

CHAPTER 20

TRANSPORT AND COMMUNICATION

The statistics in this chapter relate in the main to the year 1976-77, with comparisons restricted to a few recent years. The chapter contains information on shipping; railways; tram, bus and ferry services; motor vehicles; road traffic accidents; roads and bridges; air transport; postal services; internal and overseas telecommunication services; radio communication stations; broadcasting and television; and government bodies concerned with these activities.

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

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 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, is comprised of the Commonwealth Ministers for Transport, Capital Territory, Northern Territory, and each State Minister with transport responsibilities. The New Zealand Minister of Transport, Civil Aviation and Railways, and the Northern Territory Cabinet Member for Transport and Industry attend as observers.

The council primarily considers policy matters relating to transport operations, co-ordination and developments. Its functions are: to initiate discussion and report to the respective Governments as necessary on any matter raised by the Council or any State or Commonwealth Government Authority; generally to exercise its purely advisory functions and to report as necessary to the respective Governments concerned on any matter which will tend to promote a better co-ordination of transport development, while at the same time encouraging modernisation and innovation to meet changing needs; and to assist in maintaining continuous and comprehensive research in relation to transport development in Australia and abroad, such research to be carried out for the benefit of Australian Transport authorities and agencies.

The regulation of and the executive responsibility for transport is shared between the Commonwealth and State Governments. ATAC is the meeting ground at a ministerial level and provides an effective means of inviting discussion and reaching uniformity of approach towards transport administrative procedures and policy. It also provides a means for reviewing and discussing national solutions of transport problems and the rectification of transport deficiencies generally. The Council has been active in: the establishment of special committees and conferences to examine and report on specific problems such as road safety, motor vehicle standards and safety features, motor vehicle emissions, transport economic research, and highway planning; the exchange of views and the formulation of common policies on a wide range of transport matters; the effecting, at ministerial level, of Commonwealth-State and interstate co-operation on such matters as urban transport arrangements and funding, provision of funds for roads, construction and operation of interstate railway links, collecting of fines and fees interstate, policing of regulations, etc., and the publication of comprehensive surveys of Australian transport.

The Bureau of Transport Economics

This Bureau, which from June 1977 incorporated the functions of the former Commonwealth Bureau of Roads, undertakes research and analysis to assist the Commonwealth Government in the assessment, formulation and development of policy aimed at the efficient allocation of resources in the transport field. This work covers all transport activities and includes the analysis of funding for road investment as well as matters relating to the reduction of transport costs and the rational planning of future transport facilities. For administrative purposes the Bureau is attached to the Department of Transport, but it is responsible to the Minister for Transport for the conduct of its studies and investigations.

SHIPPING

Control of shipping

Commonwealth Government navigation and shipping legislation

For an outline of the development and scope of Commonwealth Government legislation, see Year Book No. 55, pages 366-7.

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

Navigation Act 1912 as Amended

One of the largest Commonwealth Acts, the *Navigation Act*, with forty-four sets of Regulations made under it, provides for various regulatory controls over ships and their crews, passengers and cargoes, mainly in connection with the ensuring of the safety of the ship and the preservation of life at sea. Substantial penalties are provided for serious offences. In particular, it gives effect to the important international conventions produced under the aegis of the Inter-Government Maritime Consultative Organisation (IMCO) dealing with safety of life at sea, ships' load lines and prevention of collisions.

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

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

There are requirements for the manning of ships, designed to ensure that sufficient officers and men are carried for safety and operational purposes. Manning disputes are dealt with by a statutory Committee 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 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.

Coasting trade. Under the coastal trade provisions of the *Navigation Act*, the Australian coastal trade is reserved for licensed vessels, i.e. those which comply with Australian standards of manning, accommodation, and award conditions and wages. 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 these conditions and to operate in the Australian coastal trade subject to approval being given for the importation of the vessel where necessary. Provision exists

for unlicensed vessels to operate in the coast 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.

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

The last amending *Navigation Act* was passed in 1972. It was mainly for the purpose of inserting provisions dealing with the tonnage measurements of ships.

Australian Shipping Commission

The Commission was established by the *Australian Coastal Shipping Commission Act 1956*. The Commission's role has been to establish, maintain and operate interstate, overseas and territorial shipping services. The Commission's title was changed in October 1974 to the Australian Shipping Commission to reflect the increasing importance of its overseas trading activities.

As at 30 June 1978 the Commission, operating as the Australian National Line, owned and/or operated a fleet of thirty-five vessels. The fleet includes eleven vessels engaged in overseas trading: five vehicle deck cargo ships totalling 104,712 tonnes deadweight; three cellular container ships totalling 95,951 tonnes deadweight; two ore-bulk carriers totalling 261,946 tonnes deadweight; and one hybrid container vessel of 16,477 tonnes deadweight. The Line had yet to commission two overseas built bulk carriers of 139,507 tonnes deadweight and 122,734 tonnes deadweight respectively.

The coastal fleet of twenty two vessels includes one vehicle deck passenger ship, the *Empress of Australia* of 2,736 tonnes deadweight; seven vehicle deck cargo ships totalling 48,410 tonnes deadweight; one container bulkship of 12,140 tonnes deadweight in the Darwin trade; two bulk carriers in the 100,000 tonnes deadweight class; four bulk carriers in the 50-100,000 tonnes deadweight class; six other bulk carriers each less than 50,000 tonnes deadweight totalling 86,478 tonnes deadweight; and one grain carrier of 2,054 tonnes deadweight.

Two Australian built 27,500 tonnes deadweight bulk carriers and two 16,557 tonnes deadweight bulk carriers built in Japan will be delivered to the Line during the latter half of 1978.

The Line operates specialised terminals at Adelaide, Melbourne, Burnie, Devonport, Bell Bay, Sydney, Port Kembla, Brisbane, Mackay, Townsville, Cairns and Darwin.

The *Empress of Australia* carried 110,140 passengers between Melbourne and Devonport together with 30,701 vehicles during the year ending 30 June 1978.

Australian Shipbuilding Board

Advice to the Minister on the shipbuilding industry, including recommendations on bounty for each particular shipbuilding proposal, is provided by the Australian Shipbuilding Board. This Board has a membership of six including a representative from each of the Department of Defence (Navy Office) and the trade union movement.

To 31 December 1977, 355 vessels valued at approximately \$788 million had been completed by Australian shipyards. Seventy-seven of those vessels (ranging from customs launches to survey and research vessels, landing craft and lighthouse supply vessels) were built for the Commonwealth Government. The remaining 278 were built under a Commonwealth subsidy scheme for other ship owners, including the Australian National Line.

Three major Australian shipyards are building merchant vessels—one in South Australia, and two in New South Wales; two other shipyards are engaged principally in naval shipbuilding—one in New South Wales and one in Victoria. There are numerous smaller yards building fishing vessels and other small craft and many builders of wooden commercial and pleasure boats.

Shipbuilding Assistance

The shipbuilding industry in Australia has been given Government assistance since the introduction of the shipbuilding subsidy scheme in 1947. The level of maximum subsidy has been determined by the Government on the basis of inquiries into the industry by the former Tariff Board, now the Industries Assistance Commission. These inquiries have been held in 1954, 1959, 1963, 1971 and 1976. The Commission, in 1978, has a reference under inquiry covering the construction of vessels under 6,000 tons gross.

Present policy is given effect by the *Ship Construction Bounty Act 1975*. Assistance is by way of a bounty at a fixed percentage dependent upon the size of the vessel and, for maximum bounty, the date upon which construction was commenced in the shipyard. This rate is applied to the lowest acceptable Australian tender received as a result of public calling of tenders with appropriate deductions applied for items ineligible for bounty. Under the policy Australian owners may seek approval to import ships when overseas prices are less than the bounty-paid Australian price.

Vessels eligible for the bounty are fishing vessels of 21 metres length and longer and other vessels of 150 gross construction tons and above. For the smaller vessels, bounty is at 25 per cent, rising at 2.5 per cent per 1,000 tons gross to the maximum which, in 1978, is 31 per cent. This diminishes to a long-term rate of 25 per cent for vessels commenced in 1981. The administration of the policy on shipbuilding assistance is the responsibility of the Minister for Industry and Commerce.

Importation of Ships

The control of imports forms an integral part of the Government's shipbuilding assistance arrangements. Under the Customs (Prohibited Imports) Regulations ships may only be imported into Australia with the written permission of the Minister for Transport. The Minister has issued a General Consent under these Regulations permitting certain small vessels to be imported without his specific written permission.

Australian Stevedoring Industry Authority

Following extensive consultations with parties directly involved in the Australian stevedoring industry, a National Stevedoring Industry Conference was established to consider the development of a framework within which parties directly involved in the industry could be given greater responsibility in the industry's affairs. In April 1977 a report of the National Stevedoring Industry Conference was presented and, as a consequence, legislation was developed to provide for: termination of the operation of the Australian Stevedoring Industry Authority; alternative means for dealing with industry funding arrangements; and measures designed to improve the operational and industrial relations aspects of the industry. Legislation was introduced into the Parliament during November 1977 and becomes operative from a date to be proclaimed.

An important part of the proposed new arrangements is the establishment of a Stevedoring Industry Consultative Council which would be under the chairmanship of a Government appointee and draw its membership from all major organisations concerned with stevedoring.

The legislation provides for the establishment of a federal co-ordinating committee comprising representatives of both the employers and the Waterside Workers' Federation to oversee the implementation and operation of arrangements agreed to in the National Stevedoring Industry Conference. In each port a Port Co-ordinating Committee is to be established to implement the arrangements at the local level.

Legislation will also provide for the establishment of the National Stevedoring Industry Finance Committee to oversee the disbursement of funds collected for employers by various statutory levies. The statutory provisions relating to the industry are contained in the *Stevedoring Industry Act (Termination) Act 1977*; the *Stevedoring Industry Charge (Termination) Act 1977*; the *Stevedoring Industry Finance Committee Act 1977*; the *Stevedoring Industries Levy Act 1977*; the *Stevedoring Industry Levy Collection Act 1977*; and the *Port Statistics Act 1977*.

Tasmanian Freight Equalisation Scheme

The Commission of Inquiry into Transport to and from Tasmania in its Report published in March 1976 found that because of Tasmania's physical separation from the mainland by sea, Tasmanian shippers suffer a cost 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 with those for moving similar commodities over comparable interstate mainland rail and road routes by subsidising freight transport charges for shipments by sea of those commodities between Tasmania and the mainland.

The northbound component applies to eligible goods of Tasmanian origin produced for use or sale on the mainland. Under the southbound component, however, only 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.

Assistance provided under the Scheme for northbound cargoes totalled \$16.4 million in 1976-77. In 1977-78, \$18.8 million was paid in respect of northbound cargoes and for southbound cargoes, for 1976-77 and 1977-78, a total of \$2.1 million. The Commonwealth Department of Transport is responsible for the administration of the Scheme.

Revised rates of assistance for northbound cargoes were introduced on 1 July 1978 following a review of freight costs by the Bureau of Transport Economics. The efficiency of the Scheme is to be reviewed not later than 1980.

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

The Overseas Cargo Shipping provisions of the Trade Practices Act are administered by the Minister for Transport.

The principal object of the Overseas Cargo Shipping provisions is the control of the operations of shipping conferences (associations into which shipowners have traditionally combined) and of individual shipowners in relation to the carriage of goods by sea from Australia to other countries. To achieve that object, the provisions are designed to facilitate negotiations between shipowners and The Australian Shippers' Council, an association designated under the Act by the Minister that represents the interests of shippers and producers of goods exported from Australia.

Regarding shipping conferences, the provisions require certain agreements of a specified character between shipowners operating in the outward trades from Australia to be filed with the Clerk of Shipping Agreements. A shipowner who is a party to such an agreement may be requested by the Minister to give him an undertaking to negotiate with the Council with regard to the arrangements for, and the terms and conditions that are applicable to, cargo shipping to which the agreement relates. Whether such a shipowner has failed so to negotiate, or whether the services provided pursuant to the agreement are adequate, efficient or economical, are the matters that may be referred by the Minister for enquiry and report by the Trade Practices Tribunal. Certain powers are vested in the Governor-General to disapprove the agreement after consideration of a report by the Tribunal to the Minister. A probable effect of such a disapproval would be to force a shipowner party to the agreement to carry on its business in the absence of any agreement with other shipowners. The Governor-General may, however, in his discretion, approve such a shipowner entering into another agreement.

Provisions similar to the provisions in respect of shipping conferences apply in respect of individual shipowners. In addition, an individual shipowner may, as a result of a declaration by the Governor-General, be prohibited from engaging in certain specified activities in carrying on his business, e.g. engaging in freight cutting with the object of substantially damaging the business of another shipowner.

The provisions also protect the rights of efficient Australian flag operators to participate to a reasonable extent in overseas cargo shipping.

Review of Australia's Overseas Cargo Shipping Legislation

On 17 March 1977 the Minister for Transport announced the establishment of a study group to review Australia's overseas cargo shipping legislation and report within six months.

The review covered the operation of Part X of the Trade Practices Act, possible future legislative arrangements and the role and long-term financing of the Australian Shippers' Council.

The recommendations of the report are being considered by the Government.

Maritime Industry Commission of Inquiry

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

Collection and presentation of statistics

Basic documents

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

Scope of the statistics

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

Period covered by the statistics

Monthly shipping statistics relate to vessels arriving at and departing from each port in a calendar month. Annual statistics are published on a financial year basis.

Statistics of vessels

Statistics of vessels are compiled in terms of registered net tonnages. Net tonnage is expressed in units of 100 cubic feet (i.e. 100 cu ft equals 1 ton) and represents the volume of enclosed space which can be utilised for cargo or passengers.

Statistics of vessel movements

Returns show the last or next port of call of a vessel according to whether an arrival or departure at a port is being reported. Each vessel is classified to either the overseas or the coastal fleets serving Australia. This information, supplemented by the voyage of the vessel indicated by ports it visits to load or discharge cargo, is the basis on which each vessel movement is allocated to one of the following classifications: overseas direct; overseas via other States; overseas via ports in the same State; interstate direct; interstate via ports in the same State; intrastate.

Cargo loaded or discharged

Returns for arrivals show cargo discharged, and for departures cargo loaded, in terms of tonnes or cubic metres, depending on the basis on which freight is charged.

Type of service

Overseas shipping cargo statistics are classified by type of service. Coastal shipping cargo statistics, on the other hand, combine all service types.

For overseas shipping, cargo shipped in liners is shown separately from cargo shipped in tramps, bulkships and tankers. A liner is a vessel which, on the voyage on which cargo is loaded or discharged at an Australian port, is operated to provide services on a specified route on a relatively regular basis.

Statistics of cargo shipped in liner services do not necessarily provide a measure of cargo carried by ships operating under shipping conference arrangements. For example, liner services may be provided by shipping companies which are not parties to conference agreements. Cargo may also be shipped under shipping conference conditions in vessels operating on a voyage charter basis for specific cargo and, in the statistics, such cargo is classified as cargo shipped in tramp vessels.

Country of loading or discharge of overseas cargo

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

Transshipments of cargo within Australia

The State of loading or discharge shown in the statistics is the State in which cargo is loaded onto or discharged from, reporting vessels. Cargo loaded in a given State can therefore include cargo previously shipped interstate, while cargo discharged can include cargo which would subsequently be shipped interstate.

Units of measurement

Deadweight tonnage. A measure of the total mass (weight) of cargo, fuel, potable water, boiler feed water, ballast, stores, crew and their gear, etc. It is equal to loaded displacement tonnage less light displacement tonnage.

Gross tonnage. A measure of the enclosed internal volume of a ship and its superstructure, with certain spaces exempted. It is also an indicator of the total volumetric size of a ship.

Net tonnage. A volumetric measure consisting of the gross tonnage less the volume of non-earning spaces, e.g. master's cabin, crew accommodation, wheelhouse, galley, etc., and an allowance for machinery spaces. Volumetric measurement of ships has not yet been converted to metric.

Overseas shipping

The following table shows the number of vessels entered and cleared direct from and to overseas countries, and the aggregate net tonnage involved, for the years 1971-72 to 1976-77.

OVERSEAS SHIPPING(a): VESSELS ENTERED AND CLEARED

		1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
Entered	number	5,439	5,647	5,975	6,230	5,772	5,830
	'000 net tons	53,144	62,628	72,042	80,313	75,002	79,666
Cleared	number	5,447	5,631	5,909	6,254	5,824	5,824
	'000 net tons	53,491	62,031	71,462	80,305	75,399	79,503

(a) Excludes vessels of 200 net tons and under.

Particulars of the total overseas movement of shipping for each year from 1822 to 1920-21 were published in Year Book No. 15, page 507 and those for each year from 1921-22 to 1950-51 were published in Year Book No. 40, page 97. Those for each year from 1948-49 are shown in the Statistical Summary of this Year Book.

The following table shows, for each State and the Northern Territory, the number of vessels entered and cleared direct from and to overseas countries, and the aggregate net tonnage involved.

OVERSEAS SHIPPING(a): VESSELS ENTERED AND CLEARED, STATES, 1976-77

		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Entered	number	1,457	658	1,138	227	1,989	157	204	5,830
	'000 net tons	15,789	5,260	14,807	1,978	37,108	2,506	2,217	79,666
Cleared	number	1,203	558	1,317	300	2,135	128	183	5,824
	'000 net tons	13,844	4,352	16,463	2,202	38,105	2,313	2,223	79,503

(a) Excludes vessels of 200 net tons and under.

The following table shows particulars of overseas shipping which entered Australian ports according to country of registration of vessels.

OVERSEAS SHIPPING: VESSELS ENTERED DIRECT, BY COUNTRY OF REGISTRATION, AUSTRALIA(a)
(^{'000} net tons)

Country of registration of vessels	1974-75	1975-76	1976-77	Country of registration of vessels	1974-75	1975-76	1976-77
Australia	398	512	1,514	Panama	3,189	3,358	4,138
China—excl. Taiwan Province	752	813	870	Singapore, Republic of	991	1,229	1,282
—Taiwan Province only	456	490	695	Sweden	1,506	1,053	875
Denmark	1,022	374	725	United Kingdom	12,263	9,938	8,823
Germany, Federal Republic of	2,575	1,932	1,836	United States of America	860	623	620
Greece	4,248	4,156	4,186	U.S.S.R.	795	1,369	1,114
Hong Kong	345	922	984	Other countries	4,480	4,311	4,039
India	1,548	1,034	2,285	All countries—			
Italy	978	722	629	In cargo	19,764	18,089	19,118
Japan	22,904	24,080	26,049	Proportion of total %	24.6	24.1	24.0
Liberia	11,876	12,129	13,795	In ballast	60,549	56,913	60,548
Netherlands	1,218	798	540	Proportion of total %	75.4	75.9	76.0
Norway	7,909	5,159	4,667	Grand Total	80,313	75,002	79,666

(a) Excludes vessels of 200 net tons and under.

Australian registered tonnage which entered Australian ports from overseas during the year 1976-77 represented 1.90 per cent of the total tonnage entered.

Interstate shipping

Interstate movement

Interstate direct. The following table shows the number of coastal vessels entered and the net tonnage recorded into each State and the Northern Territory from any other State during 1976-77. Total interstate movements by coastal and overseas vessels are shown in *Total interstate movements* below.

INTERSTATE MOVEMENT: COASTAL VESSELS ENTERED INTERSTATE DIRECT 1976-77(a)

		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Number of vessels		683	1,238	292	375	163	1,084	71	3,906
Net tonnage	'000 tons	5,502	6,500	2,374	1,942	2,315	3,218	219	22,070

(a) Excludes vessels of 200 net tons and under.

Overseas via States. The figures in the following table show the number and aggregate net tonnage of overseas vessels entered and cleared which, having arrived at an Australian port direct from an overseas port, continued their voyages from/to overseas countries via other Australian States.

INTERSTATE MOVEMENT: OVERSEAS VESSELS ENTERED AND CLEARED VIA OTHER AUSTRALIAN STATES, 1976-77(a)

		<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>Aust.</i>
Entered	number	1,205	1,321	697	486	430	351	45	4,535
	'000 net tons	9,267	9,149	4,936	2,994	3,939	1,535	401	32,220
Cleared	number	1,464	1,379	532	415	275	375	62	4,502
	'000 net tons	11,403	9,561	3,254	2,816	2,710	1,701	394	31,839

(a) Excludes vessels of 200 net tons and under.

Total interstate movements. The following table shows, for each State and the Northern Territory, the total number of vessels entered from and cleared for other States during the year 1976-77, together with the aggregate net tonnage. Total interstate movement includes details of vessels entered or cleared interstate direct, interstate via ports in the same State and overseas via other States.

INTERSTATE MOVEMENT: TOTAL VESSELS ENTERED AND CLEARED, STATES AND NORTHERN TERRITORY, 1976-77(a)

		<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>Aust.</i>
Entered	number	1,952	2,562	1,149	922	628	1,520	116	8,849
	'000 net tons	15,137	15,680	7,909	5,379	6,378	5,118	620	56,220
Cleared	number	2,200	2,649	964	800	492	1,513	138	8,756
	'000 net tons	16,936	16,479	6,048	4,803	5,191	5,065	640	55,162

(a) Excludes vessels of 200 net tons and under.

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 1977.

**AUSTRALIAN TRADING VESSELS OF 150 GROSS TONS OR MORE
30 JUNE 1977**

(Source: Department of Transport)

<i>Vessels</i>	<i>Number</i>	<i>Tonnes deadweight</i>	<i>Tons gross</i>
Interstate vessels—			
Australian owned registered	52	900,836	598,847
Australian owned and registered, engaged in Australian coastal trade	7	158,172	102,406
Overseas owned and registered on charter, engaged in Australian coastal trade	12	687,640	375,661
Total interstate fleet	71	1,746,648	1,076,914
Intrastate vessels	23	290,589	182,393
Total coastal trading vessels	94	2,037,237	1,259,307
Overseas trading vessels—			
Registered in Australia	15	765,162	478,505
Registered overseas	5	143,031	89,986
Total overseas trading vessels	20	908,193	568,491
Total Australian trading vessels	114	2,945,430	1,827,798

Harbour boards and trusts

For detailed information see the individual State Year Books.

Shipping at principal ports

The following table shows the total volume of shipping—overseas and coastal—entering the principal ports of Australia.

TOTAL SHIPPING: VESSELS ENTERED AT PRINCIPAL PORTS(a)

Port of entry	1974-75		1975-76		1976-77	
	Num- ber	Net tons	Num- ber	Net tons	Num- ber	Net tons
		'000		'000		'000
New South Wales—						
Sydney	2,925	16,481	2,409	15,584	2,249	16,125
Botany Bay	366	3,286	288	3,501	279	3,891
Newcastle	1,377	9,093	934	8,172	869	8,512
Port Kembla	804	7,401	734	7,473	693	7,151
Victoria—						
Melbourne	2,608	13,059	2,369	12,245	2,517	13,410
Geelong	420	2,936	371	2,794	337	2,741
Westernport	386	4,720	423	5,089	435	5,437
Queensland—						
Brisbane	1,246	8,573	1,219	8,519	1,229	8,720
Bundaberg	90	467	83	557	97	658
Cairns	176	696	149	748	147	767
Gladstone	429	7,005	388	6,206	404	6,675
Hay Point	159	4,459	150	4,416	162	5,292
Mackay	225	1,056	245	1,124	252	1,144
Rockhampton	80	299	97	354	67	244
Townsville	328	1,700	363	1,909	353	2,122
Weipa	285	5,337	232	4,277	240	4,576
South Australia—						
Adelaide	1,108	4,087	1,140	4,053	942	3,628
Port Lincoln	158	809	140	667	118	525
Port Pirie	146	863	157	976	133	831
Port Stanvac	68	1,238	97	1,605	96	1,639
Thevenard	100	430	66	295	63	278
Whyalla	311	2,369	283	2,060	204	1,558
Western Australia—						
Fremantle(b)	1,345	10,699	1,318	10,754	1,313	11,007
Albany	127	855	125	743	126	779
Bunbury	154	937	111	799	171	1,637
Geraldton	109	811	144	883	141	975
Yampi Sound	130	1,577	117	1,130	102	954
Port Hedland	639	15,749	561	13,066	478	12,146
Dampier	532	12,487	540	12,591	492	13,218
Port Walcott	173	4,716	171	4,538	143	5,053
Tasmania—						
Hobart	505	1,594	440	1,546	383	1,333
Burnie	344	1,398	366	1,569	366	1,688
Devonport	422	1,247	361	1,144	405	1,312
Launceston	413	2,314	386	2,211	421	2,651
Port Latta	40	716	32	692	38	734
Northern Territory—						
Darwin	134	670	148	678	135	623
Groote Island	96	700	106	770	96	731
Gove	129	1,852	97	1,491	106	1,608

(a) Excludes vessels of 200 net tons and under. (b) Includes Kwinana.

Shipping cargo

Overseas and interstate cargo

The following table shows a summary of overseas and interstate cargo discharged and loaded during the past six years.

CARGO DISCHARGED AND LOADED: AUSTRALIA

('000)

Year	Overseas cargo				Interstate cargo			
	Discharged		Loaded		Discharged		Loaded	
	Tonnes	Cubic metres	Tonnes	Cubic metres	Tonnes	Cubic metres	Tonnes	Cubic metres
1971-72	19,505	5,865	108,047	3,161	25,801	3,087	26,387	2,799
1972-73	20,167	6,084	132,362	3,555	27,364	3,136	28,006	2,927
1973-74	23,055	7,641	150,471	3,071	28,570	3,224	29,471	3,034
1974-75	21,893	8,029	164,866	2,926	27,864	3,199	28,454	3,143
1975-76	19,718	7,170	156,133	2,488	28,371	2,978	28,241	2,937
1976-77	20,554	7,775	164,899	2,219	28,762	2,179	28,477	1,999

The following table shows details of container and non-container cargo discharged and loaded at Australian ports during 1976-77.

OVERSEAS CONTAINER AND NON-CONTAINER CARGO DISCHARGED AND LOADED BY PORT,

1976-77

('000)

Port	Discharged				Loaded			
	Container		Non-container		Container		Non-container	
	Tonnes	Cubic metres	Tonnes	Cubic metres	Tonnes	Cubic metres	Tonnes	Cubic metres
New South Wales—								
Sydney	933	1,380	1,640	987	812	512	4,875	184
Newcastle	7	19	930	5	11	5	10,622	1
Total	940	1,399	2,570	992	823	517	15,497	185
Victoria—								
Melbourne	622	2,481	1,066	1,213	1,208	493	791	219
Geelong	—	—	1,137	1	—	—	1,576	3
Total	622	2,481	2,203	1,214	1,208	493	2,367	222
Queensland—								
Brisbane	78	308	840	431	363	42	1,724	82
Gladstone	—	—	716	—	—	—	8,067	2
Weipa	—	—	59	—	—	—	5,275	—
Total	78	308	1,615	431	363	42	15,066	84
South Australia—								
Adelaide	21	54	437	363	51	56	457	251
Total	21	54	437	363	51	56	457	251
Western Australia—								
Fremantle	35	198	4,753	252	164	44	5,838	95
Dampier	—	—	257	—	—	—	36,870	—
Port Hedland	—	—	71	2	—	—	27,441	—
Total	35	198	5,081	254	164	44	70,149	95
Tasmania—								
Hobart	2	—	120	12	6	—	143	—
Launceston	—	—	100	8	—	—	1,603	8
Total	2	—	220	20	6	—	1,746	8
Other Ports	12	—	6,719	61	61	13	56,941	210
Total all Ports	1,710	4,440	18,845	3,335	2,676	1,165	162,223	1,055

The following table shows details of overseas and interstate cargo discharged and loaded at principal Australian ports during 1976-77.

CARGO DISCHARGED AND LOADED AT PRINCIPAL PORTS, 1976-77

('000)

Port	Overseas cargo				Interstate cargo			
	Discharged		Loaded		Discharged		Loaded	
	Tonnes	Cubic metres	Tonnes	Cubic metres	Tonnes	Cubic metres	Tonnes	Cubic metres
New South Wales—								
Sydney	2,572	2,367	5,687	696	2,052	148	152	202
Botany Bay	1,787	—	168	—	3,979	—	177	—
Newcastle	937	24	10,633	6	3,392	—	532	—
Port Kembla	492	2	6,474	—	6,587	—	1,564	—
Other	11	—	756	—	46	—	13	—
<i>Total New South Wales</i>	<i>5,799</i>	<i>2,393</i>	<i>23,718</i>	<i>701</i>	<i>16,055</i>	<i>148</i>	<i>2,437</i>	<i>203</i>
Victoria—								
Melbourne	1,688	3,694	1,999	712	2,448	202	2,002	190
Geelong	1,137	2	1,576	3	421	—	1,106	—
Portland	163	1	243	—	19	—	11	—
Westernport	132	—	1,421	—	413	—	9,242	—
<i>Total Victoria</i>	<i>3,119</i>	<i>3,696</i>	<i>5,239</i>	<i>715</i>	<i>3,301</i>	<i>202</i>	<i>12,361</i>	<i>190</i>
Queensland—								
Brisbane	918	740	2,087	123	3,385	3	98	24
Cairns	39	—	453	1	13	4	13	2
Gladstone	716	—	8,067	2	91	—	565	—
Hay Point	—	—	12,489	—	—	—	155	—
Mackay	62	1	642	—	52	—	321	—
Townsville	446	33	1,345	6	139	—	211	—
Weipa	59	—	5,275	—	—	—	55	—
Other	2	—	1,309	—	58	—	244	—
<i>Total Queensland</i>	<i>2,242</i>	<i>774</i>	<i>31,669</i>	<i>133</i>	<i>3,737</i>	<i>7</i>	<i>1,662</i>	<i>26</i>
South Australia—								
Port Adelaide	459	417	508	307	681	5	297	3
Ardrossan	—	—	147	—	—	—	401	—
Port Lincoln	65	—	447	—	43	—	3	—
Port Pirie	5	—	561	—	223	—	160	—
Port Stanvac	1,684	—	109	—	505	—	482	—
Whyalla	109	—	1,318	—	1,119	—	1,343	—
Other	23	—	428	—	—	—	503	—
<i>Total South Australia</i>	<i>2,344</i>	<i>417</i>	<i>3,519</i>	<i>307</i>	<i>2,572</i>	<i>5</i>	<i>3,190</i>	<i>3</i>
Western Australia—								
Fremantle	4,788	450	6,002	139	1,209	8	1,116	35
Albany	78	—	741	42	21	—	—	—
Bunbury	130	—	1,964	53	—	—	96	—
Dampier	257	—	36,870	—	—	—	—	—
Geraldton	17	—	920	49	—	—	—	—
Port Hedland	71	2	27,441	—	2	1	5,816	—
Port Walcott	367	—	13,521	14	—	—	—	—
Yampi Sound	2	—	2,685	—	11	—	69	—
Other	98	2	2,012	47	36	—	215	—
<i>Total Western Australia</i>	<i>5,810</i>	<i>455</i>	<i>92,157</i>	<i>344</i>	<i>1,279</i>	<i>9</i>	<i>7,312</i>	<i>35</i>
Tasmania—								
Hobart	123	12	149	—	661	230	439	198
Burnie	63	3	168	—	230	290	363	296
Devonport	16	—	34	11	155	628	221	600
Launceston	100	8	1,603	8	714	538	151	371
Port Latta	19	—	2,112	—	16	—	10	—
Other	18	—	298	—	1	58	8	60
<i>Total Tasmania</i>	<i>339</i>	<i>23</i>	<i>4,363</i>	<i>18</i>	<i>1,777</i>	<i>1,743</i>	<i>1,192</i>	<i>1,525</i>
Northern Territory—								
Darwin	305	18	6	—	21	34	9	2
Groote Island	19	—	1,245	—	6	13	305	3
Gove	578	—	2,983	—	14	17	8	12
<i>Total Northern Territory</i>	<i>901</i>	<i>18</i>	<i>4,234</i>	<i>—</i>	<i>41</i>	<i>64</i>	<i>322</i>	<i>17</i>
Australia	20,554	7,775	164,899	2,219	28,762	2,179	28,477	1,999

Overseas cargo according to major trade areas and type of service

The following table shows details of cargo loaded in Australia for discharge overseas, and cargo discharged in Australia from overseas, classified according to the major trade areas of the world, by type of shipping service (i.e. liner or tramp, bulkship and tanker).

OVERSEAS CARGO LOADED AND DISCHARGED IN AUSTRALIA: MAJOR TRADE AREAS BY TYPE OF SERVICE
(^{'000})

<i>Major trade areas</i>	<i>Liners (a)</i>		<i>Tramps, bulkships, tankers</i>		<i>All vessels</i>	
	<i>Tonnes</i>	<i>Cubic metres</i>	<i>Tonnes</i>	<i>Cubic metres</i>	<i>Tonnes</i>	<i>Cubic metres</i>
1976-77—						
Overseas cargo loaded—						
North America and Hawaii . . .	491	195	5,859	1	6,350	196
South America	56	26	506	—	562	26
Europe (including U.S.S.R.) . . .	1,102	445	29,902	32	31,004	479
Africa	118	44	1,609	21	1,727	65
Asia—						
Eastern Asia	1,340	283	114,455	13	115,794	297
Other Asia	854	394	6,217	398	7,072	793
Total Asia	2,194	677	120,671	412	122,866	1,089
Papua New Guinea, New Zealand and Pacific Islands . .	701	304	1,672	46	2,373	350
Indian Ocean Islands and Antarctic Area	1	—	16	15	17	15
Overseas cargo discharged—						
North America and Hawaii . . .	628	993	1,708	487	2,336	1,480
South America	15	18	73	—	87	18
Europe (including U.S.S.R.) . . .	564	1,944	799	175	1,362	2,120
Africa	60	51	123	1	183	52
Asia—						
Eastern Asia	481	1,842	2,185	1,324	2,666	3,166
Other Asia	254	654	11,612	76	11,866	730
Total Asia	735	2,496	13,797	1,400	14,531	3,896
Papua New Guinea, New Zealand and Pacific Islands . .	456	147	1,125	52	1,581	199
Indian Ocean Islands and Antarctic Area	—	—	470	9	470	9
Total loaded—						
1974-75	4,643	2,503	160,224	423	164,866	2,926
1975-76	4,766	1,989	151,366	499	156,133	2,488
1976-77	4,663	1,691	160,236	528	164,899	2,219
Total discharged—						
1974-75	2,229	5,679	19,663	2,350	21,893	8,029
1975-76	2,407	5,459	17,311	1,711	19,718	7,170
1976-77	2,458	5,651	18,097	2,125	20,554	7,775

(a) Cargo and passenger liners.

Overseas cargo according to country of registration of vessels

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

**OVERSEAS CARGO DISCHARGED AND LOADED, BY COUNTRY OF REGISTRATION OF VESSELS:
AUSTRALIA
('000)**

Country of registration of vessels	1974-75		1975-76		1976-77	
	Tonnes	Cubic metres	Tonnes	Cubic metres	Tonnes	Cubic metres
Australia	367	503	715	655	2,427	763
Belgium-Luxembourg	578	-	592	-	969	1
Canada	2,565	80	1,244	-	1,047	-
China-excl. Taiwan Province	1,653	-	1,860	-	1,912	-
-Taiwan Province only	812	106	992	57	1,256	48
Denmark	2,382	221	704	156	1,517	206
Germany, Federal Republic of	5,465	619	3,342	540	3,718	756
Greece	9,780	132	9,598	101	9,830	187
Hong Kong	618	41	1,656	140	1,850	163
India	3,590	74	2,417	73	5,060	62
Japan	64,576	1,830	67,783	1,571	74,506	1,544
Korea, Republic of	367	18	714	7	1,077	6
Liberia	28,018	288	29,042	311	31,903	519
Norway	18,399	538	12,950	419	11,188	420
Panama	6,021	245	6,619	333	7,802	456
Singapore, Republic of	1,719	406	2,061	366	1,928	510
Sweden	3,121	465	1,982	580	1,694	462
United Kingdom	23,845	2,995	19,452	2,593	16,272	2,481
U.S.S.R.	1,031	126	1,988	189	1,305	178
Other	11,862	2,259	10,140	1,567	8,196	1,232
Grand total	186,769	10,945	175,851	9,658	185,453	9,994

Vessels registered in Australia

The following table shows the number and gross tonnage of trading vessels of 200 tons and over registered in Australia at 30 June 1978, 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, 30 JUNE 1977(a)

(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
1973 and earlier	50	590,984	20	178,972	48	549,380	22	220,576	70	769,956
1974	5	107,666	-	-	4	101,394	1	6,272	5	107,666
1975	6	78,227	2	570	5	30,906	3	47,891	8	78,797
1976	4	149,995	-	-	2	10,562	2	139,433	4	149,995
1977	6	226,318	1	2,851	2	29,286	5	199,883	7	229,169
1978 to date(b)	3	26,568	-	-	-	-	3	26,568	3	26,568
Total registered in Australia	74	1,179,758	23	182,393	61	721,528	36	640,623	97	1,362,151

(a) Excludes vessels of 200 net tons and under. (b) To 30 June.

Miscellaneous**Shipping casualties**

Courts of Marine Inquiry are constituted by a magistrate assisted by skilled assessors, and, when necessary, are held at the principal port in each State and at Launceston (Tasmania). Such courts have power to deal with the certificates of officers who are found at fault.

RAILWAYS

Government railways

Government railways in Australia operate in all States and Territories and provide an important means of transportation. In 1976-77 a total of 109.9 million tonnes of freight was carried, an increase of 128.0 per cent over the 48.2 million tonnes carried in 1956-57. However, in the same twenty-year period, the number of passengers carried (mostly within the suburban areas of Sydney and Melbourne) declined by 33.5 per cent from 499 million in 1956-57 to 332 million in 1976-77 (excluding Perth metropolitan passenger journeys). The number of train-kilometres run during 1976-77 (151 million) was a decrease of 1.3 per cent since 1956-57 (153 million), which is an indication of the trend towards heavier train loads with the more powerful motive power now available. Since the introduction of the first mainline diesel-electric locomotives in 1950, their numbers have increased greatly until at 30 June 1977 there were 1,480 throughout Australia. Diesel-electric locomotives during 1976-77 hauled 98 million train-kilometres, while electric and other locomotives hauled 5 million train-kilometres.

Railway development

Details outlining railway development in Australia are given in Year Book No. 61, page 380. The following table sets out the route-kilometres of government railways in each State and Territory from 1972 to 1977. Details prior to 1972 can be found in Year Book No. 61, page 381.

GOVERNMENT RAILWAYS: ROUTE-KILOMETRES OPEN, 1972 TO 1977
(Kilometres)

30 June—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1972 . . .	10,129	6,357	9,560	5,829	6,846	805	789	8	40,323
1973 . . .	10,129	6,357	9,560	5,904	6,897	830	789	8	40,474
1974 . . .	10,130	6,329	9,472	5,905	6,922	851	789	8	40,406
1975 . . .	10,131	6,331	9,780	5,909	6,805	851	789	8	40,604
1976 . . .	10,130	6,325	9,844	5,915	6,893	849	789	8	40,753
1977 . . .	10,130	6,251	9,796	5,911	6,895	864	278	8	40,133

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. The following table shows the route-kilometres open in each State and Territory at 30 June 1977 according to gauge.

GOVERNMENT RAILWAYS: ROUTE-KILOMETRES OPEN, BY GAUGE, 30 JUNE 1977
(Kilometres)

Gauge	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1600 mm	(a)328	(b)5,912	..	2,533	..	..	..	..	8,773
1435 mm	(c)9,802	325	111	(d)1,824	(e)2,108	..	..	(f)8	14,178
1067 mm . . . . .	..	..	9,685	(g)1,554	(h)4,787	864	278	..	17,168
762 mm . . . . .	..	14	..	..	..	..	..	..	14
610mm . . . . .	..	..	..	..	..	..	..	..	..
Total	10,130	6,251	9,796	5,911	6,895	864	278	8	40,133
Per 1,000 of population	2.05	1.65	4.58	4.63	5.76	2.10	2.64	0.04	2.85
Per 1,000 square kilometre	12.65	27.46	5.67	6.01	2.73	12.74	0.21	3.33	5.23

(a) Portion of Victorian System. (b) Excludes 325 kilometres of 1600 mm gauge line which almost parallels the 1435 mm gauge line between Melbourne and the New South Wales border. (c) Includes 47 kilometres of 1435 mm gauge line from Broken Hill to Cockburn. (d) Comprises 1,123 kilometres of Trans-Australian and 350 kilometres of the Central Australia Railway Systems, and includes 351 kilometres from Port Pirie to Cockburn. (e) Includes 730 kilometres of the Trans-Australian Railway System. (f) Australian Capital Territory Railway System. (g) Includes 591 kilometres of the Central Australia Railway System. (h) Excludes 141 kilometres of 1435 mm/1067 mm dual gauge line which is included in the 1435 mm gauge line.

Government railway systems

Prior to 1 July 1975 there were six separate State Government railway systems and the Commonwealth Railways system. In 1975, however, Commonwealth and State Government legislation was enacted for the transfer to the Commonwealth Government of the Tasmanian Government Railways and the non-metropolitan South Australian railways. These transfers took effect from 1 July 1975 and the Australian National Railways Commission came into existence on that date to control the two transferred systems and the former Commonwealth Railways. As the former Commonwealth Railways included routes in South Australia and Western Australia, and the Victorian system extended into New South Wales, the system route-kilometres shown in the following table do not represent route-kilometres within each State and Territory (these are shown in the previous table). The route-kilometres of each system open for traffic, according to gauge, at 30 June 1977 is shown in the following table.

GOVERNMENT RAILWAYS: ROUTE-KILOMETRES OPEN, BY GAUGE AND SYSTEM 30 JUNE 1977
(Kilometres)

System	Gauge					Total
	1600 mm	1435 mm	1067 mm	762 mm	610 mm	
New South Wales . . . . .	..	(a)9,755	..	..	..	9,755
Victoria	(b)6,240	325	..	14	..	6,579
Queensland . . . . .	..	(c)111	9,685	..	..	9,796
South Australia	2,533	398	963	..	..	3,894
Western Australia . . . . .	..	1,378	(d)4,787	..	..	6,165
Tasmania . . . . .	..	..	864	..	..	864
National . . . . .	..	2,211	869	..	..	3,080
Australia	8,773	14,178	17,168	14	..	40,133

(a) Includes 446 route-kilometres which are electrified. (b) Excludes 325 route-kilometres of 1600 mm gauge line which almost parallels the 1435 mm gauge line between Melbourne and Murray River. Includes 421 route-kilometres which are electrified. (c) Operated by the Public Transport Commission of New South Wales which is recouped for the cost of the operation. (d) Excludes 141 kilometres of 1435 mm/1067 mm dual gauge line which is included in the 1435 mm gauge line.

The six government owned railway systems are operated by the Public Transport Commission of New South Wales (PTC), Queensland Government Railways (QR), Victorian Railways (VR), Western Australian Government Railways (WAGR), the State Transport Authority of South Australia (STA), and Australian National Railways (ANR).

The PTC (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 West 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. ANR operates the non-metropolitan railways in South Australia (1600 mm and 1067 mm gauge), including the isolated Eyre Peninsula system (1067 mm gauge), the Tasmanian main line from Hobart to Launceston, with its branches (1067 mm gauge) and the railways (1435 mm gauge) from Kalgoorlie to Broken Hill, Queanbeyan to Canberra, Port Augusta to Marree, and (1067 mm gauge) Marree to Alice Springs. The Darwin to Larrimah line (1067 mm gauge), remains open, but no services have been operated since 1 July 1976.

See also details in the annual publication *Rail, Bus and Air Transport* (9201.0), and Year Book No. 58, page 348.

Developments in standardisation

The Commonwealth Government has enacted legislation for the construction of a standard gauge connection between Adelaide and the Trans-Australian Railway. Work on this project has commenced and, when the link is completed, all mainland State capital cities will be connected to the standard gauge network.

The Commonwealth Government has also enacted legislation for the construction of a reliable, all-weather standard gauge railway between Tarcoola, on the Trans-Australian Railway, and Alice Springs to replace the existing flood-prone narrow gauge section of the Central Australia Railway between Marree and Alice Springs. The line is expected to be completed in 1981-82.

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, 1976-77

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>National</i>	<i>Aust.</i>
Train-kilometres								
('000)(a)—								
Suburban passenger	20,489	14,423	3,320	3,957	2,154	..	..	44,342
Country passenger	9,950	7,654	4,033	2,009	1,207	237	1,284	26,374
Goods(b)	26,601	11,412	22,853	4,777	9,485	1,430	3,850	80,407
Total	57,039	33,489	30,206	10,742	12,846	1,667	5,134	151,125
Passenger journeys								
('000)(c)—								
Suburban	181,115	98,252	29,296	12,230	n.a.	16	..	n.a.
Country(d)	3,306	4,402	1,758	636	248	124	187	10,659
Total	184,421	102,654	31,054	12,866	n.a.	140	(e)187	n.a.
Passenger-kilometres								
('000)(f)—								
Suburban	n.a.	1,601,885	n.a.	n.a.	n.a.	129	..	n.a.
Country	n.a.	627,125	n.a.	150,904	108,470	15,484	n.a.	n.a.
Total	n.a.	2,229,010	n.a.	n.a.	n.a.	15,613	n.a.	n.a.
Freight—								
Tonnes carried								
('000)(d)	33,777	10,971	34,237	6,402	19,003	1,644	3,909	109,943
Net tonne-kilometres								
(million)(g)	9,320.2	3,042.2	10,286.6	1,834.0	4,532.5	247.5	2,732.4	31,995.4

(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) Passenger journeys continuing over both the Trans-Australian and Central Australia Railway Systems are counted twice. In 1976-77 these numbered 4,583. (f) One passenger travelling one kilometre. (g) One tonne carried one kilometre.

Rolling stock

GOVERNMENT RAILWAYS: ROLLING STOCK INCLUDED IN CAPITAL ACCOUNT

(Number)

<i>System and date</i>	<i>Locomotives</i>				<i>Coaching stock(b)</i>	<i>Goods stock</i>	<i>Service stock</i>
	<i>Diesel-electric</i>	<i>Electric</i>	<i>Other(a)</i>	<i>Total</i>			
30 June 1977							
New South Wales	470	39	31	540	2,675	14,933	1,614
Victoria	258	35	99	392	2,582	16,841	1,034
Queensland	429	—	86	515	1,158	20,899	2,253
South Australia	151	—	4	155	393	7,035	542
Western Australia	184	—	21	205	372	10,747	446
Tasmania	50	—	21	71	55	1,925	169
National	104	—	—	104	142	3,305	545
Australia	1,646	74	262	1,982	(c)7,615	(c)75,694	(c)6,604
30 June—							
1976	1,590	75	326	1,991	7,592	78,405	7,256
1975	1,573	75	332	1,980	7,624	78,810	7,614
1974	1,563	76	372	2,011	7,870	79,086	7,723
1973	1,539	76	378	1,993	7,982	79,913	7,800
1972	1,489	76	435	2,000	8,178	81,135	8,033

(a) Includes non-passenger-carrying diesel power vans and steam locomotives. (b) includes all brake vans and non-powered electric train stock. (c) Includes jointly-owned stock.

Train-kilometres*Train-kilometres by type of service and motive power***GOVERNMENT RAILWAYS: TRAIN-KILOMETRES 1976-77**

('000 kilometres)

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>National</i>	<i>Aust.</i>
Type of service—								
Passenger—suburban	20,489	14,423	3320	3957	2154	..	..	44,342
Passenger—country	9,950	7,654	4,033	2,009	1,207	237	1,284	26,374
Goods(a)	26,601	11,412	22,853	4,777	9,485	1,430	3,850	80,407
<i>Total</i>	<i>57,039</i>	<i>33,489</i>	<i>30,206</i>	<i>10,742</i>	<i>12,846</i>	<i>1,667</i>	<i>5,134</i>	<i>151,125</i>
Type of motive power—								
Hauled by diesel-electric locomotives	31,783	15,701	27,443	5,900	10,319	1,662	5,125	97,932
Hauled by electric and other locomotives(b)	3,146	1,475	443	6	1	—	—	5,070
Powered coaching stock	22,111	16,314	2,320	4,836	2,526	5	9	48,121
<i>Total</i>	<i>57,039</i>	<i>33,489</i>	<i>30,206</i>	<i>10,742</i>	<i>12,846</i>	<i>1,667</i>	<i>5,134</i>	<i>151,125</i>

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

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

('000 kilometres)

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>National</i>	<i>Aust.</i>
1971-72	61,176	33,175	29,165	10,018	12,410	1,767	6,013	153,724
1972-73	59,941	33,058	29,523	10,024	11,669	1,960	5,859	152,035
1973-74	58,255	33,345	28,542	10,313	12,617	2,154	5,966	151,192
1974-75	55,661	33,876	30,114	10,189	12,866	1,983	5,936	150,624
1975-76	54,943	33,818	30,813	10,304	12,856	1,748	5,595	150,078
1976-77	57,039	33,489	30,206	10,742	12,846	1,667	5,134	151,125

Freight traffic*Freight carried***GOVERNMENT RAILWAYS: FREIGHT CARRIED(a), SYSTEMS**

('000 tonnes)

<i>Commodity and year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>National</i>	<i>Aust.</i>
1976-77—								
Grain	5,217	2,456	1,657	863	3,454	8	—	13,655
Other agricultural produce	925	435	2,423	100	236	7	23	4,150
Coal, coke and briquettes	16,126	837	21,769	6	1,179	159	1,942	42,017
Other minerals(b)	2,999	512	3,939	1,716	10,247	22	80	19,514
Iron and steel	1,867	675	—	412	—	7	—	2,961
Fertilisers	291	593	173	298	525	62	3	1,945
Cement	444	903	161	67	92	273	49	1,989
Timber	104	247	97	55	271	305	23	1,102
Containers	2,662	669	834	721	—	108	—	4,994
Livestock	181	310	761	298	71	2	123	1,747
All other commodities	2,959	3,337	2,422	1,866	2,928	692	1,666	15,871
<i>Total</i>	<i>33,777</i>	<i>10,971</i>	<i>34,237</i>	<i>6,402</i>	<i>19,003</i>	<i>1,644</i>	<i>3,909</i>	<i>109,943</i>
1975-76	31,234	10,803	33,118	6,139	17,647	1,610	3,804	104,355
1974-75	33,476	11,057	30,208	6,738	16,153	1,731	4,102	103,465
1973-74	32,651	11,370	25,401	6,607	14,839	1,828	4,270	96,966
1972-73	31,044	11,475	24,666	5,781	13,706	1,554	4,255	92,481
1971-72	32,310	11,795	19,267	6,014	13,867	1,299	4,119	88,671

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

*Freight net tonne-kilometres***GOVERNMENT RAILWAYS: FREIGHT NET TONNE-KILOMETRES, SYSTEMS**

(Million)

<i>Commodity and year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld.</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>National</i>	<i>Aust.</i>
1976-77—								
Grain	2,049.9	731.4	(a)	148.5	901.3	1.5	—	(a)
Other agricultural produce	494.3	135.8	(a)	27.1	96.5	1.6	32.6	(a)
Coal, coke and briquettes	1,380.6	138.8	(a)	3.0	179.4	31.0	495.7	(a)
Other minerals(b)	623.1	100.3	(a)	366.3	1,773.7	3.7	20.2	(a)
Iron and steel	1,248.4	213.8	(a)	173.2	—	1.2	—	(a)
Fertilisers	173.0	154.3	(a)	92.9	194.2	19.0	3.9	(a)
Cement	149.5	113.5	(a)	23.9	43.6	23.1	19.0	(a)
Timber	91.6	79.5	(a)	17.8	91.3	26.0	32.6	(a)
Containers	1,385.6	282.0	(a)	258.3	—	25.5	—	(a)
Livestock	100.3	94.8	413.0	73.7	23.4	—	62.6	767.8
All other commodities	1,624.0	997.8	9,873.6	649.3	1,229.0	114.9	2,065.7	16,554.3
Total	9,320.2	3,042.2	10,286.6	1,834.0	4,532.5	247.5	2,732.4	31,995.4
1975-76	8,566.9	3,071.4	10,101.2	1,686.6	4,542.4	231.8	2,609.0	30,809.3
1974-75	8,782.3	3,091.4	9,118.0	1,756.9	4,262.4	273.3	2,507.4	29,791.7
1973-74	8,642.5	3,126.2	7,855.1	1,753.1	4,142.5	277.9	2,532.0	28,329.3
1972-73	8,117.6	3,164.8	7,613.1	1,588.4	3,686.2	210.6	2,201.1	26,581.7
1971-72	8,615.2	3,264.2	6,315.1	1,583.0	3,447.8	169.7	2,007.9	25,402.9

(a) Not available separately, included with 'All other commodities'. (b) Includes sand and gravel.

Finance**GOVERNMENT RAILWAYS: GROSS EARNINGS(a), SYSTEMS, 1976-77**

(\$'000)

	<i>N.S.W.(b)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>National</i>	<i>Aust.</i>
Coaching—								
Suburban passenger	52,677	38,151	6,607	3,207	..	..	..	n.a.
Country passenger	19,513	14,182	5,962	3,138	3,451	n.a.	6,461	n.a.
Other	9,699	9,265	4,367	1,574	2,834	n.a.	820	n.a.
Total coaching	81,889	61,598	16,936	7,919	6,285	516	7,281	182,423
Freight (goods and livestock)—								
Grain	(c)	20,165	17,435	5,133	26,394	58	—	n.a.
Other agricultural produce	(c)	4,267	14,358	678	4,382	77	440	n.a.
Coal, coke and briquettes	(c)	5,081	97,970	51	6,625	857	4,915	n.a.
Other minerals(d)	(c)	2,458	29,406	8,169	29,378	179	336	n.a.
Iron and steel	(c)	4,404	—	2,639	—	96	—	n.a.
Fertilisers	(c)	3,311	3,219	1,398	4,194	619	47	n.a.
Cement	(c)	4,944	2,532	449	1,298	1,159	326	n.a.
Timber	(c)	2,857	1,752	364	3,100	920	403	n.a.
Containers	(c)	4,056	6,818	4,353	—	643	—	n.a.
Livestock	(c)	2,260	16,248	2,704	819	51	1,395	n.a.
All other commodities	(c)	35,351	50,207	14,837	36,887	3,506	39,419	n.a.
Total freight	244,746	89,157	239,945	40,775	113,077	8,164	47,282	783,146
Miscellaneous	25,240	12,757	5,679	5,591	17,960	100	n.y.a.	n.y.a.
Grand total	351,875	163,512	262,561	54,284	137,323	8,780	n.y.a.	n.y.a.

(a) Excludes Government grants. (b) Includes State Co-ordination Tax Contribution. (c) Not available separately. (d) Includes sand and gravel.

GOVERNMENT RAILWAYS: WORKING EXPENSES, SYSTEMS, 1976-77

(\$'000)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.(a)	National	Aust.
Maintenance of way and works	84,903	(b)	82,803	(a)24,737	(a)30,868	6,448	12,722	242,481
Motive power(c)	182,445	(b)	109,632	(a)31,584	(a)32,618	7,978	18,502	382,759
Traffic	132,184	261,504	80,831	(a)30,114	51,968	5,830	12,469	574,900
Other charges	170,741	39,728	25,778	17,194	16,569	3,084	n.y.a.	n.y.a.
Total	570,272	301,232	299,044	(a)103,629	(a)132,024	23,340	n.y.a.	n.y.a.

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

GOVERNMENT RAILWAYS: GROSS EARNINGS, WORKING EXPENSES, AND NET EARNINGS, SYSTEMS

(\$'000)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	National	Aust.
GROSS EARNINGS								
1971-72	266,268	112,685	124,782	35,386	63,634	6,123	29,208	638,086
1972-73	254,070	111,833	137,745	35,085	63,600	6,835	31,241	640,408
1973-74	262,691	115,613	149,844	39,531	78,480	7,674	37,217	691,050
1974-75	291,373	129,942	183,687	47,950	106,844	8,266	41,367	809,429
1975-76	318,763	147,292	230,492	49,688	130,850	8,048	54,618	939,751
1976-77	351,875	163,512	262,561	54,284	137,323	8,780	n.y.a.	n.y.a.
WORKING EXPENSES								
1971-72	263,484	138,722	119,743	(a)46,521	(a)63,748	(a)10,391	(a)31,540	674,149
1972-73	298,180	156,120	133,384	52,320	68,223	11,829	34,487	754,543
1973-74	349,897	188,599	162,101	60,747	81,916	15,598	44,423	903,281
1974-75	415,234	243,393	227,925	80,466	103,696	19,973	55,847	1,146,534
1975-76	472,188	271,940	265,662	91,352	118,607	22,087	64,279	1,306,115
1976-77	570,272	301,232	299,044	103,629	132,024	23,340	n.y.a.	n.y.a.
NET EARNINGS(b)								
1971-72	2,784	-26,036	5,038	-11,135	-115	-4,267	-2,333	-36,063
1972-73	-44,111	-44,287	4,361	-17,236	-4,622	-4,994	-3,247	-114,135
1973-74	-87,206	-72,986	-12,257	-21,216	-3,436	-7,924	-7,206	-212,231
1974-75	-123,861	-113,451	-44,238	-32,516	3,148	-11,707	-14,479	-337,104
1975-76	-153,425	-124,648	-35,170	-41,664	12,243	-14,039	-9,661	-366,364
1976-77	-218,397	-137,720	-36,483	-49,345	5,299	-14,560	n.y.a.	n.y.a.

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

GOVERNMENT RAILWAYS: SURPLUS OR DEFICIT, SYSTEMS, 30 JUNE 1977

(\$'000)

System	Net earnings Plus grants and other earnings—excess of gross earnings over working expenses payable to railways					Less other expenses charged to railways				Surplus (+) or deficit (-)
	State Government grants	Road motor earnings	Other	Total	Interest and ex-change	Sinking fund	Road motor expenses (a)	Other	Total	
New South Wales	-218,397	(b)6,411	-	-	6,411	53,265	7,897	(c)1,479	62,641	-274,627
Victoria	-137,720	(d)74	92	166	-	-	522	-	522	-138,077
Queensland	-36,483	-	-	-	53,448	-	-	(e)1,111	54,559	-91,042
South Australia	-49,345	-	401	401	1,323	-	659	186	2,168	-51,113
Western Australia	5,299	-	988	988	14,885	-	2,495	(f)35	17,416	-11,129
Tasmania	-14,560	-	20	20	-	-	-	-	-	-14,539
National	n.y.a.	-	-	-	-	-	-	-	-	n.y.a.
Australia	n.y.a.	6,485	1,481	20	7,986	122,921	7,897	3,676	2,811	137,306

(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) Loan management and loan flotation expenses. (d) Kerang-Koondrook tramway recoup from Treasury. (e) Demolished assets written off. (f) Australian currency revaluation adjustment.

Employment, salaries and wages**GOVERNMENT RAILWAYS: AVERAGE NUMBER OF EMPLOYEES (EXCLUDING CONSTRUCTION STAFF) AND SALARIES AND WAGES PAID(a), 1976-77**

	<i>N.S.W.</i>	<i>Vic.(b)</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>National</i>	<i>Aust.</i>
Salaried staff	8,972	5,299	4,085	1,707	2,168	350	725	23,306
Wages staff	31,001	19,110	20,435	5,634	7,610	1,489	3,098	88,377
Total staff	39,973	24,409	24,520	7,341	9,778	1,839	3,823	111,683
Salaries and wages paid \$'000	404,610	233,137	238,206	77,722	91,419	16,343	36,259	1,097,697

(a) Excludes salaries and wages paid to road motor staff. (b) Includes construction staff.

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 Bureau of Transport Economics by the various railway operators. All operators provided details of tonnes consigned and most provided details of tonne-kilometres performed. In a few cases the tonne-kilometre figures have been estimated by the Bureau of Transport Economics using the advised average length of haul.

TRAFFIC TASK PERFORMED BY AUSTRALIAN NON-GOVERNMENT RAILWAYS 1971-72 TO 1976-77

<i>Year</i>	<i>Iron ore railways</i>	<i>Sugar tramways</i>	<i>Other non-government railways</i>	<i>Total non-government railways</i>	<i>Non-government as a percentage of total tonnes consigned/tonne-kilometres performed</i>	
					<i>TONNES CONSIGNED ('000)</i>	<i>Per cent</i>
1971-72	54,865	16,189	13,742	84,796		51
1972-73	67,723	16,060	16,990	100,773		55
1973-74	84,867	16,442	19,970	121,279		58
1974-75	95,666	17,163	21,180	134,009		59
1975-76	83,837	18,844	17,847	120,528		56
1976-77	86,622	20,066	20,271	126,959		54
<i>TONNE-KILOMETRES (million)</i>						
1971-72	16,121	261	214	16,596		40
1972-73	19,501	259	272	20,032		43
1973-74	25,890	264	336	26,490		48
1974-75	29,559	275	341	30,175		50
1975-76	25,748	302	298	26,348		46
1976-77	26,646	322	369	27,337		46

TRAM, BUS, AND FERRY SERVICES**Systems in operation**

Trams and trolley-buses. At 30 June 1977 tram services were in operation in Melbourne, Victoria and in Adelaide, South Australia. The last of the trolley-bus services ceased to operate in Australia with its replacement by buses in Perth, Western Australia, on 29 August 1969. 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 Western Australian Government Railways. Particulars of bus services under the control of private operators for the States of New South Wales, Victoria, Queensland, South Australia and Western Australia are given in the annual bulletin *Rail, Bus and Air Transport* (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; and Tasmania, on the Mersey River at Devonport and on the Derwent River at Hobart. Control is exercised by both government authorities and private operators. Particulars of the operations of these services are given in previous issues of this Year Book and in the annual bulletin *Rail, Bus and Air Transport* (9201.0). In Victoria and Queensland the services operated are not extensive. There are no ferry passenger services in South Australia.

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, 1976-77

		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Route-kilometres at 30 June—										
Tram(a)	kilometres	..	217	..	11	..	..	..	..	228
Bus	"	1,049	249	676	830	8,377	454	85	740	12,460
Vehicle-kilometres—										
Tram	'000	..	24,166	..	774	..	..	..	..	24,940
Bus	"	63,028	12,762	19,303	33,772	41,800	9,617	920	11,400	192,603
Rolling stock at 30 June—										
Tram	number	..	739	..	26	..	..	..	..	765
Bus	"	1,708	279	565	723	903	304	31	384	4,897
Passenger journeys—										
Tram	'000	..	102,886	..	1,302	..	..	..	..	104,188
Bus	"	186,744	20,073	49,433	56,827	58,362	19,773	661	14,183	406,056
Gross revenue(b)—										
Tram and bus	\$'000	39,913	32,373	11,633	16,782	16,471	2,862	354	3,581	123,970
Working expenses(c)—										
Tram and bus	\$'000	91,981	53,887	18,781	27,711	28,292	8,663	1,029	8,767	239,112
Net revenue—										
Tram and bus	\$'000	-52,069	-21,514	-7,148	-10,929	-11,821	-5,801	-674	-5,186	-115,142
Employees at 30 June—										
Tram and bus	number	6,791	4,624	1,463	1,837	2,169	627	112	653	18,276
Accidents—										
Tram and bus(d)—										
Persons killed	number	6	11	2	3	3	-	-	-	25
Persons injured	"	n.a.	656	277	206	388	45	-	37	(e)1,609

(a) Gauge 1435 mm throughout. (b) Excludes government grants. (c) Includes provision of reserves for depreciation, etc., where possible. (d) Excludes accidents to employees. (e) Excludes New South Wales. Minus sign (-) denotes deficit.

TRAM AND BUS SERVICES: GOVERNMENT AND MUNICIPAL

		1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
Route-kilometres at 30 June—							
Tram	kilometres	225	228	227	228	228	228
Bus	"	10,495	10,890	11,780	11,859	11,217	12,460
Vehicle kilometres—							
Tram	'000	24,889	25,119	24,555	24,516	24,945	24,940
Bus	"	170,769	172,866	179,702	188,062	190,131	192,603
Rolling stock at 30 June—							
Tram	number	722	734	734	729	765	765
Bus	"	4,437	4,442	4,761	4,967	5,007	4,897
Passenger journeys—							
Tram	'000	104,558	106,333	110,791	112,329	107,375	104,188
Bus	"	398,421	410,139	417,513	(a)416,160	406,163	406,056
Gross revenue(b)—							
Tram and bus	\$'000	91,015	95,171	105,149	112,690	121,420	123,970
Working expenses(c)—							
Tram and bus	\$'000	103,274	117,598	146,655	187,787	208,241	239,112
Net revenue—							
Tram and bus	\$'000	-12,260	-22,426	-41,506	-75,098	-86,821	-115,142
Employees at 30 June—							
Tram and bus	number	17,545	17,256	17,549	17,829	17,846	18,276
Accidents—							
Tram and bus(d)—							
Persons killed	number	22	30	10	14	22	25
Persons injured	"	2,275	2,732	2,587	(e)1,245	(e)1,535	(e)1,609

(a) Excludes Northern Territory. (b) Excludes government grants. (c) Includes provision of reserve for depreciation, etc., where possible. (d) Excludes accidents to employees. (e) Excludes New South Wales. Minus sign (-) denotes deficit.

MOTOR VEHICLES

Arrangements for the registration of motor vehicles and the licensing of drivers and riders are not uniform throughout Australia, since they are the function of a separate authority or authorities in each State and Territory. Particulars of registrations, licences, fees payable, etc., in each State and Territory at 30 June 1977 are shown in *Motor Vehicle Registrations 1976-77*, (9304.0).

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 1976 by the Australian Bureau of Statistics for the purpose of gathering information on the usage of motor vehicles. Previous surveys were conducted in 1963 and 1971. The owners of approximately 53,000 vehicles other than buses were approached for information relating to the usage of their vehicles over the twelve months ended 30 September 1976. 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 1976 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 1976 (FINAL)

Type of vehicle	Laden business		Unladen business		Total business (a)		Paid to and from work		Unpaid to and from work		Private		Total	
	million kilometres	S.E. %	million kilometres	S.E. %	million kilometres	S.E. %	million kilometres	S.E. %	million kilometres	S.E. %	million kilometres	S.E. %	million kilometres	S.E. %
Cars and station wagons	..	..	..	..	15,584.3	3.8	2,434.5	6.4	16,196.7	2.7	44,304.0	1.4	78,531.0	1.2
Motor cycles	..	..	..	..	171.8	13.9	46.7	21.1	610.8	7.9	811.9	8.1	1,641.3	5.4
Utilities and panel vans	4,097.9	5.2	1,919.9	8.1	6,368.5	4.5	335.7	19.4	1,730.8	7.1	3,854.8	6.2	12,289.9	2.6
Rigid trucks	3,769.2	1.5	1,731.8	2.1	5,505.6	1.5	51.2	10.1	195.1	6.3	278.7	7.4	6,031.8	1.4
Articulated trucks	1,395.6	0.9	577.6	1.1	1,974.7	0.8	4.9	11.2	21.0	4.9	4.3	14.4	2,005.0	0.8
Other truck type vehicles	..	..	..	..	223.5	15.1	2.6	32.3	29.6	12.6	164.5	9.4	420.2	8.7
Total	9,262.7	2.4	4,229.3	3.8	29,828.5	2.2	2,875.6	5.9	18,783.9	2.4	49,418.2	1.4	100,919.2	1.0

(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 and 1976. At these census dates considerably greater information concerning the particulars shown in the tables following is available. Final detailed results of the 1976 census have been published in separate census bulletins for each State and Territory and for Australia.

A revised classification of motor vehicles has been adopted for publication of statistics of motor vehicle registrations from 1 July 1976. The principal difference between this classification and that which it replaces involves the categories utilities, panel vans, trucks and other truck type vehicles. The principle of accepting vehicle-type data as recorded by the registration authority has also been accepted. Consequently, figures shown from July 1976 for these categories are not strictly comparable with data for previous periods.

MOTOR VEHICLE CENSUS: 30 SEPTEMBER 1976 (FINAL)
(*000)

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	1,712.9	131.8	108.0	115.7	13.1	7.8	11.2	95.5	2,196.0
Victoria	1,456.2	104.5	47.0	117.8	9.8	4.9	7.3	51.9	1,799.4
Queensland	723.4	129.4	42.1	43.8	5.9	3.2	3.6	72.8	1,024.0
South Australia	509.2	41.4	19.6	36.3	5.2	4.1	3.2	31.8	650.7
Western Australia	442.6	55.5	34.2	43.8	3.4	3.8	3.3	28.5	615.2
Tasmania	158.7	17.0	8.3	10.4	1.2	1.1	1.7	6.5	204.8
Northern Territory	19.3	8.0	2.0	2.0	0.3	0.2	0.2	2.7	34.8
Australian Capital Territory	79.9	4.6	4.7	2.5	0.1	0.1	0.9	3.7	96.6
Total	5,102.2	492.3	265.9	372.2	39.0	25.1	31.4	293.4	6,621.5

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

MOTOR VEHICLES ON REGISTER, BY TYPE OF VEHICLE AUSTRALIA
(*000)

30 June	Motor cars and station wagons	Utilities, trucks, panel vans, other truck type vehicles and buses		Total (excludes motor cycles)	Motor cycles
1972	4,141.3		995.7	5,137.0	180.1
1973	4,361.6		1,041.1	5,402.7	210.4
1974	4,604.0		1,090.1	5,694.1	258.6
1975	4,858.5		1,140.2	5,998.7	277.7
1976	5,072.8		1,215.0	6,287.8	293.0
1977	5,243.0		1,279.6	6,522.6	295.5

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

30 June	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1972	374.4	394.1	384.6	413.3	421.0	418.2	310.6	413.3	389.8
1973	389.7	408.3	396.1	428.1	432.9	429.6	321.0	421.8	403.8
1974	402.9	427.4	408.7	442.4	449.3	442.0	329.5	427.6	418.7
1975	419.8	447.2	413.1	467.1	470.7	461.8	334.5	433.7	435.6
1976	426.8	466.6	445.4	482.2	493.4	481.1	315.6	436.8	451.9
1977	435.1	470.1	463.9	498.7	523.7	494.9	328.0	456.3	463.4

(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 monthly bulletins, and by type and make of vehicle in quarterly and annual bulletins 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.

A revised classification of motor vehicles has been adopted for publication of statistics of new motor vehicle registrations from 1 July 1976. The principal difference between this classification and that which it replaces involves the categories utilities, panel vans, trucks and other truck type vehicles. The principle of accepting vehicle-type data as recorded by the registration authority has also been accepted. Consequently, figures shown from July 1976 are not strictly comparable with data for previous periods.

REGISTRATIONS OF NEW MOTOR VEHICLES, BY TYPE OF VEHICLE

State or Territory and year	Motor cars	Station wagons	Utilities	Panel vans	Trucks		Other truck type vehicles	Buses	Total (excludes motor cycles)	Motor cycles
					Rigid	Articulated				
1977-78—										
New South Wales	127,199	26,086	13,197	15,808	12,118	1,135	835	1149	197,527	12,984
Victoria	97,220	18,148	8,405	7,167	10,034	1,008	743	891	143,616	6,469
Queensland	49,391	10,799	13,310	6,192	2,975	566	145	571	83,949	8,729
South Australia	32,976	5,998	2,916	2,917	2,969	674	282	432	49,164	4,313
Western Australia	33,094	7,896	4,725	6,094	4,739	353	221	406	57,528	3,339
Tasmania	11,671	2,213	1,301	1,203	1,178	139	219	130	18,054	972
Northern Territory	1,554	784	1,525	428	541	43	9	34	4,918	646
Australian Capital Territory	6,367	1,043	567	503	480	82	20	99	9,161	597
Australia	359,472	72,967	45,946	40,312	35,034	4,000	2,474	3,712	563,917	38,049
1976-77	365,624	81,478	(a)48,420	(a)39,532	(a)36,051	(a)4,752	(a)2,749	3,205	581,811	50,321
1975-76	380,713	73,924	43,500	38,296	39,574	4,139	474	3,743	584,363	60,017
1974-75	433,244	69,476	45,151	36,647	32,675	3,545	409	3,040	624,187	67,563
1973-74	407,983	57,007	41,848	29,352	29,878	3,753	398	2,465	572,684	85,249
1972-73	373,876	55,863	41,144	28,136	29,176	3,364	365	2,215	534,139	65,551

(a) Not directly comparable with previous figures.

Drivers' and riders' licences

At 30 June 1978, the numbers of licences in force to drive or ride motor vehicles were: New South Wales, 2,848,996; Victoria, 2,016,063; South Australia, 718,607; Western Australia, 654,949; Tasmania, 214,007; Northern Territory, 67,389; Australian Capital Territory, 135,921. Particulars are not available for Queensland.

ROAD TRAFFIC ACCIDENTS

Compulsory fitting and use of seat belts and protective helmets in Australia

Information on the compulsory fitting and use of seat belts and protective helmets in Australia is given in Year Book No. 61, page 395.

Accidents involving casualties, persons killed, persons injured

ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a): NUMBER OF ACCIDENTS, PERSONS KILLED OR INJURED, 1977

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	27,943	1,268	38,407	564	26	775	124	6	170
Victoria	14,659	954	19,672	388	25	520	80	5	107
Queensland	7,696	572	10,002	360	27	468	72	5	93
South Australia	7,922	306	10,781	621	24	844	119	5	161
Western Australia	6,224	290	8,353	520	24	698	95	4	128
Tasmania	1,603	112	2,343	390	27	571	76	5	112
Northern Territory	634	47	882	596	44	829	163	12	226
Australian Capital Territory	868	29	1,176	416	14	563	88	3	119
Australia	67,549	3,578	91,616	480	25	651	99	5	134

(a) Accidents reported to the police which occurred in public thoroughfares and which resulted in death within thirty days or in bodily injury to an extent requiring surgical or medical treatment. (b) Average number of motor vehicles (excluding tractors, plant and equipment) on register.

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

Year	N.S.W	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Total		
									Num- ber	Per 100,000 of mean popu- lation	Per 10,000 motor vehicles regis- tered(b)
Accidents involving casualties—											
1972	27,365	14,757	7,863	8,116	4,909	1,371	592	777	65,750	499	123
1973	29,308	14,485	8,643	9,267	5,404	1,479	711	854	70,151	524	125
1974	29,853	12,542	8,086	9,469	4,742	1,393	575	813	67,473	496	113
1975	28,217	12,514	8,241	8,793	5,104	1,496	554	869	65,788	478	105
1976	27,393	12,680	7,814	8,090	5,287	1,603	582	833	64,282	462	98
1977	27,943	14,659	7,696	7,922	6,224	1,603	634	868	67,549	480	99
Persons killed—											
1972	1,092	915	572	312	340	106	53	32	3,422	26	6
1973	1,230	935	638	329	358	105	55	29	3,679	27	7
1974	1,275	806	589	382	334	111	44	31	3,572	26	6
1975	1,288	910	635	339	304	122	64	32	3,694	27	6
1976	1,264	938	569	307	308	108	51	38	3,583	26	5
1977	1,268	954	572	306	290	112	47	29	3,578	25	5
Persons injured—											
1972	36,814	20,646	10,788	10,997	6,751	1,968	795	1,007	89,766	681	168
1973	39,294	20,011	11,660	12,625	7,377	2,103	1,012	1,122	95,204	712	169
1974	40,429	17,539	10,627	12,725	6,277	1,911	788	1,042	91,338	672	153
1975	38,141	17,437	11,019	12,020	6,832	2,137	789	1,124	89,499	650	142
1976	37,327	17,653	10,405	11,082	7,059	2,323	814	1,145	87,808	631	134
1977	38,407	19,672	10,002	10,781	8,353	2,343	882	1,176	91,616	651	134

(a) See footnote (a) to previous table.

(b) See footnote (b) to previous table.

Types of road user killed or injured

Responsibility for cause of accident is not indicated by this classification.

ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a): PERSONS KILLED OR INJURED, TYPES OF ROAD USER INVOLVED, 1977

<i>Type of road user</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>
PERSONS KILLED									
Drivers of motor vehicles	489	353	215	108	93	49	12	9	1,328
Motor cyclists	125	78	97	42	27	10	5	2	386
Pedal cyclists	22	27	27	9	10	3	1	2	101
Passengers (all types)(b)	363	276	141	96	101	32	20	12	1,041
Pedestrians	266	217	92	51	58	18	9	4	715
Other classes(c)	3	3	-	-	1	-	-	-	7
Total	1,268	954	572	306	290	112	47	29	3,578
PERSONS INJURED									
Drivers of motor vehicles	14,744	8,079	3,712	4,140	3,746	992	326	457	36,196
Motor cyclists	4,055	1,673	1,670	1,625	778	210	126	168	10,305
Pedal cyclists	1,067	883	349	554	268	46	27	103	3,297
Passengers (all types)(b)	14,149	6,931	3,511	3,646	2,877	908	336	367	32,725
Pedestrians	4,349	2,074	756	810	655	187	67	81	8,979
Other classes(c)	43	32	4	6	29	-	-	-	114
Total	38,407	19,672	10,002	10,781	8,353	2,343	882	1,176	91,616

(a) Accidents reported to the police which occurred in public thoroughfares and which resulted in death within thirty days or in bodily injury to an extent requiring surgical or medical treatment. (b) Includes pillion riders. (c) Includes bystanders, tram-drivers, riders of horses and drivers of animal-drawn vehicles.

Age groups of persons killed or injured**ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a): PERSONS KILLED OR INJURED BY AGE GROUP, 1977**

<i>Age group (years)</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>
PERSONS KILLED									
Under 5	36	29	14	10	13	1	2	1	106
5 and under 7	24	13	10	7	4	1	1	1	61
7 " " 17	110	72	69	34	30	11	5	2	333
17 " " 21	220	178	130	78	47	38	6	7	704
21 " " 30	281	213	140	71	75	24	18	6	828
30 " " 40	135	107	47	21	27	7	7	2	353
47 " " 50	107	75	43	16	24	6	5	5	281
50 " " 60	120	82	47	22	24	7	1	2	305
60 and over	233	166	72	47	44	16	2	3	583
Not stated	2	19	-	-	2	1	-	-	24
Total	1,268	954	572	306	290	112	47	29	3,578
PERSONS INJURED									
Under 5	1,253	571	283	240	218	65	29	32	2,691
5 and under 7	761	344	146	150	133	33	18	21	1,606
7 " " 17	4,493	2,144	1,215	1,618	847	351	77	158	10,903
17 " " 21	8,727	4,170	2,713	2,608	1,929	626	166	336	21,275
21 " " 30	9,233	4,802	2,349	2,141	2,006	548	308	312	21,699
30 " " 40	4,572	2,175	1,025	997	900	212	123	150	10,154
40 " " 50	3,190	1,507	675	668	624	145	63	68	6,940
50 " " 60	2,754	1,410	618	623	490	162	47	46	6,150
60 and over	3,006	1,385	705	630	513	178	16	53	6,486
Not stated	418	1,164	273	1,106	693	23	35	-	3,712
Total	38,407	19,672	10,002	10,781	8,353	2,343	882	1,176	91,616

(a) See footnote (a) to previous table.

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 1977. 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 1977

(Kilometres)

Class of road	N.S.W.	Vic.(a)	Qld	S.A.	W.A.	Tas.	Total
State Highways	10,478	(b)7,280	10,138	13,652	{ 7,717 7,602	{ 1,960 — 1,063	108,083
Trunk roads	7,075	14,548	{ 135				
Ordinary main roads	18,305		{ 8,130				
Total main roads	35,857	21,828	18,403	13,652	15,319	3,023	108,083
Secondary roads	(c)287	—	(d)13,774	—	8,772	290	23,123
Development roads	3,618	—	7,063	—	—	181	10,862
Tourist roads	403	797	—	—	—	150	1,350
Other roads	2,606	(e)1,032	—	—	—	—	3,638
Total other roads	6,914	1,829	20,837	—	8,772	621	
Grand total	42,772	23,657	39,240	13,652	24,091	3,644	147,056

(a) As from 1 July 1974 the Country Roads Board acquired the road making powers, roads and relevant staff of the Melbourne and Metropolitan Board of Works. (b) Includes 231 kilometres of freeways constructed by the Country Roads Board. (c) Metropolitan only. (d) Includes mining access roads, farmers' roads and tourist tracks. (e) 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 1977

(Kilometres)

Surface of roads	N.S.W.(a)	Vic.	Qld	S.A.	W.A.	Tas.	N.T.(b)	A.C.T.	(a)Total
Bitumen or concrete	66,878	57,538	42,648	18,088	32,593	7,308	4,907	1,680	231,640
Gravel, crushed stone or other improved surface	65,499	45,785	28,969	21,192	32,367	13,825	1,750	360	209,747
Formed only	41,920	27,825	62,558	24,225	46,276	702	{ 5,476	{ 42	400,742
Cleared only	14,689	28,537	51,373	37,024	52,077		{ 8,018	{ -	
Total	188,985	159,685	185,548	100,529	163,313	21,835	20,151	2,082	842,128

(a) Excludes 20,286 kilometres of road dedicated but not trafficable. (b) Figures as at 30 June 1976. Figures as at 30 June 1977 are not available.

Expenditure on roads and bridges

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

* Includes bridges.

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; Country Roads Board, Victoria; Main Roads Department, Queensland; Highways Department, South Australia; Main Roads Department, Western Australia; Department of Main Roads, Tasmania; Commonwealth Department of 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.

Road research is a continuing concern, and in 1959 the Association decided to set up and finance a separate national centre to conduct road research on behalf of its members. The Australian Road Research Board (ARRB) was duly established in 1960 as a company controlled by a Board consisting of the NAASRA members.

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

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

Australian Road Research Board

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

ARRB regularly undertakes and arranges 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. The Board also relies on advice from its Technical Committees in Bituminous Surfacing, Road Pavements, Human Factors, Local Government Engineering, Traffic Engineering and Transport Planning, and its Steering Committee of senior advisors.

ARRB disseminates road research information through its biennial conference, first held in 1962, and regular symposia, and through its publications which include the *Conference Proceedings*, a quarterly journal *Australian Road Research* and various reports arising out of its many research projects. The Board also maintains a unique library of road literature and operates an expanding computer-based information service called *Australian Road Index* which collects and collates all Australian road research findings. It also operates the International Road Research Documentation (IRRD) data base of OECD in Australia.

The Commonwealth Bureau of Roads

In June 1977, the Commonwealth Bureau of Roads was officially amalgamated with the Bureau of Transport Economics. (See section on the Bureau of Transport Economics at the beginning of this chapter.)

AIR TRANSPORT

Department of Transport

Control of air transport in Australia is exercised by the Department of Transport. The Department's jurisdiction covers Australia and areas of the Indian and Pacific Oceans. Year Books Nos. 16, 19 and 38 trace the establishment of air transport control in Australia and the appropriate Acts of Parliament and Regulations under which this control is exercised. Further details about air transport control and operations are given in the annual reports to the Commonwealth Parliament by the Minister for Transport.

Regular air services within Australia

Interstate services. The majority of scheduled interstate services with passenger and all-freight aircraft are provided by two airlines only: the private enterprise airline Ansett Airlines of Australia (a division of Ansett Transport Industries (Operations) Pty Ltd, which is a subsidiary of Ansett Transport Industries Ltd); and the Commonwealth Government-owned Trans-Australia Airlines (TAA). All principal routes are competitive, with both airlines providing equal capacities in accordance with legislation passed by the Commonwealth Parliament. The two principal Acts which establish the legislative basis of this controlled competition are the *Airlines Agreements Act* 1952 and the *Airlines Equipment Act* 1958. The *Airlines Equipment Act* established the machinery for the achievement and maintenance of comparable, but not necessarily identical, aircraft fleets between TAA and Ansett Airlines of Australia, and was designed to prevent the provision of excess aircraft capacity. The *Airlines Agreement Act* established the basis of control of the two-airline competitive system and extended this machinery until at least 1982. In addition to purely interstate services, both Ansett Airlines of Australia and Trans-Australia Airlines operate non-competitive intrastate routes in Australia.

At 30 June 1978, the Ansett Airlines of Australia fleet included twelve Boeing 727s, twelve DC-9s, twelve Friendships, three Electra freighters and three helicopters. At the same date, Trans-Australia Airlines operated a fleet of eleven Boeing 727s, twelve DC-9s, thirteen Friendships and four Twin Otter DHC-6s.

Intrastate services. In addition to the intrastate services operated by Ansett Airlines of Australia and Trans-Australia Airlines there are a number of smaller regional airlines operating from Sydney (Ansett Airlines of New South Wales and East-West Airlines), Adelaide (Ansett Airlines of South Australia), Perth (MacRobertson Miller Airlines), and Darwin (Connair). With the exception of Connair, which provides regular service to outback homesteads and communities, all of these are concerned primarily with traffic moving to and from their respective capital cities. Except for the independently-owned East-West Airlines and Connair, all regional airlines are divisions of Ansett Transport Industries (Operations) Pty Ltd. The larger aircraft used by these regional airlines are Fellowships and Friendships. Connair uses DC3s and Herons.

Commuter services. These are not airline services but regular flights by charter firms with small single and twin-engined aircraft operating to fixed and published timetables. Many provide regular air links between many centres, towns and country areas which are not served by the major airlines. The first commuter service approved was for Opal Air Pty Ltd, of Coober Pedy (S.A.), to operate between Adelaide and the South Australian opal fields. At 30 June 1978 forty-five charter operators were operating commuter services in Australia. 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)

		1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
Hours flown	number	248,774	256,435	281,611	282,706	270,928	258,151
Kilometres flown	'000	113,033	118,566	131,829	135,455	130,100	122,933
Passengers—							
Embarkations	number	6,629,316	7,502,892	8,857,654	9,393,104	9,315,141	9,348,697
Passenger-kilometres	'000	5,134,058	5,684,791	6,812,300	7,374,126	7,280,993	7,329,665
Freight—							
Tonnes uplifted	tonnes	89,883	94,425	112,654	107,813	106,061	108,108
Tonne-kilometres	'000	74,179	81,519	98,294	97,914	97,499	96,315
Mail—							
Tonnes uplifted	tonnes	10,137	10,114	9,916	9,613	9,708	9,636
Tonne-kilometres	'000	9,292	9,787	9,272	9,023	9,113	9,148

(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 Australia 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 serviced 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

<i>Airport</i>	<i>1971-72</i>	<i>1972-73</i>	<i>1973-74</i>	<i>1974-75</i>	<i>1975-76</i>	<i>1976-77</i>
Sydney	3,694,498	4,162,659	4,679,513	4,953,051	4,788,086	4,846,610
Melbourne	2,861,896	3,226,294	3,876,877	4,037,585	4,125,932	4,149,390
Brisbane	1,448,920	1,658,043	2,078,812	2,218,780	2,119,538	2,075,381
Adelaide	1,046,840	1,154,384	1,374,645	1,494,675	1,454,917	1,618,299
Canberra	670,608	813,712	934,069	981,815	901,837	881,668
Perth	545,890	536,057	646,699	696,527	629,530	704,041
Hobart	227,016	282,676	382,636	375,769	403,759	403,069
Townsville	202,160	231,665	315,782	320,153	329,831	322,498
Coolangatta	188,917	243,994	278,044	300,854	314,780	320,606
Launceston	208,090	244,982	294,694	287,741	304,784	309,341
Cairns	182,300	204,414	251,847	266,620	275,439	270,147
Mackay	133,806	159,408	196,951	213,972	249,196	244,025
Darwin	131,703	141,696	182,319	241,003	208,806	200,833

International activity

International organisations. The International Civil Aviation Organization had a membership of 129 nations in June 1977. Australia has continued its position as a member of the Council, which it has held since ICAO was established in 1947. Further details will be found in Year Book No. 40 and earlier issues.

International agreements. Australia had air service agreements in force with twenty-five countries at 30 June 1977. 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 six other countries at 30 June 1977.

International air services. At 30 June 1978, twenty-two overseas international airlines were operating regular scheduled air services to Australia. These were: Air-India (India), Air Nauru (Nauru), Air New Zealand (New Zealand), Air Niugini (New Guinea), Air Pacific (Fiji), Alitalia (Italy), British Airways Overseas Division (Britain), Canadian Pacific Air Lines (Canada), Cathay Pacific (Hong Kong), Deutsche Lufthansa (Federal Republic of Germany), Garuda (Indonesia), Japan Air Lines (Japan), JAT (Yugoslavia), KLM Royal Dutch Airlines (Netherlands), Singapore International Airlines (Singapore), Merpati Nusantara Airlines (Indonesia), Pan American World Airways (United States of America), Philippines Air Lines (Philippines), South African Airways (Republic of South Africa), Thai International (Thailand), Malaysian Airways (Malaysia), and Union de Transport Aeriens (France). Qantas, Australia's international airline, operates a fleet of nineteen aircraft of which one is a Hawker Siddeley, three are Boeing 707-338C jet aircraft and fifteen are Boeing 747B jet aircraft. All the shares in Qantas Airways Limited are owned by the Commonwealth Government.

International operations. The table following shows particulars of international airline traffic during 1976-77 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), 1976-77

<i>Type of traffic</i>	<i>Aircraft movements</i>	<i>Passengers</i>	<i>Freight</i>	<i>Mail</i>
Traffic to Australia—			tonnes	tonnes
Qantas Airways Limited	3,722	677,394	16,593	1,028
Other airlines	7,255	806,685	32,769	4,053
All airlines	10,977	1,484,079	49,362	5,081
Traffic from Australia—				
Qantas Airways Limited	3,736	637,886	12,160	2,021
Other airlines	7,224	773,000	16,936	946
All airlines	10,960	1,410,886	29,095	2,968

(a) Australian mainland and Norfolk Island.

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

AIR TRANSPORT: OPERATIONS OF AUSTRALIA'S REGULAR OVERSEAS SERVICES

		1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
Hours flown	number	91,357	87,548	90,293	86,231	85,839	79,499
Kilometres flown	'000	66,270	64,823	69,062	65,045	65,221	61,586
Passengers—							
Embarkations	number	885,548	1,054,929	1,295,457	1,418,541	1,488,858	1,551,679
Passenger-kilometres	'000	4,892,044	6,775,195	8,653,357	9,434,345	10,541,870	11,318,928
Freight—							
Tonnes uplifted	tonnes	20,961	23,239	27,328	29,974	33,417	34,380
Tonne-kilometres	'000	143,514	150,342	195,078	213,748	243,911	258,748
Mail—							
Tonnes uplifted	tonnes	2,841	2,791	2,912	2,950	2,997	3,205
Tonne-kilometres	'000	24,627	22,891	25,071	24,043	26,217	27,788

General aviation activity, which covers all non-airline operations such as charter, aerial work and private flying, has grown rapidly throughout Australia in recent years and is an important sector of the Australian aviation industry. Hours flown by general aviation during 1977-78 were estimated at 1.420 million, approximately 3.6 per cent more than the previous year.

Aerodromes

The number of aerodromes throughout Australia and its external territories at 30 June 1978 was 453. Eighty-two were owned by the Commonwealth Government and 371 by local authorities and private interests. Capital expenditure on aerodrome and building construction was \$19.3 million in 1977-78. Maintenance expenditure on Commonwealth Government-owned aerodromes during 1977-78 was \$5.0 million, and development and maintenance grants to licensed aerodromes participating in the Local Ownership Plan totalled \$1,847,920.

Airways facilities

A total of 416 navigational aids were in service at 30 June 1977. The total includes 224 non-directional beacons (NDB), 102 distance measuring equipment (DME), 9 international distance measuring equipment (DMEI), 9 visual-aural ranges (VAR), 55 VHF omni-directional ranges (VOR), 16 instrument landing systems (ILS) and one twin locator approach system.

One hundred and forty-two aerodromes are now equipped with night landing facilities. Eighty-one Australian-designed 'T' systems (T-VASIS) are operating. Seven long-range surveillance radars, two short range and nine secondary surveillance radars (seven civil, two military) are also in operation. There are twenty-seven fully-equipped Air Traffic Control Centres and fifty-three flight service units.

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

At 30 June 1978 there were 5,387 aircraft registered in Australia. At 30 June 1978 there were also 41,820 pilots' licences in force, of which 19,062 were private pilots' licences, 3,531 commercial pilots' licences, and 17,719 student pilots' licences. Flight radio-telephone operators' licences numbered 27,606.

Accidents and casualties

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

	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Number	30	34	24	32	33	45
Persons killed	41	46	25	54	39	54
Persons seriously injured	8	19	16	24	24	24

(a) Accidents involving civil aircraft which resulted in death or serious injury. Excludes parachutists killed on contact with earth after an uninterrupted fall. (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. The Central Offices of the Postal and Telecommunications Department are located in Canberra, Melbourne and Sydney.

Postal and Telecommunications Department—General

Early in 1975, legislation was passed to establish two statutory authorities—the Australian Telecommunications Commission and the Australian Postal Commission—to take over the postal and telecommunications responsibility of the former Postmaster-General's Department from 1 July 1975. The residual functions of the former department remain with the Postal and Telecommunications Department, which was created from that date. These mainly involve the administration of the *Wireless Telegraphy Act* 1905 which concerns the licensing and management of the radio frequency spectrum. The new Department also took over (from the former Department of the Media) the responsibility for policy matters concerned with broadcasting.

The principal functions of the Department are 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 Post and Telecommunications is responsible.

Since its establishment the Department has assumed other responsibilities, some of which are currently reflected in the *Wireless Telegraphy Act* 1905 and the *Broadcasting and Television Act* 1942.

The authorities responsible to the Minister for Post and Telecommunications have been established to provide within Australia a network or 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;
- to plan and manage the radio frequency spectrum and regulate radio communications service;
- to construct, maintain and operate the transmitters of the National Broadcasting and Television Service and the Radio Australia Service (*see* pages 470–472); and
- to provide agency services for Australian and State Government Departments and other instrumentalities.

Australian Postal Commission

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

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

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

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

- the introduction of Australia Post Courier services
- the introduction of a concessional rate for domestic Christmas greeting cards
- the introduction of a new postal Money Order Service
- the revision of the Registered Publications Service and
- the introduction of an overnight parcels service between all capital cities.

In order to improve services further, the Commission has undertaken a program to decentralise the mail sorting and distribution network. The program involves the establishment of regional mail sorting centres in country and suburban areas in each State. A number have already been established.

The following tables indicate Australia Post's financial results, services and operations for 1977–78. Selected tables also show figures from 1972–73 to 1977–78.

AUSTRALIAN POSTAL COMMISSION: REVENUE AND EXPENDITURE, 1973 TO 1978
(S'000)

<i>Year ended 30 June—</i>	<i>1973</i>	<i>1974</i>	<i>1975</i>	<i>1976(a)</i>	<i>1977(a)</i>	<i>1978(a)</i>
Revenue—						
Mail services	207,277	224,246	274,073	402,221	435,790	456,739
Money order, postal order services	4,778	4,944	5,653	7,481	6,881	6,242
Commission on agency services	10,055	11,863	13,207	85,892	101,739	95,636
Other revenue	4,386	3,943	9,055	10,044	17,186	20,110
Total	26,496	244,996	301,988	505,638	561,596	578,727
Expenditure—						
Operating and general	173,265	203,185	262,006	354,995	395,675	426,100
Transportation	35,404	36,638	42,214	46,723	50,168	55,343
Depreciation, superannuation, long-service leave, interest	38,719	59,691	62,364	72,258	86,854	95,217
Total	247,388	299,514	366,584	473,976	532,697	576,660

(a) Figures not comparable with years prior to 1976 due mainly to changes in accounting for work done at post offices for Telecom Australia.

NOTE: Prior to 1976, postal services were operated by the Postmaster-General's Department.

AUSTRALIAN POSTAL COMMISSION: STATEMENT OF REVENUE AND EXPENDITURE FOR THE YEAR ENDED 30 JUNE 1978
(S'000)

Revenue—	
Mail services	456,739
Postal order and money order services	6,242
Commission on agency services	95,636
Other revenue	20,110
Total	578,727
Expenditure—	
Operating and general	426,100
Transportation	55,343
Depreciation	11,786
Superannuation	60,250
Long Service Leave	17,083
Interest	6,098
Total	576,660
Accumulated surplus available for appropriation—	
Operating surplus	2,067
Accumulated surplus brought forward	21,234
Total	23,301
Appropriation—	
Transfer to fixed assets reserve	—
Total	—
Accumulated surplus carried forward	23,301

AUSTRALIAN POSTAL COMMISSION: SUMMARY OF TRANSACTIONS AFFECTING FIXED ASSETS, 1977-1978
(S)

<i>Class of asset</i>	<i>Value at 1 July 1977</i>	<i>Additions in the year</i>	<i>Asset expenditure written out</i>	<i>Value at 30 June 1978 (a)</i>
Land	22,972,796	1,918,347	109,384	24,781,759
Buildings	159,216,549	12,072,646	4,954,948	166,334,247
Motor vehicles	11,384,112	3,167,191	2,112,028	12,439,275
Plant	36,726,942	1,878,798	1,730,454	35,513,478
Equipment	14,028,685	2,405,832	450,768	15,983,749
Total value of fixed assets	244,329,084	21,442,814	9,357,582	255,052,508
Less depreciation				51,424,282
Net book value of fixed assets				203,628,226

(a) At cost.

TRANSPORT AND COMMUNICATION

AUSTRALIAN POSTAL COMMISSION: ANALYSIS OF TRANSACTIONS
AFFECTING THE PROVISION FOR DEPRECIATION, 1977-78

(\$)

<i>Class of asset</i>	<i>Balance of provision at 1 July 1977</i>	<i>Depreciation provided for in 1977-78</i>	<i>Asset expenditure written out</i>	<i>Balance of provision at 30 June 1978</i>
Buildings	29,859,499	3,624,004	4,954,948	28,528,555
Motor vehicles	2,740,121	3,794,702	2,112,028	4,422,795
Plant	13,078,105	3,355,356	1,730,454	13,341,199
Equipment	4,570,212	1,012,289	450,768	5,131,733
Total value of provision . . .	50,247,937	11,786,351	9,248,198	51,424,282

AUSTRALIAN POSTAL COMMISSION: PERSONS ENGAGED IN PROVIDING POSTAL SERVICES AT
30 JUNE 1978

	<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. 1978</i>	<i>Aust. 1977</i>
Full time official staff (a)—									
Permanent	520	9,268	6,105	3,431	2,535	2,037	669	24,565	23,729
Temporary	17	3,411	2,252	665	289	321	131	7,086	7,735
Other staff (b)	1	4,633	2,496	2,057	1,221	986	461	11,855	12,002
Total	538	17,312	10,853	6,153	4,045	3,344	1,261	43,506	43,466

(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 1978

	<i>N.S.W</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust. 1978</i>	<i>Aust. 1977</i>
Contract road services	1,818	832	1,081	314	376	187	4,608	4,692
Households receiving mail . . .	1,676,296	1,238,996	646,032	452,047	385,339	129,261	4,527,971	4,434,784
Businesses receiving mail . . .	144,053	111,322	63,593	37,243	34,708	10,248	401,167	388,323
Post Offices—								
Official—								
At 1 July 1977	515	335	218	171	164	42	1,445	..
At 30 June 1978	513	336	224	169	163	42	1,447	..
Non-official—								
At 1 July 1977	1,373	1,048	699	556	376	220	4,272	..
At 30 June 1978	1,339	1,003	639	552	376	215	4,124	..
Total post offices	1,852	1,339	863	721	539	257	5,571	..

AUSTRALIAN POSTAL COMMISSION: TOTAL POSTAL ARTICLES HANDLED

('000)

<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>	<i>Mail carried on domestic air services (included in total)(a)</i>	<i>Gross weight</i>
					<i>Articles</i>	<i>kilograms</i>
1973	2,425,799	108,306	156,520	2,690,625	523,762	6,794,426
1974	2,411,355	97,833	147,053	2,656,241	499,767	6,483,148
1975	2,281,898	93,898	140,176	2,515,972	495,725	6,430,717
1976	1,989,575	82,577	136,394	2,208,546	431,328	5,594,724
1977	1,972,570	85,005	140,802	2,198,377	496,470	6,448,310
1978	2,069,153	84,993	149,393	2,303,539	516,330	6,706,242

(a) Postings within Australia and Territories for delivery therein.

AUSTRALIAN POSTAL COMMISSION: ORDINARY POSTAL ARTICLES(a)
(^{'000})

Year ended 30 June	Standard letters			Total articles	Non-standard articles			Total articles
	Posted for delivery within Australia	Posted for places abroad	Received from abroad		Posted for delivery within Australia	Posted for places abroad	Received from abroad	
1976	1,711,812	67,880	99,028	1,878,720	258,586	12,114	32,609	303,309
1977	1,697,798	70,102	103,115	1,871,015	254,502	12,498	33,021	300,021
1978	1,774,608	67,610	110,222	1,952,440	273,189	14,893	34,379	322,461

STATES—YEAR ENDED 30 JUNE 1978

New South Wales	682,010	27,509	46,333	755,852	117,384	7,772	16,972	142,128
Victoria	477,281	21,844	40,426	539,551	87,311	4,456	11,211	102,978
Queensland	268,258	5,568	10,144	283,970	28,194	1,229	2,178	31,601
South Australia	156,052	6,497	5,802	168,351	17,517	398	1,634	19,549
Western Australia	142,559	5,950	7,517	156,026	15,259	1,003	2,374	18,636
Tasmania	48,448	242	..	48,690	7,524	35	10	7,569

(a) Includes certified messenger delivery and priority paid mail.

AUSTRALIAN POSTAL COMMISSION: REGISTERED ARTICLES(a) AND PARCELS(b)
(^{'000})

Year ended 30 June	Registered articles				Parcels			
	Posted for delivery in Australia	Posted for places abroad	Received from abroad	Total articles	Posted for delivery in Australia	Posted for places abroad	Received from abroad	Total articles
1973	7,071	1,846	2,455	11,372	22,483	1,137	1,824	25,444
1974	7,063	1,898	2,761	11,722	22,323	1,041	1,964	25,328
1975	6,256	2,113	2,797	11,166	20,419	1,002	1,939	23,360
1976	3,877	1,533	2,807	8,217	15,300	1,050	1,950	18,300
1977	3,370	1,375	2,696	7,441	16,900	1,030	1,970	19,900
1978	3,122	1,422	2,794	7,338	18,234	1,068	1,998	21,300

STATES—YEAR ENDED 30 JUNE 1978

New South Wales	1,031	707	1,670	3,408	6,848	460	722	8,030
Victoria	699	513	928	2,140	4,728	367	758	5,853
Queensland	580	60	51	691	3,130	88	256	3,474
South Australia	412	56	34	502	1,784	73	95	1,952
Western Australia	278	84	111	473	1,433	72	144	1,649
Tasmania	122	2	..	124	311	8	23	342

(a) Totals include messenger delivery mail. (b) Totals include certified, messenger delivery and priority paid mail.

**AUSTRALIAN POSTAL COMMISSION: SPECIAL SERVICES:
ARTICLES HANDLED**
(^{'000})

Year ended 30 June	Certified mail	Messenger delivery	Priority paid mail(a)
1973	6,116	1,716	1,354
1974	6,241	1,794	1,623
1975	6,288	1,572	1,462
1976	5,424	1,129	1,386
1977	4,927	1,007	1,449
1978	5,473	1,013	1,783

STATES—YEAR ENDED 30 JUNE 1978

New South Wales	1,598	601	791
Victoria	1,518	208	475
Queensland	1,041	83	156
South Australia	514	62	202
Western Australia	505	49	109
Tasmania	297	10	50

TRANSPORT AND COMMUNICATION
**AUSTRALIAN POSTAL COMMISSION:
 MONEY ORDERS AND POSTAL ORDERS**

Year ended 30 June	<i>Money orders issued(a)</i>					
	<i>For payment in Australia</i>		<i>For payment overseas</i>		<i>Postal orders issued(a)</i>	
	<i>Number</i>	<i>Value</i>	<i>Number</i>	<i>Value</i>	<i>Number</i>	<i>Value</i>
	'000	\$'000	'000	\$'000	'000	\$'000
1973	4,705	139,665	447	5,231	16,787	57,475
1974	4,348	149,099	426	5,343	15,822	60,887
1975	4,161	177,023	361	5,645	14,547	60,566
1976	3,685	197,201	258	4,681	9,673	42,554
1977	3,610	218,513	198	4,162	7,100	33,075
1978(b)	6,801	337,652	188	4,515	2,228	10,863

(a) Since 21 November 1977 a new Postal Money Order Service has replaced both the Money Order and Postal Order Services.
 (b) Money Orders issued includes Postal Money Orders issued since 21 November 1977.

**AUSTRALIAN POSTAL COMMISSION:
 SUMMARY OF AUSTRALIAN OVERSEAS AIRMAIL-ARTICLES
 ('000)**

Year ended 30 June	<i>Despatched overseas</i>			<i>Received from overseas</i>			
	<i>Letters</i>	<i>Other articles</i>	<i>Parcels</i>	<i>Total articles</i>	<i>Letters</i>	<i>Other articles</i>	<i>Total articles</i>
1973	63,818	6,762	202	70,782	91,950	8,598	632
1974	66,418	8,322	275	75,015	96,949	9,239	695
1975	66,097	8,508	301	74,906	96,615	9,557	741
1976	59,210	7,371	274	66,855	96,450	9,763	799
1977	59,103	7,433	337	66,873	97,885	11,013	851
1978	59,554	8,014	395	67,963	100,067	12,712	859

Telecommunications services within Australia

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

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

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

Financial Results

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

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

<i>Year ended 30 June—</i>	<i>1976</i>	<i>1977</i>	<i>1978</i>
Telephone rentals	416,831	454,111	495,420
Telephone calls	839,580	967,331	1,078,830
Telephone connections and rearrangements	58,447	77,465	80,719
Telegrams	29,423	31,511	31,303
Telex rentals	14,090	16,219	18,655
Telex calls	17,417	20,021	26,081
Other earnings(a)	48,401	108,334	125,490
Total	1,424,189	1,674,991	1,856,499

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

AUSTRALIAN TELECOMMUNICATIONS COMMISSION: EXPENDITURE
(S'000)

<i>Year ended 30 June—</i>	<i>1976</i>	<i>1977</i>	<i>1978</i>
Maintenance of plant	278,125	355,196	386,723
Operating	236,148	275,278	288,573
General and administrative	62,621	71,520	105,160
Accommodation	50,224	64,678	74,705
Depreciation	312,358	340,817	366,514
Superannuation	70,395	100,381	106,669
Long service leave	22,336	24,090	25,949
Interest	239,588	278,629	317,288
Total	1,271,795	1,510,589	1,671,580

AUSTRALIAN TELECOMMUNICATIONS COMMISSION:
FUNDS STATEMENT
(S million)

<i>At 30 June—</i>	<i>1976</i>	<i>1977</i>	<i>1978</i>
Source of funds—			
From the Commonwealth	392.0	215.0	65.0
From the public	—	193.7	200.3
From trading activities—			
Net trading result	152.4	164.4	184.9
Plus non-cash charges—			
Depreciation	312.4	340.8	372.3
Excess of liability over long service leave	10.0	7.1	10.3
Total	866.8	921.0	832.8
Application of funds—			
Increase in fixed assets and stores holdings	780.0	897.0	949.5
Less non-cash charges capitalised—			
Depreciation	-8.4	-9.2	-10.9
Long service leave liability	-13.0	-15.6	-17.1
Increase in current assets over current liabilities	108.2	48.8	-88.7
Total	866.8	921.0	832.8

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 1978

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Australia</i>
Type of service—							
Ordinary exchange services	1,415,185	1,107,015	480,962	346,211	289,958	100,850	3,740,181
Party line services	2,533	405	1,810	642	358	1	5,749
Private branch exchange	150,171	106,260	42,569	40,875	38,742	8,860	387,477
Public telephones	12,875	7,387	5,253	3,124	2,790	1,109	32,538
Connected to—							
Automatic exchanges	1,540,407	1,202,718	502,176	377,710	327,956	110,820	4,061,787
Manual exchanges	40,357	18,349	28,418	13,142	3,892	—	104,158
Located in—							
Metropolitan local service area	980,710	902,399	288,639	292,684	254,382	50,138	2,768,952
Country areas	600,054	318,668	241,955	98,168	77,466	60,682	1,396,993
Total	1,580,764	1,221,067	530,594	390,852	331,848	110,820	4,165,945

TELEPHONE INSTRUMENTS IN SERVICE

<i>At 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>Australia</i>
1976	2,236,284	1,598,447	644,988	478,276	404,041	139,472	5,501,508
1977	2,376,900	1,701,769	688,024	487,469	436,033	144,711	5,834,906
1978	2,537,345	1,749,733	735,262	531,475	472,788	154,713	6,181,316
Number per 100 population at 30 June	48.7	45.9	34.0	38.0	38.8	37.5	43.5

TRANSPORT AND COMMUNICATION
LOCAL AND TRUNK LINE TELEPHONE CALLS

<i>Year ended 30 June—</i>	<i>1976</i>	<i>1977</i>	<i>1978</i>
Effective paid local calls	3,720,000,000	3,924,000,000	4,186,000,000
Local calls per service	1,028	1,032	1,037
Trunk line calls	374,300,000	412,000,000	462,000,000
Trunk lines calls per service	103	108	114
Total calls	4,094,300,000	4,336,000,000	4,648,000,000

Subscriber Trunk Dialling (STD) facilities were introduced during the year 1961–62. For the year ended at 30 June 1978, 86.5 per cent of trunk calls were made by STD.

Telegrams

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

TELEGRAM TRAFFIC

<i>Year ended 30 June—</i>	<i>1976</i>	<i>1977</i>	<i>1978</i>
Ordinary	11,234,049	9,225,700	7,775,779
Urgent	292,018	172,149	164,497
Lettergrams	16,159	16,627	18,916
Meteorological	913,617	743,004	635,598
Service	474,449	240,289	371,252
Total telegrams	12,930,292	10,397,769	8,966,042

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>
1976	17,047	27,036,000
1977	19,601	29,435,000
1978	22,724	32,177,000

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

Overseas telecommunications services

The Overseas Telecommunications Commission (Australia), which was established by the *Overseas Telecommunications Act 1946*, is the authority responsible for the establishment, maintenance, operation and development of telecommunication services between Australia and other countries, the external territories (mostly islands in the Pacific and Indian Oceans) and ships at sea.

Telephone (including International Subscriber Dialling), telex, public message telegram, photo-telegram, switched data and leased circuit services are provided to many countries and places throughout the world by means of submarine cables, communication satellites and, in a decreasing number of cases, high frequency radio. Television services are provided to those countries with access to satellite communication facilities.

OTC is directed by five Commissioners appointed by the Governor-General. The chief executive is the General Manager, who is appointed by the Commission.

Details of overseas communication systems operating in Australia prior to 1946 and developments leading to the establishment of the Commission were published in Year Book No. 37, pages 220–4.

International consultation

OTC participates in the Commonwealth Telecommunications Organisation, the International Telecommunication Union and the International Telecommunications Satellite Organisation (INTELSAT) which has established a global communications satellite system. OTC is involved in

the establishment of the International Maritime Satellite Organisation (INMARSAT) which will provide a satellite system for high-grade telephone, telex and data communications with ships at sea on a global basis, including distress and search and rescue communications.

Establishments

The Commission's Head Office is in Sydney and it has offices in Melbourne and Brisbane. The Commission owns and operates International Gateway terminals at Paddington and Broadway in Sydney which interface with the national telecommunications network; cable stations at Ceduna (S.A.) Cairns (Qld) and at Guam in the Mariana Islands; satellite earth stations at Carnarvon (W.A.), Ceduna (S.A.) and Moree (N.S.W.) which provide more than half of Australia's telecommunications links; 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 and at Norfolk Island for communicating with ships at sea.

Submarine cables

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

Satellites

OTC is a shareholder in INTELSAT which operates communication satellites over the Indian, Pacific and Atlantic Oceans.

1977-78 Statistics

As at March 1978 the OTC staff totalled 2,080, revenue for the previous twelve months was approximately \$121 million and profit after tax was \$13.836 million, the after tax return on capital and reserves being 15.9 per cent. Telephone service which is available to 216 overseas destinations provided about 57 per cent of revenue, telex about 22 per cent and telegraph about 8 per cent. A significant event on 1 April 1976 was the introduction of International Subscriber Dialling or ISD, by which the customer can dial his or her own overseas telephone calls to many destinations. Over 98 per cent of overseas telex calls from Australia are now automatically subscriber connected.

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. OTC is applying computer techniques extensively in its telegraph, telephone and telex services.

Charges

The Commission made substantial reductions in charges for most international telecommunications services in 1977-78. Some other charges were increased to avoid excessive cross subsidisation.

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 to OTC.

International telecommunication traffic

The following table shows particulars of overseas telecommunication traffic between Australia and overseas countries for the years ended 31 March 1977 and 1978.

INTERNATIONAL TELECOMMUNICATION SERVICES: YEARS ENDED 31 MARCH 1977 AND 1978

Service		Transmissions					
		From Australia		To Australia		Total	
		1976-77	1977-78	1976-77	1977-78	1976-77	1977-78
Telephone	'000 paid minutes	26,345	35,877	26,506	32,025	52,851	67,902
Telex	'000 paid minutes	11,453	12,964	10,981	12,203	22,434	25,167
Television programs	paid minutes	921	2,464	9,254	21,873	10,175	24,337
Telegraph services	'000 words	62,174	59,351	51,075	44,360	113,249	103,711

Coastal stations

The Overseas Telecommunications Commission operates fourteen coastal radio stations at points around the Australian coast, and one at Norfolk Island. During the year ended 31 March 1978 the coastal radio service handled 6,077,000 paid words to ships and 5,134,000 words from ships. Ship calls over the radiotelephone service extended over 246,000 paid minutes.

Radiocommunication stations authorised

At 30 June 1977 there were 266,403 civil radiocommunication stations authorised for operation in Australia and its Territories. Of these, 5,887 were stations established at fixed locations, 21,620 were land stations which were established at fixed locations for communication with mobile stations, 13 were space and broadcasting stations, 231,060 were mobile stations and 7,823 were amateur stations. Particulars of broadcasting stations are shown on page 472.

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 Post and Telecommunications. Federal bodies which are directly involved include the Postal and Telecommunications Department, the Australian Broadcasting Commission, the Australian Broadcasting Tribunal, the Australian Telecommunications Commission and the Special Broadcasting Service.

Basically, the Australian broadcasting and television system is comprised of the following types of stations: national broadcasting and television stations funded by the Federal Government; commercial broadcasting and television stations operated by companies under licence; public broadcasting and television 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 Postal and Telecommunications Department 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 Broadcasting and Television Service

Commercial broadcasting and television stations are operated by companies under licences granted by the Australian Broadcasting Tribunal and with technical operating conditions determined by the Postal and Telecommunications Department. The stations obtain income from the broadcasting of advertisements. At 30 June 1977 there were 123 commercial broadcasting 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 sixty-six 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 by wireless telegraphy; it does not originate programs. There are ten repeater stations in Australia operated by mining companies which transmit programs recorded on magnetic tape over a limited area.

The fee for a licence to operate a commercial broadcasting or television station is \$200 plus an amount based on the gross earnings from advertising receipts during the preceding financial year, assessed on a sliding scale varying from 1 per cent for amounts up to \$0.5 million to 6.0 per cent on amounts exceeding \$5.0 million.

The Broadcasting and Television Act makes provision for the grant of licences for the operation of a broadcasting or a television station for special purposes. As at 9 November 1977 this section of the Act had not been proclaimed. However, fifteen stations have been licensed on an experimental basis and, of these, two are operated by music broadcasting societies in Sydney and Melbourne, while the remainder are associated with various tertiary educational institutions throughout Australia.

The Special Broadcasting Service

The *Broadcasting and Television Amendment Bill 1977*, which was passed by Parliament on 9 November 1977, makes provision for the establishment of the Special Broadcasting Service (SBS). The role of the new authority will be to produce special broadcasting programs which it would not be appropriate for the Australian Broadcasting Commission or other established broadcasters to undertake. Initially the SBS will be responsible for the ethnic broadcasting service through stations 2EA Sydney and 3EA Melbourne. It is envisaged that the SBS may, at a later stage, assume responsibility

for other special broadcasting and television services in Australia. New services by the SBS, however, may only be undertaken after parliamentary approval is given and the necessary regulations promulgated. The SBS will be empowered to fund its operations by the broadcasting of sponsored programs, by charging for the provision of services and facilities and by the sale of programs and rights or interests in programs. These avenues of funding are in addition to moneys appropriated annually from the Parliament to the SBS. The SBS will not, however, derive revenue by means of normal commercial advertising.

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 and to determine program and advertising standards applicable to licensed stations. In particular, the Tribunal is required to conduct public inquiries into the grant of licences following the invitation of applications by the Minister, and 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 Commission through transmitters operated by the Australian Telecommunications Commission.

Technical facilities. At 30 June 1978 the National Broadcasting Service comprised 110 transmitting stations, of which eighty-nine were medium frequency, four frequency modulation and seven-teen high frequency (six internal and eleven Radio Australia).

The medium-frequency transmitters operate in the broadcast band 530 to 1,590 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 1978 seventy-six of the Australian medium-frequency stations were situated outside the six State capital cities.

Program facilities. The programs of the Australian Broadcasting Commission cover a wide range of activities. The proportions of broadcasting time allocated on Radio 1 stations to the various types of program during 1977-78 were as follows: entertainment 57.3 per cent; news 8.0 per cent; sporting 13.1 per cent; spoken word 9.3 per cent; drama and features 1.2 per cent; parliament 8.5 per cent; religious 1.1 per cent; young people's programs 0.1 per cent; rural 0.5 per cent; and presentation 0.7 per cent. By contrast, the ABC's Radio 2 station's programming was: classical music 53.3 per cent; light music 0.9 per cent; entertainment 3.4 per cent; drama and features 5.6 per cent; young people's programs 0.5 per cent; education 6.0 per cent; spoken word 13.7 per cent; religious 3.5 per cent; news 8.5 per cent; rural 3.3 per cent; and presentation 1.1 per cent. Radio 3 (regional) stations feature a higher proportion of news and rural programs. Further particulars of the operations of the Australian Broadcasting Commission in respect of music, drama and features, youth education, talks, rural broadcasts, news, and other activities are shown in the Forty-sixth Annual Report of the Australian Broadcasting Commission.

Overseas Broadcasting Service

There are seven high-frequency stations at Shepparton, two at Lyndhurst, Victoria and two at Carnarvon, Western Australia which provide the overseas service known as 'Radio Australia'. As is the case of the National Broadcasting Service, these stations are maintained and operated by the Australian Telecommunications Commission, and their programs are arranged by the A.B.C. 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 70 news bulletins a day. The overseas audience has grown very substantially in recent years, as evidenced by a large and increasing number of letters from listeners abroad (317,106 in 1977-78), Radio Australia broadcasts in nine languages—English, Indonesian, Japanese, Neo-Melanesian, Thai, French, Standard Chinese, Cantonese and Vietnamese.

TRANSPORT AND COMMUNICATION
BROADCASTING STATIONS: 30 JUNE 1978

Type of station	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
National—									
Medium frequency	22	6	20	10	18	6	5	2	89
High frequency	1	2	2	—	1	—	—	—	6
Frequency modulation	1	1	—	1	—	—	—	1	4
Overseas—									
Short wave (Radio Australia)	—	9	—	—	2	—	—	—	11
Commercial—									
Medium frequency	40	22	27	9	15	8	2	2	125
Public community—									
Medium frequency	1	1	—	1	(a)2	—	—	1	6
Frequency modulation	5	3	1	—	1	1	—	—	11

(a) Includes one emergency broadcasting station.

Television services

The National Television Service

The National Television Service is provided by the Australian Broadcasting Commission through transmitters operated by the Australian Telecommunications Commission. The first national station (ABN Sydney) commenced regular transmission on 5 November 1956. At 30 June 1978, 159 stations were operating, including seventy-four translator stations.

The television programs provided by the Australian Broadcasting Commission cover a wide range of activities. The proportions of television time allocated among the ABC's various departments at 30 June 1978 were as follows: drama, 16.6 per cent; public interest, 16.2 per cent; sporting 17.1 per cent; news 6.4 per cent; variety and acts 5.3 per cent; education 26.1 per cent; musical performance 1.7 per cent; religious 0.9 per cent; rural 0.5 per cent; special arts and aesthetics 1.2 per cent; cartoons 1.4 per cent; panel and quiz games 0.3 per cent; and presentation 6.5 per cent. The average weekly transmission time for the 159 national television transmitters was eighty-seven hours during the year ended 30 June 1978.

During the year ended 30 June 1978, five new national translator channels went into operation at Mareeba, Babinda and Gordonvale in Queensland, St Helens in Tasmania and Pannawonica in Western Australia.

Twelve remote communities are now provided with ABC programs from material tape recorded at Townsville and Perth.

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 1978

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	13	7	31	6	15	2	3	—	77
Translator	23	8	13	4	11	14	1	—	74
<i>Total, National</i>	37	16	45	11	27	17	5	1	159
Commercial—									
Metropolitan television	3	3	3	3	2	1	1	1	17
Country television	11	16	8	3	4	1	—	—	33
Translator	27	10	20	2	4	16	—	1	86
<i>Total, Commercial</i>	41	19	31	8	10	18	1	2	130

Related publications

More detailed figures and particulars for earlier years are included in the annual bulletins, *Rail, Bus and Air Transport* (9201.0), *Public Authority Finance—Federal Authorities* (5502.0), and in the annual mimeographed statement *Motor Vehicle Registrations* (9304.0). Current information on subjects dealt with in this chapter appears in the *Monthly Review of Business Statistics* (1304.0), the *Digest of Current Economic Statistics* (1305.0), *Overseas and Coastal Shipping* (annual) (9207.0),

Motor Vehicle Registrations (quarterly) (9303.0), one preliminary monthly statement *Registration of New Motor Vehicles* (9301.0), two quarterly bulletins *Road Traffic Accidents involving Casualties* (9403.0) and (9402.0), and the monthly bulletin, *Road Accident Fatalities* (9401.0).

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

