

## CHAPTER 20

### TRANSPORT AND COMMUNICATION

This chapter contains information on motor vehicles; roads; road traffic accidents; railways; shipping; air transport; bus, train and ferry services; postal services, internal and overseas telecommunication services; radio communication stations; broadcasting and television; and government bodies concerned with these activities.

More detailed figures and particulars for earlier years are included in the publications listed at the end of the chapter.

### TRANSPORT ORGANISATIONS

#### **The Australian Transport Advisory Council**

In April 1946, Commonwealth and State Governments agreed to establish a co-ordinating and advisory committee at Ministerial level whose principal functions were to review annually the various laws and regulations deemed necessary to safeguard the interests of the State Governments and road users generally and to consider matters of transport policy.

The Australian Transport Advisory Council (ATAC), thus established, now comprises the Commonwealth Minister for Transport and the Minister for Territories and Local Government, each State Minister responsible for transport and roads, and the Northern Territory Minister for Transport and Works. The New Zealand Minister responsible for transport attends as an observer. Chairmanship of the Council is the responsibility of the host Minister.

The Council has, on a number of occasions since its inception, reviewed and refined its procedures and operations. At present it meets at least twice each year and its primary role is to consider policy matters relating to transport operations, co-ordination and development. Its decisions are reached by consensus of all members. Council's functions are to initiate discussion and report on any matter raised by Council members and to advise on matters which will tend to promote a better co-ordination of, or research in, transport development for the benefit of Australian transport authorities and agencies.

Matters which Council considers include: road safety, motor vehicle standards and safety features, motor vehicle emissions, driver licensing improvement and road user performance, road planning and funding, urban transport arrangements and funding, construction and operation of interstate railway links, aviation matters, transport economics and research, and the publication of comprehensive surveys on particular aspects of Australian transport.

The Council is advised on these matters by the following four policy groups: the *Co-ordinating and General Transport Group* (C & G), comprising principal Ministerial advisers, such as the Permanent Heads of the relevant Departments, which deals with overall issues of policy co-ordination and development as well as topics which do not fall within the terms of reference of the other Groups. (The *ATAC Agenda Sub-Committee* (AASC) reports to C & G, and recommends on the agenda for ATAC meetings and on ATAC's future work program); the *Railway Group*, comprising State and Australian National Railway Commissioners, together with Commonwealth Government representatives, advises on all railway matters considered by the Council; the *Road Group*, comprising State Road Commissioners together with Commonwealth Government officials, advises the Council on matters concerned with the construction and maintenance of all classes of roads and their financing. The *Motor Transport Group* (MTG), consisting of the principal State officials in the motor vehicle safety and regulatory areas, together with Commonwealth Government representatives, advises the Council on all matters arising from the work of the technical advisory committees and on vehicle safety standards, technical standards and on-road operation.

Through MTG the Council is also advised by the following technical committees: the *Vehicle Standards Advisory Committee* (VSAC); the *Advisory Committee on Road User Performance and Traffic Codes* (ACRUPTC); the *Advisory Committee on Vehicle Emissions and Noise* (ACVEN)—this committee reports jointly to ATAC and the *Australian Environment Council* (AEC); the *Advisory Committee on Road Trauma* (ACRT); and the *Publicity Advisory Committee on Education in Road Safety* (PACERS). In addition to these technical committees, the *Advisory Committee on the Transport of Dangerous Goods* (ACTDG) reports to the Co-ordinating and General Transport Group.

The ACRT was established by ATAC in February 1983 to investigate the medical, psychological and social aspects of road accidents, with particular attention to the causes of road accidents including driver behaviour. The VSAC was established by ATAC in July 1983, replacing the former *Advisory Committee on Safety in Vehicle Design* and the *Advisory Committee on Vehicle Performance*.

In 1969, ATAC established the *Australian Motor Vehicle Certification Board* to advise State and Territory registering authorities on compliance by new motor vehicles with Australian Design Rules (ADRs). The Board's principal function is to issue Compliance Plate Approvals based on manufacturers' submissions that a vehicle complies with those rules applicable at its date of manufacture. Compliance with ADRs is a prerequisite to vehicle registration throughout Australia. The Board reports to ATAC annually.

The four policy Groups, the AMVCB and the technical advisory committees are all chaired by a Commonwealth representative.

#### **Transport Industries Advisory Council**

The Transport Industries Advisory Council (TIAC) was formed following the March 1971 Australian Transportation Conference. TIAC, an access channel between industry and the Commonwealth Minister for Transport, provides advice and comment to the Minister on policy issues as well as recommendations related to improving transport systems in Australia, including aviation.

The 30 members (as at 30.6.83) of TIAC are drawn from senior management in all modes of transport, major consumers, Government bodies and unions. The Minister appoints members on the basis of personal expertise. New members, appointed annually, serve on the Council for extendable terms of three years. The full Council, which meets four times a year, operates through an Executive Committee and subject-specific Project Committees.

Examples of topics currently under consideration by TIAC include road pricing, open registry shipping, need for a national transport strategy, ship repair, truck safety, effect of Offshore Constitutional Settlement on the operation of ships, ARRDO Reports on Rail industrial relations training, undeclared hazardous cargo, road tanker driver/operator training, owner-drivers, consultative mechanisms in the rail industry and second Sydney Airport. TIAC is also undertaking a review of the Transport Indicators with the Bureau of Transport Economics.

#### **Marine and Ports Council of Australia**

The Marine and Ports Council of Australia (MPCA) provides an advisory forum for Commonwealth and State Governments in which to discuss initiatives and developments in marine and port matters. Membership comprises the Commonwealth Minister for Transport (Chairman) and State and Territory Ministers whose portfolios include responsibility for port and marine matters.

Evolving from six meetings of a Commonwealth/State Ministerial Council for Port Development and Marine Affairs, the MPCA was convened for the first time in May 1976, bringing together Commonwealth and State policy-making machinery in relation to ports, the administration of shipping matters, cargo movements, shipping and marine laws, marine pollution control, safety and consultation on treaties. The Council now meets annually.

To assist the Council in its deliberations there exists a Committee of Advisers comprising Commonwealth, State and Territory ministerial advisers, generally at permanent head level or equivalent, who are responsible for marine and port matters. This Committee makes recommendations to Ministers on matters referred to them by Ministers or from within the Committee. In addition, several standing and ad hoc Working Groups have been established to report and make recommendations to Advisers on legal, technical, operational and administrative issues of relevance to the Council's activities.

#### **Aviation Industry Advisory Council**

The Aviation Industry Advisory Council (AVIAC) was established in 1978 to enhance the level of consultation between the aviation industry and the Government. The Council provides advice to the Commonwealth Minister for Aviation on policies, plans and programs relating to the aviation industry within Australia, promotes the continuing development of a safe, efficient, economic aviation industry, and provides a forum for discussion of important matters of joint concern to the aviation industry and Government.

Membership of the Council consists of the Commonwealth Minister for Aviation (Chairman); Secretary to the Department of Aviation; Chairman of Qantas Airways Ltd; Chairman of Australian National Airlines Commission (TAA); Chairman of Regional Airlines Association of Australia Ltd; Chairman of East-West Airlines; National Chairman of the General Aviation Association; Joint Chairman of Ansett Transport Industries Ltd; National President of the Royal Federation of Aero Clubs of Australia and President of the Aircraft Owners and Pilots Association of Australia.

The AVIAC has established a Committee of Advisers to assist in the analysis and preparation of matters to put to the Council for deliberation and decision.

### **The Bureau of Transport Economics**

The Bureau of Transport Economics (BTE) is a professional research body which undertakes independent studies and investigations to assist the Commonwealth Government in formulating policy relating to all modes of transport.

The primary function of the BTE is to advise the Commonwealth Government on the economic, financial and technical aspects of air, road, rail and sea transport in Australia. In pursuit of this overall function, the BTE analyses the nature, capacity, performance and financing of transport systems. It also investigates the economic and resource allocation implications of such systems. The BTE has a secondary function of providing assistance to State and local governments, Commonwealth and State instrumentalities and the private sector to identify and address transport problems.

Although formally linked to the Commonwealth Department of Transport, the BTE has a considerable degree of professional and administrative autonomy and reports directly to the Minister for Transport on its program of research work.

## **SHIPPING**

### **Control of shipping**

#### **Commonwealth Government navigation and shipping legislation**

Commonwealth Government Acts concerned with shipping are: the *Navigation Act* 1912, the *Sea-Carriage of Goods Act* 1924, the *Seamen's Compensation Act* 1911, the *Seamen's War Pensions and Allowances Act* 1940, the *Pollution of the Sea by Oil Act* 1960, the *Pollution (Shipping Levy) Act* 1972, the *Pollution (Shipping Levy Collection) Act* 1972, the *Australian Shipping Commission Act* 1956, the *Beaches, Fishing Grounds and Sea Routes Protection Act* 1932, the *Submarine Cables and Pipelines Protection Act* 1963, the *Lighthouses Act* 1911, the *Explosives Act* 1961, the *Inter-State Commission Act* 1975, the *King Island Harbour Agreement Act* 1973, the *King Island Shipping Service Agreement Act* 1974, the *Ship Construction Bounty Act* 1975, the *Trade Practices Act*, 1974, Part X, the *Shipping Registration Act* 1981.

#### **Navigation Act 1912 as Amended**

One of the largest Commonwealth Acts, the *Navigation Act*, provides for various regulatory controls over ships and their crews, passengers and cargoes, mainly for the preservation of life and property at sea. Substantial penalties are provided for serious offences. The Act gives effect to a number of important international conventions produced under the aegis of the International Maritime Organisation (IMO).

Many of the 43 sets of Regulations under the Act are being replaced by a system of Marine Orders.

Taken in the order in which they appear in the Act, the main substantive matters dealt with are as follows:

*Masters and seamen.* Some sections deal with the examination of masters, mates and engineers for certificates of competency. Other sections ensure that appropriate conditions apply to crews serving on ships by providing for the supervision of the engagement, discharge and payment of wages; discipline at sea; the settlement of wages and other disputes; the return to their home port of distressed seamen; taking charge of wages and effects of deceased seamen and of those who have deserted or been left behind; and enquiries into deaths at sea. These matters are administered by Mercantile Marine Offices established at numerous ports. The health of seamen is cared for by the prescription of scales of medicines and medical stores to be carried by ships, and there are provisions to give effect to International Labour Organisation Convention requirements for the accommodation of crews. Plans for new or altered accommodation in ships have to be approved by a Crew Accommodation Committee.

There are requirements for the manning of ships, designed to ensure that sufficient officers and men are carried for safety and operational purposes. Manning disputes are dealt with by statutory Committees of Advice. The Act provides for a Marine Council to advise the Minister on the suitability of persons for engagement as seamen.

*Ships and shipping.* There are particularly important provisions dealing with ship safety in such matters as survey of ships, load lines, life-saving and fire appliances, prevention of collisions, and carriage of potentially dangerous cargoes. Whilst in Australia, all ships which trade interstate or overseas come under the survey provisions of the *Navigation Act* and require certificates issued

by the Department of Transport unless they are registered in a country which is a party to the Convention concerned and hold valid certificates issued by their Governments and conforming to the requirements of the Safety of Life at Sea and Load Lines Conventions. There is power to detain any ship the condition of which does not conform with the conditions set out in its certificate or which appears to be overloaded or otherwise unseaworthy.

*Passengers.* These provisions deal with matters necessary or convenient for regulating the carriage of passengers in respect of such matters as numbers that may be carried, accommodation and health aspects.

*Offshore industry.* These provisions, which came into force on 1 February 1983, deal with offshore industry vessels and offshore industry mobile units. Marine Orders giving effect to IMO resolutions on this sector of the marine industry are in the course of preparation.

*Coasting trade.* Under the coasting trade provisions of the *Navigation Act*, the Australian coastal trade is reserved for licensed vessels, i.e. those which employ seamen at Australian wage rates. The Act does not restrict the class of ships which may obtain a licence. It is open to any vessel irrespective of the registry to obtain a licence on compliance with this condition and to operate in the Australian coastal trade subject to permission being given for the importation of the vessel under the Customs (Prohibited Imports) Regulations where necessary. Provision exists for unlicensed vessels to operate in the coasting trade under single voyage permits in certain circumstances where licensed vessels are not available or are inadequate to meet the needs of the trade. Strict control is exercised over the issue of permits for the carriage of coastal cargoes.

*Wrecks and salvage.* There are provisions in relation to wrecks and salvage, covering preservation of life and of the wreck and its cargo and related matters.

*Prevention, etc., of pollution by oil of the Australian coast, coastal waters and reefs.* Under these provisions, where oil is escaping, or likely to escape, from a ship, the Minister is empowered to take action to prevent or reduce pollution of the area.

*Limitation and exclusion of shipowners' liability.* These sections give effect to an international convention and make provision on the widest possible basis for the limitation of shipowners' liability in Australia.

*Courts of Marine Inquiry.* There are provisions for the holding of Courts of Marine Inquiry to investigate the circumstances attending any casualties to ships that come within Commonwealth legislative authority, usually following a preliminary investigation. Such courts are provided with power to examine all the circumstances and to deal with the certificates of ships' officers found to have been at fault.

### Shipping Registration Act 1981

The *Shipping Registration Act* 1981 received Royal Assent on 25 March 1981 and was proclaimed on 26 January 1982. This Act replaces Part I of the *U.K. Merchant Shipping Act* 1894 under which ships in Australia were registered as British ships. The Act provides for all ships on the British register in Australia to be automatically transferred to the new Australian register. The Act has two basic objectives namely the conferring of Australian nationality on Australian-owned ships and the registration of ownership.

Taken in order in which they appear in the Act, the main substantive matters are as follows:

*Registration of Ships:* This part deals with the obligation to register Australian-owned ships, the ships permitted to be registered, the application for registration, particulars to be entered in the Register, the issue of Registration Certificates, Provisional Registration Certificates and Temporary Passes, changes in ownership, marking and naming of the ship, nationality of ships, flags to be flown, assuming and concealing Australian nationality.

*Transfers, transmissions and mortgages.* This part deals with the transfer, transmission of ship and shares, the taking out, transfer, transmission transfer and discharge of mortgages and the entry of this information into the Register.

*Administration.* This part deals with the appointment of the Registrar, delegation of the powers of the Minister and Registrar, the establishment of the Shipping Registration Office and Branch Offices.

*Register of ships.* This part deals with the maintenance, rectification and inspection of the Register.

*Transitional provisions.* This part deals with the change over from the previous law to the new legislation. This includes the completion of transactions commenced under the previous law and the acceptability of documents prepared under the previous law.

### **Australian Shipping Commission**

The Commission was established by the *Australian Coastal Shipping Commission Act* 1956. Its role has been to establish, maintain and operate interstate, overseas and territorial shipping services. In October 1974 the Commission's title was changed to the Australian Shipping Commission to reflect the increasing importance of its overseas trading activities. In 1980 the Australian Shipping Commission Act was amended to increase the Commission's borrowing powers and give it greater flexibility in having freight rates set.

As at 30 June 1983 the Commission, operating as the Australian National Line, owned and/or operated a fleet of thirty-three vessels. The fleet included 19 vessels engaged in overseas trades comprising 1 unitized/vehicular ship of 20,681 tonnes deadweight; 4 container ships totalling 106,526 tonnes deadweight; 5 vehicle deck cargo ships totalling 106,306 tonnes deadweight and 9 bulk carriers totalling 672,198 tonnes deadweight.

The fleet also included 14 vessels engaged in coastal trades comprising one vehicle deck passenger ship, the *Empress of Australia* of 2735 tonnes deadweight, 2 ro-ro ships of 12,034 tonnes deadweight each; 5 vehicle deck cargo ships totalling 28,247 tonnes deadweight; 2 coal-fired bulk carriers the *River Boyne* and *River Embley* of approximately 75,000 tonnes deadweight each and 4 other bulk carriers each less than 20,000 tonnes deadweight, totalling 65,739 tonnes deadweight.

The line operated specialised terminals at Adelaide, Melbourne, Burnie, Devonport, Bell Bay, Sydney, Port Kembla, Brisbane, Townsville and Cairns.

The *Empress of Australia* carried 122,834 passengers between Melbourne and Devonport together with 36,029 tourist vehicles during the year ending 30 June 1983.

### **Shipbuilding Assistance**

The shipbuilding industry in Australia has been assisted by the Government since the introduction of the shipbuilding subsidy scheme in 1947. The level of subsidy has been determined by the Government on the basis of inquiries into the industry by the former Tariff Board and, more recently, by the Industries Assistance Commission.

In May 1977, the Government sent a reference to the Commission on assistance to be accorded to the production of vessels under 6,000 t. The Commission reported to the Government on 25 July 1979 and on 29 November 1979 the Government announced new, simplified assistance arrangements for the Australian shipbuilding industry, with the introduction of the new *Bounty (Ships) Act* on 1 July 1980.

Under this Act, bounty continues to be accorded to the production in Australia of vessels over 150 gross construction tons, or over 21 metres in the case of fishing vessels. Bounty is payable on a 'cost of construction basis', at a rate of 27½ per cent, phasing down to a long-term rate of 20 per cent to apply from 1 July 1986.

Vessels built at major yards include small cargo vessels, offshore supply vessels, passenger ferries, fishing vessels, dredgers and barges. In addition, there are numerous smaller yards building non-bountiable vessels such as pleasure craft, small fishing vessels, and other small craft. Construction of large ships in Australia ceased in 1978.

In 1982-83 a total of 40 vessels were completed at Australian yards (as compared with 55 in 1981-82 and 53 in 1980-81).

Total financial assistance to the Australian shipbuilding industry in 1982-83 amounted to \$25.6m (as compared with \$26.8m in 1981-82 and \$17.3m in 1980-81).

### **Importation of Ships**

The control of imports forms an integral part of the Government's shipbuilding assistance arrangements, complementing the bounty legislation. Under the Customs (Prohibited Imports) Regulations all ships are 'prohibited imports' and may not be imported into Australia except with the written permission of the Minister for Transport. For shipbuilding policy purposes, importation is permitted in the case of new vessels, second-hand vessels outside the size range 70 tonnes to 10,000 tonnes, and vessels of a type not available new from Australian yards.

### **Stevedoring Industry**

In December 1977, legislation was introduced which provided for new administrative, financial and industrial arrangements for the stevedoring industry and abolished the Australian Stevedoring Industry Authority. The arrangements give the parties directly involved in the industry greater responsibility in the industry's affairs.

The Stevedoring Industry Finance Committee is responsible for the disbursement of funds collected through statutory man-hour and cargo levies.

A federal co-ordinating committee comprising representatives of the employers and the Waterside Workers' Federation (WWF) and Broken Hill Pty Ltd (BHP) and the Australian National Line oversees the operation of arrangements agreed to in the General Agreement between employers and the WWF. At the port level such matters are handled by Port Co-ordinating Committees set up in the major ports.

Under section 85A of the *Conciliation and Arbitration Act 1904* a Port Conciliator Service was created to assist parties to an industry award to implement the procedures of that award for the prevention or settling of disputes.

A non-statutory Stevedoring Industry Consultative Council chaired by Sir Alan Westerman, CBE, has been established to provide a forum for discussion and liaison between government(s), user interests and the operating sections of the industry. The Chairman is appointed by the Commonwealth Government.

The Statutory provisions relating to the industry are contained in the *Stevedoring Industry Finance Committee Act 1977*, the *Stevedoring Industry Levy Act 1977*, the *Stevedoring Industry Levy Collection Act 1977*, the *Port Statistics Act 1977* and sections 85A, 86, 87 of the *Conciliation and Arbitration Act 1904*.

### **Tasmanian Freight Equalisation Scheme**

The Commission of Inquiry into Transport to and from Tasmania in its report published in March 1976 found that because of Tasmania's physical separation from the mainland by sea, Tasmanian shippers suffer a cost freight disability in moving non-bulk cargoes by sea between Tasmania and the mainland.

Following on from the report, the Commonwealth Government introduced, with effect from 1 July 1976, the Tasmanian Freight Equalisation Scheme. The Scheme is designed to equalise door-to-door freight costs of moving certain eligible commodities between Tasmania and the mainland by sea with those for moving similar commodities over comparable interstate mainland rail and road routes.

The northbound component applies to Tasmanian consignors of specified goods by sea that are bought for use or exported for sale on the mainland. Under the southbound component certain producer raw materials, machinery and equipment are eligible for assistance. The northbound component was introduced in July 1976 and the southbound component in July 1977. Assistance under the latter applied to shipments made from 1 July 1976.

In 1982-83 assistance provided under the Scheme for northbound cargoes totalled \$25.8m, and \$1.4m in respect of southbound cargoes. Since its inception, assistance provided under the Scheme up to the end of 1982-83 totalled \$175.8 million.

Responsibility for the administration of the Scheme lies within the Transport portfolio.

Revised rates of assistance for northbound cargoes were introduced on 1 July 1978 and revised southbound rates on 1 March 1980 following reviews of freight costs by the Bureau of Transport Economics. The Government has announced that the scheme is to be reviewed by the recently established Inter-State Commission.

### **Trade Practices Act 1974 (Part X—Overseas Cargo Shipping)**

The Overseas Cargo Shipping provisions of the *Trade Practices Act* (Part X) are administered by the Transport portfolio.

Part X establishes conditions for the operation of outwards shipping conferences and individual shipowners operating in Australia's outwards trades. Conference agreements between several shipowners in a particular trade make provision for the fixing of common freight rates. They may also include provisions for pooling arrangements and shares of the trade and rationalised sailing schedules.

Part X exempts conferences from the generally applicable anti-restrictive provisions of the Act, and seeks to ensure adequate safeguards to protect shippers through:

- requiring the filing of outwards conference agreements;
- requiring shipowners to give undertakings to hold meaningful negotiations with the designated shipper body, the Australian Shippers' Council (ASC);
- providing for disapproval of a conference agreement to be exercised by the Governor-General on a number of prescribed grounds, such as a failure on the part of the shipowner to comply with an undertaking, lack of due regard to the need for overseas shipping services to be efficient, economical and adequate, prevention or hindrance of an Australian flag operator from engaging efficiently in overseas cargo shipping to a reasonable extent.

Comparable provisions apply to individual shipowners who are not party to a conference agreement.

### Marine Pollution

The *Protection of the Sea (Discharge of Oil from Ships) Act* 1981, Part VIIA of the *Navigation Act* 1912 and the *Protection of the Sea (Shipping Levy) and (Shipping Levy Collection) Acts* 1981 currently provide the Commonwealth power to deal with matters relating to marine oil pollution.

The Acts respectively provide for the control of discharges at sea and provision of control equipment and procedures on ships; empower the Minister to intervene to take action to prevent or reduce pollution and makes provision relating to limitation of liability of oil tankers for oil pollution damage; and provide for the collection of a levy to finance the National Plan to Combat Pollution of the Sea by Oil.

Three important Acts which will apply the provisions of three International Pollution Conventions are expected to be proclaimed in 1984. The *Protection of the Sea (Civil Liability) Act* 1981, the *Protection of the Sea (Powers of Intervention) Act* 1981, and the *Protection of the Sea (Prevention of Pollution from Ships) Act* 1983 will implement improved provisions concerning, respectively, limitation of liability for oil pollution damage for certain ships; empowering the Minister or his delegate to intervene on the high seas and in territorial waters to prevent, limit and combat pollution by oil and specified noxious substances; and to prohibit or control discharges of oil or noxious liquid substances at sea, and require the provision of control equipment and operational procedures on ships.

### Maritime Industry Commission of Inquiry

For details see Year Book No. 61, pages 370-1.

## Collection and presentation of statistics

### Basic Documents

From 1 July 1966 shipping statistics have been compiled by the Australian Bureau of Statistics from returns submitted by shipping companies or their representatives to Customs Houses at the various seaports throughout Australia. A return is required for the departure of a vessel from a port as well as for its arrival at that port.

On 1 July 1979 revised Bureau of Customs forms (B380/B381) came into operation bringing changes in concepts and definitions. At the same time improvements were made in the coverage of the shipping and cargo statistics collection. Consequently statistics for 1979-80 onwards are not always comparable with data for previous periods.

### Scope of the Statistics

Arrivals and departures of vessels are treated separately in shipping statistics. Not all vessels are included in the statistics, as returns are not required for (i) naval vessels; (ii) yachts and other craft used for pleasure; (iii) foreign fishing vessels that neither load nor discharge cargo; (iv) Australian registered fishing vessels operating from Australian ports; (v) geographical survey vessels, seismic survey vessels, oceanographic survey vessels; (vi) offshore oil drilling rigs and vessels servicing them; (vii) vessels of 200 registered net tonnes and under.

### Period Covered by the Statistics

The shipping statistics presented relate to overseas vessels arriving at or departing from Australian ports carrying international cargo, within the financial year.

### Vessel Characteristics

#### *Vessel recording*

Vessel movement statistics are recorded as "Vessel Number" and "Vessel Calls". "Vessel Number" relates to the number of overseas direct arrivals to, or departures from Australia. "Vessel Calls" relates to the number of port visits that an overseas vessel makes in Australia. For example, an overseas vessel which arrives direct in Brisbane and makes a further call in Sydney before departing for an overseas port from Melbourne is counted as one under "Vessel Number" for both arrivals (Brisbane) and departures (Melbourne) and as one arrival call and one departure call for each of the three ports.

#### *Vessel type*

All vessels are classified from *Lloyd's Register of Shipping* according to one of 13 vessel types which describe them in terms of their structure or design. These 13 vessel types are amalgamated into four broad categories as follows:

<i>Category</i>	<i>Vessel types</i>
(a) general cargo vessels . . . . .	Container Ships Roll on—Roll off General Cargo Ships Livestock Cargo
(b) tankers . . . . .	Gas carriers: refrigerated Gas carriers: non-refrigerated Tankers: Crude oil and petroleum products Tankers: Chemical and specialised
(c) bulk carriers . . . . .	Dry Bulk Carrier Bulk/oil Carrier
(d) other vessels . . . . .	Multi-purpose Passenger Other

#### *Type of service*

Vessels are also classified according to the type of service they provide. The two types of service for which statistics are shown are:

- (a) liner service, (according to conference and non-conference) relates specifically to a vessel which is operated by a carrier providing services on a specified route on a relatively regular basis; and
- (b) other service, which refers to all vessels operating in other than a liner service.

Conference vessels—A 'conference' is an association of shipowners which regulates the freight rates and terms and conditions of carriage of goods in any particular trade. Conferences only operate liner services and not charter services. Conference arrangements normally include provisions for sharing the trade, rationalising sailing schedules and pooling arrangements for resources and/or revenue.

#### **Country of registration**

The country of registration or flag of the vessel refers to the country in which the vessel is registered according to *Lloyd's Register of Shipping*.

#### **Recording of cargo loaded or discharged**

Returns for arrivals show cargo discharged, and returns for departures show cargo loaded, in terms of revenue tonnes. A revenue tonne is the unit of quantity predominantly used in the shipping industry. It is the basis on which freight is charged and is obtained by adding mass (tonnes weight) and volume (cubic metres) units.

#### **Container cargo**

Statistics of container cargo refer only to cargo shipped in 20 ft or 40 ft standard international containers. To provide a standard measure, all statistics relating to containers are expressed in terms of 20 ft units. A 40 ft container is therefore recorded as two twenty-foot equivalent units (or TEU's).

#### **Country of loading or discharge of overseas cargo**

In statistics of overseas shipping and cargo, the country of loading, or discharge, of overseas cargo is the country of location of the port where the cargo was loaded on to, or is to be discharged from, a reporting vessel. The countries shown are not necessarily the countries of origin or ultimate destination of cargo because previous or subsequent transshipments of cargo are not taken into account. The statistics of cargo classified by the country in which it was loaded or discharged cannot therefore be compared directly with statistics of overseas trade classified by country of origin or consignment.

#### **Trade area**

Ports at which vessels load or discharge cargo are allocated to their respective countries, which are in turn allocated to trade areas in accordance with the Classification of Trade Areas for Cargo Statistics.

#### **Units of measurement**

The cargo carrying capacity of vessels has in the past been measured in terms of registered net tonnage. However, as from 1 July 1979 this statistic has been replaced by deadweight tonnage (DWT).

*Deadweight tonnage.* A measure of the total mass (weight, in tonnes) of cargo, stores, fuel, passengers and crew carried by the ship when loaded to her maximum summer loadline.

*Gross tonnage.* A measure of the enclosed internal volume of a ship and its superstructure, with certain spaces exempt, in units of 1 ton per 2.83 cubic metres.



### Australian trading vessels

The following table shows particulars of all Australian trading vessels of 150 gross tons or more engaged in the regular overseas, interstate or intrastate services at 30 June 1983.

#### AUSTRALIAN TRADING VESSELS OF 150 GROSS TONS OR MORE 30 JUNE 1983

(Source: Department of Transport)

<i>Vessels</i>	<i>Number</i>	<i>DWT</i>	<i>Gross Tons</i>
<b>Intrastate—</b>			
Australian owned, Australian registered . . . . .	17	307,121	203,143
<i>Intrastate fleet</i> . . . . .	17	307,121	203,143
<b>Interstate—</b>			
Australian owned, Australian registered . . . . .	44	1,076,849	687,715
Overseas owned, Australian registered . . . . .	8	132,940	92,354
Overseas owned, overseas registered . . . . .	5	299,119	163,293
<i>Interstate fleet</i> . . . . .	57	1,508,908	943,362
<b>Coastal fleet</b> . . . . .	74	1,816,029	1,146,505
<b>Overseas—</b>			
Australian owned, Australian registered . . . . .	18	648,115	426,522
Overseas owned, Australian registered . . . . .	5	589,541	351,764
Overseas owned, overseas registered . . . . .	7	225,306	145,751
<b>Overseas fleet</b> . . . . .	30	1,462,962	924,037
<b>Total Australian fleet</b> . . . . .	104	3,278,991	2,070,542

### Overseas shipping

The following table shows the movement of vessels and cargo to and from overseas countries, for the years 1976-77 to 1981-82.

#### OVERSEAS SHIPPING: VESSEL AND CARGO MOVEMENTS

	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82
<b>Arrivals—</b>						
<i>vessel details</i>						
vessel number . . . . .	5,830	5,615	5,677	6,249	5,995	5,895
DWT ('000 tonnes) . . . . .	n.a.	n.a.	n.a.	247,218	237,223	234,041
<i>cargo discharged</i>						
revenue tonnes ('000) . . . . .	28,329	26,981	28,637	31,028	32,480	31,421
gross weight ('000 tonnes) . . . . .	n.a.	n.a.	n.a.	26,219	26,767	25,815
<b>Departures—</b>						
<i>vessel details</i>						
vessel number . . . . .	5,824	5,668	5,655	6,168	5,922	5,838
DWT ('000 tonnes) . . . . .	n.a.	n.a.	n.a.	246,555	234,618	236,718
<i>cargo loaded</i>						
revenue tonnes ('000) . . . . .	167,118	166,700	167,304	188,681	179,413	176,978
gross weight ('000 tonnes) . . . . .	n.a.	n.a.	n.a.	187,778	178,514	176,156

The following table shows particulars of overseas shipping which arrived at or departed from Australian ports according to the country of registration of vessels.

**OVERSEAS SHIPPING: VESSEL DEPARTURES AND ARRIVALS BY COUNTRY OF REGISTRATION, 1981-82**

<i>Country of registration</i>	<i>Departures</i>		<i>Arrivals</i>	
	<i>Vessel number</i>	<i>DWT ('000 tonnes)</i>	<i>Vessel number</i>	<i>DWT ('000 tonnes)</i>
Antilles (Netherlands)	4	65	4	65
Australia	172	8,779	165	8,960
Belgium Luxembourg	22	1,091	17	965
Bermuda	22	240	11	182
China excl. Taiwan	189	5,546	194	5,536
— Taiwan	37	2,015	38	2,244
Denmark	88	1,210	99	1,522
Finland	10	331	11	366
France	23	1,703	20	1,527
Germany, Federal Republic of	152	3,092	151	2,818
Greece	387	14,174	399	14,372
Hong Kong	150	5,481	155	6,415
India	87	2,618	83	2,489
Italy	19	680	17	583
Japan	1,234	82,492	1,257	80,004
Korea, Republic of	174	6,665	174	6,441
Kuwait	26	1,311	27	1,355
Liberia	731	35,893	748	36,633
Malaysia	53	975	52	987
Nauru, Republic of	6	151	11	282
Netherlands	78	1,256	82	1,239
New Zealand	113	1,183	127	1,335
Norway	186	8,704	178	8,370
Panama	692	19,623	701	19,577
Philippines	31	1,485	31	1,487
Poland	15	251	9	147
Singapore, Republic of	223	5,497	223	5,401
South Africa, Republic of	7	134	9	178
Spain	2	265	—	—
Sweden	35	1,061	30	957
Thailand	1	—	1	—
Turkey	2	83	1	61
United Kingdom	472	14,682	465	14,318
United States of America	28	1,110	29	1,010
U.S.S.R.	124	1,967	133	2,083
Other countries	243	4,903	243	4,132
<b>Total All Countries</b>	<b>5,838</b>	<b>236,718</b>	<b>5,895</b>	<b>234,041</b>
With cargo	5,173	216,321	2,286	50,607
In ballast	665	20,397	3,609	183,434

### Harbour boards and trusts

For detailed information see the individual State Year Books.

### Shipping at principal ports

The following table shows the total movement of overseas shipping and cargo at Australian ports, 1981-82.

## OVERSEAS VESSEL AND CARGO MOVEMENTS AT AUSTRALIAN PORTS 1981-82

Australian port	Departures		Cargo loaded	Arrivals		Cargo discharged
	Vessel details			Vessel details		
	Vessel calls	DWT ( <sup>'000 tonnes</sup> )	Gross weight ( <sup>'000 tonnes</sup> )	Vessel calls	DWT ( <sup>'000 tonnes</sup> )	Gross weight ( <sup>'000 tonnes</sup> )
<b>New South Wales—</b>						
Sydney . . . . .	1,381	29,525	5,867	1,431	30,881	3,591
Botany Bay . . . .	569	14,766	497	548	14,595	2,957
Newcastle . . . . .	557	20,978	15,022	579	20,996	1,083
Port Kembla . . . .	221	10,817	6,723	233	10,901	447
Other . . . . .	38	1,077	807	38	1,074	4
<i>Total</i> . . . . .	<i>2,766</i>	<i>77,162</i>	<i>28,916</i>	<i>2,829</i>	<i>78,448</i>	<i>8,082</i>
<b>Victoria—</b>						
Melbourne . . . . .	1,698	31,981	2,649	1,762	34,046	2,882
Geelong . . . . .	268	7,896	2,666	287	8,218	1,967
Westernport . . . .	189	4,382	1,924	192	4,334	63
Other . . . . .	105	2,807	848	106	2,807	227
<i>Total</i> . . . . .	<i>2,260</i>	<i>47,066</i>	<i>8,088</i>	<i>2,347</i>	<i>49,405</i>	<i>5,139</i>
<b>Queensland—</b>						
Brisbane . . . . .	1,039	19,886	2,494	1,029	20,229	1,329
Gladstone . . . . .	313	15,420	11,200	328	15,398	434
Hay Point . . . . .	217	20,686	14,207	216	20,288	—
Townsville . . . . .	278	4,415	1,096	278	4,392	324
Weipa . . . . .	102	5,202	4,323	103	5,088	53
Other . . . . .	367	5,070	2,580	376	5,170	170
<i>Total</i> . . . . .	<i>2,316</i>	<i>70,678</i>	<i>35,900</i>	<i>2,330</i>	<i>70,565</i>	<i>2,310</i>
<b>South Australia—</b>						
Port Adelaide . . . .	566	10,210	1,197	539	9,656	570
Port Lincoln . . . .	76	1,881	590	80	1,875	115
Port Pirie . . . . .	83	1,376	668	93	1,436	18
Port Stanvac . . . .	38	2,777	359	45	2,989	1,349
Thevenard . . . . .	52	835	622	58	937	—
Whyalla . . . . .	37	672	261	37	672	169
Other . . . . .	63	1,554	611	64	1,505	92
<i>Total</i> . . . . .	<i>915</i>	<i>19,305</i>	<i>4,308</i>	<i>916</i>	<i>19,070</i>	<i>2,312</i>
<b>West Australia—</b>						
Fremantle . . . . .	972	23,052	4,719	1,016	24,460	4,706
Bunbury . . . . .	133	3,782	2,246	129	3,591	162
Cape Cuvier . . . . .	12	700	678	13	760	—
Dampier . . . . .	368	34,650	30,524	370	33,580	88
Geraldton . . . . .	180	3,648	1,727	180	3,598	122
Port Hedland . . . .	365	33,838	30,025	387	35,288	257
Port Walcott . . . .	125	16,315	14,803	121	15,277	35
Yampi Sound . . . .	25	2,247	2,205	31	2,413	—
Other . . . . .	277	4,400	1,967	279	4,426	289
<i>Total</i> . . . . .	<i>2,457</i>	<i>122,632</i>	<i>88,895</i>	<i>2,526</i>	<i>123,394</i>	<i>5,659</i>
<b>Tasmania—</b>						
Hobart . . . . .	153	2,250	670	144	2,177	153
Launceston . . . . .	113	3,007	1,634	112	2,876	90
Port Latta . . . . .	25	2,157	1,949	25	2,129	—
Other . . . . .	121	2,313	395	120	2,290	87
<i>Total</i> . . . . .	<i>412</i>	<i>9,726</i>	<i>4,647</i>	<i>401</i>	<i>9,473</i>	<i>330</i>
<b>Northern Territory—</b>						
Darwin . . . . .	111	1,270	18	110	1,335	484
Other . . . . .	140	5,387	3,646	140	5,318	592
<i>Total</i> . . . . .	<i>251</i>	<i>6,657</i>	<i>3,664</i>	<i>250</i>	<i>6,653</i>	<i>1,076</i>
Port not available . .	308	4,714	1,739	189	1,905	907
<b>Total all ports</b> . . .	<b>11,685</b>	<b>357,942</b>	<b>176,156</b>	<b>11,788</b>	<b>358,910</b>	<b>25,815</b>

### Shipping cargo

The following table shows details of container and non-container cargo loaded and discharged at Australian ports during 1981-82.

#### OVERSEAS CONTAINER AND NON-CONTAINER CARGO LOADED AND DISCHARGED AT AUSTRALIAN PORTS, 1981-82

('000 revenue tonnes)

Port	Loaded			Discharged		
	Container cargo	Other cargo	Total	Container cargo	Other cargo	Total
<b>New South Wales—</b>						
Sydney . . . . .	767	5,251	6,018	1,959	2,988	4,947
Botany Bay . . . . .	383	151	534	1,052	2,388	3,440
Newcastle . . . . .	7	15,015	15,022	3	1,088	1,091
Port Kembla . . . . .	—	6,723	6,723	—	446	447
Other . . . . .	—	807	807	—	5	5
<b>Total</b> . . . . .	<b>1,157</b>	<b>27,947</b>	<b>29,104</b>	<b>3,014</b>	<b>6,916</b>	<b>9,930</b>
<b>Victoria—</b>						
Melbourne . . . . .	2,032	1,029	3,061	2,983	2,083	5,065
Geelong . . . . .	12	2,655	2,667	14	1,961	1,975
Westernport . . . . .	—	1,924	1,924	—	63	63
Other . . . . .	—	855	855	—	230	230
<b>Total</b> . . . . .	<b>2,044</b>	<b>6,463</b>	<b>8,507</b>	<b>2,997</b>	<b>4,337</b>	<b>7,334</b>
<b>Queensland—</b>						
Brisbane . . . . .	451	2,096	2,547	418	1,544	1,962
Gladstone . . . . .	—	11,200	11,200	—	441	441
Hay Point . . . . .	—	14,207	14,207	—	—	—
Townsville . . . . .	38	1,058	1,097	5	387	392
Weipa . . . . .	—	4,323	4,323	—	53	53
Other . . . . .	6	2,575	2,581	2	169	170
<b>Total</b> . . . . .	<b>495</b>	<b>35,459</b>	<b>35,954</b>	<b>424</b>	<b>2,594</b>	<b>3,019</b>
<b>South Australia—</b>						
Port Adelaide . . . . .	203	1,040	1,243	125	794	919
Port Lincoln . . . . .	—	590	590	—	115	115
Port Pirie . . . . .	1	669	670	—	18	18
Port Stanvac . . . . .	—	359	359	—	1,349	1,349
Thevenard . . . . .	—	622	622	—	—	—
Whyalla . . . . .	—	261	261	4	166	170
Other . . . . .	—	611	611	—	92	92
<b>Total</b> . . . . .	<b>204</b>	<b>4,151</b>	<b>4,355</b>	<b>129</b>	<b>2,534</b>	<b>2,663</b>
<b>West Australia—</b>						
Fremantle . . . . .	394	4,371	4,766	425	4,621	5,045
Bunbury . . . . .	—	2,254	2,254	—	162	162
Cape Cuvier . . . . .	—	678	678	—	—	—
Dampier . . . . .	—	30,524	30,524	—	88	88
Geraldton . . . . .	—	1,725	1,727	3	120	123
Port Hedland . . . . .	—	30,025	30,025	—	263	263
Port Walcott . . . . .	—	14,803	14,803	—	35	35
Yampi Sound . . . . .	—	2,205	2,205	—	—	—
Other . . . . .	26	1,942	1,968	3	290	293
<b>Total</b> . . . . .	<b>422</b>	<b>88,529</b>	<b>88,951</b>	<b>430</b>	<b>5,579</b>	<b>6,009</b>
<b>Tasmania—</b>						
Hobart . . . . .	—	673	673	—	184	184
Launceston . . . . .	1	1,635	1,636	—	96	96
Port Latta . . . . .	—	1,949	1,949	—	—	—
Other . . . . .	73	328	402	13	83	96
<b>Total</b> . . . . .	<b>74</b>	<b>4,585</b>	<b>4,659</b>	<b>13</b>	<b>362</b>	<b>375</b>
<b>Northern Territory—</b>						
Darwin . . . . .	1	24	25	2	516	518
Other . . . . .	—	3,646	3,646	—	592	592
<b>Total</b> . . . . .	<b>1</b>	<b>3,670</b>	<b>3,671</b>	<b>2</b>	<b>1,108</b>	<b>1,110</b>
Port not available . . . . .	377	1,399	1,776	380	602	982
<b>Total Australia</b> . . . . .	<b>4,774</b>	<b>172,204</b>	<b>176,978</b>	<b>7,389</b>	<b>24,032</b>	<b>31,421</b>

**Overseas cargo according to major trade areas and vessel type**

The following table shows details of cargo loaded in Australia for discharge overseas, and cargo discharged in Australia from overseas classified according to the major trade areas of the world and by vessel type.

**OVERSEAS CARGO LOADED AND DISCHARGED IN AUSTRALIA: MAJOR TRADE AREAS BY VESSEL TYPE, 1981-82**

('000 revenue tonnes)

<i>Trade area</i>	<i>General cargo vessels</i>	<i>Tankers</i>	<i>Bulk carriers</i>	<i>Other vessels</i>	<i>All vessels</i>
<i>Loaded</i>					
Europe . . . . .	1,338	370	27,279	51	29,037
East Asia . . . . .	1,323	172	10,444	31	11,969
Japan . . . . .	2,674	1,518	109,186	362	113,739
N. America-E. Coast . . . . .	463	488	1,973	3	2,928
N. America-W. Coast . . . . .	391	93	2,400	74	2,958
Central America . . . . .	20	31	99	-	150
S. America-E. Coast . . . . .	62	-	406	-	469
S. America-W. Coast . . . . .	46	-	74	-	120
West Africa . . . . .	-	-	-	-	-
South East Africa . . . . .	128	29	324	-	480
Red Sea . . . . .	257	-	1,342	1	1,600
Persian Gulf . . . . .	502	283	2,296	28	3,109
West India . . . . .	185	22	617	17	841
East India . . . . .	90	33	461	6	590
South East Asia . . . . .	1,914	627	3,218	40	5,799
New Zealand . . . . .	777	453	546	-	1,776
Papua New Guinea . . . . .	485	209	24	-	718
Central Pacific . . . . .	156	299	25	9	490
French Pacific . . . . .	68	12	70	3	153
Pacific Islands . . . . .	8	1	36	-	45
Other . . . . .	5	-	-	2	7
<b>Total Loaded . . . . .</b>	<b>10,892</b>	<b>4,639</b>	<b>160,819</b>	<b>628</b>	<b>176,978</b>
<i>Discharged</i>					
Europe . . . . .	2,213	652	285	51	3,200
East Asia . . . . .	1,292	70	102	31	1,495
Japan . . . . .	3,648	237	1,930	332	6,147
N. America-E. Coast . . . . .	1,097	465	524	-	2,086
N. America-W. Coast . . . . .	842	183	1,723	171	2,919
Central America . . . . .	5	20	22	-	47
S. America-E. Coast . . . . .	95	-	18	-	113
S. America-W. Coast . . . . .	9	-	-	-	9
West Africa . . . . .	6	-	1	-	7
South East Africa . . . . .	173	14	7	-	194
Red Sea . . . . .	40	435	4	-	479
Persian Gulf . . . . .	17	7,556	226	-	7,799
West India . . . . .	57	141	-	-	198
East India . . . . .	51	-	-	5	56
South East Asia . . . . .	569	2,901	803	24	4,297
New Zealand . . . . .	782	5	195	-	982
Papua New Guinea . . . . .	82	7	-	-	90
Central Pacific . . . . .	27	-	-	1	28
French Pacific . . . . .	2	31	-	-	33
Pacific Islands . . . . .	7	-	1,214	22	1,242
Other . . . . .	1	-	-	-	1
<b>Total Discharged . . . . .</b>	<b>11,014</b>	<b>12,718</b>	<b>7,054</b>	<b>636</b>	<b>31,421</b>

**Overseas cargo according to country of registration of vessels**

The following table shows the total overseas cargo, loaded and discharged, according to the country in which the vessels were registered.

**OVERSEAS CARGO LOADED AND DISCHARGED, BY COUNTRY OF REGISTRATION OF VESSELS:  
AUSTRALIA**

('000 revenue tonnes)

Country of registration	1979-80		1980-81		1981-82	
	Loaded	Discharged	Loaded	Discharged	Loaded	Discharged
Antilles (Netherlands)	10	277	8	81	45	34
Australia	6,254	1,545	6,876	1,330	6,649	1,381
Belgium-Luxembourg	1,334	549	1,125	222	886	196
Bermuda	586	84	451	20	155	27
China—excl. Taiwan	7,727	388	5,419	180	4,140	350
— Taiwan	2,180	42	1,201	—	1,729	17
Denmark	475	1,001	647	653	544	513
Finland	256	35	252	38	245	125
France	1,297	63	459	335	522	451
Germany, Federal Democratic Republic of	1,154	913	1,035	1,016	1,420	1,115
Greece	11,042	1,895	8,380	2,439	10,423	2,727
Hong Kong	2,225	549	1,975	624	3,850	1,073
India	2,055	152	2,349	221	2,070	77
Ireland	47	—	50	—	—	—
Italy	1,281	216	839	137	434	164
Japan	71,674	3,553	68,555	4,109	70,782	4,095
Korea, Republic of	3,369	80	3,066	303	5,712	375
Kuwait	127	51	151	—	233	78
Liberia	36,539	4,414	37,826	5,817	26,579	5,277
Malaysia	566	426	509	388	494	341
Nauru, Republic of	119	187	141	138	61	272
Netherlands	761	964	551	888	501	407
New Zealand	429	671	641	1,187	476	738
Norway	6,723	2,082	5,694	1,571	5,837	1,397
Panama	13,299	1,436	14,522	1,795	15,684	1,789
Philippines	997	240	1,305	46	1,371	72
Poland	82	144	71	156	61	81
Singapore, Republic of	2,787	812	2,786	1,054	3,335	1,206
South Africa, Republic of	230	197	195	96	68	117
Spain	114	—	—	105	108	—
Sweden	801	528	448	496	560	477
Thailand	—	134	—	197	8	5
Turkey	66	—	282	—	51	—
United Kingdom	9,413	5,606	8,214	5,446	7,315	4,849
United States of America	322	582	261	634	243	348
U.S.S.R.	1,122	310	1,291	320	1,223	526
Other Countries	1,216	904	1,838	436	3,165	722
<b>Total All Vessels</b>	<b>188,681</b>	<b>31,028</b>	<b>179,413</b>	<b>32,480</b>	<b>176,978</b>	<b>31,421</b>

(a) included in 'other countries'.

**Overseas cargo according to major trade areas and type of service**

The following table shows details of cargo loaded in Australia for discharge overseas, and cargo discharged in Australia from overseas, classified according to the major trade areas of the world, by type of shipping service.

**OVERSEAS CARGO LOADED AND DISCHARGED IN AUSTRALIA: MAJOR TRADE AREAS BY TYPE OF SERVICE, 1981-82**  
(\*000 revenue tonnes)

Trade area	Loaded			Discharged		
	Liner service			Liner service		
	Conference	Non-Conference	Other vessels	Conference	Non-Conference	Other vessels
Europe . . . . .	871	93	28,074	1,933	229	1,038
East Asia . . . . .	448	204	11,317	710	537	248
Japan . . . . .	775	119	112,845	1,275	205	4,667
North America—E. Coast . . . . .	464	335	2,128	932	104	1,050
North America—W. Coast . . . . .	294	166	2,498	762	707	1,449
Central America . . . . .	16	7	128	1	1	45
South America—E. Coast . . . . .	16	3	450	64	17	32
South America—W. Coast . . . . .	3	3	114	7	—	2
West Africa . . . . .	—	—	—	—	5	2
South and East Africa . . . . .	2	105	373	35	123	36
Red Sea . . . . .	52	14	1,534	—	34	445
Persian Gulf . . . . .	52	50	3,007	4	4	7,791
West India . . . . .	96	9	736	44	2	151
East India . . . . .	48	—	543	47	—	9
S.E. Asia . . . . .	606	320	4,873	330	173	3,794
New Zealand . . . . .	488	29	1,260	656	25	300
Papua New Guinea . . . . .	354	74	290	43	9	38
Central Pacific . . . . .	48	39	403	5	13	10
French Pacific . . . . .	50	22	82	—	1	32
Pacific Islands . . . . .	3	10	32	—	7	1,235
Other . . . . .	—	—	7	—	—	1
<b>Total . . . . .</b>	<b>4,685</b>	<b>1,601</b>	<b>170,692</b>	<b>6,849</b>	<b>2,196</b>	<b>22,376</b>

**Vessels registered in Australia**

The following table shows the number of vessels registered in Australia at 30 June 1983, classified according to (i) the state in which they are registered; and (ii) the nature of the vessels registration.

**SHIPS REGISTERED IN AUSTRALIA AS AT 30 JUNE 1983**

(Source: Department of Transport)

Location	Nature of registration					State total
	Demise chartered(a)	Commercial	Government	Fishing	Pleasure	
New South Wales . . . . .	2	217	1	325	1,187	1,732
Victoria . . . . .	1	106	19	125	316	567
Queensland . . . . .	2	101	30	564	461	1,158
Western Australia . . . . .	4	97	4	416	278	799
South Australia . . . . .	—	35	9	207	161	412
Tasmania . . . . .	—	79	3	180	147	409
Northern Territory . . . . .	—	9	2	73	96	180
<b>Total Australia . . . . .</b>	<b>9</b>	<b>644</b>	<b>68</b>	<b>1,890</b>	<b>2,646</b>	<b>5,257</b>

(a) A Demise chartered ship is a foreign owned ship chartered by way of a charter party to an Australian based operator, who is an Australian national and who under the charter party has whole possession and control of the ship, including the right to appoint the master and crew of the ship.

The following table shows the number and gross tonnage of trading vessels of 150 tons or more registered in Australia at 30 June 1983, classified according to: (i) year of construction; (ii) type of trade in which the vessels were engaged; and (iii) vessels built in Australian or in overseas shipyards.

## AUSTRALIAN-REGISTERED TRADING VESSELS, OF 150 GROSS TONS OR MORE 30 JUNE 1983

(Source: Department of Transport)

Year of construction	Overseas and interstate vessels		Intrastate vessels		Built in Australian yards		Built overseas		Total	
	No.	Gross tons	No.	Gross tons	No.	Gross tons	No.	Gross tons	No.	Gross tons
1975 and earlier . . .	41	534,189	11	87,006	37	421,260	15	199,935	52	621,195
1976 . . . . .	6	172,201	—	—	3	28,267	3	143,934	6	172,201
1977 . . . . .	7	246,655	1	2,851	3	46,991	5	202,515	8	249,506
1978 . . . . .	9	161,695	—	—	1	25,849	8	135,846	9	161,695
1979 . . . . .	4	97,762	—	—	—	—	4	97,762	4	97,762
1980 . . . . .	—	—	1	2,792	—	—	1	2,792	1	2,792
1981 . . . . .	6	224,251	1	1,155	—	—	7	225,406	7	225,406
1982 . . . . .	1	93,940	2	58,304	1	6,310	2	145,934	3	152,244
1983 . . . . .	1	27,662	1	51,035	—	—	2	78,697	2	78,697
<b>Registered in Australia . . . . .</b>	<b>75</b>	<b>1,558,355</b>	<b>17</b>	<b>203,143</b>	<b>45</b>	<b>528,677</b>	<b>47</b>	<b>1,232,821</b>	<b>92</b>	<b>1,761,498</b>

## Miscellaneous

## 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.

## RAILWAYS

## Government railways

Government railways in Australia operate in all States and Territories and provide an important means of transportation. In 1981–82 a total of 127.3 million tonnes of freight was carried, an increase of 122.5 per cent over the 56.5 million tonnes carried in 1961–62. However, in the same twenty-year period, the number of passengers carried (mostly within the suburban areas of Sydney and Melbourne) declined by 7.5 per cent from 443 million in 1961–62 to 412 million in 1981–82. The number of train-kilometres run during 1981–82 (150 million) was an increase of 3.4 per cent since 1961–62 (145 million), which is an indication of the trend towards heavier train loads with the more powerful motive power now available. Since the introduction of the first mainline diesel-electric locomotives in 1950, their numbers have increased greatly until at 30 June 1982 there were 1,678 throughout Australia. Diesel-electric locomotives during 1981–82 hauled 97 million train-kilometres, while electric and other locomotives hauled 4 million train-kilometres.

The Australian National Railways Commission (ANRC) assumed full control over the Tasmanian and non-metropolitan South Australian railways on 1 March 1978. This change is reflected in the figures for the 1977–78 financial year as many data items, previously available separately from these three systems, are now included in the figures shown for the ANRC. Urban rail services in South Australia remain the responsibility of the State Transport Authority (STA) and particulars of these are shown as the South Australian railway system.

Due to changes in accounting procedures and the introduction of a multi-modal system of travel, i.e. one ticket can cover a journey involving more than one mode, the STA cannot provide, in many instances, separate particulars for train, bus and tram services operated by that authority. Where data is not separately identifiable it has been included in relevant tables in the railway section of this year book.



### Railway development

Details outlining railway development in Australia are given in Year Book No. 61, page 380. One feature of the Australian government railways is the variety of gauges to which they are built. There are three principal gauges: 'broad' (1,600 mm), 'standard' (1,435 mm), and 'narrow' (1,067 mm). Extensive route-kilometres of 1,067 mm gauge railway were built in areas where traffic volumes were initially known to be small and where it was imperative to minimise the costs of construction.

### Government railway systems

The six government owned railway systems are operated by the State Rail Authority of New South Wales (SRA), 'V/Line' operated by the State Transit Authority of Victoria and 'V/Met' operated by the Metropolitan Transit Authority of Victoria, Queensland Government Railways (QR), Western Australian Government Railways Commission (WAGRC), the State Transport Authority of South Australia (STA), and Australian National Railways Commission (ANRC).

As the Australian National Railways Commission system includes routes in more than one State, and the Victorian system extends into New South Wales, the system route-kilometres shown in the following table do not represent route-kilometres within each State and Territory. The route-kilometres of each system open for traffic, according to gauge, at 30 June 1982 is shown in the following table.

GOVERNMENT RAILWAYS: ROUTE-KILOMETRES OPEN, BY GAUGE AND SYSTEM  
30 JUNE 1982  
(Kilometres)

System	Gauge				Total
	1600 mm	1435 mm	1067 mm	Dual (a)	
New South Wales	..	(b)9,773	..	..	(b) 9,773
Victoria	(c)5,487	313	..	12	5,812
Queensland	..	(d)111	9,859	..	9,970
South Australia	141	..	..	..	141
Western Australia	..	1,228	4,226	155	5,609
National	(e)2,387	3,438	1,813	..	7,638
<b>Australia</b>	<b>8,015</b>	<b>14,863</b>	<b>15,898</b>	<b>167</b>	<b>38,943</b>

(a) VR operates a 1600 mm/1435 mm dual gauge line and WAGR operates a 1435 mm/1067 mm dual gauge line.  
 (b) Includes 469 kilometres which are electrified. (c) Includes 328 kilometres of 1600 mm gauge line operating in New South Wales. Includes 417 route-kilometres which are electrified. (d) Operated by the State Rail Authority of New South Wales which is reimbursed for the cost of operations. (e) See page 458.

The following table sets out the route kilometres of each government railways system from 1977 to 1982.

GOVERNMENT RAILWAYS: ROUTE-KILOMETRES OPEN, BY SYSTEM, 1977 TO 1982  
(Kilometres)

30 June—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Australian National	Total
1977	9,755	6,579	9,796	3,894	6,165	864	3,080	40,133
1978	9,763	6,364	9,787	(a)142	5,764	(a)	(a)7,890	39,710
1979	9,820	6,184	9,789	142	5,770	(a)	7,683	39,388
1980	9,773	6,184	9,904	142	5,773	(a)	7,687	39,463
1981	9,773	5,870	9,932	140	5,773	(a)	7,648	39,136
1982	9,773	5,812	9,970	141	5,609	(a)	7,638	38,943

(a) See page 458.

The SRA (1435 mm gauge) operates lines radiating southwest and west from Sydney, northwest from Newcastle, and north from Sydney to Brisbane. QR (1067 mm gauge) operates a coastal line from Brisbane to Cairns, with long branches inland from the major ports. VR (1600 mm gauge, with the 1435 mm gauge Albury to Melbourne line) operates a network throughout Victoria and extending into New South Wales. WAGR (1067 mm gauge) operates in south-western Western Australia, and also operates standard gauge (1435 mm) from Perth to Kalgoorlie, Esperance and Leonora. The STA (1600 mm gauge) operates railways in the Adelaide metropolitan area only. ANRC operates the non-metropolitan railways in South Australia (1600 mm and 1067 mm gauge), including the isolated

Eyre Peninsula system (1067 mm gauge), the Tasmanian main line from Hobart to Launceston, with its branches (1067 mm gauge) and the railways (1435 mm gauge) from Kalgoorlie to Broken Hill (the Trans-Australian Railway), Queanbeyan to Canberra, Port Augusta to Marree, and the new Central Australia Railway from Tarcoola to Alice Springs. Services on the line between Darwin and Larrimah, the North Australia Railway, (1067 mm gauge) were withdrawn on 30 June 1976 and the line was officially closed effective as from 11 February 1981.

With regard to urban rail, Sydney and Melbourne have major electrified suburban rail systems which include some underground lines. The Brisbane suburban system is being upgraded and electrified. Adelaide and Perth have smaller-scale, non-electric urban rail networks. Rail services in the urban and inter-urban areas of Sydney, Newcastle and Wollongong are provided by the SRA in conjunction with the Urban Transit Authority of New South Wales which has responsibility for co-ordination of transport services in these areas. Similarly, metropolitan rail services in Perth are operated by the WAGR on behalf of and at the direction of the Metropolitan Transport Trust.

See also details in Year Book No. 58, page 348.

Construction of a standard gauge connection between Adelaide and the Trans-Australian Railway at Crystal Brook was completed in December 1982, the project being undertaken by the Australian National Railways Commission. All mainland State capital cities are now connected to the standard gauge network.

The new all-weather standard gauge railway between Tarcoola, on the Trans-Australian Railway, and Alice Springs was officially opened in October 1980. Upon transfer of rail services to this new line, the narrow gauge section of the Central Australia Railway from Marree to Alice Springs was officially closed effective as from 1 January 1981.

### Operations of Government railway systems

Particulars of train-kilometres, passenger journeys, passenger-kilometres, freight-tonnes carried, and freight tonne-kilometres included in this section refer only to operations for which revenue is received.

#### Summary of operations

##### GOVERNMENT RAILWAYS: SUMMARY OF OPERATIONS, SYSTEMS, 1981-82

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Australian National</i>	<i>Aust.</i>
<b>Train-kilometres</b>							
('000) (a) —							
Suburban passenger . . . . .	23,180	14,209	4,238	3,921	1,592	..	47,139
Country passenger . . . . .	11,184	6,661	4,260	..	1,024	4,188	27,317
Goods (b) . . . . .	25,595	10,266	24,198	..	8,064	7,901	76,025
<b>Total . . . . .</b>	<b>59,960</b>	<b>31,136</b>	<b>32,696</b>	<b>3,921</b>	<b>10,681</b>	<b>12,089</b>	<b>150,482</b>
<b>Passenger journeys</b>							
('000) (c) —							
Suburban . . . . .	215,957	n.a.	32,592	(g) 79,740	n.a.	..	n.a.
Country (d) . . . . .	4,880	n.a.	1,645	..	219	610	n.a.
<b>Total . . . . .</b>	<b>220,837</b>	<b>76,313</b>	<b>34,237</b>	<b>(g) 79,740</b>	<b>n.a.</b>	<b>610</b>	<b>n.a.</b>
<b>Passenger-kilometres</b>							
('000) (e) —							
Suburban . . . . .	n.a.	n.a.	n.a.	n.a.	n.a.	..	n.a.
Country . . . . .	n.a.	n.a.	n.a.	n.a.	89,631	275,926	n.a.
<b>Total . . . . .</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>	<b>275,926</b>	<b>n.a.</b>
<b>Freight —</b>							
Tonnes carried							
('000) (d) . . . . .	40,393	11,623	43,659	..	19,776	11,882	127,333
<b>Net tonne-kilometres</b>							
(million) (f) . . . . .	10,704.9	3,426.7	13,079.1	..	4,389.8	5,731.3	37,331.8

(a) One train (i.e. a complete unit of locomotive and vehicles, electric train set, or rail motor) travelling one kilometre for revenue purposes. (b) Includes mixed train-kilometres. (c) Based on ticket sales making allowances for periodical tickets. Tickets sold at concession rates are counted as full journeys. (d) Inter-system traffic is included in the total for each system over which it passes. (e) One passenger travelling one kilometre. (f) One tonne carried one kilometre. (g) See page 458.

**Rolling stock****GOVERNMENT RAILWAYS: ROLLING STOCK INCLUDED IN CAPITAL ACCOUNT**

(Number)

System and date	Locomotives				Coaching stock	Goods stock	Service stock
	Diesel-electric	Electric	Other(a)	Total			
30 June 1982(b)							
New South Wales . . . . .	445	49	80	574	2,112	11,737	1,653
Victoria . . . . .	261	31	37	329	1,384	11,487	1,062
Queensland . . . . .	496	..	77	573	1,093	21,748	2,526
South Australia . . . . .	2	..	4	6	197	—	12
Western Australia . . . . .	187	..	21	208	125	9,799	478
Australian National . . . . .	287	..	4	291	152	10,451	1,308
<b>Australia . . . . .</b>	<b>1,678</b>	<b>80</b>	<b>223</b>	<b>1,981</b>	<b>5,063</b>	<b>65,222</b>	<b>7,039</b>
30 June—							
1981 (b) . . . . .	1,722	82	193	1,997	5,036	66,386	7,201
1980 (b) . . . . .	1,727	81	185	1,993	5,121	67,685	7,228
1979 (b) . . . . .	1,695	74	203	1,972	5,055	67,163	7,192
1978(b) . . . . .	1,674	74	194	1,942	6,872	71,043	7,225
1977 . . . . .	1,646	74	262	1,982	7,615	75,694	6,616

(a) Includes non-passenger-carrying diesel power vans and steam locomotives.

(b) Excludes jointly-owned stock.

**Train-kilometres***Train-kilometres by type of service and motive power***GOVERNMENT RAILWAYS: TRAIN-KILOMETRES 1981-82**

('000 kilometres)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Australian National	Aust.
Type of service—							
Passenger—suburban . . . . .	23,180	14,209	4,238	3,921	1,592	..	47,139
Passenger—country . . . . .	11,184	6,661	4,260	..	1,024	4,188	27,317
Goods(a) . . . . .	25,595	10,266	24,198	..	8,064	7,901	76,025
<b>Total . . . . .</b>	<b>59,960</b>	<b>31,136</b>	<b>32,696</b>	<b>3,921</b>	<b>10,681</b>	<b>12,089</b>	<b>150,482</b>
Type of motive power—							
Hauled by diesel-electric locomotives . . . . .	32,414	15,665	29,311	..	8,684	11,244	97,318
Hauled by electric and other locomotives(b) . . . . .	2,797	1,325	166	..	1	..	4,288
Powered coaching stock . . . . .	24,749	14,146	3,219	3,921	1,996	845	48,876
<b>Total . . . . .</b>	<b>59,960</b>	<b>31,136</b>	<b>32,696</b>	<b>3,921</b>	<b>10,681</b>	<b>12,089</b>	<b>150,482</b>

(a) Includes mixed train-kilometres.

(b) Includes steam locomotives.

*Total train-kilometres***TRAIN-KILOMETRES**

('000 kilometres)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Australian National	Aust.
1976-77 . . . . .	57,039	33,489	30,206	10,742	12,846	1,667	5,134	151,125
1977-78 . . . . .	56,860	32,013	30,199	(a) 3,982	12,596	(a) ..	(a) 13,152	148,801
1978-79 . . . . .	55,622	30,856	32,100	3,957	12,068	..	12,918	147,520
1979-80 . . . . .	59,356	30,795	32,589	3,977	11,759	..	12,392	150,868
1980-81 . . . . .	58,089	30,615	31,282	3,879	10,891	..	12,376	147,132
1981-82 . . . . .	59,960	31,136	32,696	3,921	10,681	..	12,089	150,482

(a) See page 458.

**Freight traffic***Freight carried*

**GOVERNMENT RAILWAYS: FREIGHT CARRIED(a), SYSTEMS**  
(**'000 tonnes**)

<i>Commodity and year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Australian National</i>	<i>Aust.</i>
1981-82—								
Grain . . . . .	5,311	3,500	2,042	..	3,642	..	801	15,296
Other agricultural produce . . . . .	769	268	2,092	..	154	..	50	3,333
Coal, coke and briquettes . . . . .	22,618	487	30,067	..	1,519	..	1,814	56,505
Other minerals(b) . . . . .	3,552	913	4,427	..	10,501	..	1,439	20,832
Iron and steel . . . . .	1,994	694	780	..	9	..	787	4,264
Fertilisers . . . . .	120	557	135	..	515	..	375	1,702
Cement . . . . .	559	718	205	..	74	..	480	2,036
Timber . . . . .	74	149	102	..	688	..	1,048	2,061
Containers . . . . .	2,696	1,067	715	..	—	..	1,323	5,801
Livestock . . . . .	116	52	655	..	6	..	200	1,029
All other commodities . . . . .	2,583	3,215	2,441	..	2,669	..	3,565	14,473
<b>Total . . . . .</b>	<b>40,393</b>	<b>11,623</b>	<b>43,659</b>	<b>..</b>	<b>19,776</b>	<b>..</b>	<b>11,882</b>	<b>127,333</b>
1980-81 . . . . .	40,440	12,721	41,504	..	20,271	..	12,345	127,281
1979-80 . . . . .	39,685	13,454	38,440	..	21,937	..	12,704	126,220
1978-79 . . . . .	33,482	11,190	36,542	..	19,288	..	10,623	111,125
1977-78 . . . . .	33,434	11,120	34,155	..	18,625	..	9,995	107,329
1976-77 . . . . .	33,777	10,971	34,237	6,402	19,003	1,644	3,909	109,943

(a) Inter-system traffic is included in the total for each system (including each National railway) over which it passes. (b) Includes sand and gravel.

*Freight net tonne-kilometres*

**GOVERNMENT RAILWAYS: FREIGHT NET TONNE-KILOMETRES, SYSTEMS**  
(**Million**)

<i>Commodity and year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Australian National</i>	<i>Aust.</i>
1981-82—								
Grain . . . . .	2,151.5	1,016.3	647.3	..	1,024.0	..	134.7	4,973.8
Other agricultural produce . . . . .	441.1	84.9	382.2	..	68.4	..	24.9	1,001.5
Coal, coke and briquettes . . . . .	2,431.0	87.5	7,992.7	..	273.7	..	475.0	11,259.9
Other minerals(a) . . . . .	501.8	137.4	1,421.9	..	1,392.2	..	410.0	3,863.3
Iron and steel . . . . .	1,438.5	244.2	245.6	..	3.8	..	710.2	2,642.3
Fertilisers . . . . .	77.7	149.5	166.5	..	207.6	..	122.7	724.0
Cement . . . . .	290.5	138.0	101.5	..	35.7	..	73.8	639.5
Timber . . . . .	73.8	50.7	57.7	..	140.9	..	238.9	562.0
Containers . . . . .	1,692.1	440.1	296.9	..	—	..	1,040.6	3,469.7
Livestock . . . . .	72.6	16.7	494.5	..	3.0	..	107.2	694.0
All other commodities . . . . .	1,534.4	1,061.5	1,272.3	..	1,240.5	..	2,393.5	7,502.2
<b>Total . . . . .</b>	<b>10,704.9</b>	<b>3,426.7</b>	<b>13,079.1</b>	<b>..</b>	<b>4,389.8</b>	<b>..</b>	<b>5,731.3</b>	<b>37,331.8</b>
1980-81 . . . . .	10,543.4	3,703.7	11,981.7	..	4,488.6	..	5,750.9	36,468.3
1979-80 . . . . .	10,664.9	3,887.8	11,464.6	..	4,730.7	..	5,618.2	36,366.2
1978-79 . . . . .	8,776.7	3,145.3	10,925.2	..	4,178.8	..	5,029.5	32,055.5
1977-78 . . . . .	9,243.3	3,108.7	10,417.2	(b)	4,273.1	(b)	4,794.2	31,836.5
1976-77 . . . . .	9,320.2	3,042.2	10,286.6	1,834.0	4,532.5	247.5	2,732.4	31,995.4

(a) Includes sand and gravel. (b) See page 458.

## Finance

GOVERNMENT RAILWAYS: GROSS EARNINGS(a), SYSTEMS, 1981-82  
(\$'000)

	N.S.W.	Vic.	Qld	S.A.(b)	W.A.	Australian National	Aust.
Coaching—							
Suburban passenger . . . . .	113,717	n.a.	12,649	n.a.	n.a.	..	n.a.
Country passenger . . . . .	54,414	n.a.	10,298	..	5,132	17,342	n.a.
Other . . . . .	20,216	n.a.	4,908	n.a.	3,090	—	n.a.
<i>Total coaching</i> . . . . .	<i>188,347</i>	<i>98,630</i>	<i>27,855</i>	<i>n.a.</i>	<i>8,222</i>	<i>17,342</i>	<i>340,396</i>
Freight (goods and livestock)—							
Grain . . . . .	n.a.	45,500	24,303	..	46,053	7,670	n.a.
Other agricultural produce . . . . .	n.a.	4,231	18,015	..	4,682	892	n.a.
Coal, coke and briquettes . . . . .	n.a.	4,106	274,040	..	12,566	9,823	n.a.
Other minerals(c) . . . . .	n.a.	4,590	43,206	..	41,507	12,410	n.a.
Iron and steel . . . . .	n.a.	7,001	8,481	..	177	14,247	n.a.
Fertilisers . . . . .	n.a.	5,884	4,188	..	7,243	3,757	n.a.
Cement . . . . .	n.a.	5,726	3,384	..	1,765	2,875	n.a.
Timber . . . . .	n.a.	2,810	2,290	..	6,786	6,524	n.a.
Containers . . . . .	n.a.	9,569	11,595	..	(d)	25,633	n.a.
Livestock . . . . .	n.a.	873	19,555	..	210	6,110	n.a.
All other commodities . . . . .	n.a.	47,386	72,138	..	54,066	75,272	n.a.
<i>Total freight</i> . . . . .	<i>431,157</i>	<i>137,676</i>	<i>481,193</i>	<i>..</i>	<i>175,054</i>	<i>165,214</i>	<i>1,390,294</i>
Miscellaneous . . . . .	43,712	23,744	11,217	n.a.	28,108	12,711	119,492
<b>Grand total</b> . . . . .	<b>663,216</b>	<b>260,049</b>	<b>520,265</b>	<b>37,714</b>	<b>211,385</b>	<b>195,267</b>	<b>(e)1,887,896</b>

(a) Excludes Government grants. (b) See page 458. (c) Includes sand and gravel. (d) Separate details for containers are not available. Freight carried in containers is included in commodity classifications. (e) Includes South Australia.

GOVERNMENT RAILWAYS: GROSS EARNINGS, WORKING EXPENSES, AND NET EARNINGS, SYSTEMS  
(\$'000)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Australian National	Aust.
GROSS EARNINGS								
1976-77 . . . . .	351,875	163,512	262,561	54,284	137,323	8,780	62,590	1,040,925
1977-78 . . . . .	380,724	176,522	273,551	(a)6,113	149,477	(a)	(a)122,040	1,108,427
1978-79 . . . . .	379,033	192,656	310,418	24,550	154,597	..	131,829	1,193,083
1979-80 . . . . .	495,833	230,549	352,700	26,943	174,258	..	157,971	1,438,254
1980-81 . . . . .	559,645	256,177	416,796	33,655	180,529	..	181,353	1,628,155
1981-82 . . . . .	663,216	260,049	520,265	37,714	211,385	..	195,267	1,887,896
WORKING EXPENSES								
1976-77 . . . . .	570,272	301,232	299,044	(b)103,629	(b)132,024	23,340	52,628	1,482,169
1977-78 . . . . .	643,623	332,508	337,002	(a)25,723	148,708	(a)	(a)195,796	1,683,360
1978-79 . . . . .	679,999	347,802	365,070	71,043	159,737	..	204,738	1,828,389
1979-80 . . . . .	757,555	392,586	422,503	74,391	180,280	..	222,799	2,050,114
1980-81 . . . . .	870,378	447,761	486,126	84,998	193,166	..	244,043	2,326,472
1981-82 . . . . .	1,063,725	509,196	588,051	100,000	217,961	..	268,001	2,746,934
NET EARNINGS(c)								
1976-77 . . . . .	-218,397	-137,720	-36,483	-49,345	5,299	-14,560	9,962	-441,244
1977-78 . . . . .	-262,899	-155,986	-63,451	(a)-19,610	769	(a)	(a)-73,756	-574,933
1978-79 . . . . .	-300,966	-155,147	-54,652	-46,493	-5,141	..	-72,909	-635,308
1979-80 . . . . .	-261,722	-162,037	-69,803	-47,448	-6,022	..	-64,828	-611,860
1980-81 . . . . .	-310,734	-191,585	-69,331	-51,343	-12,637	..	-62,690	-698,320
1981-82 . . . . .	-400,509	-249,147	-67,786	-62,286	-6,576	..	-72,734	-859,038

(a) See page 458. (b) Includes provision of reserves for depreciation. (c) Excess of gross earnings over working expenses as shown in this table.

## GOVERNMENT RAILWAYS: WORKING EXPENSES, SYSTEMS, 1981-82

(\$'000)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Australian National	Aust.
Maintenance of way and works . . . . .	171,851	(b)	151,701	n.a.	(c) 47,417	n.a.	n.a.
Motive power (a) . . . . .	385,118	(b)	241,939	n.a.	(c) 56,523	n.a.	n.a.
Traffic . . . . .	247,710	421,079	145,295	n.a.	81,821	n.a.	n.a.
Other charges . . . . .	259,046	75,209	49,115	n.a.	32,200	n.a.	n.a.
<b>Total . . . . .</b>	<b>1,063,725</b>	<b>496,287</b>	<b>588,051 (c)</b>	<b>100,000 (d)</b>	<b>217,961</b>	<b>268,001</b>	<b>2,734,025</b>

(a) Includes maintenance of rolling stock. (b) Not available separately; included with traffic. (c) See page 458. (d) Includes provision of reserves for depreciation.

## GOVERNMENT RAILWAYS: SURPLUS OR DEFICIT, SYSTEMS, 30 JUNE 1982

(\$'000)

System	Net earnings — excess of gross earnings over working expenses	Plus grants and other earnings payable to railways			Less other expenses charged to railways					Surplus or deficit (—)
		State Government grants	Road motor earnings	Other	Total	Interest and ex-change	Sinking fund	Road motor expenses (a)	Other	
New South Wales . . . . .	— 400,509	(b) 13,100	..	75,727	88,827	35,414	16,116	..	24,197	75,727 — 387,409
Victoria . . . . .	— 249,147	..	148	..	148	..	..	571	..	571 — 249,570
Queensland . . . . .	— 67,786	..	..	..	..	88,789	..	..	(c) 500	89,289 — 157,075
South Australia (d) . . . . .	— 62,286	55,350	..	..	55,350	..	..	..	2,171	2,171 — 9,107
Western Australia . . . . .	— 6,576	..	2,181	1	2,182	27,335	..	3,533	..	30,868 — 35,262
Australian National . . . . .	— 72,734	68,200	..	..	68,200	..	..	..	2,990	2,990 — 7,524
<b>Australia . . . . .</b>	<b>— 859,038</b>	<b>136,650</b>	<b>2,329</b>	<b>75,728</b>	<b>214,707</b>	<b>151,538</b>	<b>16,116</b>	<b>4,104</b>	<b>29,858</b>	<b>201,616 — 845,947</b>

(a) Includes interest and exchange. (b) Grants to meet losses on country developmental lines, and the employer liability to the Government Railways Superannuation Account. (c) Demolished assets written off. (d) See page 458.

## Employment, salaries and wages

## GOVERNMENT RAILWAYS: AVERAGE NUMBER OF EMPLOYEES (EXCLUDING CONSTRUCTION STAFF) AND SALARIES AND WAGES PAID (a), 1981-82

	N.S.W.	Vic. (b)	Qld	S.A. (c) (d)	W.A.	Australian National (e)	Aust.
Salaried staff . . . . .	9,485	5,276	4,134	603	2,027	2,036	23,561
Wages staff . . . . .	32,122	15,835	21,109	2,940	7,128	8,056	87,190
<b>Total staff . . . . .</b>	<b>41,607</b>	<b>21,111</b>	<b>25,243</b>	<b>3,543</b>	<b>9,155</b>	<b>10,092</b>	<b>110,751</b>
Salaries and wages paid . . . . .	\$'000 791,752	351,724	434,422	41,487	137,289	183,162	1,939,835

(a) Excludes salaries and wages paid to road motor staff. (b) Includes construction staff. (c) See page 458. (d) Includes staff made available to the State Transport Authority by the ANRC. (e) Excludes staff made available to the South Australian STA.

## Non-government railways

The Australian non-government railways covered in this section are those which operate outside industrial estates, harbour precincts, mines and quarries with a route distance exceeding two kilometres.

The figures in the following table have been compiled from information supplied to the Department of Transport or the Bureau of Transport Economics by the various railway operators. All operators provided details of tonnes carried and most provided details of tonne-kilometres performed. In a few cases the tonne-kilometre figures have been estimated by the Department of Transport or the Bureau of Transport Economics using the advised average length of haul.

## TRAFFIC TASK PERFORMED BY AUSTRALIAN NON-GOVERNMENT RAILWAYS 1976-77 TO 1981-82

Year	Iron ore railways	Sugar tramways	Other non-government railways(a)	Total non-government railways(a)
TONNES CARRIED (million)				
1976-77	86.6	20.1	20.3	127.0
1977-78	85.9	20.3	17.9	124.0
1978-79	79.5	18.6	19.6	117.7
1979-80	88.3	18.3	20.6	127.2
1980-81	88.5	20.6	r19.5	r128.6
1981-82	83.0	21.6	20.9	125.6
TONNE-KILOMETRES (million)				
1976-77	26,646	322	369	27,337
1977-78	27,723	325	324	28,372
1978-79	24,930	299	324	25,553
1979-80	27,128	292	345	27,765
1980-81	28,264	351	r319	r28,934
1981-82	26,668	367	347	27,384

(a) Includes transfers to and from Government railways.

## TRAM, BUS, AND FERRY SERVICES

## Systems in operation

**Trams.** At 30 June 1982 tram services were in operation in Melbourne, Victoria and in Adelaide, South Australia. Regular tram services ceased to operate in Ballarat on 19 September 1971 and in Bendigo on 16 April 1972. However services are operated in both cities, on an irregular basis, but generally at holiday periods, as a tourist attraction.

In many parts of Australia private lines used for special purposes in connection 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 tram used for the conveyance of passengers.

**Buses.** Services are operated by government or municipal authorities and private operators. Statistics are collected for government and municipal bus services located in all State capital cities; Canberra, Australian Capital Territory; Newcastle, New South Wales; Rockhampton, Queensland; Fremantle and the Eastern Goldfields area, Western Australia; Launceston and Burnie, Tasmania; Darwin, Northern Territory; and for country road services operated by the Victorian Railways, the State Rail Authority of New South Wales, the Western Australian Government Railways, and the Australian National Railways. Particulars of bus services under the control of private operators for the States of New South Wales, Victoria, Queensland and South Australia are given in the annual publication *Rail, Bus and Air Transport, Australia* (9201.0) for years prior to 1976-77.

**Ferries.** Ferry passenger services are operated in the following States: New South Wales, at Sydney and Newcastle; Western Australia, on the Swan River at Perth; Tasmania, on the Mersey River at Devonport and on the Derwent River at Hobart; and the Brisbane River at Brisbane. Control is exercised by both government authorities and private operators. Particulars of the operations of these services are given in previous issues of this Year Book.

## Government and municipal tram and bus services

Because of the development in recent years of the various forms of public road transport under the control of single authorities and the gradual replacement of tram services by bus services, it is not possible to obtain separate statistics for all phases of the activities of each form of transport, particularly financial operations.

## TRAM AND BUS SERVICES: GOVERNMENT AND MUNICIPAL STATES AND TERRITORIES: 1981-82

		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Route-kilometres at 30 June										
Tram (a)	kilometres	..	220	..	11	..	..	..	..	231
Bus	"	1,104	302	751	951	8,379	493	152	1,313	13,445
Vehicle-kilometres										
Tram	'000	..	24,030	..	806	..	..	..	..	24,836
Bus	"	66,700	13,336	21,306	38,067	45,645	9,691	1,670	12,689	209,104
Rolling stock at 30 June										
Tram	number	..	698	..	26	..	..	..	..	724
Bus	"	1,723	267	579	751	960	303	39	351	4,973
Passenger journeys										
Tram	'000	..	103,479	..	(b)	..	..	..	..	(e) 103,479
Bus	"	187,340	23,546	43,753	(b)	54,878	14,283	1,816	17,600	(e) 343,216
Gross revenue (c)										
Tram and bus	\$'000	83,636	55,595	23,426	(b)	24,487	5,625	530	8,653	(e) 201,952
Working expenses (d)										
Tram and bus	\$'000	160,046	111,711	35,220	(b)	51,884	14,524	2,835	21,174	(e) 397,394
Net revenue										
Tram and bus	\$'000	-76,410	-56,116	-11,794	(b)	-27,396	-8,899	-2,305	-12,521	(e) -195,441
Employees at 30 June										
Tram and bus	number	6,164	4,592	1,518	(b)	2,240	584	97	n.a.	(e) 15,195

(a) Gauge 1435 mm throughout. (b) Not separately available. See page 458. (c) Excludes government grants. (d) Includes provision of reserves for depreciation, etc., where possible. (e) Excludes details of metropolitan tram and bus services operated by the South Australian State Transport Authority. See page 458. Minus sign (-) denotes deficit.

## TRAM AND BUS SERVICES: GOVERNMENT AND MUNICIPAL

		1976-77	1977-78	1978-79	1979-80	1980-81	1981-82
Route-kilometres at 30 June							
Tram	kilometres	228	228	231	231	231	231
Bus	"	12,142	12,649	12,828	14,173	11,930	13,445
Vehicle kilometres							
Tram	'000	24,940	24,955	24,967	24,330	24,864	24,836
Bus	"	192,003	197,660	201,693	203,963	193,324	209,104
Rolling stock at 30 June							
Tram	number	765	774	756	759	767	724
Bus	"	4,897	5,050	5,070	5,112	4,941	4,973
Passenger journeys							
Tram	'000	104,188	102,581	(a) 101,070	(a) 98,889	(a) 100,474	(a) 103,479
Bus	"	404,228	413,987	(a) 357,558	(a) 356,638	(a) 347,133	(a) 343,216
Gross revenue (b)							
Tram and bus	\$'000	123,740	134,457	(a) 123,741	(a) 143,324	(a) 184,596	(a) 201,952
Working expenses (c)							
Tram and bus	\$'000	239,107	267,281	(a) 258,644	(a) 277,865	(a) 337,434	(a) 397,394
Net revenue							
Tram and bus	\$'000	-115,366	-132,824	(a) -134,902	(a) -134,542	(a) -152,838	(a) -195,441
Employees at 30 June							
Tram and bus	number	18,276	(a) 16,613	(a) 16,547	(a) 16,244	(a) 13,795	(a) 15,195
Accidents							
Tram and bus (d)							
Persons killed	number	25	22	(e) 27	(a) 12	n.a.	n.a.
Persons injured	"	(e) 1,609	(e) 1,727	(a) 1,885	(a) 1,917	n.a.	n.a.

(a) Excludes details of metropolitan tram and bus services in South Australia. See page 458. (b) Excludes government grants. (c) Includes provision of reserve for depreciation, etc., where possible. (d) Excludes accidents to employees. (e) Excludes New South Wales.

## MOTOR VEHICLES

Arrangements for the registration of motor vehicles and the licensing of drivers and riders are not uniform throughout Australia, since they are the function of a separate authority or authorities in each State and Territory.

Tables in this section include vehicles owned by private individuals, local government authorities, State Governments, and the Australian Government (excluding those belonging to the defence services).



### Survey of motor vehicle usage

A survey was conducted throughout Australia in late 1982 by the Australian Bureau of Statistics for the purpose of gathering information on the usage of motor vehicles. The owners of approximately 59,000 vehicles other than commercial buses and Australian Government owned vehicles were approached for information relating to the usage of their vehicles over the twelve months ended 30 September 1982. The framework from which the sample was drawn was obtained from the motor vehicle registration authorities in all States and Territories. The survey was based on respondents' recollection of their usage of the selected vehicles over their period of ownership during the survey year.

The main purpose of the survey was to determine the total distance travelled by vehicles, classified according to area and purpose of travel. Information was also obtained from the survey on: (i) tonne-kilometres; (ii) average load carried; (iii) vehicle usage (i.e. for hire and reward, ancillary or other); (iv) main type of operation; (v) fuel consumption; (vi) occupant-kilometres; and (vii) driver characteristics.

The following table shows, for Australia, total annual kilometres travelled for the twelve months ended 30 September 1982 classified by vehicle type and purpose of travel. The percentage standard errors (S.E.%) indicate the extent to which the estimates can vary by chance because only a sample and not the total vehicle population was enumerated. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained from a comparable complete enumeration, and about nineteen chances in twenty that the difference will be less than two standard errors. For example, if an estimate of 3,000 million kilometres has a standard error of 5 per cent (i.e. 150 million kilometres), then there would be approximately two chances in three that a comparable complete collection would give a figure within the range of 2,850 million kilometres to 3,150 million kilometres and about nineteen chances in twenty that the figure would be within the range of 2,700 million kilometres to 3,300 million kilometres.

**TOTAL ANNUAL KILOMETRES BY VEHICLE TYPE AND PURPOSE OF TRAVEL, TWELVE MONTHS ENDED 30 SEPTEMBER 1982**

Type of vehicle	Laden business		Unladen business		Total business (a)		To and from work paid and unpaid		Private		Total	
	million	REL.	million	REL.	million	REL.	million	REL.	million	REL.	million	REL.
	kilo- metres	S.E. (%)	kilo- metres	S.E. (%)	kilo- metres	S.E. (%)	kilo- metres	S.E. (%)	kilo- metres	S.E. (%)	kilo- metres	S.E. (%)
Cars and station wagons	..	..	..	..	19,469.6	3.3	23,206.8	2.0	53,431.7	1.3	96,108.9	1.0
Motor cycles	..	..	..	..	143.9	9.3	871.0	5.3	1,137.2	5.0	2,152.1	3.8
Utilities and panel vans	6,228.8	7.4	2,672.0	9.2	9,501.7	6.1	3,109.3	8.1	4,338.1	6.3	16,951.2	3.6
Rigid trucks	5,291.5	6.7	2,364.8	5.3	7,656.5	5.8	377.4	6.5	383.3	16.1	8,417.2	5.4
Articulated trucks	2,142.7	1.4	827.4	1.6	2,970.1	1.2	24.4	8.8	5.0	12.7	2,999.5	1.2
Other truck type vehicles	..	..	..	..	229.8	12.1	5.0	28.8	2.3	48.5	237.1	11.8
<b>Total</b>	<b>13,663.0</b>	<b>4.1</b>	<b>5,864.3</b>	<b>4.6</b>	<b>39,971.5</b>	<b>2.4</b>	<b>27,593.9</b>	<b>1.9</b>	<b>59,297.6</b>	<b>1.3</b>	<b>126,866.0</b>	<b>0.9</b>

(a) Includes the total kilometres travelled for business purposes of cars, station wagons, motor cycles and utilities and panel vans predominantly used for private purposes. The dissection of business travel into laden/unladen was not sought for these vehicles.

### Motor vehicles on register

Details of motor vehicles on the register are compiled by up-dating motor vehicle census data from information made available by the various motor vehicle registration authorities in the States and Territories. Censuses of motor vehicles have been conducted in respect of 31 December 1955 and 1962, and 30 September 1971, 1976, 1979 and 1982. At these census dates considerably greater information concerning the particulars shown in the tables following is available. Final detailed results of the 1982 census have been published in separate census publications for each State and Territory and for Australia.

**MOTOR VEHICLE CENSUS: 30 SEPTEMBER 1982 (FINAL)**  
(<sup>'000</sup>)

State or Territory	Motor cars and station wagons	Utilities	Panel vans	Trucks		Other truck type vehicles	Buses	Motor cycles	Total (a)
				Rigid	Articulated				
New South Wales	2,070.4	158.4	161.7	155.2	16.1	11.9	15.9	118.5	2,708.1
Victoria	1,700.7	118.5	55.2	146.9	11.5	11.4	11.4	71.7	2,127.2
Queensland	1,005.3	190.5	77.0	55.1	8.6	4.5	7.3	91.8	1,440.0
South Australia	580.4	43.5	28.0	41.5	4.4	5.7	3.6	36.8	744.0
Western Australia	561.3	59.0	53.8	59.6	4.3	6.0	4.9	34.6	783.4
Tasmania	188.1	21.2	11.9	12.8	1.4	1.7	2.1	5.1	244.3
Northern Territory	34.5	12.0	4.3	4.5	0.8	0.2	0.6	4.0	60.9
Australian Capital Territory	92.6	4.5	3.4	3.5	0.2	0.6	0.5	4.4	109.7
<b>Australia</b>	<b>6,233.4</b>	<b>607.6</b>	<b>395.3</b>	<b>479.0</b>	<b>47.2</b>	<b>42.0</b>	<b>46.2</b>	<b>366.9</b>	<b>8,217.7</b>

(a) Excludes tractors, plant and equipment, caravans and trailers.

**MOTOR VEHICLES ON REGISTER, BY TYPE OF VEHICLE, AUSTRALIA**  
(<sup>'000</sup>)

30 June	Motor cars and station wagons	Utilities, trucks, panel vans, other truck type vehicles and buses	Total (excludes motor cycles)	Motor cycles
1977	5,243.0	1,279.6	6,522.6	295.5
1978	5,462.2	1,359.9	6,822.1	292.4
1979	5,657.2	1,412.7	7,069.9	288.2
1980	5,800.6	1,462.4	7,262.9	310.3
1981	6,021.0	1,544.3	7,565.3	352.3
1982	6,293.8	1,661.5	7,955.3	390.8

**MOTOR VEHICLES(a) ON REGISTER PER 1,000 OF POPULATION, STATES AND TERRITORIES**

30 June	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1977	431.2	463.4	465.4	495.1	520.5	489.6	333.0	444.5	459.6
1978	443.0	482.2	484.6	502.1	543.5	510.3	383.6	431.2	475.1
1979	454.3	494.0	500.2	507.0	555.8	527.1	377.7	468.8	487.1
1980	467.9	487.0	518.8	515.8	563.8	530.7	372.3	455.2	494.2
1981	480.0	499.6	539.1	522.3	569.3	542.8	408.6	464.4	506.8
1982	499.8	525.1	554.3	532.9	563.2	560.3	420.4	464.0	524.1

(a) Excludes motor cycles, tractors, plant and equipment, caravans and trailers.

**Registrations of new motor vehicles**

Particulars of registrations of new motor vehicles are shown by type of vehicle in preliminary monthly publications, and by type and make of vehicle in monthly and annual publications of Motor Vehicle Registrations.

In these statistics 'registrations' mean registrations processed by the motor vehicle registration authorities in the States and Territories during the period.

**Drivers' and riders' licences**

At 30 June 1982, the numbers of licences in force to drive or ride motor vehicles were: New South Wales, 3,198,411; Victoria, 2,255,439; South Australia, 787,627; Western Australia, 756,816; Tasmania, 238,865; Northern Territory, 68,949; Australian Capital Territory, 139,057. Particulars are not available for Queensland.

## REGISTRATIONS OF NEW MOTOR VEHICLES, BY TYPE OF VEHICLE

State or Territory	Motor cars and station wagons		Panel vans	Trucks		Other truck type vehicles	Buses	Total (excludes motor cycles)	Motor cycles
	Utilities			Rigid	Articulated				
1982 83									
New South Wales	149,021	10,433	28,016	8,276	761	621	1,527	198,655	21,829
Victoria	123,834	8,063	3,631	12,797	640	556	999	150,520	13,153
Queensland	79,171	14,585	9,060	3,167	435	219	1,028	107,665	12,347
South Australia	39,554	2,723	3,696	2,071	281	164	258	48,747	5,833
Western Australia	38,812	4,142	6,324	3,724	199	106	548	53,855	5,146
Tasmania	11,279	1,224	903	771	59	125	127	14,488	990
Northern Territory	3,260	2,058	459	160	39	23	52	6,051	925
Australian Capital Territory	8,592	454	275	548	12	20	141	10,042	838
<b>Australia</b>	<b>453,523</b>	<b>43,682</b>	<b>52,364</b>	<b>31,514</b>	<b>2,426</b>	<b>1,834</b>	<b>4,680</b>	<b>590,023</b>	<b>61,061</b>
1981 82	471,255	52,035	48,009	40,062	3,665	2,218	4,998	622,242	71,691
1980 81	462,487	47,474	37,391	36,485	4,269	1,939	4,170	594,215	70,799
1979 80	451,950	43,826	30,169	33,541	4,282	1,611	3,045	568,424	53,947
1978 79	463,453	41,591	32,068	33,756	4,496	1,891	3,171	580,426	37,278
1977 78	432,439	45,946	40,312	35,034	4,000	2,474	3,712	563,917	38,049

## ROAD TRAFFIC ACCIDENTS

## Accidents involving casualties, persons killed, persons injured

Since 1 January 1980 the ABS in the compilation of national statistics on road traffic accidents has adopted a new definition of injury and injury accidents. An injury is defined as injury to any person involved in a road vehicle accident resulting in the injured person being admitted to hospital. An injury accident is therefore defined as a non-fatal road vehicle accident in which at least one injured person was admitted to hospital. Statistics prior to this date on injury accidents and number of persons injured are therefore not comparable.

## ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a) (ADMISSIONS TO HOSPITALS): NUMBER OF ACCIDENTS, PERSONS KILLED OR INJURED

State or Territory	Per 100,000 of mean population						Per 10,000 motor vehicles registered(b)		
	Number of accidents	Persons killed	Persons injured	Number of accidents	Persons killed	Persons injured	Number of accidents	Persons killed	Persons injured
1981									
New South Wales	9,858	1,291	11,417	189	25	218	37	5	43
Victoria	7,127	766	8,308	180	19	210	35	4	41
Queensland	4,191	594	4,709	179	25	201	31	4	35
South Australia	2,584	222	3,147	196	17	239	36	3	43
Western Australia	2,323	238	2,760	179	18	212	30	3	36
Tasmania	811	111	965	190	26	226	34	5	41
Northern Territory	424	70	527	345	57	430	79	13	98
Australian Capital Territory	261	29	275	115	13	121	24	3	25
<b>Australia</b>	<b>27,579</b>	<b>3,321</b>	<b>32,108</b>	<b>185</b>	<b>22</b>	<b>215</b>	<b>35</b>	<b>4</b>	<b>41</b>
1982									
New South Wales	9,167	1,253	10,524	173	24	198	33	5	38
Victoria	7,035	709	8,283	176	18	207	32	3	38
Queensland	4,078	602	4,552	169	25	188	29	4	32
South Australia	2,569	270	3,081	193	20	232	34	4	41
Western Australia	2,401	236	2,825	179	18	211	31	3	36
Tasmania	645	96	757	151	22	176	26	4	31
Northern Territory	362	60	413	279	46	319	62	10	71
Australian Capital Territory	219	26	219	94	11	95	19	2	20
<b>Australia</b>	<b>26,476</b>	<b>3,252</b>	<b>30,654</b>	<b>175</b>	<b>21</b>	<b>202</b>	<b>31</b>	<b>4</b>	<b>37</b>

(a) Accidents reported to the police or other relevant authority which occurred in public thoroughfares and which resulted in death within thirty days or personal injury to the extent that the injured person was admitted to hospital. (b) Number of motor vehicles (excluding tractors, plant and equipment) on register at 30 June 1981 and 1982.

## ROAD TRAFFIC ACCIDENTS INVOLVING FATALITIES

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia
Accidents involving fatalities—									
1977 . . . . .	1,118	835	515	270	259	99	39	26	3,161
1978 . . . . .	1,222	775	532	254	304	96	58	27	3,268
1979 . . . . .	1,125	750	544	277	257	83	43	24	3,103
1980 . . . . .	1,152	608	508	240	268	96	55	27	2,954
1981 . . . . .	1,130	677	510	196	217	97	63	24	2,914
1982 . . . . .	1,115	631	522	239	203	84	52	26	2,872
Persons killed—									
1977 . . . . .	1,268	954	572	306	290	112	47	29	3,578
1978 . . . . .	1,384	869	612	291	345	106	68	30	3,705
1979 . . . . .	1,290	847	613	309	279	93	53	24	3,508
1980 . . . . .	1,303	657	557	269	293	100	63	30	3,272
1981 . . . . .	1,292	766	594	222	238	111	70	29	3,322
1982 . . . . .	1,253	709	602	270	236	96	60	26	3,252

## ROADS

An article dealing with the development of roads in Australia is given in Year Book, No. 60, pages 385-93.

**Summary of roads used for general traffic**

*Proclaimed or declared roads.* The table following 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 30 June 1982. The central road authority in each State assumes responsibility under the Act for the whole, or a proportion, of the cost of construction and/or maintenance of these roads, 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; the value of the roads as connecting links between centres of population or business; 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 roads. The absence of a particular class in 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, man-power or materials), construction or maintenance may not keep pace with gazettal of roads, and, therefore, the condition of a road may not match its status.

**PROCLAIMED OR DECLARED ROADS: LENGTHS, STATES, 30 JUNE 1982**  
(Kilometres)

Class of road	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
State Highways and Freeways	10,495	7,350	10,348		7,739	1,956	
Trunk roads . . . . .	7,098	14,585	149	13,381	7,482		108,734
Ordinary main roads . . . .	18,349		8,606			1,196	
<i>Total main roads . . . . .</i>	<i>35,942</i>	<i>21,935</i>	<i>19,103</i>	<i>13,381</i>	<i>15,221</i>	<i>3,152</i>	<i>108,734</i>
Secondary roads . . . . .	(a) 299	—	13,020	—	8,740	285	22,344
Development roads . . . . .	3,474	—	8,036	—	—	84	11,594
Tourist roads . . . . .	444	797	—	—	—	176	1,417
Other roads . . . . .	2,511	(b) 1,030	—	—	—	—	3,541
<i>Total other roads . . . . .</i>	<i>6,728</i>	<i>1,827</i>	<i>21,056</i>	<i>—</i>	<i>8,740</i>	<i>545</i>	<i>38,896</i>
<b>Grand total . . . . .</b>	<b>42,670</b>	<b>23,762</b>	<b>40,159</b>	<b>13,381</b>	<b>23,960</b>	<b>3,697</b>	<b>147,629</b>

(a) Metropolitan only.

(b) Forest roads.

*Total roads.* The following table represents an attempt to classify all the roads open for general traffic in Australia, at the latest dates available, according to States and Territories and to certain broad surface groups. The figures in the table for the States are obtained from the Deputy Commonwealth Statistician in each State, and are derived mainly from local government sources.

## ALL ROADS OPEN FOR GENERAL TRAFFIC LENGTHS, STATES AND TERRITORIES, 30 JUNE 1982

(Kilometres)

<i>Surface of roads</i>	<i>N.S.W.(a)(b)</i>	<i>Vic.(c)</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.(d)</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.(e)</i>	<i>Total (a)</i>
Bitumen or concrete . . . . .	70,277	63,926	48,996	20,777	37,081	8,014	5,460	1,865	n.a.
Gravel, crushed stone or other improved surface . . . . .	66,616	47,905	34,575		34,168	13,684	4,064	327	n.a.
Formed only . . . . .	39,188	23,503	57,640	81,362	44,777	407	4,834	42	n.a.
Cleared only . . . . .	13,092	21,867	21,202		22,826	210	6,670	-	n.a.
<b>Total . . . . .</b>	<b>189,173</b>	<b>157,201</b>	<b>162,413</b>	<b>102,139</b>	<b>138,851</b>	<b>22,315</b>	<b>21,028</b>	<b>2,234</b>	<b>n.a.</b>

(a) Excludes 15,397 kilometres of road dedicated but not trafficable. (b) Figures as at 30 June 1978. (c) Excludes roads coming under the responsibility of the State Electricity Commission (64 km), Melbourne and Metropolitan Board of Works (39 km) and Forests Commission (39,367 km). (d) Excludes Forests Department roads. (e) Figures at 30 June 1980.

### Expenditure on roads and bridges

Primary responsibility for the construction and maintenance of roads and bridges rests with State and local authorities. For detailed information see the individual State Year Books.

#### National Association of Australian State Road Authorities

The National Association of Australian State Road Authorities (NAASRA) was established in 1934. The present member authorities are: Department of Main Roads, New South Wales; Road Construction Authority, Victoria; Main Roads Department, Queensland; Highways Department, South Australia; Main Roads Department, Western Australia; Department of Main Roads, Tasmania; Northern Territory Department of Transport and Works; Commonwealth Department of Housing and Construction.

The Association's objectives are to provide a central organisation where, by co-operative effort, a uniform approach to the improvement, planning and development of the Australian road system can be achieved. National standards for road and bridge construction and maintenance and improved administrative and financial control methods are developed by committees of experienced staff from the authorities, with secretarial services provided by a small staff located in Sydney.

This Secretariat arranges publication of the policies and standards which are widely used by road authorities, local government and universities; co-operates with the Standards Association of Australia on the preparation of national codes of practice; and acts as an Australian centre for contact with overseas road bodies and for the circulation of standards published by them.

The Association regularly confers with the Department of Housing and Construction, the Bureau of Transport Economics and the Australian Transport Advisory Council on major road policies. As part of the Commonwealth Government's external aid program, and in conjunction with the Department of Foreign Affairs, member authorities of the Association conduct engineering training courses for experienced engineers from African and Asian countries.

The Association is a member of the Permanent International Association of Road Congresses (PIARC) and of the Road Engineering Association of Asia and Australasia (REAAA).

#### Australian Road Research Board

The Australian Road Research Board (ARRB) is a non-profit-making company founded in 1960 by the National Association of Australian State Road Authorities (NAASRA), and now located at Vermont in Victoria. It is financed by Federal and State Government Road Authorities whose permanent heads make up ARRB's Board of Directors. The Executive Director, a full-time employee and member of the Board, is responsible for administering the Directors' policies.

The ARRB regularly undertakes and sponsors road and road transport research over a comprehensive range of subjects and disseminates results to appropriate organisations, engineers and scientists involved in the design, location, construction, upkeep and use of roads. In selecting and monitoring its research projects, and developing a longer term research plan, ARRB is assisted by a senior advisory Steering Committee and four Technical Committees in the areas of Road Technology, Road Users, Road Transport and Local Government, the members of which are experts drawn from government, commerce and education.

ARRB disseminates road research information through its major biennial conferences and regular symposia, seminars and workshops and through its publications which include the *ARRB Conference Proceedings*, a quarterly journal *Australian Road Research*, the *Source Book for Australian Roads*, symposium and workshop papers and various reports and technical manuals arising out of its many research projects. ARRB also maintains a unique library of road literature and operates a computer-based information service which abstracts and indexes Australian road literature in the quarterly *Australian Road Index (ARI)*, and research projects in the annual *Australian Road Research in Progress (ARRIP)*. The machine-readable version of *ARI* and *ARRIP*, called Australian Road Research Documentation (ARRD), is available on AUSINET, the Australian Information Network.

ARRB acts as the Australian member of the Organisation for Economic Co-operation and Development's International Road Research Documentation (IRRD) system, contributing information on Australian literature and projects, IRRD information from all member countries is available to Australians through ARRB's computer search services. ARRB also maintains close contacts with road research organisations in other countries.

## AIR TRANSPORT

### Department of Aviation

*International Organisations.* Australia is one of the 150 (as at 30 June 1983) members of the International Civil Aviation Organisation (ICAO). Australia has continued its membership of the (governing) Council since ICAO was established in 1947. Australia is also a member of the 15 man Air Navigation Commission which is responsible for drawing up international standards and procedures for the safety, regularity and efficiency of air navigation. In addition, Australia participates in the Commonwealth Air Transport Council, the South Pacific Regional Civil Aviation Council and the Airport Operators Council International.

*International agreements.* Australia had air service agreements in force with twenty-eight countries at 30 June 1983. Under these agreements Australia is granted rights to operate services between Australia to and through the countries in question; these rights are exercised by Australia's international airline Qantas. In return, the designated airlines of the other countries which are partners to these agreements are granted traffic rights in Australia. Australia also had air service arrangements granting traffic rights with four other countries at 30 June 1983.

*International air services.* At 30 June 1983, twenty-three overseas international airlines were operating regular scheduled air services to Australia. These were: Air-India (India), Air Nauru (Nauru), Air New Zealand (New Zealand), Air Niugini (Papua-New Guinea), Air Pacific (Fiji), Air Vanuatu (Vanuatu), Alitalia (Italy), British Airways (Britain), Canadian Pacific Air Lines (Canada), Cathay Pacific (Hong Kong), Continental Airlines (United States of America), Deutsche Lufthansa (Federal Republic of Germany), Garuda Indonesian Airways (Indonesia), Japan Air Lines (Japan), Jugoslovenski Aerotransport (Yugoslavia), KLM Royal Dutch Airlines (Netherlands), Singapore International Airlines (Singapore), Pan American World Airways (United States of America), Philippines Air Lines (Philippines), South African Airways (Republic of South Africa), Thai Airways International (Thailand), Malaysian Airways System (Malaysia), and Union de Transport Aeriens (France). Qantas, Australia's international airline, operates a fleet of 24 Boeing 747 jet aircraft. All shares in Qantas Airways Limited are owned by the Commonwealth Government.

*International operations.* The table following shows particulars of international airline traffic during 1982-1983 moving into and out of an area which embraces Australia and Norfolk Island. These figures do not include traffic between Australia and Norfolk Island.

**AIR TRANSPORT: INTERNATIONAL AIRLINE TRAFFIC TO AND FROM  
AUSTRALIA (a), 1982-83p**

<i>Type of traffic</i>	<i>Number of flights</i>	<i>Passengers</i>	<i>Freight tonnes</i>	<i>Mail tonnes</i>
<b>Traffic to Australia—</b>				
Qantas Airways Limited . . . . .	4,420	933,405	35,580	1,003
Other airlines . . . . .	6,374	1,224,262	52,013	5,942
<b>All airlines . . . . .</b>	<b>10,794</b>	<b>2,157,667</b>	<b>87,593</b>	<b>6,945</b>
<b>Traffic from Australia—</b>				
Qantas Airways Limited . . . . .	4,297	898,849	25,444	2,983
Other airlines . . . . .	6,390	1,162,076	51,241	1,269
<b>All airlines . . . . .</b>	<b>10,687</b>	<b>2,060,925</b>	<b>76,685</b>	<b>4,252</b>

(a) Australian mainland and Norfolk Island.

Statistics covering the operations of Australia's regular overseas services are shown in the following table. These operations include all stages of Qantas flights linking Australia with overseas countries.

**AIR TRANSPORT: OPERATIONS OF AUSTRALIA'S REGULAR OVERSEAS SERVICES**

		1976-77	1977-78	1978-79	1979-80	1980-81	1981-82
Hours flown . . . . .	number	79,499	75,643	70,065	74,879	73,679	77,910
Kilometres flown . . . . .	'000	61,586	58,962	59,040	59,109	58,188	61,052
<b>Passengers—</b>							
Embarkations . . . . .	number	1,551,679	1,569,374	1,782,673	1,933,580	1,883,477	2,020,107
Passenger-kilometres . . . . .	'000	11,318,928	12,029,554	14,317,936	16,296,416	14,876,509	14,818,491
<b>Freight—</b>							
Tonnes uplifted . . . . .	tonnes	34,380	40,972	51,373	52,326	53,753	66,036
Tonne-kilometres . . . . .	'000	258,748	301,253	373,534	412,518	418,849	479,996
<b>Mail—</b>							
Tonnes uplifted . . . . .	tonnes	3,205	2,981	3,238	3,878	3,919	4,344
Tonne-kilometres . . . . .	'000	27,788	27,618	32,019	36,226	36,581	39,244

**Regular air services within Australia**

*Trunk route services.* In June 1981 the Parliament passed a package of legislation consisting of the *Airlines Agreement Act 1981* and the *Airlines Equipment Amendment Act 1981*, as well as the *Australian National Airlines Repeal Act 1981* and the *Independent Air Fares Committee Act 1981*.

The Airlines Agreement Act ratified the 1981 Airlines Agreement between the Commonwealth, Ansett Transport Industries and TAA, which provided for the continuation of the two airline policy in respect of scheduled trunk route passenger services as well as repealing earlier Airlines Agreements. Successive Airlines Agreements have provided the basis for the two airline policy, under which scheduled passenger services on trunk routes are provided by the privately owned Ansett (a division of Ansett Transport Industries (Operations) Pty Ltd, a subsidiary of Ansett Transport Industries Ltd) and the Commonwealth owned Australian National Airlines Commission, trading as Trans-Australia Airlines (TAA). The 1981 Airlines Agreement more clearly defined the role for regional and commuter operators, excluded freight from the ambit of the two airline policy and formally defined the roles of QANTAS, TAA and ANSETT for the provision of international and domestic services respectively.

The Airlines Equipment Amendment Act provided for the import, by specialist freight operators and regional airlines, of large turbo jet aircraft (the Commonwealth's power to control imports is the basic means of upholding the two airline policy). The Australian National Airlines Repeal Act (not subsequently proclaimed) provided for the restructuring of TAA as a public company, and the Independent Air Fares Committee Act provided for the establishment of a Committee with authority over fares for domestic regular public transport passenger services.

At 30 June 1983, the Ansett fleet included 2 Boeing 767s, 16 Boeing 727s, 12 Boeing 737s, 3 Electra freighters, 6 Fokker F27 Friendships and 2 helicopters. At the same date, Trans-Australia Airlines operated a fleet of 12 Boeing 727s, 4 Airbus A300s, 9 McDonnell-Douglas DC 9s and 3 Fokker F27 Friendships.

*Regional services.* In addition to their competitive trunk route services, both Ansett and Trans-Australia Airlines operate limited domestic regional services, which are non-competitive. There are also a number of smaller regional airlines operating from Sydney (Air New South Wales and East-West Airlines), Adelaide (Airlines of South Australia), Perth (Airlines of Western Australia), Cairns (Air Queensland), and Darwin (Airlines of Northern Australia). Regional airlines are so-called because, in general, they serve specific geographic regions. Except for the independently-owned East-West Airlines and Air Queensland, all regional airlines are divisions of Ansett Transport Industries (Operations) Pty Ltd. The larger aircraft used by these regional airlines are Fokker F28 Fellowships and F27 Friendships.

*Freight services.* In addition to freight services provided by the passenger airlines, IPEC Aviation provides all-freight airline services with Argosy and cargo charter services with a DC 9 aircraft over a limited network including services across Bass Strait. Also Bloodstock Air Services provides cargo charter services throughout Australia using B727 freighter aircraft, specialising in the carriage of livestock.

*Commuter services.* These are regular public transport services with light aircraft operating to fixed timetables, usually under the authority of a supplementary airline licence. They primarily provide airlinks between towns and country areas over routes which are not served by the major airlines, but many services also feed into capital cities. At 30 June 1983, there were 56 operators of commuter services in Australia, serving some 275 centres. Details of the operations of these commuter services are excluded from the statistics shown in this section.

*Scheduled domestic airline services.* Statistics of all regular airline services are set out in the following table.

#### AIR TRANSPORT: OPERATIONS OF REGULAR INTERNAL SERVICES, AUSTRALIA (a)

		1976-77	1977-78	1978-79	1979-80	1980-81	1981-82
Hours flown . . . . .	number	258,151	279,385	280,233	284,381	277,199	268,339
Kilometres flown . . . . .	'000	122,933	134,702	135,409	138,185	137,264	136,769
Passengers—							
Embarkations . . . . .	number	9,348,697	10,289,477	10,720,181	11,504,957	11,380,798	11,396,510
Passenger-kilometres . . . . .	'000	7,329,665	8,180,918	8,618,671	9,485,635	9,747,272	10,155,379
Freight—							
Tonnes uplifted . . . . .	tonnes	108,108	120,887	127,528	129,775	124,955	136,250
Tonne-kilometres . . . . .	'000	96,315	106,460	110,746	109,603	107,851	117,936
Mail—							
Tonnes uplifted . . . . .	tonnes	9,636	11,307	13,126	15,053	17,302	16,841
Tonne-kilometres . . . . .	'000	9,148	10,718	12,518	14,206	16,397	16,515

(a) Includes flights of all Australian-owned airlines, with the exception of those of Qantas Airways Limited, between airports located within Australia. The domestic carrier, East-West Airlines, commenced services between Sydney and Norfolk Island in March 1977 and particulars of these flights are included from that time. Prior to March 1977, Australia-Norfolk Island flights were operated by Qantas and details of those flights were included with statistics of regular overseas services.

*Internal airline passenger embarkation and disembarkation.* The statistics set out in the next table have been compiled by aggregating all internal airline passenger traffic loaded and unloaded at each

#### INTERNAL AIRWAYS PASSENGER EMBARKATIONS AND DISEMBARKATIONS AT PRINCIPAL AUSTRALIAN AIRPORTS

Airport	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82
Sydney . . . . .	4,839,215	5,274,577	5,539,561	5,961,807	5,858,143	5,917,874
Melbourne . . . . .	4,149,390	4,552,462	4,743,757	5,104,448	5,046,031	5,038,634
Brisbane . . . . .	2,075,381	2,252,888	2,282,641	2,521,119	2,636,552	2,758,922
Adelaide . . . . .	1,615,684	1,729,030	1,801,084	1,931,395	1,930,219	1,852,906
Perth . . . . .	704,041	792,768	830,273	910,637	929,949	1,017,173
Canberra . . . . .	881,668	966,388	945,260	967,803	872,223	820,943
Coolangatta . . . . .	320,425	409,151	457,789	570,137	632,791	648,384
Hobart . . . . .	403,069	437,948	455,577	473,567	474,115	475,127
Cairns . . . . .	270,147	307,525	345,344	387,095	426,064	442,524
Townsville . . . . .	322,498	353,522	363,285	378,884	384,587	396,622
Launceston . . . . .	309,341	353,596	387,456	390,215	380,512	376,536
Darwin . . . . .	199,963	225,052	249,056	278,669	290,789	287,210
Mackay . . . . .	244,025	254,954	253,229	261,982	197,892	159,718



airport. They include passengers on flights between Australia and Norfolk Island. At ports where through-passengers transfer between flights, such passengers are counted as embarking as well as disembarking passengers.

General aviation activity, which covers all flying other than scheduled airline operations has grown rapidly throughout Australia in recent years and is an important sector of the Australian aviation industry. Hours flown by general aviation during 1981-82 were estimated at 1.77 million, approximately 1.5 per cent more than the previous year.

#### Aerodromes

The number of aerodromes throughout Australia and its external territories at 30 June 1983 was 443. Seventy were owned by the Commonwealth Government and 373 by local authorities and private interests. The number of licensed helipads throughout Australia and its territories is 7. Capital expenditure on aerodrome and building construction was \$111.576 million in 1982-83. Maintenance expenditure on Commonwealth Government-owned aerodromes during 1982-83 was \$10.338 million. Expenditure on development and maintenance grants to licensed aerodromes participating in the Local Ownership Plan totalled \$29.893 million.

#### Airway facilities

A total of 463 navigational aids were in service at 30 June 1983. The total includes 252 non-directional beacons (NDB) (includes 222 standard NDB's and 30 locators), 108 distance measuring equipment (DME), 11 international distance measuring equipment (DMEI), 74 VHF omni-directional ranges (VOR), 17 instrument landing systems (ILS) and one twin locator approach system.

One hundred and seventy-four aerodromes are now equipped with night landing facilities. One hundred and fifteen Australian-designed 'T' systems (T-VASIS) are operating. Seven long-range surveillance radars, two short range and seven secondary surveillance radars are also in operation. There are twenty-six fully-equipped Air Traffic Control Centres and thirty-nine flight service units in operation.

#### Air transport registrations, licences, etc., in force in Australia

At 30 June 1983 there were 6,773 aircraft registered in Australia. At the same time there were also 58,134 aeroplane pilots' licences in force, of which 26,295 were private pilots' licences, 5,426 commercial pilots' licences, 1,817 senior commercial pilots' licences, 2,461 air transport pilots' licences, and 22,135 student pilots' licences. In addition there were 1,486 helicopter pilots' licences in force of which 113 were private pilots' licences, 643 commercial pilots' licences, 97 senior commercial pilots' licences and 633 student pilots' licences. There were also 788 flight engineer licences, and 10 flight navigator licences in force.

#### Accidents and casualties

AIR TRANSPORT: ACCIDENTS INVOLVING CASUALTIES(a), AUSTRALIA(b)

	1977	1978	1979	1980	1981	1982
Number . . . . .	36	48	37	48	39	51
Persons killed . . . . .	45	58	35	61	53	53
Persons seriously injured . . . . .	24	35	29	33	33	35

(a) Accidents involving civil aircraft (including registered gliders) which resulted in death or serious injury. Excludes parachutists and casualties involving non-registered aircraft. (b) Excludes accidents outside Australia involving aircraft on the Australian register; includes all accidents to overseas registered aircraft that occur in Australia.

## POSTAL, TELECOMMUNICATION AND RADIOCOMMUNICATION SERVICES

In this section, particulars for the Australian Capital Territory are included with those for New South Wales, and the South Australian figures include particulars for the Northern Territory, unless otherwise indicated.

### Department of Communications

The Postal and Telecommunications Department was created on 22 December 1975. It replaced the Postmaster-General's Department, assuming those PMG functions remaining after the formation of the Postal and Telecommunications Commissions on 1 July 1975. Following the Federal election in November 1980, the name of the Department was changed to the Department of Communications. A major activity of the Department is the administration of the *Wireless Telegraphy Act* 1905 which concerns the regulation and management of the radio frequency spectrum for radiocommunications within the Commonwealth and its Territories.

The Department also undertakes, planning for the development of broadcasting and television services in Australia and the determination of standards and practices for technical equipment used in broadcasting and television services for which formal responsibility attaches to the Minister for Communications pursuant to the provisions of the *Broadcasting and Television Act*. The Department is closely involved in the planning and procurement of the National Communications Satellite System (NCSS), in association with other government departments and agencies in particular AUSSAT PTY LTD, a government-owned company formed to own and operate NCSS.

Another function of the Department is to provide policy advice to the Minister on postal, telegraphic, telephonic, broadcasting and other like services which are subject to legislation for which the Minister for Communications is responsible.

Authorities responsible to the Minister for Communications have been established to provide within Australia a network of facilities which enable people and organisations:

- to send letters, printed matter, parcels and money in Australia and overseas and to receive such items within Australia from overseas;
- to converse by telephone in Australia and overseas;
- to send and receive written messages, data pictures and other visual matter by electrical means within Australia and to and from overseas;
- to relay on the telecommunications network, radio and television broadcasts emanating within Australia and those on relay to and from overseas.

### Australian Postal Commission

The Australian Postal Commission was established under the *Postal Services Act* 1975. It commenced operations on 1 July 1975 and trades under the name Australia Post.

The establishment of the Australian Postal Commission was accompanied by a complete reorganisation of the management of postal services in Australia. The Commission was given a charter to improve postal services whilst avoiding the large financial losses of previous years. The Postal Services Act sets specific financial objectives for the Commission, which are designed to enable postal services to be operated on a business-oriented basis.

In accordance with the *Postal Services Act* 1975, the Australian Postal Commission is required to pursue, as far as practicable, a financial policy to secure revenue sufficient to meet all expenditure chargeable to revenue and provide at least half of its capital expenditure.

Since 1 July 1975, Australia Post has taken a number of initiatives to develop new services and maintain existing ones while at the same time maintaining competitive pricing. The initiatives include:

- the introduction on 1 July 1981 of Australia Post Express, a fast service for urgent postal articles;
- the introduction of reduced rate and discount mail services for bulk lodgment of mail;
- the introduction of a concessional rate for domestic greeting cards in November and December;
- the introduction of a new Postal Money Order Service;
- the revision of the Registered Publications Service;
- the introduction of an overnight parcel service between all capital cities;
- a new policy for rural and remote mail deliveries which provides for a minimum of twice-weekly delivery wherever practicable;
- the extension of the high-speed International Priority Paid service network;
- the extension of the Surface Air Lifted network; and

- the introduction of the Bulk Direct Mail Service for approved addressed advertising mail.

The Commission has undertaken a program to decentralise the mail network as a means of improving efficiency and, more particularly, the reliability of the mail service. In the decentralised mail networks, regional mail centres in metropolitan and country areas have replaced the former highly centralised network which relied heavily on a single facility in the capital cities. The new arrangements are complete in Victoria and Queensland and almost complete in New South Wales. The following tables indicate Australia Post's financial results, services and operations for 1982-83. Selected tables also show figures for earlier periods.

**AUSTRALIAN POSTAL COMMISSION: REVENUE AND EXPENDITURE, 1978 TO 1983**  
(S'000)

<i>Year ended 30 June—</i>	<i>1978</i>	<i>1979</i>	<i>1980</i>	<i>1981</i>	<i>1982</i>	<i>1983</i>
<b>Revenue—</b>						
Mail services . . . . .	456,739	528,978	582,200	668,676	767,843	870,719
Money order, postal order services . . . . .	6,242	5,434	6,350	7,758	10,059	10,544
Commission on agency services . . . . .	95,636	93,171	82,189	83,471	86,935	90,113
Other revenue . . . . .	20,110	18,907	19,442	22,147	22,591	(b)28,058
<b>Total . . . . .</b>	<b>578,727</b>	<b>646,490</b>	<b>690,181</b>	<b>782,052</b>	<b>887,428</b>	<b>(b)999,434</b>
<b>Expenditure—</b>						
Operating and general . . . . .	426,100	476,915	530,875	625,005	696,026	771,889
Transportation . . . . .	55,343	44,842	52,744	61,018	69,985	83,665
Depreciation, superannuation, long-service leave, interest . . . . .	95,217	102,144	94,876	108,772	140,639	135,086
<b>Total . . . . .</b>	<b>576,660</b>	<b>623,901</b>	<b>678,495</b>	<b>794,795</b>	<b>(a)906,650</b>	<b>990,640</b>

(a) Includes an abnormal adjustment to implement new depreciating accounting arrangements. (b) Includes net surplus from the disposal of Commission properties during the year. See table below.

**AUSTRALIAN POSTAL COMMISSION: STATEMENT OF REVENUE AND EXPENDITURE FOR THE YEAR ENDED 30 JUNE 1983**  
(S'000)

<b>Revenue—</b>	
Mail services . . . . .	870,719
Postal money order services . . . . .	10,544
Commission on agency services . . . . .	90,113
Other revenue . . . . .	19,583
<b>Total . . . . .</b>	<b>990,959</b>
<b>Expenditure—</b>	
Operating and general . . . . .	771,889
Transportation . . . . .	83,665
Depreciation . . . . .	10,842
Superannuation . . . . .	90,200
Long service leave . . . . .	29,830
Interest . . . . .	4,214
<b>Total . . . . .</b>	<b>990,640</b>
Operating surplus (deficit) before abnormal item . . . . .	319
<b>Abnormal item—</b>	
Net surplus on disposal of Commission properties . . . . .	(8,475)
Operating surplus after abnormal item . . . . .	(8,794)
<b>Appropriations—</b>	
Accumulated deficit brought forward . . . . .	(20,279)
Operating surplus for the year . . . . .	(8,794)
Accumulated deficit . . . . .	(11,485)
<b>Appropriation—</b>	
For capital financing . . . . .	(—)
<b>Accumulated deficit carried forward . . . . .</b>	<b>(11,485)</b>

## TRANSPORT AND COMMUNICATION

**AUSTRALIAN POSTAL COMMISSION: SUMMARY OF TRANSACTIONS  
AFFECTING FIXED ASSETS, 1982-83**  
(S'000)

<i>Class of assets</i>	<i>Balance at 1 July 1982</i>	<i>Additions in the year</i>	<i>Asset expenditure written out</i>	<i>Balance at 30 June 1983 (a)</i>
Land . . . . .	38,582	545	212	38,915
Buildings . . . . .	224,829	36,898	1,391	260,336
Motor vehicles . . . . .	19,294	4,562	3,340	20,516
Plant and Equipment . . . . .	33,487	10,621	708	43,400
<i>Total of fixed assets</i> . . . . .	<i>316,192</i>	<i>52,626</i>	<i>5,651</i>	<i>363,167</i>
<i>Less accumulated depreciation</i> . . . . .	<i>63,234</i>			<i>70,289</i>
<b>Net book value of fixed assets</b> . . . . .	<b>252,958</b>			<b>292,878</b>

(a) At cost.

**AUSTRALIAN POSTAL COMMISSION: ANALYSIS OF TRANSACTIONS  
AFFECTING ACCUMULATED DEPRECIATION, 1982-83**  
(S'000)

<i>Class of asset</i>	<i>Balance at 1 July 1982</i>	<i>Depreciation provided for in 1982-83</i>	<i>Accumulated depreciation written out</i>	<i>Balance at 30 June 1983</i>
Buildings . . . . .	42,551	4,811	854	46,508
Motor vehicles . . . . .	8,050	3,373	2,315	9,108
Plant and Equipment . . . . .	12,633	2,658	618	14,673
<b>Accumulated depreciation</b> . . . . .	<b>63,234</b>	<b>10,842</b>	<b>3,787</b>	<b>70,289</b>

**AUSTRALIAN POSTAL COMMISSION: PERSONS ENGAGED IN PROVIDING POSTAL SERVICES AT  
30 JUNE 1982 AND 1983**

	<i>H.Q.</i>	<i>N.S.W. (Incl. A.C.T.)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A. (Incl. N.T.)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust. 1983</i>	<i>Aust. 1982</i>
<b>Official staff (a)—</b>									
Full-time Permanent . . . . .	616	11,199	7,849	4,041	2,638	2,273	674	29,290	28,312
Full-time Temporary . . . . .	13	1,861	944	247	57	131	40	3,293	4,147
Part-time . . . . .	1	1,139	507	313	302	275	89	2,626	2,683
<b>Other staff (b) . . . . .</b>	<b>—</b>	<b>3,136</b>	<b>1,841</b>	<b>1,579</b>	<b>855</b>	<b>701</b>	<b>376</b>	<b>8,488</b>	<b>8,449</b>
<b>Total . . . . .</b>	<b>630</b>	<b>17,335</b>	<b>11,141</b>	<b>6,180</b>	<b>3,852</b>	<b>3,380</b>	<b>1,179</b>	<b>43,697</b>	<b>43,591</b>

(a) 'Official Staff' are those whose employment is governed by the *Postal Services Act 1975*. (b) Includes persons who are not employed under the *Postal Services Act*, but who are employed on the basis of business transacted. Also included are persons or organisations who hold road mail service contracts with the Australian Postal Commission.

**AUSTRALIAN POSTAL COMMISSION: MAIL DELIVERY NETWORK AND POST OFFICES AT 30  
JUNE 1982 AND 1983**

	<i>N.S.W</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust. 1983</i>	<i>Aust. 1982</i>
Contract road services . . . . .	1,401	768	1,077	262	400	189	4,097	4,328
Households receiving mail . . . . .	1,950,666	1,360,391	826,529	507,516	468,263	142,309	5,255,674	5,056,932
Businesses receiving mail . . . . .	181,145	125,155	76,136	45,451	44,987	12,694	485,568	455,011
<b>Post Offices—</b>								
Official—								
At 1 July 1982 . . . . .	507	332	217	157	158	41	1,412	1,422
At 30 June 1983 . . . . .	504	331	210	151	158	41	1,395	1,412
Non-official—								
At 1 July 1982 . . . . .	1,098	891	544	463	304	194	3,494	3,635
At 30 June 1983 . . . . .	1,086	882	544	446	295	195	3,448	3,494
<b>Total post offices</b> . . . . .	<b>1,590</b>	<b>1,213</b>	<b>754</b>	<b>597</b>	<b>453</b>	<b>236</b>	<b>4,843</b>	<b>4,906</b>

**AUSTRALIAN POSTAL COMMISSION: TOTAL POSTAL ARTICLES HANDLED**  
(\*000)

Year ended 30 June	Posted for delivery within Australia	Posted for places abroad	Received from abroad	Total postal articles handled	Mail carried on domestic air services (included in total handled)	
					Articles	Gross weight
						kilograms
1978 . . . . .	2,072,239	81,907	149,393	2,303,539	516,330	6,706
1979 . . . . .	(a)2,267,596	(a)87,757	149,278	(a)2,504,631	661,352	8,591
1980 . . . . .	2,379,953	94,826	156,573	2,631,352	769,391	9,994
1981 . . . . .	2,503,450	107,798	155,642	2,766,890	949,995	12,340
1982 . . . . .	2,606,124	105,154	165,276	2,876,554	1,083,876	14,080
1983 . . . . .	2,669,363	111,050	163,575	2,943,988	1,118,075	14,529

(a) Estimating methods were refined in 1980 and volumes for 1979 have been reassessed on a comparable basis.

**AUSTRALIAN POSTAL COMMISSION: ORDINARY POSTAL ARTICLES(a)**  
(\*000)

Year ended 30 June	Standard articles				Non-standard articles			
	Posted for delivery within Australia	Posted for places abroad	Received from abroad	Total articles	Posted for delivery within Australia	Posted for places abroad	Received from abroad	Total articles
1981 . . . . .	2,124,622	90,569	110,463	2,325,654	349,352	14,440	40,897	404,689
1982 . . . . .	2,221,294	87,501	121,929	2,430,724	353,669	14,920	38,188	406,777
1983 . . . . .	2,292,193	93,262	121,110	2,506,565	345,287	15,278	37,856	398,421

**STATES—YEAR ENDED 30 JUNE 1983**

New South Wales . . . . .	932,712	31,897	57,636	1,022,245	139,115	7,670	14,813	161,598
Victoria . . . . .	602,530	31,393	43,741	677,664	113,610	4,181	14,208	131,999
Queensland . . . . .	329,028	12,034	6,493	347,555	41,283	1,279	5,690	48,252
South Australia . . . . .	191,358	8,301	5,171	204,830	23,471	843	956	25,270
Western Australia . . . . .	187,304	9,295	8,069	204,668	21,855	1,272	2,189	25,316
Tasmania . . . . .	49,261	342	..	49,603	5,953	33	..	5,986

(a) Includes Certified, Messenger Delivery and Priority Paid Mail.

**AUSTRALIAN POSTAL COMMISSION: REGISTERED ARTICLES(a) AND PARCELS**  
(\*000)

Year ended 30 June	Registered articles				Parcels			
	Posted for delivery in Australia	Posted for places abroad	Received from abroad	Total articles	Posted for delivery in Australia	Posted for places abroad	Received from abroad	Total articles
1978 . . . . .	3,122	1,422	2,794	7,338	18,234	1,068	1,998	21,300
1979 . . . . .	(b)3,092	1,371	2,790	(b)7,253	(b)19,838	1,088	2,018	(b)22,944
1980 . . . . .	3,107	1,451	2,758	7,316	22,951	1,192	1,875	26,018
1981 . . . . .	3,204	1,470	2,330	7,004	26,272	1,319	1,952	29,543
1982 . . . . .	2,938	1,458	2,854	7,250	28,223	1,275	2,305	31,803
1983 . . . . .	2,956	1,296	2,696	6,948	28,927	1,214	1,913	32,054

**STATES—YEAR ENDED 30 JUNE 1983**

New South Wales . . . . .	996	673	1,725	3,394	11,057	498	941	12,496
Victoria . . . . .	770	409	801	1,980	8,420	405	529	9,354
Queensland . . . . .	526	68	43	637	4,592	108	167	4,867
South Australia . . . . .	294	64	19	377	2,157	87	82	2,326
Western Australia . . . . .	255	81	108	444	2,195	109	159	2,463
Tasmania . . . . .	115	1	..	116	506	7	35	548

(a) Totals include Certified, Messenger Delivery and Priority Paid Mail.  
1979 have been reassessed on a comparable basis.

(b) Estimating methods were refined in 1980 and volumes for

**AUSTRALIAN POSTAL COMMISSION: SPECIAL SERVICES:  
ARTICLES HANDLED  
(<sup>'000</sup>)**

<i>Year ended 30 June</i>	<i>Certified mail</i>	<i>Messenger delivery</i>	<i>Priority paid mail</i>
1978 . . . . .	5,473	1,013	1,783
1979 . . . . .	5,056	1,048	2,020
1980 . . . . .	5,780	1,169	2,350
1981 . . . . .	5,889	1,370	2,669
1982 . . . . .	5,897	1,434	2,793
1983 . . . . .	6,178	1,459	2,711

**STATES—YEAR ENDED 30 JUNE 1983**

New South Wales . . . . .	2,078	1,118	1,344
Victoria . . . . .	1,751	195	674
Queensland . . . . .	972	46	254
South Australia . . . . .	593	51	230
Western Australia . . . . .	565	44	135
Tasmania . . . . .	219	5	74

**Telecommunications services within Australia**

The Australian Telecommunications Commission commenced operations on 1 July 1975, taking over the telecommunications functions of the former Postmaster-General's Department.

The functions of the Commission as set out in the *Telecommunications Act 1975* are:

- to plan, establish, maintain and operate telecommunications services within Australia;
- to operate such other services as the Commission is authorised by this Act to operate;
- to provide, at the request of the Australian Government, technical assistance outside Australia in relation to the planning, establishment, maintenance and operation of telecommunications services in countries outside Australia; and
- to do anything incidental or conducive to the performance of any of the preceding functions.

**Financial results**

The following tables show the earnings, expenses and funds situation for the latest available three years of the Commission's operations.

**AUSTRALIAN TELECOMMUNICATIONS COMMISSION: REVENUE  
(<sup>\$'000</sup>)**

<i>Year ended 30 June—</i>	<i>1981</i>	<i>1982</i>	<i>1983</i>
Telephone rentals . . . . .	674,102	833,201	1,001,212
Telephone calls . . . . .	1,533,172	1,761,610	2,011,546
Telephone connections and rearrangements . . . . .	119,556	142,727	157,750
Telegrams . . . . .	33,005	30,165	28,998
Telex rentals . . . . .	29,830	40,020	56,748
Telex calls . . . . .	29,345	32,488	34,556
Other earnings (a) . . . . .	190,430	244,166	345,038
<b>Total . . . . .</b>	<b>2,609,440</b>	<b>3,084,377</b>	<b>3,635,848</b>

(a) Major items within this classification are: fees for advertisements in telephone directories, proceeds of sales of fixed assets, telephone service connection fees and telex call fees.

**AUSTRALIAN TELECOMMUNICATIONS COMMISSION: EXPENDITURE**  
(\$'000)

<i>Year ended 30 June—</i>	<i>1981</i>	<i>1982</i>	<i>1983</i>
Maintenance of plant . . . . .	644,515	790,826	974,283
Operating . . . . .	482,387	556,407	613,950
General and administrative . . . . .	191,762	238,097	261,554
Accommodation . . . . .	116,484	128,527	155,369
Depreciation . . . . .	533,680	577,216	711,853
Interest . . . . .	408,125	518,187	656,172
<b>Total . . . . .</b>	<b>2,376,953</b>	<b>2,809,260</b>	<b>3,373,181</b>

A brief history of the development of telecommunications in Australia is shown in Year Book No. 59, pages 378–82. Common internal telecommunication operations comprise telephone, telegram, telex and data services. The following tables give details of these services.

**TELEPHONE SERVICES IN OPERATION AT 30 JUNE 1983**

	<i>N.S.W. (Incl. A.C.T.)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A. (Incl. N.T.)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Australia</i>
<b>Ordinary exchange services</b>							
Automatic . . . . .	1,851,277	1,394,296	728,287	471,579	423,996	132,260	5,001,695
Manual . . . . .	16,236	607	10,294	3,620	520		31,277
<b>Total . . . . .</b>	<b>1,867,513</b>	<b>1,394,903</b>	<b>738,581</b>	<b>475,199</b>	<b>424,516</b>	<b>132,260</b>	<b>5,032,972</b>
<b>Party line services</b>							
Automatic . . . . .	364	—	306	30	66		766
Manual . . . . .	1,311	7	1,067	208	19		2,612
<b>Total . . . . .</b>	<b>1,675</b>	<b>7</b>	<b>1,373</b>	<b>238</b>	<b>85</b>	<b>—</b>	<b>3,378</b>
<b>Private branch exchange services</b>							
Automatic . . . . .	217,692	135,014	55,312	53,411	51,171	11,207	523,807
Manual . . . . .	353		314	183	44		894
<b>Total . . . . .</b>	<b>218,045</b>	<b>135,014</b>	<b>55,626</b>	<b>53,594</b>	<b>51,215</b>	<b>11,207</b>	<b>524,701</b>
<b>Public telephones</b>							
Automatic . . . . .	10,952	6,508	5,239	3,004	2,962	1,112	29,777
Manual . . . . .	430	6	254	72	77		839
<b>Total . . . . .</b>	<b>11,382</b>	<b>6,514</b>	<b>5,493</b>	<b>3,076</b>	<b>3,039</b>	<b>1,112</b>	<b>30,616</b>
<b>Total all services</b>							
Business automatic . . . . .	529,470	403,440	217,312	130,086	132,980	36,983	1,450,271
Business manual . . . . .	8,067	152	5,628	1,976	457		16,280
Non-business automatic . . . . .	1,550,815	1,132,378	571,832	397,938	345,215	107,596	4,105,774
Non-business manual . . . . .	10,263	468	6,301	2,107	203		19,342
<b>Total Services . . . . .</b>	<b>2,098,615</b>	<b>1,536,438</b>	<b>801,073</b>	<b>532,107</b>	<b>478,855</b>	<b>144,579</b>	<b>5,591,667</b>

**TELEPHONE INSTRUMENTS IN SERVICE**

<i>At 30 June—</i>	<i>N.S.W. (Incl. A.C.T.)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A. (Incl. N.T.)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Australia</i>
1981 . . . . .	3,085,574	2,161,824	950,443	694,285	609,781	182,429	7,684,336
1982 . . . . .	3,232,912	2,200,273	1,047,193	730,349	652,825	191,531	8,055,083
1983 . . . . .	3,091,583	2,387,943	1,103,479	765,536	690,417	227,704	8,266,662
Number per 100 population at 30 June . . . . .	55.3	59.2	44.5	52.0	50.6	52.6	53.8

**LOCAL AND TRUNK LINE TELEPHONE CALLS**

<i>Year ended 30 June—</i>	<i>1981</i>	<i>1982</i>	<i>1983</i>
Effective paid local calls . . . . .	5,300,578,000	5,451,452,000	5,456,219,000
Local calls per service . . . . .	1,078	1,044	1,021
Trunk line calls . . . . .	680,961,000	785,466,000	837,288,000
Trunk lines calls per service . . . . .	139	150	153
<b>Total calls . . . . .</b>	<b>5,981,539,000</b>	<b>6,236,918,000</b>	<b>6,433,456,000</b>

Subscriber Trunk Dialling (STD) facilities were introduced during the year 1961–62. For the year ended at 30 June 1983, 95.6 per cent of trunk calls were made by STD.

**Telegrams**

Telegrams can be lodged at any post office or telephone office or from any public telephone equipped for multi-coin operation. In addition, telegrams can be dispatched from any subscriber's telephone or telex service. The number of telegrams of various types transmitted within Australia is set out below.

**TELEGRAM TRAFFIC**

<i>Year ended 30 June—</i>	<i>1981</i>	<i>1982</i>	<i>1983</i>
Ordinary . . . . .	4,320,353	3,808,525	3,185,567
Urgent . . . . .	141,887	133,758	98,523
Meteorological . . . . .	333,685	315,753	313,074
Service . . . . .	265,086	200,580	453,576
<b>Total telegrams . . . . .</b>	<b>5,061,011</b>	<b>4,458,616</b>	<b>4,050,740</b>

**Telex**

Particulars of the operations of the telex network, which are additional to the telegraph traffic shown above, are as follows.

**TELEX NETWORK SERVICES AND INTERNAL CALLS**

<i>Year ended 30 June—</i>	<i>Number of services</i>	<i>Internal calls during the year</i>
1981 . . . . .	33,975	43,057,000
1982 . . . . .	37,802	44,209,000
1983 . . . . .	39,388	45,492,000

Further detailed statistics are contained in the Australian Telecommunication Commission's Annual Reports.

**Overseas telecommunications services**

The Overseas Telecommunications Commission (Australia) (OTC), established by the Overseas Telecommunications Act 1946, is a Commonwealth Statutory Authority responsible for the establishment, maintenance, operation and development of all public telecommunications services between Australia and other countries, between Australia and its external territories and with ships at sea. It has a specific responsibility, under section 38A, to make its services available at the lowest possible rates of charges. OTC is responsible to the Commonwealth Parliament through the Minister for Communications.

Telephone, telex, public message telegram, switched data and leased circuit services are provided to most countries and places throughout the world by means of submarine cables, communications satellites and, in a decreasing number of cases, short wave radio. Television relay is provided to and from countries with access to satellite communications facilities. Recently introduced services include INTERPLEX (a large scale, common-use, leased-message switching system), MIDAS (a multimode international data acquisition service), OVERSEASFAX (an international facsimile service for document transfer), INTERTEL (a comprehensive public message service for small businesses) and MINERVA (an international electronic messaging system).

**International consultation**

OTC participates in the Commonwealth Telecommunications Organisation (CTO), the International Telecommunication Union (ITU), the International Telecommunications Satellite Organisation (INTELSAT) which owns and operates the international telecommunications satellite system, and the International Maritime Satellite Organisation (INMARSAT), which operates an international satellite system for the provision of high-grade telecommunications, including distress and search and rescue communications, with ships at sea. OTC also participates in the regional organisations, the Asia-Pacific Telecommunity and the South Pacific Regional Telecommunications Meetings (SPECTEL).



### Establishments

The Commission's Head Office is in Sydney and it has offices in Canberra, Melbourne and Brisbane. The Commission owns and operates International Gateway terminals at Paddington and Broadway in Sydney which interface with the national telecommunications network; cable stations at Cairns (Qld), Guam in the Mariana Islands and at Norfolk Island; satellite earth stations at Carnarvon (W.A.), Ceduna (S.A.) and Moree (N.S.W.); international radio stations at Doonside and Bringelly (N.S.W.) and at Gungahlin (W.A.); and fourteen coast radio stations at points around the Australian coast and one at Norfolk Island for communicating with ships at sea.

### Submarine cables

OTC is a part owner of the following submarine cables (the year in which they opened for service is in brackets): COMPAC, Sydney-Auckland-Suva-Hawaii-Vancouver (1963); SEACOM, Sydney-Madang-Guam-Hong Kong (1967); TRANSPAC II, Hawaii-Guam-Okinawa (Japan) (1975); HAW III, Hawaii-U.S. Mainland (1975); TASMAN, Sydney-Auckland (1976); A-PNG, Sydney-Port Moresby (1976); OLUHO, Okinawa (Japan)-Philippines-Hong Kong (1977); ASEAN P-S, Philippines-Singapore (1978); ASEAN I-S, Indonesia-Singapore (1980) and ICOM, Penang-Madras (1981).

In November 1979 the Government gave approval for OTC to participate in a replacement Pacific cable system (ANZCAN) linking Australia and New Zealand with Norfolk Island, Fiji, Hawaii and Canada, with onward connections to Britain and Europe. OTC's investment in the system, which is now under construction and will be entering into service in 1984, will be approximately \$200 million.

### Satellites

OTC is the fourth largest shareholder in INTELSAT which operates communication satellites over the Indian, Pacific and Atlantic Oceans, and a major shareholder in INMARSAT (see above). INTELSAT satellites now carry more than 60 per cent of Australia's international telecommunications and, through OTC, provide capacity through which the remote area television service is provided by the ABC.

### 1982-83 Statistics

As at 31 March 1983, OTC staff totalled 2,486; revenue for the previous 12 months was \$300 million and profit before tax was \$42.1 million. Telephone service, which is available to 233 overseas destinations, provided about 71 per cent of revenue, telex about 15 per cent and telegraph about 3.6 per cent. International Subscriber Dialling (ISD), by which customers can dial their own overseas telephone calls, is now available to more than 152 destinations. Over 99 per cent of international telex calls from Australia are now automatically subscriber connected.

More detailed statistics are contained in the OTC Annual Report.

### Facilities to match growth

The high growth in demand for the Commission's services requires that the capacity of its major transmission and switching plant be at least doubled every three years. The OTC is applying computer techniques extensively in a number of its services, including telephone, telex, MIDAS (multimode international data acquisition service) and INTERPLEX (private message-switched networks).

### Charges

Some increases were necessary in telegrams tariffs from 1 April 1983 due to the high cost, labour-intensive nature of the service, and some minor charges in the international telephone service were introduced or increased from 1 October 1983.

### Detailed information on OTC

The Commission reports on its operations to Parliament through its Minister about October each year. Traffic, financial and other information is contained in its Annual Report, copies of which are available on request from the OTC.

### International telecommunication traffic

The following table shows particulars of overseas telecommunication traffic between Australia and overseas countries for the years ended 31 March 1982 and 1983.

## INTERNATIONAL TELECOMMUNICATION SERVICES: YEARS ENDED 31 MARCH 1982 AND 1983

Service		Transmissions					
		From Australia		To Australia		Total	
		1981-82	1982-83	1981-82	1982-83	1981-82	1982-83
Telephone . . . . .	'000 paid minutes	109,960	132,375	82,900	97,600	192,860	229,975
Telex . . . . .	'000 paid minutes	22,648	26,325	23,450	26,275	46,098	52,600
Television programs . . . . .	paid minutes	10,899	25,850	77,237	85,525	(a) 97,051	(b) 120,782
Telegraph services . . . . .	'000 words	48,845	36,141	35,592	25,947	84,437	62,088

(a) Includes 8,915 paid minutes of television programs distributed within Australia by OTC.  
minutes of television programs distributed within Australia by OTC.

(b) Includes 9,407 paid

**Coastal stations**

The Overseas Telecommunications Commission operates fourteen coastal radio stations at points around the Australian coast, and one at Norfolk Island. During the year ended 31 March 1983 the Coastal Radio Service handled 8,533,000 paid words to ships and 4,219,000 words from ships. Ship calls over the radiotelephone service amounted to 618,000 paid minutes and the radiotelex service handled 119,000 paid minutes. Usage of radiotelephone and radiotelex leased services amounted to 4,367 and 9,360 hours respectively.

**Radiocommunication stations authorised**

At 30 June 1978 there were 460,171 civil radiocommunication stations authorised for operation in Australia and its Territories. Of these, 6,316 were stations established at fixed locations, 24,000 were land stations which were established at fixed locations for communication with mobile stations, 13 were space and broadcasting stations, 420,442 were mobile stations and 9,400 were amateur stations. Particulars of broadcasting stations are shown on page 486.

**BROADCASTING AND TELEVISION**

Radio and television broadcasting falls within the jurisdiction of the Commonwealth Government and, pursuant to the *Broadcasting and Television Act 1942*, is one of the responsibilities of the Minister for Communications. Federal bodies which are involved include the Australian Telecommunications Commission, the Australian Broadcasting Commission (ABC), the Special Broadcasting Service, the Australian Broadcasting Tribunal, the Department of Communications and the Overseas Telecommunications Commission.

Basically, the Australian broadcasting system is comprised of the following types of stations:

- national radio and television stations broadcasting programs produced by the Australian Broadcasting Corporation;
- commercial radio and land television stations operated by companies under licence;
- public radio stations operated by corporations under licence on a non-profit basis; and
- stations operated under the aegis of the Special Broadcasting Service.

As from 1 January 1977, the Minister for Communications assumed the responsibility for broadcasting planning, including all matters relating to the technical operation of stations, and for the investigation of interference to the transmission and reception of programs.

**The Commercial Radio and Television Service**

Commercial radio and television stations are operated by companies under licences granted by the Australian Broadcasting Tribunal and with technical operating conditions determined by the Minister for Communications. The stations obtain income from the broadcasting of advertisements. At 30 June 1983 there were 137 commercial radio stations in operation in Australia. Call signs for radio stations are prefixed by numerals indicating each State of Australia. (2—New South Wales, 3—Victoria, 4—Queensland, 5—South Australia, 6—Western Australia, 7—Tasmania, 8—Northern Territory). In addition there were fifty commercial television stations and 121 commercial television translator stations in operation in Australia. A television translator station is a station of low power designed to receive the signals of another station and re-transmit them; it does not originate programs. There are nine limited coverage repeater stations in Australia operated by mining companies which transmit programs recorded on magnetic tape.

### **The Public Broadcasting Service**

The Broadcasting and Television Act also makes provision for the grant of licences for the operation of public radio and television stations. At 30 June 1983, 38 public radio stations were broadcasting "special purpose" programs ranging from fine music to ethnic languages. A number of public radio stations are associated with tertiary educational institutions. There are no public television services in operation.

### **The Special Broadcasting Service**

The Special Broadcasting Service (SBS) was established by the Commonwealth Government on 1 January 1978 to provide multilingual radio services and, if authorised by regulations, to provide multilingual television services. A regulation authorising the provision of multilingual television services was gazetted in August 1978. The Service is also empowered by the *Broadcasting and Television Act* 1977 to provide broadcasting and television services for such special purposes as are prescribed by the Government.

In carrying out its functions the SBS provides:

- *multilingual broadcasting services to:*
  - the Melbourne metropolitan area and Geelong through radio station 3EA which broadcasts in 42 languages for 126 hours per week
  - the Sydney metropolitan area through radio station 2EA which broadcasts in 48 languages for 126 hours per week
  - the provincial centres of Newcastle and Wollongong in N.S.W. through 2EA translator stations.
- subsidies to public broadcasting stations in Adelaide, Brisbane, Canberra, Hobart, Perth, Albury, Armidale, Bathurst, Lismore and Newcastle for the production and presentation of ethnic radio programs.
- a subsidy to Whyalla Ethnic Broadcasters Inc. for the production of ethnic radio programs for presentation on commercial radio station 5AU Whyalla.
- a *multicultural television service* on VHF Channel 0 and UHF Channel 28 to the Sydney and Melbourne metropolitan areas and Geelong.

## **Broadcasting services**

### **The Australian Broadcasting Tribunal**

The Australian Broadcasting Tribunal came into being on 1 January 1977 and is responsible for certain of the functions previously performed by the Australian Broadcasting Control Board (abolished 31 December 1976), including the licensing and supervising of the operations (other than technical aspects) of all stations except national stations. The Tribunal is empowered to grant, renew, suspend or revoke licences, to determine program and advertising standards applicable to licensed stations, and to determine the hours of transmission of licensed stations. In particular, the Tribunal is required to conduct public inquiries into the granting of licences following the invitation of applications by the Minister. The Tribunal may also conduct enquiries into the renewal of licences, the setting of standards of broadcasting practices, alleged breaches of licence conditions and such other matters as the Minister may direct.

### **The National Broadcasting Service**

In sound broadcasting the programs of the National Broadcasting Service are provided by the Australian Broadcasting Corporation through transmitters operated by Telecom Australia on behalf of the ABC and the Department of Communications.

*Technical facilities.* At 30 June 1983 the National Broadcasting Service comprised 136 transmitting stations, of which ninety-five were medium frequency, twenty-five frequency modulation and sixteen high frequency (six internal and ten Radio Australia).

The medium-frequency transmitters operate in the broadcast band 526.5 to 1,606.5 kilohertz. The high-frequency stations, using frequencies within the band of three to thirty megahertz, provide services to listeners in sparsely populated parts of Australia such as the north-west of Western Australia, the Northern Territory, and northern and central Queensland.

Many of the programs provided by country stations are relayed from the capital cities using high-quality program transmission lines. A number of program channels are utilised to link national broadcasting stations in the capital cities of Australia. When necessary, this system is extended to connect both the national and commercial broadcasting stations.

At 30 June 1983 eighty-one of the ABC's medium-frequency stations were situated outside the six State capital cities.

**Program facilities.** The programs of the Australian Broadcasting Corporation cover a wide range of activities. The proportions of broadcasting time allocated on Radio 1 stations to the various types of program during 1982-83 were as follows: entertainment 56.0 per cent; news 8.6 per cent; sporting 13.7 per cent; spoken word 11.8 per cent; drama and features 0.2 per cent; parliament 6.8 per cent; religious 1.4 per cent; rural 0.8 per cent; and presentation 0.6 per cent. By contrast, the ABC's Radio 2 station's programming was: classical music 53.2 per cent; light music 0.4 per cent; entertainment 3.7 per cent; drama and features 5.8 per cent; education 5.5 per cent; spoken word 13.8 per cent; religious 3.8 per cent; news 8.5 per cent; rural 3.2 per cent; and presentation 1.5 per cent. Radio 3 (regional) stations feature a higher proportion of news and rural programs. Further particulars of the operations of the Australian Broadcasting Corporation in respect of music, drama and features, youth education, talks, rural broadcasts, news, and other activities are shown in the Annual Report of the ABC.

### Overseas Broadcasting Service

There are six high-frequency stations at Shepparton, two at Lyndhurst, Victoria and two at Carnarvon, Western Australia which provide the overseas service known as Radio Australia. As in the case of the National Broadcasting Service, these stations are maintained and operated by Telecom Australia, and their programs are arranged by the ABC. The programs, which, as well as entertainment, give news and information about Australia presented objectively, are directed to most parts of the world but with special emphasis on Asia and the Pacific. They include 67 news bulletins a day. The overseas audience has been quite substantial in recent years, as evidenced by a large number of letters from listeners abroad (233,687 in 1981-82, and 208,095 in 1982-83), Radio Australia broadcasts in nine languages—English, Indonesian, Japanese, Neo-Melanesian, Thai, French, Standard Chinese, Cantonese and Vietnamese.

BROADCASTING STATIONS: 30 JUNE 1983

Type of station	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
National—									
Medium frequency . . . . .	21	6	21	10	23	6	6	2	95
High frequency . . . . .	1	2	2	—	1	—	—	—	6
Frequency modulation . . . . .	7	6	4	3	2	2	—	1	25
Overseas—									
Short wave (Radio Australia) . . . . .	—	8	—	—	2	—	—	—	10
Commercial—									
Medium frequency . . . . .	43	24	29	10	17	8	2	2	135
Frequency modulation . . . . .	2	2	1	1	1	—	—	—	7
Public broadcasting—									
Medium frequency . . . . .	2	2	1	1	1	—	—	1	(a)8
Frequency modulation . . . . .	8	4	3	2	2	2	2	—	23

(a) Includes broadcasting stations 2EA and 3EA operated by the Special Broadcasting Service.

## Television services

### The National Television Service

The National Television Service is provided by the Australian Broadcasting Corporation through transmitters operated by Telecom Australia on behalf of the ABC and the Department of Communications. The first national station (ABN Sydney) commenced regular transmission on 5 November 1956. At 30 June 1983, 273 stations were operating—85 transmitters and 188 translator stations.

The television programs provided by the Australian Broadcasting Corporation cover a wide range of activities. The proportions of television time allocated among the ABC's various departments at 30 June 1983 were as follows: drama 17.76 per cent; public interest 12.40 per cent; sporting 18.89 per cent; news 6.50 per cent; variety and acts 5.20 per cent; education 25.8 per cent; musical performance 1.02 per cent; religious 1.08 per cent; special arts and aesthetics 4.40 per cent; panel and quiz games 0.22 per cent; and presentation 6.43 per cent. The average weekly transmission time for the 273 national television transmitters was ninety-four hours during the year ended 30 June 1983.

During the year ended 30 June 1983, twenty two new national translator channels went into operation—one in New South Wales, one in Victoria, eight in Queensland, three in South Australia, seven in Western Australia, one in Tasmania, and one in the Northern Territory.

### Colour television

Colour television (PAL) was introduced in Australia late in 1974 and services became fully effective in March 1975.

#### TELEVISION AND TRANSLATOR STATIONS: 30 JUNE 1982

<i>Type of station and location</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Total</i>
National—									
Metropolitan television . . . . .	1	1	1	1	1	1	1	1	8
Country television . . . . .	13	8	31	5	15	2	3	—	77
Translator . . . . .	38	13	53	15	41	15	12	1	188
<i>Total, National</i> . . . . .	<i>52</i>	<i>22</i>	<i>85</i>	<i>21</i>	<i>57</i>	<i>18</i>	<i>16</i>	<i>2</i>	<i>273</i>
Commercial—									
Metropolitan television . . . . .	3	3	3	3	2	1	1	1	17
Country television . . . . .	11	6	8	3	4	1	—	—	33
Translator . . . . .	36	12	24	5	7	17	—	1	102
<i>Total, Commercial</i> . . . . .	<i>50</i>	<i>21</i>	<i>35</i>	<i>11</i>	<i>13</i>	<i>19</i>	<i>1</i>	<i>2</i>	<i>152</i>

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 Registration of New Motor Vehicles, Australia (monthly) (9301.0)  
 Motor Vehicle Registrations, Australia (monthly) (9303.0)  
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 Road Traffic Accidents Involving Fatalities, Australia (monthly) (9401.0)  
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### Other Publications

Information additional to that contained in ABS publications is available in the annual reports and other statements of the Department of Transport, the Department of Aviation, the various harbour boards and trusts, the several Government railway authorities, the Australian Postal Commission, the Australian Telecommunications Commission, and the Australian Broadcasting Corporation.

