

## 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 in the Bibliography at the end of the chapter.

### TRANSPORT ORGANISATIONS

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

In April 1946, the State and Commonwealth 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, roads, marine and ports matters, and the Northern Territory Minister for Transport and Works. The New Zealand Minister responsible for transport attends as an observer. The Commonwealth Minister for Aviation is co-opted if aviation matters are to be considered by the council.

The Council has, on a number of occasions since its inception, reviewed and refined its procedures and operations. In July 1984, ATAC and the *Marine and Ports Council of Australia* (MPCA) agreed to amalgamate. 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, all modes of transport development for the benefit of Australian transport authorities and agencies. Following the decision to amalgamate ATAC and MPCA, Ministers also agreed to review the procedures, operations and organisation of all ATAC activities. The previous ATAC structure comprised four groups of policy advisers, which reported separately to Council, namely, the *Railway Group*, *Road Group*, *Motor Transport Group* and *Co-ordinating and General Transport Group*.

In addition, a number of technical advisory committees reported to Council through the appropriate policy group on such matters as vehicle design and performance standards, driver licensing and behaviour, traffic codes, road safety education and publicity, road trauma, motor vehicle emissions and transport of dangerous goods.

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 MPCA was assisted by a Committee of Advisers, which comprised senior Ministerial advisers. Several sub-committees and working groups, established to consider and recommend on specialised issues, reported to the Committee of Advisers.

#### **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 members 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. A report of TIAC activities is published annually in the Department of Transport's Annual Report.

#### **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.

#### **National Airports Consultative Council**

The National Airports Consultative Council was formed in 1984 to provide the Minister for Aviation with advice on

- aspects relating to the establishment of a National Airports Authority
- matters of national concern regarding airports
- aviation, commercial, social and environmental aspects of airports policy.

Membership of the Council comprises representatives of the *Australian Mayoral Aviation Council*, the airlines, the general aviation industry, unions concerned with the Department of Aviation, the tourism industry, and an independent member with international expertise in airports management and finance.

#### **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 *Protection of the Sea (Discharge of Oil from Ships) Act 1981*, the *Protection of the Sea (Civil Liability) Act 1981*, the *Protection of the Sea (Powers of Intervention) Act 1981*, the *Protection of the Sea (Shipping Levy) Act 1981*, the *Protection of the Sea (Shipping Levy Collection) Act 1981*, the *Australian Shipping Commission Act 1956*, the *Environment Protection (Sea Dumping) Act 1981*, 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).

There are 27 sets of Regulations under the Act, and a system of Marine Orders which give legislative effect to various safety and technical requirements in respect of ships, their cargoes and persons on board.

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 and manning disputes are often 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, 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 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.

### 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 Act was amended to increase the Commission's borrowing powers and give it greater flexibility in determining freight rates. Further amendments to the Act were introduced in 1983 giving the Commission greater control over day-to-day operations and allowing it to operate more commercially.

As at 30 June 1984 the Commission, trading as the Australian National Line, owned and operated a fleet of thirty-three ships. The fleet included nineteen ships engaged in overseas trades comprising ten liner ships totalling 234,685 tonnes deadweight and nine bulk carriers totalling 668,524 tonnes deadweight.

The fleet also included 14 ships engaged in coastal trade comprising one vehicle deck passenger ship, the *Empress of Australia* of 2,725 tonnes deadweight, seven liner ships totalling 51,992 tonnes deadweight and seven bulk carriers totalling 216,601 tonnes deadweight.

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

In recent times the Line has faced severe economic difficulties at home and abroad, and early in 1984 initiated a review of all of its services. As a result ANL's service to Darwin was withdrawn in February 1984 and as the review continues it is expected that other services and ships may be affected.

The *Empress of Australia* carried 124,674 passengers between Melbourne and Devonport together with 39,500 tourist vehicles during the year ended 30 June 1984. The 'Empress' is approaching the end of her economic life and will be replaced on the Bass Strait service during 1985.

### 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 tg. 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 25 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 1983-84 a total of 85 vessels were completed at Australian yards (as compared with 40 in 1982-83 and 55 in 1981-82).

Total financial assistance to the Australian shipbuilding industry in 1983-84 amounted to \$26.6m (as compared with \$25.6m in 1982-83 and \$26.8m in 1981-82).

#### **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 gross construction tonnes to 10,000 gross construction 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 freight cost 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 1983-84 assistance provided under the Scheme for northbound cargoes totalled \$27.4m, and \$1.9m in respect of southbound cargoes. Since its inception, assistance provided under the Scheme up to the end of 1983-84 totalled \$205.0 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 Scheme is currently being reviewed by the Interstate Commission which is expected to hand its report to the Government by March 1985.

### **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*, the *Protection of the Sea (Powers of Intervention) Act 1981*, the *Protection of the Sea (Civil Liberty) Act 1981*, 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.

Two further important Act which will apply the provisions of the International Convention for the Prevention of Pollution from Ships 1973/78 are expected to be proclaimed in 1985. The *Protection of the Sea (Prevention of Pollution from Ships) Act 1983* and the *Navigation (Protection of the Sea) Amendment Act 1983* will implement improved provisions concerning the prevention and limitation of pollution by oil and specified noxious substances and the prohibition or control of discharges of oil or noxious liquid substances at sea. The Acts will also (when proclaimed) require the provision of control equipment and operational procedures on ships.

## **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 ship from a port as well as for its arrival at that port.

On 1 July 1979 revised Australian Customs Service 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 ships are treated separately in shipping statistics. Not all ships are included in the statistics, as returns are not required for (i) naval ships; (ii) yachts and other craft used for pleasure; (iii) foreign fishing ships that neither load nor discharge cargo; (iv) Australian registered fishing ships operating from Australian ports; (v) geographical survey ships, seismic survey ships, oceanographic survey ships; (vi) offshore oil drilling rigs and ships servicing them; (vii) ships of 200 registered net tonnes and under.

### **Period covered by the statistics**

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

## Ship characteristics

### Ship recording

Ship movement statistics are recorded as 'Ship Number' and 'Ship Calls'. 'Ship Number' relates to the number of overseas direct arrivals to, or departures from Australia. 'Ship Calls' relates to the number of port visits that an overseas ship makes in Australia. For example, an overseas ship 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 'Ship Number' for both arrivals (Brisbane) and departures (Melbourne) and as one arrival call and one departure call for each of the three ports.

### Ship type

All ships are classified from *Lloyd's Register of Shipping* according to one of 11 ship types which describe them in terms of their structure or design. These 11 ship types are amalgamated into four broad categories as follows:

Category	Ship types
(a) General cargo ships . . . . .	Container ships Conventional cargo ships Roll on—Roll off ships Other cargo ships
(b) Tankers . . . . .	Gas carriers Liquid tankers
(c) Bulk carriers . . . . .	Dry bulk ships Dry/wet bulk ships
(d) Other ships . . . . .	Multi-purpose ships Passenger ships Other ships

### Type of service

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

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

Conference ships—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 ship refers to the country in which the ship 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 and gross weight 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 may be measured by mass (tonnes) or volume (cubic metres). Revenue tonnes statistics are consequently a mix of mass and volume units and should be used with care. Gross weight is the total weight in tonnes of cargo, excluding the weight of containers, irrespective of the basis on which freight is charged.

### Container cargo

Statistics of container cargo refer only to cargo shipped in international containers (including flats but not pallets). 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 ship. 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 ships 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 ships 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
<i>Coastal fleet</i> . . . . .	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
<i>Overseas fleet</i> . . . . .	30	1,462,962	924,037
<b>Total Australian fleet</b> . . . . .	104	3,278,991	2,070,542

**Vessels registered in Australia**

The following table shows the number of vessels registered in Australia at 30 June 1984, classified according to (i) the state in which they are registered; and (ii) the nature of the vessels registration.

**VESSELS REGISTERED IN AUSTRALIA AS AT 30 JUNE 1984**

(Source: Department of Transport)

<i>Location</i>	<i>Nature of registration</i>					<i>Total</i>
	<i>Demise chartered(a)</i>	<i>Other</i>	<i>Government</i>	<i>Fishing</i>	<i>Pleasure</i>	
New South Wales . . . . .	4	230	1	320	1,272	1,827
Victoria . . . . .	1	111	19	140	352	623
Queensland . . . . .	5	131	30	573	544	1,283
Western Australia . . . . .	6	111	4	442	309	872
South Australia . . . . .	—	39	9	220	170	438
Tasmania . . . . .	—	83	3	192	155	433
Northern Territory . . . . .	—	13	2	77	104	196
<b>Total Australia</b> . . . . .	16	718	68	1,964	2,906	5,672

(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>

### Harbour boards and trusts

For detailed information see the individual State Year Books.

### Overseas shipping

#### Ship movements into and out of Australia

The following table shows the movement of ships and cargo to and from overseas countries, for the years 1977-78 to 1982-83.

#### OVERSEAS SHIPPING: SHIP AND CARGO MOVEMENTS

	1977-78	1978-79	1979-80	1980-81	1981-82	1982-1983
<b>Arrivals—</b>						
<i>ship details</i>						
ship number . . . . .	5,615	5,677	6,249	5,995	5,860	5,519
DWT ('000 tonnes) . . . . .	n.a.	n.a.	247,218	237,223	233,044	223,978
<i>cargo discharged</i>						
revenue tonnes ('000) . . . . .	26,981	28,637	31,028	32,480	31,340	27,898
gross weight ('000 tonnes) . . . . .	n.a.	n.a.	26,219	26,767	25,769	23,028
<b>Departures—</b>						
<i>ship details</i>						
ship number . . . . .	5,668	5,655	6,168	5,922	5,795	5,686
DWT ('000 tonnes) . . . . .	n.a.	n.a.	246,555	234,618	236,144	230,011
<i>cargo loaded</i>						
revenue tonnes ('000) . . . . .	166,700	167,304	188,681	179,413	177,193	170,517
gross weight ('000 tonnes) . . . . .	n.a.	n.a.	187,778	178,514	176,378	169,572

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: SHIP DEPARTURES AND ARRIVALS BY COUNTRY OF REGISTRATION,  
1982-83**

<i>Country of registration</i>	<i>Departures</i>		<i>Arrivals</i>	
	<i>Ship number</i>	<i>DWT (<sup>'000 tonnes</sup>)</i>	<i>Ship number</i>	<i>DWT (<sup>'000 tonnes</sup>)</i>
Australia . . . . .	197	10,921	189	10,898
China—excl. Taiwan . . . . .	156	4,435	149	4,312
—Taiwan . . . . .	82	5,283	83	5,383
Denmark . . . . .	89	1,453	89	1,480
Germany, Federal Republic of . . . . .	161	3,211	135	2,585
Greece . . . . .	294	10,201	279	9,806
Hong Kong . . . . .	186	6,807	166	6,631
India . . . . .	40	1,105	47	1,220
Japan . . . . .	1,307	86,972	1,286	84,824
Korea, Republic of . . . . .	196	7,413	200	7,667
Liberia . . . . .	577	27,481	589	27,697
Malaysia . . . . .	47	1,177	51	1,302
Netherlands . . . . .	82	1,360	79	1,264
New Zealand . . . . .	86	912	89	941
Norway . . . . .	129	5,333	118	5,071
Panama . . . . .	644	17,470	645	17,251
Philippines . . . . .	60	2,262	56	2,264
Singapore, Republic of . . . . .	223	5,278	205	4,949
Sweden . . . . .	45	1,509	37	1,182
United Kingdom . . . . .	491	14,351	467	13,521
United States of America . . . . .	15	648	14	578
U.S.S.R. . . . .	125	1,841	118	1,809
Other countries . . . . .	454	12,587	428	11,343
<b>Total All Countries . . . . .</b>	<b>5,686</b>	<b>230,011</b>	<b>5,519</b>	<b>223,978</b>
With cargo . . . . .	5,002	210,731	2,177	49,088
In ballast . . . . .	684	19,279	3,342	174,891

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

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

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

(<sup>'000 revenue tonnes</sup>)

<i>Country of registration</i>	<i>1980-81</i>		<i>1981-82</i>		<i>1982-83</i>	
	<i>Loaded</i>	<i>Discharged</i>	<i>Loaded</i>	<i>Discharged</i>	<i>Loaded</i>	<i>Discharged</i>
Australia . . . . .	6,876	1,330	6,644	1,378	7,689	1,860
China—excl. Taiwan . . . . .	5,419	180	4,150	347	3,472	249
—Taiwan . . . . .	1,201	—	1,729	17	4,913	83
Denmark . . . . .	647	653	544	513	711	415
Germany, Federal Democratic Republic of . . . . .	1,035	1,016	1,419	1,096	838	1,024
Greece . . . . .	8,380	2,439	10,452	2,720	7,257	1,679
Hong Kong . . . . .	1,975	624	3,995	1,072	4,522	904
India . . . . .	2,349	221	2,068	77	880	50
Japan . . . . .	68,555	4,109	70,972	4,097	76,317	3,605
Korea, Republic of . . . . .	3,066	303	5,712	375	6,235	259
Liberia . . . . .	37,826	5,817	26,533	5,264	18,110	6,000
Malaysia . . . . .	509	388	494	341	702	422
Netherlands . . . . .	551	888	501	407	605	292
New Zealand . . . . .	641	1,187	476	735	383	564
Norway . . . . .	5,694	1,571	5,777	1,409	3,378	1,003
Panama . . . . .	14,522	1,795	15,730	1,789	13,743	1,565
Philippines . . . . .	1,305	46	1,371	72	1,833	73
Singapore, Republic of . . . . .	2,786	1,054	3,335	1,206	3,164	1,194
Sweden . . . . .	448	496	560	477	724	370
United Kingdom . . . . .	8,214	5,446	7,292	4,822	6,737	4,035
United States of America . . . . .	261	634	243	329	102	138
U.S.S.R. . . . .	1,291	320	1,223	532	1,011	508
Other Countries . . . . .	6,310	1,961	5,975	2,270	7,190	1,607
<b>Total All Ships . . . . .</b>	<b>179,413</b>	<b>32,480</b>	<b>177,193</b>	<b>31,340</b>	<b>170,517</b>	<b>27,898</b>

**Shipping at principal ports**

The following table shows the total movement of overseas shipping and cargo at Australian ports, 1982-83. Details of container and non-container cargo loaded and discharged are also shown.

**OVERSEAS SHIP AND CARGO MOVEMENTS AT AUSTRALIAN PORTS 1982-83**

<i>Australian port</i>	<i>Departures</i>			<i>Arrivals</i>		
	<i>Ship details</i>		<i>Cargo loaded</i>	<i>Ship details</i>		<i>Cargo discharged</i>
	<i>Ship calls</i>	<i>DWT ('000 tonnes)</i>		<i>Ship calls</i>	<i>DWT ('000 tonnes)</i>	
			<i>Gross weight ('000 tonnes)</i>			<i>Gross weight ('000 tonnes)</i>
<b>New South Wales—</b>						
Sydney . . . . .	1,200	24,432	5,429	1,187	23,798	2,378
Botany Bay . . . . .	401	10,901	513	399	10,911	2,648
Newcastle . . . . .	567	23,595	18,267	552	22,797	992
Port Kembla . . . . .	216	10,709	6,791	216	10,224	415
Other . . . . .	42	1,190	861	44	1,224	2
<i>Total</i> . . . . .	<i>2,426</i>	<i>70,826</i>	<i>31,861</i>	<i>2,398</i>	<i>68,955</i>	<i>6,434</i>
<b>Victoria—</b>						
Melbourne . . . . .	1,188	21,687	2,286	1,259	22,760	2,535
Geelong . . . . .	211	6,000	1,045	205	5,771	1,747
Westernport . . . . .	169	4,201	1,657	172	4,200	63
Other . . . . .	69	2,043	342	69	1,989	229
<i>Total</i> . . . . .	<i>1,637</i>	<i>33,931</i>	<i>5,330</i>	<i>1,705</i>	<i>34,720</i>	<i>4,573</i>
<b>Queensland—</b>						
Brisbane . . . . .	884	16,037	1,965	909	16,513	1,323
Gladstone . . . . .	292	16,439	12,005	291	16,121	435
Hay Point . . . . .	179	17,266	13,864	182	17,337	—
Townsville . . . . .	237	3,871	1,208	236	3,832	80
Weipa . . . . .	69	3,066	2,640	69	3,111	86
Other . . . . .	325	4,719	2,553	327	4,791	157
<i>Total</i> . . . . .	<i>1,986</i>	<i>61,398</i>	<i>34,234</i>	<i>2,014</i>	<i>61,707</i>	<i>2,082</i>
<b>South Australia—</b>						
Port Adelaide . . . . .	454	7,356	768	461	7,614	473
Port Lincoln . . . . .	47	1,108	285	46	1,104	109
Port Pirie . . . . .	84	1,406	606	81	1,327	11
Port Stanvac . . . . .	45	2,598	128	46	2,868	1,593
Thevenard . . . . .	38	548	343	38	548	—
Whyalla . . . . .	36	671	342	37	711	146
Other . . . . .	35	835	263	34	805	61
<i>Total</i> . . . . .	<i>739</i>	<i>14,722</i>	<i>2,734</i>	<i>743</i>	<i>14,977</i>	<i>2,393</i>
<b>West Australia—</b>						
Fremantle . . . . .	1,046	25,413	6,538	1,038	25,155	4,599
Bunbury . . . . .	120	3,444	2,068	121	3,462	269
Cape Cuvier . . . . .	11	623	629	10	563	—
Dampier . . . . .	388	34,074	30,935	391	33,930	68
Geraldton . . . . .	170	3,913	1,555	168	3,828	235
Port Hedland . . . . .	323	29,189	26,089	328	28,747	112
Port Walcott . . . . .	110	14,224	12,349	113	14,188	40
Yampi Sound . . . . .	33	2,607	2,344	36	2,621	—
Other . . . . .	276	5,099	2,432	276	5,131	270
<i>Total</i> . . . . .	<i>2,477</i>	<i>118,587</i>	<i>84,941</i>	<i>2,481</i>	<i>117,625</i>	<i>5,591</i>
<b>Tasmania—</b>						
Hobart . . . . .	158	2,908	659	172	3,117	160
Launceston . . . . .	116	3,163	1,671	115	3,160	45
Port Latta . . . . .	28	2,331	2,041	30	2,398	39
Other . . . . .	119	2,322	406	121	2,319	83
<i>Total</i> . . . . .	<i>421</i>	<i>10,724</i>	<i>4,776</i>	<i>438</i>	<i>10,993</i>	<i>328</i>
<b>Northern Territory—</b>						
Darwin . . . . .	85	1,062	30	80	991	385
Other . . . . .	139	5,551	3,994	139	5,498	622
<i>Total</i> . . . . .	<i>224</i>	<i>6,613</i>	<i>4,024</i>	<i>219</i>	<i>6,489</i>	<i>1,007</i>
<b>Port not available for publication . . . . .</b>	<b>4</b>	<b>46</b>	<b>1,671</b>	<b>—</b>	<b>—</b>	<b>618</b>
<b>Total all ports . . . . .</b>	<b>9,914</b>	<b>316,848</b>	<b>169,572</b>	<b>9,998</b>	<b>315,466</b>	<b>23,028</b>

**OVERSEAS CONTAINER AND NON-CONTAINER CARGO LOADED AND DISCHARGED AT  
AUSTRALIAN PORTS, 1982-83**

('000 revenue tonnes)

<i>Australian port</i>	<i>Loaded</i>			<i>Discharged</i>		
	<i>Container cargo</i>	<i>Other cargo</i>	<i>Total</i>	<i>Container cargo</i>	<i>Other cargo</i>	<i>Total</i>
<b>New South Wales—</b>						
Sydney . . . . .	557	4,999	5,556	1,213	2,056	3,268
Botany Bay . . . . .	516	43	559	1,538	1,853	3,392
Newcastle . . . . .	2	18,265	18,267	16	992	1,008
Port Kembla . . . . .	1	6,790	6,791	3	413	416
Other . . . . .	—	876	876	—	2	2
<i>Total</i> . . . . .	<i>1,076</i>	<i>30,974</i>	<i>32,050</i>	<i>2,770</i>	<i>5,316</i>	<i>8,086</i>
<b>Victoria—</b>						
Melbourne . . . . .	1,949	735	2,684	2,519	1,742	4,262
Geelong . . . . .	42	1,014	1,056	6	1,750	1,755
Westernport . . . . .	6	1,650	1,657	6	57	63
Other . . . . .	—	342	342	—	228	229
<i>Total</i> . . . . .	<i>1,998</i>	<i>3,741</i>	<i>5,738</i>	<i>2,531</i>	<i>3,777</i>	<i>6,309</i>
<b>Queensland—</b>						
Brisbane . . . . .	478	1,566	2,044	381	1,512	1,893
Gladstone . . . . .	—	12,005	12,005	—	435	435
Hay Point . . . . .	—	13,864	13,864	—	—	—
Townsville . . . . .	35	1,173	1,208	5	134	139
Weipa . . . . .	—	2,640	2,640	—	87	87
Other . . . . .	5	2,549	2,553	1	157	157
<i>Total</i> . . . . .	<i>517</i>	<i>33,796</i>	<i>34,313</i>	<i>387</i>	<i>2,325</i>	<i>2,712</i>
<b>South Australia—</b>						
Port Adelaide . . . . .	162	659	821	88	664	752
Port Lincoln . . . . .	—	285	285	—	109	109
Port Pirie . . . . .	7	599	606	—	11	11
Port Stanvac . . . . .	—	128	128	—	1,593	1,593
Thevenard . . . . .	—	343	343	—	—	—
Whyalla . . . . .	—	342	342	—	146	146
Other . . . . .	—	263	263	—	61	61
<i>Total</i> . . . . .	<i>169</i>	<i>2,618</i>	<i>2,787</i>	<i>88</i>	<i>2,584</i>	<i>2,672</i>
<b>Western Australia—</b>						
Fremantle . . . . .	448	6,155	6,603	366	4,544	4,910
Bunbury . . . . .	—	2,072	2,072	—	274	274
Cape Cuvier . . . . .	—	629	629	—	—	—
Dampier . . . . .	—	30,937	30,937	—	68	68
Geraldton . . . . .	—	1,555	1,555	—	235	235
Port Hedland . . . . .	—	26,090	26,090	1	115	117
Port Walcott . . . . .	—	12,349	12,349	—	44	44
Yampi Sound . . . . .	—	2,344	2,344	—	—	—
Other . . . . .	2	2,431	2,433	4	270	274
<i>Total</i> . . . . .	<i>450</i>	<i>84,563</i>	<i>85,012</i>	<i>372</i>	<i>5,549</i>	<i>5,921</i>
<b>Tasmania—</b>						
Hobart . . . . .	—	660	660	2	181	183
Launceston . . . . .	5	1,694	1,699	—	50	50
Port Latta . . . . .	—	2,041	2,041	—	39	39
Other . . . . .	73	344	416	23	67	90
<i>Total</i> . . . . .	<i>77</i>	<i>4,738</i>	<i>4,816</i>	<i>25</i>	<i>338</i>	<i>363</i>
<b>Northern Territory—</b>						
Darwin . . . . .	9	27	36	7	414	421
Other . . . . .	—	3,994	3,994	—	622	622
<i>Total</i> . . . . .	<i>9</i>	<i>4,021</i>	<i>4,030</i>	<i>7</i>	<i>1,036</i>	<i>1,043</i>
Port not available for publication . . . . .	375	1,396	1,771	383	410	793
<b>Total all ports</b> . . . . .	<b>4,671</b>	<b>165,847</b>	<b>170,517</b>	<b>6,563</b>	<b>21,334</b>	<b>27,898</b>

**Overseas cargo according to trade area and ship 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 various trade areas of the world and by ship type.

**OVERSEAS CARGO BY TRADE AREA OF PORT OF DISCHARGED/LOADING BY SHIP TYPE, 1982-83**

('000 revenue tonnes)

<i>Trade area</i>	<i>General cargo ships</i>	<i>Tankers</i>	<i>Bulk carriers</i>	<i>Other ships</i>	<i>All ships</i>
<i>—Outward cargo—</i>					
Europe . . . . .	1,325	502	24,308	34	26,169
East Asia . . . . .	1,120	198	10,724	37	12,079
Japan . . . . .	3,106	1,738	101,565	409	106,818
N. America-E. Coast . . . . .	508	174	1,804	1	2,487
N. America-W. Coast . . . . .	273	151	2,169	33	2,626
Central America . . . . .	28	—	53	—	81
S. America-E. Coast . . . . .	10	5	654	10	679
S. America-W. Coast . . . . .	27	—	57	—	84
West Africa . . . . .	—	—	62	—	63
South and East Africa . . . . .	102	18	433	—	553
Red Sea . . . . .	269	3	817	10	1,098
Persian Gulf . . . . .	609	7	2,454	3	3,073
West India . . . . .	127	65	491	—	684
East India . . . . .	55	22	548	—	625
South East Asia . . . . .	1,718	453	3,874	79	6,124
New Zealand . . . . .	675	516	565	14	1,771
Papua New Guinea . . . . .	488	276	36	—	801
Central Pacific . . . . .	193	294	7	2	496
French Pacific . . . . .	65	65	63	—	193
Pacific Islands . . . . .	16	—	5	—	21
Trade area not available for publication . . . . .	160	—	3,820	14	3,994
<b>Total outward overseas cargo . . . . .</b>	<b>10,872</b>	<b>4,487</b>	<b>154,511</b>	<b>647</b>	<b>170,517</b>
<i>—Inward cargo—</i>					
Europe . . . . .	2,200	709	334	26	3,269
East Asia . . . . .	1,098	23	125	19	1,264
Japan . . . . .	3,037	175	1,961	213	5,387
N. America-E. Coast . . . . .	759	336	935	6	2,036
N. America-W. Coast . . . . .	672	271	1,203	72	2,219
Central America . . . . .	2	5	—	—	6
S. America-E. Coast . . . . .	73	26	12	—	112
S. America-W. Coast . . . . .	2	—	—	—	2
West Africa . . . . .	4	—	21	—	25
South and East Africa . . . . .	136	31	69	2	236
Red Sea . . . . .	36	35	53	—	124
Persian Gulf . . . . .	31	6,454	500	—	6,985
West India . . . . .	39	179	81	—	298
East India . . . . .	21	—	—	—	21
South East Asia . . . . .	662	2,600	837	31	4,130
New Zealand . . . . .	596	—	184	12	793
Papua New Guinea . . . . .	57	4	—	1	62
Central Pacific . . . . .	31	3	—	—	34
French Pacific . . . . .	3	—	—	—	3
Pacific Islands . . . . .	—	—	891	—	891
<b>Total inward overseas cargo . . . . .</b>	<b>9,459</b>	<b>10,851</b>	<b>7,206</b>	<b>382</b>	<b>27,898</b>

**Overseas cargo according to trade area 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 various trade areas of the world, by type of shipping service.

**OVERSEAS CARGO LOADED AND DISCHARGED IN AUSTRALIA BY TRADE AREA OF PORT OF DISCHARGE/LOADING BY TYPE OF SERVICE, 1982-83**

('000 revenue tonnes)

Trade area	Outward overseas cargo			Inward overseas cargo		
	Liner service			Liner service		
	Conference	Non-Conference	Other ships	Conference	Non-Conference	Other ships
Europe . . . . .	822	77	25,270	1,765	217	1,287
East Asia . . . . .	287	152	11,641	582	455	227
Japan . . . . .	591	182	106,044	959	152	4,276
North America—E. Coast . . . . .	372	248	1,867	687	82	1,267
North America—W. Coast . . . . .	213	125	2,289	450	389	1,380
Central America . . . . .	13	—	67	1	1	5
South America—E. Coast . . . . .	8	2	669	32	12	68
South America—W. Coast . . . . .	4	1	78	—	—	2
West Africa . . . . .	—	—	63	—	4	21
South and East Africa . . . . .	2	70	482	36	60	140
Red Sea . . . . .	50	23	1,025	—	26	98
Persian Gulf . . . . .	82	57	2,934	3	3	6,979
West India . . . . .	74	9	601	37	1	260
East India . . . . .	43	—	582	20	1	—
South East Asia . . . . .	610	373	5,141	425	159	3,545
New Zealand . . . . .	422	39	1,310	435	43	315
Papua New Guinea . . . . .	286	104	411	26	13	23
Central Pacific . . . . .	38	51	407	4	14	17
French Pacific . . . . .	39	24	129	2	1	1
Pacific Islands . . . . .	5	15	1	—	114	777
Trade area not available for publication . . . . .	—	—	3,994	—	—	—
<b>Total . . . . .</b>	<b>3,961</b>	<b>1,553</b>	<b>165,004</b>	<b>5,463</b>	<b>1,745</b>	<b>20,690</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.

### Coastal shipping cargo

The following tables shows the gross weight of cargo loaded at an Australian port for discharge at another Australian port. Both inter and intra-state cargo movements are included. Cargo loaded at, or to be discharged at, an overseas port is excluded.

#### COASTAL CARGO LOADED AND DISCHARGED AT AUSTRALIAN PORTS, 1982-83

('000 tonnes)

(Source: Department of Transport)

Australian port	Loaded ( <sup>'000 tonnes</sup> )			Discharged ( <sup>'000 tonnes</sup> )		
	Interstate	Intrastate	Total	Interstate	Intrastate	Total
<b>New South Wales—</b>						
Sydney . . . . .	177	42	219	2,319	738	3,057
Botany Bay . . . . .	343	1,109	1,452	3,573	4	3,577
Newcastle . . . . .	440	46	486	2,416	849	2,765
Port Kembla . . . . .	1,673	82	1,755	4,388	221	4,609
Other . . . . .	3	306	309	14	253	267
<b>Total</b> . . . . .	<b>2,635</b>	<b>1,586</b>	<b>4,221</b>	<b>12,709</b>	<b>1,564</b>	<b>14,273</b>
<b>Victoria—</b>						
Melbourne . . . . .	1,197	196	1,393	1,752	..	1,752
Geelong . . . . .	1,573	206	1,779	583	23	606
Western port . . . . .	7,742	..	7,742	732	..	732
Other . . . . .	31	319	350	49	285	334
<b>Total</b> . . . . .	<b>10,543</b>	<b>721</b>	<b>11,264</b>	<b>3,116</b>	<b>308</b>	<b>3,424</b>
<b>Queensland—</b>						
Brisbane . . . . .	131	1,064	1,195	3,305	316	3,621
Gladstone . . . . .	481	294	775	268	4,198	4,466
Hay Point . . . . .	..	..	..	..	..	..
Townsville . . . . .	218	25	243	425	190	615
Weipa . . . . .	..	4,992	4,992	..	11	11
Other . . . . .	767	84	851	223	724	947
<b>Total</b> . . . . .	<b>1,597</b>	<b>6,459</b>	<b>8,056</b>	<b>4,221</b>	<b>5,439</b>	<b>9,660</b>
<b>South Australia—</b>						
Port Adelaide . . . . .	256	80	336	504	1,066	1,570
Port Lincoln . . . . .	8	14	22	77	40	117
Port Pirie . . . . .	152	..	152	218	102	320
Port Stanvac . . . . .	439	111	550	464	42	466
Thevenard . . . . .	439	..	439	..	..	..
Whyalla . . . . .	343	..	343	741	88	829
Other . . . . .	669	1,203	1,872	..	69	69
<b>Total</b> . . . . .	<b>2,306</b>	<b>1,408</b>	<b>3,714</b>	<b>2,004</b>	<b>1,407</b>	<b>3,411</b>
<b>Western Australia—</b>						
Fremantle . . . . .	1,076	782	1,858	1,254	403	1,656
Bunbury . . . . .	356	..	356	..	149	149
Cape Cavier . . . . .	..	..	..	..	..	..
Dampier . . . . .	1	..	1	..	..	..
Geraldton . . . . .	..	49	49	..	212	212
Port Headland . . . . .	4,250	25	4,275	..	147	147
Port Walcott . . . . .	..	..	..	1	30	31
Yampe Sound . . . . .	439	4	443	..	28	28
Other . . . . .	808	437	1,245	76	222	298
<b>Total</b> . . . . .	<b>6,930</b>	<b>1,297</b>	<b>8,227</b>	<b>1,331</b>	<b>1,191</b>	<b>2,522</b>
<b>Tasmania—</b>						
Hobart . . . . .	436	63	499	684	152	836
Launceston . . . . .	274	13	287	950	6	956
Port Latta . . . . .	..	..	..	..	..	..
Other . . . . .	720	193	913	675	88	763
<b>Total</b> . . . . .	<b>1,430</b>	<b>269</b>	<b>1,699</b>	<b>2,309</b>	<b>246</b>	<b>2,555</b>
<b>Northern Territory—</b>						
Darwin . . . . .	18	8	26	161	7	168
Other . . . . .	264	3	267	29	4	33
<b>Total</b> . . . . .	<b>282</b>	<b>11</b>	<b>293</b>	<b>190</b>	<b>11</b>	<b>201</b>
<b>Total</b> . . . . .	<b>25,723</b>	<b>11,751</b>	<b>37,474</b>	<b>25,880</b>	<b>10,166</b>	<b>36,046</b>

## RAILWAYS

## Government railways

Government railways in Australia operate in all States and Territories and provide an important means of transportation. In 1982-83 a total of 124.1 million tonnes of freight was carried, an increase of 118.5 per cent over the 56.8 million tonnes carried in 1962-63. However, in the same twenty-year period, the number of passengers carried (mostly within the suburban areas of Sydney and Melbourne) declined by 6.6 per cent from 442 million in 1962-63 to 413 million in 1982-83. The number of train-kilometres run during 1982-83 (148 million) was a decrease of 1.4 per cent since 1962-63 (150 million). Since the introduction of the first mainline diesel-electric locomotives in 1950, their numbers have increased greatly until at 30 June 1983 there were 1,701 throughout Australia. Diesel-electric locomotives during 1982-83 hauled 91 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, including those formerly managed by the Commonwealth 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 Australian National. 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 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.

GOVERNMENT RAILWAYS: ROUTE-KILOMETRES OPEN, BY GAUGE AND SYSTEM  
30 JUNE 1983  
(Kilometres)

System	Gauge				Total
	1600 mm	1435 mm	1067 mm	Dual (a)	
New South Wales . . . . .	..	(b)9,883	..	..	(b)9,883
Victoria . . . . .	(c)5,490	313	..	12	5,815
Queensland . . . . .	..	(d)111	9,868	..	9,979
South Australia . . . . .	131	..	..	..	131
Western Australia . . . . .	..	1,226	4,226	158	5,610
Australian National . . . . .	2,198	3,636	1,813	..	7,647
<b>Australia . . . . .</b>	<b>7,819</b>	<b>15,169</b>	<b>15,907</b>	<b>170</b>	<b>39,065</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.



The following table sets out the route kilometres of each government railways system from 1978 to 1983.

**GOVERNMENT RAILWAYS: ROUTE-KILOMETRES OPEN, BY SYSTEM, 1978 TO 1983**  
(Kilometres)

30 June—	N.S.W.	Vic.	Qld	S.A.	W.A.	Australian National	Total
1978 . . . . .	9,763	6,364	9,787	142	5,764	7,890	39,710
1979 . . . . .	9,820	6,184	9,789	142	5,770	7,683	39,388
1980 . . . . .	9,773	6,184	9,904	142	5,773	7,687	39,463
1981 . . . . .	9,773	5,870	9,932	140	5,773	7,648	39,136
1982 . . . . .	9,773	5,812	9,970	141	5,609	7,638	38,943
1983 . . . . .	9,883	5,815	9,979	131	5,610	7,647	39,065

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. Australian National operates the non-metropolitan railways in South Australia (1600 mm, 1435 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 Port Augusta (the Trans Australian Railway) and from Port Augusta to Broken Hill, Port Augusta to Marree, the Central Australia Railway from Tarcoola to Alice Springs, and the A.C.T. railway (Queanbeyan to Canberra). 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.

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

Australian National opened a new Passenger Terminal in Adelaide (at Keswick) for Interstate and South Australian country services in June 1984.

The all-weather standard gauge railway from Tarcoola to 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, 1982-83**

	N.S.W.	Vic.	Qld	S.A.	W.A.	Australian National	Aust.
Train-kilometres							
('000)(a)—							
Suburban passenger . . . . .	25,082	14,549	4,466	3,894	1,733	..	49,724
Country passenger . . . . .	12,124	7,004	4,133	..	945	2,395	26,601
Goods(b) . . . . .	24,301	8,613	22,285	..	7,881	8,400	71,481
Total . . . . .	61,507	30,166	30,885	3,894	10,560	10,795	147,806

For footnotes see end of Table

## GOVERNMENT RAILWAYS: SUMMARY OF OPERATIONS, SYSTEMS, 1982-83—continued

	N.S.W.	Vic.	Qld	S.A.	W.A.	Australian National	Aust.
<b>Passenger journeys</b> ( <sup>'000</sup> )(c)—							
Suburban . . . . .	203,028	80,197	33,135	85,420	n.a.	..	n.a.
Country(d) . . . . .	4,750	4,126	1,614	..	220	357	11,067
<b>Total</b> . . . . .	<b>207,778</b>	<b>84,323</b>	<b>34,749</b>	<b>85,420</b>	<b>n.a.</b>	<b>357</b>	<b>n.a.</b>
<b>Passenger-kilometres</b> ( <sup>'000</sup> )(e)—							
Suburban . . . . .	n.a.	n.a.	n.a.	n.a.	n.a.	..	n.a.
Country . . . . .	n.a.	n.a.	n.a.	n.a.	86,288	247,198	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>247,198</b>	<b>n.a.</b>
<b>Freight—</b>							
Tonnes carried ( <sup>'000</sup> )(d) . . . . .	41,350	8,570	43,706	..	19,791	10,676	124,093
Net tonne-kilometres (million)(f) . . . . .	9,116.6	2,467.9	13,176.8	..	4,384.4	5,347.8	34,493.5

(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.

GOVERNMENT RAILWAYS: ROLLING STOCK(a) INCLUDED IN CAPITAL ACCOUNT  
(Number)

System and date	Locomotives				Coaching stock	Goods stock	Service stock
	Diesel- electric	Electric	Other(b)	Total			
<b>30 June 1983</b>							
New South Wales . . . . .	473	53	80	606	2,713	9,728	1,427
Victoria . . . . .	256	28	24	308	1,619	11,569	967
Queensland . . . . .	527	..	77	604	1,270	22,266	2,568
South Australia . . . . .	2	..	4	6	197	—	12
Western Australia . . . . .	170	..	17	187	324	8,738	487
Australian National . . . . .	273	..	13	286	391	9,853	1,291
<b>Australia</b> . . . . .	<b>1,701</b>	<b>81</b>	<b>215</b>	<b>1,997</b>	<b>6,514</b>	<b>62,154</b>	<b>6,752</b>
<b>30 June—</b>							
1982 . . . . .	1,678	80	223	1,981	5,063	65,222	7,039
1981 . . . . .	1,722	82	193	1,997	5,036	66,386	7,201
1980 . . . . .	1,727	81	185	1,993	5,121	67,685	7,228
1979 . . . . .	1,695	74	203	1,972	5,055	67,163	7,192
1978 . . . . .	1,674	74	194	1,942	6,872	71,043	7,225

(a) Excludes jointly-owned stock. (b) Includes non-passenger-carrying diesel power vans and steam locomotives.

GOVERNMENT RAILWAYS: TRAIN-KILOMETRES 1982-83  
(<sup>'000</sup> kilometres)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Australian National	Aust.
<b>Type of service—</b>							
Passenger—suburban . . . . .	25,082	14,549	4,466	3,894	1,733	..	49,724
Passenger—country . . . . .	12,124	7,004	4,133	..	945	2,395	26,601
Goods(a) . . . . .	24,301	8,613	22,285	..	7,881	8,400	71,481
<b>Total</b> . . . . .	<b>61,507</b>	<b>30,166</b>	<b>30,885</b>	<b>3,894</b>	<b>10,560</b>	<b>10,795</b>	<b>147,806</b>
<b>Type of motive power—</b>							
Hauled by diesel-electric loco- motives . . . . .	31,764	14,394	26,635	..	8,397	10,150	91,339
Hauled by electric and other locomotives(b) . . . . .	2,716	1,342	128	..	2	..	4,187
Powered coaching stock . . . . .	27,027	14,430	4,122	3,894	2,161	646	52,279
<b>Total</b> . . . . .	<b>61,507</b>	<b>30,166</b>	<b>30,885</b>	<b>3,894</b>	<b>10,560</b>	<b>10,795</b>	<b>147,806</b>

(a) Includes mixed train-kilometres. (b) Includes steam locomotives.

**TRAIN-KILOMETRES**  
(<sup>'000 kilometres</sup>)

<i>Year</i>	<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>
1977-78	56,860	32,013	30,199	3,982	12,596	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
1982-83	61,507	30,166	30,885	3,894	10,560	10,795	147,806

**GOVERNMENT RAILWAYS: FREIGHT CARRIED(a), SYSTEMS**  
(<sup>'000 tonnes</sup>)

<i>Commodity and year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>W.A.</i>	<i>Australian National</i>	<i>Aust.</i>
1982-83—						
Grain	3,106	1,441	1,350	4,698	546	11,141
Other agricultural produce	785	277	1,847	123	19	3,051
Coal, coke and briquettes	27,910	430	32,130	1,489	1,752	63,711
Other minerals(b)	3,031	767	4,065	9,862	2,116	19,841
Iron and steel	1,289	506	559	2	575	2,931
Fertilisers	69	419	94	440	294	1,316
Cement	452	689	162	34	363	1,700
Timber	56	129	61	689	889	1,824
Containers	1,390	836	592	—	918	3,736
Livestock	170	69	577	4	155	975
All other commodities	3,093	3,007	2,271	2,450	3,049	13,870
<b>Total</b>	<b>41,350</b>	<b>8,570</b>	<b>43,706</b>	<b>19,791</b>	<b>10,676</b>	<b>124,093</b>
1981-82	40,393	11,623	43,659	19,776	11,882	127,333
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

(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.

**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>W.A.</i>	<i>Australian National</i>	<i>Aust.</i>
1982-83—						
Grain	1,395.3	395.3	467.7	n.a.	n.a.	n.a.
Other agricultural produce	436.3	91.9	347.0	n.a.	n.a.	n.a.
Coal, coke and briquettes	2,631.5	87.2	8,603.3	n.a.	n.a.	n.a.
Other minerals(a)	439.5	108.4	1,496.8	n.a.	n.a.	n.a.
Iron and steel	920.1	176.0	183.3	n.a.	n.a.	n.a.
Fertilisers	42.0	112.1	116.6	n.a.	n.a.	n.a.
Cement	250.1	121.9	73.8	n.a.	n.a.	n.a.
Timber	60.7	43.6	36.4	n.a.	n.a.	n.a.
Containers	840.4	356.1	272.0	n.a.	n.a.	n.a.
Livestock	150.3	16.5	390.5	n.a.	n.a.	n.a.
All other commodities	1,951.0	958.9	1,189.6	n.a.	n.a.	n.a.
<b>Total</b>	<b>9,116.6</b>	<b>2,467.9</b>	<b>13,176.8</b>	<b>4,384.4</b>	<b>5,347.8</b>	<b>34,493.5</b>
1981-82	10,704.9	3,426.7	13,079.1	4,389.8	5,731.3	37,331.8
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	4,273.1	4,794.2	31,836.5

(a) Includes sand and gravel.

**GOVERNMENT RAILWAYS: GROSS EARNINGS(a), SYSTEMS, 1982-83**  
(\$'000)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Australian National	Aust.
<b>Coaching—</b>							
Suburban passenger . . . . .	136,362	n.a.	14,987	n.a.	n.a.	..	n.a.
Country passenger . . . . .	57,312	n.a.	11,499	..	5,584	18,526	n.a.
Other . . . . .	—	n.a.	4,718	n.a.	425	—	n.a.
<b>Total coaching . . . . .</b>	<b>193,674</b>	<b>112,852</b>	<b>31,204</b>	<b>34,921</b>	<b>6,009</b>	<b>18,526</b>	<b>397,186</b>
<b>Freight (goods and livestock)—</b>							
Grain . . . . .	n.a.	18,635	16,641	..	n.a.	6,814	n.a.
Other agricultural produce . . . . .	n.a.	4,662	17,650	..	n.a.	281	n.a.
Coal, coke and briquettes . . . . .	n.a.	3,962	314,765	..	n.a.	10,226	n.a.
Other minerals(b) . . . . .	n.a.	4,330	49,277	..	n.a.	16,291	n.a.
Iron and steel . . . . .	n.a.	5,674	6,014	..	n.a.	11,662	n.a.
Fertilisers . . . . .	n.a.	4,541	3,172	..	n.a.	3,116	n.a.
Cement . . . . .	n.a.	6,172	2,739	..	n.a.	2,385	n.a.
Timber . . . . .	n.a.	2,389	1,663	..	n.a.	6,079	n.a.
Containers . . . . .	n.a.	8,348	10,746	..	n.a.	9,071	n.a.
Livestock . . . . .	n.a.	904	14,900	..	n.a.	5,725	n.a.
All other commodities . . . . .	n.a.	49,187	70,655	..	n.a.	89,830	n.a.
<b>Total freight . . . . .</b>	<b>452,626</b>	<b>108,803</b>	<b>508,223</b>	<b>..</b>	<b>183,632</b>	<b>161,480</b>	<b>1,414,764</b>
Miscellaneous . . . . .	48,519	26,290	10,432	6,987	34,283	13,848	140,359
<b>Grand total . . . . .</b>	<b>694,819</b>	<b>247,945</b>	<b>549,859</b>	<b>41,908</b>	<b>223,925</b>	<b>193,854</b>	<b>1,952,310</b>

(a) Excludes Government grants.

(b) Includes sand and gravel.

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

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Australian National	Aust.
<b>GROSS EARNINGS</b>							
1977-78 . . . . .	380,724	176,522	273,551	6,113	149,477	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
1982-83 . . . . .	694,819	247,945	549,859	41,908	223,925	193,854	1,952,310
<b>WORKING EXPENSES</b>							
				(a)	(a)		
1977-78 . . . . .	643,623	332,508	337,002	25,723	148,708	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
1982-83 . . . . .	1,157,486	625,848	664,548	116,884	235,211	300,410	3,100,387
<b>NET EARNINGS(b)</b>							
1977-78 . . . . .	-262,899	-155,986	-63,451	-19,610	769	-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
1982-83 . . . . .	-462,667	-377,903	-114,689	-74,976	-11,286	-106,556	-1,148,077

(a) Includes provision of reserves for depreciation.

(b) Excess of gross earnings over working expenses as shown in this table.

**GOVERNMENT RAILWAYS: WORKING EXPENSES, SYSTEMS, 1982-83**  
(S'000)

	<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>
Maintenance of way and works . . . . .	174,689	(b)	178,575	n.a.	52,946	n.a.	n.a.
Motive power (a) . . . . .	406,051	(b)	270,898	n.a.	59,284	n.a.	n.a.
Traffic . . . . .	261,897	525,480	156,867	n.a.	84,380	n.a.	n.a.
Other charges . . . . .	314,849	100,368	58,207	n.a.	38,600	n.a.	n.a.
<b>Total . . . . .</b>	<b>1,157,486</b>	<b>625,848</b>	<b>664,548</b>	<b>(c) 116,884</b>	<b>(c) 235,211</b>	<b>300,410</b>	<b>3,100,387</b>

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

**GOVERNMENT RAILWAYS: SURPLUS OR DEFICIT, SYSTEMS, 30 JUNE 1983**  
(S'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 Govern- ment grants	Road motor earnings	Other	Total	Interest and ex- change	Sinking fund	Road motor expenses (a)	Other	Total		
New South Wales	—462,667	(b) 14,400	..	137,608	152,008	55,749	12,220	..	69,639	137,608	—448,267
Victoria	—377,903	—	184	—	184	40,201	894	599	(c) 12,867	54,561	—432,280
Queensland	—114,689	—	—	—	—	97,284	—	—	(d) 500	97,784	—212,473
South Australia	—74,976	64,869	—	585	65,454	—	—	—	10,870	10,870	—20,392
Western Australia	—11,286	—	2,274	—	2,274	33,420	—	4,481	2	37,903	—46,915
Australian National	—106,556	102,400	—	—	102,400	—	—	—	16,271	16,271	—20,427
<b>Australia</b>	<b>—1,148,077</b>	<b>181,669</b>	<b>2,458</b>	<b>138,193</b>	<b>322,320</b>	<b>226,654</b>	<b>13,114</b>	<b>5,080</b>	<b>110,149</b>	<b>354,997</b>	<b>—1,180,754</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) Depreciation. (d) Demolished assets written off.

**Employment, salaries and wages**

**GOVERNMENT RAILWAYS: AVERAGE NUMBER OF EMPLOYEES (EXCLUDING CONSTRUCTION STAFF) AND SALARIES AND WAGES PAID (a), 1982-83**

	<i>N.S.W.</i>	<i>Vic. (b)</i>	<i>Qld</i>	<i>S.A. (c)</i>	<i>W.A.</i>	<i>Australian National (d)</i>	<i>Aust.</i>
Salaried staff . . . . .	9,499	5,234	4,259	716	1,939	2,063	23,710
Wages staff . . . . .	31,373	15,671	21,684	2,870	6,661	7,754	86,013
<b>Total staff . . . . .</b>	<b>40,872</b>	<b>20,905</b>	<b>25,943</b>	<b>3,586</b>	<b>8,600</b>	<b>9,817</b>	<b>109,723</b>
Salaries and wages paid . . . . . S'000	841,102	410,606	477,926	49,290	147,521	207,574	2,134,019

(a) Excludes salaries and wages paid to road motor staff. (b) Includes construction staff. (c) Includes staff made available to the State Transport Authority by the ANRC. (d) 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 1977-78 TO 1982-83

Year	Iron ore railways	Sugar tramways	Other non-government railways (a)	Total non-government railways (a)
TONNES CARRIED (million)				
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	19.5	128.6
1981-82	83.0	21.6	20.9	125.6
1982-83	78.2	20.9	15.1	114.1
TONNE-KILOMETRES (million)				
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	319	28,934
1981-82	26,668	367	347	27,384
1982-83	24,432	355	257	25,045

(a) Includes transfers to and from Government railways.

## TRAM, BUS, AND FERRY SERVICES

## Systems in operation

**Trams.** At 30 June 1983 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.

## 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: 1982-83

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Route-kilometres at 30 June									
Tram (a) . . . . . kilometres		221		11					232
Bus . . . . . " . . . . .	1,109	313	760	965	8,405	498	152	1,351	13,553
Vehicle-kilometres									
Tram . . . . . '000		24,202		756					24,958
Bus . . . . . " . . . . .	65,971	13,311	22,031	38,453	46,607	9,601	1,920	14,529	212,423

For footnotes see end of Table

**TRAM AND BUS SERVICES: GOVERNMENT AND MUNICIPAL STATES AND TERRITORIES:  
1982-83—continued**

		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Rolling stock at 30 June—										
Tram . . . . .	number	..	691	..	22	..	..	..	..	713
Bus . . . . .	"	1,719	281	593	767	964	293	40	361	5,018
Passenger journeys—										
Tram . . . . .	'000	..	n.a.	..	(b)	..	..	..	..	..
Bus . . . . .	"	188,424	n.a.	45,715	(b)	54,457	14,318	2,087	20,648 (e)(f)	325,649
Gross revenue (c)—										
Tram and bus . . . . .	\$'000	101,795	60,040	19,301	(b)	27,456	5,710	616	10,318	(e) 225,236
Working expenses (d)—										
Tram and bus . . . . .	\$'000	181,419	129,744	42,488	(b)	62,128	15,453	4,382	23,838	(e) 459,452
Net revenue—										
Tram and bus . . . . .	\$'000	-79,624	-69,704	-23,187	(b)	-32,472	-9,742	-3,766	-13,520 (e)	-232,015
Employees at 30 June—										
Tram and bus . . . . .	number	6,227	4,918	1,519	(b)	2,239	565	103	805	(e) 16,376

(a) Gauge 1435 mm throughout. (b) Not separately available. See page 20/16. (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 20/16. (f) Excludes details of metropolitan tram and bus services in Victoria. Minus sign (-) denotes deficit.

**TRAM AND BUS SERVICES: GOVERNMENT AND MUNICIPAL**

		1977-78	1978-79	1979-80	1980-81	1981-82	1982-83
Route-kilometres at 30 June—							
Tram . . . . .	kilometres	228	231	231	231	231	232
Bus . . . . .	"	12,649	12,828	14,173	11,930	13,445	13,553
Vehicle kilometres—							
Tram . . . . .	'000	24,955	24,967	24,330	24,864	24,836	24,958
Bus . . . . .	"	197,660	201,693	203,963	193,324	209,104	212,423
Rolling stock at 30 June—							
Tram . . . . .	number	774	756	759	767	724	713
Bus . . . . .	"	5,050	5,070	5,112	4,941	4,973	5,018
Passenger journeys—							
Tram . . . . .	'000	102,581	(a) 101,070	(a) 98,889	(a) 100,474	(a) 103,479	..
Bus . . . . .	"	413,987	(a) 357,558	(a) 356,638	(a) 347,133	(a) 343,216	(a)(f) 325,649
Gross revenue (b)—							
Tram and bus . . . . .	\$'000	134,457	(a) 123,741	(a) 143,324	(a) 184,596	(a) 201,952	(a) 225,236
Working expenses (c)—							
Tram and bus . . . . .	\$'000	267,281	(a) 258,644	(a) 277,865	(a) 337,434	(a) 397,394	(a) 459,452
Net revenue—							
Tram and bus . . . . .	\$'000	-132,824 (a)	-134,902 (a)	-134,542 (a)	-152,838 (a)	-195,441 (a)	(a) -232,015
Employees at 30 June—							
Tram and bus . . . . .	number	(a) 16,613	(a) 16,547	(a) 16,244	(a) 13,795	(a) 15,195	(a) 16,376
Accidents—							
Tram and bus (d)—							
Persons killed . . . . .	number	22	(e) 27	(a) 12	n.a.	n.a.	n.a.
Persons injured . . . . .	"	(e) 1,727	(a) 1,885	(a) 1,917	n.a.	n.a.	n.a.

(a) Excludes details of metropolitan tram and bus services in South Australia. See page 20/16. (b) Excludes government grants. (c) Includes provision of reserve for depreciation, etc., where possible. (d) Excludes accidents to employees. (e) Excludes New South Wales. (f) Excludes details of metropolitan tram and bus services in Victoria.

## MOTOR VEHICLES

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 kilo- metres	REL. S.E. (%)	million kilo- metres	REL. S.E. (%)	million kilo- metres	REL. S.E. (%)	million kilo- metres	REL. S.E. (%)	million kilo- metres	REL. S.E. (%)	million kilo- metres	REL. 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		Panel vans	Trucks		Other truck type vehicles	Buses	Motor cycles	Total (a)
	Utilities			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>)

<i>30 June</i>	<i>Motor cars and station wagons</i>	<i>Utilities, trucks, panel vans, other truck type vehicles and buses</i>	<i>Total (excludes motor cycles)</i>	<i>Motor cycles</i>
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
1983 . . . . .	6,469.6	1,718.3	8,187.9	402.0

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

<i>30 June</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>Aust.</i>
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
1983 . . . . .	504.2	539.9	564.9	541.6	555.9	563.4	433.6	471.5	531.7

(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 1983, the numbers of licences in force to drive or ride motor vehicles were: New South Wales, 3,274,999; Victoria, 2,318,698; South Australia, 930,810; Western Australia, 780,618; Tasmania, 244,209; Northern Territory, 72,972; Australian Capital Territory, 144,984. Particulars are not available for Queensland.

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

<i>State or Territory</i>	<i>Motor cars and station wagons</i>	<i>Utilities</i>	<i>Panel vans</i>	<i>Trucks</i>		<i>Other truck type vehicles</i>	<i>Buses</i>	<i>Total (excludes motor cycles)</i>	<i>Motor cycles</i>
				<i>Rigid</i>	<i>Articulated</i>				
<b>1983 84</b>									
New South Wales . . . . .	150,967	11,987	24,554	9,018	857	549	9,023	206,955	16,971
Victoria . . . . .	126,652	8,577	2,374	13,454	653	561	1,031	153,302	10,067
Queensland . . . . .	77,289	14,521	7,662	3,094	436	151	1,115	104,268	8,480
South Australia . . . . .	41,204	3,113	3,498	2,486	249	197	226	50,973	4,671
Western Australia . . . . .	39,737	3,857	6,996	3,639	193	76	438	54,936	3,969
Tasmania . . . . .	13,214	1,510	1,007	976	114	70	114	17,005	1,027
Northern Territory . . . . .	3,396	2,096	452	137	69	20	66	6,236	845
Australian Capital Territory . . . . .	8,559	479	236	593	10	6	156	10,039	654
<b>Australia . . . . .</b>	<b>461,018</b>	<b>46,140</b>	<b>46,779</b>	<b>33,397</b>	<b>2,581</b>	<b>1,630</b>	<b>12,169</b>	<b>603,714</b>	<b>46,684</b>
<b>1982 83</b>	453,523	43,682	52,364	31,514	2,426	1,834	4,680	590,023	61,061
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

## 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, 1983**

State or Territory	Number of accidents	Persons killed	Persons injured	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
New South Wales	8,282	966	9,402	155	18	175	29	3	33
Victoria	6,884	664	8,039	171	17	199	31	3	36
Queensland	3,424	510	3,872	139	21	157	23	3	26
South Australia	2,561	266	3,075	191	20	229	34	4	40
Western Australia	2,164	203	2,497	159	15	183	27	3	31
Tasmania	532	70	605	123	16	140	21	3	24
Northern Territory	300	48	369	224	36	275	49	8	60
Australian Capital Territory	204	28	221	86	12	93	18	2	19
<b>Australia</b>	<b>24,351</b>	<b>2,755</b>	<b>28,080</b>	<b>158</b>	<b>18</b>	<b>183</b>	<b>28</b>	<b>3</b>	<b>33</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 1983.

## ROAD TRAFFIC ACCIDENTS INVOLVING FATALITIES

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia
<b>Accidents involving fatalities—</b>									
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
1983	877	610	437	235	191	63	45	27	2,485
<b>Persons killed—</b>									
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
1983	966	664	510	266	203	70	48	28	2,755

## 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 1983. 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 1983**  
(Kilometres)

<i>Class of road</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
State Highways and Freeways	10,503	7,544	10,344		7,739	1,946	38,076
Trunk roads . . . . .	7,098		149	13,421			20,668
Ordinary main roads . . . . .	18,358	14,852	8,589		7,482	1,290	50,571
<i>Total main roads</i>	<i>35,959</i>	<i>22,396</i>	<i>19,082</i>	<i>13,421</i>	<i>15,221</i>	<i>3,236</i>	<i>109,315</i>
Secondary roads . . . . .	(a)299	-	13,019	-	8,740	282	22,340
Development roads . . . . .	3,474		8,046	-	-	45	11,565
Tourist roads . . . . .	445	797	-	-	-	172	1,414
Other roads . . . . .	2,511	(b)1,013	-	-	-	-	3,524
<i>Total other roads</i>	<i>6,729</i>	<i>1,810</i>	<i>21,065</i>	<i>-</i>	<i>8,740</i>	<i>499</i>	<i>38,843</i>
<b>Grand total</b>	<b>42,688</b>	<b>24,206</b>	<b>40,147</b>	<b>13,421</b>	<b>23,961</b>	<b>3,735</b>	<b>148,158</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 1983**  
(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.</i>	<i>Total (a)</i>
Bitumen or concrete . . . . .	73,247	63,985	50,363	21,767	37,760	8,444	5,289	2,042	262,897
Gravel, crushed stone or other improved surface . . . . .	64,899	47,470	35,474		37,078	13,180	5,350	105	203,556
Formed only . . . . .	36,155	23,403	56,345	80,633	43,355	373	4,814	-	245,078
Cleared only . . . . .	20,805	21,857	21,217		21,218	213	4,727	-	90,037
<b>Total</b>	<b>195,127</b>	<b>156,715</b>	<b>163,399</b>	<b>102,400</b>	<b>139,411</b>	<b>22,210</b>	<b>20,180</b>	<b>2,147</b>	<b>801,589</b>

(a) Excludes road designated but not trafficable. Excludes Lord Howe Island and the unincorporated area of the Western Division.  
(b) Figures as at 31 December 1982. (c) Excludes roads coming under the responsibility of the State Electricity Commission (38 km), Melbourne and Metropolitan Board of Works (32 km) and Forests Commission (39,656 km). (d) Excludes Forests Department roads.

### 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 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 Director's 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 153 (as at 30 June 1984) 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 1984. 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 five other countries at 30 June 1984.

*International air services.* At 30 June 1984, twenty-six overseas international airlines were operating regular scheduled air services to Australia. These were: Air Caledonie (New Caledonia), 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 Airways (Hong Kong), Continental Airlines (United States of America), Deutsche Lufthansa (Federal Republic of Germany), Flying Tiger Line (United States of America), 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), Royal Brunei Airlines (Brunei), 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 23 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 1983-84 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), 1983-84p**

<i>Type of traffic</i>	<i>Number of flights(b)(c)</i>	<i>Passengers</i>	<i>Freight tonnes</i>	<i>Mail tonnes</i>
<b>Traffic to Australia—</b>				
Qantas Airways Limited . . . . .	4,477	975,480	42,800	853
Other airlines . . . . .	6,124	1,322,981	65,374	6,399
<b>All airlines . . . . .</b>	<b>10,601</b>	<b>2,298,461</b>	<b>108,174</b>	<b>7,252</b>
<b>Traffic from Australia—</b>				
Qantas Airways Limited . . . . .	4,371	957,800	30,782	2,658
Other airlines . . . . .	6,076	1,191,563	53,814	1,426
<b>All airlines . . . . .</b>	<b>10,447</b>	<b>2,149,363</b>	<b>84,596</b>	<b>4,084</b>

(a) Australia and Norfolk Island. (b) Qantas flights leased aircraft from other airlines. (c) Difference between scheduled flights into the country is caused by flights leaving the country as non scheduled operators.

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**

		1978-79	1979-80	1980-81	1981-82	1982-83	1983-84
Hours flown . . . . .	number	70,065	74,879	73,679	77,910	82,409	83,551
Kilometres flown . . . . .	'000	59,040	59,109	58,188	61,052	64,898	65,670
<b>Passengers—</b>							
Embarkations . . . . .	number	1,782,673	1,933,580	1,883,477	2,020,107	2,101,788	2,189,669
Passenger-kilometres . . . . .	'000	14,317,936	16,296,416	14,876,509	14,818,491	14,477,756	15,247,801
<b>Freight—</b>							
Tonnes uplifted . . . . .	tonnes	51,373	52,326	53,753	66,036	75,375	84,844
Tonne-kilometres . . . . .	'000	373,534	412,518	418,849	479,996	485,549	563,268
<b>Mail—</b>							
Tonnes uplifted . . . . .	tonnes	3,238	3,878	3,919	4,344	4,219	4,410
Tonne-kilometres . . . . .	'000	32,019	36,226	36,581	39,244	40,058	40,324

The air cargo statistics set out in the following table have been compiled from information contained in import and export documents submitted by importers and exporters, or their agents to the Australian Customs Service as required by the *Customs act 1901*.

**AIR CARGO BY TRADE AREA: 1982-83**

<i>Trade area</i>	<i>Inward cargo</i>		<i>Outward cargo</i>	
	<i>Gross weight (tonnes)</i>	<i>Value (\$'000)</i>	<i>Gross weight (tonnes)</i>	<i>Value (\$'000)</i>
Europe . . . . .	21,547	1,054,427	4,583	492,446
East Asia . . . . .	4,498	146,483	6,066	107,032
Japan . . . . .	6,594	303,364	2,143	69,588
N. America—E. Coast . . . . .	9,801	559,214	1,184	84,037
N. America—W. Coast . . . . .	9,059	730,732	3,096	179,156
Central America . . . . .	73	10,248	72	1,282
S. America—E. Coast . . . . .	120	7,544	28	3,178
S. America—W. Coast . . . . .	78	4,437	15	1,054
West Africa . . . . .	14	2,144	29	871
South and East Africa . . . . .	383	7,219	494	11,604
Red Sea . . . . .	3	283	1,069	6,338
Persian Gulf . . . . .	23	7,739	13,103	37,655
West India . . . . .	459	16,994	255	3,682
East India . . . . .	1,026	19,973	81	2,240
South East Asia . . . . .	3,807	120,353	20,593	160,879

## AIR CARGO BY TRADE AREA: 1982-83—continued

Trade area	Inward cargo		Outward cargo	
	Gross weight (tonnes)	Value (\$'000)	Gross weight (tonnes)	Value (\$'000)
New Zealand	27,056	246,274	14,682	235,314
Papua New Guinea	217	23,384	3,321	59,482
Central Pacific	89	20,356	1,836	23,050
French Pacific	23	2,116	1,906	12,365
Pacific Islands	10	1,409	285	7,058
Trade area not specified	45	2,719	4,364	66,172
Other	2	25	43	225
<b>Total</b>	<b>84,927</b>	<b>3,287,437</b>	<b>79,249</b>	<b>1,564,707</b>

**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 1984, the Ansett fleet included 4 Boeing 767s, 12 Boeing 727s, 12 Boeing 737s, 3 Lockheed Electra freighters, 5 Fokker F27 Friendships and 2 Sikorsky helicopters. At the same date, Trans-Australia Airlines operated a fleet of 14 Boeing 727s, 3 Airbus A300s and 12 McDonnell-Douglas DC 9s.

*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.

*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 1984, there were 43 operators of commuter services in Australia, serving some 295 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)

		1977-78	1978-79	1979-80	1980-81	1981-82	1982-83
Hours flown . . . . .	number	279,385	280,233	284,381	277,199	268,339	245,567
Kilometres flown . . . . .	'000	134,702	135,409	138,185	137,264	136,769	127,952
Passengers—							
Embarkations . . . . .	number	10,289,477	10,720,181	11,504,957	11,380,798	11,396,510	10,332,934
Passenger-kilometres . . . . .	'000	8,180,918	8,618,671	9,485,635	9,747,272	10,155,379	9,327,206
Freight—							
Tonnes uplifted . . . . .	tonnes	120,887	127,528	129,775	124,955	136,250	141,853
Tonne-kilometres . . . . .	'000	106,460	110,746	109,603	107,851	117,936	124,796
Mail—							
Tonnes uplifted . . . . .	tonnes	11,307	13,126	15,053	17,302	16,841	16,767
Tonne-kilometres . . . . .	'000	10,718	12,518	14,206	16,397	16,515	17,167

(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 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.

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

Airport	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83
Sydney . . . . .	5,274,577	5,539,561	5,961,807	5,858,143	5,917,874	5,338,944
Melbourne . . . . .	4,552,462	4,743,757	5,104,448	5,046,031	5,038,634	4,500,234
Brisbane . . . . .	2,252,888	2,282,641	2,521,119	2,636,552	2,758,922	2,518,841
Adelaide . . . . .	1,729,030	1,801,084	1,931,395	1,930,219	1,852,906	1,635,544
Perth . . . . .	792,768	830,273	910,637	929,949	1,017,173	995,987
Canberra . . . . .	966,388	945,260	967,803	872,223	820,943	786,449
Coolangatta . . . . .	409,151	457,789	570,137	632,791	648,384	553,886
Hobart . . . . .	437,948	455,577	473,567	474,115	475,127	433,910
Cairns . . . . .	307,525	345,344	387,095	426,064	442,524	387,895
Townsville . . . . .	353,522	363,285	378,884	384,587	396,622	377,186
Launceston . . . . .	353,596	387,456	390,215	380,512	376,536	356,261
Darwin . . . . .	225,052	249,056	278,669	290,789	287,210	266,268
Mackay . . . . .	254,954	253,229	261,982	197,892	159,718	160,517

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 1984 was 441. Seventy-one were owned by the Commonwealth Government and 370 by local authorities and private interests. The number of licensed helipads throughout Australia and its territories is 4. Capital expenditure on aerodrome and building construction was \$68.8 million in 1983-84. Maintenance expenditure on Commonwealth Government-owned aerodromes during 1983-84 was \$11.87 million. Expenditure on development and maintenance grants to licensed aerodromes participating in the Local Ownership Plan totalled \$34.22 million.

**Airway facilities**

A total of 470 navigational aids were in service at 30 June 1984. The total includes 254 non-directional beacons (NDB) (includes 224 standard NDB's and 30 locators), 108 distance measuring equipment (DME), 11 international distance measuring equipment (DMEI), 75 VHF omni-directional ranges (VOR), 17 instrument landing systems (ILS) and five twin locator approach systems.

One hundred and eighty-six aerodromes are now equipped with night landing facilities. One hundred and twenty-three 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 thirty-two fully-equipped Air Traffic Control Centres and forty-three flight service units in operation.

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

At 30 June 1984 there were 6,801 aircraft registered in Australia. At the same time there were also 61,528 aeroplane pilots' licences in force, of which 27,381 were private pilots' licences, 5,705 commercial pilots' licences, 2,030 senior commercial pilots' licences, 2,435 air transport pilots' licences, and 23,977 student pilots' licences. In addition there were 1,743 helicopter pilots' licences in force of which 161 were private pilots' licences, 748 commercial pilots' licences, 98 senior commercial pilots' licences and 736 student pilots' licences. There were also 794 flight engineer licences, and 8 flight navigator licences in force.

**Accidents and casualties****AIR TRANSPORT: ACCIDENTS INVOLVING CASUALTIES (a), AUSTRALIA (b)**

	1978	1979	1980	1981	1982	1983
Number . . . . .	48	37	48	39	51	44
Persons killed . . . . .	58	35	61	53	53	47
Persons seriously injured . . . . .	35	29	33	33	35	29

(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 development of the Australian Communications Satellite System (ACSS), in association with other government departments and agencies in particular AUSSAT PTY LTD, a government-owned company formed to own and operate ACSS.

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.

Under the *Postal Services Act 1975*, the Australian Postal Commission is required to operate Australia's postal services in such a manner as will best meet the social, industrial and commercial needs of the Australian people. In performing its functions, the Commission is required to have regard



for the special needs for postal services of Australian people who reside or carry out business outside the cities. It is also required to raise sufficient revenue to cover operating expenditure and to fund at least half of its capital expenditure.

Australia Post provides surface and airmail services within Australia and to and from other countries. Special services provided include priority paid mail, business reply post, cash-on-delivery, certified mail, freepost, messenger delivery, a security mail service and a number of reduced rate services. From February 1984, it has operated an express courier service and an electronic mail service.

Australia Post operates a money transfer service, sells postal products such as padded post bags, postal stationery and philatelic items, and acts as agent on behalf of Federal, State and local Government departments and authorities and, since February 1984, for private sector principals.

Australia Post is the authority for the issue of postage stamps throughout the Commonwealth of Australia and its external territories.

The following tables give details of Australia Post's financial results, services and operations for 1983-84. Selected tables show figures for earlier periods.

**AUSTRALIAN POSTAL COMMISSION: PROFIT AND LOSS, 1979 TO 1984**  
(*\$'000*)

<i>Year ended 30 June—</i>	<i>1979</i>	<i>1980</i>	<i>1981</i>	<i>1982</i>	<i>1983</i>	<i>1984</i>
<b>Revenue—</b>						
Mail services . . . . .	528,978	582,200	668,676	767,843	870,719	971,676
Commission on agency services . . . . .	93,171	82,189	83,471	86,935	90,113	90,449
Postal money order service . . . . .	5,434	6,350	7,758	10,059	10,544	11,632
Other revenue . . . . .	18,907	19,442	22,147	22,591	28,058	21,993
<b>Total . . . . .</b>	<b>646,490</b>	<b>690,181</b>	<b>782,052</b>	<b>887,428</b>	<b>999,434</b>	<b>1,095,750</b>
<b>Expenditure—</b>						
Labour and related expenditure . . . . .	n.a.	n.a.	n.a.	n.a.	774,662	831,600
Carriage of mail by contractors . . . . .	n.a.	n.a.	n.a.	n.a.	83,665	92,984
Depreciation and interest . . . . .	n.a.	n.a.	n.a.	n.a.	15,056	15,299
Other expenditure . . . . .	n.a.	n.a.	n.a.	n.a.	117,257	131,716
<b>Total . . . . .</b>	<b>623,901</b>	<b>678,495</b>	<b>794,795</b>	<b>(a) 906,650</b>	<b>990,640</b>	<b>1,071,599</b>

(a) Includes an abnormal adjustment to implement new depreciating accounting arrangements.

**AUSTRALIAN POSTAL COMMISSION: PROFIT AND LOSS STATEMENT FOR  
THE YEAR ENDED 30 JUNE 1984**  
(*\$'000*)

<b>Revenue—</b>	
Mail services . . . . .	971,676
Commission on agency services . . . . .	90,449
Postal money order service . . . . .	11,632
Other revenue . . . . .	21,993
<b>Total . . . . .</b>	<b>1,095,750</b>
<b>Expenditure—</b>	
Labour and related expenditure . . . . .	831,600
Carriage of mails by contractors . . . . .	92,984
Accommodation . . . . .	41,364
Stores and supplies . . . . .	41,566
Depreciation . . . . .	9,886
Interest . . . . .	5,413
Other operating expenditure . . . . .	48,786
<b>Total . . . . .</b>	<b>1,071,599</b>
<b>Operating Profit . . . . .</b>	<b>24,151</b>
<b>Appropriations—</b>	
Accumulated loss brought forward . . . . .	(11,485)
Operating profit for the year . . . . .	24,151
Accumulated profit carried forward . . . . .	12,666

**AUSTRALIAN POSTAL COMMISSION: SUMMARY OF TRANSACTIONS  
AFFECTING FIXED ASSETS, 1983-84**

(\$'000)

<i>Class of assets</i>	<i>Balance at 1 July 1983</i>	<i>Additions in the year</i>	<i>Asset expenditure written out</i>	<i>Balance at 30 June 1984 (a)</i>
Land . . . . .	38,915	2,442	129	41,228
Buildings . . . . .	260,336	25,858	1,676	284,518
Motor vehicles . . . . .	20,516	6,168	2,829	23,855
Plant and Equipment . . . . .	43,400	15,941	647	58,694
<i>Total of fixed assets</i> . . . . .	<i>363,167</i>	<i>50,409</i>	<i>5,281</i>	<i>408,295</i>
<i>Less accumulated depreciation</i> . . . . .	<i>70,289</i>	<i>—</i>	<i>—</i>	<i>77,087</i>
<b>Net book value of fixed assets</b> . . . . .	<b>292,878</b>	<b>—</b>	<b>—</b>	<b>331,208</b>

(a) At cost.

**AUSTRALIAN POSTAL COMMISSION: ANALYSIS OF TRANSACTIONS  
AFFECTING ACCUMULATED DEPRECIATION, 1983-84**

(\$'000)

<i>Class of asset</i>	<i>Balance at 1 July 1983</i>	<i>Depreciation provided for in 1983-84</i>	<i>Accumulated depreciation written out</i>	<i>Balance at 30 June 1984</i>
Buildings . . . . .	46,508	4,513	803	50,218
Motor vehicles . . . . .	9,108	2,625	1,900	9,833
Plant and Equipment . . . . .	14,673	2,748	385	17,036
<b>Accumulated depreciation</b> . . . . .	<b>70,289</b>	<b>9,886</b>	<b>3,088</b>	<b>77,087</b>

**AUSTRALIAN POSTAL COMMISSION: PERSONS ENGAGED IN PROVIDING POSTAL SERVICES AT  
30 JUNE 1983 AND 1984**

	<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. 1984</i>	<i>Aust. 1983</i>
Official staff (a)—									
Full-time Permanent . . . . .	641	11,651	8,057	4,130	2,631	2,304	664	30,078	29,290
Full-time Temporary . . . . .	11	1,540	857	214	78	122	53	2,875	3,293
Part-time . . . . .	1	1,154	535	311	315	296	88	2,700	2,626
Other staff (b) . . . . .	—	2,995	1,836	1,683	846	678	379	8,417	8,488
<b>Total</b> . . . . .	<b>653</b>	<b>17,340</b>	<b>11,285</b>	<b>6,338</b>	<b>3,870</b>	<b>3,400</b>	<b>1,184</b>	<b>44,070</b>	<b>43,697</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 1983 AND 1984**

	<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. 1984</i>	<i>Aust. 1983</i>
Contract road services . . . . .	1,552	748	1,085	267	403	188	4,243	4,097
Households receiving mail . . . . .	2,017,499	1,419,756	903,537	522,435	478,420	146,573	5,488,220	5,255,674
Businesses receiving mail . . . . .	191,091	130,578	90,817	47,684	46,222	12,940	519,322	485,568
Post Offices—								
Official—								
At 1 July 1983 . . . . .	504	331	210	151	158	41	1,395	1,412
At 30 June 1984 . . . . .	499	333	211	148	156	41	1,388	1,395
Non-official—								
At 1 July 1983 . . . . .	1,086	882	544	446	295	195	3,448	3,494
At 30 June 1984 . . . . .	1,072	877	538	443	280	192	3,402	3,448
<b>Total post offices</b> . . . . .	<b>1,571</b>	<b>1,210</b>	<b>749</b>	<b>591</b>	<b>436</b>	<b>233</b>	<b>4,790</b>	<b>4,843</b>

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

<i>Year ended 30 June</i>	<i>Posted for delivery within Australia</i>	<i>Posted for places abroad</i>	<i>Received from abroad</i>	<i>Total postal articles handled</i>
1979 . . . . .	2,267,596	87,757	149,278	2,504,631
1980 . . . . .	2,379,953	94,826	156,573	2,631,352
1981 . . . . .	2,503,450	107,798	155,642	2,766,890
1982 . . . . .	2,606,124	105,154	165,276	2,876,554
1983 . . . . .	2,669,363	111,050	163,575	2,943,988
1984 . . . . .	2,764,113	106,585	164,362	3,035,060

**AUSTRALIAN POSTAL COMMISSION: ORDINARY POSTAL ARTICLES(a)**  
(<sup>'000</sup>)

<i>Year ended 30 June</i>	<i>Standard articles</i>				<i>Non-standard articles</i>			
	<i>Posted for delivery within Australia</i>	<i>Posted for places abroad</i>	<i>Received from abroad</i>	<i>Total articles</i>	<i>Posted for delivery within Australia</i>	<i>Posted for places abroad</i>	<i>Received from abroad</i>	<i>Total articles</i>
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
1984 . . . . .	2,376,733	89,544	122,084	2,588,361	355,599	14,356	37,395	407,350

**STATES—YEAR ENDED 30 JUNE 1984**

New South Wales (incl. A.C.T.) . . . . .	966,059	32,574	57,574	1,056,207	145,145	7,302	14,274	166,721
Victoria . . . . .	622,338	30,585	44,586	697,509	110,860	3,946	14,759	129,565
Queensland . . . . .	347,049	8,187	6,316	361,552	47,482	1,031	4,773	53,286
South Australia (incl. N.T.) . . . . .	196,103	8,494	4,721	209,318	23,588	782	1,075	25,445
Western Australia . . . . .	195,006	9,213	8,043	212,262	22,113	1,247	2,255	25,615
Tasmania . . . . .	50,175	491	844	51,513	6,411	48	259	6,718

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

**AUSTRALIAN POSTAL COMMISSION: REGISTERED ARTICLES(a) AND PARCELS**  
(<sup>'000</sup>)

<i>Year ended 30 June</i>	<i>Registered articles</i>				<i>Parcels</i>			
	<i>Posted for delivery in Australia</i>	<i>Posted for places abroad</i>	<i>Received from abroad</i>	<i>Total articles</i>	<i>Posted for delivery in Australia</i>	<i>Posted for places abroad</i>	<i>Received from abroad</i>	<i>Total articles</i>
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
1984 . . . . .	2,801	1,301	2,689	6,789	28,980	1,384	2,196	32,560

**STATES—YEAR ENDED 30 JUNE 1984**

New South Wales . . . . .	957	673	1,706	3,336	11,603	570	986	13,159
Victoria . . . . .	687	418	816	1,921	7,963	454	804	9,220
Queensland . . . . .	499	66	40	605	4,536	127	159	4,822
South Australia . . . . .	295	65	19	379	2,182	89	82	2,353
Western Australia . . . . .	257	77	106	440	2,156	135	142	2,433
Tasmania . . . . .	106	2	-	108	541	9	23	573

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

## TRANSPORT AND COMMUNICATION

**AUSTRALIAN POSTAL COMMISSION: SPECIAL SERVICES:  
ARTICLES HANDLED  
(000)**

<i>Year ended 30 June</i>	<i>Certified mail</i>	<i>Messenger delivery</i>	<i>Priority paid mail</i>
1982 . . . . .	5,897	1,434	2,793
1983 . . . . .	6,178	1,459	2,711
1984 . . . . .	6,064	1,329	6,760

## STATES—YEAR ENDED 30 JUNE 1984

New South Wales . . . . .	2,250	1,038	4,142
Victoria . . . . .	1,991	163	1,369
Queensland . . . . .	993	39	627
South Australia . . . . .	606	43	290
Western Australia . . . . .	500	41	247
Tasmania . . . . .	264	5	85

**Telecommunications services within Australia**

The Australian Telecommunications Commission (Telecom Australia) commenced operation 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 and expenses situation for the latest available three years of the Commission's operations.

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

<i>Year ended 30 June—</i>	<i>1982</i>	<i>1983</i>	<i>1984</i>
Telephone rentals . . . . .	833,201	1,001,212	1,165,912
Telephone calls . . . . .	1,761,610	2,011,546	2,328,977
Telephone connections and rearrangements . . . . .	142,727	157,750	426,112
Telegrams . . . . .	30,165	28,998	27,424
Telex rentals . . . . .	40,020	56,748	59,443
Telex calls . . . . .	32,488	34,556	35,012
Other earnings(a) . . . . .	244,166	345,038	177,851
<b>Total . . . . .</b>	<b>3,084,377</b>	<b>3,635,848</b>	<b>4,220,731</b>

(a) Main items included in this classification are: advertising in Yellow Pages directories; sales of customer equipment; telephone installation charges; and connection fees.

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

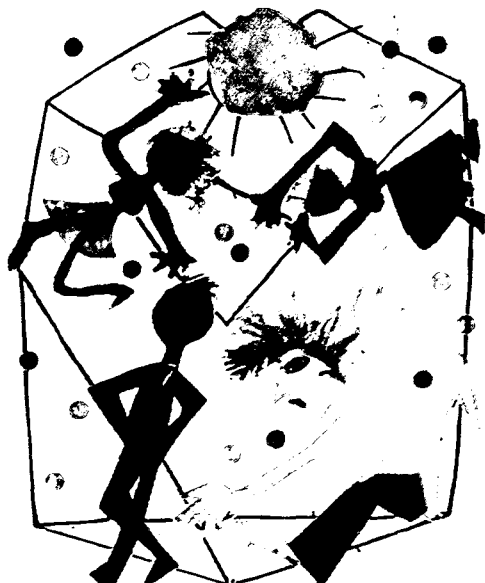
<i>Year ended 30 June—</i>	<i>1982</i>	<i>1983</i>	<i>1984</i>
Installation and maintenance of customer services . . . . .	n.a.	444,796	722,927
Maintenance of network plant . . . . .	n.a.	414,570	476,807
Marketing and operations . . . . .	n.a.	728,867	823,531
General and administrative . . . . .	238,097	261,554	281,660
Accommodation . . . . .	128,527	155,369	174,258
Depreciation . . . . .	577,216	711,853	570,829
Interest . . . . .	518,187	656,172	861,937
<b>Total . . . . .</b>	<b>2,809,260</b>	<b>3,373,181</b>	<b>3,911,949</b>

# Centenary of District Nursing Services 1985



AUSTRALIA

AUSTRALIA 30c



Commemorative stamps issued in 1985

*Australia Post*

Special articles on 'District Nursing in Australia' and the 'International Year of Youth' are featured in Chapters 10 and 12 of this Year Book.

International Youth Year 1985

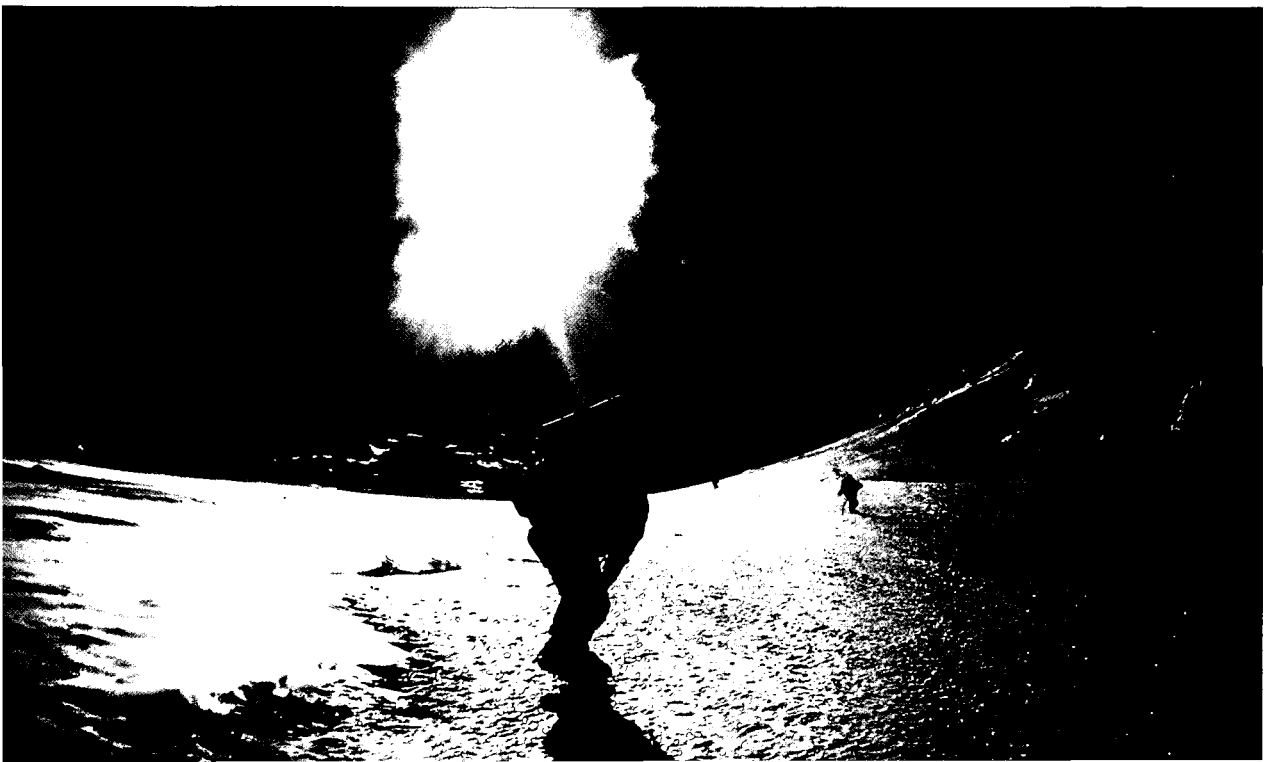


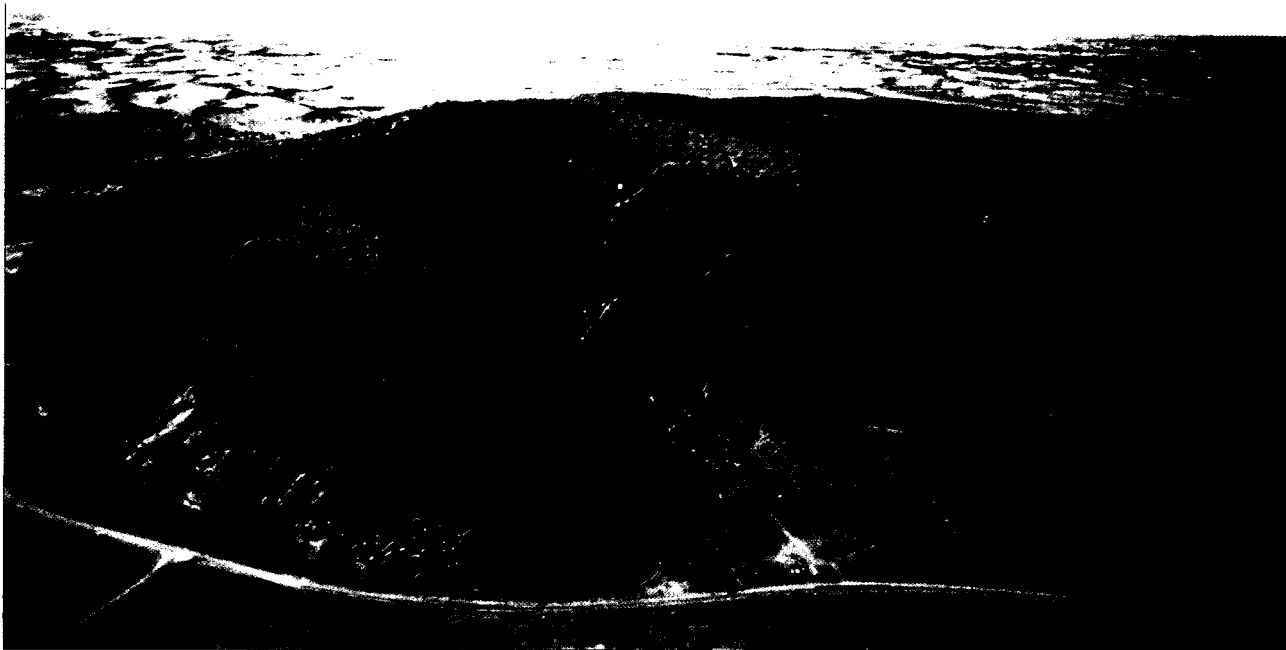
Members of the first all Australian expedition to conquer Mt. Everest in October 1984, shown here on the ridge above Advance Base Camp looking across Rongbuk Glacier.

*Tim Macartney-Snape*

Expedition team members photographed in the Great Couloir, during their ascent of Everest.

*Tim Macartney-Snape*





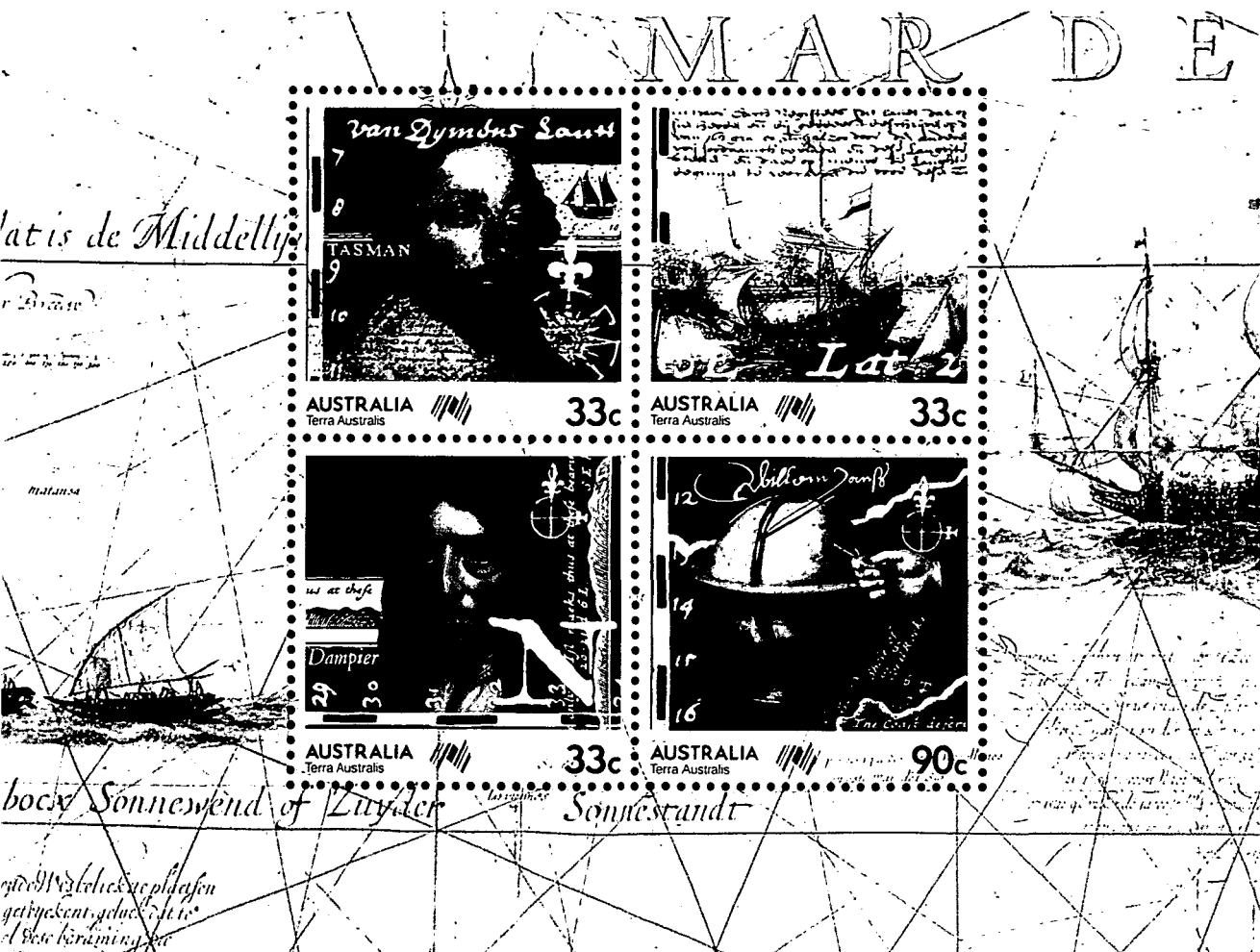
Ayers Rock, Uluru National Park, is a well known feature of the Australian landscape. The number of tourists to visit the Park in 1983-84 was estimated at 110,000—See chapter 26 for special article on 'Tourism in Australia'.

*Australian Information Service*

'Sunrise' taken from a cave at the base of Ayers Rock.

*Australian Information Service*





The first miniature sheet issued by Australia Post for the Australian Bicentennial Collection incorporates the four 'Terra Australis Navigators' stamps.

*Australia Post*

The poster commissioned in honour of the National Film and Sound Archive opening in October 1984 features a collection of memorabilia which reflect the history of Australian film, television and recorded sound.

*National Film & Sound Archive*





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 1984

	<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>
Ordinary exchange services—							
Automatic . . . . .	1,998,297	1,482,666	788,451	516,636	466,269	139,157	5,391,476
Manual . . . . .	13,759	—	6,063	2,791	237	—	22,850
<b>Total</b> . . . . .	<b>2,012,056</b>	<b>1,482,666</b>	<b>794,514</b>	<b>519,427</b>	<b>466,506</b>	<b>139,157</b>	<b>5,414,326</b>
Party line services—							
Automatic . . . . .	359	—	392	16	50	—	817
Manual . . . . .	1,147	—	896	185	12	—	2,240
<b>Total</b> . . . . .	<b>1,506</b>	<b>—</b>	<b>1,288</b>	<b>201</b>	<b>62</b>	<b>—</b>	<b>3,057</b>
Private branch exchange services—							
Automatic . . . . .	162,306	103,938	53,355	35,554	35,706	11,051	401,910
Manual . . . . .	380	—	130	53	14	—	577
<b>Total</b> . . . . .	<b>162,686</b>	<b>103,938</b>	<b>53,485</b>	<b>35,607</b>	<b>35,720</b>	<b>11,051</b>	<b>402,487</b>
Public telephones—							
Automatic . . . . .	11,058	6,487	5,406	3,086	2,979	1,111	30,127
Manual . . . . .	305	—	189	59	44	—	597
<b>Total</b> . . . . .	<b>11,363</b>	<b>6,487</b>	<b>5,595</b>	<b>3,145</b>	<b>3,023</b>	<b>1,111</b>	<b>30,724</b>
Total all services—							
Business automatic . . . . .	555,077	413,590	227,772	134,101	138,085	37,873	1,506,498
Business manual . . . . .	6,642	—	3,786	1,500	215	—	12,143
Non-business automatic . . . . .	1,616,943	1,179,501	619,834	421,191	366,919	113,446	4,317,834
Non-business manual . . . . .	8,949	—	3,490	1,588	92	—	14,119
<b>Total Services</b> . . . . .	<b>2,187,611</b>	<b>1,593,091</b>	<b>854,882</b>	<b>558,380</b>	<b>505,311</b>	<b>151,319</b>	<b>5,850,594</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>
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
1984 . . . . .	3,069,260	2,357,539	1,169,522	729,228	771,795	231,370	8,328,714
Number per 100 population at 30 June	54.4	57.9	46.7	52.7	51.7	52.9	53.6

## LOCAL AND TRUNK LINE TELEPHONE CALLS

<i>Year ended 30 June—</i>	<i>1982</i>	<i>1983</i>	<i>1984</i>
Effective paid local calls . . . . .	5,451,452,000	5,596,916,000	6,174,595,000
Local calls per service . . . . .	1,044	1,021	1,077
Trunk line calls . . . . .	785,466,000	837,171,000	933,621,000
Trunk lines calls per service . . . . .	150	153	163
<b>Total calls</b> . . . . .	<b>6,236,918,000</b>	<b>6,434,087,000</b>	<b>7,108,216,000</b>

## DATEL SERVICES(a)—DATA MODEMS IN OPERATION

<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>
1982 . . . . .	24,116	15,070	6,624	4,076	4,635	1,675	56,196
1983 . . . . .	29,420	18,913	8,716	5,390	5,601	2,151	70,191
1984 . . . . .	34,867	22,570	10,516	6,581	6,318	2,397	83,249

(a) A Datel service is a combination of a particular type of circuit (either switched network or private line) plus the necessary Modulator/Demodulator (Modem) unit to provide data transmission facilities for a specified transmission rate.

Subscriber Trunk Dialling (STD) facilities were introduced during the year 1961–62. For the year ended at 30 June 1984, 96.0 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 in the following table.

TELEGRAM TRAFFIC

<i>Year ended 30 June—</i>	<i>1982</i>	<i>1983</i>	<i>1984</i>
Ordinary . . . . .	3,808,525	3,525,243	3,201,625
Urgent . . . . .	133,758	98,523	99,019
Meteorological . . . . .	315,753	313,074	258,589
Service . . . . .	200,580	113,900	109,674
<b>Total telegrams . . . . .</b>	<b>4,458,616</b>	<b>4,050,740</b>	<b>3,668,907</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>
1982 . . . . .	37,802	44,209,000
1983 . . . . .	40,810	45,492,000
1984 . . . . .	42,186	46,725,000

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. Other 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), MINERVA (an international electronic messaging system) and OTC NET (an international corporate voice/data network using private leased circuits).

### 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 telecommunications organisations such as 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. A third International Gateway terminal is being established at Scoresby, near Melbourne, which will become operational in 1987.

The Commission also owns and operates cable stations at Sydney, Cairns (Qld), Guam in the Mariana Islands and at Norfolk Island; satellite earth stations at Carnarvon (W.A.), Ceduna (S.A.), Healesville (Vic.) and Moree (N.S.W.); international radio stations at Doonside and Bringelly (N.S.W.) and at Gnangara (W.A.); and fourteen coast radio stations at points around the Australian coast for communicating with ships at sea. A new cable station for the Australia-Indonesia-Singapore (A-I-S) cable system at Gnangara, Perth, will be brought into service in 1986.

#### **Submarine cables**

OTC is a part owner of the following submarine cables (the year in which they opened for service is in brackets): COMPAC, Auckland-Suva-Hawaii (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 IOCOM, Penang-Madras (1981); ASEAN M-S-T, Malaysia-Singapore-Thailand (1983); and ANZCAN, Sydney-Norfolk Island-Auckland-Suva-Hawaii-Vancouver (1984).

In 1984 the Government gave approval for OTC to participate in the construction of three new Indian Ocean cable systems: A-I-S, Perth-Jakarta-Singapore; SIN-HON-TAI, Singapore-Hong Kong-Taipei; and SEA-ME-WE, Singapore-Middle East-Europe. OTC's investment in the three systems, which will enter service in 1985-86, is approximately \$135 million.

#### **Satellites**

OTC is the sixth 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 approximately two-thirds of Australia's international telecommunications and, through OTC, provide capacity through which the remote area television service is provided by the ABC.

#### **1983-84 Statistics**

As at 31 March 1984, OTC staff totalled 2,407; revenue for the previous 12 months was \$339 million and profit before tax was \$63.9 million. Telephone service, which is available to 233 overseas destinations, provided about 70 per cent of revenue, telex about 14 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 approximately 159 destinations. Approximately 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**

The long-haul international telex service tariff was reduced but some increases were necessary in charges for minor services; these changes operated from 1 February 1984. A new scale of tariffs for certain enhancements to the international telex service, resulting from the availability of store and forward facilities, was introduced on 1 August 1984.

#### **Detailed information on OTC**

The Commission reports on its operations to Parliament through its Minister about September 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 1983 and 1984.

## INTERNATIONAL TELECOMMUNICATION SERVICES: YEARS ENDED 31 MARCH 1983 AND 1984

Service		Transmissions					
		From Australia		To Australia		Total	
		1982-83	1983-84	1982-83	1983-84	1982-83	1983-84
Telephone . . . . .	'000 paid minutes	132,375	153,350	97,600	113,325	229,975	226,675
Telex . . . . .	'000 paid minutes	26,325	28,000	26,275	28,725	52,600	56,725
Television programs . . . . .	paid minutes	25,850	12,591	85,525	53,880	(a) 120,782	(b) 69,278
Telegraph services . . . . .	'000 words	36,141	25,990	25,947	18,925	62,088	44,915

(a) Includes 9,407 paid minutes of television programs distributed within Australia by OTC.  
paid minutes of television programs distributed within Australia by OTC.

(b) Includes 2,807

**Coastal radio service**

During the year ended 31 March 1984 the Coastal Radio Service handled 8,775,000 paid words to ships and 4,570,000 words from ships. Ship calls over the radiotelephone service amounted to 578,000 paid minutes and the radiotelex service handled 131,000 paid minutes. Usage of radiotelephone and radiotelex leased services amounted to 4,996 and 3,209 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 468.

**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 Corporation (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 1984 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 130 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 1984, 50 public radio stations were

broadcasting programs ranging from fine music to ethnic languages and programs produced by and directed towards specific communities. 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 1984 the National Broadcasting Service comprised 144 transmitting stations, of which ninety-five were medium frequency, thirty-three frequency modulation and sixteen high frequency (five internal and eleven 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 1984 eighty-three 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 1983–84 were as follows: entertainment 51.2 per cent; news 8.3 per cent; sporting 13.4

per cent; spoken word 14.4 per cent; parliament 10.2 per cent; religious 1.2 per cent; rural 0.7 per cent; and presentation 0.5 per cent. By contrast, the ABC's Radio 2 station's programming was: classical music 53.0 per cent; light music 0.4 per cent; entertainment 3.4 per cent; drama and features 6.0 per cent; education 5.6 per cent; spoken word 14.1 per cent; religious 3.6 per cent; news 8.4 per cent; rural 3.6 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 three 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 Radio Australia. 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 sixty-seven 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 (208,095 in 1982-83 and 181,708 in 1983-84), Radio Australia broadcasts in nine languages—English, Indonesian, Japanese, Neo-Melanesian, Thai, French, Standard Chinese, Cantonese and Vietnamese.

BROADCASTING STATIONS: 30 JUNE 1984

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 . . . . .	—	2	2	—	1	—	—	—	5
Frequency modulation . . . . .	7	7	6	3	6	2	1	1	33
Overseas—									
Short wave (Radio Australia) . . . . .	—	8	—	—	3	—	—	—	11
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 1984, 276 stations were operating—84 transmitters and 192 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 1984 were as follows: drama 19.62 per cent; public interest 13.73 per cent; sporting 13.11 per cent; news 5.99 per cent; variety and acts 4.64 per cent; education 26.52 per cent; musical performance 1.51 per cent; religious 1.03 per cent; special arts and aesthetics 7.52 per cent; and presentation 6.12 per cent. The average weekly transmission time for the 276 national television transmitters was ninety-five hours during the year ended 30 June 1984.

During the year ended 30 June 1984, three new national translator channels went into operation—one in New South Wales, one in Victoria, and one in Queensland.

### 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 1984

Type of station and location	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Total
National—									
Metropolitan television . . .	1	1	1	1	1	1	1	1	8
Country television . . . . .	14	9	32	5	15	2	3	—	80
Translator . . . . .	38	13	53	15	41	15	12	1	188
<i>Total, National</i> . . . . .	<i>53</i>	<i>23</i>	<i>86</i>	<i>21</i>	<i>57</i>	<i>18</i>	<i>16</i>	<i>2</i>	<i>276</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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 Motor Vehicle Registrations, Australia (monthly) (9303.0)  
 Motor Vehicle Registrations, Australia (9304.0)  
 Road Traffic Accidents Involving Fatalities, Australia (monthly) (9401.0)  
 Road Traffic Accidents Involving Casualties (Admissions to hospitals), Australia (quarterly) (9405.0)

## 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.