aircraft being based in New Zealand.

**Statistical Summaries, pp. 147-8.**—The following is a summary of civil aviation for Australia in 1951-52 and 1952-53:—At 30th June, 1953 (1952 in parentheses):—Registered aircraft owners, 369 (343); registered aircraft, 821 (786); pilots' licences—private, 1,677 (1,444), commercial, 518 (470), student, 2,639 (2,644), 1st class airline transport, 495 (513), 2nd class, 45 (35), 3rd class, 371 (400); flight navigators', 163 (155); during 1952-53 (1951-52 in parentheses)—Accidents—persons killed, 6 (37), persons injured, 19 (22).

Regular internal services' operations during 1952-53 (1951-52 in parentheses) showed the following results:—Hours flown, 237,640 (260,947); miles flown, 39,059,000 (41,831,000); paying passengers, 1,706,446 (1,828,506); paying passenger-miles, 667,321,000 (721,573,000). Freight—Actual short tons, 57,635 (57,464); ton-miles, 27,167,000 (26,684,000). Mail—Actual short tons, 3,311 (2,681); ton-miles, 1,166,000, (1,285,000).

The operations of services between Australia and oversea countries during 1952-53 (1951-52 in parentheses) were as follows:—Route-miles, 66,558 (43,455); hours flown, 54,148 (50,336); miles flown, 11,565,000 (10,664,000); paying passengers, 97,753 (95,134); paying passenger-miles, 275,206,000 (265,756,000); Freight—Actual short tons, 1,957 (2,138); ton-miles, 7,401,000 (6,716,000); Mail—Actual short tons, 1,168 (1,141); ton-miles, 6,122,000 (6,162,000).

## I. POSTS, TELEGRAPHS, TELEPHONES AND WIRELESS.

### § 1. General to § 4. Telephones.

**Summary of Operations, pp. 149-61.**—The following table is a summary of the operations of the Postmaster-General's Department during the years 1951-52 and 1952-53:—

#### POSTMASTER-GENERAL'S DEPARTMENT: SUMMARY OF OPERATIONS, 1951-52 AND 1952-53.

State.	Gross Revenue.	Expenditure.	Total Postal Matter Dealt with. (a)	Money Orders Issued, value.	Postal Notes Issued, value.	Telegrams Dispatched.	Telephones.			
							Lines Connected. (b)	Instruments Connected. (b)	Local Calls.	Trunk Line Calls.
							£'000.	£'000.	mill.	£'000.
<b>1951-52.</b>										
New South Wales	23,570	34,167	594.7	23,951	4,599	9,729	352	499	412	24
Victoria	17,354	23,250	421.6	11,908	4,323	6,007	292	414	296	20
Queensland	8,117	12,163	184.7	6,201	1,000	4,315	124	167	113	11
South Australia	5,057	7,402	116.6	3,086	911	3,687	81	112	71	7
Western Australia	3,645	4,925	100.8	2,742	542	2,583	52	72	55	4
Tasmania	1,628	2,777	63.9	1,607	233	759	27	37	21	3
Australia	59,371	93,109	1,482.3	49,495	11,608	27,080	928	1,301	968	69
<b>1952-53.</b>										
New South Wales	25,449	35,299	602.2	25,635	4,537	8,669	370	527	411	26
Victoria	19,184	24,359	423.3	12,680	4,428	5,248	312	442	298	22
Queensland	8,678	13,526	189.0	6,567	984	4,058	132	178	114	12
South Australia	5,453	7,837	119.4	3,417	958	2,333	87	121	72	7
Western Australia	3,896	5,462	114.9	2,934	522	2,382	55	77	56	4
Tasmania	1,738	2,930	67.5	1,855	229	607	29	39	22	4
Australia	64,398	98,344	1,516.3	53,088	11,658	23,407	985	1,384	973	75

(a) Comprises (in millions) (1951-52 in parentheses):—Letters, Cards, etc. 1,228.7 (1,198.0); Newspapers and Packets 254.4 (249.7); Parcels, 16.3 (16.7); Registered Articles other than Parcels, 16.9 (17.9).

(b) At 30th June.

(c) Includes £8,922,000 (£8,425,000), Central Office expenditure.

(d) Excludes international telegrams—dispatched, 1,207,000 (1,329,000), received 1,187,000 (1,357,000).

### § 5. Cable and Radio Communication.

**Radio-communication Stations Authorized, p. 163.**—The following radio-communication stations were authorized in Australia and Papua-New Guinea at 30th June, 1953 :—Transmitting and receiving stations—aeronautical, 84 (9) ; coast, 42 (8) ; land, 2,107 (252) mobile (general), 4,046 (49) ; ship, 755 ; aircraft, 230 ; other mobile stations, 247 ; and miscellaneous, 72. In addition, there were 390 land and 165 mobile (general) stations for the purpose of receiving only. The figures in parentheses refer to Papua-New Guinea and are included in the totals preceding them.

### § 6. Broadcasting and Television.

**Broadcast Licences, Issued, p. 168.**—The following table shows the number of broadcast licences issued at 30th June, 1953 and, for broadcast listeners' licences only, at 30th June, 1952 also.

#### BROADCAST LICENCES ISSUED.

State or Territory in which Issued.	30th June, 1953.						30th June, 1952. Broadcast Listeners'.
	Broadcasting.		Broadcast Listeners'.			Amateur.	
	National Stations. (a)	Com- mercial Stations.	Metro- politan.	Country.	Total.		
New South Wales	12	36	391,600	345,989	737,589	1,024	736,565
Victoria ..	7	19	317,086	216,243	533,329	959	520,364
Queensland ..	14	20	120,053	162,285	282,338	304	279,852
South Australia ..	4	8	133,858	76,950	210,808	330	207,527
Western Australia	7	13	89,564	55,577	145,141	185	141,950
Tasmania ..	3	8	22,524	48,217	70,741	109	68,832
Northern Territory	2	..	..	1,296	1,296	14	1,164
Aust. Cap. Terr. ..	2	1	..	4,413	4,413	15	4,790
Total ..	(b) 53	105	1,074,685	910,970	1,985,655	(c) 2,977	1,961,044

(a) Includes short-wave stations : New South Wales, 1 ; Victoria, 3 ; Queensland, 2 ; Western Australia, 2. (b) Includes 1 medium-wave and 1 short-wave station in Papua-New Guinea. (c) Includes 37 stations in Papua-New Guinea.

## CHAPTER VI.—TRADE.

NOTE.—Values are expressed in £A. f.o.b., port of shipment.

### § 5. Total Oversea Trade.

**Summary of Movements, pp. 184-6.**—The following is a summary of the total overseas trade movements of Australia during the year 1952-53 :—Merchandise—Exports, £848,498,000, Imports £510,342,000, Commodity balance, + £338,156,000 ; Bullion and Specie—Exports, £22,774,000, Imports, £3,767,000, Balance. + £19,007,000 ; Total balance, + £357,163,000.

### § 6. Direction of Oversea Trade.

**Imports according to Country of Origin and Exports according to Country of Destination, pp. 186-8.**—The following table shows particulars of the values of total imports and total exports of Australia, including bullion and specie, according to countries of origin or of destination, for the year 1952-53.

## TOTAL OVERSEA TRADE, AUSTRALIA : COUNTRIES OF ORIGIN OR OF DESTINATION, 1952-53.

(£'000.)

Country of Origin or of Destination.	Imports.	Exports.
Australia (Re-imported) .. .. .	1,533	..
United Kingdom .. .. .	214,702	359,257
Australian Territories—		
New Guinea .. .. .	4,750	6,140
Papua .. .. .	1,142	3,404
Borneo (British) .. .. .	5,998	778
Canada .. .. .	19,546	8,712
Ceylon .. .. .	9,786	14,687
Cyprus .. .. .	10	1,713
East Africa—Tanganyika Territory .. .. .	2,030	63
Hong Kong .. .. .	521	4,855
India .. .. .	14,646	17,148
Ireland, Republic of .. .. .	146	4,354
Malaya, Federation of .. .. .	5,798	9,344
New Zealand .. .. .	3,999	28,677
Pacific Is.—Fiji .. .. .	1,435	3,618
Singapore .. .. .	5,858	12,794
South Africa, Union of .. .. .	3,100	3,640
West Africa—Gold Coast .. .. .	1,541	172
Other British Countries .. .. .	12,710	19,689
<b>Total British Countries .. .. .</b>	<b>309,251</b>	<b>499,045</b>
Arabian States—		
Saudi Arabia and Yemen .. .. .	6,736	1,158
Bahrein Is. .. .. .	14,913	320
Austria .. .. .	1,195	602
Belgian Congo .. .. .	1,291	71
Belgium and Luxemburg .. .. .	5,506	32,141
Brazil .. .. .	901	467
China .. .. .	1,408	681
Czechoslovakia .. .. .	1,020	2,696
Egypt .. .. .	913	3,374
Finland .. .. .	883	62
France .. .. .	9,253	76,016
Germany, Federal Republic of .. .. .	13,582	22,366
Indonesia .. .. .	21,544	5,064
Italy .. .. .	5,225	44,706
Japan .. .. .	4,692	83,958
Netherlands .. .. .	5,954	8,081
Netherlands Antilles .. .. .	2,476	221
Norway .. .. .	2,420	736
Persia .. .. .	323	327
Poland .. .. .	44	3,644
Spain .. .. .	652	173
Sweden .. .. .	6,786	2,888
Switzerland .. .. .	4,056	2,168
Turkey .. .. .	40	2,788
United States of America .. .. .	85,168	57,837
Yugoslavia .. .. .	95	479
Other Foreign Countries .. .. .	7,776	19,203
<b>Total Foreign Countries .. .. .</b>	<b>204,858</b>	<b>372,227</b>
<b>Total All Countries .. .. .</b>	<b>514,109</b>	<b>871,272</b>

### § 9. Classified Summary of Australian Oversea Trade.

Imports and Exports in Statistical Classes, pp. 201-2.—The following table shows the values of total imports and total exports in statistical classes for the year 1952-53 :—

#### TOTAL OVERSEA TRADE, AUSTRALIA : CLASSES, 1952-53.

(£'000.)

Class.	Imports.	Exports.
I. Foodstuffs of Animal Origin .. .. .	3,122	117,344
II. Foodstuffs of Vegetable Origin, Non-alcoholic Beverages	18,478	180,591
III. Spirituous and Alcoholic Liquors .. .. .	1,215	1,518
IV. Tobacco, etc. .. .. .	15,507	263
V. Live Animals .. .. .	458	742
VI. Animal Substances, not Foodstuffs .. .. .	1,946	424,602
VII. Vegetable Substances and Fibres; Cork and Manu- factures; Plastic Moulding Materials and Synthetic Fibres .. .. .	16,794	1,282
VIII. Manufactured Fibres, Textiles and Apparel—		
(a) Yarns and Manufactured Fibres .. .. .	15,745	387
(b) Textiles .. .. .	28,975	749
(c) Apparel .. .. .	3,523	474
IX. Oils, Fats and Waxes .. .. .	74,272	5,273
X. Pigments, Paints and Varnishes .. .. .	1,287	689
XI. Rocks, Minerals and Hydrocarbons .. .. .	6,378	22,267
XII. Metals, Metal Manufactures and Machinery—		
(a) Metals and Metal Manufactures .. .. .	109,768	52,203
(b) Dynamo Electrical Machinery, Appliances and Equipment .. .. .	26,659	1,630
(c) Machines and Machinery .. .. .	89,462	7,535
XIII. Rubber and Leather and Manufactures thereof—		
(a) Rubber and Rubber Manufactures .. .. .	8,654	360
(b) Leather and Leather Manufactures .. .. .	321	2,504
XIV. Wood and Wicker .. .. .	6,232	4,080
XV. Earthenware, Cement, China, Glass and Stoneware ..	6,011	710
XVI. Paper and Stationery—		
(a) Pulp, Paper and Board .. .. .	16,097	389
(b) Paper Manufactures and Stationery .. .. .	6,334	1,549
XVII. Sporting Materials, Toys, Fancy Goods, Jewellery and Timepieces .. .. .	2,391	497
XVIII. Optical, Surgical and Scientific Instruments and Appli- ances and Photographic Goods, n.e.i. .. .. .	5,577	1,310
XIX. Drugs, Fertilizers and Chemicals .. .. .	12,749	5,069
XX. Miscellaneous .. .. .	32,387	14,481
XXI. Gold and Silver; Bronze Specie .. .. .	3,767	22,774
Total .. .. .	514,109	871,272

The following table shows the total quantities of some of the principal commodities exported from Australia during 1952-53 :—

**TOTAL OVERSEA TRADE, AUSTRALIA : PRINCIPAL EXPORTS, 1952-53.**

Item.	Unit of Quantity.	Quantity.	Item.	Unit of Quantity.	Quantity.
Butter .. ..	'000 lb.	110,520	Fruits preserved in Liquid .. ..	'000 lb.	143,309
Cheese .. ..	"	53,007	Wheat .. ..	'000 tons(a)	1,594
Milk and Cream .. ..	"	150,327	Barley, Unprepared .. ..	"	496
Eggs—			Oats, .. ..	"	212
In shell .. ..	'000 doz.	20,911	Flour (Wheaten) .. ..	"	776
Not in shell .. ..	'000 lb.	24,047	Sugar (Cane) .. ..	"	459
Meats preserved by Cold Process—			Sheep and Lamb Skins .. ..	'000	18,923
Beef and Veal .. ..	"	192,500	Wool—		
Lamb .. ..	"	86,070	Greasy .. ..	'000 lb.	981,493
Mutton .. ..	"	80,774	Scoured, etc. .. ..	"	107,544
Pork .. ..	"	3,453	Silver, Silver lead, Lead and Zinc—		
Meats preserved in Tins, etc. .. ..	"	216,414	Ores and Concentrates .. ..	'000 tons(a)	286
Currants .. ..	"	23,267	Pig Lead .. ..	"	42
Raisins .. ..	"	131,905			
Apples, Fresh .. ..	'000 bus.	4,696			
Citrus Fruit .. ..	"	435			

(a) Ton = 2,240 lb.

**§ 13. Australian Index of Export Prices.**

Monthly Index (Fixed Weights), p. 212.—The following are the export price index-numbers for the year 1952-53 and the six months ended December, 1953.

**EXPORT PRICE INDEXES : AUSTRALIA.**

**SIMPLE AGGREGATIVE INDEX : FIXED WEIGHTS.**

INDIVIDUAL COMMODITIES, GROUPS OF COMMODITIES AND ALL GROUPS (COMBINED).

(Base of each section : Average of three years ended June, 1939 = 100.)

Period.	Wool.	Wheat.	But-ter.	Metals. (a)	Meats. (b)	Sugar.	Dried Fruits. (c)	Tal- low. (d)	Hides. (d)	Gold. (e)	All Groups.	
											Ex- clud- ing Gold.	In- clud- ing Gold.
1952-53—												
July .. ..	(f) 566	432	313	621	294	501	300	483	340	186	486	465
August .. ..	(f) 566	432	313	613	294	501	300	483	381	187	486	465
September .. ..	551	432	313	603	294	501	300	483	379	188	477	457
October .. ..	588	432	313	501	321	501	300	(f) 483	383	188	490	469
November .. ..	588	432	313	501	321	501	300	360	404	187	490	469
December .. ..	618	(g) 448	313	510	321	501	300	322	395	184	(g) 508	(g) 485
January .. ..	618	(g) 448	313	509	321	501	300	298	391	189	(g) 508	(g) 485
February .. ..	626	(g) 448	313	475	321	501	300	295	375	186	(g) 509	(g) 486
March .. ..	656	(g) 448	313	463	321	501	290	298	364	185	(g) 522	(g) 499
April .. ..	671	(g) 448	313	418	321	501	290	284	344	185	(g) 526	(g) 502
May .. ..	701	(g) 448	313	407	321	501	290	252	352	184	(g) 540	(g) 515
June .. ..	641	(g) 448	313	429	321	500	290	249	326	181	(g) 512	(g) 489
Year 1952-53 .. ..	616	(g) 441	313	504	314	501	297	358	369	186	(g) 504	(g) 482
1953-54—												
July .. ..	(f) 641	(g) 448	325	446	331	500	290	244	319	183	(g) 515	(g) 492
August .. ..	(f) 634	(g) 446	325	450	331	500	290	251	321	182	(g) 511	(g) 488
September .. ..	626	(g) 443	325	438	331	500	290	260	336	182	(g) 506	(g) 484
October .. ..	634	(g) 428	325	450	340	500	290	269	374	181	(g) 509	(g) 486
November .. ..	634	(g) 414	325	458	340	500	290	301	383	176	(g) 508	(g) 485
December .. ..	(g) 611	(g) 413	325	442	340	500	290	341	377	177	(g) 495	(g) 473

(a) Non-ferrous—silver, copper, tin, zinc, lead. (b) Beef, lamb, mutton, pork. (c) Sultanas, lolas, currants. (d) Cattle hides, calfskins. (e) The price used in the index since 14th December, 1951 is the price of Australian gold on oversea premium markets. (f) Nominal. (g) Subject to revision.

### § 17. The Australian Balance of Payments.

NOTE.—Further details of the summarized estimates presented here will be found in *The Australian Balance of Payments, 1928-29 to 1951-52* and in the mimeographed publication *The Australian Balance of Payments 1951-52, 1952-53 and first half 1953-54*, obtainable from the Commonwealth Statistician.

Australia's Balance of Payments on Current and Capital Account, pp. 217-20.—The following table shows in summary form revised estimates for 1951-52 and estimates for 1952-53 :—

#### AUSTRALIA : BALANCE OF PAYMENTS, SUMMARY. (£A. million.)

	1951-52.	1952-53.
CURRENT ACCOUNT. (Credit items +, Debit items -)		
Exports f.o.b. .. .. .	+ 664.2	+846.7
Imports f.o.b. .. .. .	-1,051.5	-512.7
Trade Balance .. .. .	-387.3	+334.0
Invisible Credits .. .. .	+ 98.9	+100.2
Invisible Debits .. .. .	-298.6	-250.2
Invisible Balance .. .. .	-199.7	-150.0
Balance on Current Account .. .. .	-587.0	+184.0
CAPITAL ACCOUNT. (Plus sign (+) indicates net increases in assets or net decreases in liabilities and minus sign (-) indicates net decreases in assets or net increases in liabilities)		
International Reserves .. .. .	(a)-464.0	+186.2
Public Authority Debt Domiciled Overseas .. .. .	+ 2.6	+ 2.3
Net transactions with International Monetary Fund and International Bank for Reconstruction and Development .. .. .	- 23.9	- 31.3
Net Investment in Joint Organization (Wool) .. .. .	+ 0.7	..
Miscellaneous Official Transactions .. .. .	+ 5.3	- 3.0
Undistributed Income accruing to Oversea Companies .. .. .	- 24.3	- 20.0
Private Capital Movements and Balancing Items .. .. .	- 83.4	+ 49.8
Balance on Capital Account .. .. .	-587.0	+184.0

(a) Excludes movements due to adjustments of an accounting nature during 1951-52 which were not due to balance of payments transactions.

Australia's Balance of Payments on Current Account—Various Countries, p. 221.—Summarized estimates of Australia's regional balance of payments in 1951-52 and 1952-53 are given in the following table.

**AUSTRALIA : BALANCE OF PAYMENTS ON CURRENT ACCOUNT, VARIOUS COUNTRIES AND MONETARY AREAS.**

(Minus sign (-) denotes debit ; other items are credits.)

(£A. million.)

	Gold Production.	Sterling Area.		Dollar Area.			Other Non-Sterling.		Total.
		United Kingdom.	Other.	United States of America.	Canada.	Other.	O.E.E.C.	Other. (a)	
1951-52—									
Exports f.o.b.	..	208.6	125.6	77.4	9.2	2.6	166.4	74.4	664.2
Imports f.o.b.	..	-466.6	-145.7	-109.6	-23.6	1.5	-189.2	-115.3	-1,051.5
Invisibles (net)	14.2	-83.5	-30.8	-42.6	-8.4	-0.6	-21.0	-27.0	-199.7
Balance on Current Account ..	14.2	-341.5	-50.9	-74.8	-22.8	0.5	-43.8	-67.9	-587.0
		-392.4		-97.1			-111.7		
1952-53—									
Exports f.o.b.	..	347.2	131.0	57.9	8.7	2.1	191.6	108.2	846.7
Imports f.o.b.	..	-216.7	-88.0	-85.4	-19.5	2.2	-59.2	-41.7	-512.7
Invisibles (net)	16.4	-72.7	-30.6	-30.9	-5.2	-0.5	-10.3	-16.2	-150.0
Balance on Current Account ..	16.4	57.8	12.4	-58.4	-16.0	-0.6	122.1	50.3	184.0
		70.2		-75.0			172.4		

(a) Includes international bodies.

Australia's Balance of Payments with the Dollar Area, pp. 222-3.—The following table presents revised estimates, for 1950-51 and 1951-52, and estimates for 1952-53, of Australia's dollar balance of payments:—

**AUSTRALIA : BALANCE OF PAYMENTS WITH THE DOLLAR AREA (UNITED STATES DOLLARS).**

(Credit Items +, Debit Items -.)

(U.S. \$ million.)

	1950-51.	1951-52.	1952-53.
<b>CURRENT ACCOUNT.</b>			
<b>Merchandise Trade.</b>			
1. Merchandise exports f.o.b. to United States of America and Canada .. .. .	+ 372	+ 194	+ 149
2. Merchandise imports f.o.b. from United States of America and Canada .. .. .	- 176	- 298	- 235
3. Trade balance with United States of America and Canada .. .. .	+ 196	- 104	- 86
4. Trade balance with other American account countries .. .. .	+ 9	+ 2	..
5. Trade balance with the Dollar Area .. .. .	+ 205	- 102	- 86



AUSTRALIA: BALANCE OF PAYMENTS WITH THE DOLLAR AREA  
(UNITED STATES DOLLARS)—*continued.*  
(U.S. \$ million.)

	1950-51.	1951-52.	1952-53.
Other Current Transactions.			
6. Freight on imports .. .. .	-22.2	-60.4	-34.1
7. Insurance on imports .. .. .	-1.7	-2.4	-1.7
8. Expenditure by Australian travellers .. .. .	-2.8	-2.7	-3.0
9. Expenses of Australian companies in North America .. .. .	-5.0	-3.3	-2.2
10. Film remittances .. .. .	-3.9	-5.8	-4.5
11. Profits and dividends remitted .. .. .	-8.5	-7.4	-7.2
12. Undistributed income accruing to companies incorporated in dollar area .. .. .	-18.1	-27.1	-22.4(a)
13. Public authority interest payments .. .. .	-8.3	-8.0	-8.0
14. Other miscellaneous debits .. .. .	-8.3	-9.9	-11.2
15. Miscellaneous credits .. .. .	+9.6	+11.2	+12.3
16. Other items (net) .. .. .	-26.3	+26.4	+50.1
17. Invisible balance with the Dollar Area .. .. .	-95	-89	-32
18. Balance on current account (5 + 17) .. .. .	+110	-191	-118
INVESTMENT ACCOUNT.			
19. Increase in debt of public authorities .. .. .	-3	-3	-3
20. Undistributed income (see item 12) .. .. .	+18	+27	+22(a)
21. Identified private capital inflow .. .. .	+25	+38	+33
22. Errors and omissions (mainly capital movements) .. .. .	-79	-35	
23. Balance on Investment Account .. .. .	-39	+27	+52
24. Dollar Surplus or Deficit (18 + 23) .. .. .	+71	-164	-66
DOLLAR FINANCING.			
25. Dollar purchases from I.M.F. .. .. .			+30
26. Dollar loans from I.B.R.D. .. .. .	+9	+54	+40
27. Gold sales to United Kingdom .. .. .	+21		
28. Estimated dollar drawings from (+) or contributions to (-) Sterling Area Dollar Pool .. .. .	-97	+133	+12
29. Movement in Australian dollar balances (increase -) .. .. .	-4	-23	-16
30. Total .. .. .	-71	+164	+66

(a) Provisional estimate only.

## CHAPTER VIII.—LABOUR, WAGES AND PRICES.

### A. RETAIL PRICES AND PRICE INDEXES.

#### § 6. Tabular Statements of Retail Price Index-Numbers.

"C" Series Retail Price Index, p. 269.—The following table shows the "C" Series index-numbers for the March to December quarters, 1953 for each capital city and for the six capital cities combined, showing separate series for each of the four main groups of items:—

#### "C" SERIES RETAIL PRICE INDEX-NUMBERS(a): CAPITAL CITIES.

(Base of each Group: Weighted average of Six Capital Cities, 1923-27 = 1,000.)

Period.	Sydney.	Mel-bourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Six Capitals. (b)
GROUP I.—FOOD AND GROCERIES.							
Mar. Qtr., 1953 ..	2,664	2,598	2,361	2,371	2,492	2,641	2,572
June " " ..	2,669	2,653	2,372	2,411	2,594	2,698	2,605
Sept. " " ..	2,758	2,728	2,429	2,478	2,690	2,890	2,686
Dec. " " ..	2,751	2,757	2,488	2,514	2,656	2,981	2,702

For footnotes see next page.

"C" SERIES RETAIL PRICE INDEX-NUMBERS (a) : CAPITAL CITIES—  
continued.

Period.	Sydney.	Mel- bourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Six Capitals. (b)
GROUP II.—HOUSING (4 AND 5-ROOMED HOUSES).(c)							
Mar. Qtr., 1953 ..	1,245	985	972	1,147	1,194	1,234	1,122
June " " ..	1,274	986	974	1,154	1,199	1,245	1,136
Sept. " " ..	1,287	989	986	1,157	1,210	1,251	1,144
Dec. " " ..	1,299	990	993	1,160	1,215	1,265	1,151

GROUPS I. AND II.—FOOD, GROCERIES AND HOUSING ("B" SERIES INDEX).

Mar. Qtr., 1953 ..	2,105	1,963	1,814	1,888	1,980	2,087	2,001
June " " ..	2,119	1,997	1,821	1,915	2,044	2,125	2,026
Sept. " " ..	2,178	2,044	1,861	1,957	2,107	2,244	2,079
Dec. " " ..	2,178	2,062	1,900	1,980	2,088	2,305	2,091

GROUP III.—CLOTHING.

Mar. Qtr., 1953 ..	3,246	3,188	3,083	3,195	3,172	3,162	3,200
June " " ..	3,305	3,225	3,104	3,254	3,192	3,210	3,245
Sept. " " ..	3,276	3,200	3,116	3,257	3,195	3,230	3,228
Dec. " " ..	3,263	3,191	3,110	3,235	3,181	3,247	3,217

GROUP IV.—MISCELLANEOUS.

Mar. Qtr., 1953 ..	2,039	2,086	1,903	2,104	2,033	2,086	2,048
June " " ..	2,044	2,089	1,908	2,095	2,039	2,088	2,051
Sept. " " ..	2,039	2,093	1,922	2,097	2,041	2,185	2,054
Dec. " " ..	2,040	2,093	1,980	2,096	2,042	2,188	2,060

GROUPS I. TO IV.—"C" SERIES INDEX.

Mar. Qtr., 1953 ..	2,338	2,250	2,105	2,210	2,247	2,317	2,268
June " " ..	2,360	2,279	2,115	2,238	2,290	2,351	2,293
Sept. " " ..	2,388	2,301	2,143	2,264	2,328	2,444	2,321
Dec. " " ..	2,385	2,310	2,176	2,272	2,314	2,485	2,327

(a) The index-numbers given in the separate parts of the table cannot be compared with each other in order to show the relative cost of food and groceries, housing, etc., since the cost in 1923-27 in each group or combination is made equal to 1,000. (b) Weighted average. (c) The rent index-numbers measure the proportionate rise and fall in the average weekly rentals paid for houses of four and five rooms taking corresponding houses throughout. See footnote (b) on page 265.

## B. WHOLESALE PRICES AND PRICE INDEXES.

### § 2. Wholesale Price (Basic Materials and Foodstuffs) Index.

Index-numbers, p. 276.—Index-numbers for each group of commodities and for all groups combined for the index of wholesale prices of basic materials and foodstuffs are shown below for the year 1952-53 and the six months ended December, 1953.

## WHOLESALE PRICE (BASIC MATERIALS AND FOODSTUFFS) INDEX-NUMBERS.

(Base of each group : Average of three years ended June, 1939 = 100.)

Period.	Basic Materials.							Food-stuffs and Tobacco.	Basic Materials and Foodstuffs.		
	Metals and Coal.	Oils, Fats and Waxes.	Textiles.	Chemicals.	Rubber and Hides.	Building Materials.	Total.		Goods principally Imported.	Goods principally Home Produced.	Total All Groups
1952-53—											
July ..	392	230	570	349	279	435	355	304	302	338	327
August ..	394	230	577	350	241	418	351	303	295	338	325
September ..	399	230	566	349	237	418	352	295	294	333	321
October ..	390	235	589	349	233	418	352	283	295	322	314
November ..	390	237	589	349	223	420	352	280	296	321	313
December ..	390	237	609	349	227	420	353	292	297	329	320
January ..	389	236	608	350	223	420	353	290	297	328	318
February ..	391	235	611	355	212	391	348	290	289	328	316
March ..	393	235	640	355	212	391	350	289	290	328	317
April ..	392	235	643	348	203	391	349	299	288	336	322
May ..	391	233	661	349	203	364	344	301	279	338	321
June ..	392	233	621	348	199	364	342	305	283	338	322
Year 1952-53	392	234	607	350	224	404	350	294	292	331	320
1953-54—											
July ..	391	225	583	329	198	365	336	315	275	346	325
August ..	389	226	581	329	198	365	335	336	275	360	335
September ..	389	226	576	329	199	364	335	331	276	357	333
October ..	389	226	576	327	198	364	334	325	273	353	329
November ..	388	223	574	327	197	365	333	311	270	342	321
December ..	388	223	(a) 561	327	192	365	(a) 332	304	269	(a) 337	(a) 318

(a) Preliminary.

## § 3. Melbourne Wholesale Price Index.

Index-numbers, p. 279.—The following are the index-numbers for each group, and for all groups combined, of those commodities included in the series for the year 1953 :—

Index-numbers—Melbourne Wholesale Prices (Base of each Group : Year 1911 = 1,000), Year 1953 : Metals and Coal, 6,529 ; Wool, Cotton, Leather, etc., 6,950 ; Agricultural Produce, etc., 4,958 ; Dairy Produce, 4,533 ; Groceries, 3,767 ; Meat, 6,303 ; Building Materials, 8,519 ; Chemicals, 4,691 ; All Groups, 5,619.

## D. WAGES.

## § 2. Rates of Wage and Hours of Labour.

Weekly Rates of Wage, pp. 282 and 285.—The following table shows for each State and Australia the weighted average nominal weekly rates of wage payable, and the index-numbers based thereon, for adult males and for adult females at 31st March, 1953, 30th June, 1953, 30th September, 1953 and 31st December, 1953 :—

## WEEKLY WAGE RATES OF ADULT MALES AND FEMALES.

(WEIGHTED AVERAGE NOMINAL WEEKLY RATES PAYABLE FOR A FULL WEEK'S WORK AND INDEX-NUMBERS OF WAGE RATES.)

Date.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust. (σ)
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## ADULT MALES—RATES OF WAGE.

	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
31st March, 1953 ..	285 8	275 4	267 9	271 9	285 0	286 3	279 0
30th June, 1953 ..	289 10	278 4	269 11	274 11	288 3	292 4	282 6
30th September, 1953	296 1	281 3	271 0	278 5	292 0	296 7	286 7
31st December, 1953	296 8	282 6	273 10	278 9	292 5	296 11	287 7

## ADULT MALES—INDEX-NUMBERS.

(Base : Weighted Average Wage for Australia (51s. 3d.), 1911 = 1,000.)

31st March, 1953 ..	5,573	5,372	5,224	5,302	5,561	5,586	5,443
30th June, 1953 ..	5,655	5,431	5,266	5,364	5,624	5,704	5,512
30th September, 1953	5,778	5,487	5,288	5,432	5,697	5,787	5,591
31st December, 1953	5,788	5,513	5,342	5,439	5,705	5,794	5,611

## ADULT FEMALES—RATES OF WAGE.

	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
31st March, 1953 ..	194 7	196 6	184 3	194 1	186 0	191 7	193 8
30th June, 1953 ..	196 9	198 11	186 3	196 7	188 5	194 6	196 0
30th September, 1953	198 5	200 4	187 6	199 6	190 5	196 4	197 7
31st December, 1953	198 5	200 10	188 7	199 6	190 5	196 4	197 11

## ADULT FEMALES—INDEX-NUMBERS.

(Base : Weighted Average for Australia (27s. 2d.), 30th April, 1914 = 1,000.)

31st March, 1953 ..	7,161	7,232	6,782	7,144	6,846	7,050	7,128
30th June, 1953 ..	7,240	7,322	6,855	7,236	6,934	7,158	7,212
30th September, 1953	7,302	7,372	6,900	7,342	7,007	7,226	7,272
31st December, 1953	7,302	7,392	6,940	7,342	7,007	7,226	7,285

(a) Weighted average for Australia.

## § 3. Basic Wages in Australia.

Basic Wage and Standard Hours Inquiry, 1952-53.—On 5th August, 1952 the Commonwealth Court of Conciliation and Arbitration began hearing claims by:—

(1) The Metal Trades Employers' Association and other employers' organizations—

- (a) that the basic wage for adult males be reduced ;
- (b) that the basic wage for adult females be reduced ;
- (c) that the standard hours of work be increased ;
- (d) that the system of adjusting the basic wages in accordance with variations occurring in retail price index-numbers be abandoned.

(2) The Metal Trades Federation, an association of employees' organizations, that the basic wage for adult males be increased, which would also result in increasing the amount, though not the proportion it bears to the basic wage for adult males, of the basic wage for adult females.

The Court consisted of Kelly *C.J.*, Foster, Kirby, Dunphy, Wright, McIntyre and Morgan *JJ.*, but before the hearing of evidence commenced Wright *J.* withdrew and during the hearing of the case Foster *J.* withdrew from the bench. The Court gave its decision on 12th September, 1953 and stated that reasons for its decision would be delivered later. Before the reasons for the judgment could be delivered McIntyre *J.*, who had been ill during the case, died.

The hearing of evidence for employers began on 16th September, 1952 and the hearing of evidence for employees concluded on 11th September, 1953. After the employers had finished their case and before the employees had commenced theirs, the counsel for employees applied to the Court to have the case dismissed on the grounds that "no case" had been made out by the employers. The Court, however, rejected this claim.

The decision of the Court, announced on 12th September, 1953. was expressed in the following terms :—

" 1. The employers' applications for reduction of the current basic wage for adult males and for reduction of the current basic wages for adult females are refused.

2. The employers' applications for an increase of the standard hours of work in the industries covered thereby are refused.

3. The employers' applications for omission or deletion of clauses or sub-clauses providing for the adjustment of basic wages are granted.

4. The Unions' application for increases of basic wages are refused.

The Court makes orders accordingly, to operate as from to-day.

The reasons for the above decision will be delivered at a later date.

The form of the appropriate orders will be settled by the Industrial Registrar."

This decision applied to awards within the jurisdiction of the Commonwealth Court of Conciliation and Arbitration.

The reasons for the decision were delivered on 27th October, 1953.

**Commonwealth Basic Wage Rates, p. 294.**—The following basic weekly wage rates for adult males for each capital city and the six capitals were operative during 1953 :—

**BASIC WAGE : WEEKLY RATES, CAPITAL CITIES, PRESCRIBED BY COMMONWEALTH COURT OF CONCILIATION AND ARBITRATION FOR ADULT MALES.**

Date Operative.(a)	Sydney.	Mel-bourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Six Capitals.
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
1953—							
February ..	238 0	229 0	215 0	225 0	229 0	232 0	231 0
May ..	241 0	232 0	217 0	228 0	231 0	239 0	234 0
August(b) ..	243 0	235 0	218 0	231 0	236 0	242 0	236 0

(a) Generally from the beginning of the first pay-period commencing in the month indicated.  
 (b) By the decision of the Commonwealth Court of Conciliation and Arbitration, announced on 12th September, 1953, automatic adjustment of basic wages in accordance with variations occurring in retail price index-numbers was discontinued in Commonwealth awards either then the subject of applications before the Court or subsequently reviewed in this connexion.

State Basic Wage Rates, p. 299.—The table below shows the "basic" weekly wage rates of State industrial tribunals, operative in November, 1952 and 1953.

## STATE BASIC WAGE—WEEKLY RATES.

State.	November, 1952.			November, 1953.		
	Date of Operation.	Males.	Females.	Date of Operation.	Males.	Females.
		<i>s. d.</i>	<i>s. d.</i>		<i>s. d.</i>	<i>s. d.</i>
New South Wales—						
Metropolitan and Country excluding Broken Hill ..	(a)	237 0	177 6	(b)	243 0	182 0
Broken Hill .. .. .	(a)	246 0	184 6	(b)	247 0	185 0
Victoria(c)(d) .. .. .	(a)	228 0	171 0	(e)	237 0	177 6
Queensland—						
Southern Division (Eastern District)—including Brisbane(f) .. .. .	3.11.52	216 0	144 6	2.11.53	222 0	149 0
South Australia .. .. .	(a)	229 0	171 6	(g)	231 0	173 0
Western Australia—						
Metropolitan Area .. .. .	27.10.52	238 6	155 0	(h)	246 6	160 3
South-West Land Division ..	27.10.52	239 2	155 6	(h)	246 0	159 11
Goldfields and other areas ..	27.10.52	244 2	158 9	(h)	249 4	162 1
Tasmania(c) .. .. .	(a)	230 0	172 6	(i)	242 0	181 6

(a) Beginning of first pay-period commencing in November, 1952.

(b) Automatic adjustment of basic wages was discontinued by the State Industrial Tribunal following the decision of the Commonwealth Court of Conciliation and Arbitration.

(c) None declared. Rates shown (capital city) are those commonly adopted by Wages Boards.

(d) The Victorian Factories and Shops (Wages Boards) Act 1953 (proclaimed 25th November, 1953) required Wages Boards in Victoria to provide for the automatic adjustment of wage rates and piece work prices in accordance with variations in retail price index numbers.

(e) Payable from date in November or December prescribed in determinations. (f) Allowances added for other areas:—Males—Southern Division (Western District), 7s. 4d.; Mackay Division, 5s. 6d.; Northern Division (Eastern District), 10s.; Northern Division (Western District), 17s. 4d.; Females—Half of these allowances.

(g) The "living wage" declared for the metropolitan area is also adopted in country areas except at Whyalla where a loading of 5s. is generally payable. The "living wage" is subject to quarterly variation according to the amount of the general automatic quarterly adjustment in the Commonwealth basic wage (discontinued on 12th September, 1953) for Adelaide.

(h) Following the suspension of quarterly adjustments to the Commonwealth basic wage, the State Arbitration Court declined on 13th November, 1953, to make any quarterly adjustment to the State basic wages.

(i) See note (c) above. However, in Tasmania, increases of 10s. for adult males and 7s. 6d. for adult females were paid from early November, but ceased to operate from 9th December, when automatic adjustments were discontinued.

**Average Weekly Total Wages Paid and Average Earnings.**—The following figures are derived from employment and wages recorded on Pay-roll Tax Returns (which cover approximately 80 per cent. of the total employment for Australia) and from estimates of the unrecorded balance. The figures relate to civilian wages and salaries only, pay and allowances of members of the armed forces being excluded. Quarterly figures, also, are published in the *Quarterly Summary of Australian Statistics* and in the *Monthly Review of Business Statistics*, which contains, in addition, an index of average weekly wage earnings, seasonally adjusted.

## AVERAGE WEEKLY TOTAL WAGES PAID AND AVERAGE EARNINGS.

Year.	N.S.W. (a)	Vic.	Q'land.	S. Aust. (b)	W. Aust.	Tas.	Aust.
AVERAGE WEEKLY TOTAL WAGES PAID. (£'000.)							
1945-46 .. .. .	4,966	3,378	1,563	947	689	344	11,887
1946-47 .. .. .	5,838	3,958	1,770	1,150	827	409	13,952
1947-48 .. .. .	6,976	4,719	2,069	1,369	954	492	16,579
1948-49 .. .. .	8,133	5,540	2,503	1,644	1,120	580	19,520
1949-50 .. .. .	9,018	6,370	2,838	1,894	1,315	672	22,107
1950-51 .. .. .	11,385	7,916	3,501	2,389	1,639	817	27,647
1951-52 .. .. .	14,364	9,816	4,319	3,013	2,108	1,059	34,684
1952-53 .. .. .	15,090	10,490	4,750	3,311	2,344	1,178	37,163

For footnotes see next page.

**AVERAGE WEEKLY TOTAL WAGES PAID AND AVERAGE EARNINGS—**  
*continued.*

Year.	N.S.W. (a)	Vic.	Q'land.	S. Aust. (b)	W. Aust.	Tas.	Aust.
<b>AVERAGE WEEKLY EARNINGS PER EMPLOYED MALE UNIT.(c)</b> (£.)							
1945-46 .. ..	6.57	6.59	5.95	5.89	6.04	5.67	6.37
1946-47 .. ..	6.81	6.86	6.00	6.19	6.18	5.94	6.59
1947-48 .. ..	7.73	7.80	6.58	7.02	6.87	6.72	7.44
1948-49 .. ..	8.73	8.84	7.63	8.03	7.75	7.56	8.44
1949-50 .. ..	9.50	9.78	8.34	8.83	8.65	8.49	9.26
1950-51 .. ..	11.46	11.70	9.82	10.58	10.23	9.99	11.09
1951-52 .. ..	14.24	14.20	11.93	13.13	12.80	12.59	13.65
1952-53 .. ..	15.50	15.46	13.32	14.58	14.13	13.97	14.95

(a) Includes Australian Capital Territory. (b) Includes Northern Territory. (c) Male units represent total male employment plus a proportion of female employment based on the approximate ratio of female to male earnings. The same ratio has been used in each State, and because the average ratio of female to male earnings may vary between States, precise comparisons between average earnings in different States cannot be made on the basis of the figures above.

## E. EMPLOYMENT AND UNEMPLOYMENT.

### § 1. Employment.

**Wage and Salary Earners in Civilian Employment, pp. 303-4.**—The following are particulars of wage and salary earners in civilian employment, excluding rural wage earners, females in domestic work in private homes, persons on the paid strength of the Defence Forces and National Service trainees in camp, for the month of June, 1953:—

#### WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT, JUNE, 1953.

*(Excluding Rural Wage Earners, Female Domestic in Private Homes, Persons on Paid Strength of Defence Forces and National Service Trainees in Camp.)*

('000.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.(a)
Males .. ..	734.3	521.6	255.2	170.6	130.2	61.8	1,886.8
Females .. ..	266.2	205.9	83.7	53.4	41.0	20.1	673.7
Persons .. ..	1,000.5	727.5	338.9	224.0	171.2	81.9	2,560.5

Particulars.	Governmental. (b)	Private Employers.	Mining and Quarrying.	Factories. (c)	Transport and Communication.	Retail Trade.	Other Commerce and Finance.
Males .. ..	567.8	1,319.0	58.0	666.3	295.1	125.0	191.0
Females .. ..	112.0	561.7	0.9	202.9	36.2	109.9	71.5
Persons .. ..	679.8	1,880.7	58.9	869.2	331.3	234.9	262.5

(a) Includes Australian Capital Territory and Northern Territory. (b) Includes all employees of Governmental Authorities (Commonwealth, State, Local and Semi-Governmental) on services such as railways, tramways, banks, post office, air transport, education, broadcasting, police, public works, factories and munitions establishments, migrant hostels, etc., as well as administrative employees within Australia. (c) Subject to revision.

**Government Employees, p. 305.**—The number of Government employees in Australia in June, 1953 was as follows:—

Commonwealth Government: Males, 159,000; Females, 41,600; Persons, 200,600.

State Government and Semi-Government Bodies: Males, 349,100; Females, 65,100; Persons, 414,200.

Local Government Authorities: Males, 59,700; Females, 5,300; Persons, 65,000.

Total: Males, 567,800; Females, 112,000; Persons, 679,800.

## § 2. Unemployment.

**Unemployment in Reporting Trade Unions, pp. 307-8.**—The following particulars relate to unemployment of members of trade unions during the June quarter of 1953:—  
Australia: Unions reporting, 365; Membership, 853,668; Unemployed—Number, 26,417; Percentage, 3.1. States: Percentage Unemployed—New South Wales, 3.5; Victoria, 3.7; Queensland, 2.0; South Australia, 2.4; Western Australia, 1.2; Tasmania, 3.3.

## § 4. Industrial Disputes.

**Summary of Disputes (involving Stoppage of Work), p. 315.**—The following table shows particulars of industrial disputes in each State and Territory during 1953:—

### INDUSTRIAL DISPUTES: SUMMARY, 1953.

State or Territory.	Number.	Workpeople Involved.			Working Days Lost.	Estimated Loss in Wages.
		Directly.	Indirectly. (a)	Total.		
New South Wales(b)	1,050	302,007	6,375	308,382	759,391	£ 2,403,242
Victoria	53	65,962	2,164	68,126	57,160	176,330
Queensland	265	87,986	3,511	91,497	153,448	465,830
South Australia	24	18,502	190	18,692	55,476	200,610
Western Australia	11	3,665	..	3,665	4,977	15,663
Tasmania	18	5,069	6	5,075	18,441	68,259
Northern Territory	5	535	..	535	1,807	7,161
Australian Capital Territory	3	74	..	74	130	342
Australia(b)	1,459	483,800	12,246	496,046	1,050,830	3,337,437

(a) Persons thrown out of work at the establishments where the stoppages occurred but not themselves parties to the dispute. (b) Includes disputes uncompleted at end of 1952.

## CHAPTER IX.—POPULATION.

### § 3. Growth and Distribution of Population.

**Growth of Population, pp. 328-30.**—The following table shows the estimated population of each State and Territory at 31st December, 1953:—

#### ESTIMATED POPULATION. (EXCLUDING FULL-BLOOD ABORIGINALS.)

Population—	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
At 31st Decem-ber, 1953—									
Males	1,747,953	1,214,862	645,689	380,278	326,935	168,471	10,048	18,353	4,512,589
Females	1,724,341	1,190,434	624,692	385,242	306,596	154,341	6,898	12,630	4,405,174
Persons	3,472,294	2,405,296	1,270,381	765,520	633,531	322,812	16,946	30,983	8,917,763



### § 4. Mean Population.

Mean Population, p. 335.—Mean populations for the calendar year ended 31st December, 1953 and for the financial year ended 30th June, 1953 are as follows :—

MEAN POPULATION.  
(EXCLUDING FULL-BLOOD ABORIGINALS.)

Period.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Year ended—									
30th June, 1953	3,420,171	2,362,440	1,248,823	749,500	612,735	308,926	16,353	28,428	8,747,376
31st Dec., 1953	3,445,165	2,385,011	1,261,435	757,765	622,697	313,196	16,747	29,712	8,831,728

### § 5. Elements of Increase.

Natural Increase, p. 336, Increase by Net Migration, p. 339 and Total Increase, p. 341.—The following table shows particulars of natural increase, increase by net migration and total increase during the year 1953 :—

#### POPULATION : NATURAL INCREASE, INCREASE BY NET MIGRATION AND TOTAL INCREASE, 1953.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
NATURAL INCREASE (EXCESS OF BIRTHS OVER DEATHS).									
Persons ..	43,183	30,911	19,776	11,194	10,790	5,185	344	664	122,047
Rate(a) ..	12.54	12.96	15.68	14.77	17.32	16.55	20.54	22.35	13.82
INCREASE BY NET MIGRATION.									
Persons ..	7,343	17,562	2,715	2,791	8,258	1,672	718	1,838	42,897
TOTAL INCREASE.									
Persons ..	50,526	48,473	22,491	13,985	19,048	6,857	1,062	2,502	164,944

(a) Excess of births over deaths per 1,000 of mean population.

### § 9. Oversea Migration.

Classes of Arrivals and Departures, p. 362.—Arrivals and departures during 1953 were :—Permanent new arrivals, 74,915 ; Australian residents returning from abroad, 42,695 ; temporary visitors arriving, 45,515 ; total arrivals, 163,125 : Australian residents departing permanently, 32,032 ; Australian residents departing temporarily, 39,946 ; temporary visitors departing, 48,250 ; total departures, 120,228.

## CHAPTER X.—VITAL STATISTICS.

## § 1. Marriages, § 2. Fertility and Reproduction, and § 3. Mortality.

Numbers and Rates, pp. 377-8, 382, 387, 398-9 and 403-4.—The following table shows totals and rates for marriages, live births, deaths and infant deaths for 1953 :—

## MARRIAGES, BIRTHS, DEATHS AND INFANT DEATHS, 1953.

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Marriages .. {									
Number	27,573	19,238	9,859	6,149	5,032	2,424	154	211	70,640
Rate(a)	8.00	8.08	7.82	8.11	8.08	7.74	9.20	7.10	8.00
Live Births .. {									
Number	74,890	53,561	30,782	18,156	15,862	7,736	460	788	202,235
Rate(a)	21.74	22.46	24.40	23.96	25.47	24.70	27.47	(b):6.52	22.90
Deaths .. {									
Number	31,707	22,650	11,006	6,962	5,072	2,551	116	124	80,188
Rate(a)	9.20	9.50	8.72	9.19	8.15	8.15	6.93	4.17	9.08
Infant Deaths .. {									
Number	1,845	1,133	769	375	375	177	18	17	4,712
Rate(c)	24.64	21.15	24.98	20.65	23.83	22.88	39.13	21.57	23.30

(a) Number per 1,000 of mean population. (b) Late in 1952, with the provision of maternity accommodation in Queanbeyan, the number of births registered in Canberra declined. The number of births in 1953 to mothers resident in the Territory was 26.66 per 1,000 of mean population. (c) Number of deaths under 1 year per 1,000 live births registered.

## § 1. Marriages.

Age and Conjugal Condition at Marriage, p. 379.—A summary of the previous conjugal condition of bridegrooms and brides in 1952 in relation to age at marriage is as follows :—

## AGE AND CONJUGAL CONDITION OF BRIDEGROOMS AND BRIDES : AUSTRALIA, 1952.

Age at Marriage. (Years).	Bridegrooms.				Brides.			
	Bachelors.	Widowers.	Divorced.	Total.	Spinsters.	Widows.	Divorced.	Total.
Under 20 ..	2,304	..	..	2,304	14,734	7	5	14,746
20-24 ..	31,034	12	50	31,096	33,794	109	315	34,218
25-29 ..	19,886	96	554	20,536	10,200	277	1,183	11,660
30-34 ..	6,637	198	1,020	7,855	3,226	418	1,254	4,898
35-39 ..	2,964	295	1,029	4,288	1,568	516	1,096	3,180
40-44 ..	1,491	357	874	2,722	827	467	663	1,957
45-49 ..	835	389	567	1,791	504	456	385	1,345
50-54 ..	408	474	349	1,231	251	435	222	908
55-59 ..	177	487	192	856	146	324	93	563
60-64 ..	115	512	86	713	73	263	33	369
65 and over ..	95	630	55	780	54	261	13	328
<b>Total ..</b>	<b>65,946</b>	<b>3,450</b>	<b>4,776</b>	<b>74,172</b>	<b>65,377</b>	<b>3,533</b>	<b>5,262</b>	<b>74,172</b>

In 1952 the proportional distribution (per cent.) of bridegrooms and brides according to previous conjugal condition was :—

Bridegrooms : Bachelors, 88.91 ; Widowers, 4.65 ; Divorced, 6.44.

Brides : Spinsters, 88.14 ; Widows, 4.76 ; Divorced, 7.10.

The average age in 1952 of bridegrooms was 28.79 years and of brides 25.61 years.

Celebration of Marriages, pp. 380-1.—The number of marriages in 1952 celebrated by ministers of religion in the various denominations or by civil officers was as follows.

## MARRIAGES IN EACH DENOMINATION, 1952.

Denomination.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia.	
									No.	Pro- portion of Total. %
Church of England	10,967	5,695	2,726	1,413	1,710	936	23	82	23,552	31.75
Roman Catholic	6,514	4,410	2,384	930	994	489	44	75	15,840	21.36
Methodist	3,071	2,869	1,665	1,791	738	441	17	11	10,603	14.29
Presbyterian	3,513	3,902	1,974	299	444	132	13	18	10,295	13.88
Congregational	331	346	125	274	123	60	..	1	1,260	1.70
Baptist	378	353	191	172	64	64	..	2	1,224	1.65
Lutheran	109	197	214	339	22	1	..	1	883	1.19
Church of Christ	114	324	80	157	74	16	..	..	765	1.03
Salvation Army	88	88	91	33	25	17	7	..	349	0.47
Greek Orthodox	127	73	42	33	50	..	..	..	325	0.44
Seventh-Day Ad- ventist	86	30	26	13	27	9	..	..	191	0.26
Other Christian	172	163	144	51	84	33	..	..	647	0.87
Hebrew	144	213	7	2	17	1	..	..	384	0.52
<b>Total</b>	<b>25,614</b>	<b>18,663</b>	<b>9,669</b>	<b>5,507</b>	<b>4,372</b>	<b>2,199</b>	<b>104</b>	<b>190</b>	<b>66,318</b>	<b>89.41</b>
Civil Officers	3,737	1,557	387	734	1,017	354	33	35	7,854	10.59
<b>Grand Total</b>	<b>29,351</b>	<b>20,220</b>	<b>10,056</b>	<b>6,241</b>	<b>5,389</b>	<b>2,553</b>	<b>137</b>	<b>225</b>	<b>74,172</b>	<b>100.00</b>

## PROPORTION OF TOTAL.

(Per Cent.)

Denominational	87.27	92.30	96.15	88.24	81.13	86.13	75.91	84.44	89.41
Civil	12.73	7.70	3.85	11.76	18.87	13.87	24.09	15.56	10.59

Summarized tables of Australian marriage statistics for 1952 will be found in the *Monthly Australian Demographic Review*, No. 31, July, 1953.

## § 2. Fertility and Reproduction.

**Gross and Net Reproduction Rates for Females, pp. 389-90.**—In 1952 the gross reproduction rate was 1.547 and the net reproduction rate (based on 1946-48 mortality experience) was 1.468.

**Fertility of Marriages, p. 391.**—For the year 1952 the number of nuptial confinements per marriage on the basis explained on p. 391 was 2.63. This figure must be read in conjunction with the text on that page.

**Age, Duration of Marriage and Issue of Mothers, p. 394.**—The following table shows for 1952 the number of married mothers according to each duration of marriage together with the total issue and average issue in each group.

Duration of Marriage (Years).	Total Married Mothers.	Total Issue.	Average Issue.	Duration of Marriage (Years).	Total Married Mothers.	Total Issue.	Average Issue.
0-1	25,169	25,632	1.02	14-15	2,388	11,259	4.71
1-2	24,346	29,162	1.20	15-16	1,971	9,919	5.03
2-3	21,797	36,403	1.67	16-17	1,634	8,822	5.40
3-4	20,007	40,052	2.00	17-18	1,219	6,845	5.62
4-5	18,415	42,251	2.29	18-19	896	5,381	6.01
5-6	15,787	41,202	2.61	19-20	707	4,467	6.32
6-7	12,209	34,707	2.84	20-21	537	3,509	6.53
7-8	9,006	27,496	3.05	21-22	345	2,476	7.18
8-9	7,514	24,837	3.31	22-23	318	2,223	6.99
9-10	7,381	25,430	3.45	23-24	203	1,596	7.86
10-11	6,998	25,317	3.62	24-25	141	1,178	8.35
11-12	5,241	20,687	3.95	25 and over	168	1,470	8.75
12-13	4,190	17,360	4.14				
13-14	3,083	13,798	4.48	<b>Total</b>	<b>191,670</b>	<b>463,479</b>	<b>2.42</b>

The average number of children born to mothers in the various age groups in 1952 was :—Under 20 years, 1.20; 20–24 years, 1.65; 25–29 years, 2.29; 30–34 years, 2.99; 35–39 years, 3.69; 40–44 years, 4.55; and 45–49 years, 5.53. The average for mothers of all ages was 2.42.

A classification of mothers by age group and previous issue is given for 1952 in the following table :—

**NUPTIAL CONFINEMENTS : AGE OF MOTHER AND PREVIOUS ISSUE, AUSTRALIA, 1952.**

Previous Issue.	Age of Mother (Years).							Total Married Mothers.
	Under 20.	20–24.	25–29.	30–34.	35–39.	40–44.	45 and over.	
0 .. ..	7,385	29,793	18,096	6,641	2,674	615	34	65,238
1 .. ..	1,425	17,156	22,299	10,272	3,724	709	42	55,627
2 .. ..	140	5,830	13,728	10,455	4,601	987	50	35,791
3 .. ..	12	1,536	5,641	6,211	3,631	897	60	17,988
4 .. ..	2	320	1,954	2,871	2,291	671	41	8,150
5 .. ..	..	44	718	1,391	1,294	492	32	3,971
6 .. ..	..	14	269	675	761	346	31	2,096
7 .. ..	..	2	76	345	493	242	15	1,173
8 .. ..	..	..	24	166	304	184	21	699
9 .. ..	..	..	6	74	178	111	10	379
10 and over ..	..	..	3	52	228	233	42	558
<b>Total Married Mothers ..</b>	<b>8,964</b>	<b>54,695</b>	<b>62,814</b>	<b>39,153</b>	<b>20,179</b>	<b>5,487</b>	<b>378</b>	<b>191,670</b>

**Nuptial First Births, pp. 395–6.**—The number and proportion of first births in 1952 according to duration of marriage of the mother was :—

**FIRST BIRTHS : DURATION OF MARRIAGE, AUSTRALIA, 1952.**

Duration of Marriage.	Number of First Births.	Proportion of Total First Births.
		%
Under 8 months .. ..	10,461	16.03
8 months .. ..	2,255	3.46
9 .. ..	4,784	7.33
10 .. ..	4,035	6.19
11 .. ..	3,442	5.28
<b>Total under 1 year .. ..</b>	<b>24,977</b>	<b>38.29</b>
1–2 years .. ..	19,861	30.44
2–3 .. ..	8,427	12.92
3–4 .. ..	4,503	6.90
4–5 .. ..	2,763	4.24
5–10 .. ..	3,870	5.93
10–15 .. ..	716	1.10
15 years and over .. ..	121	0.18
<b>Total .. ..</b>	<b>65,238</b>	<b>100.00</b>

A comprehensive summary of the Australian birth statistics for 1952 will be found in the *Monthly Australian Demographic Review*, No. 34, October, 1953.

### § 3. Mortality.

Infant Deaths : Causes of Death, pp. 407-8.—The principal causes of death of children under one year of age in 1952 were as follows :—

#### CAUSES OF DEATH: CHILDREN UNDER ONE YEAR OF AGE, AUSTRALIA, 1952.

Cause of Death.	Number of Deaths under one Year.	Cause of Death.	Number of Deaths under one Year.
Tuberculosis .. .. .	8	Bronchitis .. .. .	37
Septicaemia and pyaemia .. .. .	17	Other diseases of the respiratory system	59
Diphtheria .. .. .	4	Hernia and intestinal obstruction .. .. .	45
Whooping Cough .. .. .	18	Gastro-enteritis and colitis, age four weeks and over .. .. .	133
Meningococcal infections .. .. .	54	Other diseases of the digestive system .. .. .	24
Measles .. .. .	5	Diseases of the genito-urinary system .. .. .	12
Other infective and parasitic diseases .. .. .	30	Diseases of the skin and cellular tissue .. .. .	7
Neoplasms .. .. .	18	Diseases of the bones and organs of movement .. .. .	3
Allergic, endocrine system, etc., diseases	24	Congenital malformations .. .. .	813
Diseases of the blood .. .. .	11	Certain diseases of early infancy—	
Mental, etc., disorders .. .. .	17	Without mention of immaturity .. .. .	1,044
Meningitis .. .. .	59	With immaturity .. .. .	1,810
Encephalitis .. .. .	11	Symptoms and ill-defined conditions .. .. .	22
Erythroedema polynœuritica .. .. .	13	Accidents, poisoning and violence .. .. .	133
Otitis media and mastoiditis .. .. .	15		
Other diseases of the nervous system, etc.	31	All Causes .. .. .	4,797
Diseases of the circulatory system .. .. .	19		
Pneumonia, age four weeks and over .. .. .	301		

#### DEATHS FROM CERTAIN DISEASES OF EARLY INFANCY : AUSTRALIA, 1952.

Category No.	Cause of Death.	Without Mention of Immaturity.			With Immaturity.			Total.		
		Males.	Fe-males.	Per-sons.	Males.	Fe-males.	Per-sons.	Males.	Fe-males.	Per-sons.
760	Intracranial and spinal injury at birth .. .. .	192	116	308	63	26	89	255	142	397
761	Other birth injury .. .. .	68	34	102	76	50	126	144	84	228
762	Post-natal asphyxia and atelectasis .. .. .	144	105	249	175	113	288	319	218	537
763	Pneumonia of the newborn .. .. .	72	49	121	25	20	45	97	69	166
764	Diarrhoea of the newborn .. .. .	4	2	6	2	3	5	6	5	11
765	Ophthalmia neonatorum .. .. .	..	..	..	..	..	..	..	..	..
766	Pemphigus neonatorum .. .. .	1	..	1	..	..	..	1	..	1
767	Umbilical sepsis .. .. .	2	3	5	..	..	..	2	3	5
768	Other sepsis of newborn .. .. .	7	3	10	2	..	2	9	3	12
769	Neonatal disorders arising from maternal toxæmia .. .. .	18	14	32	29	40	69	47	54	101
770	Haemolytic disease of newborn (erythroblastosis) .. .. .	71	47	118	12	11	23	83	58	141
771	Haemorrhagic disease of newborn .. .. .	16	12	28	7	6	13	23	18	41
772	Nutritional maladjustment .. .. .	7	6	13	1	..	1	8	6	14
773	Ill-defined diseases peculiar to early infancy .. .. .	34	17	51	43	31	74	77	48	125
774	Immaturity with mention of any other subsidiary condition .. .. .	..	..	..	15	12	27	15	12	27
775	Immaturity subsidiary to some other cause .. .. .	..	..	..	..	..	..	..	..	..
776	Immaturity unqualified .. .. .	..	..	..	590	458	1,048	590	458	1,048
	Total, Class XV. .. .. .	636	408	1,044	1,040	770	1,810	1,676	1,177	2,854

Age Distribution, p. 409.—A summary of the ages at death for Australia for the year 1952 is given in the following table:—

## AGE AT DEATH : AUSTRALIA, 1952.

Age at Death.	Males.	Fe- males.	Per- sons.	Age at Death.	Males.	Fe- males.	Per- sons.
Under 1 week .. .. .	1,711	1,221	2,932	Total 5- 9 years..	290	224	514
1 week and under 2 weeks..	138	108	246	" 10-14 " ..	206	143	349
2 weeks " " 3 " ..	54	49	103	" 15-19 " ..	446	160	606
3 " " " 28 days ..	45	30	75	" 20-24 " ..	665	226	891
Total under 28 days ..	1,948	1,408	3,356	" 25-29 " ..	675	333	1,008
28 days and under 3 months	238	174	412	" 30-34 " ..	636	437	1,073
3 months and under 6 " ..	255	196	451	" 35-39 " ..	864	613	1,478
6 " " " 12 " ..	333	245	578	" 40-44 " ..	1,184	812	1,996
Total under 1 year ..	2,774	2,023	4,797	" 45-49 " ..	1,772	1,107	2,879
1 year .. .. .	270	274	544	" 50-54 " ..	2,570	1,554	4,124
2 years .. .. .	171	125	296	" 55-59 " ..	3,526	2,137	5,663
3 " " " ..	119	80	199	" 60-64 " ..	5,140	2,983	8,123
4 " " " ..	95	69	164	" 65-69 " ..	5,876	3,805	9,681
Total under 5 years ..	3,429	2,571	6,000	" 70-74 " ..	5,807	4,425	10,232
				" 75-79 " ..	5,211	4,938	10,149
				" 80-84 " ..	4,210	4,719	8,929
				" 85-89 " ..	2,400	3,104	5,504
				" 90-94 " ..	772	1,194	1,966
				" 95-99 " ..	152	238	390
				" 100 and over ..	7	19	26
				Age not stated ..	13	4	17
				Total, All Ages ..	45,851	35,746	81,597

Causes of Death, pp. 411-5.—The total number of deaths in Australia in 1952 according to the causes of death used in the abbreviated list of 50 causes and the death-rate per million of mean population from each of these causes were as shown in the following table. Only the code numbers of the abbreviated list have been shown and reference should be made to pp. 412-5 for the titles or the groupings of detailed list numbers.

## CAUSES OF DEATH : AUSTRALIA, 1952.

ABBREVIATED LIST OF 50 CAUSES (BASED ON THE SIXTH REVISION OF THE INTERNATIONAL LIST).

Code No. (see pp. 412-5 for Titles).	Number of Deaths.			Rate per 1,000,000 of Mean Popu- lation.	Code No. (see pp. 412-5 for Titles).	Number of Deaths.			Rate per 1,000,000 of Mean Popu- lation.
	Males.	Females.	Persons.			Males.	Females.	Persons.	
B 1 ..	884	281	1,165	135	B 27 ..	1,163	836	2,019	233
B 2 ..	70	55	125	14	B 28 ..	1,051	1,161	2,212	257
B 3 ..	150	54	204	24	B 29 ..	678	730	1,408	163
B 4 ..	2	3	5	1	B 30 ..	105	114	219	25
B 5 ..	..	..	..	..	B 31 ..	1,532	1,261	2,793	323
B 6 ..	18	24	42	5	B 32 ..	596	227	823	95
B 7 ..	5	3	8	1	B 33 ..	456	135	591	68
B 8 ..	14	19	33	4	B 34 ..	110	64	174	20
B 9 ..	9	14	23	3	B 35 ..	294	247	541	63
B 10 ..	75	61	136	16	B 36 ..	243	235	478	55
B 11 ..	..	..	..	..	B 37 ..	269	139	408	47
B 12 ..	67	42	109	13	B 38 ..	869	742	1,611	186
B 13 ..	..	..	..	..	B 39 ..	653	..	653	75
B 14 ..	16	16	32	4	B 40 ..	..	190	190	22
B 15 ..	4	..	4	..	B 41 ..	603	487	1,090	126
B 16 ..	3	7	10	1	B 42 ..	718	444	1,162	134
B 17 ..	167	122	289	33	B 43 ..	115	80	195	23
B 18 ..	5,815	5,322	11,137	1,288	B 44 ..	844	654	1,497	173
B 19 ..	173	184	357	41	B 45 ..	865	865	1,731	200
B 20 ..	380	705	1,085	125	B 46 ..	2,740	3,264	6,004	810
B 21 ..	125	197	322	37	BE 47 ..	1,697	383	2,080	240
B 22 ..	4,675	6,123	10,798	1,248	BE 48 ..	1,950	972	2,922	338
B 23 ..	91	54	145	17	BE 49 ..	694	225	919	106
B 24 ..	54	60	114	13	BE 50 ..	94	42	136	16
B 25 ..	372	442	814	94					
B 26 ..	13,343	8,441	21,784	2,519	All Causes	45,851	35,746	81,597	9,434

## CHAPTER XI.—EDUCATION.

## § 8. Universities.

**Commonwealth Grants, pp. 463-4.**—The States Grants (Universities) Act No. 75 of 1953 (assented to 10th December, 1953) repealed the 1951 Act, and shall be deemed to have come into operation on 1st January, 1953. The main provisions are summarized below :—

Section 5 (1).—If the sum of the fees and State grants received by a University during either of the years 1953 and 1954 exceeds the amount specified in column 2 of the table below, the grant to the State for that year is—

- (a) an amount equal to one-third of the excess, and
- (b) the amount shown in column 3 of the table.

Section 5 (2).—The maximum amount payable under Section 5 (1.) (a) above is shown in column 4.

Section 6.—The State will, in the year in which payment is received, pay to the University concerned an amount equal to the grants received and must ensure that—

- (a) the grant under Section 5 (1.) (a) is applied for expenditure, not being capital expenditure, on university purposes ;
- (b) of the grant under Section 5 (1.) (b), the amount shown in column 5 is applied towards the teaching and administrative costs of the residential colleges of the University and the remainder for expenditure, not being capital expenditure, on university purposes.

Section 9.—The provisions of the 1951 Act shall be deemed to have operated in respect of the year 1952 as if the amounts set out on page 464 of Chapter XI.—Education in relation to the New South Wales University of Technology had been the following :—  
£7,280 ; £81,885 ; £605,805 ; £30,826 ; £2,356.

## COMMONWEALTH GRANTS TO THE STATES FOR UNIVERSITY PURPOSES.

(£.)

University.	Amount of fees and State grants.	Amount of financial assistance under Section 5. (1.) (b).	Maximum amount payable under Section 5. (1.) (a).	Amount for teaching and administrative costs of residential colleges.
(1)	(2)	(3)	(4)	(5)
New South Wales—				
University of Sydney .. .. .	783,369	270,023	202,140	8,900
N.S.W. University of Technology ..	605,805	81,885	61,652	2,356
New England University College ..	64,164	13,099	9,960	220
Victoria—University of Melbourne ..	655,159	220,414	165,000	7,265
Queensland—University of Queensland	309,269	93,226	69,780	3,073
South Australia—University of Adelaide	272,394	93,893	70,320	3,095
Western Australia—University of West- ern Australia .. .. .	183,531	62,845	47,400	1,668
Tasmania—University of Tasmania ..	106,319	33,127	22,920	505
<b>Total .. .. .</b>	<b>2,980,010</b>	<b>868,512</b>	<b>649,172</b>	<b>27,082</b>

## CHAPTER XII.—PUBLIC JUSTICE.

§ 2. Lower (Magistrates' Courts), § 3. Higher Courts (Judges' Courts),  
 § 4. Civil Courts, § 5. Police and Prisons.

Convictions, Bankruptcies, Police, Prisons, pp. 491, 494, 496, 503, 505-6.—The following table is a summary of the more important statistics of this chapter for the latest year for which the information is available :—

## PUBLIC JUSTICE : SUMMARY, 1952.

Particulars.	N.S.W.	Vic.	Qld. (a)	S.A.	W.A.	Tas.	N.T. (a)	A.C.T.	Aust.
Convictions for serious crime, Magistrates' Courts .. No.	17,858	7,602	2,916	(a)1,945	3,446	1,126	149	173	35,215
Convictions for Drunkenness .. No.	79,088	21,526	22,932	(a)6,307	6,042	816	424	541	137,676
Convictions at Higher Courts—									
Offences against the Person .. No.	(a) 411	202	120	86	64	35	10	8	936
Offences against Property .. No.	(a) 1,173	631	284	214	145	123	13	8	2,591
Other Offences ..	(a) 45	50	15	28	4	13	3	..	158
Total ..	(a) 1,629	883	419	328	213	171	26	16	3,685
Bankruptcies (a) .. No.	298	184	116	100	64	44	..	(b)	806
Liabilities £	1,045,490	597,244	417,158	320,768	337,541	44,078	..	(b)	2,762,279
Assets £	685,397	383,094	382,730	202,016	293,857	25,488	..	(b)	1,972,582
Police .. No.	4,688	2,992	2,449	(a)1,091	(a) 929	(a) 418	50	60	12,677
Prisons ..	(a) 15	9	7	16	(a) 19	(a) 2	2	..	70
Prisoners in Gaol ..	(a) 2,231	1,248	538	437	(a) 374	(a) 154	44	..	5,026

(a) Year 1952-53.

(b) Included in New South Wales.

## CHAPTER XIII.—PUBLIC HEALTH AND RELATED INSTITUTIONS.

## A. PUBLIC HEALTH.

§ 9. Hospital Benefits Act, § 12. Pharmaceutical Benefits Act,  
 § 13. Pensioner Medical Service.

Hospital Benefits, pp. 529-30, Pharmaceutical Benefits, p. 531, Pensioner Medical Service, p. 531, The National Health Act 1953.—The Hospital Benefits Act 1951, the Pharmaceutical Benefits Act 1947-1952 and the National Health Service Act 1948-49 providing these respective benefits were repealed by the National Health Act 1953. This Act is largely a consolidating measure, designed to put into statute form all phases of the National Health Scheme. Parts I.—Preliminary and II.—National Health



Services came into operation on 18th December, 1953, Part VII.—Pharmaceutical Benefits commenced on 12th May, 1954 and the remainder on 14th April, 1954. Benefits payable under the former Acts were continued at existing rates and under the same conditions. Particulars of the hospital and pharmaceutical benefits and of the pensioner medical service provided under the scheme will be found in Chapter XIII.

**Medical Benefits.**—A national medical benefits scheme was introduced on 1st July, 1953. This scheme is based on the principle of voluntary insurance, persons who are contributors to an approved medical benefits organization being entitled under the scheme to receive part reimbursement by the Commonwealth of payments made for medical services to themselves or their dependants. The benefits were originally prescribed under the National Health (Medical Benefits) Regulations, now superseded by the National Health Act 1953.

Commonwealth medical benefits are set out in the First and Second Schedules of the National Health Act 1953. Benefits in the First Schedule which cover the ordinary services provided by a general medical practitioner must be matched by registered organizations. Second Schedule Commonwealth benefits are mainly of a specialist nature. Registered organizations do not have to match these benefits.

## B. INSTITUTIONS.

### § 2. Public Hospitals (other than Mental Hospitals).

**Number, Staff, etc., pp. 533-4.**—The following table gives a summary of details relating to public hospitals in each State for the year 1951-52 :—

#### PUBLIC HOSPITALS : SUMMARY, 1951-52.

Particulars.	N.S.W.	Vic. (a)	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
Hospitals .. No.	257	101	136	61	96	23	1	675
Medical staff .. "	3,684	1,623	567	490	296	208	21	6,889
Nursing staff .. "	9,762	5,589	4,593	1,774	1,906	855	77	24,556
Beds and cots .. "	18,762	10,429	8,551	3,448	4,156	1,798	184	47,328
In-patients (Cases) treated during year .. No.	376,343	176,417	175,164	59,374	72,858	31,663	4,201	896,020
Inmates at end of year .. No.	14,171	7,560	6,437	2,297	2,414	1,135	147	34,161
" , average daily number ..	13,648	7,337	6,335	2,370	2,589	1,137	136	33,552
Out-patients treated '000	1,047	423	495	114	(b) 109	86	12	2,286
Revenue—								
Government aid ..	£'000. (c)	£'000. { 6,692	£'000. (d) 3,702	£'000. 1,869	£'000. 2,538	£'000. 1,040	£'000. 174	£'000. }
Commonwealth hospital benefits ..	13,140	1,010	895	434	347	183	22	32,046
Public subscriptions ..	129	1,015	3	172	103	2	..	1,424
Fees ..	1,857	1,299	325	332	222	54	7	4,096
Total ..	15,375	10,254	4,968	3,055	3,223	1,284	204	38,363
Expenditure—								
Salaries and wages ..	10,193	4,637	2,831	1,706	1,573	831	87	21,858
Buildings, upkeep, etc.	499	235	120	138	73	21	11	1,097
Capital ..	73	3,018	988	222	436	..	42	4,779
Total ..	16,174	11,432	5,983	3,053	3,134	1,289	204	41,269

(a) Year ended 31st March, 1952.  
expenditure.

(d) Year 1950-51.

(b) Estimated.

(c) Excludes loan receipts and

### § 4. Mental Hospitals.

Number, Staff, etc., pp. 535-7.—The following table gives a summary of details relating to mental hospitals in each State for the year 1951-52.

#### MENTAL HOSPITALS : SUMMARY, 1951-52.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
	(a)	(a)	(b)	(a)	(a)		
Hospitals .. .. .	No. 13	9	4	2	4	1	33
Medical staff .. .. .	(c) 66	75	10	8	6	2	167
Nursing staff .. .. .	1,925	1,418	817	397	244	184	4,985
Beds and cots .. .. .	12,189	6,510	4,191	2,427	1,506	750	27,573
In-patients treated .. .. .	14,813	8,701	5,300	2,837	1,808	981	34,440
Inmates at end of year .. .. .	12,873	7,568	4,388	2,425	1,599	710	29,563
„ , average daily number .. .. .	11,235	6,517	4,155	2,358	1,517	707	26,489
Revenue—	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Fees .. .. .	125	116	9	19	24	8	301
Mental institution benefits .. .. .	203	149	..	34	18	..	408
Other .. .. .	(d) 83	20	3	31	9	1	152
Total .. .. .	416	285	12	84	51	13	861
Expenditure—							
Salaries and wages .. .. .	1,657	1,111	618	355	278	153	4,172
Upkeep, etc., buildings .. .. .	78	151	6	41	26	8	310
Other .. .. .	1,306	1,041	460	245	173	97	3,322
Capital Expenditure .. .. .	341	401	112	48	43	..	945
Total .. .. .	3,382	2,704	1,196	689	520	258	8,749

(a) Year 1951 except for revenue and expenditure, which relate to the year 1951-52. (b) Includes the Epileptic Home. (c) In addition there are 30 visiting specialists who are paid for their services. (d) Includes £31,000 Commonwealth Hospital Benefits.

## CHAPTER XIV.—WELFARE SERVICES.

### A. COMMONWEALTH SOCIAL SERVICE BENEFITS.

#### § 2. Commonwealth Expenditure on Social and Health Services.

States, 1952-53, p. 539.—The following table shows particulars of payments of social and health services in each State during 1952-53 :—

#### COMMONWEALTH EXPENDITURE ON SOCIAL AND HEALTH SERVICES, YEAR 1952-53.

(£'000.)

Social and Health Services.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
	(a)	(a)	(b)	(b)	(a)		
Age and Invalid Pensions .. .. .	30,533	17,476	10,723	6,308	4,842	2,542	72,424
Funeral Benefits .. .. .	112	70	37	24	18	9	270
Maternity Allowances .. .. .	1,195	872	497	305	249	128	(e) 3,248
Child Endowment .. .. .	20,012	13,996	8,343	4,770	4,053	2,059	d 53,244
Widows' Pensions .. .. .	2,630	1,535	1,059	486	404	220	6,334
Unemployment and Sickness Benefits—							
Unemployment .. .. .	2,686	924	662	132	124	42	4,570
Sickness .. .. .	546	370	209	134	85	49	1,393
Special(e) .. .. .	73	141	40	17	13	8	292
Community Rehabilitation .. .. .	87	167	54	85	53	8	454
Hospital Benefits .. .. .	2,842	1,805	1,136	630	551	259	7,223
Tuberculosis Campaign(f) .. .. .	1,519	1,602	541	389	000	165	4,876
Pharmaceutical Benefits .. .. .	2,470	1,835	854	636	505	138	(g) 6,487
National Health Services—							
Medical Benefits for Pensioners .. .. .	808	404	208	169	119	32	1,740
Pharmaceutical Benefits for Pensioners .. .. .	365	139	97	65	49	14	729
Nutrition for Children .. .. .	706	433	55	175	92	60	1,521
Miscellaneous Services .. .. .	46	26	54	13	17	13	(h) 183
Mental Institution Benefits .. .. .	200	151	99	36	18	10	523
Total .. .. .	66,830	42,006	24,668	14,374	11,792	5,756	165,511

(a) Includes Australian Capital Territory. (b) Includes Northern Territory. (c) Includes payments overseas, £2,000. (d) Includes payments overseas, £11,000. (e) Includes payments to migrants. (f) Includes allowances and reimbursement to States. (g) Includes £49,000 Head Office Administration. (h) Includes £14,000 Head Office administration.

### § 3. Age and Invalid Pensions, § 4. Maternity Allowances, § 5. Child Endowment, and § 6. Widows' Pensions.

General, pp. 540-9.—The following table gives a summary of age and invalid and widows' pensions, maternity allowances and child endowment for the year 1952-53 :—

#### SOCIAL SERVICES : SUMMARY, 1952-53. (Number.)

Particulars.	N.S.W. (a)	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Age and Invalid Pensions—							
Age Pensions in force	No. 154,936	93,353	54,236	34,207	25,679	12,380	374,791
Invalid Pensions in force	.. 33,546	15,019	10,691	4,378	3,996	2,602	70,232
Maternity Allowances—							
Claims paid	No. 74,011	55,297	31,058	19,068	15,535	7,983	c 203,042
Child Endowment—							
Family claims in force	No. 491,848	328,561	178,760	113,529	89,671	44,202	d1,246,986
Endowed children	.. 1,005,887	672,525	393,539	234,582	192,991	98,619	d2,599,026
Widows' Pensions—							
Pensions in force	No. 16,812	10,173	6,814	3,163	2,686	1,380	41,028
Children for whom pensions paid	.. 7,815	3,844	3,158	1,334	1,127	702	17,980

(a) Includes Australian Capital Territory. (b) Includes Northern Territory. (c) Includes 90 claims paid abroad. (d) Includes 415 claims and 883 children abroad.

### § 7. Unemployment and Sickness Benefits.

Statistics, p. 551.—The following table shows the number of persons in each State admitted to benefit during the year, and the number on benefit at the end of the year 1952-53, together with corresponding particulars for Australia for the year 1953-54 :—

#### UNEMPLOYMENT AND SICKNESS BENEFITS : PERSONS ADMITTED TO AND ON BENEFIT, 1952-53 and 1953-54.

State.	Unemployment.		Sickness.		Special.(a)		Total.(c)		
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Persons.
NUMBER ADMITTED TO BENEFIT, 1952-53.									
N.S. Wales(b)	76,668	11,972	15,135	4,692	640	247	92,743	16,911	109,654
Victoria	34,689	4,283	8,466	2,580	383	451	43,538	7,314	50,852
Queensland	27,320	3,827	7,067	1,606	620	151	35,013	5,584	40,597
Sth. Australia(c)	5,023	886	3,994	924	244	56	10,161	1,866	12,027
W. Australia	7,092	399	2,977	637	91	37	10,160	1,073	11,233
Tasmania	1,814	203	1,620	321	31	38	3,471	562	4,033
Australia—									
1952-53	153,512	21,570	39,565	10,760	2,009	980	195,086	33,310	228,396
1953-54	52,418	9,715	43,944	12,592	2,298	1,333	98,660	23,640	122,300

#### NUMBER ON BENEFIT, 30TH JUNE, 1953.

N.S.W.(b)	12,044	2,585	2,500	913	652	422	15,196	3,920	19,116
Victoria	5,056	883	1,565	494	80	303	6,701	1,680	8,381
Queensland	3,017	660	910	277	94	186	4,021	1,123	5,144
Sth. Australia(c)	505	150	549	179	59	45	1,113	374	1,487
W. Australia	626	65	493	94	20	50	1,049	209	1,258
Tasmania	304	19	213	38	7	67	524	124	648
Australia—									
30th June—									
1953	21,552	4,362	6,140	1,995	912	1,073	28,604	7,430	36,034
1954	4,360	1,723	5,791	2,011	543	1,309	10,694	5,043	15,737

(a) Excludes migrants receiving benefits. (b) Includes Australian Capital Territory. (c) Includes Northern Territory.

## CHAPTER XVI.—PRIVATE FINANCE.

## A. CURRENCY.

## § 2. Coinage.

Issues of Australian Coins, p. 608.—The net issues of Australian coins to 30th June, 1953, were :—silver, £32,196,000 ; bronze, £2,633,000 ; total, £34,829,000.

## § 3. Notes.

The Australian Note Issue, p. 614.—The average value of notes in circulation for the year 1952–53 was £319,730,000. This amount was distributed in denominations as follows :—10s., £9,738,000 ; £1, £68,286,000 ; £5, £152,679,000 ; £10, £88,257,000 ; £20, £6,000 ; £50, £55,000 ; £100, £60,000 ; and £1,000, £649,000. The amount held by the banks was £36,400,000 and by the public, £283,330,000.

## B. BANKING.

## § 1. Cheque-Paying Banks.

Commonwealth Bank, pp. 623–4.—Particulars of the average liabilities and assets of the Central Banking Business and General Banking Division, etc., of the Commonwealth Bank for the year 1952–53 appear below :—

The average liabilities of the Central Banking Business (including Note Issue Department) of the Commonwealth Bank for the year ended June, 1953 amounted to £874,913,000. Capital and Reserve Funds amounted to £11,023,000 ; Notes on Issue to £318,192,000 ; Special Accounts of Trading Banks to £212,890,000 ; Other Deposits of Trading Banks to £45,447,000 ; Other Liabilities to £287,361,000.

Particulars of the average assets are as follows :—Gold and Balances held abroad, £363,576,000 ; Australian Coin, £2,538,000 ; Cheques and Bills of other Banks, £6,595,000 ; Government and Other Securities (including Treasury Bills), £434,771,000 ; Bills Receivable and Remittances in Transit, £130,000 ; and Other Assets, £67,303,000.

The average liabilities in Australia of the General Banking Division only, for the year ended June, 1953, were £131,870,000. Of this amount Deposits not bearing interest amounted to £96,664,000 ; Deposits bearing interest to £22,817,000 ; Balances due to other Banks to £3,820,000 ; Other Liabilities to £8,569,000.

The average assets in Australia, £138,762,000, included Cash and Cash Balances, £8,784,000 ; Special Deposit Account with Central Bank, £21,731,000 ; Balances with other Banks, £1,600,000 ; Treasury Bills, £17,239,000 ; Other Australian Public Securities, £25,840,000 ; Other Securities, £92,000 ; Loans, Advances and Bills Discounted, £59,492,000 ; Other Assets, £3,984,000.

Private Trading Banks, pp. 624–6.—Average liabilities in Australia of the Private Trading Banks for the year ended June, 1953, were £1,187,705,000. Interminable Deposits or Deposit Stock amounted to £226,000 ; Deposits not bearing interest to £943,747,000 ; Deposits bearing interest to £218,699,000 ; Notes in Circulation to £158,000 ; Balances due to other Banks to £10,628,000 ; Other Liabilities to £14,247,000.

Average assets in Australia amounted to £1,188,699,000. These comprised Cash and Cash Balances, £74,712,000; Special Accounts with Commonwealth Bank, £211,737,000; Balances with other Banks, £22,580,000; Treasury Bills, £123,059,000; Other Australian Public Securities, £86,513,000; Other Securities, £2,313,000; Loans, Advances and Bills Discounted, £638,092,000; All Other Assets, £29,693,000.

**Classification of Advances within Australia—Commonwealth Bank and Private Trading Banks, p. 628.**—Advances within Australia at the end of June, 1953 dissected by industries were:—Business advances—Agriculture, Dairying and Grazing, £148,279,000; Manufacturing, £141,481,000; Transport, Storage and Communication, £12,710,000; Finance and Property, £64,615,000; Commerce, £109,565,000; Miscellaneous, £42,618,000; Not elsewhere specified, £9,345,000; Total Business advances, £528,613,000; Advances to Public Authorities, £13,551,000; Personal advances, £127,912,000; Total, £670,076,000.

**Clearing House Returns, p. 630.**—The average weekly bank clearings in each capital city for the year ended June, 1953 were as follows:—Sydney, £88,557,000; Melbourne, £78,965,000; Brisbane, £17,886,000; Adelaide, £16,794,000; Perth, £11,441,000; Hobart, £2,985,000; Total, £216,628,000.

**Debits to Customers' Accounts—All Cheque-paying Banks, p. 630.**—The average weekly debits to customers' accounts in each State for the year 1952–53 for all cheque-paying banks (excluding debits to accounts of Australian Governments in capital cities) were as follows:—New South Wales, £151,938,000; Victoria, £131,998,000; Queensland, £43,796,000; South Australia, £30,063,000; Western Australia, £22,091,000; Tasmania, £8,850,000; Australian Capital Territory, £580,000; Total, £389,316,000.

## § 2. Savings Banks.

**All Savings Banks, p. 633.**—The amounts on deposit in the several States at 30th June, 1953 were:—New South Wales, £319,149,000; Victoria, £319,971,000; Queensland, £109,360,000; South Australia, £113,875,000; Western Australia, £49,794,000; Tasmania, £32,078,000; Northern Territory, £1,116,000; Australian Capital Territory, £2,154,000; Total £947,497,000. Total excess of deposits over withdrawals during 1952–53 was £39,020,000, and interest added was £16,579,000.

The number of operative accounts in the several States at 30th June, 1953 was:—New South Wales, 2,280,000; Victoria, 2,079,000; Queensland, 838,000; South Australia, 726,000; Western Australia, 414,000; Tasmania, 269,000; Northern Territory, 9,000; Australian Capital Territory, 18,000; Total, 6,633,000.

## D. INSURANCE.

### § 2. Life Assurance.

**Life Assurance, pp. 646–51.**—The following is a summary of the life assurance business transacted in Australia during 1953 (figures for 1952 in parentheses) compiled from monthly returns collected from the 22 companies registered under the Life Assurance Act 1945–1950, and excluding the Government Insurance Office of New South Wales and the Queensland State Government Insurance Office which operate only within their respective States. Particulars shown are therefore not entirely comparable with those in Chapter XVI., which are derived from annual returns and include business of the State Government Offices.



**Taxation, 1953-54 Budget Proposals.**—Under legislation introduced to implement the 1953-54 Commonwealth Budget proposals, the following changes were made in Commonwealth taxation provisions :—

**Estate Duty, p. 670.**—From the 28th October, 1953 the statutory exemption on estates passing to the widow, children or grand-children of the deceased was increased to £5,000 (from £2,000) decreasing on a graduated scale and ceasing to apply when the net value of the estate reaches £20,000. On estates passing to persons other than those referred to above, the statutory exemption was increased to £2,500 (from £1,000) and ceasing to apply at £10,000. Where the estate passes partly to these relatives and partly to others a proportionate allowance is made. In all cases the statutory exemption was varied to diminish by £1 for every £3 of the excess value of the estate.

The legislation also provided, as from 27th June, 1950, for a special deduction of £5,000 from estates of persons serving in Korea or Malaya.

Under the Estate Duty Convention (United States of America) Act 1953, assented to on 11th December, 1953, relief was provided for double taxation on the estates of deceased persons.

**Gift Duty, p. 671.**—Under the Gift Duty Convention (United States of America) Act 1953, assented to on 11th December, 1953, relief was provided for double taxation on gifts under certain conditions.

**Income Taxes, pp. 737-46.**—The following changes and rates of tax apply for the 1953-54 financial year (income year 1953-54) for individuals :—

**Concessional Deductions, p. 737.** Changes in concessional deductions were (a) for a dependent spouse, daughter-housekeeper, housekeeper or parent, £130 (increased from £104); (b) for education expenses, £75 (increased from £50) and (c) for medical expenses, £150 (increased from £100), including dental expenses, £30 (increased from £20).

**Effective Exemptions from Tax, p. 738.** For the financial year 1953-54 the effect of the deductions for dependants was to exempt from taxation persons with incomes up to the amounts shown hereunder :—

#### RESIDENT TAXPAYERS : EFFECTIVE EXEMPTIONS FROM TAX.

( £.)

Taxpayers with—	Income Tax and Social Services Contribution.
No dependants .. .. .	104
Wife .. .. .	234
Wife and one child .. .. .	312
" two children .. .. .	364
" three children .. .. .	416
" four children .. .. .	468

An aged person will be exempt from Income Tax and Social Services Contribution if the person's net income does not exceed £375 or, if contributing to the maintenance of a spouse, £750.

**Rates of Income Tax and Social Services Contribution on Individuals, p. 739.**—Compared with 1952-53, rates for 1953-54 were reduced over all income ranges and the further tax on property incomes was abolished. For

the first time since the inception of Commonwealth Income Tax the same tax is payable on property as on personal exertion income. The rates of Income Tax and Social Services Contribution are—

**INCOME TAX AND SOCIAL SERVICES CONTRIBUTION—INDIVIDUALS :  
RATES OF INCOME TAX AND SOCIAL SERVICES CONTRIBUTION—1953-54.**

Total Taxable Income.		Column 3.	Column 4.			
Column 1.	Column 2.	Tax and Contribution on amount set out in Column 1.	Tax and Contribution on Remainder of Taxable Income.			
Not less than—	Not more than—					
£	£	£ s. d.	plus 1d. in each £1 in excess of			£
Nil	100	Nil				
100	150	0 8 4				100
150	200	1 5 0	9d.			150
200	250	3 2 6	13d.			200
250	300	5 16 8	17d.			250
300	400	9 7 6	22d.			300
400	500	18 10 10	28d.			400
500	600	30 4 2	33d.			500
600	700	43 19 2	38d.			600
700	800	59 15 10	42d.			700
800	900	77 5 10	46d.			800
900	1,000	96 9 2	50d.			900
1,000	1,200	117 5 10	56d.			1,000
1,200	1,400	163 19 2	64d.			1,200
1,400	1,600	217 5 10	71d.			1,400
1,600	1,800	276 9 2	78d.			1,600
1,800	2,000	341 9 2	85d.			1,800
2,000	2,400	412 5 10	93d.			2,000
2,400	2,800	567 5 10	100d.			2,400
2,800	3,200	733 19 2	107d.			2,800
3,200	3,600	912 5 10	114d.			3,200
3,600	4,000	1,102 5 10	121d.			3,600
4,000	4,400	1,303 19 2	128d.			4,000
4,400	5,000	1,517 5 10	136d.			4,400
5,000	6,000	1,857 5 10	144d.			5,000
6,000	8,000	2,457 5 10	151d.			6,000
8,000	10,000	3,715 12 6	158d.			8,000
10,000	16,000	5,032 5 10	165d.			10,000
16,000	upwards	9,157 5 10	168d.			16,000

Commencing with 1953-54, these graduated rates will not, however, wholly apply to the income of actors, artists, composers, and inventors whose taxable income, including any abnormal receipts, will be taxed at the rate appropriate to the normal taxable income plus one-third of the abnormal receipts.

The Income Tax (International Agreements) Act 1953 assented to on 11th December, 1953, provided for relief from double taxation of incomes flowing between Australia and the United States of America. It also provided similar relief in respect of the United Kingdom which had been covered by the Income Tax Assessment Act since 1947.

*Taxes on Specified Incomes*, p. 740.—The following table shows the Income Tax and Social Services Contribution payable by taxpayers with various incomes and numbers of dependants on income derived in 1953-54.



**COMMONWEALTH TAXES ON INCOME, INDIVIDUALS : 1953-54.**  
(£.)

Income.	Income from Personal Exertion.			
	Taxpayer with No Dependents.	Taxpayer with Dependent Wife.	Taxpayer with Dependent Wife and One Child.	Taxpayer with Dependent Wife and Two Children.
150 .. .. .	1.25	..	..	..
200 .. .. .	3.10	..	..	..
250 .. .. .	5.85	0.75	..	..
300 .. .. .	9.35	2.00	..	..
350 .. .. .	13.95	4.20	1.10	..
400 .. .. .	18.55	7.25	2.80	1.10
500 .. .. .	30.20	15.80	8.80	5.30
600 .. .. .	43.95	26.70	17.80	13.05
800 .. .. .	77.30	55.05	42.85	35.70
1,000 .. .. .	117.30	90.70	75.90	66.80
1,250 .. .. .	177.30	145.30	127.10	115.20
1,500 .. .. .	246.85	209.30	188.50	174.60
2,000 .. .. .	412.30	366.25	338.85	321.95
3,000 .. .. .	823.10	765.15	730.60	708.95
4,000 .. .. .	1,303.95	1,238.40	1,199.10	1,172.85
5,000 .. .. .	1,857.30	1,783.60	1,739.40	1,709.95
6,000 .. .. .	2,457.30	2,379.30	2,332.50	2,301.30
8,000 .. .. .	3,715.60	3,633.85	3,584.75	3,552.05
10,000 .. .. .	5,032.30	4,946.70	4,895.35	4,861.10
12,500 .. .. .	6,751.05	6,661.65	6,608.05	6,572.30
15,000 .. .. .	8,469.80	8,380.40	8,326.80	8,291.05

*Company Income Taxes* p. 743.—The rates of Primary and Additional Income Tax and Social Services Contribution payable by companies for the 1953-54 financial year (income year 1952-53) are shown in the following table :—

**RATES OF TAX : COMPANIES, 1953-54 FINANCIAL YEAR (INCOME DERIVED, 1952-53).**  
(Pence per £1.)

Type of Company.	Rate of Tax—		
	On Taxable Income.		On Undistributed Amount—Additional Tax.
	Up to £5,000.	On Remainder of Taxable Income.	
Private .. .. .	48	72	120
Co-operative and Non-profit(a) .. .. .	60	84	..
Life Assurance—			
Mutual .. .. .	48	72	..
Other—			
(1) Mutual Income .. .. .	48	72	..
(2) Other Income (b) .. .. .	(c) 72	84	..
Other .. .. .	(c) 72	84	..

(a) Non-profit companies with taxable incomes not exceeding £104 were exempted from tax and if the taxable income does not exceed £208 the tax may not exceed one-half of the amount by which the taxable income exceeds £104. (b) The rate of 72d. is levied on the amount by which the £5,000 exceeds the mutual income. (c) For non-resident companies dividends included in this part of taxable income are taxed at 60 pence per £1. (A resident company is allowed a rebate of tax in respect of dividends received.)

**Pay-roll Tax, p. 672.**—From the 1st October, 1953 the exemption was increased to £80 per week, i.e. £4,160 annually. The previous exemption limit was £20 per week, i.e. £1,040 annually.

**Entertainments Tax, p. 672.**—This tax was abolished from 1st October, 1953.

**Sales Tax, p. 673.**—From the 10th September, 1953 the special rates of sales tax, 50 per cent., 33½ per cent. and 20 per cent. were abolished. Most goods subject to those rates were then taxed at a special rate of 16½ per cent. The previous general rate of 12½ per cent. was not changed. An extension was made to the list of exemptions.

### C. COMMONWEALTH AND STATE FINANCE.

**Revenue and Expenditure, p. 717.**—The following table shows particulars of Commonwealth and State revenue and expenditure during the year 1952-53 and estimated revenue and expenditure for the year 1953-54.

#### COMMONWEALTH AND STATE REVENUE AND EXPENDITURE.(a)

(£'000.)

Government of—	Consolidated Revenue Fund.			Loan Fund— Net Expenditure on Works and Services.
	Revenue.	Expenditure.	Surplus (+) or Deficit (—)	
1952-53.				
New South Wales(b) .. .. .	180,908	180,811	+ 97	51,547
Victoria .. .. .	96,995	97,360	— 365	37,763
Queensland .. .. .	63,171	62,980	+ 191	19,382
South Australia .. .. .	44,251	44,226	+ 25	21,981
Western Australia .. .. .	38,725	39,233	— 508	17,606
Tasmania .. .. .	12,061	11,763	+ 298	12,822
Six States .. .. .	436,111	436,373	— 262	161,101
Commonwealth .. .. .	1,040,067	1,026,667	+ 13,400	35,670
Grand Total—Unadjusted .. .. .	1,476,178	1,463,040	+ 13,138	196,771
Adjusted .. .. .	1,310,604	1,297,556	+ 13,138	196,771

#### 1953-54: ESTIMATED.

New South Wales(b) .. .. .	182,610	183,575	— 965	} (c)
Victoria .. .. .	104,822	104,811	+ 11	
Queensland .. .. .	67,505	67,482	+ 23	
South Australia .. .. .	47,355	47,345	+ 10	
Western Australia .. .. .	43,416	43,549	— 133	
Tasmania .. .. .	13,258	13,644	— 386	
Six States .. .. .	458,976	460,406	— 1,430	} (c)
Commonwealth .. .. .	1,022,786	966,502	+ 56,284	
Grand Total—Unadjusted .. .. .	1,481,762	1,426,908	+ 54,854	} (c)
Adjusted .. .. .	1,311,285	1,256,431	+ 54,854	

(a) To avoid duplication in aggregating particulars for the Commonwealth and States the grand totals exclude payments by the Commonwealth to the States for compensation in respect of uniform taxation, interest on States' debts, special grants and special financial assistance, also pay-roll tax payments by States to the Commonwealth. The totals of revenue and expenditure of the States have also been adjusted.

(b) Excludes Main Roads Department, Road Transport and Traffic Fund, and recoups of interest, etc. from undertakings outside the Budget.

(c) Not available.

## D. COMMONWEALTH AND STATE PUBLIC DEBT.

## § 3. Commonwealth and State Public Debt Outstanding.

Public Debt and Annual Interest Payable, pp. 721-2.—The following table shows details of the public debt of the Commonwealth and States and the annual interest payable thereon at 30th June, 1953.

## COMMONWEALTH AND STATE PUBLIC DEBT AND ANNUAL INTEREST PAYABLE AT 30th JUNE, 1953.

Particulars.	Maturing in—			Total. £'000.
	Australia. £A'000.	London. £Stg.'000.	New York. £'000.(a)	
<b>DEBT.</b>				
Commonwealth—				
War (1914-18) .. .. .	144,799	7,534	..	152,333
War (1939-45) .. .. .	1,467,002	5,775	..	1,472,777
Works and other Purposes .. .. .	176,842	50,071	36,192	263,105
Total .. .. .	1,788,643	63,380	36,192	1,888,215
States .. .. .	1,230,404	289,493	23,751	1,543,648
Grand Total .. .. .	3,019,047	352,873	59,943	3,431,863
<b>ANNUAL INTEREST PAYABLE.</b>				
Commonwealth .. .. .	48,548	2,124	1,572	52,244
States .. .. .	38,028	9,231	881	48,140
Grand Total .. .. .	86,576	11,355	2,453	100,384

(a) £ payable in dollars which have been arbitrarily converted to £ at the rate of \$4.8665 to £1.

## § 4. Commonwealth Loan Raisings.

Loans Raised, pp. 732-5.—Particulars of loans raised by the Commonwealth between 1st July, 1952 and 30th June, 1953 are given in the following table.

## COMMONWEALTH LOANS RAISED, 1952-53.

Month of Raising.	Where Raised. (a)	Amount Invited. £'000.	Amount Subscribed. £'000.	Rate of Interest. (b)	Year of Maturity.	Purpose.
July, 1952 .. .. .	London	(d) 11,790	(c) 11,790	4½	1960-62	Conversion and redemption, £11,790,000 Advances to States for Housing.
November, 1952 .. .. .	Australia	20,000	20,271	4½	1961	
March, 1953 .. .. .	Australia	77,000	{ 44,177 35,053	{ 3 4½	{ 1955 1962	State purposes, £17,810,000 Conversion and redemption loan, £47,211,000 Advances to States for Housing, £3,688,000 State purposes, £28,331,000 Advances to States for Housing, £15,327,000 State purposes, £107,673
June, 1953 .. .. .	Australia	123,000	{ 35,000 88,000	{ 3 4½	{ 1955 1962	

(a) During 1952-53 \$40,223,000 were drawn against the loan made available by the International Bank for Reconstruction and Development. (b) Australian Loans bearing interest at 4½ per cent. were issued at par and those at 3 per cent. at £99 10s. The London loan was issued at £98. (c) Sterling.

## CHAPTER XVIII.—MINERAL INDUSTRY.

## § 1. The Mineral Wealth of Australia.

Quantity and Value of Production, pp. 749-51.—In the table hereunder particulars are given of the quantity and value of production in Australia of the principal minerals during the years 1952 and 1953 :—

MINERAL PRODUCTION: QUANTITIES AND VALUES, AUSTRALIA.  
METALLIC MINERALS.

Year.	Principal Contents of Metallic Minerals Produced.								Total Value of Output of Metal Mining.
	Copper.	Gold.	Iron.	Lead.	Silver.	Tip.	Zinc.	Sulphur. (a)	
	Tons.	Fine oz.	Tons.	Tons.	'000 fine oz.	Tons.	Tons.	Tons.	£'000.
1952 ..	18,579	980,435	61883087	228,196	11,278	1,610	196,450	217,217	73,820
1953(b) ..	37,364	1,073,080	62132086	269,296	12,249	1,494	239,069	224,530	(d)

## NON-METALLIC AND FUEL MINERALS.

Year.	Quantities Produced.						Total Value of Output of Non-metal and Fuel Mining.
	Coal.		Gypsum.	Limestone. (e)	Mica.	Salt.	
	Black.	Brown.					Tons.
1952 ..	19,405	8,104	351,678	2,720,730	71,929	277,000	61,717
1953(b) ..	18,441	8,257	327,204	3,029,584	72,227	239,285	(d)

(a) Includes sulphur content of spent oxide roasted. (b) Subject to revision. (c) Estimated.  
(d) Not yet available. (e) Excludes limestone used as a construction material. (f) Incomplete.

The total value of output of all mining and quarrying in 1952 was £135,450,000.

## CHAPTER XIX.—PASTORAL PRODUCTION.

Live Stock, Meat and Wool Produced.—The following table shows, for each State, the numbers of live stock at 31st March, 1953, and the amounts of meat and wool produced during 1952-53 :—

## LIVE STOCK, MEAT AND WOOL PRODUCED.

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
HORSES ('000.), p. 803.									
1953 ..	298	154	282	57	50	18	(a) 35	1	895
CATTLE ('000.), p. 804.									
1953 ..	3,649	2,297	6,751	483	846	275	936	10	15,247
SHEEP ('000.), p. 811.									
1953 ..	57,461	21,368	17,030	12,036	12,475	2,421	(a) 34	247	123,072
PIGS ('000), p. 797.									
1953 ..	299	183	336	59	76	39	(a) 1	..	993
BEEF, INCLUDING VEAL ('000 TONS BONE-IN WEIGHT), p. 806.									
1952-53 ..	217	124	252	31	32	14	3	2	675

For footnotes see next page.

LIVE STOCK, MEAT AND WOOL PRODUCED—*continued.*

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
MUTTON AND LAMB ('000 TONS BONE-IN WEIGHT), p. 813.									
1952-53 ..	126	153	20	51	33	11	..	1	395
TOTAL MEAT (INCLUDING PIG-MEATS) IN TERMS OF FRESH ('000 TONS BONE-IN WEIGHT)									
1952-53 ..	371	295	292	89	72	28	3	3	1,153
WOOL (AS IN THE GREASE) PRODUCED ('000 lb.), p. 816.									
Season— 1952-53 ..	556,552	252,195	163,149	158,658	128,148	19,807	332	2,245	1,281,086

(a) For year ended previous December.

## CHAPTER XX.—AGRICULTURAL PRODUCTION.

§ 3. *Distribution, Production and Value of Crops.*

Principal Crops, pp. 835-8.—The following table shows the area, production and average yield per acre of wheat in each State for 1952-53 and 1953-54.

## WHEAT FOR GRAIN: AREA, PRODUCTION AND AVERAGE YIELD.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA ('000 ACRES).								
1952-53 ..	2,702	2,232	724	1,544	2,999	7	1	10,209
1953-54(a) ..	3,470	2,400	500	1,510	2,800	10	1	10,691
PRODUCTION ('000 BUSHELS).								
1952-53 ..	56,670	50,335	18,662	33,919	35,458	156	8	195,208
1953-54(a) ..	65,000	54,000	9,800	30,000	40,000	200	15	199,015
AVERAGE YIELD PER ACRE (BUSHELS).								
1952-53 ..	20.97	22.55	25.76	21.97	11.82	23.39	12.75	19.12
1953-54(a) ..	18.70	22.50	19.60	19.90	14.30	20.00	15.00	18.60

(a) Subject to revision.

The area, production and average yield per acre of other principal crops in Australia during 1952-53 are set out hereunder:—

Area ('000 acres): Oats, 2,764; Maize, 174; Hay, 1,761; Sugar-cane, 434; Total Crops, 20,371.

Production ('000): Oats, 43,623 bush.; Maize, 4,967 bush.; Hay, 2,765 tons; Sugar-cane crushed, 6,967 tons; Cane-sugar, 949 tons.

Average Yield per Acre: Oats, 15.78 bush.; Maize, 28.53 bush.; Hay, 1.57 tons; Sugar-cane, 24.89 tons; Cane-sugar, 3.39 tons (Sugar-cane and Cane-sugar yields are per acre of productive crop).

## CHAPTER XXI.—FARMYARD, DAIRY AND BEE PRODUCTS.

Principal Farmyard, Dairy and Bee Products.—Particulars of the total production of these products in each State during 1952-53 are shown below:—

## PRODUCTION OF PRINCIPAL FARMYARD, DAIRY AND BEE PRODUCTS.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
TOTAL WHOLE MILK PRODUCED ('000 GALS.), p. 918.								
1952-53 ..	317,385	436,417	285,757	84,247	49,830	44,269	688	1,218,595
BUTTER(a) (TONS), p. 919.								
1952-53 ..	38,875	58,178	49,426	7,982	6,643	6,372	5	167,481

PRODUCTION OF PRINCIPAL FARMYARD, DAIRY AND BEE PRODUCTS—  
*continued.*

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
<b>CHEESE(a) (TONS), p. 920.</b>								
1952-53 .. ..	3,163	22,386	9,439	10,454	898	266	..	46,606
<b>PORK (TONS, BONE-IN WEIGHT), p. 926.</b>								
1952-53 .. ..	9,611	6,925	6,548	2,836	2,436	1,920	132	(b) 30,468
<b>BACON AND HAM (TONS, CURED WEIGHT), p. 927.</b>								
1952-53 .. ..	13,228	8,165	9,510	3,063	3,693	886	..	38,545
<b>SHELL EGGS: PRODUCTION(c) RECORDED BY EGG BOARDS ('000 DOZ.), p. 928.</b>								
1952-53 .. ..	50,884	24,700	7,860	11,359	8,783	1,108	..	104,545
<b>HONEY ('000 lb.), p. 932.</b>								
1952-53 .. ..	8,046	6,235	2,166	7,656	3,393	309	5	27,810

(a) Includes an estimate of farm production.

(b) Includes Northern Territory, 60 tons.

(c) Receivals from consignors and sales by producer agents.

### CHAPTER XXIV.—MANUFACTURING INDUSTRY.

**Summary, p.967.**—The table following gives a summary of operations in manufacturing industries during 1951-52. Particulars for 1952-53, which became available too late for inclusion herein, will be found in the *Quarterly Summary of Australian Statistics*, March, 1954, and also in *A Summary of Principal Statistics of Factories, 1952-53*, issued by this Bureau:—

#### FACTORIES: SUMMARY, 1951-52.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
1. Factories .. .. No.	18,144	14,758	4,918	3,245	3,266	1,512	45,843
2. Persons employed(a) .. ..	495,994	324,143	94,349	84,189	45,071	24,027	977,773
3. Salaries and wages paid(b) £'000	263,651	202,586	51,906	53,798	25,369	14,704	612,014
4. Value of power, fuel light, etc., used .. .. £'000	48,664	21,990	8,287	10,408	5,172	2,107	96,628
5. .. materials used .. .. £'000	647,291	477,617	150,427	139,198	58,512	40,025	1,513,070
6. .. production(c) .. .. £'000	443,391	334,360	91,329	82,409	42,693	29,794	1,023,976
7. .. output of factories .. .. £'000	1,139,346	833,967	250,043	232,015	106,377	71,926	2,633,674
8. .. land and buildings .. .. £'000	153,662	119,465	28,610	28,507	16,732	13,210	360,186
9. .. plant and machinery .. .. £'000	166,437	128,934	41,290	32,177	20,700	22,994	412,532

(a) Average over whole year; includes working proprietors.

(b) Excludes amounts drawn by working proprietors.

(c) Value of production equals figures in line 7 less totals of figures in lines 4 and 5.

**Value of Production in Classes of Industry, p. 991.**—The following table shows, for the year 1951-52, the value of production in Australia for the various classes of factories. Particulars for 1952-53 will be found in the two publications referred to in the preceding paragraph:—

#### FACTORIES: VALUE OF PRODUCTION, AUSTRALIA, 1951-52.

(£.)

Class of Industry.	Value of Production.	Class of Industry.	Value of Production.
I. Treatment of Non-metalliferous Mine and Quarry Products .. ..	21,892,811	VIII. Clothing .. ..	81,057,556
II. Bricks, Pottery, Glass, etc., .. ..	20,946,063	IX. Food, Drink and Tobacco .. ..	141,053,124
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease .. ..	63,662,399	X. Woodworking and Basket-ware .. ..	58,082,368
IV. Industrial Metals, Machines, Implements and Conveyances .. ..	413,050,950	XI. Furniture, Bedding, etc. .. ..	19,320,128
V. Precious Metals, Jewellery and Plate .. ..	5,438,339	XII. Paper, Stationery, Printing, Bookbinding, etc. .. ..	68,234,231
VI. Textiles and Textile Goods .. ..	56,583,422	XIII. Rubber .. ..	18,045,024
VII. Skins and Leather .. ..	13,622,681	XIV. Musical Instruments .. ..	1,415,950
		XV. Miscellaneous Products .. ..	17,179,286
		XVI. Heat, Light and Power .. ..	24,392,086
		<b>Total .. ..</b>	<b>1,023,976,418</b>

Principal Factory Products, pp. 998-1001.—The following table shows the production during 1951-52 and 1952-53 of a selection of the principal commodities manufactured in Australia :—

QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES : AUSTRALIA.

Item.	Unit of Quantity.	1951-52.	1952-53.(a)	Item.	Unit of Quantity.	1951-52.	1952-53.(a)
Acid, Sulphuric (100%)	'000 tons	650	627	Lacquers .. .. .	'000 gal.	1,191	1,005
Asbestos Cement Building Sheets	Mill. sq. yds.	23.3	24.3	Malt .. .. .	'000 bus.	6,182	6,573
Beer .. .. .	Mill. gal.	b 185	b 199	Margarine—			
Biscuits .. .. .	Mill. lb.	149.9	145.3	Table .. .. .	Mill. lb.	16.0	15.9
Blankets .. .. .	'000 pr.	643	447	Other .. .. .		56.2	49.3
Boots, Shoes and Sandals .. .. .	Mill. pr.	18.5	17.4	Meat, Tinned .. .. .		147.8	211.5
Bricks, Clay .. .. .	Mill.	715	661	Motors, Electric .. .. .	'000	610.4	522.2
Cement, Portland .. .. .	'000 tons	1,237	1,426	Newsprint .. .. .	'000 tons	32.6	34.0
Cloth, Woolen .. .. .	Mill. sq. yds.	27.8	26.9	Palms, Oil .. .. .	'000 gal.	5,513	4,260
Confectionery—				Refrigerators, Domestic .. .. .	'000	192.8	181.7
Chocolate .. .. .	Mill. lb.	61.3	58.4	Soap .. .. .	'000 cwt.	1,305	1,169
Other .. .. .		78.4	75.4	Socks and Stockings—	'000		
Electricity .. .. .	'000	11.3	12.3	Men's and Boys' .. .. .	doz. pr.	1,462	1,575
Enamels .. .. .	Mill. kWh.			Women's and Girls' .. .. .		1,868	2,324
	'000 gal.	2,093	2,127	Children's .. .. .		462	414
Engines, Internal Combustion—				Stoves, Cooking—			
Petrol, Marine(c) .. .. .	'000	2.1	1.3	Electric—Domestic .. .. .	'000	50.9	22.6
Other(d) .. .. .		30.4	21.1	Cookers, Stovettes etc. .. .. .		49.0	40.1
Fibrous Plaster Sheets	Mill. sq. yds.	16.5	14.6	Gas .. .. .		51.0	34.4
Flour, Wheaten .. .. .	'000 short tons	1,721	1,721	Solid Fuel .. .. .		71.7	46.6
Fruit, Preserved(e) .. .. .	Mill. lb.	256.1	218.5	Sugar, Refined .. .. .	'000 tons	493	422
Gas(f) .. .. .	'000 mill. cub. ft.	40.4	41.3	Sulphate of Ammonia .. .. .		63.8	70.2
Ice Cream .. .. .	Mill. gal.	17.3	13.6	Superphosphate .. .. .		1,597	1,581
Iron and Steel—				Tiles, Roofing—			
Pig Iron .. .. .	'000 tons	1,430	1,692	Cement .. .. .	Mill.	66.5	42.7
Ingot Steel .. .. .		1,521	1,801	Terra-cotta .. .. .		48.9	58.2
Jam .. .. .		48.4	34.2	Timber, Sawn Native	Mill. sup. ft.	1,392	1,308
				Tobacco, Cigars and Cigarettes .. .. .	Mill. lb.	33.5	36.2
				Vegetables, preserved(g)		100.4	65.1
				Wool, Scoured .. .. .		121	125
				Yarn, Woolen and Worsted .. .. .		36.5	35.2

(a) Subject to revision. (b) Includes waste beer. (c) Other than Diesel type. (d) Excludes motor car, motor cycle, truck, tractor and aero engines. (e) Includes all types of preserved apples. (f) Made in gas-works only. (g) Includes preserved tomatoes.

CHAPTER XXVII.—DEFENCE.

Australian Participation in Korea, Malaya and the Middle East, p. 1103.—(i) Korea. (a) Casualties. The number of casualties sustained by the Australian forces in the Korean campaign is shown in the following table :—

Particulars.	Royal Australian Navy.	Australian Military Forces.	Royal Australian Air Force.	All Services.
Battle Casualties—				
Killed (including died of wounds) .. .. .	1	252	23	266
Missing (all categories) .. .. .	2	21	6	39
Prisoners-of-war .. .. .		16	6	(a) 22
Wounded in action (including shell shock) .. .. .	6	1,062		1,068
Total Battle Casualties .. .. .	9	1,351	35	1,395
Other Casualties—				
Accidental and other deaths .. .. .		14	10	24
Accidental wounds and injuries .. .. .		172		172
Total Casualties .. .. .	9	1,537	45	1,591

(a) Includes 21 prisoners-of-war repatriated since the armistice and one who died while a prisoner-of-war.

(b) *Prisoner-of-War Exchange Agreement.*—As a result of talks between United Nations and Chinese delegates at Panmunjom during April, 1953, the Chinese agreed to release 600 United Nations sick and wounded prisoners-of-war in exchange for 5,100 North Korean and 700 Chinese prisoners. The exchange programme commenced on 23rd April, 1953 and 100 United Nations personnel were exchanged daily. The only Australians released were four captured on 25th January, 1953, and one captured on 14th January, 1953. All were released at Panmunjom on 23rd April, 1953. Under the terms of the Armistice Agreement signed at Panmunjom at 1000 hours on 27th July, 1953, all prisoners-of-war who insisted on repatriation were to be handed over within 60 days to the side to which they belonged at the time of capture. Fifteen Australian Army personnel and six R.A.A.F. personnel were released as a result of the agreement.

(c) *Awards.*—The following table shows the number of operational awards granted for services in the Korean campaign :—

Award.	Royal Australian Navy.	Australian Military Forces.	Royal Australian Air Force.	All Services.
<b>British—</b>				
Commander Order of British Empire (C.B.E.)	1	1	..	2
Distinguished Service Order (D.S.O.) ..	2	6	3	11
Officer Order of British Empire (O.B.E.) ..	..	12	1	13
Member Order of British Empire (M.B.E.) ..	2	14	3	19
Distinguished Service Cross (D.S.C.) ..	10	..	..	10
Distinguished Service Cross, Bar ..	2	..	..	2
Military Cross (M.C.) ..	..	25	..	25
Military Cross, Bar ..	..	1	..	1
Distinguished Flying Cross (D.F.C.) ..	..	..	44	44
Distinguished Flying Cross, Bar ..	..	..	6	6
Air Force Cross (A.F.C.) ..	..	..	12	12
Air Force Cross, Bar ..	..	..	1	1
Medal for Distinguished Conduct in the Field (D.C.M.) ..	..	4	..	4
Medal for Distinguished Conduct in the Field, Bar ..	..	1	..	1
George Medal (G.M.) ..	..	1	..	1
Distinguished Service Medal ..	3	..	..	3
Military Medal ..	..	39	..	39
Military Medal, Bar ..	..	1	..	1
Distinguished Flying Medal (D.F.M.) ..	..	..	18	18
British Empire Medal (B.E.M.) ..	4	2	..	6
Mention in Despatches ..	30	87	148	265
Commendation for Meritorious Service in the Air ..	..	..	14	14
<b>Total British</b> ..	<b>54</b>	<b>194</b>	<b>250</b>	<b>498</b>
<b>Foreign—</b>				
<b>United States—</b>				
Silver Star ..	..	5	..	5
Bronze Star ..	..	4	1	5
Legion of Merit ..	..	4	1	5
Distinguished Flying Cross ..	..	..	17	17
Air Medal ..	..	..	107	107
Korean Order of Military Merit ..	..	1	..	1
<b>Total Foreign</b> ..	<b>..</b>	<b>14</b>	<b>126</b>	<b>140</b>
<b>Grand Total</b> ..	<b>54</b>	<b>208</b>	<b>376</b>	<b>638</b>

In addition, the following unit citations were awarded :—

*Army.*—For its part in the Battle of Kapyong on 23rd–24th April, 1951, the 3rd Battalion, Royal Australian Regiment, was awarded the Distinguished Unit Citation by the President of the United States of America.

*Air Force.*—The Government of the Republic of Korea awarded a Presidential Unit Citation to No. 77 (Interceptor/Fighter) Squadron.



## CHAPTER XXIX.—MISCELLANEOUS.

## § 5. Retail Trade.

Value of Retail Sales, p. 1153.—The number of retail establishments and the total value of retail sales for the year ended 30th June, 1953, are classified in the following tables according to thirty broad commodity groups. These are the preliminary results of the Census of Retail Establishments, 1952-53, and are subject to revision.

The first table shows the number of retail establishments which recorded retail sales in each commodity group. Many establishments showed sales in more than one group, so that the aggregate of the number of establishments in all commodity groups is greater than the total number of establishments as shown. The value of retail sales is classified by commodity groups in the second table.

CENSUS OF RETAIL ESTABLISHMENTS : NUMBER OF RETAIL ESTABLISHMENTS  
CLASSIFIED BY COMMODITY GROUP(a), 1952-53.

Commodity Group.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.(b)
Groceries .. .. .	7,185	4,428	2,704	2,320	1,227		
Butchers' Meat .. .. .	2,121	1,150	826	606	346		
Fruit and Vegetable .. .. .	3,114	3,132	1,357	1,587	889		
Bread, Cakes, Pastry .. .. .	4,667	3,544	1,835	2,587	657		
Confectionery, Ice Cream, Soft Drinks .. .. .	7,248	4,860	2,801	2,617	1,284		
Other Food .. .. .	2,689	1,915	1,266	1,160	285		
Beer, Wine, Spirits .. .. .	2,191	1,400	710	734	318		
Tobacco, Cigars, Cigarettes .. .. .	10,084	6,543	3,717	3,539	1,689		
Men's and Boys' Clothing .. .. .	2,188	1,375	999	957	412		
Women's, Girls' and Infants' Clothing .. .. .	3,485	1,417	1,092	925	459		
Drapery, Piecegoods, Manchester, Soft Furnishings .. .. .	1,699	1,097	847	786	295		
Men's and Boys' Footwear .. .. .	1,399	1,029	721	614	347		
Women's, Girls' and Infants' Footwear .. .. .	1,258	851	655	557	305		
Builders' Hardware .. .. .	1,472	804	665	692	172		
Domestic Hardware, China, Glass- ware .. .. .	2,428	1,464	1,279	1,120	445		
Domestic Refrigerators, Electrical Goods, Radios, Musical Instru- ments .. .. .	1,932	1,162	874	914	301		
Furniture .. .. .	963	515	394	419	147		
Floor Coverings .. .. .	666	309	311	261	135		
Business Machines, etc. .. .. .	80	77	38	58	22		
Tractors .. .. .	389	357	232	196	44		
New Motor Vehicles .. .. .	848	564	460	241	77		
Used Motor Vehicles .. .. .	825	613	470	293	83		
Motor Parts, Accessories, Tyres, Tubes, etc. .. .. .	2,252	1,441	1,035	947	291		
Petrol, Oil, Lubricants, etc. .. .. .	2,803	1,944	1,257	1,049	429		
Newspapers, Books, Stationery .. .. .	2,667	2,014	1,210	1,021	484		
Chemists' Goods .. .. .	2,396	1,814	1,089	1,315	432		
Sporting Requisites, Travel Goods .. .. .	1,062	686	448	461	157		
Jewellery, Silverware, etc. .. .. .	1,130	675	520	519	192		
Grain, Feed, Fertilizers .. .. .	1,068	1,030	540	604	248		
Other Goods .. .. .	2,878	964	776	732	310		
<b>Total .. .. .</b>	<b>32,879</b>	<b>15,050</b>	<b>9,688</b>	<b>8,476</b>	<b>3,635</b>		

(a) Excludes establishments with retail turnover of less than £500 during the year ended 30th June, 1953. Sales of basic building materials (e.g. timber, roofing tiles, etc.), farm machinery, farm implements and earth-moving equipment were excluded from the Census by definition but establishments selling these goods are included in so far as they sell goods in other commodity groups. (b) Excludes the Australian Capital Territory and the Northern Territory, results for which are not yet available.

## CENSUS OF RETAIL ESTABLISHMENTS: VALUE OF RETAIL SALES CLASSIFIED BY COMMODITY GROUP(a), 1952-53.

(£ million.)

Commodity Group.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.(b)
Groceries .. .. .	64.9	42.3	20.6	20.7	8.7		
Butchers' Meat .. .. .	36.8	17.0	10.4	8.2	4.5		
Fruit and Vegetables .. .. .	15.8	7.1	4.5	4.4	1.6		
Bread, Cakes, Pastry .. .. .	17.0	7.6	4.8	3.6	2.0		
Confectionery, Ice Cream, Soft Drinks .. .. .	20.3	7.7	5.3	3.8	1.9		
Other Food .. .. .	8.9	3.6	2.3	1.9	0.5		
Beer, Wine, Spirits .. .. .	45.6	22.3	14.8	14.4	5.3		
Tobacco, Cigars, Cigarettes .. .. .	20.0	8.8	5.9	5.2	2.4		
Men's and Boys' Clothing .. .. .	26.2	12.1	8.6	6.3	3.3		
Women's, Girls' and Infants' Clothing .. .. .	41.6	16.8	13.5	9.4	5.7		
Drapery, Piecegoods, Manchester, Soft Furnishings .. .. .	18.6	10.1	6.3	4.8	2.0		
Men's and Boys' Footwear .. .. .	4.8	2.2	1.6	1.3	0.7		
Women's, Girls' and Infants' Footwear .. .. .	9.0	3.6	2.9	2.3	1.1		
Builders' Hardware .. .. .	16.3	8.5	5.2	5.2	1.6		
Domestic Hardware, China, Glass-ware .. .. .	14.2	5.9	5.3	4.1	1.6		
Domestic Refrigerators, Electrical Goods, Radios, Musical Instruments .. .. .	21.1	10.3	6.9	6.1	2.3		
Furniture .. .. .	15.1	5.9	5.0	3.3	1.5		
Floor Coverings .. .. .	7.7	2.0	2.7	1.9	0.9		
Business Machines, etc. .. .. .	3.8	1.7	0.9	0.8	0.3		
Tractors .. .. .	5.6	7.1	3.1	3.4	0.8		
New Motor Vehicles .. .. .	44.6	26.4	20.3	14.9	5.8		
Used Motor Vehicles .. .. .	18.1	11.4	10.8	8.6	2.7		
Motor Parts, Accessories, Tyres, Tubes, etc. .. .. .	15.6	8.9	5.4	4.6	1.9		
Petrol, Oil, Lubricants, etc. .. .. .	24.3	10.0	6.7	5.8	2.5		
Newspapers, Books, Stationery .. .. .	16.5	6.3	3.3	3.3	1.5		
Chemists' Goods .. .. .	14.4	6.4	4.1	3.2	1.5		
Sporting Requisites, Travel Goods .. .. .	3.0	1.4	0.8	0.8	0.4		
Jewellery, Silverware, etc. .. .. .	6.3	3.1	2.0	1.8	0.6		
Grain, Feed, Fertilizers .. .. .	11.4	6.2	2.5	6.6	1.1		
Other Goods .. .. .	18.0	5.0	4.3	3.9	2.2		
<b>Total .. .. .</b>	<b>585.5</b>	<b>287.7</b>	<b>190.8</b>	<b>164.6</b>	<b>68.9</b>		

For footnotes see previous table.

## § 9. War Service Homes Division.

War Service Homes Division, p. 1157.—During 1952-53, 13,776 applications were approved, 5,848 homes were either built or assistance to build them was given, while homes purchased or mortgages discharged numbered 6,574. The total number of homes provided during 1952-53 was 12,422. Transfers and resales approved numbered 648.

At 30th June, 1953, 4,250 homes were under construction, 1,034 contracts had been let but work not started and 1,031 tenders had been called but not finally dealt with. Capital expenditure for 1952-53 amounted to £27,976,575 and receipts to £7,263,453. £4,049,887 was paid to the National Debt Sinking Fund.



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## GENERAL INDEX.\*

NOTE.—This index is preceded by an index of maps, graphs and diagrams, also a list of special articles, etc., in previous issues of the Official Year Book. Area, population, etc., of particular localities are indexed under the locality concerned. Subject matter extending continuously over more than one page is indexed according to the first page only. Where more than one reference to a subject is given, the chief reference, wherever it has been possible to determine it, is indicated by *italic type*. Two references to a subject so indicated signify major, and approximately equal, importance.

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Pocket Compendium of Australian Statistics	39, 1954	Apr., 1954	1 0	1 3	1 3
Quarterly Summary of Australian Statistics	215, Mar., 1954	Oct., 1954	1 0†	1 5	1 7
Monthly Review of Business Statistics‡ ..	203, Aug., 1954	Oct., 1954	..	..	..
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Finance ..	43, 1951-52	Dec., 1953	5 0	5 9	6 3
Labour Report ..	41, 1952	Feb., 1954	5 0	5 7	5 11
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