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SOUTH AUSTRALIAN  
**Year book** *1995*

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# **South Australian Year Book**

**1995**



COVER: Lake Gairdner filled with water, September 1993.

In March 1994 Rosco McGlashan used this section of the Lake (then dry) to establish a new Australian land speed record of 802 kilometres per hour in his jet-powered *Aussie Invader 2*.

*Photo: ABC TV News Weather Program  
Taken by Genè Brand*

# South Australian Year Book

**No. 29 : 1995**

**P.M. GARDNER**

*Deputy Commonwealth Statistician  
and Government Statist*

AUSTRALIAN BUREAU OF STATISTICS  
SOUTH AUSTRALIAN OFFICE

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## Preface

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The *South Australian Year Book* is the major reference publication prepared by the South Australian Office of the Australian Bureau of Statistics (ABS). It provides a detailed statistical profile of the State and reflects its social, demographic and economic development in geographical and historical context. The *South Australian Year Book* utilises the wide range of social and economic data available from the ABS to produce a comprehensive picture of contemporary South Australian society.

Most of the statistics contained in this volume relate to the years ended December 1993 or June 1994. More detailed, or more recent, statistics may be available in other ABS publications. The more significant of these publications are listed at the end of the relevant chapters of the Year Book, while the *ABS Catalogue of Publications and Products* (1101.0) lists all current publications of the ABS.

This, the twenty-ninth issue includes for the first time a new chapter on Environmental Management in South Australia and features a special supplement on the Royal Geographical Society of South Australia. This issue also contains an article on Whyalla (including a pictorial section) in an ongoing series presenting detailed studies of various regions of the State.

Other new initiatives for this issue include a State Statistical Summary, a special feature of important events that occurred in the State during 1993–94 and one page cameos on Football Park and the 'Bay Tram'.

I extend my thanks and appreciation to all those staff involved in the preparation of the *South Australian Year Book* and the organisations who have kindly supplied material for inclusion in this edition.

**P.M. GARDNER**  
*Deputy Commonwealth Statistician  
and Government Statist*

November 1994





## **Note of Appreciation**

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ABS publications draw extensively on information provided freely by individuals, businesses, governments and other organisations. Their continued cooperation is very much appreciated; without it the wide range of statistics published by the ABS would not be available for general use by the community. Information received by the ABS is treated in strict confidence as required by the Census and Statistics Act.



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## General Information

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<b>Symbols used</b>	n.a.	not collected
	n.e.c.	not elsewhere classified
	n.e.i.	not elsewhere included
	n.e.s.	not elsewhere specified
	n.p.	not available for publication but included in totals where applicable
	n.y.a.	figures not yet available
	p	preliminary
	..	not applicable
	-	nil or less than half the final digit shown
	—	break in continuity of series (where drawn across a column between two consecutive figures)

**Other forms of usage** Yearly periods shown as 1993 refer to the year ended 31 December 1993; those shown as 1992-93 refer to the year ended 30 June 1993. Other periods are specifically indicated.

In general, statistics in this volume relate to South Australia. A few tables, which are appropriately footnoted, include details for the Northern Territory.

Values are shown in Australian dollars (\$) or \$A).

Where figures have been rounded, discrepancies may occur between sums of component items and totals. Adjustments are made randomly to data from the Population Census to protect the confidentiality of individuals and may not add to totals.

**Citation of Acts** Acts of the South Australian Parliament are cited in italics *e.g. Planning Act 1982*. Acts of the Commonwealth Parliament are cited in italics immediately followed by jurisdiction (abbreviated) in parentheses *e.g. Census and Statistics Act 1905 (Cwlth)*.

**Services provided by ABS** A comprehensive range of statistics is made available to clients in published form. Some statistics, including those which are not published, may be available in the form of microfiche, photocopy, computer printout, clerically-extracted tabulation, floppy disk, magnetic tape and compact disk. A wide range of statistics can also be accessed electronically.

The *Catalogue of Publications and Products* (1101.0) shows the range of ABS products. These products are available for sale from the ABS Bookshop. The library holds copies of ABS publications and is open to the public.

The ABS has a publication subscription service. Readers are encouraged to subscribe to ensure they receive them on a regular and timely basis.

The Information Consultancy Service, which operates on a fee for service basis, has specialist staff to assist and advise clients with their statistical inquiries.

For more information about these services telephone the Information Officer on Adelaide (08) 237 7100 or call at the ABS, 55 Currie Street or write to Information Services, ABS, GPO Box 2272, Adelaide 5001.



**A STATISTICAL SUMMARY OF SOUTH AUSTRALIA  
AND COMPARISON WITH AUSTRALIA**

<i>Item</i>	<i>Unit</i>	<i>Period</i>	<i>South Australia</i>	<i>Australia</i>	<i>Per cent (a)</i>
<b>NATURAL ENVIRONMENT</b>					
Total area .....	'000 km <sup>2</sup>		984	7,682	12.8
Length of coastline .....	km		3,700	36,735	10.1
<b>POPULATION</b>					
Estimated resident population .....	'000	June 1993p	1,463	17,657	8.3
Estimated resident population aged 0-14 .....	No.	June 1993p	300,675	3,826,970	7.9
Estimated resident population aged 75 and over .....	No.	June 1993p	78,643	818,199	9.6
Rate of population growth .....	per cent	1992-93p	0.36	0.96	..
Projected population (Series A) .....	'000	2041	1,622	24,858	6.5
Indigenous population .....	No.	Census 1991	16,232	265,459	6.1
<b>SOCIAL ENVIRONMENT</b>					
Victims of robbery .....	No.	1992	1,703	12,765	13.3
Households: victims of crime .....	'000	April 1993	53.8	522.0	10.3
Homicides committed .....	No.	1993	106	802	13.2
<b>EDUCATION</b>					
Full-time school students .....	No.	1993	247,227	3,098,375	8.0
Students at universities .....	No.	1993	44,471	575,617	7.7
Apprenticeships completed .....	No.	1993-94	2,867	29,916	9.6
Total outlay on education .....	\$m	1993-94	1,662	18,654	8.9
<b>LABOUR</b>					
Employed .....	'000	1993-94	635	7,781	8.2
Unemployed .....	'000	1993-94	77	915	8.4
Labour force .....	'000	1993-94	713	8,696	8.2
Civilian population aged 15 years and over .....	'000	1993-94	1,163	13,854	8.4
Unemployment rate .....	per cent	1993-94	10.8	10.5	..
Unemployment rate 15-19 year olds looking for full-time work .....	per cent	1993-94	28.3	23.7	..
Participation rate .....	per cent	1993-94	61.3	62.8	..
Trade union members .....	No.	June 1994	294,000	3,000,100	9.8
Working days lost per 1,000 employees Average weekly earnings (full-time adults; ordinary time) .....	Days \$	1993-94 1993-94	34 600	91 609	.. ..
<b>AGRICULTURE, FORESTRY AND FISHERIES</b>					
Area of crops .....	'000 ha	1992-93	3,073	17,297	17.8
Area of vines .....	hectares	Mar. 1993	26,134	62,816	41.6
Barley production .....	'000 tonnes	1992-93	1,855	5,397	34.4
Wheat production .....	'000 tonnes	1992-93	2,421	14,739	16.4
Sheep numbers .....	'000	Mar. 1993	12,151	109,705	11.1
Cattle numbers .....	'000	Mar. 1993	1,104	24,062	4.6
Grape production .....	tonnes	1992-93	286,138	793,996	36.0
Estimated value of agricultural commodities produced .....	\$m	1993-94p	2,086	22,700	9.2
Total red meat production .....	tonnes	1993-94p	249,780	2,811,390	8.9
Total wool production .....	'000 tonnes	1992-93	98.9	712.0	13.9

**A STATISTICAL SUMMARY OF SOUTH AUSTRALIA  
AND COMPARISON WITH AUSTRALIA (continued)**

<i>Item</i>	<i>Unit</i>	<i>Period</i>	<i>South Australia</i>	<i>Australia</i>	<i>Per cent (a)</i>
<b>HOUSING AND BUILDING</b>					
Private dwellings . . . . .	No.	Census 1991	569,163	6,449,964	8.8
Non-private dwellings . . . . .	No.	Census 1991	41,923	581,624	7.2
Dwelling unit commencements . . . . .	No.	Yr ended Mar. 1994	11,625	173,848	6.7
Buildings: value of work done . . . . .	\$m	Yr ended Mar. 1994	1,499	25,143	6.0
Engineering construction, value of work done . . . . .	\$m	Yr ended Mar. 1994	797.4	12,405.9	6.4
<b>MANUFACTURING</b>					
Employment . . . . .	'000	June 1992	86.6	906.9	9.5
Manufacturing turnover . . . . .	\$m	1991-92	15,387	168,019	9.2
Transport equipment turnover . . . . .	\$m	1991-92	3,951	14,153	27.9
Food, beverages and tobacco turnover	\$m	1991-92	2,648	35,768	7.4
<b>MINING AND ENERGY</b>					
Mining establishments turnover . . . . .	\$m	1992-93	1,249.1	31,507.1	4.0
Minerals metallic value . . . . .	\$m	1992-93	287.1	10,920.3	2.6
Mineral exploration expenditure . . . . .	\$m	1992-93	21.3	631.8	3.4
<b>COMMERCE</b>					
Imports . . . . .	\$m	1993-94	2,803	64,470	4.3
Exports . . . . .	\$m	1993-94	3,879	61,556	6.3
Exports of road vehicles, parts and accessories . . . . .	\$m	1993-94	351	937	37.5
Exports of wine . . . . .	\$m	1993-94	241	368	65.5
Exports to Japan . . . . .	\$m	1993-94	623	14,732	4.3
Turnover of retail establishments (1989-90 prices) . . . . .	\$m	1993-94	6,790	90,341	7.5
Consumer price index: change from previous year . . . . .	per cent	1993-94	2.0	1.8	..
<b>TRANSPORT</b>					
New motor vehicle registrations . . . . .	No.	1993-94	38,586	574,266	6.7
Road traffic accidents: deaths . . . . .	No.	1992	173	2,066	8.4
<b>PUBLIC FINANCE</b>					
Gross domestic product (I) . . . . .	\$m	1993-94	31,858	425,566	7.5
Wages, salaries and supplements . . . . .	\$m	1993-94	16,180	211,298	7.7
Private final consumption expenditure: Current prices . . . . .	\$m	1993-94	20,160	264,235	7.6
1989-90 prices . . . . .	\$m	1993-94	17,918	237,716	7.5
Private gross fixed capital expenditure	\$m	1993-94	3,873	64,872	6.0
<b>STATE FINANCE</b>					
Secured housing finance commitments to individuals . . . . .	\$m	1993-94	3,620	50,750	7.1
Personal finance commitments . . . . .	\$m	1993-94	1,830	25,245	7.2
Lease finance commitments . . . . .	\$m	1993-94	254	5,880	4.3
Commercial finance commitments . . . . .	\$m	1993-94	5,499	95,113	5.8
Private new fixed capital expenditure . . . . .	\$m	Yr ended Mar. 1994	1,343	26,017	5.2

(a) South Australia as a percentage of Australia.



## 1.1 DESCRIPTION

### Size and location

The State of South Australia has the Southern Ocean to the south and is flanked on the other sides by land. It lies south of the 26th parallel of south latitude and has as a western boundary the 129th meridian of east longitude. The eastern boundary, north of the River Murray, corresponds with the 141st meridian, while to the south, between the river and the sea, the boundary lies approximately three kilometres to the west of this meridian.

The State is approximately 1,201 kilometres from east to west at the northern boundary and 1,139 kilometres at the head of the Great Australian Bight; from north to south it varies from 630 kilometres near the western extremity to approximately 1,336 kilometres near the eastern boundary; its coastline, excluding islands, measures approximately 3,700 kilometres. South Australia covers a total area of 984,377 square kilometres (one-eighth of the area of the Australian continent); however, approximately one-third of this area has no significant economic use and more than one-half is devoted to extensive pastoral pursuits. Approximately 99 per cent of the population live south of the 32nd parallel.

A comparison of the areas, length of coastline and standard time of the various States and Territories is shown in the following table.

Area, Coastline and Standard Times, Australia

State or Territory	Estimated area (a)		Length of coastline (a)	Standard time	
	Total	Percentage of total area		Meridian selected	Ahead of GMT
	'000 km <sup>2</sup>		km		hours
New South Wales.....	802	10.43	1,900	150°E	(b)10.0
Victoria.....	228	2.96	1,800	150°E	(b)10.0
Queensland.....	1,727	22.48	7,400	150°E	10.0
Western Australia.....	2,526	32.87	12,500	120°E	8.0
<b>South Australia.....</b>	<b>984</b>	<b>12.81</b>	<b>3,700</b>	<b>142°30'E</b>	<b>(b)9.5</b>
Tasmania.....	68	0.88	3,200	150°E	(b)10.0
Northern Territory.....	1,346	17.52	6,200	142°30'E	9.5
Australian Capital Territory	2	0.03	35	150°E	(b)10.0
<b>Australia.....</b>	<b>7,682</b>	<b>100.00</b>	<b>36,735</b>	..	..

(a) As determined by the Survey and Land Information Group.

(b) Because of 'daylight saving' an hour should be added from late October to early March.

The areas and length of coastline were determined by the Survey and Land Information Group by manually digitising these features from the 1:250,000 map series of Australia. This means that only features of measurable size at this scale were considered. About 60,000 points were digitised at an approximate spacing of 0.5 kilometres. These points were joined by chords as the basis for calculation of areas and coastline lengths by computer.

Distances Between Adelaide and Other Capital Cities  
(Kilometres)

Method of travel	Canberra	Sydney	Melbourne	Brisbane	Perth	Hobart	Darwin
Road (a) . . . .	1,178	1,401	729	2,116	2,716	..	3,042
Rail . . . . .	1,595	1,692	776	2,641	2,661	..	..
Sea . . . . .	..	1,833	949	2,761 (b)	2,509	1,436 (c)	5,799
Air . . . . .	988	1,196	660	1,967	2,216	1,283	2,766

(a) RAA recommended routes. (b) To Fremantle. (c) Via Fremantle.

**Standard time**

In terms of the *Standard Time Act 1898* South Australia has used 'the mean time of the meridian of longitude 142.5 degrees east of Greenwich' as standard time since 1 May 1899. This time, known in Australia as Central Standard Time, is nine hours thirty minutes ahead of Universal Time Constant, one hour thirty minutes ahead of Western Standard Time used in Western Australia and thirty minutes behind Eastern Standard Time used by States on the east coast of Australia.

The *Daylight Saving Act Amendment Act 1972*, provided for the observance of daylight saving in the summer of 1972-73, and in each summer since, from October to March.

A special article on the basis of time keeping and the determination of time standards was included on pages 4-5 of the *South Australian Year Book 1984*. An article on the determination of the time of sunrise and sunset was included on pages 6-7 of the same issue.

**Physical features**

South Australia is a land of generally low relief, the inland area being largely covered by featureless plains, or sand and gibber deserts. Approximately 50 per cent of the State is less than 150 metres above sea level and over 80 per cent is less than 300 metres. Even the dominant mountains, the Mount Lofty-Flinders Ranges system, nowhere exceed 1,200 metres and have at no point proved difficult barriers to communications.

Kangaroo Island, approximately 480 kilometres in circumference and covering 4,350 square kilometres, is the predominant island off the South Australian coastline. There are, however, approximately 100 islands in all, relatively few of which are utilised.

The most important mountains are the Mount Lofty-Flinders Ranges system. Kangaroo Island structurally belongs to these ranges which, together with parallel subsidiary ranges, extend north from Cape Jervis some 800 kilometres to the northern end of Lake Torrens. In the south the rounded hills of the Mount Lofty Ranges are of comparatively low altitude with Mount Lofty, the highest peak, being 727 metres. The western side of these ranges presents steep scarps to the Adelaide Plains while on the eastern side more gentle slopes merge into the Murray Basin.

To the north the Flinders Ranges are of greater height and sharper outline than their southern counterpart. St Mary Peak of 1,168 metres is the highest point. North of Peterborough there is a divergence from the main range which stretches *via* the Olary Ridges to the Barrier Range and Broken Hill. In the far north the ranges again diverge; one spur circling the northern end of Lake Torrens and the other ending north of Lake Frome. The Flinders Ranges contain some unusual basins of which Wilpena Pound is perhaps the best known.

The western half of the State is largely occupied by a low plateau over which an intermittent series of low ranges, including the Warburton, Stuart, Denison, Peake, and Everard Ranges, stretch from the Flinders to the somewhat higher Musgrave Ranges in the far north-west. Mount Woodroffe (1,435 metres), the highest point in the State, is located in the Musgrave Ranges.

The comparatively low hills of the Gawler Ranges form the northern side of the Eyre Peninsula triangle, and to the west of Whyalla lie the economically important Middleback Ranges. Isolated peaks of volcanic origin are found in the extreme south-east of the State.

The River Murray, which drains approximately one-seventh of Australia, enters the sea in South Australia and is the State's only major river. The fall of the Murray is very slight, dropping less than twenty-two metres over the 642 kilometres between the border and the sea. For the 216 kilometres to Overland Corner the river occupies a wide valley and then passes through a narrower steeper-sided valley to Lakes Alexandrina and Albert at its heavily silted mouth.

Surrounding the northern Flinders Ranges is a series of vast lakes which are in reality lakes only after particularly heavy rainfall, normally appearing as shallow depressions with a salt or clay encrusted surface. Lake Eyre, the largest of these, is sixteen metres below mean sea level and is fed by a series of intermittently flowing rivers, including the Finke, the Diamantina and Cooper Creek, which traverse the plains of the north-east, constituting one of the largest areas of internal drainage in the world. To the south of Lake Eyre are Lakes Gairdner, Frome and Torrens, the last named being 240 kilometres in length.

## 1.2 CLIMATE AND METEOROLOGY

The weather at mid-latitudes in the southern hemisphere is generally not as extreme as that in the northern hemisphere. This is because the southern hemisphere has extensive ocean areas and no large land masses linking the polar regions to the mid-latitudes. The ameliorating effect of land-sea distribution is particularly noticeable in southern South Australia.

South Australia has hot, dry summers with relatively mild nights, and cool winters with most rainfall occurring during May to August.

Briefly, the basic features of the South Australian climate are hot, dry summers with relatively mild nights, and cool but not severe winters with most rainfall occurring during the months of May, June, July and August.

### **Meteorological observations**

Meteorological services throughout Australia are provided by the Bureau of Meteorology. The South Australian Regional Office is located in Adelaide. It issues forecasts and warnings for the State, provides bulletins of weather statistics and reports on climatic issues such as trends in South Australia's recorded temperatures.

### **Rainfall**

#### *Average annual rainfall*

South Australia is by far the driest of the Australian States with about four-fifths of the State normally receiving less than 250 millimetres of rain annually. By comparison only about one-third of the continent receives less than 250 millimetres.

As can be seen from the annual rainfall map, isohyets generally show highest annual averages along the Flinders and Mount Lofty Ranges and near the southern coast. Averages fall off rapidly to less than 250 millimetres within 150 to 250 kilometres inland. They then decrease more gradually to below 150 millimetres near Lake Eyre. This area is the driest part of Australia: there have been protracted periods when the annual rainfall here has been less than 75 millimetres.

#### *Seasonal distribution of rainfall*

In the settled areas of the State, rainfall has a marked winter maximum. Rainfall from November to March is generally light and unreliable. A high evaporation rate during these months means that these rains are generally not significant from the agricultural point of view. The first significant rains generally arrive during late April or May; winter (June to August) is usually the wettest period, with rains tending to show a marked decrease during September and October. By contrast, the occurrence of rainfall over the interior of the State is quite erratic, but a trend towards a slight winter maximum is discernible in southern parts of this area.

Mean monthly rainfalls for selected recording stations are shown in the following table.

Mean Rainfall : Selected Stations<sup>(a)</sup>  
(Millimetres)

<i>Period</i>	<i>Ceduna</i>	<i>Ernabella</i>	<i>Kingscote</i>	<i>Moonta</i>	<i>Mount Gambier</i>	<i>Oodnadatta</i>
January.....	10	44	14	14	25	28
February.....	14	36	17	17	26	29
March.....	17	27	18	19	36	14
April.....	22	20	36	35	58	11
May.....	36	19	59	47	73	15
June.....	37	17	72	49	81	12
July.....	42	12	78	46	100	10
August.....	37	14	66	41	94	9
September.....	28	12	47	36	71	10
October.....	26	24	36	31	64	13
November.....	21	22	23	22	47	11
December.....	21	29	19	17	37	14
Year.....	310	276	486	374	712	176

<i>Period</i>	<i>Murray Bridge</i>	<i>Pinnaroo</i>	<i>Port Lincoln</i>	<i>Port Pirie</i>	<i>Renmark</i>	<i>Woomera</i>
January.....	17	17	13	17	16	16
February.....	18	22	15	18	18	21
March.....	21	19	20	18	15	17
April.....	29	25	38	29	19	13
May.....	36	36	58	40	26	23
June.....	37	36	74	41	25	15
July.....	35	36	79	34	23	17
August.....	37	39	70	36	26	15
September.....	36	36	50	35	27	16
October.....	34	34	35	33	27	17
November.....	25	26	22	24	21	17
December.....	23	21	19	22	18	14
Year.....	348	347	494	347	261	201

(a) For all years of record to end of 1992.

*Rainfall intensity*

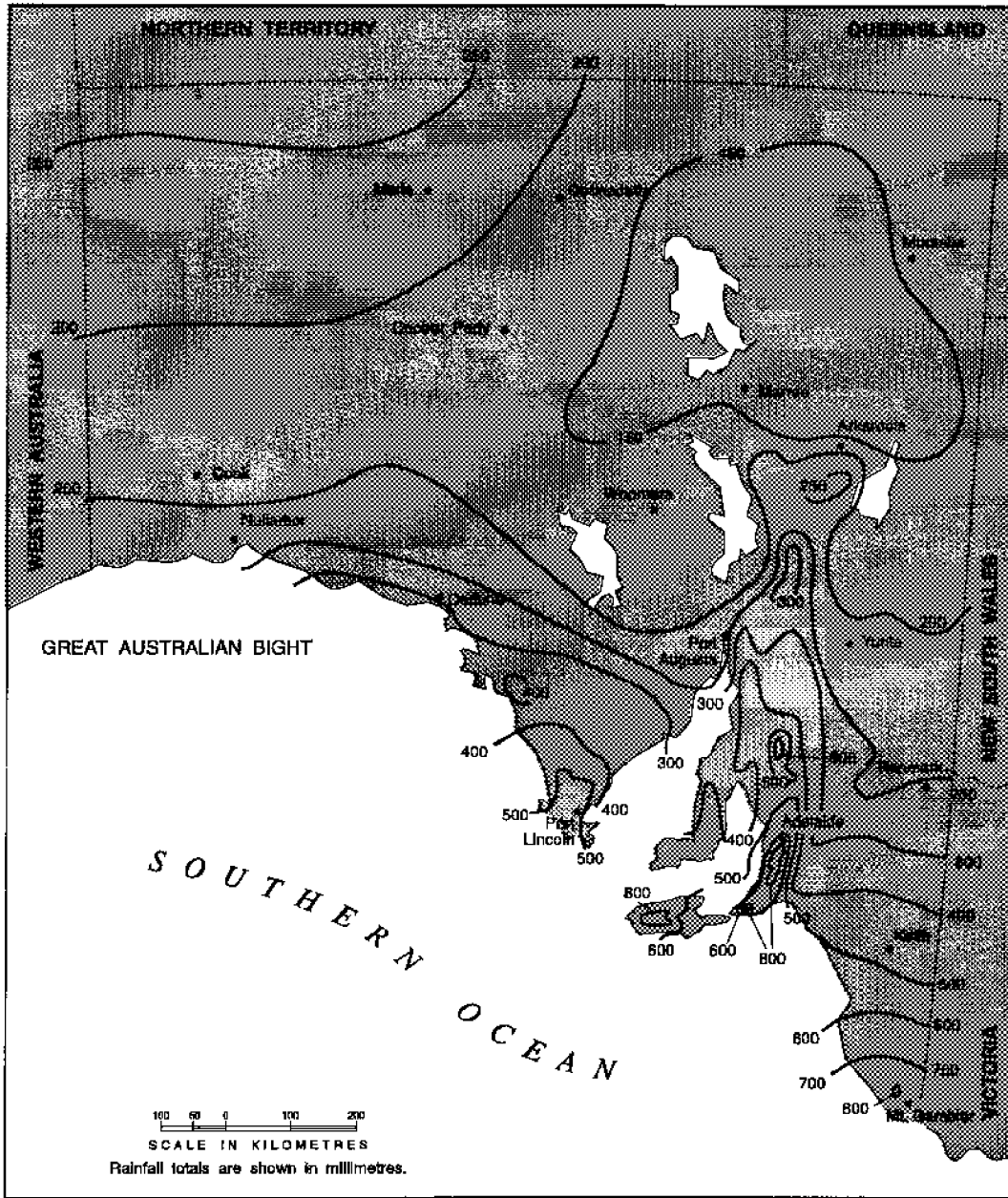
Long sustained periods of intense rainfall are rare in South Australia. However, occasionally there are very intense falls lasting only a few minutes. Falls at a rate of more than 100 millimetres an hour, over a five-minute period, have been recorded in Adelaide on several occasions. Such intense falls can cause considerable damage to crops and to light or freshly worked soils.

The most notable falls of rain which have occurred within a period of 24 hours ending at 9 a.m. were at:

Motpca (14 March 1989) .....	273 mm
Cordillo Downs (6 February 1991).....	241 mm
Stansbury (18 February 1946) .....	222 mm
Stirling (17 April 1889).....	208 mm
Ardrossan (18 February 1946) .....	206 mm
Oodnadatta (9 February 1976).....	200 mm

Several other exceptional rainfalls have been recorded by private observers including 228 millimetres in four hours at Dutton (near Truro) on 2 March 1983. During this storm a fall in excess of 300 millimetres occurred at a nearby property.

ANNUAL RAINFALL, SOUTH AUSTRALIA



- Snow and hail** The occurrence of snow in South Australia is infrequent and is mainly confined to the Mount Lofty and southern Flinders Ranges. Most falls are very light and do not persist. Hail has been reported in all parts of the State but falls most frequently about the southern coasts and ranges during winter. Although hail is more frequent in winter, summer thunderstorms produce the largest hailstones.
- Droughts** When dry conditions persist over wide areas for long periods of time, drought, the worst of all Australian climatic hazards, is experienced. The worst drought years in the settled areas of South Australia were 1863–67, 1896–98, 1901–03, 1913–16, 1926–30, 1939–40, 1943–45, 1959–62, 1965, 1982–83 and 1990–91 and in the interior, 1859–60, 1884–86, 1895–98, 1911–15, 1928–29, 1943–45, 1959, 1967, 1976–77, 1982–83, 1987–88 and 1990–91.
- Humidity** In the north of the State the mean relative humidity in summer is under 35 per cent, this increases to about 50 per cent in winter. Most southern parts of the State have an average humidity of 45 to 55 per cent in summer, increasing to 70 to 80 per cent in winter.
- Since relative humidity depends not only on the actual water vapour content of the air but also on air temperature, there is a tendency for highest relative humidities to be associated with low temperatures during the early morning hours. Conversely, the lowest values tend to occur during the warmest part of the afternoon.
- Sunshine and cloud** The annual average sunshine as determined from records of sunshine (and average cloudiness) ranges from about 2,000 hours along parts of the southern coastal fringe to 3,500 hours near the northern border of the State.
- Wind** The prevailing winds across South Australia are generally south–easterly during the summer months. A well defined sea–breeze is common along the whole of the coastal fringe from October through to April or May. During the winter months north–westerly winds predominate, but the proportion of west to south–west winds is also high.
- Temperature** Because of the ocean's moderating effects daily variations in temperatures tend to increase with distance from the coast. However, the Mount Lofty and Flinders Ranges are cooler than the surrounding country due to their altitude. During summer mean maximum temperatures range from less than 25°C along the southern coasts to more than 37°C in the far north. In winter minimum temperatures are generally greater than 7°C along the coasts and over the north–west of the State. Most of the inland has values higher than 3°C. However, mean minima of less than 3°C are found on the higher parts of the ranges. The highest temperature recorded in South Australia was 50.7°C at C. odnadatta on 2 January 1960, and the lowest –8.2°C at Yongala on 20 July 1976.

Mean Maximum Temperatures : Selected Stations  
(°Celsius)

Period	Mount			Murray			
	Ceduna	Gambier	Oodnadatta	Port Pirie	Kingscote	Bridge	Renmark
January . . .	28.5	25.1	37.5	31.8	23.7	28.6	32.4
February . . .	28.0	24.9	36.5	31.6	23.5	29.0	32.0
March . . . . .	26.6	23.0	33.9	29.4	22.1	26.4	28.9
April . . . . .	24.0	19.3	28.2	24.7	19.8	23.2	24.2
May . . . . .	20.7	16.0	22.9	20.3	17.4	19.4	19.5
June . . . . .	18.1	13.8	19.7	17.1	15.3	16.5	16.7
July . . . . .	17.2	13.0	19.4	16.3	14.6	16.1	16.1
August . . . .	18.4	13.9	21.7	17.9	15.0	17.0	17.8
September . .	21.2	15.7	25.9	21.2	16.4	19.3	20.7
October . . . .	23.7	17.8	30.2	24.4	18.5	22.4	24.4
November . . .	25.8	20.1	33.7	27.5	20.5	25.1	27.8
December . . .	27.1	22.7	36.4	29.9	22.3	27.2	30.3
<b>Year . . . . .</b>	<b>23.3</b>	<b>18.8</b>	<b>28.8</b>	<b>24.3</b>	<b>19.7</b>	<b>22.5</b>	<b>24.2</b>

Mean Minimum Temperatures : Selected Stations  
(°Celsius)

Period	Mount			Murray			
	Ceduna	Gambier	Oodnadatta	Port Pirie	Kingscote	Bridge	Renmark
January . . .	14.9	10.8	22.6	17.3	14.8	14.4	16.6
February . . .	14.9	11.4	22.2	17.6	15.3	14.5	16.5
March . . . . .	13.2	10.4	19.3	15.9	14.3	13.2	14.3
April . . . . .	10.7	8.7	14.2	13.0	12.4	10.6	11.0
May . . . . .	8.6	7.2	9.6	10.6	10.7	8.0	8.2
June . . . . .	6.4	5.6	6.5	8.3	9.3	6.0	5.9
July . . . . .	5.7	5.0	5.6	7.6	8.4	5.4	5.1
August . . . .	6.2	5.3	7.2	8.1	8.3	6.0	6.0
September . .	7.7	6.1	11.0	9.5	9.0	7.1	8.0
October . . . .	9.7	7.0	15.0	11.8	10.3	9.0	10.7
November . . .	12.1	8.2	18.4	14.1	11.9	11.2	13.2
December . . .	13.9	9.8	21.1	16.1	13.6	13.2	15.2
<b>Year . . . . .</b>	<b>10.3</b>	<b>8.0</b>	<b>14.4</b>	<b>12.5</b>	<b>11.5</b>	<b>9.9</b>	<b>10.9</b>

**Evaporation**

Evaporation is determined by measuring the amount of water evaporated from an exposed free water surface in a standard tank or pan. The annual average evaporation varies from below 1,500 millimetres in parts of the Mount Lofty Ranges and the lower South East to greater than 3,500 millimetres over an area around and north east of Oodnadatta in the far north of the State. About half the State has an average evaporation rate exceeding 3,000 millimetres which is all the more significant when it is considered that the average annual rainfall over most of the northern half is less than 175 millimetres.



**Climate of Adelaide** Adelaide weather observations were originally taken at a site on West Terrace, Adelaide. In February 1977 the South Australian Regional Office moved to College Road, Kent Town. Data presented here are for Kent Town unless otherwise specified.

**Rainfall** Adelaide is the driest Australian capital city. Summer rainfall is light and unreliable; completely rainless months are not uncommon. Monthly rainfall averages over 50 millimetres from May to September and is fairly reliable. June, the wettest month, averages under 80 millimetres. The annual average rainfall for Adelaide, at Kent Town, is 585 millimetres. At West Terrace the average was 528 millimetres, based on 139 years of records. Annual rainfall totals for Adelaide have ranged from a high of 882.4 millimetres (Kent Town 1992) to the lowest fall of 257 millimetres (West Terrace 1967).

**Wind** The prevailing wind during the day in summer is south-easterly with a south-westerly sea-breeze. During summer evenings another common wind, known locally as the 'Gully Wind', blows from the east across the Adelaide Hills. These winds can be very strong and gusty at times. In winter the prevailing wind is north-westerly with a high proportion of south-westerlies.

**Temperature** In January and February, Adelaide's warmest months, the mean maximum temperature is around 29°C. On average, temperatures in excess of 40°C are recorded on about three days each year. July is the coldest month with a mean maximum of 15°C.

Climatological Data, Kent Town, Adelaide  
 Temperature and Rainfall based on a composite record of Greenwich Stand  
 and Stevenson Screen observations

Month	Temperature				Rainfall	
	Maximum		Minimum		Mean	Highest monthly and yearly total
	Mean	Highest recorded	Mean	Lowest recorded		
	°C	°C	°C	°C	mm	mm
January	28.6	44.2	16.6	9.2	22	40
February	29.1	43.4	16.8	10.6	22	25
March	26.4	41.9	15.4	7.2	26	106
April	22.5	36.7	12.3	5.5	47	105
May	18.8	28.7	10.3	1.5	76	128
June	16.0	23.9	8.0	-0.4	79	175
July	15.1	22.6	7.3	0.4	75	160
August	16.3	27.8	8.1	1.8	69	129
September	18.6	34.3	9.4	2.6	57	152
October	21.8	39.0	11.3	5.2	51	105
November	24.8	41.4	13.8	6.6	33	107
December	27.0	42.0	15.5	8.0	28	69
<b>Year</b>	<b>22.1</b>	<b>44.2</b>	<b>12.1</b>	<b>-0.4</b>	<b>585</b>	<b>882</b>

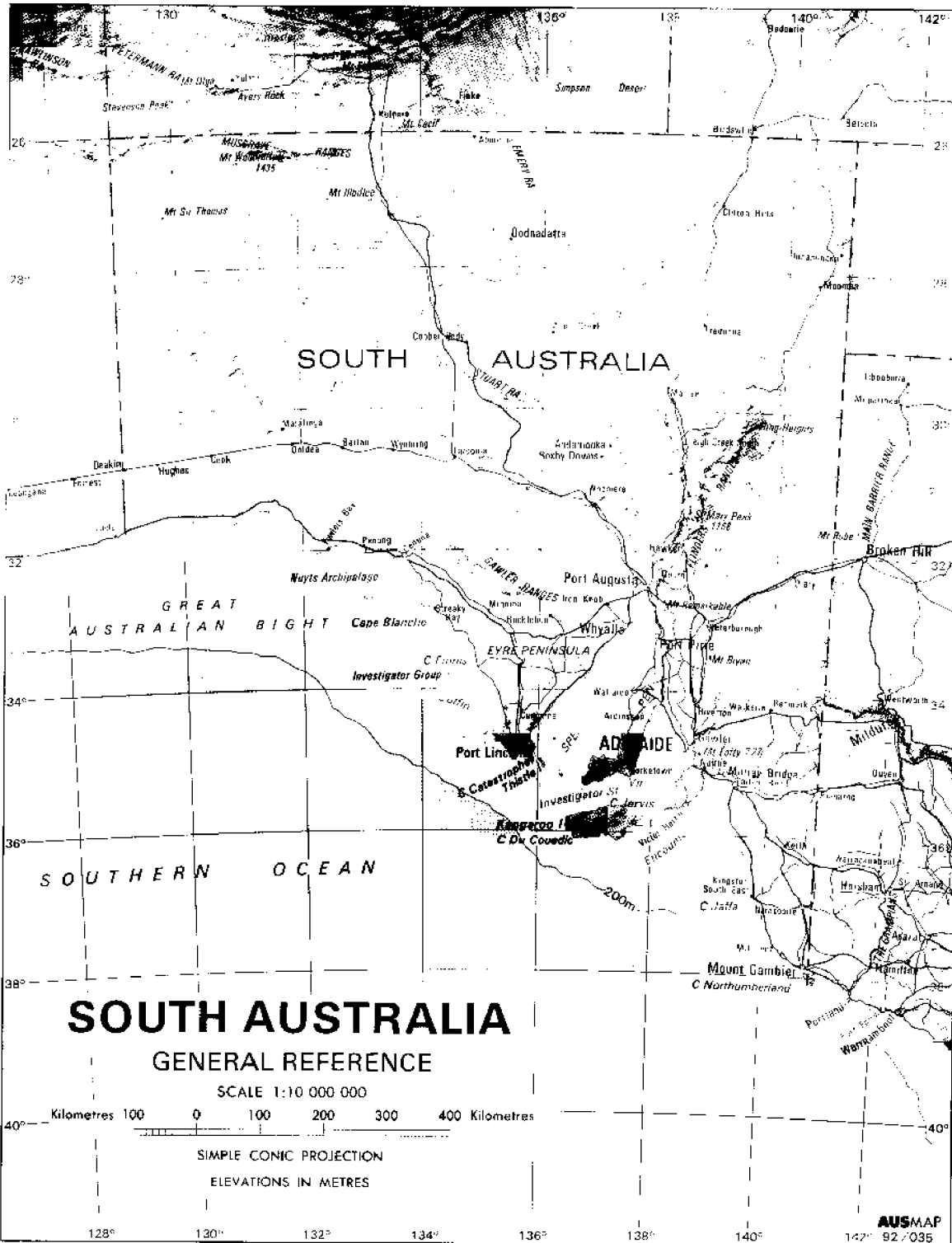
Climatological Data, West Terrace, Adelaide<sup>(a)</sup>  
Other Conditions

Month	Mean daily sunshine	Clear days (b)	Mean amount of cloud (c)	Amount of evaporation (d)	Vapour pressure 9 a.m.	Mean barometric pressure (e)
Years of record	95	58	107	12	108	121
	<i>hours</i>	<i>No.</i>		<i>mm</i>	<i>mb</i>	<i>mb</i>
January . . . . .	10.0	12.4	3.1	254	11.9	1,013.2
February . . . . .	9.3	10.9	3.3	216	12.5	1,014.3
March . . . . .	7.9	10.9	3.5	176	12.0	1,017.2
April . . . . .	6.0	6.6	4.5	120	11.5	1,019.9
May . . . . .	4.8	4.6	5.1	79	10.8	1,020.1
June . . . . .	4.2	4.0	5.3	56	10.0	1,019.9
July . . . . .	4.3	3.6	5.2	60	9.5	1,020.0
August . . . . .	5.3	4.9	4.9	78	9.7	1,019.0
September . . . . .	6.2	5.7	4.6	110	10.0	1,017.7
October . . . . .	7.2	5.7	4.5	164	10.2	1,016.0
November . . . . .	8.6	6.6	4.2	196	10.5	1,015.0
December . . . . .	9.4	9.0	3.7	241	11.3	1,013.3
Year . . . . .	<b>6.9</b>	<b>85.0</b>	<b>4.3</b>	<b>1,751</b>	<b>10.8</b>	<b>1,017.1</b>

(a) West Terrace data is longest term data available. (b) With less than two-eighths cloud. (c) Scale 0 (clear) to 8 (overcast) at 9 a.m. and 3 p.m. daily. (d) From Class A Pan (period 1967-1977). (e) Mean of 9 a.m. and 3 p.m. readings corrected to sea level.

Humidity

Relative humidity in Adelaide is at its lowest in January when the average 9 a.m. reading (which approximates the average for the whole 24 hours) is 41 per cent. This low value alleviates the stress associated with heat waves in Adelaide. In fact, the relative humidity is very low for most months of the year, only becoming higher in winter, with the average at 9 a.m. reaching 75 per cent in June.





## 2.1 CHARACTERISTICS OF THE ENVIRONMENT

The characteristics of South Australia that make it different are found in its climate, its topography and its vegetation. Climatically, the southern part of South Australia enjoys a 'Mediterranean' climate with mild wet winters and hot dry summers. To the north the climate is essentially hot desert with low rainfall. Topographically much of the State is flat and of low relief; the dominant mountain range, the Mount Lofty – Flinders Ranges system, is nowhere higher than 1,200 metres. The Musgrave Ranges, in the north west includes the State's highest point, Mount Woodroffe (1,435 metres).

The inland arid region which accounts for 80 per cent of South Australia comprises extensive plains, or sand and stony deserts. The vegetation is predominantly sparse shrublands and grasslands with trees confined to the creeks. Large salt lakes which are filled infrequently occupy part of this area. Artesian springs well to the surface and mound springs and small freshwater lakes have formed. Occasional life-giving rains transform the harsh desert landscape with colourful wild flowers and the expansive floodplains of the inland rivers are filled and attract birdlife in abundance.

### Vegetation

To the south, the more temperate agricultural region comprises plains and low ranges of hills, often capped with remnant native vegetation. The original open vegetation which cloaked much of this land had the characteristic multi-stemmed mallee trees with an understorey of shrubs and grasses. In the ranges occurred woodlands of various Eucalyptus species with an understorey of native grasses and shrubs. In small areas of the Mount Lofty Ranges and the lower South East, open Eucalyptus forests occurred with a dense shrub understorey. Extensive limestone formations underlie the Nullarbor Plain, Yorke and Eyre Peninsulas and the Murray Mallee. In the South East are lines of parallel dunes marking former coastlines. South Australia has approximately 100 islands and the largest, Kangaroo Island, is dominated by an elevated plateau which terminates at the sea in high cliffs in the western half.

*\*Contributed by Andrew Lothian, Department of Environment and Natural Resources.*

The River Murray, with its source in the Australian Alps, is South Australia's only major river and ends in shallow lakes and the Coorong near its mouth. Seasonal streams and creeks occur in the Mount Lofty Ranges and mid north region. In other regions, however, the limestone subsurface and low rainfall have limited the development of watercourses.

South Australia's coast is diverse in character, and includes mangrove and samphire swamps, coastal dunes, rocky coasts and sheer cliffs such as those found at the head of the Great Australian Bight. Offshore the continental shelf extends several hundred kilometres out to sea from the western coast and this narrows towards the State's South East where the shelf is only a few kilometres wide. Spencer Gulf and St Vincent Gulf, although shallow, contain important fisheries.

## 2.2 HUMAN IMPACT ON THE ENVIRONMENT

### Indigenous population

Before settlement by Europeans, indigenous communities inhabited the land, deriving sustenance from the animals they hunted and a variety of seeds, insects, shellfish and other natural foodstuffs. The indigenous population was limited in size by the natural abundance of the environment but there was modification through burning of native vegetation to promote regrowth and attract wildlife. Such practices almost certainly altered the structure and composition of the native vegetation. Overall however, given that they inhabited the land for at least 40,000 years, their impact was much less than that of the incoming settlers.

From the earliest days of European contact by sealers on Kangaroo Island, the non-indigenous economic view of the environment was evident. While the indigenous people lived essentially within the limits of the natural environment, Europeans sought to modify and control it to their benefit and to make it more productive.

From the initial settlement in the well-timbered Adelaide Plains, the colonists moved quickly into the central Mount Lofty Ranges where mixed farming on 32.4 hectare (the old 80 acre) sections was commenced. However this small area was insufficient to provide a living and the land was over-exploited.

### Climate

The settlers found it difficult to comprehend the harshness of the Australian climate and persisted long in the belief that the land, and somehow the climate could be modified and made tolerable by dint of human effort.

The enthusiasm of the acclimatisation societies which introduced many exotic plants and animals into the country, and the mistaken idea that the rain would follow the plough as new country was developed, both illustrate the prevailing view of the environment.

After the initial troubles which beset the new colony, prosperity came with the discovery of copper at Kapunda and Burra and later at Kadina, Wallaroo and Moonta, together with the rapidly expanding wheat fields over newly cleared land. Enthusiasm at the time ran high and fuelled the drive to develop the new colony. Extensive areas around the mines however lost their tree cover which provided wood for the boilers and timber for mine pit props. The mining towns would come to be regarded as heritage areas to later generations.

### **Goyders Line**

A series of good seasons in the late 1860s and 1870s suggested that the colonists were successful in moderating the climate and settlement pushed northwards to Hawker. However the normal climate returned and many farmers were forced off the land. In 1865, the Government Surveyor-General, George Goyder established Goyders Line as the northern limit of cereal farming. The natural limits of the land were slowly being recognised and from then on the northern arid areas would remain for pastoral use only.

Settlement spread not only northwards, establishing mines and farms, but pushed eastwards to the River Murray and southwards to the South East. The latter region was waterlogged in winter and drainage commenced in the 1860s which made the land far more productive but eventually saw the loss of much of the region's wetlands.

### **River trade**

Along the River Murray, through a combination of skill and ingenuity during the 1850s and 1860s, South Australia dominated the interstate shipping trade along the river, carrying supplies far upstream and returning with the produce of NSW and Victoria for export through South Australian ports. In the 1880s, swamps along the lower Murray were drained and at Renmark in 1887 an irrigation colony was established.

With the passage of time, memories of the colonists homelands diminished and settlers started to appreciate the merits of the Australian landscape. In 1882 the Forests Board was established to protect the colony's forest resources. Growth in interest in the Australian bush led to the establishment of the Belair National Recreation and Pleasure Ground in 1891, Australia's second national park.

By the turn of the century, a mere 60 years after settlement schools, hospitals, the University, the Museum, Art Gallery, and basic industry had been established. In 1855, a Botanic Garden was established which, as well as having an ornamental function, introduced plants of potential economic worth. During these 60 years, mines had been through boom and bust phases, the River Murray shipping trade had waxed and waned, farming had spread over much of the southern region and after pushing into the northern drier regions, had retreated under pressure. Irrigation ventures had been established on the River Murray.

### **European diseases**

Settlement and development were having adverse consequences although few people either saw them or wanted to see them. European diseases and numerous instances of armed conflict had severely reduced the indigenous people and culture and by 1900 only remnants remained of their former extent and stature. Their traditions and culture were severely affected by the impact of the new settlers.

Environmentally, native vegetation had been extensively cleared for agriculture and mines, red gum forests along the River Murray had been felled to provide fuel for the paddle steamers, wetlands along the River Murray and the South East had been drained, and the introduction of rabbits in the 1870s had had a devastating impact on the environment as well as competing with stock for feed.

### **Federation**

The establishment of Federation in 1901 and Statehood for South Australia brought new status and new problems. Just as the early settlers found it difficult to adapt to the new land, a latter generation found it difficult to view themselves as part of a nation and not a separate colony.

This failure was reflected in the difficulties in reaching an agreement with New South Wales and Victoria over the apportionment of the waters of the River Murray.

The river shipping trade had declined significantly by the turn of the century, with railways replacing it as a means of transporting goods and produce. An agreement was finally reached between the three States and the Commonwealth in 1914 although South Australia continued to insist on the guaranteed navigability of the river for its river trade which by then had largely vanished.

### **Weirs and barrages**

The result was the construction of the barrages which excluded seawater from the river, and a series of weirs across the river which maintained a constant pool level in the river for shipping purposes and for the growing irrigation industry. In its natural state, the flow and level of the River Murray fluctuated widely, flooding across its floodplain in spring and dropping to minimal flow by late summer, even drying out to a series of waterholes as it did in the 1914 drought. The weirs across the river prevented the level falling below a stable pool level and drastically changed the river ecology. It reduced the regeneration of trees on the floodplain, affected the breeding of fish, birds and insects and created conditions more suited to introduced species of fish. Steps are now being taken to re-create flooding of backwater areas for environmental benefit.

### **Soldier settlers**

The two wars were the main stimulus for development in the first half of the twentieth century. Ex-servicemen were settled on the land which needed to be brought into production to provide farms. Extensive irrigation areas were established along the River Murray and war service settlements were also established on Kangaroo Island and the northern Mallee, the latter being a very marginal area for farming. Severe land



degradation such as soil erosion and acidification and dryland salinity has occurred in many parts of the State and has been addressed through soil conservation programs and over the past decade through farmer involvement in landcare.

Following the 1939–45 War, the use of heavy machinery enabled widespread clearance of land and the clearance was so thorough that in the southern agricultural regions, only 20 per cent of the original vegetation remains outside of national parks. Controls were introduced in the 1980s over further clearance of vegetation.

Manufacturing industry accelerated rapidly and the industrial cities of Whyalla and Port Pirie expanded, supplied with water piped from the River Murray. Water pipelines and reservoirs were also constructed to supply Adelaide and other regions. The Leigh Creek coalfield was developed during the 1940s and coal was railed to the Port Augusta power station for the generation of electricity. Later, natural gas was piped from Moomba and is used extensively for power generation, by industry and householders.

**Industrial and urban expansion**

Agreements were struck with companies at Whyalla and at Millicent which allowed them to discharge wastes to the environment with impunity – the loss of Lake Bonney in the South East from discharges from the nearby pulp and paper mill was a legacy of this era. The plant has now been substantially upgraded and pollution is minimal. In time the lake may be restored. Industry generally has done much over the past 20 years or so to reduce its pollution and waste to the environment.

Adelaide, which began as a series of nodes of villages, gradually spread to occupy the entire plains and become a city of over one million people. The coastal dunes were largely removed resulting in continuing problems of beach erosion and necessitating an expensive ongoing sand replenishment program. Wetlands in the western suburbs were drained and the creeks which run across the plains were largely channelised or placed in pipes. Interest is now growing in retaining this water and allowing it to percolate into the aquifer. Major quarries were opened up along the ranges overlooking the city and although largely rehabilitated now, for many years presented their scars to full view.

The industrialisation of South Australia in the post war period reduced its reliance on the land but created problems of pollution and waste. Concern and interest in the environment has however grown, reflected in environmental protection legislation and programs to manage and protect the environment. An example is the very large expansion of the national parks system from less than half a dozen at the end of the 1939–45 War to nearly 250 today.

## 2.3 ATTITUDES TOWARDS THE ENVIRONMENT

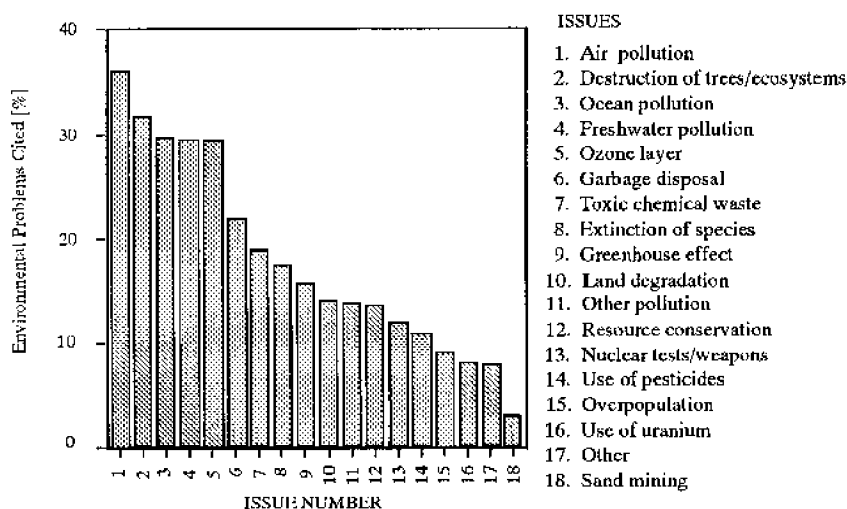
### ABS survey

During the past twenty or so years, Australians have become very concerned about the environment. A survey by the Australian Bureau of Statistics in 1992 found that slightly more South Australians were concerned about the environment than the national average, 77 per cent compared with 74.8 per cent nationally.

### Ozone

The survey found that pollution and ecosystem destruction were the top environmental issues among South Australians. Ozone was seen to be more important than the greenhouse effect. Pollution was a bigger issue among urban people than in rural areas where the land degradation issue scored higher. Concern about environmental problems was fairly uniform up to the mid 50s age group after which it declined. Less than 10 per cent, registered their concern through writing a letter or phoning the relevant agency.

PERCEPTION OF ENVIRONMENTAL PROBLEMS - SOUTH AUSTRALIA



Source: Australian Bureau of Statistics, 1993. *Environmental Issues: People's views and practices, Australia, May 1992*

The survey also asked people to rank the importance of environmental protection and economic growth. Consistent with an Australian-wide pattern, South Australians showed a strong preference (70.5 per cent) for both to be regarded as of equal importance. While 4.6 per cent regarded economic growth to be more important, four times as many (20.9 per cent) regarded environmental protection to be more important.

This and other surveys have indicated that there is strong community support for the environment and for action by governments, business and individuals to better manage and protect it.

## 2.4 INSTITUTIONAL AND LEGISLATIVE ARRANGEMENTS

### Conservation

In 1970, the State Government created the Ministry of Conservation, the first such position in Australia dealing with the environment. In 1972, a Government-appointed committee reported on the need for action covering water resources, pollution, planning, open space and national parks and in the same year, the Government established the Department of Environment and Conservation. The name and responsibilities of the Department have changed over time and currently the Department of Environment and Natural Resources (DENR) is responsible for:

- national parks and wildlife
- pastoral management
- coastal management
- European heritage conservation
- native vegetation management
- pollution and waste management, covering water quality, air, noise, hazardous wastes, CFCs and recycling
- water resources management
- River Murray and Murray – Darling Basin management policy
- land services, covering mapping, surveying, state cadastre and lands titles
- environmental information and education
- Botanic Gardens and the State Herbarium

Legislation administered by DENR includes:

- Coast Protection Act – provides for the care and management of the coast
- Environment Protection – provides for prevention and management of pollution and waste
- Heritage Act – provides for assessment and care of heritage. Shipwrecks are covered under separate legislation
- National Parks and Wildlife Act – provides for the care and management of national parks and reserves, protection of wildlife throughout the State, and provision for public recreation
- Native Vegetation Act – provides for control of vegetation clearance, provision of financial assistance and management of protected vegetation
- Pastoral Land Management and Conservation Act – provides for the sustainable management of the State's pastoral lands
- Water Resources Act – provides for the management and conservation of water resources
- Wilderness Protection Act – provides for the protection of wilderness qualities

Other agencies of the South Australian Government with responsibilities covering the environment are:

- Department of State Aboriginal Affairs – responsibilities include Aboriginal heritage
- Engineering & Water Supply Department – responsible for the State's water supply, sewerage, irrigation, drainage and related services
- SA Health Commission – responsibilities include public and environmental health
- Department of Housing & Urban Development – responsible for the state's land use planning system
- Department of Industrial Affairs – responsibilities include health and safety of the workplace environment
- Mines and Energy (SA) – encourages exploration and development of SA's mineral and energy resources within the Government's environmental protection policies
- Office of Energy and the Energy Information Centre – encourages the efficient use of energy
- Primary Industries (SA) Agriculture – responsibilities include agricultural chemicals, pest plants and animals, land care and soil conservation, and rural revegetation
- Primary Industries (SA) Fisheries – responsible for the management of marine and freshwater fish and crustaceans
- Primary Industries (SA) Forestry – responsibilities include management of native forests

Much environmental policy is now developed cooperatively on a national basis through the Australian and New Zealand Environment and Conservation Council.

In addition to Government agencies, there are many private organisations with an interest in the environment and many thousands of volunteers who carry out landcare projects, maintenance of national parks, and tree planting on public and private land throughout South Australia.

## 2.5 REVIEW OF THE ENVIRONMENT

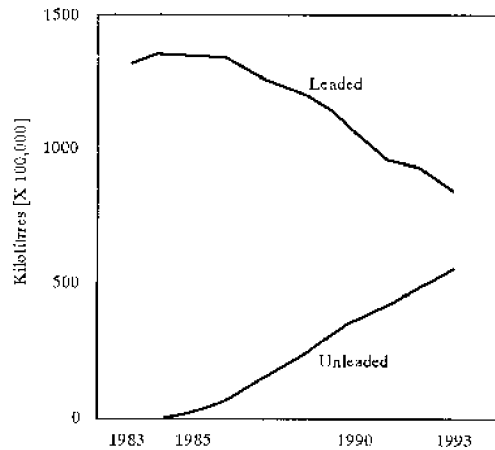
The following examines the current condition of the major sectors of the South Australian environment.

### Atmosphere

Air quality is not a serious concern when viewed on a global scale and although it has improved measurably in South Australia, the number of complaints have also increased.

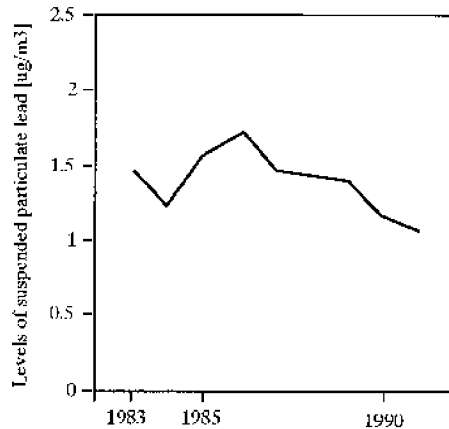
Measurements of total suspended particulates, lead fallout, oxidants which form smog, nitrogen dioxide and sulphur dioxide for Adelaide indicate that the levels of these pollutants are generally all within national or international standards having trended downwards over a period of years. With greater use of unleaded petrol, lead levels should continue downwards.

USE OF LEADED AND UNLEADED PETROL  
1983 - 93



Source: Commonwealth Department of Primary Industries & Energy

SUSPENDED PARTICULATE LEAD  
ADELAIDE 1983 - 91



Note: Data averaged over 7 metropolitan sites

Source: Department of Environment & Natural Resources

One area of noticeable improvement has been in the control of odours from animal processing works such as abattoirs which now use more reliable equipment which controls odours. In 1986 these odours accounted for nearly one-third of all complaints, but by 1991-92 this had fallen to only 7 per cent.

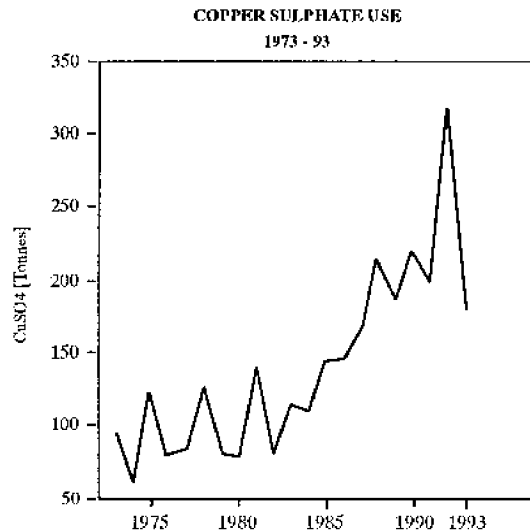
South Australia is a world leader in the phase-out of ozone depleting substances and most chlorofluorocarbons (CFCs) and halons will be phased out by the end of 1995, a year ahead of the target date.

**Aquatic environment and water resources**

Water is a vital resource in this dry State and major demands are made of it to meet agricultural, industrial and domestic uses. Overall, water quality has declined since European settlement. Initially it was due to pollution from industry and other point sources but these have been largely rectified and the main pressure on water quality now is from chronic, relatively low level pollution from diffuse sources such as agriculture and runoff from roads.

*Algae*

Clearance of native vegetation increases turbidity, salinity and nutrient levels of runoff water. Agricultural runoff contains nutrients, turbidity, pesticides and suspended solids while runoff from urban areas contains heavy metals, nutrients and other pollutants. High nutrient levels in water can cause outbreaks of algae with potential for creating offensive tastes, odours and toxicity. Copper sulphate is used in reservoirs to control algae growth and the increase in the dose required indicates the level of pollution of catchments in the Mount Lofty Ranges.



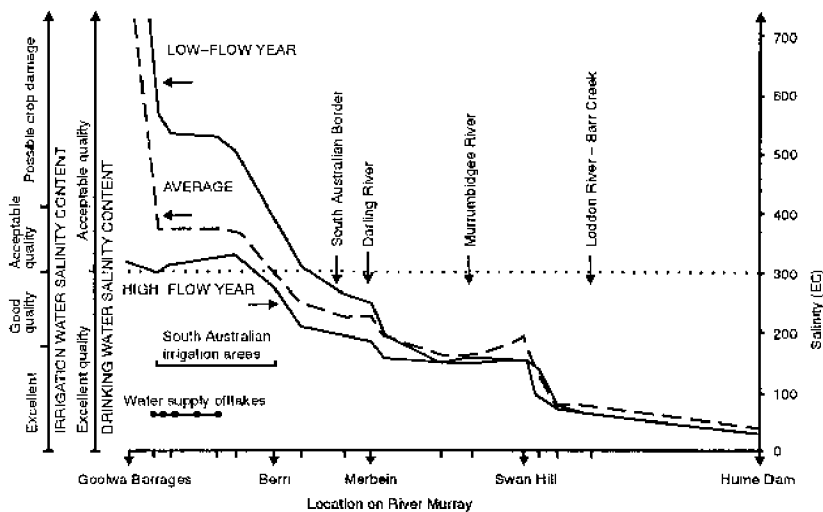
Source: E&WS Dept

The occurrence of blue-green algal blooms in the River Murray and Lakes Alexandrina and Albert in recent years is caused by high levels of nutrients such as nitrogen and phosphorus associated with low flow rates. Increasing levels of salinity of streams due to land salinisation is of growing concern. Examples include the Tod River on Eyre Peninsula, Middle River on Kangaroo Island, and streams in the Mount Lofty Ranges. Pollution of groundwater resources such as with dairy wastes in the South East continues to be a concern.

Water salinity

Water quality data for the River Murray indicates that all major nutrients vary widely with the higher values occurring at periods of low river flow. The averages indicate a slow increase with distance downstream, reflecting the impact of agricultural activity and discharge of treated effluents from sewage treatment plants. Salinity levels in the River Murray are at acceptable levels upstream of the South Australian border but the entry of highly saline groundwater inflows between the border and Morgan raises salinity levels significantly. This is more serious in years of low flow when insufficient dilution of the salinity is available and levels can exceed that suitable for use for irrigation.

RIVER MURRAY SALINITY LEVELS



Source: Murray Darling Environmental Resource Study, 1986.

Groundwater resources have been exploited beyond their sustainable yields; examples include the Barossa, Angas-Bremer and Northern Adelaide Plains. Water diversions and storages on streams means that little water is left to support the natural aquatic system, e.g. on the Onkaparinga River, no water passed the water storages (Mount Bold Reservoir and Clarendon Dam) in 9 out of 17 years. Changes have been made to the water rating system towards a pay-as-you-use system, and the use of stormwater to increase local discharge to groundwater is being trialled. Wetlands have been established, such as in the Salisbury area, in which runoff is stored and allowed to infiltrate into the aquifer.

With the recent completion of the Port Lincoln sewage treatment works, sewage from all towns served by the Engineering and Water Supply Department is treated before disposal either to the marine environment or to an inland stream. South Australia is the only state which does not

dispose raw sewage to the sea. Nutrients in the treated effluent can affect aquatic ecosystems and steps are underway to dispose of effluent on land through woodlots.

### Land resources

#### *Erosion*

In the early days of settlement, farming and grazing practices which had been used in the temperate northern countries were applied to a land which had far less fertile soils and a more arid climate. These inappropriate land management practices resulted in large-scale land degradation throughout South Australia. The State is climatically prone to wind and water erosion, aggravated by overclearance, overgrazing and excessive cultivation of the soil.

During recent years in particular much progress has been made in rectifying these past mistakes through improved agricultural and pastoral management practices, revegetation and extensive involvement of landholders in land care and soil conservation groups. The *Soil Conservation and Land Care Act 1989* and the *Pastoral Land Management and Conservation Act 1989* provide for the sustainable management of the land resource.

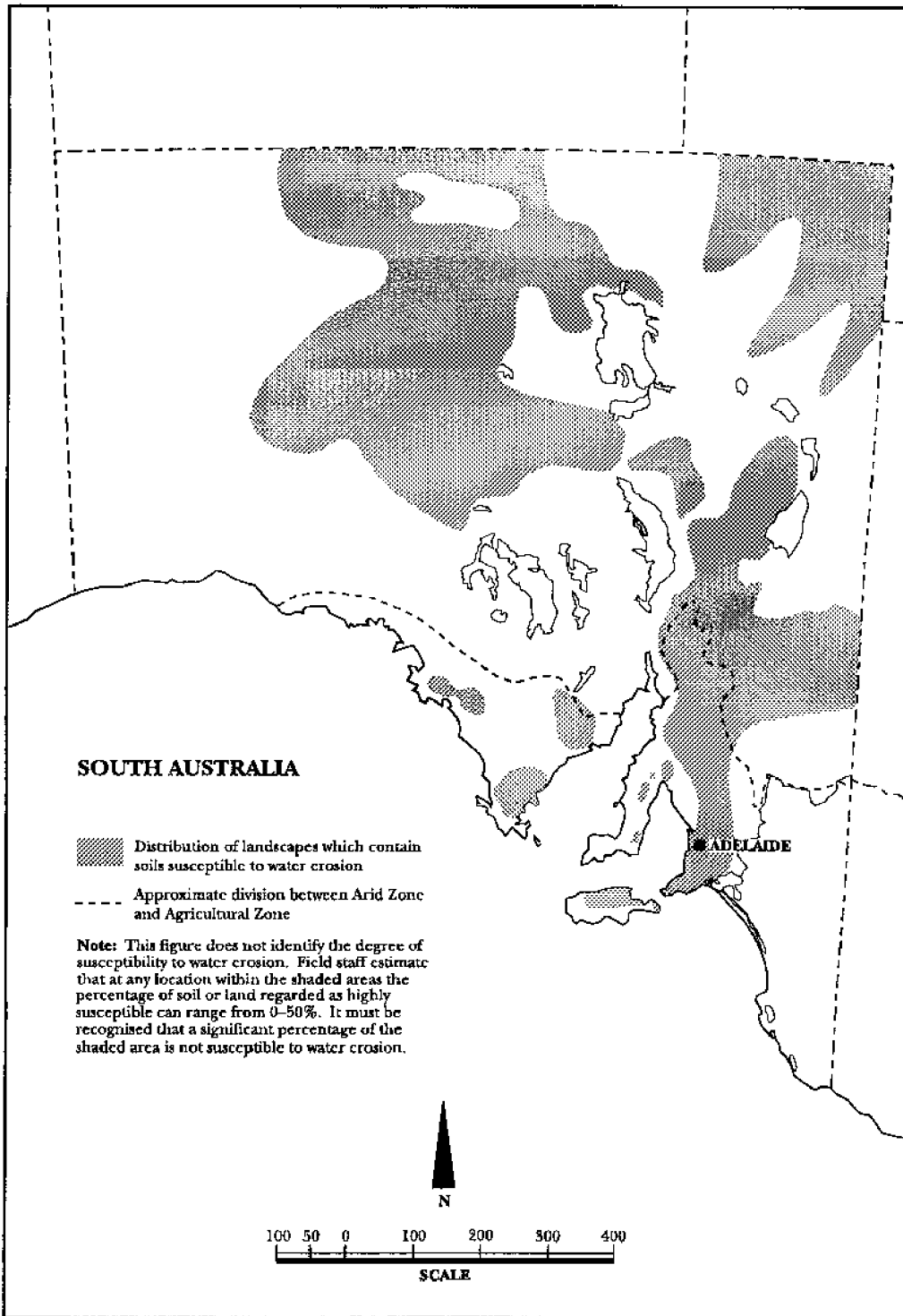
Over-cultivation of soil can result in change of soil structure and loss of organic matter. Continuous cropping, for example, can cause rapid decline of organic carbon levels. Decline of soil structure and associated reduced rainfall infiltration has been estimated to result in an annual loss of \$60 million in production. Use of legumes to maintain and improve soil fertility, and decline in the practice of crop residue burnoffs are helping to retain crop stubbles which eventually contribute to organic carbon in the soil.

Water erosion is mainly a problem in the higher rainfall areas of South Australia although high intensity rainfall events can cause significant erosion elsewhere. Serious gully, rill and sheet erosion has occurred in these areas. Loss of one millimetre of topsoil represents 10–12 tonnes per hectare and this can occur frequently on bare and sloping land. Stubble cover and reduced tillage helps protect the soil from water and wind erosion. In the northern cereal districts, it is estimated that 80 per cent of landholders use stubble retention and reduced tillage methods which reduce losses from water and wind erosion.

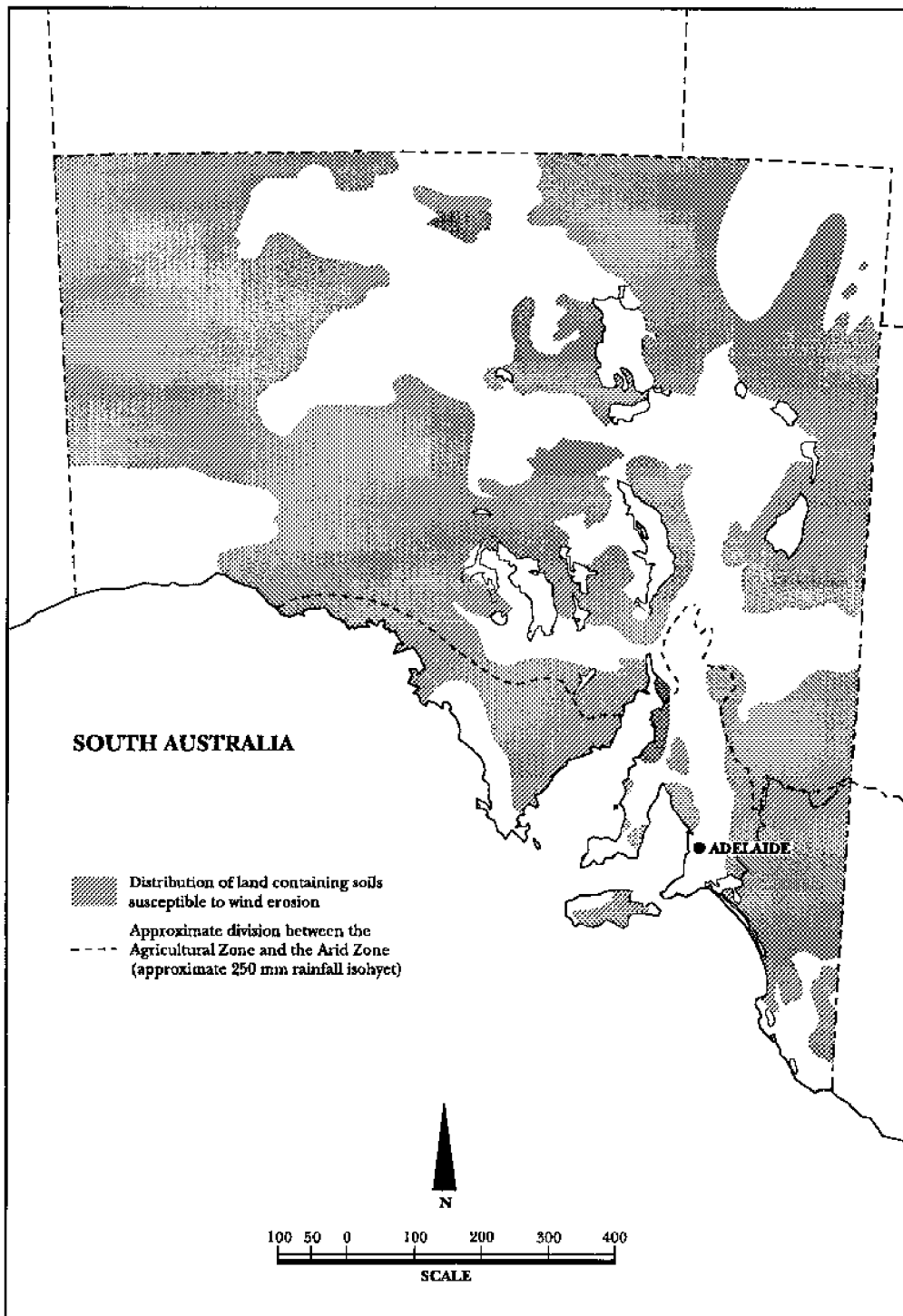
Wind erosion was a major problem in the 1920s and 1930s when dust storms occurred regularly. Improved soil conservation measures in the post-war years gradually reduced their incidence, however overcropping in recent years brought on by economic pressures have increased the potential for wind erosion. Much of South Australia with the exception of ranges and hills and the lower South East is susceptible to wind erosion. Both wind and water erosion cause loss, not only of topsoil and its valuable organic material, but also of the nitrogen and phosphorous fertilisers it contains.



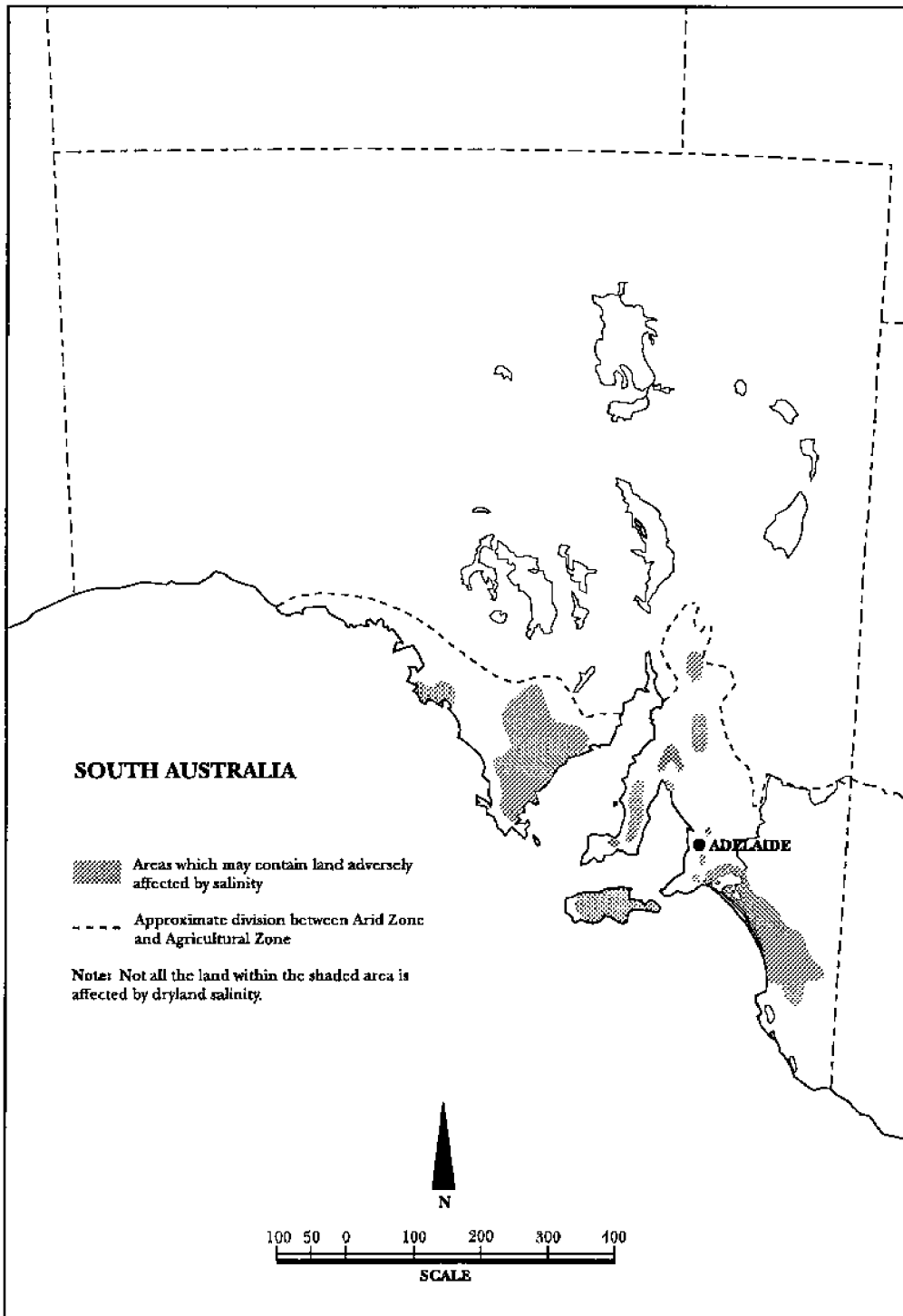
WATER EROSION



WIND EROSION



DRYLAND SALINITY



*Dryland salinity* Dryland salinity is a rapidly growing problem in South Australia and the State has 28 per cent of the Australian total area. More than 225,000 hectares are affected with an annual loss of production of approximately \$27 million. Dryland salinity occurs following loss of vegetative cover and a greater amount of rainfall infiltrates into the ground, in some areas reaching the groundwater table. Over time the groundwater table can rise to the surface, mobilising salts in the soil as it moves upwards, and depositing these on the land surface. This results in scalding and salinisation.

The issue had been underestimated in past years and its seriousness has only recently been appreciated. An example is the upper South East area between Keith and Tailm Bend where it has been estimated that if current trends in rising groundwater levels persist, that by about 2020 dryland salinity will have increased by 50 per cent.

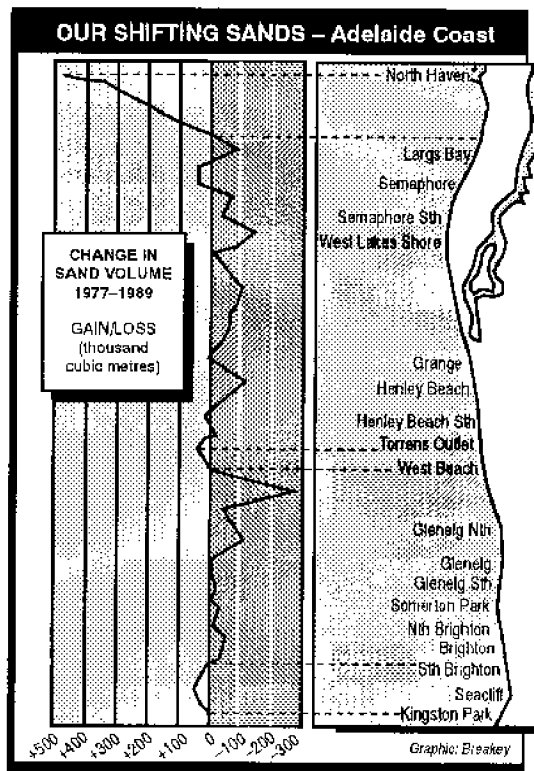
*Tree planting* Other forms of land degradation include soil acidification which affects about one million hectares and has potential to affect 2.5 million hectares. Water repellence in some sandy soils is a problem on Eyre Peninsula and the Murray Mallee where about 2.2 million hectares are affected.

Rural tree planting has been encouraged for many years and a State Government program commenced in 1989. Using tubestock seedlings and direct seeding, nearly 70 million trees and shrubs have been established in rural areas over the five years to 1993. Direct seeding of trees and shrubs is becoming the preferred means of establishment as it is cheaper, quicker and more effective than the traditional tubestock method.

**Coast** Since the introduction of the Coast Protection Act in 1972 and the formation of the Coast Protection Board, significant work on protection and provision of amenities has been carried out.

On the Adelaide coast, removal of the protective coastal dunes due to subdivisions, road making and sand extraction from the early days of settlement have made the beaches susceptible to erosion. Expensive rock protection of the land and a continuing sand replenishment program has been necessary just to maintain the beaches. Rising sea levels combined with a fall in the level of parts of the Adelaide coast have aggravated the situation. Despite the measures taken, sand is continuing to be lost from beaches with beach levels falling as a consequence. Between 1977 and 1989 beach levels in the West Beach area fell by 80 cm and in the Somerton area by 30–40 cm.

A review of options undertaken for the Coast Protection Board has found that sand replenishment is the most cost-effective means of maintaining beaches.



Source: Department of Environment and Natural Resources

**Contaminated land**

In recent years the discovery of considerable areas of contaminated land has been a major concern. The 1985 McClelland Royal Commission detailed the radioactive contamination of the Maralinga lands. Port Pirie, the site of a large lead smelting and refining industry since the 1880s, became severely contaminated with lead dust and it has been estimated that more than 160,000 tonnes of lead have been deposited in the city. Since 1982 a major lead decontamination program has been underway.

In Adelaide, many former industrial sites have been found to be heavily contaminated by various pollutants. These include arsenic from tanneries, leaking underground petrol tanks, wood treatment plants, sheep dips, scrapyards, battery breaking sites and drum cleaning sites where a variety of chemicals may be found. In rural areas the use of persistent organo-chlorine chemicals many years ago has contaminated some land. Contaminated land can be very expensive to remedy.

**Biodiversity**

Biodiversity, or biological diversity, is the variety of all life forms including all plants, animals and microorganisms, their genes and the ecosystems of which they are a part. A region's biodiversity is not static but is constantly subject to change in response to genetic change, climatic variations, evolutionary processes, changes to habitat and other pressures such as fire.

The vegetation and animals of South Australia reflect its aridity of climate. Nevertheless there are areas of wetlands which support their own wildlife and wetter parts of the State which supports more temperate forms of flora and fauna. There are nearly 4000 species of flora and fauna in the State, many of which also occur in other parts of Australia. The following table indicates the status of South Australia's biodiversity. Species may be considered to be extinct, endangered, vulnerable or rare within South Australia but still exist or have a different level of abundance elsewhere in Australia.

Indicative Status of South Australian Vascular Plants and Vertebrate Animals

Species group	Extinct		Endangered		Vulnerable		Rare		Indeterminate	
	SA	Aust.	SA	Aust.	SA	Aust.	SA	Aust.	SA	Aust.
Plants (3109 spp) . . . . .	33	2	90	23	95	53	173		32	
Mammals (137) . . . . .	24	10	15	7	7	4	39		2	
Birds (437) . . . . .	5	1	10		58	6	28		2	
Reptiles (210) . . . . .				1			2			
Amphibians (26) . . . . .										
Freshwater fish (50) . . . . .	2		2		3	3	8		18	
<b>Total (3969) . . . . .</b>	<b>64</b>	<b>13</b>	<b>117</b>	<b>31</b>	<b>163</b>	<b>68</b>	<b>248</b>		<b>54</b>	

Notes: Figures in parentheses are total number of species in a group. The status of species changes over time with new surveys and improved information identifies new species.

Source: National Parks Review, 1994 and Department of Environment and Natural Resources

*Extinct mammals*

The number of mammal extinctions in South Australia over the past 150 years are among the highest rates of extinction in the world for that period. Most of the mammal extinctions were from the late 1880s to 1920s and no species is known to have become extinct in the State over the last 30 years. The species which are believed to be extinct both within South Australia and throughout Australia are:

- plants: spiny everlasting (*Acanthocladium dockeri*) and groundsel daisy (*Senecio georgianus*) previously found in the Murray Mallee.
- mammals: mainly marsupials including dasyurids, kangaroos and wallabies, koala (which has been reintroduced), bilbics and bandicoots.
- birds: Kangaroo Island emu (*Dromaius baudinianus*)

The Adelaide pygmy blue-tongue lizard (*Tiliqua adclaidensis*) was considered extinct, however it was rediscovered in 1992 near Burra.

In addition to the groups of species included in the table, there are over 8,000 species of non-vascular plants (which includes algae, fungi, lichens, mosses and liverworts) and invertebrates (of which there are over 125,000 species in Australia). The conservation status of both of these groups is largely unknown. There are also 28 marine mammals including seals, whales and dolphins which visit South Australian waters; four of these are considered vulnerable or rare. The status of marine flora is largely unknown.

Pressures on wildlife include:

- Clearance of about 80 per cent of South Australia's higher rainfall native vegetation together with changes of habitat and the fragmentation of remaining vegetation into smaller areas which are more vulnerable to losses by fire, drought, flood or disease, and in which inbreeding of species can occur due to insufficient genetic diversity.
- Grazing by rabbits and stock which limits regeneration of plants and reduces the availability of food and shelter for native animals. Overgrazing in the pastoral region has resulted in significant degradation and loss of plant cover.
- Competition from introduced species; one quarter of the State's flora now comprises introduced species and many compete with and displace native plants. Feral goats, cats, foxes, camels and other species compete with and are a predator of native animals.
- Changed fire frequency affect the distribution and abundance of many native plant species.
- Changes to the flow regime of rivers and streams from dams, drainage works and clearance of catchments.
- Global warming may add further stress to native species.

**Parks and reserves**

Conservation of South Australia's biodiversity has occurred mainly within the past forty years through the protection of areas within the national parks system, controls over the taking of wildlife, and over clearance of native vegetation. South Australia has the largest proportion of any mainland State within the national parks system – 20.7 per cent of the State's area and it is the only State which has fully controlled the clearance of native vegetation.

South Australian National Parks and Reserves 1993

	Area (ha)	Per cent of total
National Parks .....	4,293,713	21.12
Conservation Parks .....	5,727,526	28.18
Game Reserves .....	25,631	0.13
Recreation Parks .....	4,533	0.02
Regional Reserves .....	10,276,584	50.55
<b>Total.....</b>	<b>20,327,987</b>	<b>100.00</b>

Source: Department of Environment and Natural Resources.

The declaration of the regional reserves which are multiple use parks in which grazing and mining activities are permitted has more than doubled in the past five years. In addition to reserves on public land, the controls over the clearance of native vegetation have protected 550,000 hectares of vegetation on private land. The significance of this is evident when compared with the extent of reserves protected within the National Parks system in the agricultural region.

Conservation of Habitats within Agricultural Region

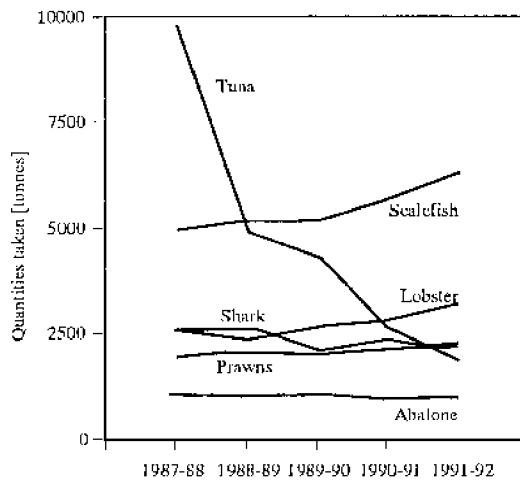
	Area (ha)	Per cent of total
National Parks system .....	846,000	60
Protected native vegetation on private land .	550,000	40
<b>Total .....</b>	<b>1,396,000</b>	<b>100</b>

Source: Department of Environment and Natural Resources.

**Fisheries**

South Australia's production from its commercial fisheries is valued at \$130 million per annum and involves about 20 fish species and three species of crustacea and molluscs. Scientific management of fisheries was introduced in the early 1970s but has been inadequate to prevent over-fishing of some major commercial species including the southern bluefin tuna, school shark and gummy shark. Snapper, King George whiting, garfish, abalone and prawns are fully exploited, in some cases beyond their sustainable limits. Recreational fishing adds a further substantial demand on the commercial take.

COMMERCIAL CATCHES OF FISH AND CRUSTACEA



Source: Dept of Primary Industries [Fisheries]

A major review of South Australia's marine fishery was undertaken in 1992 and new management strategies are being implemented to manage the fisheries within sustainable levels.



**Heritage**

The protection of heritage has become increasingly important and reflects a community desire to retain significant features, structures and buildings of our past culture together with sites of historical importance. South Australia has been divided into 14 heritage regions and surveys have been completed in half of these together with 17 council areas in Adelaide. It is planned to complete surveys of the State's heritage by the year 2000. There are over 1800 items of heritage significance registered on the Heritage Register and in addition 13 Heritage Areas have been proclaimed in various towns and areas such as Burra, Goolwa, Moonta Mines, Hahndorf and Port Adelaide.

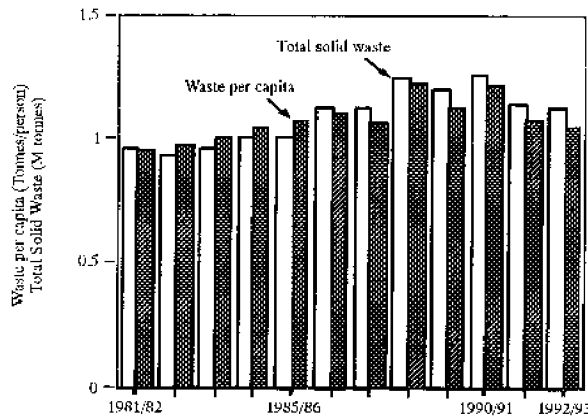
Shipwrecks in the River Murray and the sea are protected by both State and Commonwealth legislation, the latter for offshore waters. A total of 32 shipwrecks have been declared historic under the legislation. There are however some 700 shipwrecks in South Australian waters. Regional surveys have been completed for the South East, Kangaroo Island and River Murray. The latter identified 61 ship remains in the river.

Sites and objects, which include areas and items of significance to Aboriginal and Torres Strait Islander tradition, anthropology, archaeology and history, are given blanket protection under legislation regardless of whether or not they have been recorded. The Register of Sites and Objects contains 4,500 recorded sites including paintings, engravings, archaeological scatters, middens and scarred trees.

**Waste and recycling**

Waste covers any matter discarded or left over from industrial, commercial, domestic or other activities. It can be broadly classified as either solid or liquid. Industrial and commercial waste represents about 40 per cent of the total, domestic waste another 40 per cent and construction and demolition waste the remaining 20 per cent.

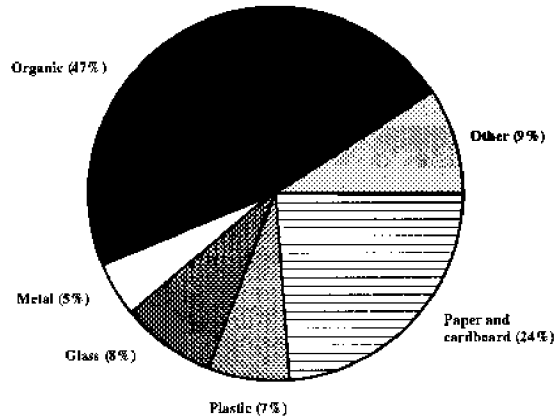
TOTAL SOLID WASTE DISPOSED AND PER CAPITA WASTE  
METROPOLITAN ADELAIDE  
1981/82 - 1992/93



Source: Department of Environment and Natural Resources

Increasing use of the large 240 litre mobile garbage bins (MGB) has increased the amount of domestic waste collected by councils. In one metropolitan council it increased from 8.9 kg per household in 1986, prior to the bins, to 15.5 after their adoption. MGB's are now used in about half the properties in the Metropolitan area and about a quarter of the country properties. Much of Adelaide's waste is disposed of at Wingfield, Pedler Creek and St Agnes landfill depots.

COMPOSITION OF ADELAIDE'S DOMESTIC WASTE



Source: Amdel, 1991, Mitcham City Council Waste Composition Study

Litter is a visual and sometimes dangerous form of pollution and occurs on beaches, car parks, along roadsides and in parks. Over half the litter is paper, particularly cigarette packets and milk cartons, a further 21 per cent are plastics, mainly bottles, and the remainder are glass bottles, metal cans and miscellaneous items including tyres, clothing, ice cream sticks and the ubiquitous cigarette butt.

While South Australia's container deposit legislation ensures high recycling rates for beverage cans and bottles, large amounts of other potentially recyclable materials are discarded. The recycling rates for beverage containers is substantially higher than other States and the South Australian rates already exceed the national targets.

Recycling Rates – Beverage Containers  
(Per cent)

	SA rate	National targets (1995)
Cans .....	88.6	65.0
PET/PVC plastics .....	61.7	25.0
Glass bottles – 750 ml .....	90.0	
– 375 ml .....	95.0	
Soft drink (refillable) .....	96.0	45.0

Source: Department of Environment and Natural Resources.

Recycling rates for other materials are:

Glass	50%
Paper	26%
Milk cartons	2.5%
Telephone books	15% of white pages 27% of yellow pages
Metals	105,000 tonnes ferrous metals 24,000 tonnes non-ferrous metals
Plastics	Small amounts only recycled. This will increase with kerbside collections and coding system.
Composting	Small amounts being composted but increasing.
Tyres	800,000 tyres discarded annually in SA; recycling system is being established nationally.

Hazardous wastes are those which are highly corrosive, flammable, explosive or toxic, including infectious. Such wastes must be specially disposed, they cannot be disposed of in the sewage system or in landfill sites. A liquid and hazardous waste disposal facility has been established at Wingfield which neutralises, detoxifies, dewateres and separates wastes. Approximately 17,000 kilolitres are generated annually.

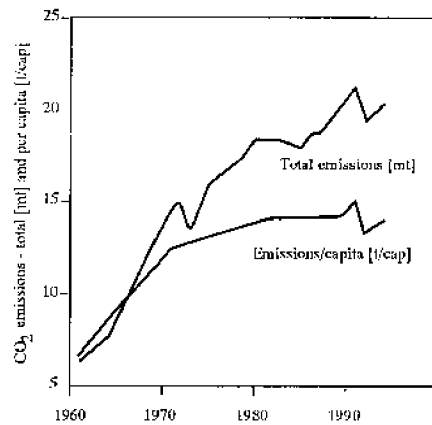
**Noise**

Despite the increasing number of noise complaints, much is being done to control many of the major noise sources. Planning authorities and developers are generally paying more attention to environmental noise. New design rules applying to cars, heavy trucks and motor cycles have significantly lowered their maximum noise levels. The location of Adelaide Airport amidst residential areas creates a potential for considerable noise impact. In 1982 Adelaide Airport was ranked second to Sydney for the number of residents seriously or moderately affected by aircraft noise. Since this time, aircraft noise levels have been lowered substantially through design improvements and aircraft noise is not a significant issue although night time arrivals of international flights have potential to change this. The heavy use of Parafield Airport for flight training purposes results in considerable light aircraft traffic over the adjoining residential areas.

**Energy**

Energy is fundamental to economic development and its use has resulted in a range of environmental impacts. At the global level, the burning of fossil fuels which releases greenhouse gases such as carbon dioxide is believed to be causing a rise in global temperatures. These have continued to rise during the 1980s and 1990s. In South Australia, overall emissions from burning fossil fuels contribute about 20 million tonnes of carbon dioxide annually.

SOUTH AUSTRALIA'S CARBON DIOXIDE EMISSIONS  
ENERGY SECTOR, 1960 - 93



Source: Office of Energy

South Australia has endorsed the National Greenhouse Response Strategy and has initiated a plan of action to reduce emissions through measures such as improved energy efficiency, energy conservation and the use of renewable sources of energy.

The recovery of methane from landfill sites and its use in electricity generation or in mains gas supplies is well advanced in South Australia. Since early 1990, landfill gas has been recovered from the Wingfield site north of Adelaide. In the first two years of its operation the landfill gas has saved 700,000 cubic metres of natural gas and reduced the greenhouse impact of the landfill by the equivalent of 22,400 tonnes of carbon dioxide per annum. The Government has contracted with a company to supply 28 MW of electricity daily for 15 years from methane collected from various landfill sites in Adelaide.

A further area of interaction between energy and the environment is in the distribution of electricity. South Australia's Stobie pole has long been criticised for its aesthetic impact and steps have been taken to underground powerlines. This State is more advanced in undergrounding than any other State and nearly \$3 million is spent annually by Electricity Trust of South Australia (ETSA) on this program. Local government contributes one dollar for every two dollars contributed by ETSA.

Percentage of Electricity Mains Underground

	1988	1989	1990	1991	1992
South Australia .....	8.3	9.0	9.6	10.2	9.7
Queensland .....	3.7	2.6	2.9	3.0	4.0
New South Wales .....	7.3	7.8	8.1	8.4	8.0
Victoria .....	5.4	6.0	5.9	4.9	4.6
Tasmania .....	5.6	5.7	5.8	5.9	5.7
Western Australia .....	2.6	2.6	2.9	3.0	2.9

Source: Electricity Trust of South Australia

In addition, in bushfire risk areas, ETSA is installing insulated overhead mains to replace the existing bare lines. The single lines are less obtrusive.

Electric and magnetic fields (EMF) is a significant issue for the electricity industry due to the possible adverse health effects. To date, independent and authoritative reviews have not established that the 50 hertz electric and magnetic fields cause adverse health effects. A comprehensive database has been established by ETSA on the issue.

Comparative Costs of Alternative Energy Sources, 1992

	<i>Cents per kilowatt hour</i>
Solar thermal - solar ponds . . . . .	30
- central receiver . . . . .	36
- parabolic trough (LUZ) . . . . .	14
- parabolic dish . . . . .	12
Photovoltaics . . . . .	43
Hydrogen (solar thermal based) . . . . .	27
Fuel cells (natural gas fuelled) . . . . .	6
Wind (dependent on location) . . . . .	7
Conventional - baseload . . . . .	4
- peak . . . . .	6

Source: Office of Energy.

Alternative energy forms such as wind power and solar energy have the potential of contributing to the demand for energy and have the environmental advantage of nil emissions. Commercially available technologies include solar water heating and pool heating, wind power and photovoltaic systems. In remote areas where electricity is not available from a grid and diesel generators are used such technologies can be cost effective.

## 2.6 OVERALL ASSESSMENT : SOUTH AUSTRALIAN ENVIRONMENT

Several assessments of the prevailing condition of the South Australian environment have been undertaken, commencing in 1972 with the report of the Government-appointed Committee on Environment in South Australia. A brief State Of Environment (SOE) assessment was undertaken in 1985 and in 1988 the first comprehensive assessment was published.

A second SOE report was released in 1993 which detailed the changes since the first report. It identified the following priorities for action some of which are similar to the 1988 findings:

- need for greater water conservation including stormwater
- wetlands protection
- overexploitation of marine species

- extensive land salinisation
- rehabilitation and connection of areas of native vegetation
- research into conservation status of non vascular plants and invertebrates
- biological control of rabbits
- development of markets for recycled materials
- improved energy efficiency and energy management
- compliance of motor vehicles with noise and emissions standards
- housing development in proximity to quarries
- continuing lead levels in Port Pirie
- maintenance of urban quality and character in infill areas

The 1993 report noted progress in the following:

- development of national strategies on ecologically sustainable development, greenhouse, ozone protection, biodiversity and waste minimisation and recycling
- ozone protection – phase out of CFCs
- passage of the *Marine Environment Protection Act 1989* to control all effluent discharges
- the *Soil Conservation and Land Care Act 1989* and the *Pastoral Land Management and Conservation Act 1989* under which sustainable management of South Australia's pastoral and agricultural lands is being advanced
- coastal area plans to establish coastal hazard policies and planning principles
- recycling and waste minimisation programs were being established
- improved hazardous waste management
- a code of practice covering agricultural spray drift from farm chemicals had been adopted
- rehabilitation of mine and quarry sites was proceeding
- an environmental code of practice was incorporated into the tourism development strategy

Action by the government, business and industry, and the general community are addressing many of these issues. The concept of ecologically sustainable development is becoming widely accepted, that is achieving development which improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends.

The history of South Australia, and the past twenty years in particular, has been one of coming to terms with the environment, of deriving benefit from its use and development while not destroying or degrading its ability to continue to provide these benefits.

- 1627 The first recorded sighting of the South Australian coast by Europeans, when Dutch ship *Gulden Zeepaard* examined the coastline from Cape Leeuwin to the islands of St Francis and St Peter in the far west of South Australia.
- 1792 The next recorded sighting of South Australia made by the French explorer Rear Admiral D'Entrecasteaux while searching for the lost French explorer La Perouse. In December he sighted land south of Cape Leeuwin and examined the cliffs of the Great Australian Bight.
- 1800 Lieutenant James Grant was the first British explorer to sail along the South Australian coast. He sighted the extreme easterly shores of South Australia and named Cape Banks, Cape Northumberland, Mount Schank and Mount Gambier.
- 1802 Matthew Flinders in the *Investigator* thoroughly explored the coast of South Australian waters between Nuyts Archipelago and Encounter Bay. He discovered the Gulfs and Central Highlands and reported a very promising country for settlement.
- 1804 – 1836 A number of further discoveries took place at various parts of South Australian coastline by Captains Dillon (1815–16), Gould (1827–28), Hart (1831–33), and Jones (1833–34).
- 1829 While imprisoned in Newgate Gaol, Edward Gibbon Wakefield produced a number of writings including the now famous *A Letter from Sydney* series which contained his radical ideas for the colonisation of South Australia.
- 1830 Captain Charles Sturt explored the River Murray from New South Wales to its mouth; traversed Lake Alexandrina and located the Goolwa Channel, reaching the western shore of the Murray mouth on 12 February.
- 1833 Charles Sturt's *Two Expeditions into the Interior of Southern Australia* was published. This glowing report of South Australia was welcomed by those in England seeking a suitable site to establish a colony where the Wakefield Plan could be applied without restriction.
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## History and Chronology

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- 1834 The South Australian Colonisation Act was assented to on 15 August. The territory allotted under the Act embraced 802,508 square kilometres, with the western boundary the 132nd meridian of east longitude and the other boundaries virtually as they are today. The colony was to be opened to settlement by British subjects, but under no condition were convicts to be admitted, making South Australia the only State to be settled entirely by free persons.
- 1836 First migrants landed at Kangaroo Island on 27 July. First South Australian newspaper published in London. Colony's first school opened on Kangaroo Island. The Surveyor-General, Colonel Light arrived in November and commenced survey of Adelaide. Governor Hindmarsh arrived in HMS *Buffalo* and proclaimed South Australia a Province on 28 December.
- 1837 Colonel Light completed survey of Adelaide and designed the city's present layout. First Adelaide land allotments made. First newspaper published in South Australia. South Australian Supreme Court established. First hospital opened on North Terrace, Adelaide.
- 1838 First overland cattle and sheep drives from New South Wales. First export from South Australia, a small clip of wool, dispatched. First German settlers under the leadership of Pastor Kavel arrived in South Australia. Formation of first police force.
- 1839 Colonel Light died at Thebarton and buried in Light Square. First road in South Australia built between Adelaide and Port Adelaide. Adelaide Chamber of Commerce founded.
- 1840 Eyre started overland journey to Western Australia. The Municipality of Adelaide incorporated, the first in Australia. McLaren Wharf, Port Adelaide, opened by Governor Gawler.
- 1841 First South Australian mine (silver-lead) opened near Glen Osmond. Assisted migration suspended because of depression. Following financial crisis Governor Gawler recalled and succeeded by Governor Grey. Eyre arrived at Albany in Western Australia.
- 1842 Registration of births, deaths and marriages commenced. Portions of South Australia divided for first time into counties. Copper discovered at Kapunda. Legislative Council constituted. The South Australian Board of Colonisation Commissioners abolished by the British Government.
- 1843 Agricultural stripper invented by Ridley. A flour mill built at Hindmarsh.
- 1844 First Colonial Census held, and showed a population of 17,366.



- 1845 Copper discovered at Burra. Sturt explored the north-eastern part of the State. Gold found in South Australia, near Montacute. Assisted migration resumed.
- 1846 First pastoral leases granted.
- 1847 First winery in the Barossa Valley commenced operation. St Peters College established.
- 1848 Opening of The Savings Bank of South Australia. First ferry across the River Murray commenced operations at Wellington.
- 1849 The Central Board of Main Roads established.
- 1850 An Act granting representative government to South Australia passed by the British Parliament.
- 1851 The Central Board of Education established.
- 1852 First overland gold escort arrived in Adelaide.
- 1853 W.R. Randell's *Mary Ann* and Francis Cadell's *Lady Augusta* initiated the navigation of the River Murray.
- 1854 State's first railway (horse-drawn) built from Goolwa to Port Elliot.
- 1855 First South Australian postage stamps issued.
- 1856 First telegraph line opened from Adelaide to Port Adelaide. The new Constitution Act embodying the principle of responsible government proclaimed; it provided for Parliament to consist of two Houses; a Legislative Council and a House of Assembly. First steam railway from Adelaide to Port Adelaide constructed. Population of the State passed 100,000.
- 1857 Railway to Smithfield and Gawler opened.
- 1858 The Real Property Act, which embodied the principles of conveyancing formulated by Torrens, came into operation. First telegraph line to Melbourne opened.
- 1859 A jetty over 350 metres in length constructed at Glenelg. Copper discovered at Wallaroo.

## History and Chronology

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- 1860 Water supplied to the City of Adelaide by means of a main connected with the reservoir at Thorndon Park.
- 1861 Copper discovered at Moonta. Water laid on to houses in Adelaide. John McDouall Stuart set out to cross the continent from south to north. The South Australian boundary shifted west to coincide with the boundary of Western Australia.
- 1862 Stuart reached Chambers Bay on the coast of the Northern Territory.
- 1863 Administration of the Northern Territory taken over by South Australia. Shops of Adelaide lit for the first time with gas.
- 1865 Annual leases of pastoral lands sold by auction for first time. The Bank of Adelaide founded.
- 1866 Camels introduced by Sir Thomas Elder for the purpose of exploration. The Adelaide Town Hall opened.
- 1867 Visit of H.R.H. Prince Alfred, Duke of Edinburgh, who laid the foundation stone of the General Post Office.
- 1869 Foundation stone of St Peter's Cathedral laid. Prince Alfred College opened. Adelaide Chamber of Manufacturers founded.
- 1870 Construction of the transcontinental telegraph from Port Darwin commenced. John Forrest and party made first of two journeys of exploration from Perth.
- 1872 Transcontinental telegraph from Port Darwin completed and first direct telegram from London received.
- 1873 Eight-hour working day adopted. First Health Act, establishing a Central Board of Health, passed. First official cricket match played on Adelaide Oval.
- 1874 The University of Adelaide founded.
- 1875 The State Education Act passed. First Forestry Board established.
- 1876 Telegraph communication with New Zealand established. The Smith brothers invented the 'stump jump' plough. South Australia became first State to give legal recognition to trade unions.
- 1877 Overland telegraph line from Port Augusta to Eucla completed and first telegram from Perth transmitted. The Adelaide Bridge completed.
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- 1878 Provisions of the Education Act relating to compulsory school attendance brought into force in the Adelaide school district. First tramway (horse-drawn) in any Australian city commenced carrying passengers to Kensington and North Adelaide. The State's population passed 250,000.
- 1879 Foundation stone of the University of Adelaide laid. First bridge across River Murray in South Australia opened at Murray Bridge.
- 1881 First reclamation of swamp areas of River Murray. Art Gallery opened by H.R.H. Prince Albert Victor. Construction of the weir which created the Torrens Lake completed.
- 1882 Fire Brigades Board established.
- 1883 The Telephone Exchange commenced operations. Roseworthy Agricultural College opened to students.
- 1884 Largs Bay Fort opened. Adelaide Trades and Labor Council, the first delegates society, inaugurated.
- 1885 Broken Hill silver mines opened. Column erected on Mount Lofty summit as a prominent landmark for mariners.
- 1887 Act authorising payment to members of Parliament passed. Renmark Irrigation Colony established. First express trains ran between Adelaide and Melbourne. The Jubilee Exhibition opened. Stock Exchange of Adelaide formed by amalgamation of Adelaide Stock Exchange and Stock Exchange of South Australia.
- 1888 Totalisator legally authorised by an Act of Parliament.
- 1889 The School of Mines and Industries opened. Smelting of silver-lead ore from Broken Hill commenced at Port Pirie.
- 1890 First South Australian built locomotive completed.
- 1892 Education made free to the compulsory age.
- 1894 Act granting the franchise to women passed. Inauguration of industrial arbitration by the establishment of Boards of Conciliation.
- 1896 State Bank of South Australia opened. Women voted for the first time at the general election. Happy Valley Reservoir opened. One of Adelaide's most severe droughts commenced, and continued for several years.

## History and Chronology

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- 1899** Second referendum concerning the establishment of Federation held. In South Australia, 65,990 electors voted for Federation and 17,053 against. First military contingent left South Australia for the Boer War.
- 1900** Adelaide lit for the first time with electric light. The Commonwealth of Australia Constitution Act received Royal Assent and a Proclamation was issued uniting the States as the Commonwealth of Australia from 1 January 1901. Conservatorium of Music opened. First Workmens Compensation Act passed.
- 1901** Early closing of shops introduced. First Commonwealth Parliament elected. The Duke and Duchess of York arrived in the *Ophir*. The Customs Act came into force. The Electric Light Works was opened. Iron Knob connected to Whyalla by railway.
- 1902** Flinders column, at Mount Lofty, dedicated to the public by the Governor, Lord Tennyson.
- 1905** First kindergarten in South Australia opened.
- 1906** Military cadet system inaugurated.
- 1907** High schools were established in a number of country centres. Municipal Tramways Trust incorporated. First Federal basic wage judgment – the 'Harvester' award – made.
- 1908** Penny savings bank accounts for children established. The Outer Harbor opened. Adelaide High School established.
- 1909** Adelaide electric tramways commenced operations. Payment of age pensions by the Commonwealth Government commenced.
- 1910** Payment of invalid pensions by the Commonwealth Government commenced. First recorded monoplane flight in Australia made by F.C. Cusance at Bolivar.
- 1911** 'Penny Postage' to all parts of the British Empire introduced. The Federal Defence Act came into operation. Administration of the Northern Territory transferred to the Commonwealth Government.
- 1913** Medical inspection of school children introduced. Commonwealth Bank formally opened. Metropolitan Abattoirs established.
- 1914** First South Australian military expeditionary force embarked at Outer Harbor. South Australia experienced its most severe drought.

- 1915 Prices of commodities fixed by a commission. A referendum approved the closing of liquor bars at 6 p.m. Women appointed as justices of the peace for the first time. First shipment of iron ore made from Whyalla to steelworks in Newcastle. First women police appointed. Opal discovered at Coober Pedy.
- 1916 Referendum proposing compulsory military service abroad defeated. First Public Service Commissioner appointed. First State living wage with general application declared.
- 1917 German private schools in South Australia were closed. East–West transcontinental railway completed and the first train ran to Perth. Mr R.G. Carey, in a Bleriot 60, made the State's first airmail flight from Enfield to Gawler.
- 1919 Captain Butler flew from Adelaide across Gulf St Vincent carrying air mail to Minlaton. Soldier Settlement Bill passed by the South Australian Parliament. First Lord Mayor of Adelaide elected.
- 1920 Sir Ross Smith and party arrived at Adelaide by non-stop flight from Melbourne. Peace Exhibition held at the Jubilee Exhibition buildings. H.R.H. Edward, Prince of Wales visited South Australia.
- 1921 The State's population passed 500,000.
- 1922 First lock on the River Murray completed and opened at Blanchetown.
- 1923 The Government approved an extensive re-organisation of the railway system.
- 1924 Public Debt Commissioners were appointed. Air mail between Adelaide and Sydney inaugurated. Waite Agricultural Research Institute established. First radio stations commenced broadcasting.
- 1925 Showgrounds at Wayville opened. The first Federal election at which voting was compulsory took place. Foundation stone of Adelaide Teachers Training College laid.
- 1926 The South Australian barley exhibit won all prizes at the Brewers Exhibition in London. The State Bank opened for general banking business. Construction of a narrow gauge railway from Oodnadatta to Alice Springs approved. State petrol tax declared invalid following a Commonwealth Government writ against the State.
- 1927 Extension of the North–South railway commenced. The first train arrived at Renmark following the opening of the Paringa Bridge. The Duke and Duchess of York arrived in South Australia.

## History and Chronology

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- 1929 The first air mail left Adelaide for Perth. The first train to Alice Springs left Adelaide. Compulsory military training abolished and replaced by a voluntary system. Electric tram service to Glenelg commenced.
- 1930 All officers of the South Australian public service over the age of sixty-five years were compulsorily retired. The South Australian basic wage was reduced by 18c to \$1.25 a day. Transport Control Board, State Finance Committee and Unemployed Relief Council established.
- 1931 City Bridge opened. Financial Plan formulated at the Premiers' Conference adopted and Financial Emergency Act passed. Federal basic wage reduced by 10 per cent for twelve months but was to be adjusted in accordance with a retail price index. State basic wage reduced from \$1.25 to \$1.05 a day. Basic wage for females reduced, first from \$3.95 to \$3.50 and later to \$3.15 a week.
- 1932 Boundaries and names of a number of local government areas changed and others abolished following the report of a commission.
- 1933 The Farmers Assistance Board, the Betting Control Board and the Metropolitan and Export Abattoirs Board established.
- 1934 Water restrictions in force from May until the following January.
- 1935 The Nomenclature Act of 1935 restored the former German names to a number of towns, the names of which had been changed in 1917.
- 1936 Centenary year of the State's foundation celebrated. Contract signed for the completion of Parliament House and the foundation stone laid by the Governor, Sir Winston Dugan.
- 1937 South Australian Housing Trust established. New Federal basic wage of \$7.40 per week, which incorporated a 'prosperity' loading, declared. First trolley bus service inaugurated. Mount Bold Reservoir with a capacity of 30,000 megalitres filled, almost doubling Adelaide's water storage. Schools closed and other precautions taken as a result of an epidemic of poliomyelitis.
- 1938 First South Australian Housing Trust dwelling completed.
- 1939 State's worst heat wave and disastrous bushfires experienced during the first two months of the year. Record high temperature of 47.6°C recorded in Adelaide. New Parliament House opened by His Excellency the Governor-General, Lord Gowrie.

- 1940 Goolwa Barrage completed at a cost of \$1,400,000. Birkenhead Bridge opened. A rapid development of secondary industry took place as munition annexes were added to existing factories and new factories were opened.
- 1941 Scriptural instruction in State schools commenced. First naval vessel built in South Australia launched. First blast furnace to be built at Whyalla went into operation. Child endowment payments inaugurated. Payroll tax commenced.
- 1942 Daylight saving of one hour introduced for almost three months. Wages and prices pegged and profits and interest rates restricted. Racing and bookmaking prohibited. Rationing of tea and clothing commenced. Widows pension instituted. The uniform Income Tax Act came into force. First coal obtained from Leigh Creek.
- 1943 Price stabilisation legislation came into force. Butter rationing commenced. Wage and price subsidies were introduced and the prices of tea, potatoes and other commodities were reduced in order to bring price indexes and wages to a lower level. Racing resumed but betting shops remained closed.
- 1944 Rationing of meat began. Morgan-Whyalla pipeline officially opened. The first State election with compulsory voting took place. Severe water restrictions imposed. First output of Leigh Creek coal for electricity generation.
- 1945 Unemployment and sickness benefits came into operation. Restrictions imposed on the use of gas and electricity for domestic and industrial purposes.
- 1946 Commonwealth Government munition factories leased to various private firms. Payment of government subsidies to hospitals commenced. Restrictions on the use of gas and electricity again imposed. The Electricity Trust of South Australia took over the property and functions of the Adelaide Electric Supply Company.
- 1947 Fruit fly detected in metropolitan orchards and efforts made to eliminate it by stripping gardens and orchards. Sugar rationing abolished. Conciliation commissioners appointed following an amendment to the Federal Conciliation and Arbitration Act. Severe restrictions imposed on imports from North America.
- 1948 Restrictions on the use of gas and electricity imposed on a number of occasions during the year because of the shortage of coal. Preparation of the Woomera rocket range commenced. Forty-hour working week introduced by Arbitration Court award. Serious bushfires occurred in January. Severe storms during April resulted in widespread damage including the destruction of the Glenelg jetty. The free medicine scheme came into operation. Clothing and meat rationing abolished. Full scale production of the 'Holden' car commenced.

## History and Chronology

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- 1949 Petrol rationing by the Commonwealth Government declared illegal but resumed later in the year under a State Act. An extended national coal strike occurred. Water pipeline to the Woomera rocket range completed. The Commonwealth and South Australian Governments ratified an agreement for the standardisation of railway gauges.
- 1950 Petrol, butter and tea rationing discontinued. Federal free drugs scheme came into operation. Water restrictions imposed in December and remained in force until June 1951.
- 1951 Serious bushfires occurred in January. Wool prices reached a record high level. Distribution of free milk to school children introduced.
- 1952 The hospital benefits scheme came into operation. Price control on clothing removed in South Australia. Severe import restrictions gazetted. Installations for the bulk handling of grain opened at Ardrossan. Compulsory chest X-rays introduced.
- 1953 Remaining controls on building removed. Port Pirie became the first country town to be proclaimed a city. The medical benefits scheme came into operation. Automatic quarterly cost-of-living adjustments to the basic wage discontinued. Size of the State Cabinet increased from six to eight Ministers.
- 1954 A severe earthquake occurred in Adelaide on 1 March. Her Majesty Queen Elizabeth II visited South Australia. First unit of Port Augusta power station opened. Construction of dwellings in Elizabeth commenced. Water from the River Murray pumped into metropolitan reservoirs through the Mannum pipeline.
- 1955 Adelaide Airport at West Beach opened. The new satellite town at Elizabeth officially opened.
- 1956 River Murray flooded for several months and caused considerable damage in irrigation and reclaimed areas. Town Planning Committee established. Atomic device exploded at Maralinga. Salk Poliomyelitis vaccination program commenced.
- 1957 Centenary of responsible government in South Australia celebrated. Long service leave legislation passed by the South Australian Parliament.
- 1958 Visit of Queen Elizabeth, the Queen Mother, to South Australia. Introduction of parking meters to Adelaide. South Para Reservoir opened and connected to Adelaide water supply. Final run by a street tram in Adelaide, following conversion to diesel bus transport.



- 1959 South Australia ceased to be a claimant State for special grants from Grants Commission. Full-scale television transmission commenced. Sir Thomas Playford created record term as Premier in a British country (26 years 125 days). Aboriginals became eligible for age, invalid and widows pensions.
- 1960 First Adelaide Festival of Arts held (March 12–26). Completion of second unit and formal opening of Thomas Playford power station at Port Augusta.
- 1961 First United Kingdom Trade Commissioner appointed to South Australia. Compulsory driving tests introduced. The trailer ship Troubridge made its first run from Port Adelaide to Kingscote and Port Lincoln. Sturt's Desert Pea declared State's official floral emblem.
- 1962 Myponga Reservoir completed and linked to Happy Valley Reservoir. Duplication of Morgan–Whyalla pipeline commenced.
- 1963 Population of the State passed 1,000,000 mark. Port Stanvac oil refinery 'on stream'. School leaving age increased to fifteen years. Three weeks annual leave for employees governed by State awards and determinations introduced. First direct dialling for an overseas telephone call from South Australia. Major gas flow from Gidgealpa No. 2 well. Royal visit by Her Majesty, Queen Elizabeth II.
- 1964 Work commenced on conversion of Port Pirie–Broken Hill railway to standard gauge. First gas from Port Stanvac refinery piped for use in Adelaide's gas supply. Record wind gust (148 km/h) registered at Adelaide on 12 July. New world land speed record set by Donald Campbell on Lake Eyre.
- 1965 Election of first Labor State Government since 1933. First country television station opened at Port Pirie. Steel works including a basic oxygen steel making plant opened at Whyalla. First woman judge in Australia appointed to Supreme Court of South Australia. Size of the State Cabinet increased from eight to nine Ministers.
- 1966 Women sworn in for jury service for the first time. The Flinders University of South Australia at Bedford Park officially opened by Her Majesty Queen Elizabeth, the Queen Mother. New outlet tunnel 2,700 metres long from Happy Valley Reservoir completed. ELDO rocket *Europa-1* launched at Woomera.
- 1967 Totalisator Agency Board operated off-course in South Australia for the first time. First South Australian lottery drawn. Federal Basic Wage superseded by Total Wage concept. Liquor trading hours extended to 10 p.m. WRESAT-1, first Australian orbital satellite launched from Woomera. New record low annual rainfall for Adelaide (257 mm). Torrens Island power station commenced operations. First off-shore drilling rig – *Ocean Digger* – constructed and launched at Whyalla.
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## History and Chronology

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- 1968** State Elections held. Labor Government returned but subsequently defeated on the floor of the House at the first meeting of the new Parliament. New Liberal Premier, R.S. Hall sworn in. Four weeks leave for State Government employees introduced. Sealed highway from Broken Hill to Adelaide opened. Sir James Harrison first Australian-born Governor of South Australia sworn in.
- 1969** Work begun on second major pipeline to bring River Murray water to Adelaide. Electricity Trust signed \$120 million contract for supply of natural gas. Natural gas flowed through completed 832 kilometre pipeline from Moomba–Gidgealpa to Adelaide.
- 1970** Abortion law reformed in South Australia. First direct telecast from England to Australia via satellite. Hairy-nosed wombat adopted as State's faunal emblem.
- 1971** Fluoridation of Adelaide water supply commenced. Age of majority reduced from twenty-one to eighteen. Commonwealth Government transferred power to levy payroll tax to the States. Daylight saving introduced in South Australia for the first time since the 1939–45 War. Death of South Australian Governor Sir James Harrison in office. Sir Mark Oliphant, the first South Australian born Governor, sworn in. Wearing of seat belts in motor vehicles made compulsory.
- 1972** New Stirling to Verdun freeway opened. New laws regulating door-to-door selling and used car dealing introduced. University of Adelaide's educational radio station VL5UV commenced broadcasting. Weather temperature reports changed to degrees Celsius. Daylight saving re-introduced for 1972–73 and subsequent summers. South Australian Film Corporation commenced operation. South Australia's first ombudsman appointed.
- 1973** New long service leave provision for three months leave after ten years service came into force. New \$11 million hospital opened at Modbury. Dunstan ALP Government returned at State election to become the first ALP Government to retain office after a general election in South Australia since 1910. Cross Lotto game introduced by State Lotteries Commission. Adelaide Festival Theatre opened by the Prime Minister. Legislation enacted for adult franchise and proportional representation for the Legislative Council. Compulsory blood tests for road accident victims introduced. \$50 note issued for the first time.
- 1974** World Gliding Championships held at Waikerie. H.R.H. Prince Philip, the Duke of Edinburgh, visited South Australia. First match held at the new South Australian National Football League headquarters at West Lakes. Conversion of road signs to metric measurements undertaken. Judgment handed down making four weeks annual leave standard for workers under State awards. Legislation allowing hotel trading to 12 midnight on Fridays and Saturdays came into force.

- 1975** Transmission of television in colour commenced. International Equestrian Exposition 1975 held in Adelaide and attended by H.R.H. Princess Anne. State Election held on 12 July, after the Legislative Council failed to pass the Railways (Transfer Agreement) Bill; the Dunstan ALP Government was returned with a reduced majority and the Bill was subsequently passed. Medibank commenced operations in South Australia. Legislation for the redistribution of House of Assembly electoral boundaries passed by the Legislative Council.
- 1976** A new commercial radio station (5AA) went to air, Adelaide's first for forty-six years. A new political party, the New Liberal Movement formed. Sir Douglas Nicholls appointed as Governor of South Australia from 1 December 1976. A total eclipse of the sun occurred in parts of South Australia on 23 October. Large deposits of copper ore discovered at Roxby Downs near Andamooka. Legislation passed making rape within marriage a criminal offence. Capital punishment abolished in South Australia.
- 1977** Her Majesty, Queen Elizabeth II and the Duke of Edinburgh visited South Australia. \$5.8 million Southern Plaza at the Adelaide Festival Centre officially opened by Her Majesty, Queen Elizabeth II. South Australia's first million dollar lottery, the Celebration Lottery, drawn by the Lotteries Commission. A major deposit of sub-bituminous coal discovered near Lock. The South Australian Health Commission came into operation. Keith Scaman sworn in as the new Governor of South Australia. Adelaide first water filtration plant at Hope Valley commenced operations. Late night shopping in city and suburbs commenced.
- 1978** A Royal Commission held into the dismissal of Police Commissioner Salisbury. The last ship to be built at Whyalla shipyards, the *Denis O'Malley*, was launched. Adelaide tramways held centenary celebrations. Lotteries Commission introduced Instant Money Game with prizes of up to \$10,000. South Australian Heritage Committee was formed.
- 1979** A new public transport zone-fare system introduced. D.A. Dunstan, the State's second longest serving Premier resigned for health reasons. Adelaide's unemployment levels highest in Australia in March - 8.9 per cent of the workforce. Santos legislation passed, limiting maximum permissible single shareholdings to 15 per cent. State elections held; D.O. Tonkin, new Liberal Premier, sworn in. Merger of Bank of Adelaide with ANZ Banking Group approved. Charles Moore retail group ceased operating in South Australia.
- 1980** Norwood by-election, ordered by Court of Disputed Returns, won by ALP candidate G. Crafter. Bushfire destroyed thirty-five houses in Adelaide Hills, causing \$6 million damage. First of State Transport Authority's new 'Series 2000' railcars began service. Mitsubishi Motor Corporation purchased control of Chrysler Australia Ltd. New slogan 'The Festival State' for South Australian motor vehicle number-plates. Constitutional Museum opened. H.R.H. Princess Alexandra and her husband, Mr Angus Ogilvy, visited South Australia. The Tarcoola-Alice Springs rail link opened.
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- 1981** By-election for Federal seat of Boothby, made vacant by the appointment of Mr J. McLeay as Consul-General in Los Angeles, won by Mr R. Steele Hall (Liberal). On February 15, Adelaide had its hottest day since 1948. Temperature reached 43.4°C. H.R.H. Charles, Prince of Wales visited South Australia. On June 1, Adelaide recorded its lowest barometric pressure ever (979 millibars).
- 1982** Commencement of Moomba-Stony Point liquids pipeline. An Australian register of ships established. Lt-Gen. Sir Donald Dunstan, KBE, CB, sworn in as the State's new Governor, in April. Mr Mario Feleppa, AM, endorsed to fill a casual vacancy in the Legislative Council, became the first Italian-born migrant to enter the South Australian Parliament. On June 8, Adelaide experienced its coldest minimum temperature since the Bureau of Meteorology began taking records in 1857; -0.4°C. Following amendments to the Licensing Act, some hotels in 'tourist areas' began trading on Sundays, for one or two 2-hour periods. State elections held; J.C. Bannon, new Labor Premier sworn in. International air services commenced through Adelaide.
- 1983** First twins born in South Australia under Queen Elizabeth Hospital's *in vitro* fertilisation program. Large bushfires in February claimed 28 lives in South Australia. Damage estimated at over \$200 million. Fires at nine separate locations, including Clare, Adelaide Hills, and South-East. Adelaide recorded its lowest maximum March daytime temperature, 14.9°C (on March 22) for 104 years. The State was visited by H.R.H. Charles, Prince of Wales, and the Princess of Wales. Mrs Wendy Chapman was elected Adelaide's first woman Lord Mayor. Liquids pipeline from Moomba to Port Bonython completed.
- 1984** Maralinga Land Rights Bill was passed by State Parliament, returning 76,000 square kilometres of South Australia's Far North to the traditional Aboriginal owners. Australian National's new Adelaide Rail Passenger Terminal at Keswick began operating. Australia's new \$100 note and \$1 coin released for the first time. State Bank and Savings Bank of South Australia amalgamated. Snow fell in the Mount Lofty Ranges, in the Mid North, and at Peterborough.
- 1985** The Adelaide Station and Environs Redevelopment (ASER) Property Trust continued construction on the site of the old railway station yards. The Trust is building a 400-room international hotel, a convention centre, a new office block and two parking stations. ASER is also a partner in the company which operates the casino established in the station building. Australian Formula One Grand Prix motor race (in Adelaide's East Parklands) won by Keke Rosberg of Finland, driving a 'Williams'. Bannon Government re-elected in December. State Government appointed Australia's first Commissioner for the Ageing.
- 1986** Jubilee Celebrations, commemorating the 150th Anniversary of European settlement, began on New Year's Eve. Visit of Her Majesty Queen Elizabeth II and Duke of Edinburgh. Adelaide Festival of Arts held in March. Sixth World Three Day Equestrian Event Championships held at Gawler in May. Pope John Paul II visited the State. South Australian Maritime Museum in Port Adelaide opened in December.

- 1987 The River Murray Commission replaced by the Murray Darling Commission. Entry fees to Belair and Para Vista National Parks introduced. Work commenced on the Botanic Gardens tropical conservatory. Daylight saving started one week later and finished in line with eastern States. Grand Prix held in November. Tall ships visited Port Adelaide en-route to Hobart. A substantial part of the submarine construction contract for RAN was awarded to South Australia.
- 1988 Large bushfire in January burnt out 70 per cent of Wilpena Pound. World Fireball Championship held at Glenelg. By-election for Federal seat of Adelaide, made vacant by resignation of Mr C. Hurford, was won by Mr M. Pratt (Liberal). The State was visited by H.R.H. Charles, Prince of Wales, and the Princess of Wales. Festival of Arts held in March. Red-light cameras installed at selected traffic light sites. Mitsubishi Motors Australia Ltd commenced exports of Magna motor car to Japan. \$2 coin issued for the first time. A Poll Merino ram sold for \$188,000, a world record price for the breed. East End Market closed down - replaced by a new market complex at Pooraka. The Australia's first hospitality industry training hotel, the College Arms, opened. Police Air Wing facility opened at Adelaide Airport.
- 1989 A new apprenticeship scheme, the Retail Traineeship Scheme, launched. Approval given for stage one of the Wilpena Pound tourist resort development in the Flinders Ranges. Construction began of a new major metropolitan hospital at Noarlunga. National Crime Authority Office opened in Adelaide. Natural gas supplied to Whyalla and the town's BHP steelworks. Highest rainfall ever in South Australia in one day (273 mm) recorded at Motpena Station near Flinders Ranges National Park. Extensive flooding in the north of the State during March. Lakes Eyre and Torrens filled, Lake Torrens for the first time this century. The Adelaide Childrens Hospital and Queen Victoria Hospital amalgamated to become the Adelaide Medical Centre for Women and Children. Australian Formula One Grand Prix won by Thierry Boutsen, driving a 'Williams'. Following the State Government election, ALP formed a minority Government with the help of two independents. Submarine fleet manufacturing facilities opened at Osborne. Botanic Gardens tropical conservatory opened in November.
- 1990 Festival of Arts held in March. Club Keno, the world's only on-line computer generated Keno game commenced. Free travel on STA scheduled services for children and students introduced. A new \$1.3 million pipe organ was unveiled in the Adelaide Town Hall. Exhibition Hall, the final stage of the Adelaide Plaza on North Terrace was opened. Adelaide recommended as a preferred site for the Multi Function Polis (MFP) by the MFP Joint Steering Committee. Department of Local Government was abolished. The five-millionth Holden rolled off Elizabeth's production line. Police introduced radar speed cameras.

- 1991 University of South Australia formed by merging South Australian Institute of Technology and three Colleges of Advanced Education. Electoral reform referendum held in February, approved by 89.9 per cent of voters. Dame Roma Mitchell, AC, DBE, sworn in as new Governor. The Flinders University of South Australia celebrated its Silver Jubilee. Commonwealth Government gave go-ahead for Australia's first Multi Function Polis. New system of water and sewerage rates introduced. The \$40 million Adelaide Entertainment Centre opened in July.
- 1992 The Hackney Bus Depot site to be developed by the Botanic Gardens in a way which will complement the Bicentennial Conservatory. Australia's last remaining metropolitan afternoon newspaper, Adelaide's *The News*, closed. The Police Commissioner reported a drop of 15 per cent in housebreaking and car theft and a drop of 10 per cent in larceny. This is attributed to crime prevention initiatives such as Neighbourhood Watch. The Hanson Centre for Cancer Research was officially opened. The University of Adelaide commercial precinct opened. Its aim is to give commercial enterprises access to research and to develop new industries. The South Australian Certificate of Education (SACE) was introduced to replace the previous matriculation system. The oldest rock carvings in the world were discovered in the Olary region 110 kilometres west of Broken Hill. They are 42,700 years old and pre-date the Neanderthal carvings by 15,700 years. The final marker on the 1,500 kilometre Haysen Walking Trail was positioned in October 1992. The trail extends from Cape Jervis on the Fleurieu Peninsula to Mount Babbage in the Upper Flinders Ranges. The wettest year on record with 882.4 millimetres of rain.
- 1993 Tantanoola's paper pulp mill was opened in February 1993. The mill uses timber from local woodlots. An environmentally friendly oxygen based bleaching method is used instead of the usual chlorine based method. Adelaide hosted 14 per cent of the International Conventions held in Australia in 1992-93. Seagrass from Kingston in the South East Region is being exported to Japan for use in fertiliser manufacture. The 30-year contract removes what was a problem from the beaches in the area. The 888 kilometre border between South Australia and New South Wales has been marked with 223 concrete marker slabs. The 8 year project was completed in June 1993. The first Collins class submarine, *HMAS Collins*, was launched in August 1993. It was built at the Osborne facility of the Australian Submarine Corporation. The design, based on the Swedish Vastergotland class, has been adapted for Australian conditions and can accommodate women crew members. The Arid Lands Botanic Gardens at Port Augusta was opened in September. The eastern boundary of the 200 hectare site extends into Spencer Gulf and the gardens include coastal and marine vegetation. A long boardwalk protects the fragile environment.

## IMPORTANT EVENTS THAT OCCURRED IN SOUTH AUSTRALIA IN 1993-94

The following important events occurred in South Australia in 1993-94. They are listed under broad category headings and by chronological order within their group.

### GOVERNMENT

*September 1993* The fourth and final report of the Royal Commission into the State Bank of South Australia and the State Bank Group of Companies was released. In the report the Royal Commissioner Mr John Mansfield QC (who replaced the original Royal Commissioner Mr Samuel Jacobs QC) detailed 56 recommendations for further investigation of which the bulk centred on possible civil damages claims for the Bank's losses. This Report brought to an end the Royal Commission which had run for two years and cost approximately \$35m.

*December 1993  
State Election* The Liberal Party led by Dean Brown won the State election by a substantial margin. The defeated Labor Party had been in power since November 1982. The new Liberal Government won a majority of 27 seats in the Lower House of Assembly (37 to 10) and although it gained one Legislative seat from Labor (11 to 10) the Australian Democrats held onto their two seats and balance of power.

*May 1994* The Report of the State Audit Commission was released. Immediately after gaining office the new Government set up a Commission of Audit to undertake a broad review of the State's public sector finances. The emphasis of the recommendations was to cut costs, improve efficiencies and to reduce public debt. It covered all areas of State Government operations (health, education, ETSA, E&WS, Housing Trust, police etc.) and each sector received specific recommendations.

*June 1994* Following the Audit Commission Report the State Government released a Financial Statement which outlined the Government program and aims for streamlining the State Public Service, reducing Budget deficit and State debt.

### BUSINESS

*August 1993* The first of the six \$850m Collins class submarines was launched into the Port River at Osborne. Each of these submarines to be built by the Australian Submarine Corporation is 78 metre long, weighs 3,000 tonnes and is conventionally powered.

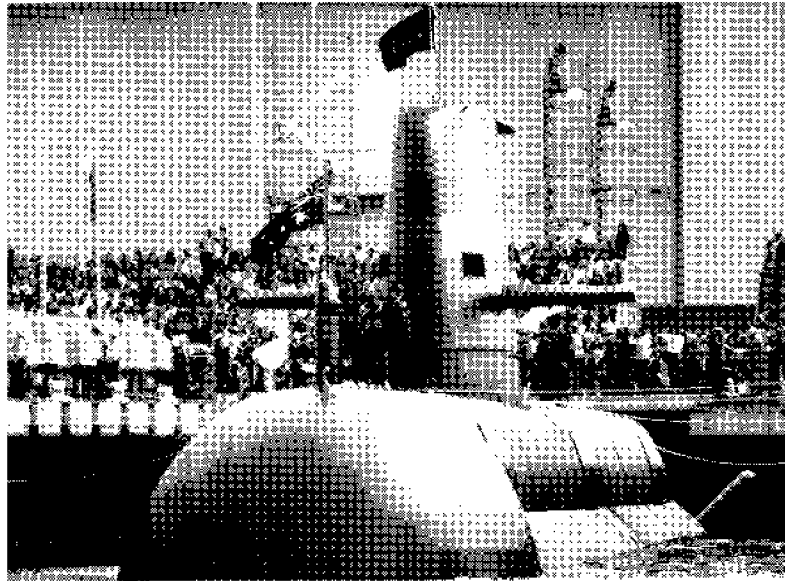
Almost 5,000 dignitaries and overseas guests saw Lady Phillis Collins launch the submarine which was named (as is the class) after her husband, Vice-Admiral Sir John Collins.

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Launch of the first Collins class submarine.

Photo:  
The Advertiser

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*November 1993* A new gas plant at Ballera in Queensland and a new gas pipeline from Ballera to Moomba in the far north of South Australia were jointly opened by Mr Arnold and Mr Goss, Premiers of South Australia and Queensland respectively. The gas plant will supply LPG and condensate to Moomba and in the future to Port Bonython. The 200 km pipeline will supply about one-third of South Australia's gas supplies and secures the State's gas supplies well beyond 2003.

*January 1994* A new regional bank, Adelaide Bank Ltd was launched. Previously it had operated as the Co-operative Building Society for 93 years. Although the Adelaide Bank will concentrate its operations locally it does have plans to establish branch offices interstate in the next three to five years.

#### **SOCIAL**

*October 1993* Poker machines introduced into South Australia. The Adelaide Casino publicly launched 415 poker machines a forerunner to what was opened in hotels and clubs throughout the State from July 1994 onwards. Each machine has to return at least 85 per cent to players and the State turnover tax for each machine is 4 per cent. All machines are connected to a central computer system which monitors the bets and winnings of each machine.

*January 1994* A year of celebrating a Centenary of Women's Suffrage in South Australia was launched. This celebration marks the world first achievement of South Australia suffragettes in 1894 of gaining the right to vote and stand for parliament (the rights were granted on 18/12/1894). These achievements will be celebrated by special events and projects including a time capsule which will have various celebratory items placed in it during the



year. The capsule will then be buried in the catacombs of State Parliament House on 17 December 1994 for opening in 100 years time. The Centenary will also be recognised by the release of a commemorative \$5 coin by the Royal Australian Mint and a special series of stamps by Australia Post.

January 1994

The Art Gallery of South Australia purchased a \$1 million 375 year old portrait of a seated couple by Sir Anthony Van Dyck. Although considered to be purchased at a bargain price it is the most expensive single work ever acquired by the Art Gallery and the Gallery revealed that the benefactor who put up most of the money was Mr James Fairfax, a prominent Sydney art lover. Van Dyck (who became court painter to Charles I) is famous for his technically perfect portraits and this painting is a key work in the Gallery's strong collection of British portraiture.

February/  
March 1994

The 18th Bi-ennial Adelaide Festival of Arts was held. Directed by Christopher Hunt this Festival was unique in that it centered around Asian culture and how Australian arts are integrating into the Asian scene. The Festival was also concentrated around the Festival Theatre complex and had an emphasis on outdoor attractions. A special outdoor performance space resembling a South-East Asian longhouse called the 'Open Roof' was constructed in Elder Park. Half of the Festival performances comprising Aboriginal, Javanese, Sumatran, Pacific Islands and South-East Asian music, theatre and dance together with Australian outdoor theatre companies performed in the 'Open Roof'. Another new development for this Festival was its accessibility. One-third of all seats were made available at a flat fee of ten dollars including opening night performances. Overall there were 540 performances by 950 artists from 21 countries and the whole Festival period enjoyed calm and warm weather conditions which were perfect for the outdoor content.

Also run in conjunction with the Festival was the Fringe Festival which had a strong concentration of Australian theatre, particularly Australian drama. The Fringe Festival was also very popular and the 1994 Fringe experienced record attendances.

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The 'Open-Roof' outdoor performance venue especially constructed for the 1994 Festival.

Photo: Adelaide Festival Office

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### SPORT

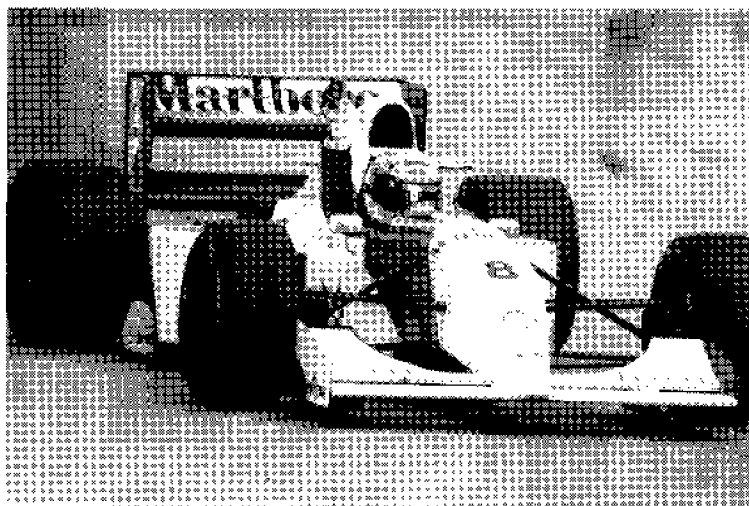
- August 1993* Adelaide breast stroke swimmer Phil Rogers swam new world record times for short course 100 metres and 200 metres at the Australian Short Course Championships in Melbourne. The Bronze medallist from the Barcelona Olympics achieved this double feat after just having won his first international gold medals for 100 and 200 metres breast stroke events at the Pan Pacific Swimming Championships in Japan. In December at the World Short Course Championships in Spain Phil won Gold for the 100 metres and Silver for the 200 metres events. These successes saw Phil Rogers elected as the 1993 'Advertiser - Caltex' Sports Star of South Australia.
- August 1993* South Australian Sports Institute rowers won medals at the World Junior Rowing Championships at Larungen in Norway. Amy Safe and Peta Coudraye achieved Gold in the women's pairs and Sally Newmarch obtained Silver in the women's singles.
- September 1993* The Adelaide Football Club (Crows) achieved its first chance to play in the Australian Football League finals. They were successful in the first elimination final at the MCG in beating Hawthorn and earned a 'double chance'. The following week the 'Crows' lost to Carlton at Waverley which put them up against Essendon in the eliminating preliminary final at the MCG. Although the Crows led by seven goals at half-time Essendon won and the Crows finished third overall for the season.
- November 1993* Ayrton Senna (McLaren) won the 1993 Australian Grand Prix from Alain Prost and Damon Hill (Williams). This ninth Formula One Grand Prix in Adelaide was also the last race for the retiring 1993 World Champion Alain Prost. It was the second time that Ayrton Senna had won in Adelaide (he won this race in 1991) and was the last win he achieved before his death in the 1994 San Marino Grand Prix.

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Ayrton Senna salutes the crowd after winning the 1993 Australian Formula I Grand Prix.

*Photo:*  
*The Advertiser*

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- December 1993* Shock announcement that the rights to stage the Australian Formula One Grand Prix after 1996 had been granted to Victoria and that the event would be held on a new street track in Melbourne. Subsequent talks between the South Australia and Victorian Governments clarified the issue and agreement was reached that the event would go to Victoria after the 1995 event.
- May 1994* Adelaide City Soccer Club (Zebras) won the 1994 and their third National Championship in Melbourne. Although only being fifth at the end of the home and away games Adelaide won their way through to the finals and beat the minor round premiers Melbourne Knights (1–0). Adelaide City have played in the last three successive Grand Finals and won the Championship previously in 1986 and 1992.
- May 1994* The National Women's Superleague Netball final between two arch-rival Adelaide teams Contax and Garville saw Contax win the Cup in a controversial final and become the 1994 National Netball Club Champions. (Garville were the 1993 National Champions.) The match was a close and tense struggle with both teams tied at full-time but Garville claimed that a goal scored by them had been incorrectly credited to Contax. However extra time was played and at the end of the two seven minutes periods of overtime (and after Garville being ahead at one stage) Contax led by three goals (61–58) and won the Championship. Garville subsequently appealed and in August the All Australian Netball Association issued a statement accepting that although the scoring error had been made the final result would remain unchanged.
- May 1994* The interstate State-of-origin Australian rules match between Victoria and South Australia celebrated 20 years of Football Park (*see* special Football Park feature in Chapter 6). The high class contest was narrowly won by South Australia (11–9 to 10–13).

### WEATHER

- December 1993* After heavy rainfalls in the Eastern States and in the Murray River system catchment areas the River Murray floods reached South Australia. The flooding peaked during December matching a previous big flood in 1981 but not as high as the 1956 flooding; the highest this century. Although low lying land, river shacks and caravan parks were inundated with water the flooding gave long term beneficial effects. The high volume of flow improves the quality of water, benefits fishing stocks and the flooding of backwaters regenerates growth benefiting bird-life and yabbie stocks.
- March–May 1994* A dry and stormy period. The State received no rainfall in March, the driest March since 1874, and up until nearly the end of May Adelaide and the rest of the State had experienced a prolonged dry period. In Adelaide less than one-third of the average rainfall had been received and most of that fell in January and early February.

## History and Chronology

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In late May South Australia experienced severe storms. First the State had dust storms. On 24 May it experienced the worst one with winds up to 170 km/h whipping up precious dry top soil from rural areas and causing wide spread property damage.

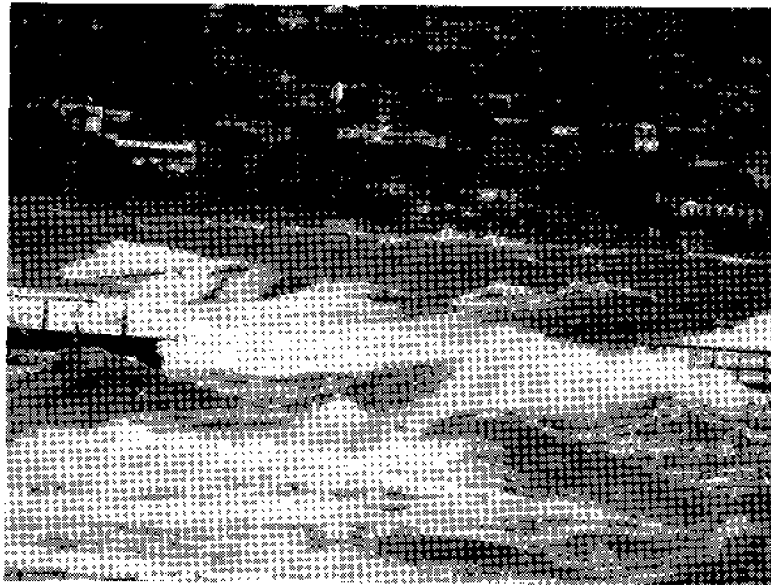
The next day fierce storms ravaged the coast and caused widespread damage. Strong winds, rain squalls and huge seas buffeted coastal areas resulting in sea-side damage. Sections of the Brighton and Semaphore jetties were washed away and hundreds of thousands of tonnes of beach sand were eroded out to sea.

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High seas pound  
the Brighton jetty.

*Photo:*  
*The Advertiser*

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## 4.1 SYSTEM OF GOVERNMENT

South Australia is one of the six Australian States (originally constituted by Acts of the Imperial Parliament) which at Federation in 1901 ceded many of their powers on matters of national importance (e.g. international affairs and defence) to the Commonwealth of Australia. From time to time other powers on matters of local importance have been delegated to local governing bodies. As a result the people of South Australia are subject to the laws of a three-tier system of government. In addition, statutory powers within specified fields are exercised by certain public corporations such as the Electricity Trust of South Australia, the South Australian Housing Trust and the South Australian Meat Corporation.

Both the Commonwealth and the South Australian Parliaments are bicameral; in each the leader of the Government (the Prime Minister of the Commonwealth and the Premier of South Australia) is seated in the Lower House and in each the Upper House has restricted powers concerning money Bills.

### *Cabinet and Executive Government*

Both in the Commonwealth and in South Australia, executive government is based on the system which was evolved in Britain in the eighteenth century and which is generally known as 'cabinet' or 'responsible' government. Its main principles are that the head of the State, Her Majesty the Queen (or her representative, the Governor-General or Governor, acting on her behalf) should perform governmental acts on the advice of her Ministers; that she should choose her principal Ministers of State from members of Parliament belonging to the party or coalition of parties commanding a majority in the popular House; that the Ministry so chosen should be collectively responsible to that House for the government of the State; and that the Ministry should resign if it ceases to command a majority there.

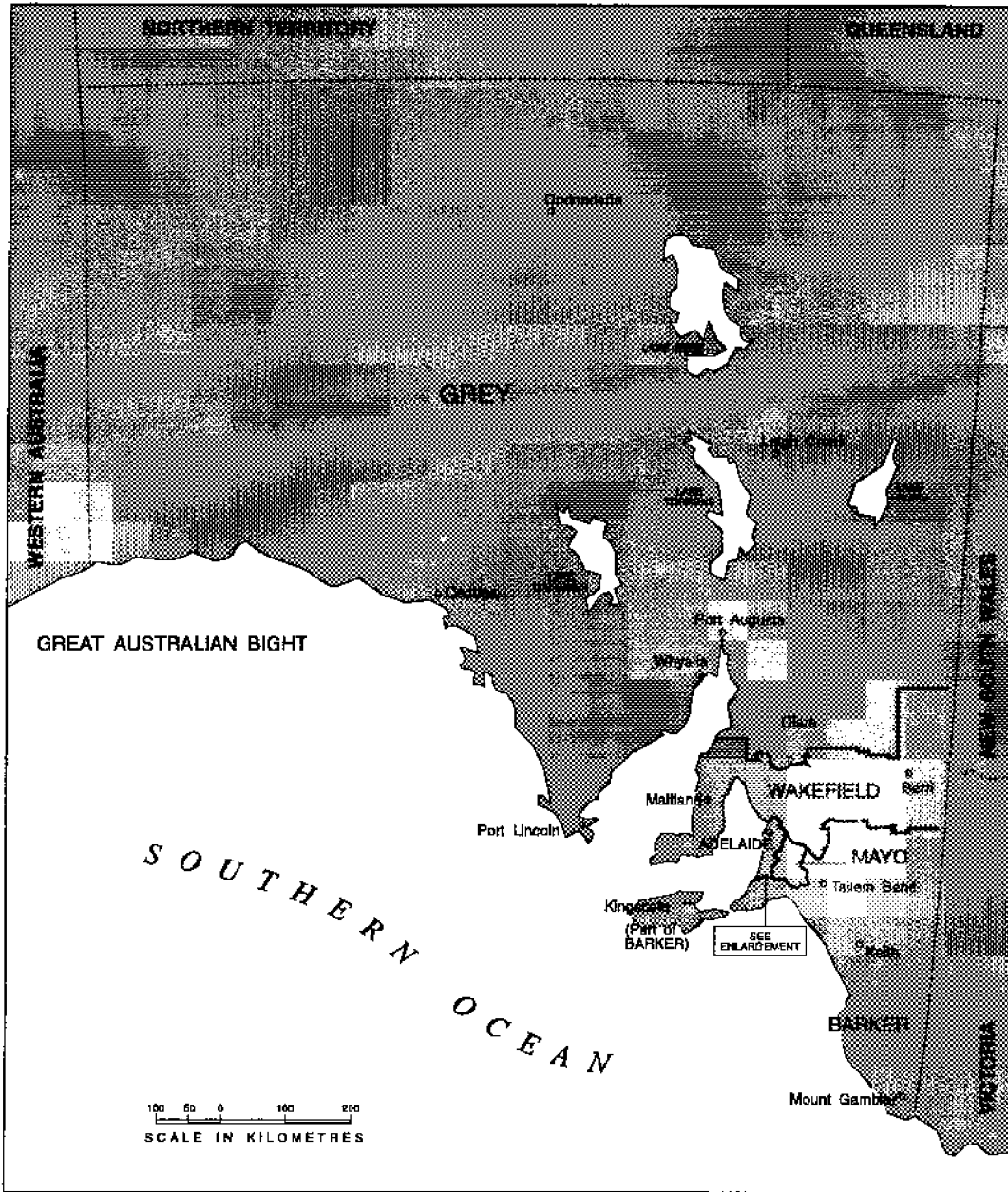
The cabinet system operates chiefly by means of constitutional conventions, customs or understandings and through institutions that do not form part of the legal structure of government at all. The executive power of the Commonwealth is exercisable by the Governor-General and that of South Australia by the Governor, each being advised by an executive council which meets only for formal purposes. The whole policy of a Ministry is, in practice, determined by some or all of the Ministers of State, meeting without the Governor-General or Governor under the chairmanship of the Prime Minister or Premier. This group of Ministers is known as the Cabinet.

The Cabinet	As Ministers are the leaders of the party or parties commanding a majority in the popular House, the Cabinet substantially controls not only the general legislative program of Parliament, but the whole course of Parliamentary proceedings. In effect, though not in form, the Cabinet, by reason of the fact that all Ministers are members of the Executive Council, is also the dominant element in the executive government of the State. In summoning, proroguing or dissolving Parliament, the Governor-General or the Governor is usually guided by the advice tendered by the Cabinet through the Prime Minister or Premier, although legally the discretion is vested in the Office of the Governor-General or Governor.
Executive Council	The Executive Council is usually presided over by the Governor-General or Governor, the members holding office during the Governor's pleasure. All Ministers of State must be members of the Executive Council. Commonwealth Ministers remain members of the Executive Council on leaving office, but are not summoned to attend its meetings, for it is an essential feature of the cabinet system that attendance should be limited to the Ministers of the day.
Appointment of Ministers	Legally, Ministers hold office during the pleasure of the Governor-General or Governor, but in practice the discretion of the Queen's representative in the choice of Ministers is limited by the conventions on which the Cabinet system rests. When a Ministry resigns it is the custom of the Crown to send for the leader of the party which commands, or is likely to be able to command, a majority in the popular House and to commission that person, as Prime Minister or Premier, to 'form a Ministry' – that is, to nominate other persons to be appointed as Ministers of State and to serve as colleagues in the Cabinet.

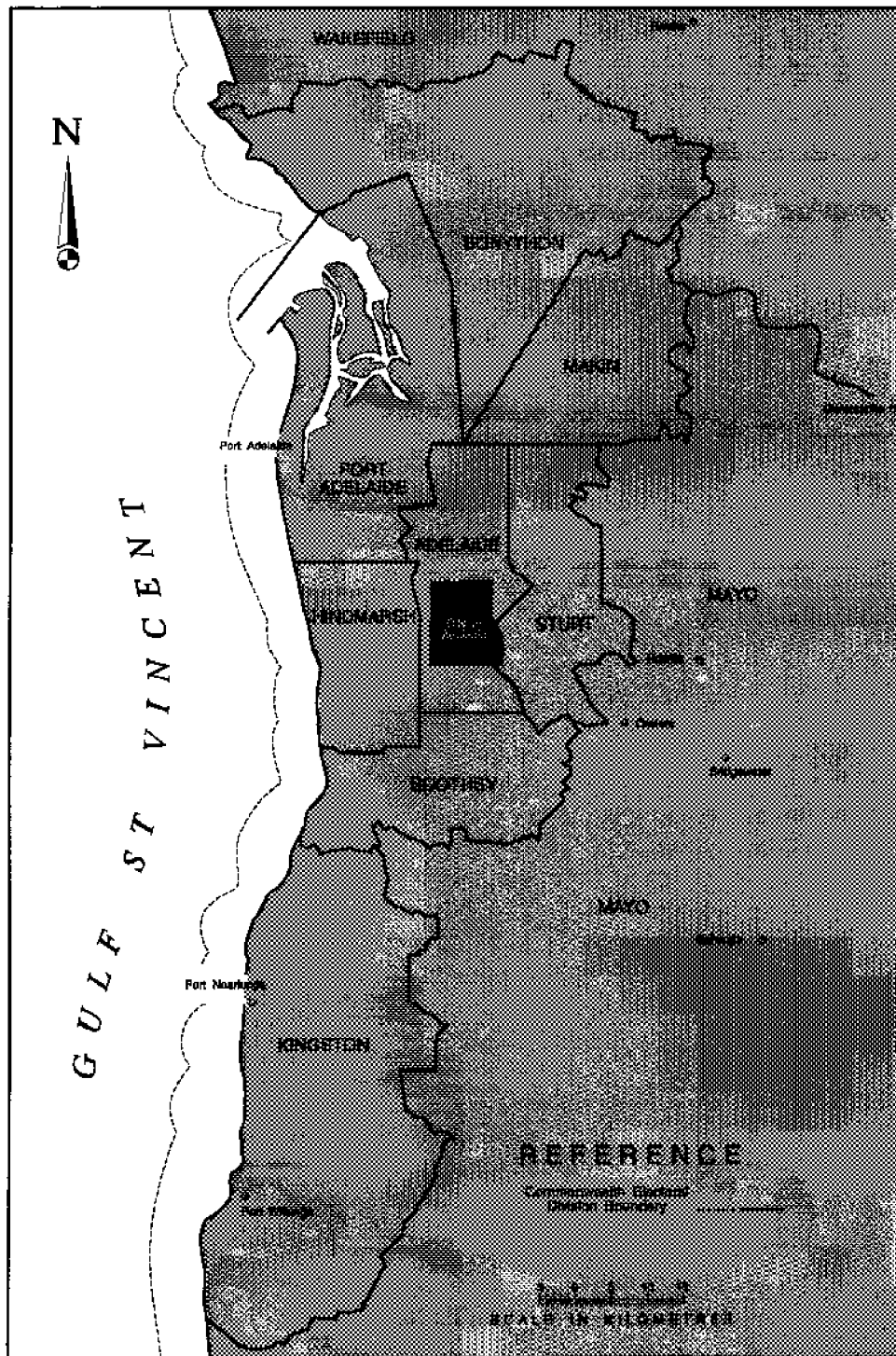
## 4.2 COMMONWEALTH GOVERNMENT

<i>Federation</i>	The Commonwealth of Australia was proclaimed on 1 January 1901 in 'An Act to constitute the Commonwealth of Australia', a statute of the Imperial Parliament, which received Royal Assent in July 1900. The draft Constitution, which was enacted with only minor amendment, had been prepared at intercolonial conferences during 1897, 1898 and 1899, and was accepted at referendums during 1899 by South Australia, New South Wales, Victoria, Queensland and Tasmania, and in 1900 by Western Australia.
<i>Separation of powers</i>	The Constitution provides, in Sections 52, 69, 86, 90 and 115, for certain powers to be vested exclusively in the Commonwealth Government and, in Section 51, for certain specified fields of interest to be common to both the Commonwealth and State Governments until amendment is made to the Constitution Act or until the State Parliaments cede particular powers.

SOUTH AUSTRALIA  
COMMONWEALTH ELECTORAL DIVISIONS



PORTION OF SOUTH AUSTRALIA  
COMMONWEALTH ELECTORAL DIVISIONS





*Financial resources*

Since Federation the distribution of financial resources between the Commonwealth and State Governments has been an almost constant problem. Under the original terms of the Constitution three-quarters of the net revenues from the duties of customs and excise, for ten years, was returned to the States; provision also existed for general and particular grants to the States. Significant changes have been made in the distribution of financial resources since 1910. These are reviewed in some detail in Chapter 16 Public Finance.

**Commonwealth legislature**

The Constitution provides that 'the legislative power of the Commonwealth shall be vested in a Federal Parliament, which shall consist of the Queen, a Senate, and a House of Representatives'. Provision for constitutional amendment includes a requirement that a proposed amendment must be submitted to a referendum.

*Franchise*

Qualifications for franchise are possessed by any Australian citizen, or any British subject who on 25 January 1984 was enrolled on a Commonwealth electoral roll. The person must be not under eighteen years of age and not disqualified on other grounds. (A person may enrol at seventeen years of age but is not entitled to vote until the eighteenth birthday.) Residence in a division for a period of one month before enrolment, is necessary to enable a qualified person to enrol. Enrolment and voting are compulsory although compulsory enrolment provisions did not apply to Aborigines before 21 February 1984.

Persons of unsound mind, or convicted of treason or treachery and not pardoned, or convicted and under sentence for any offence punishable by imprisonment for five years or longer, or persons who are holders of temporary entry permits under the *Migration Act 1958* (Cwlth) or are prohibited non-citizens under that Act are excluded from the franchise.

*Membership*

Qualifications necessary for membership of either House of the Commonwealth Parliament are possessed by any qualified elector who is an Australian citizen of the full age of eighteen years.

The principal reasons for disqualification of persons otherwise eligible as members of either House are; membership of the other House, allegiance to a foreign power, being attainted of treason, being convicted and under sentence for any offence punishable by imprisonment for one year or longer, being an undischarged bankrupt or insolvent, holding office of profit under the Crown (with certain exceptions), or having pecuniary interest in any agreement with the Public Service of the Commonwealth except as a member of an incorporated company of more than twenty-five persons.

## Government

### Executive government

#### Governor-General

On 16 February 1989 His Excellency the Honourable William George Hayden, AC was sworn in as the twenty-first Governor-General of the Commonwealth. His authority as the Queen's representative is derived from Letters Patent, instructions under the Royal Sign Manual and Signet, and the relevant sections of the Commonwealth Constitution.

#### Executive Council

Members of the Federal Executive Council are chosen, summoned and sworn by the Governor-General and hold office during his pleasure. All Ministers are members. Councillors usually retain membership for life but it is customary for attendance at meetings to be limited to Ministers of the day.

### The Senate

The Senate is the Upper House. Originally it was intended that this House should protect the rights and interests of the States, but with the growth of the parliamentary system of party-line voting, its role has become mainly that of a house of review.

#### Elections for the Senate : Voting

Date of election	Electors enrolled	Votes recorded		Informal votes	
		Number	Percentage of electors enrolled	Number	Percentage of votes recorded
21 Nov. 1970	639,807	609,268	95.23	42,306	6.94
18 May 1974	750,308	722,434	96.28	82,191	11.38
13 Dec. 1975	789,004	759,369	96.24	75,540	9.95
10 Dec. 1977	824,205	783,669	95.08	81,451	10.39
18 Oct. 1980	849,899	806,695	94.92	70,359	8.72
5 Mar. 1983	880,455	836,699	95.03	73,350	8.77
1 Dec. 1984	906,278	862,369	95.16	46,399	5.38
11 July 1987	942,880	890,556	94.45	33,514	3.76
24 Mar. 1990	966,431	931,561	96.39	23,438	2.52
13 Mar. 1993	1,014,400	968,365	95.46	22,390	2.31

### Representation

At present the Senate consists of seventy-six members, twelve from each State, two from the Australian Capital Territory and two from the Northern Territory. The original provision was that each State, voting as a single electorate, should elect six Senators but by the Representation Act of 1983, which was effective for the 1984 elections, the number was raised to twelve. By the *Senate (Representation of Territories) Act 1973* (Cwlth), two Senators were added from both the Australian Capital Territory and the Northern Territory. The Territories were represented in the Senate for the first time following the general election of 13 December 1975. Except in extraordinary circumstances each Senator is elected for a term of six years. Six Senators from each State and all Territory Senators retire every three years.

The members representing South Australia in the Senate are:

<i>To Retire 30 June 1996:</i>	<i>To Retire 30 June 1999:</i>
Hill, Robert (LP)	Vanstone, Amanda (LP)
Crowley, Rosemary (ALP)	Bolkus, Nick (ALP)
Coulter, John (AD)	Minchin, Nick (LP)
Teague, Baden (LP)	Foreman, Dominic (ALP)
Schacht, Chris (ALP)	Ferguson, Alan (LP)
Chapman, Grant (LP)	Lees, Meg (AD)

## The House of Representatives

### Representation

The members of the House of Representatives (the Lower House) are elected in single-member electorates. The number of electorates into which a State is divided is determined by the proportion that the population of the State bears to the population of the Commonwealth as a whole.

The *Commonwealth Electoral Act 1918* (Cwlth) provides for the redrawing of electoral boundaries from time to time. New Commonwealth electoral boundaries for South Australia were drawn in 1992 and came into effect at the 13 March 1993 election. Maps of the new Commonwealth Electoral Divisions have been included in this section.

Section 24 of the Constitution provides that the number of members in the House of Representatives shall be as nearly as possible twice the number of Senators and prescribes the formula to be used, 'until the Parliament otherwise provides', for allocating to each State its share of the available seats but stipulates that no original State shall have less than five members in the House. In addition one member is elected from the Northern Territory and two members are elected from the Australian Capital Territory. Preferential voting is used for elections for the House of Representatives.

### Elections for the House of Representatives : Voting

<i>Date of election</i>	<i>Electors enrolled</i>	<i>Votes recorded</i>		<i>Informal votes</i>	
		<i>Number</i>	<i>Percentage of electors enrolled</i>	<i>Number</i>	<i>Percentage of votes recorded</i>
2 Dec. 1972 .....	671,081	644,211	96.00	16,845	2.61
18 May 1974 .....	750,308	722,434	96.28	20,311	2.81
13 Dec. 1975 .....	789,004	759,369	96.24	18,201	2.40
10 Dec. 1977 .....	824,205	783,669	95.08	26,461	3.38
18 Oct. 1980 .....	849,899	806,695	94.92	22,491	2.79
5 Mar. 1983 .....	880,455	836,699	95.03	22,380	2.67
1 Dec. 1984 .....	906,278	859,629	94.85	74,719	8.69
11 July 1987 .....	942,880	884,418	93.80	60,536	6.84
24 Mar. 1990 .....	966,431	927,897	96.01	34,143	3.68
13 Mar. 1993 .....	1,014,400	962,763	94.91	39,088	4.06

Division 3 of the *Commonwealth Electoral Act 1918* (Cwlth) complements Section 24 of the Constitution in determining the level of representation of the States and Territories in the House of Representatives.

House of Representatives, 1993 Election  
Voting and Party Representation in South Australian Electorates

Electorate	Electors on roll	Electors voting	Successful candidates		First preference votes
			Name	Party	
Adelaide . . . . .	85,484	79,819	Worth, P.M.	LP	34,296
Barker . . . . .	83,749	80,157	McLachlan, I.M.	LP	46,667
Bonython (a) . . . . .	77,877	73,693	Blewett, Hon. N.	ALP	38,820
Boothby . . . . .	85,021	81,002	Hall, Hon. R.S.	LP	41,708
Grey . . . . .	86,386	81,738	Wakelin, B.H.	LP	34,703
Hindmarsh . . . . .	88,799	84,046	Gallus, C.A.	LP	38,117
Kingston . . . . .	82,511	79,092	Bilney, Hon. G.N.	ALP	33,906
Makin . . . . .	84,984	81,507	Duncan, Hon. P.	ALP	36,748
Mayo . . . . .	85,924	81,782	Downer, A.J.G.	LP	42,657
Port Adelaide . . . . .	86,302	81,432	Sawford, R.W.	ALP	41,248
Sturt . . . . .	82,520	77,333	Pyne, C.M.	LP	29,121
Wakefield . . . . .	84,843	81,162	Andrew, J.N.	LP	44,503

(a) By-election for the seat of Bonython in March 1994, made vacant by the resignation of Hon. N. Blewett, was won by Mr M. Evans (ALP).

### 4.3 GOVERNMENT OF SOUTH AUSTRALIA

The *Constitution Act 1855*, which inaugurated the system of responsible government in South Australia, was passed and came into force on 24 October 1856. A summary of early constitutional history and the introduction of responsible government was included on pages 60–2 of the *South Australian Year Book 1971*.

**Vice-regal representation**

The Honourable Dame Roma Mitchell, AC, DBE, was sworn in as the Queen's representative in South Australia on 6 February 1991.

The role of the vice-regal representative has changed significantly over the past one hundred and fifty years. When South Australia was founded, the Governor determined matters of policy, made laws and was responsible to the United Kingdom Government for the management of the Colony. In time, policy matters were left increasingly to elected Members of Parliament, self-government was achieved and the Governor's links with the United Kingdom Government diminished.

Today, vice-regal approval is still required to give legislation, regulations and appointments the force of law. However, the Governor invariably relies on the advice of Ministers or follows established conventions and does not become involved in political debate.

Following the passage of the Australia Act in 1986 by the Parliaments of the Commonwealth and the United Kingdom at the request of the States, no constitutional links remain between State Governors and the United Kingdom Government.

Nevertheless, the Crown, personified by the Governor, continues to symbolise the ongoing rule of law and the unity of the State, irrespective of the rise and fall of governments. The Governor retains important discretionary powers and is thus enabled to maintain something of a safeguard against malpractice and injustice, particularly in extreme circumstances. The Governor has a responsibility to ensure the maintenance of lawful parliamentary government in South Australia.

#### Governors of South Australia

<i>Name</i>	<i>Term of Office</i>	
Captain John Hindmarsh, RN, KH	28 December 1836	16 July 1838
Lt-Col. George Gawler, KH	17 October 1838	15 May 1841
George Grey	15 May 1841	25 October 1845
Lt-Col. Frederick Holt Robe	25 October 1845	2 August 1848
Sir Henry E.F. Young	2 August 1848	20 December 1854
Sir Richard G. MacDonnell, CB	8 June 1855	4 March 1862
Sir Dominick Daly	4 March 1862	19 February 1868
Rt Hon. Sir James Fergusson, Bart	16 February 1869	18 April 1873
Sir Anthony Musgrave, KCMG	9 June 1873	29 January 1877
Lt-Gen. Sir Wm F.D. Jervis, GCMG, CB	2 October 1877	9 January 1883
Sir Wm C.F. Robinson, GCMG	19 February 1883	5 March 1889
Rt Hon. the Earl of Kintore, PC, GCMG	11 April 1889	10 April 1895
Sir Thomas F. Buxton, Bart, GCMG	29 October 1895	29 March 1899
Rt Hon. the Lord Tennyson, KCMG	10 April 1899	17 July 1902
Sir George R. Le Hunte, KCMG	1 July 1903	18 February 1909
Admiral Sir Day Hort Boanquet, GCVO, KCB	18 February 1909	22 March 1914
Lt-Col. Sir Henry L. Galway, KCMG, DSO	18 April 1914	30 April 1920
Lt-Col. Sir Wm E.G. Archibald Weigall, KCMG	9 June 1920	30 May 1922
Lt-Gen. Sir George T.M. Bridges, KCB, KCMG, DSO	4 December 1922	4 December 1927
Brig.-Gen. the Hon. Sir A.G.A. Hore-Ruthven, VC, KCMG, CB, DSO	14 May 1928	26 April 1934
Maj.-Gen. Sir W.J. Dugan, KCMG, CB, DSO	28 July 1934	23 February 1939
Sir Charles M. Barclay-Harvey, KCMG	12 August 1939	26 April 1944
Lt-Gen. Sir C.W.M. Norrie, KCMG, CB, DSO, MC	19 December 1944	19 June 1952
Air Vice-Marshal Sir Robert A. George, KCMG, KCVO, KBE, CB, MC	23 February 1953	7 March 1960
Lt-Gen. Sir Edric M. Bastyan, KCMG, KCVO, KBE, CB	4 April 1961	1 June 1968
Maj.-Gen. Sir James W. Harrison, KCMG, CB, CBE	4 December 1968	16 September 1971
Sir Mark L. Oliphant, KBE	1 December 1971	30 November 1976
Sir Douglas R. Nicholls, KCVO, OBE	1 December 1976	30 April 1977
Sir Keith D. Seaman, KCVO, OBE	1 September 1977	28 March 1982
Lt-Gen. Sir Donald B. Dunstan, KBE, CB	23 April 1982	5 February 1991
The Hon. Dame Roma Mitchell, AC, DBE	6 February 1991	

The Governor is appointed by the Queen on the advice of the South Australian Premier. Vice-regal authority derives from the South Australian Constitution, the Australia Act, Letters Patent signed by the Queen

on the advice of her South Australian Government, and convention. Essentially, the Governor exercises the authority of the Sovereign in respect of South Australia. The Governor's direct relationship to the Queen, which is independent of that of the Governor-General, reflects the sovereignty of South Australia within the Australian Federation.

The amount appropriated from Consolidated Revenue for the Governor's salary for 1993-94 was \$66,600. An allowance of \$108,800 is used to meet the Governor's expenses in performing her duties. The *Governors' Pensions Act 1976* provides for a pension to be paid to former Governors and to the spouses of deceased Governors.

The duration of a Governor's appointment is indeterminate, but it is expected that he or she will serve for up to five years. The appointment may be extended for a further period.

Pending the appointment of a Governor or, in the event of the Governor's absence from the State, or incapacity, the above functions would be performed by the Lieutenant-Governor acting either as Administrator or the Governor's Deputy, depending on the circumstances. The present Lieutenant-Governor is Dr Basil Hetzel, AC. If the Lieutenant-Governor were unable to act, the Chief Justice of the Supreme Court usually would become Administrator or Governor's Deputy.

**Cabinet and  
Executive  
Government**

In South Australia every Minister must be a member of either the Legislative Council or the House of Assembly. All Ministers are members of the Cabinet and all Ministers are *ex officio* members of the Executive Council. Although the Governor may, subject to any law enacted by the Legislature, appoint other persons to the Executive Council, membership is in practice limited to Ministers of the day.

The maximum number of Ministers has been varied from time to time. In 1856 the number was five; in 1873, six; 1901, four; 1908, six; 1953, eight; 1965, nine; 1970, ten; 1973, eleven; 1975, twelve and 1978, thirteen. In 1908 it was specified that no more than four Ministers were to be in the House of Assembly, but in 1953 this limit was increased to five, in 1965 to six, in 1970 to seven and in 1973 to eight. This restriction on the number of Ministers from the Lower House was removed by the *Constitution Act Amendment Act (No. 2) 1975* and now it is permissible for all Ministers to be selected from the House of Assembly. Since 1978, ten Ministers have been selected from the House of Assembly and three from the Legislative Council.

Cabinet, as such, has no legal powers. Some Cabinet decisions result in the initiation and subsequent enactment of legislation; other decisions become legally binding through ratification by Executive Council or through powers vested in individual Ministers for the administration and control of their respective departments of government. In addition to government departments, statutory authorities also come under some degree of ministerial or parliamentary oversight.

## Premiers

Since 1856 the following forty-one persons have held the office of Premier.

## Premiers of South Australia

Names	Dates of Office	Total period in Office	
		Years	Days
Hon. Boyle T. Finnis . . . . .	24/10/1856 – 21/8/1857	–	301
Hon. John Baker . . . . .	21/8/1857 – 1/9/1857	–	11
Hon. Robert R. Torrens . . . . .	1/9/1857 – 30/9/1857	–	29
Hon. Richard D. Hanson . . . . .	30/9/1857 – 9/5/1860	2	222
Hon. Thomas Reynolds . . . . .	9/5/1860 – 8/10/1861	1	152
Hon. G.M. Waterhouse . . . . .	8/10/1861 – 4/7/1863	1	269
Hon. Francis S. Dutton . . . . .	4/7/1863 – 15/7/1863;		
	22/3/1865 – 20/9/1865	–	193
Hon. Sir Henry Ayers, KCMG . . . . .	15/7/1863 – 4/8/1864;		
	20/9/1865 – 23/10/1865;		
	3/5/1867 – 24/9/1868;		
	13/10/1868 – 3/11/1868;		
	22/1/1872 – 22/7/1873	4	35
Hon. Arthur Blyth . . . . .	4/8/1864 – 22/3/1865;		
	10/11/1871 – 22/1/1872;		
	22/7/1873 – 3/6/1875	2	254
Hon. John Hart, CMG . . . . .	23/10/1865 – 28/3/1866;		
	24/9/1868 – 13/10/1868;		
	30/5/1870 – 10/11/1871	1	339
Hon. James P. Boucaut, QC . . . . .	28/3/1866 – 3/5/1867;		
	3/6/1875 – 6/6/1876;		
	26/10/1877 – 27/9/1878	3	11
Hon. H.B. Strangways . . . . .	3/11/1868 – 30/5/1870	1	208
Hon. John Colton . . . . .	6/6/1876 – 26/10/1877;		
	16/6/1884 – 16/6/1885	2	142
Hon. William Morgan . . . . .	27/9/1878 – 24/6/1881	2	270
Hon. John C. Bray . . . . .	24/6/1881 – 16/6/1884	2	358
Hon. Sir J.W. Downer, KCMG, QC	16/6/1885 – 11/6/1887;		
	15/10/1892 – 16/6/1893	2	239
Hon. Thomas Playford . . . . .	11/6/1887 – 27/6/1889;		
	19/8/1890 – 21/6/1892	3	323
Hon. J.A. Cockburn . . . . .	27/6/1889 – 19/8/1890	1	53
Hon. F.W. Holder . . . . .	21/6/1892 – 15/10/1892;		
	8/12/1899 – 15/5/1901	1	274
Rt Hon. C.C. Kingston, QC . . . . .	16/6/1893 – 1/12/1899	6	168
Hon. V.L. Solomon . . . . .	1/12/1899 – 8/12/1899	–	7
Hon. J.G. Jenkins . . . . .	15/5/1901 – 1/3/1905	3	290
Hon. Richard Butler . . . . .	1/3/1905 – 26/7/1905	–	147
Hon. Thomas Price . . . . .	26/7/1905 – 5/6/1909	3	314
Hon. A.H. Peake . . . . .	5/6/1909 – 3/6/1910;		
	17/2/1912 – 3/4/1915;		
	14/7/1917 – 8/4/1920	6	312
Hon. John Verran . . . . .	3/6/1910 – 17/2/1912	1	259
Hon. Crawford Vaughan . . . . .	3/4/1915 – 14/7/1917	2	102
Hon. Sir H.N. Barwell, KCMG . . . . .	8/4/1920 – 16/4/1924	4	8
Hon. John Gunn . . . . .	16/4/1924 – 28/8/1926	2	134
Hon. Lionel L. Hill . . . . .	28/8/1926 – 8/4/1927;		
	17/4/1930 – 13/2/1933	3	160
Hon. R.L. Butler . . . . .	8/4/1927 – 17/4/1930;		
	18/4/1933 – 5/11/1938	8	210

## Premiers of South Australia (continued)

Names	Dates of Office	Total period in Office	
		Years	Days
Hon. R.S. Richards . . . . .	13/2/1933 – 18/4/1933	–	64
Hon. Sir Thomas Playford, GCMG	5/11/1938 – 10/3/1965	26	125
Hon. F.H. Walsh . . . . .	10/3/1965 – 1/6/1967	2	83
Hon. D.A. Dunstan, QC . . . . .	1/6/1967 – 17/4/1968; 2/6/1970 – 15/2/1979	9	210
Hon. R.S. Hall . . . . .	17/4/1968 – 2/6/1970	2	47
Hon. J.D. Corcoran . . . . .	15/2/1979 – 18/9/1979	–	216
Hon. D.O. Tonkin . . . . .	18/9/1979 – 10/11/1982	3	49
Hon. J.C. Bannon . . . . .	10/11/1982 – 4/9/1992	9	300
Hon. L.M.F. Arnold . . . . .	1/10/1992 – 14/12/1993	1	101
Hon. D.C. Brown . . . . .	14/12/93 –	–	–

## Parliament

Parliament is summoned, prorogued, or dissolved, by proclamation issued by the Governor. The two Houses of Parliament are the Legislative Council (Upper House) and the House of Assembly (Lower House). The following table gives the dates and the number of House of Assembly sitting days for Parliamentary sessions in recent years.

Parliamentary session	Period	House of Assembly sitting days
1986–87 . . . . .	31/7/86 – 14/4/87	57
1987–88 . . . . .	6/8/87 – 14/4/88	55
1988–89 . . . . .	4/8/88 – 13/4/89	48
1989 . . . . .	3/8/89 – 19/10/89	24
1990 . . . . .	8/2/90 – 11/4/90	21
1990–91 . . . . .	2/8/90 – 11/4/91	56
1991–92 . . . . .	8/8/91 – 6/5/92	58
1992–93 . . . . .	6/8/92 – 6/5/93	62
1993 . . . . .	3/8/93 – 4/11/93	23
1994 . . . . .	10/2/94 – 16/6/94	28

## Voting system

Members of the House of Assembly are elected by secret ballot using the preferential system of voting and counting. To be elected, a candidate must receive an absolute majority of votes, that is, more than 50 per cent of the number of formal votes cast. If no candidate receives an absolute majority of first preference votes, the second preferences of the candidate who received the fewest first preference votes are examined and distributed to the remaining candidates. The distribution of next available preferences from the candidate with the fewest votes is repeated until a candidate is elected with an absolute majority. Voting for Members of the Legislative Council is also preferential. The whole State acts as one multi-member electoral district, and to be elected, a candidate must obtain a certain proportion, currently around 8.3 per cent, of the formal vote.



*Members, qualifications and privileges*

Election to the South Australian Parliament is open to those eligible to vote (see page 77). However, under the *Constitution Act 1934-1975*, certain people are not eligible to sit in Parliament, for example, judges, members of the Commonwealth Parliament, holders of certain government contracts and occupants of some offices of profit under the Crown. Members are required to take an oath or make an affirmation of allegiance to the Crown before sitting or voting in Parliament.

*Franchise*

The franchises for the separate Houses are shown on page 77. South Australia was the first, at the general election of 25 April 1896, of the Australian States to give voting rights and eligibility to stand for Parliament to women, and the existence of this provision contributed to the decision to include full adult franchise in proposals for Federation. For the first eighty-five years of responsible government, voting for both Houses of Parliament was voluntary, but the Electoral Act Amendment Act of 1942 made voting for the House of Assembly compulsory for persons whose names appear on the House of Assembly Electoral Roll.

*Numbers of members and electorates*

Alterations made to the number of members and number of electorates for each of the two Houses are shown in the following table.

Members and Electorates

Date	Legislative Council		House of Assembly	
	Members	Electorates	Members	Electorates
1856 .....	18	1	36	17
1863 .....	18	1	36	18
1875 .....	18	1	46	22
1882 .....	24	4	46	22
1884 (a) .....	24	4	52	26
1890 .....	24	4	54	27
1902 .....	18	4	42	13
1912 (b) .....	18	4	40	12
1915 .....	20	5	46	19
1938 .....	20	5	39	39
1970 .....	20	5	47	47
1975 .....	21	1	47	47
1979 .....	22	1	47	47

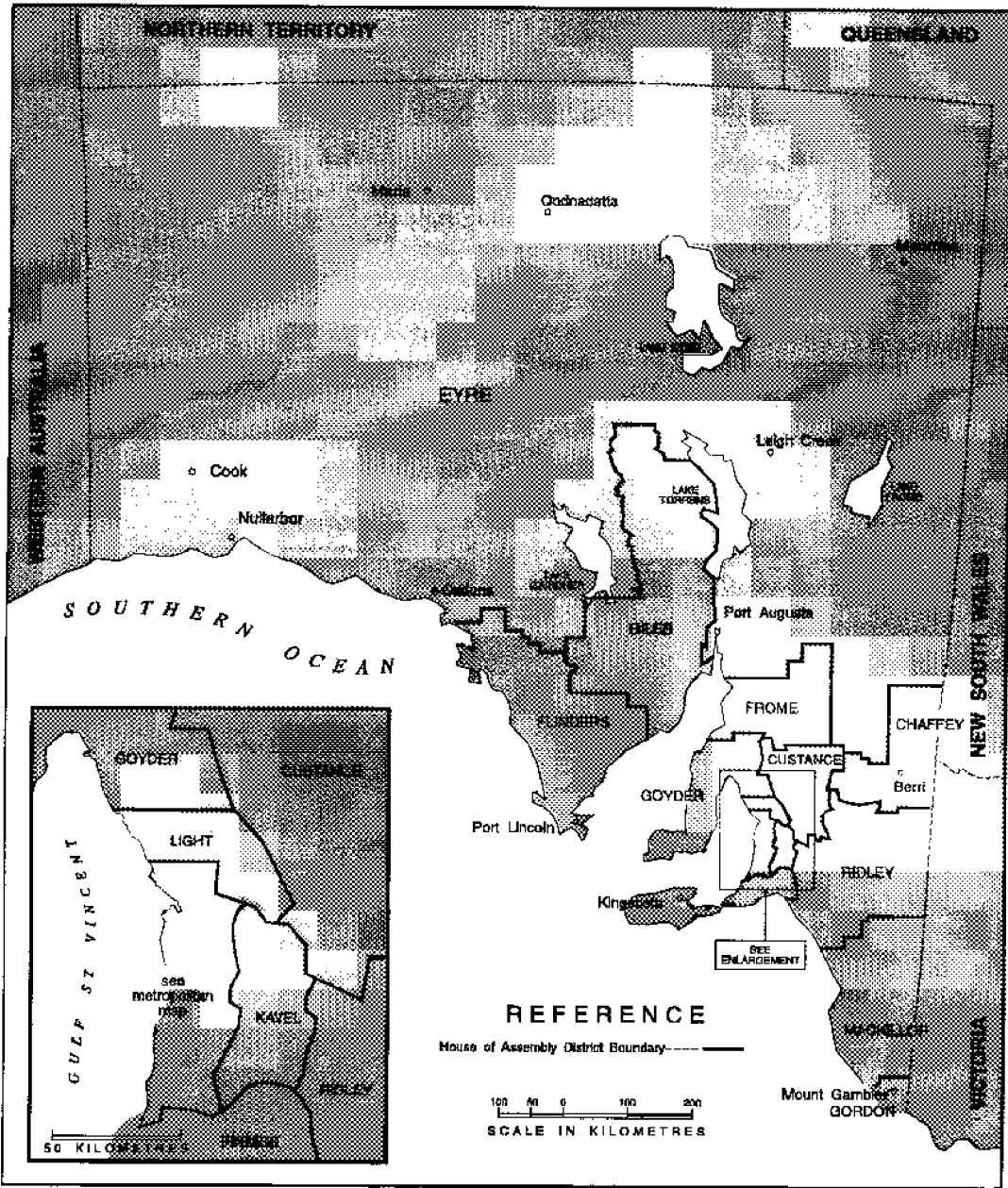
(a) Separate representation for Northern Territory. (b) Cession of Northern Territory to Commonwealth Government control.

*Functions of Parliament*

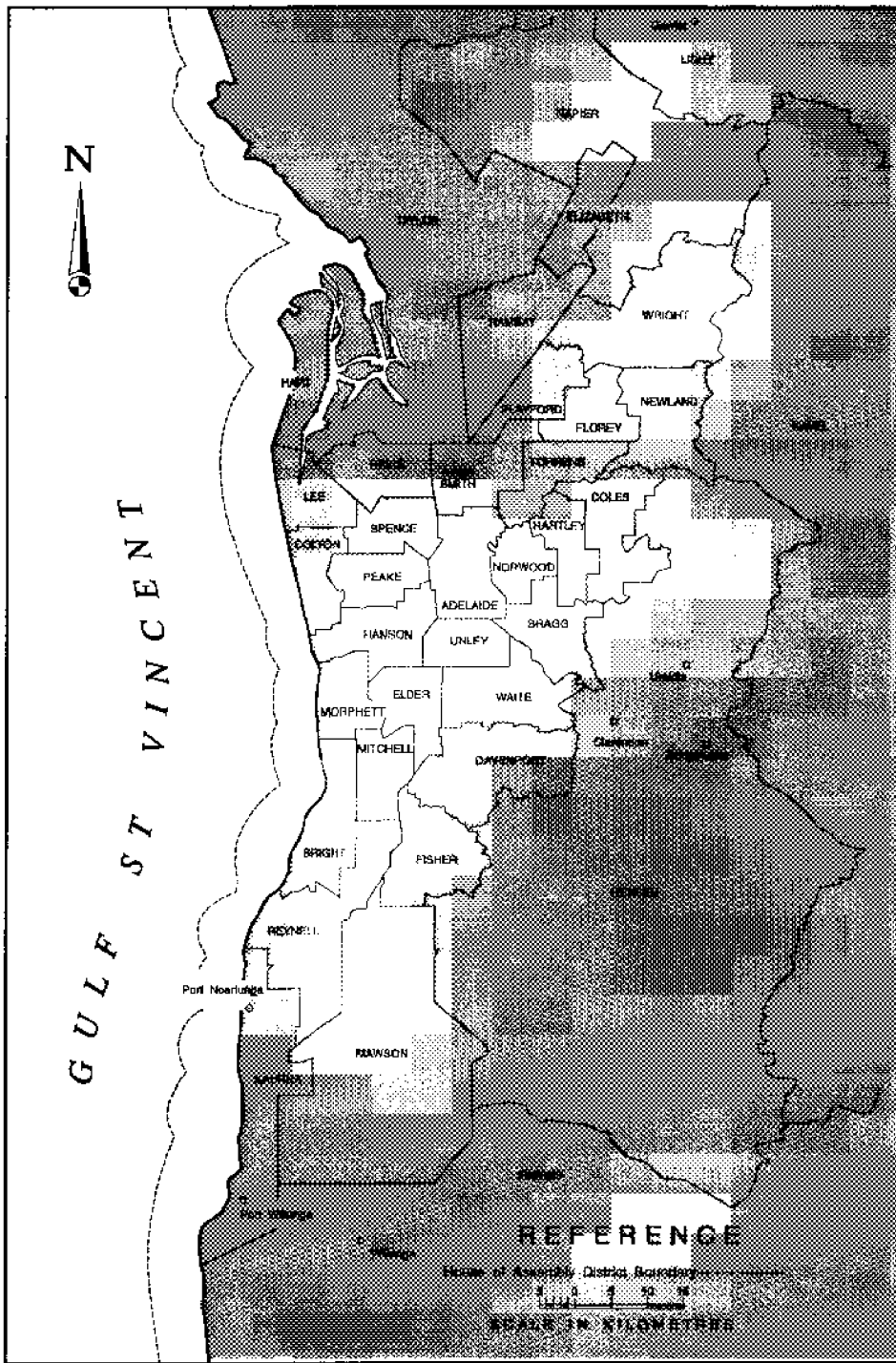
The function of Parliament is to legislate for the peace, order, and good government of the State. Principal among the tasks of Parliament is the raising of revenue and the appropriation of funds for the development and maintenance of the State through its public services.

Legislation, other than money Bills, may be initiated by any member in either House. Money Bills must be initiated by Ministers of the Crown in the House of Assembly, and the Legislative Council may only suggest amendments to them. Most Bills are initiated by the Government as a result of the deliberations of Cabinet.

SOUTH AUSTRALIA  
SOUTH AUSTRALIAN ELECTORAL DISTRICTS



PORTION OF SOUTH AUSTRALIA  
SOUTH AUSTRALIAN ELECTORAL DISTRICTS



The Opposition and independent members usually confine their activities to examination, criticism, and amendment of Government measures. Legislation, other than to alter the constitution of either House, may be passed by a simple majority of the votes of the members present.

An alteration to the constitution of either House requires, at the second and third readings of the Bill, acceptance by a majority of all the members (not only those present or voting) of each House voting separately.

*Deadlocks*

A deadlock results from the refusal by the Legislative Council to pass the same (or substantially the same) Bill during two consecutive Parliaments, provided that a general election for the House of Assembly has been held between the refusals and that on the second occasion an absolute majority of all the members of the House of Assembly voted in favour of the Bill at its second and third readings. In the event of a deadlock between the Houses, the Governor may proclaim the dissolution of both Houses.

*Cost of Parliamentary Government*

The following table shows, in broad groups, the expenditure incurred in the operation of the parliamentary system in South Australia, comprising the Governor, the Ministry, the Legislative Council, House of Assembly and electoral activities.

Cost of Parliamentary Government  
(\$'000)

<i>Particulars</i>	<i>1988-89</i>	<i>1989-90</i>	<i>1990-91</i>	<i>1991-92</i>	<i>1992-93</i>
Governor's establishment . . . . .	1,019	1,030	994	1,190	1,251
Ministry . . . . .	1,293	1,318	1,565	1,725	1,662
Parliament:					
Legislative Council (a) . . . . .	3,056	3,059	3,668	4,152	4,339
House of Assembly (a) . . . . .	6,066	6,029	7,385	8,072	8,570
Other (b) . . . . .	8,350	11,395	12,621	14,030	16,314
<i>Total Parliament</i> . . . . .	<i>19,783</i>	<i>20,484</i>	<i>23,674</i>	<i>26,254</i>	<i>28,725</i>
Electoral (c) . . . . .	1,519	4,171	4,602	1,779	2,328
Royal Commissions, Select Committees etc. . . . .	231	179	263	257	195
<b>Total</b> . . . . .	<b>21,532</b>	<b>27,181</b>	<b>31,097</b>	<b>31,205</b>	<b>34,160</b>

(a) Allowances to members, travelling and other expenses.  
 (b) Government contribution to members' superannuation funds, printing, reporting staff, library etc.  
 (c) Excludes the Joint Standing Committee on Electoral matters, as it is not considered to be a cost of parliamentary government.

*Life of Parliament*

The term of office of each Parliament is four years from the day on which it first meets for the dispatch of business and Parliament may not be prorogued or dissolved by the Governor before the expiration of three years from the day it first met unless the House passes a motion of no confidence in the Government; a Bill of 'special importance' is rejected by the Legislative Council, or the Governor acts in the settlement of a deadlock.

**Legislative Council**

*Members and electorates*

The *Constitution and Electoral Acts Amendment Act 1973*, assented to on 22 November 1973, increased the number of members in the Legislative Council from twenty to twenty-two, and reduced the number of electorates to one with the whole State becoming a single electorate whose members are elected on a proportional representation basis. This amendment did not become fully effective for two general elections as only half the Legislative Councillors retire at each election and eleven members are now elected at each general Legislative Council election. Casual vacancies are filled by persons chosen at a joint sitting of the members of the Legislative Council and House of Assembly.

*Franchise*

Under the *Constitution Acts Amendment Act 1973*, all electors whose names were on the House of Assembly electoral roll were included on the Legislative Council electoral roll. Under the *Electoral Act 1985*, voting for the Legislative Council was made compulsory.

*President*

At the first meeting of the Council in each Parliament the members choose one from among their number to fill the position of President. The person so selected is then entitled to a casting vote only.

**House of Assembly**

*Seat of Government*

The Government of the day holds its position for as long as it has majority support in the House of Assembly. When it no longer controls such a majority in vital issues the Government must resign or go to the polls. Once defeated in the Lower House on a money Bill, the Government is unable to finance the administration of the State.

*Franchise*

An Australian citizen aged eighteen and over, of sound mind, who has lived at his or her present address for at least one month before enrolling to vote for Commonwealth and State elections, is entitled to vote at all elections.

A British citizen who was enrolled on a Commonwealth or State electoral roll at some time between 26 October 1983 and 25 January 1984, and fulfils the other criteria above, is also entitled to vote.

Enrolment for South Australian State elections is not compulsory but, in practice, as there is a joint Commonwealth and State electoral roll, most voters are enrolled for both.

*Membership*

Subject to the provisos mentioned on page 73, election to the South Australian Parliament is open to those eligible to vote in elections.

Members of the House of Assembly are elected for a maximum of four years. If a seat becomes vacant through the resignation, death or disqualification of a member, it is usually filled at a by-election.

*Electoral boundaries*

The Electoral Districts Boundaries Commission, established under the *Constitution Act 1934*, comprises a Judge of the Supreme Court, the Electoral Commissioner and the Surveyor-General and is responsible for making periodical adjustments to House of Assembly electoral boundaries in South Australia. The Commission must, before commencing proceedings invite, by advertisement, representations from any person in relation to the redistribution of boundaries.

Boundaries are redrawn on the principles that among the population of each electoral district a community of interest exists (*e.g.* social, economic, regional or other kind) and, that the number of electors in each district should not vary from a predetermined quota by more than ten per cent. This quota is calculated by dividing the total number of electors in South Australia by the total number of House of Assembly electoral districts.

The *Constitution (Electoral Redistribution) Amendment Act 1991*, removed a requirement that the Commission should have regard to the desirability of leaving boundaries undisturbed as far as possible. The Act provides a criterion for electoral fairness which requires the Commission to ensure, as far as practicable, that a group of candidates which attracts more than fifty per cent of the popular vote will be elected in sufficient numbers to form a government.

The 1991 Electoral Districts Boundaries Commission drew up new boundaries for the 47 House of Assembly seats which became effective at the 1993 State elections. Maps of these State Electoral Boundaries are included in this section of the *South Australian Year Book*. The Commission is expected to draw up new boundaries, reporting in late 1994.

*Officers and their functions*

Election of a Speaker is the first business when a new Parliament first meets. The Speaker presides over debate, maintains order, represents the House officially, communicates its wishes and resolutions, defends its privileges when necessary, and applies its procedure. The Speaker may exercise a casting vote only. A Chairman of Committees is also elected by the House at the beginning of each Parliament; the Chairman presides over the deliberations of the House in Committee and acts as Deputy Speaker when required. Other officers of the Parliament include the Leader and Deputy Leader of the Opposition in either House and party whips whose function is to ensure that their party members are present in the House for divisions and other important business.

**Elections and party representation**

The following tables give details of the numbers of electors enrolled and voting in contested electorates for all general elections, and Party representation from 1973 to 1993.

## South Australian Parliament : Voting at Elections, 1973 to 1993

Date	Legislative Council			House of Assembly		
	Contested electorates			Contested electorates		
	Electors enrolled	Electors voting	Per cent	Electors enrolled	Electors voting	Per cent
10 March 1973 . . . . .	383,758	357,971	93.28	696,290	655,937	94.20
12 July 1975 . . . . .	771,414	719,753	93.30	771,414	721,770	93.56
17 September 1977 . . . . .	..	..	..	818,335	764,072	93.37
15 September 1979 . . . . .	826,586	765,033	92.55	826,586	768,985	93.03
6 November 1982 . . . . .	871,216	808,363	92.79	871,216	811,758	93.18
7 December 1985 . . . . .	905,607	846,250	93.46	905,607	846,289	93.46
25 November 1989 . . . . .	941,368	889,896	94.53	941,368	888,918	94.43
11 December 1993 . . . . .	1,006,035	941,864	93.62	1,006,035	941,306	93.57

## South Australian Parliament : Party Representation at Elections, 1973 to 1993

Date	Legislative Council			House of Assembly		
	ALP	LP	Other	ALP	LP	Other
10 March 1973 . . . . .	6	13	1	26	18	3
12 July 1975 . . . . .	10	9	2	23	20	4
17 September 1977 . . . . .	10	11	-	27	18	2
15 September 1979 . . . . .	10	11	1	19	25	3
6 November 1982 . . . . .	9	11	2	24	21	2
7 December 1985 . . . . .	10	10	2	27	16	4
25 November 1989 . . . . .	10	10	(a)2	(c)22	22	(b)(c)3
11 December 1993 . . . . .	9	11	(a)2	(d)10	(d)37	-

(a) Australian Democrats, (b) 1 National Party, 2 Independent Labor, (c) On 3 February 1992 one ALP member became Independent Labor and representation became 21 ALP, 4 Other.  
 (d) Following by-elections in Elizabeth (9 April 1994) and Torrens (7 May 1994) the composition of the House of Assembly in June 1994 became ALP 11, LP 36.  
 ALP Australian Labor Party LP Liberal Party of Australia

At the general election held on 11 December 1993 there were forty-seven electorates represented in the House of Assembly. The table which follows shows the electoral returns for that election.

## House of Assembly : Party Representation, 1993

Electorate	Electors on roll	Electors voting	Name	Successful candidate	
				Party	First preference votes
Adelaide . . . . .	21,355	19,417	Armitage, M.	LP	11,045
Bragg . . . . .	22,064	20,451	Ingerson, G.	LP	14,584
Bright . . . . .	21,125	20,066	Matthew, W.	LP	12,573
Chaffey . . . . .	21,951	20,394	Andrew, K.	LP	8,109
Coles . . . . .	21,370	20,200	Hall, J.	LP	10,891
Colton . . . . .	21,663	20,322	Condous, S.	LP	8,609
Custance . . . . .	21,255	19,935	Venning, I.	LP	13,550
Davenport . . . . .	21,848	20,586	Evans, I.	LP	11,691
Elder . . . . .	21,164	19,860	Wade, D.	LP	9,098
Elizabeth . . . . .	19,796	18,512	Evans, M. (a)	ALP	8,392
Eyre . . . . .	21,088	18,296	Gunn, G.	LP	8,040
Finniss . . . . .	21,579	20,016	Brown, D.	LP	13,527
Fisher . . . . .	21,674	20,540	Such, R.	LP	12,892
Flinders . . . . .	20,829	19,546	Penfold, E.	LP	10,353

## House of Assembly : Party Representation, 1989 (continued)

Electorate	Electors on roll	Electors voting	Successful candidate		First preference votes
			Name	Party	
Florey . . . . .	21,938	20,760	Bass, R.	LP	10,981
Frome . . . . .	22,268	20,922	Kerin, R.	LP	10,615
Giles . . . . .	20,643	19,151	Blevins, F.	ALP	7,298
Gordon . . . . .	20,964	19,825	Allison, H.	LP	13,401
Goyder . . . . .	21,219	20,350	Meier, E.	LP	13,960
Hanson . . . . .	22,119	20,426	Leggett, S.	LP	9,086
Hartley . . . . .	20,678	19,368	Foley, K.	ALP	7,506
Hartley . . . . .	21,799	20,344	Scalzi, G.	LP	11,338
Heysen . . . . .	21,115	19,795	Wotton, D.	LP	12,753
Kaurna . . . . .	20,223	19,010	Rosenberg, L.	LP	8,230
Kavel . . . . .	20,659	19,388	Olsen, J.	LP	12,521
Lee . . . . .	21,599	20,328	Rossi, J.	LP	9,138
Light . . . . .	20,510	19,224	Buckby, M.	LP	11,482
MacKillop . . . . .	21,889	20,840	Baker, D.	LP	14,133
Mawson . . . . .	23,251	22,060	Brokenshire, R.	LP	11,208
Mitchell . . . . .	20,975	19,828	Caudell, C.	LP	9,905
Morphett . . . . .	21,341	19,714	Oswald, J.	LP	12,523
Napier . . . . .	21,795	20,448	Hurley, A.	ALP	6,110
Newland . . . . .	21,623	20,510	Kotz, D.	LP	12,256
Norwood . . . . .	21,246	19,487	Cummins, J.	LP	9,669
Peake . . . . .	21,333	20,004	Becker, H.	LP	9,005
Playford . . . . .	20,785	19,731	Quirke, J.	ALP	8,329
Price . . . . .	21,566	20,010	De Laine, M.	ALP	10,098
Ramsay . . . . .	21,998	20,664	Rann, M.	ALP	10,800
Reynell . . . . .	20,444	19,207	Greig, J.	LP	8,575
Ridley . . . . .	21,302	20,199	Lewis, I.	LP	13,955
Ross Smith . . . . .	20,943	19,463	Clarke, R.	ALP	7,786
Spence . . . . .	21,398	19,869	Atkinson, M.	ALP	9,542
Taylor . . . . .	20,767	19,289	Arnold, L.	ALP	9,501
Torrens . . . . .	21,424	20,187	Tiernan, P. (b)	LP	9,368
Unley . . . . .	22,394	20,518	Brindal, M.	LP	11,321
Waite . . . . .	22,280	20,590	Baker, S.	LP	12,622
Wright . . . . .	22,786	21,651	Ashenden, E.	LP	10,510

(a) By-election for the seat of Elizabeth 9 April 1994, made vacant by the resignation of Hon M.J. Evans (ALP), was won by Ms L. Stevens (ALP).

(b) By-election for the seat of Torrens 7 May 1994, made vacant by the death of Mr P.J. Tiernan (LP), was won by Ms R. Geraghty (ALP).

ALP Australian Labor Party LP Liberal Party of Australia

The members of the Legislative Council at June 1994 were as follows:

Crothers, Hon. T. (ALP)	Lucas, Hon. R.I. (LP)
Davis, Hon. L.H. (LP)	Pfützner, Hon. B.S.L. (LP)
Dunn, Hon. H.P.K. (LP)	Pickles, Hon. C.A. (ALP)
Elliott, Hon. M.J. (AD)	Redford, Hon. A.J. (LP)
Feleppa, Hon. M.S. (ALP)	Roberts, Hon. R.R. (ALP)
Griffin, Hon. K.T. (LP)	Roberts, Hon. T.G. (ALP)
Irwin, Hon. J.C. (LP)	Schaefer, Hon. C.V. (LP)
Kanck, Hon. S.M. (AD)	Stefani, Hon. J.F. (LP)
Laidlaw, Hon. D.V. (LP)	Summer, Hon. C.J. (ALP)
Lawson, Hon. R.D. (LP)	Weatherill, Hon. G. (ALP)
Levy, Hon. J.A.W. (ALP)	Wiese, Hon. B.J. (ALP)



**Referendums** Since the inception of responsible government in South Australia in 1856 nine referendums have been held – the first in 1896 and subsequent ones in 1898, 1899, 1911, 1915, 1965, 1970, 1982 and 1991 – and twelve proposals have been submitted.

Three proposals related to education (1896) of which only one was approved; three were constitutional (1898 and 1899) – all approved; one related to Parliamentary salaries (1911) – not approved; one related to bar-room closing hours (1915) – favoured 6 p.m. closing; one related to the establishment of a lottery (1965) – approved; one related to extended shopping hours in the metropolitan area (1970) – not approved; and one related to daylight saving (1982) – approved. The last referendum, held on 9 February 1991, asked House of Assembly electors 'Do you approve the *Constitution (Electoral Redistribution) Amendment Bill 1991*?'. Of the 882,650 who voted, 649,906 voted 'Yes' and 197,244 voted 'No'.

**Overseas representation** South Australia is represented in London by the Agent General for South Australia, at South Australia House, 50 Strand, London. As official representative of the State, it is the function of the Agent General to keep the State Government informed of political and economic developments overseas; to promote industrial development and investment in South Australia; to encourage immigration to the State and to foster trade with the United Kingdom and other countries.

**State emblems** The State Coat of Arms gazetted on 19 April 1984 replaced an earlier Coat of Arms conferred by King George V in 1936.

The State Flag, which is flown from Government buildings, comprises the Blue Ensign with the State Badge in the fly. The State Badge is a drawing of a Piping Shrike or White Backed Magpie (*Gymnorhina tibicen leuconota*) standing on a staff of a gum tree.

On 23 November 1964, the Government adopted Sturt's Desert Pea (*Swainsona Formosa*) as the Floral Emblem of South Australia and the Hairy-Nosed or Plains Wombat (*Lasiornhinus latifrons*) was adopted as the faunal emblem of the State on 27 August 1970.

Opal was adopted as the gemstone emblem on 15 August 1985.

The official colours of South Australia are Red, Blue and Gold.

#### 4.4 PUBLIC CORPORATIONS

A public corporation is defined, for statistical purposes, as a body (other than a local government authority or body whose receipts and payments are included in the public accounts of the Commonwealth, a State, or a Territory) created by or under legislation to carry out an activity or activities on behalf of a government, or a body in which a government has a controlling interest.

Most public corporations have independent powers for the recruitment of staff. All possess greater administrative and financial autonomy than government departments but there is a wide variation in the degree of autonomy accorded, in various aspects, to different authorities.

Activities carried out by public corporations include tertiary education, hospital services, power supply, public transport, banking services, fire control, irrigation and drainage in rural areas, control and regulation of milk supply, slaughtering of animals for human consumption, housing development, off-course totalisators and lotteries, and investigation of problems relating to the development of mineral resources.

In appropriate parts of this Year Book reference is made to the activities of most of the public corporations which operate in South Australia.

#### 4.5 LOCAL GOVERNMENT AUTHORITIES

At 1 January 1994, there were 118 local government authorities in South Australia. Each local government area is controlled by a Council consisting of members elected by residents and property owners and exercising powers under the *Local Government Act 1934*.

While around 99 per cent of the State's population resides within the 118 incorporated areas, only 15 per cent of the State is covered by them – the remaining parts are served by the Outback Areas Community Development Trust, Anangu Pitjantjatjara and Maraling Tjarutja, and the three Lands Trust communities of Gerard, Yalata and Nepabunna.

##### *Boundaries*

Local government areas are defined by proclaimed boundaries. Changes to boundaries can be initiated by proposals of the councils affected, or by 10 per cent or more of electors in the council areas affected, or by 25 per cent or more of electors in the parts of the council areas affected. Panels constituted by the Local Government Association of South Australia oversee the preparation of reports on proposals and consultation with local communities. The panels also make recommendations as to whether proposals should be carried into effect. Polls of local electors must be held in respect of recommendations about proposals if 10 per cent or more of electors petition within a fixed period.

Most council areas contain wards which are essentially electoral districts. Ward boundaries are also defined by proclamation and must be reviewed at least every seven years to ensure that electors are adequately and fairly represented.

##### *Functions*

Broadly speaking the role of councils is to act as:

- an elected accountable decision maker for the local community. This can include educating, informing and leading the community in issues that have local impact.

- a provider, coordinator and information disseminator for facilities, programs and services at a local level;
- an upholder of standards set down in legislation *e.g.* the Development Act;
- a catalyst, facilitator and coordinator of local effort and organiser for external resources (*i.e.* grants); and
- an advocate and representative for the local community to other governments and the wider society.

There are more than 45 Acts of State Parliament which prescribe the powers and authorities which each council exercises in the management of its area. The *Local Government Act 1934* is the major legislation which affects local government. It prescribes the structure of councils, the timing and running of meetings, the voting procedures at local government elections, how councils can raise income and allocate their funds. Each council is constituted as a corporate body.

Each council provides different services to meet the needs of its community. Providing these services is part of the council's duty of representing and making decisions for the community.

The most common services councils provide are libraries, road and footpath building and maintenance, environmental health services, traffic control, street lighting, street signs, street seats and trees, litter bins, public toilets, community halls, town planning, building and planning approvals, rubbish collection, community care workers, citizenship ceremonies, information provision, parking inspection, dog control, maintenance of foreshores, playgrounds, playing fields and recreation parks.

Services which are provided by some councils, depending on local needs and circumstances include recycling, swimming pools, child care, aged housing, immunisation, maintenance of cemeteries and community buses. Beyond this councils may, if they wish, provide other services and facilities.

#### *Membership*

The local government electorate is represented by a council whose membership comprises a mayor or chairman, aldermen and councillors. The mayor or chairman is the principal member of the council. A mayor is elected by the area as a whole while a chairman is chosen from among the members of the council. The Mayor of the City of Adelaide is entitled to be called Lord Mayor. A small number of councils have aldermen who are elected representatives of the area as a whole. There may not be more aldermen than half the number of councillors. Councillors are elected by the electors of the area as representatives of the area as a whole, where there are no wards. In the case where wards exist, councillors are elected by the electors of those wards.

A person is eligible to nominate for local government office if he/she is an elector for the area, provided that he/she is not an undischarged bankrupt, liable to imprisonment, disqualified from holding public office, or an officer or employee of the council. Furthermore, members of other councils and persons who have nominated for offices in other councils are also ineligible. A person elected to the office of mayor or alderman must have been a member of a council for at least twelve months.

A member of council receives an annual allowance for expenses and reimbursement and other prescribed expenses. The allowances are fixed at the first meeting after an election and may not be less than \$500 per annum or more than \$2,025 per annum.

A person of or above the age of majority may vote if he or she is an elector in the area for the House of Assembly, lives in the area and has lodged a declaration with the council, or is a ratepayer by virtue of being the sole owner or occupier of rateable property. A body corporate may be enrolled as an elector if it is a ratepayer by virtue of being the sole owner of rateable property. A group of persons is able to vote if all the members are ratepayers in respect of rateable property within the area, the members are joint owners or occupiers of the rateable property, and at least one member is not enrolled on the relevant voters roll.

## 5.1 POPULATION ESTIMATES AND PROJECTIONS

Before 1971, the main measure of the population of South Australia was the census count. Since 1971, figures have been compiled on the basis of the estimated resident population of the State. The estimated resident population for Census dates is derived by adding estimates of Australians temporarily overseas and estimates of census under-enumeration to the count of persons at their usual place of residence.

The following table shows the number of persons in South Australia at censuses to 1966 and the estimated resident population at census dates from 1971.

Population<sup>(a)(b)</sup>

Census date	Males	Females	Persons	Average annual increase	
				Number	Per cent
1844 26 February...	9,686	7,680	17,366	..	..
1846 26 February...	12,670	9,720	22,390	2,512	14.47
1851 1 January .....	35,302	28,398	63,700	8,262	36.90
1855 31 March .....	43,720	42,101	85,821	5,530	8.68
1861 8 April .....	65,048	61,782	126,830	6,835	7.96
1866 26 March .....	85,334	78,118	163,452	7,324	5.78
1871 2 April .....	95,236	90,189	185,425	4,395	2.69
1876 26 March .....	109,841	102,687	212,528	5,421	2.92
1881 3 April .....	145,113	130,231	275,344	12,563	5.91
1891 5 April .....	161,920	153,292	315,212	3,987	1.45
1901 31 March .....	180,485	177,861	358,346	4,313	1.37
1911 3 April .....	207,358	201,200	408,558	5,021	1.40
1921 4 April .....	248,267	246,893	495,160	8,660	2.12
1933 30 June .....	290,962	289,987	580,949	7,149	1.44
1947 30 June .....	320,031	326,042	646,073	4,652	0.80
1954 30 June .....	403,903	393,191	797,094	21,574	3.34
1961 30 June .....	490,225	479,115	969,340	24,607	3.09
1966 30 June .....	<u>550,196</u>	<u>544,788</u>	<u>1,094,984</u>	<u>25,129</u>	<u>2.59</u>
1971 30 June (c) ...	597,572	602,542	1,200,114	..	..
1976 30 June .....	635,152	638,918	1,274,070	14,791	1.23
1981 30 June .....	653,940	664,829	1,318,769	8,940	0.70
1986 30 June .....	687,764	694,786	1,382,550	12,756	0.97
1991 30 June .....	717,622	728,677	1,446,299	12,750	0.92

(a) Excludes full-blood Aborigines before the 1966 Census. (b) Until 1891 included the Northern Territory. (c) Estimated resident population from 1971.

The count of persons in South Australia (excluding Australia's indigenous people) had reached 17,366 persons at the first census on 26 February 1844. In 1861, twenty-five years after the first settlers arrived, the count was 126,830 and this figure had more than doubled by the Census in 1881. By 1921 the Census counted almost half a million persons and the population of South Australia was estimated to have reached a million in January 1963.

The population at 6 August 1991 was estimated to be 1,447,400 persons. Population projections indicate that South Australia's population will reach one and a half million about the year 2000.

Between population censuses the number of persons is estimated by adding to the Census estimated resident population the recorded natural increase, net overseas migration gain and interstate movement involving a change in usual residence.

Increases in the Estimated Resident Population

<i>Year ended 30 June</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>	<i>Natural increase</i>	<i>Total increase</i>	<i>Rate of growth</i>
1988 .....	697,700	707,200	1,404,900	8,489	12,145	0.87
1989 .....	704,400	714,600	1,419,000	8,664	14,120	1.01
1990 .....	710,700	721,400	1,432,100	8,253	13,027	0.92
1991 .....	717,600	728,700	1,446,300	8,767	14,243	0.99
1992 .....	723,500	734,100	1,457,600	8,532	11,296	0.78
1993p .....	726,200	736,600	1,462,900	8,380	5,257	0.36

The estimated mean resident population for South Australia is calculated for the years ended 30 June and 31 December and these estimates are shown below.

Estimated Mean Resident Population

<i>Year</i>	<i>Year ended 30 June</i>			<i>Year ended 31 December</i>		
	<i>Males</i>	<i>Females</i>	<i>Persons</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>
1988 .....	695,100	704,000	1,399,100	697,900	707,500	1,405,400
1989 .....	701,400	711,200	1,412,600	704,500	714,700	1,419,200
1990 .....	707,500	718,100	1,425,600	710,800	721,600	1,432,400
1991 .....	714,200	725,100	1,439,300	717,600	728,600	1,446,200
1992 .....	720,800	731,600	1,452,400	723,300	733,900	1,457,200
1993p .....	724,900	735,300	1,460,200	726,400	736,800	1,463,200

Measures of the estimated mean (average) resident population for a period are generally used when calculating rates (e.g. crude birth rates) for a period. Projections of estimates of future populations are based on sets of assumptions about population trends, and are important in forecasting and planning.

The following table of intercensal population growth rates shows the effects of some important aspects of the development of the State, namely:

- (a) the net migration, especially of males, away from South Australia following the mineral discoveries in other States in the 1880s and early 1890s;
- (b) the slow growth during the economic depression of the 1930s when natural increase fell to a particularly low level; and
- (c) the high rate of migration in the post 1939–45 War period up to 1960.

Intercensal Compound Annual Population Growth Rates  
South Australia and Australia, 1861–1991<sup>(a)</sup>

Period	Per cent growth rate per annum	
	South Australia (b)	Australia
1861–71	3.88	n.a.
1871–81	4.03	n.a.
1881–91	1.36	3.51
1891–1901	1.29	1.74
1901–11	1.32	1.67
1911–21	1.94	2.01
1921–33	1.32	1.65
1933–47	0.76	0.96
1947–54	3.05	2.46
1954–61	2.83	2.26
1961–66	2.47	2.00
1966–71	1.85	2.41
1971–76	1.20	1.44
1976–81	0.69	1.24
1981–86	0.95	1.43
1986–91	0.91	1.53

(a) Estimated resident population from 1971. (b) Includes Northern Territory before 1881.

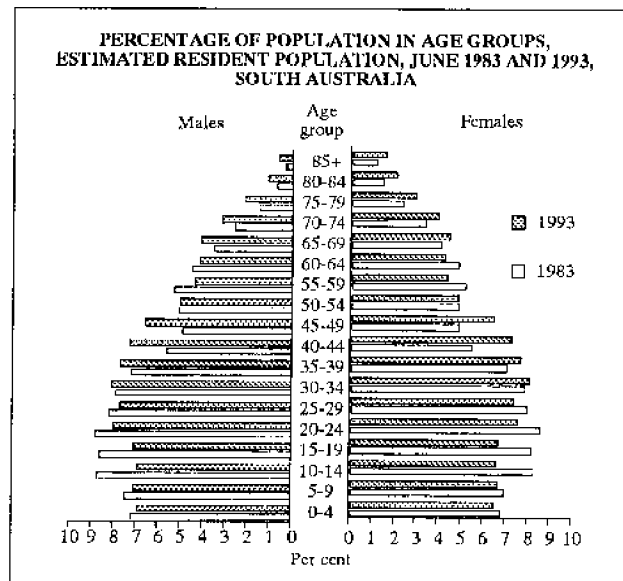
The State's rate of population increase was slower than the Australian rate in every period from 1881 to 1947. From 1947 the steep rise in the rate of net migration enabled an above-average growth rate to be achieved and this was maintained until 1966. Since 1966 however, the State's growth rate has been generally below the Australian rate.

#### Age distribution

Details of the age distribution of the population are of particular importance because they reveal changes which have occurred over time in the age structure and supply basic material for the calculation of fertility, mortality and annuity rates and the probabilities of survival.

The population pyramid demonstrates the ageing of the South Australian population. It shows how the non-dependent population can be expected to decline over the next few years, reflecting the decline in fertility rates in the 1970s, which levelled off in the 1980s. The median

age of the estimated resident population has increased from 32.4 years at 30 June 1987 to 33.9 years at 30 June 1992. In 1961 the median age was 31.3 years, falling to 27.5 in 1971 before rising again to 33.9 in 1991.



**Geographical distribution**

The Australian Standard Geographical Classification divides the State into seven statistical divisions. Each of these is further divided into statistical subdivisions which consist of a number of statistical local areas.

In South Australia the statistical local areas are the same as local government areas with the exception of Enfield which is divided into two statistical local areas. Estimated resident populations for these areas are prepared annually.

Estimated Resident Population of Statistical Divisions and Subdivisions<sup>(a)</sup>

Statistical Division and Subdivision	Persons at 30 June		
	1986	1991	1993p
<b>Adelaide:</b>			
Northern .....	295,675	321,287	329,023
Western .....	214,020	213,035	210,595
Eastern .....	213,928	216,562	216,227
Southern .....	279,925	306,277	314,395
<b>Total Adelaide .....</b>	<b>1,003,548</b>	<b>1,057,161</b>	<b>1,070,240</b>
<b>Outer Adelaide:</b>			
Barossa .....	33,686	38,425	40,443
Kangaroo Island .....	4,224	4,134	4,114
Onkaparinga .....	22,852	26,146	28,364
Fleurieu .....	21,329	24,495	26,609
<b>Total Outer Adelaide .....</b>	<b>82,091</b>	<b>93,200</b>	<b>99,530</b>



Estimated Resident Population of Statistical Divisions and Subdivisions<sup>(a)</sup> (continued)

Statistical Division and Subdivision	Persons at 30 June		
	1986	1991	1993p
<b>Yorke and Lower North:</b>			
Yorke .....	23,772	24,322	24,715
Lower North .....	19,445	19,559	19,879
<b>Total Yorke and Lower North.....</b>	<b>43,217</b>	<b>43,881</b>	<b>44,594</b>
<b>Murray Lands:</b>			
Riverland .....	33,427	34,426	34,178
Murray Mallee.....	32,158	33,017	32,735
<b>Total Murray Lands .....</b>	<b>65,585</b>	<b>67,443</b>	<b>66,913</b>
<b>South East:</b>			
Upper South East.....	19,706	19,374	18,779
Lower South East.....	43,420	43,481	43,146
<b>Total South East.....</b>	<b>63,126</b>	<b>62,855</b>	<b>61,925</b>
<b>Eyre:</b>			
Lincoln .....	28,101	26,817	26,767
West Coast.....	6,826	6,348	6,148
<b>Total Eyre.....</b>	<b>34,927</b>	<b>33,165</b>	<b>32,915</b>
<b>Northern:</b>			
Whyalla.....	28,899	26,891	25,416
Pirie.....	28,587	28,014	27,643
Flinders Ranges.....	24,341	22,998	22,192
Far North .....	8,229	10,691	10,353
<b>Total Northern .....</b>	<b>90,056</b>	<b>88,594</b>	<b>85,604</b>
<b>Total State .....</b>	<b>1,382,550</b>	<b>1,446,299</b>	<b>1,461,721</b>

(a) Some boundaries have been adjusted because of changes.

Estimated Resident Population of Statistical Local Areas  
Adelaide Statistical Division

STATISTICAL DIVISION Subdivision and statistical local area	Persons at 30 June		
	1986	1991	1993p
<b>ADELAIDE .....</b>	<b>1,003,548</b>	<b>1,057,161</b>	<b>1,070,240</b>
<b>Northern .....</b>	<b>295,675</b>	<b>321,287</b>	<b>329,023</b>
Elizabeth (C).....	31,432	29,754	28,578
Enfield (C) Pt A.....	47,506	46,378	45,471
Gawler (M).....	12,803	15,596	16,654
Munno Para (C).....	28,462	32,755	35,329
Salisbury (C).....	99,271	109,326	110,667
Tea Tree Gully (C).....	76,201	87,478	92,324
<b>Western .....</b>	<b>214,020</b>	<b>213,035</b>	<b>210,595</b>
Enfield (C) Pt B.....	16,703	16,621	16,668
Henley and Grange (C).....	15,166	14,726	14,532
Hindmarsh (M).....	8,137	8,359	8,546
Port Adelaide (C).....	38,368	39,448	39,143
Thebarton (M).....	8,730	7,874	7,750
West Torrens (C).....	44,986	44,552	43,786
Woodville (C).....	81,930	81,455	80,170
Unincorporated.....		Included with Port Adelaide (C)	

Estimated Resident Population of Statistical Local Areas  
Adelaide Statistical Division (continued)

STATISTICAL DIVISION Subdivision and statistical local area	Persons at 30 June		
	1986	1991	1993p
Eastern .....	213,928	216,562	216,227
Adelaide (C) .....	11,661	11,322	11,425
Burnside (C) .....	38,303	39,391	39,313
Campbelltown (C) .....	44,896	45,527	45,443
East Torrens (DC) .....	5,968	6,791	6,917
Kensington and Norwood (C) ..	9,200	9,058	9,044
Payneham (C) .....	16,483	15,965	16,000
Prospect (C) .....	18,975	19,191	19,196
St Peters (M) .....	8,495	8,351	8,225
Stirling (DC) .....	15,739	17,095	17,182
Unley (C) .....	37,146	36,837	36,557
Waikerville (M) .....	7,062	7,034	6,925
Southern .....	279,925	306,277	314,395
Brighton (C) .....	19,723	19,457	19,237
Glenside (C) .....	13,315	13,089	12,807
Happy Valley (C) .....	29,488	36,192	37,852
Marion (C) .....	72,380	77,348	77,505
Mitcham (C) .....	63,000	63,604	62,839
Noarlunga (C) .....	71,795	83,752	90,153
Willunga (DC) .....	10,224	12,835	14,002

(C) Municipality with city status (DC) District Council (M) Municipality

Urban centres  
and rural  
localities

Census counts are available for urban centres and rural localities. These consist of one or more adjoining census collection districts with urban characteristics (based on *Linge* criteria). Urban centres are defined as population clusters of 1,000 or more people (including known holiday resorts of smaller size) and rural localities are defined as population clusters of between 200 and 999 people. Between 1986 and 1991 most urban centres beyond the Adelaide Statistical Division experienced population growth. This was most evident in towns within 100 kilometres of Adelaide. In the 'Iron Triangle', Port Pirie increased slightly while Port Augusta and Whyalla declined.

Persons in Urban and Rural Areas

Census	Urban		Rural	Total (including migratory)
	Adelaide (a)	Other (b)		
1971 .....	809,482	183,187	179,148	1,173,707
1976 .....	857,196	198,777	187,546	1,244,756
1981 .....	882,520	207,934	193,628	1,285,033
1986 .....	917,000	221,036	205,625	1,345,945
1991 .....	957,480	235,088	207,535	1,400,622

(a) Urban Adelaide is a subset of the Adelaide Statistical Division. (b) 'Other Urban' comprises clusters of 1,000 or more persons and a number of holiday resorts which are regarded as urban on a dwelling density basis.

**Population in other urban centres**

Only 16.8 per cent of the South Australian population is located in urban centres outside the capital city. This is low compared with New South Wales, Victoria and Queensland. In each of these States, there are at least six centres outside the capital city with a population in excess of 20,000, whereas in South Australia only Whyalla and Mount Gambier meet this criterion.

Persons in Urban Centres<sup>(a)</sup>

Urban centre	1986	1991	Urban centre	1986	1991
Adelaide . . . . .	917,000	957,480	Millicent . . . . .	5,075	5,118
Aldinga Beach . . . . .	3,041	3,541	Moonta . . . . .	2,199	2,723
Angaston . . . . .	1,823	1,819	Mount Barker . . . . .	5,370	6,239
Ardrossan . . . . .	963	1,008	Mount Gambier . . . . .	20,813	21,153
Balaklava . . . . .	1,365	1,439	Murray Bridge . . . . .	11,893	12,725
Barmera . . . . .	1,912	1,859	Nairne . . . . .	889	1,346
Berri . . . . .	3,502	3,733	Naracoorte . . . . .	4,636	4,711
Bordertown . . . . .	2,318	2,235	Nuriootpa . . . . .	3,209	3,321
Burra . . . . .	1,187	1,191	Penola . . . . .	1,222	1,147
Ceduna . . . . .	2,877	2,753	Peterborough . . . . .	2,239	2,138
Clare . . . . .	2,591	2,575	Port Augusta . . . . .	15,291	14,595
Cooper Pedy . . . . .	2,103	2,491	Port Elliot . . . . .	1,050	1,203
Crafers-Bridgewater . . . . .	11,222	11,887	Port Lincoln . . . . .	11,552	11,345
Crystal Brook . . . . .	1,294	1,282	Port Pirie . . . . .	13,960	14,110
Gawler . . . . .	11,354	13,835	Quorn . . . . .	1,079	1,056
Goolwa . . . . .	2,359	3,018	Renmark . . . . .	3,489	4,256
Hahndorf . . . . .	1,688	1,661	Roxby Downs . . . . .	492	1,999
Jamestown . . . . .	1,372	1,369	Strathalbyn . . . . .	1,924	2,623
Kadina . . . . .	3,263	3,536	Tallem Bend . . . . .	1,542	1,502
Kapunda . . . . .	1,622	1,979	Tanunda . . . . .	2,856	3,087
Keith . . . . .	1,189	1,176	Tumby Bay . . . . .	996	1,147
Kingscote . . . . .	1,403	1,443	Victor Harbor . . . . .	5,318	5,930
Kingston (SE) . . . . .	1,367	1,425	Waikerie . . . . .	1,593	1,748
Leigh Creek . . . . .	1,967	1,378	Walleroo . . . . .	2,224	2,465
Lobethal . . . . .	1,580	1,521	Whyalla . . . . .	26,900	25,526
Loxton . . . . .	3,372	3,322	Willunga . . . . .	826	1,164
Maitland . . . . .	1,103	1,066	Woodside . . . . .	853	1,085
Mannum . . . . .	2,056	2,025	Woomera . . . . .	1,805	1,600
McLaren Vale . . . . .	1,196	1,469			

(a) Urban centres are clusters of 1,000 or more persons. The figures are Census counts.

**Projections of the population**

Population projections have been prepared using the cohort-component method, *i.e.* a base population in single years of age is brought forward year by year by applying a number of assumptions about future levels of fertility, mortality and migration. These assumptions lead to a range of projections for the State, *e.g.* under Series A the population is projected to reach 1,622,300 by 2041, under Series D 1,701,300.

Projected Population (Including Migration)<sup>(a)</sup>  
(‘000)

At 30 June	Series A	Series B	Series C	Series D
1996 .....	1,483.3	1,486.9	1,485.2	1,484.0
2001 .....	1,522.0	1,530.1	1,530.9	1,528.4
2006 .....	1,554.4	1,568.2	1,573.3	1,568.5
2011 .....	1,580.3	1,600.3	1,609.2	1,602.7
2016 .....	1,602.2	1,628.6	1,641.3	1,633.1
2021 .....	1,620.3	1,653.3	1,670.4	1,660.2
2026 .....	1,632.7	1,672.6	1,696.0	1,682.0
2031 .....	1,637.6	1,684.5	1,716.3	1,696.5
2036 .....	1,633.7	1,687.9	1,729.7	1,702.7
2041 .....	1,622.3	1,683.8	1,736.4	1,701.3

(a) Based on final estimated resident population at 30 June 1993.

The projections in the following table indicate that for all series the proportion of the population aged under 15 is likely to decrease while the proportion 65 and over is expected to increase.

Projected Age Group Proportions (Including Migration)  
(Per cent)

Age group (years)	At 30 June	Series A	Series B	Series C	Series D
0-14	2011 .....	17.57	17.65	18.93	17.71
	2041 .....	15.49	15.63	17.42	15.72
15-64	2011 .....	67.16	67.21	66.07	67.18
	2041 .....	59.51	59.83	59.22	59.92
65 and over	2011 .....	15.27	15.14	15.00	15.11
	2041 .....	25.00	24.54	23.36	24.36

**Further references**

Additional information may be found in the following ABS publications:

- 2730.4 *Census Counts for Small Areas : South Australia*
- 3101.0 *Australian Demographic Statistics*
- 3201.4 *Estimated Resident Population in Statistical Local Areas, South Australia*
- 3204.4 *Estimated Resident Population by Age and Sex in Statistical Local Areas, South Australia*
- 3222.0 *Projections of the Populations of Australia, States and Territories, 1993-2041*

## 5.2 THE CENSUS

**Early 'musters'**

Population returns in one form or another have existed from a very early period in the history of Australia. The earliest enumerations were known as 'musters', and although the actual results of very few of them have been preserved, it is probable that during the early days of colonisation they were of frequent occurrence. The first official 'muster' was taken in 1788 soon after the settlement of Sydney Cove.

**Development of the Census**

The first regular census in Australia was taken in New South Wales in November 1828, and included the population of Moreton Bay (in what is now Queensland). This census sought details of the names, ages and civil conditions of the inhabitants. The first recognised census in South Australia was taken in 1844. The 1881 Census was the first census taken simultaneously in all the States of Australia and formed part of the first simultaneous census of the British Empire.

Under the Commonwealth of Australia Constitution Act of 1900, 'Census and Statistics' became Commonwealth Government functions and with the passing of the empowering legislation, the *Census and Statistics Act 1905* (Cwlth), all censuses of Australia have been taken under the authority of this Act. The first Australian census collected under the Act was that of 1911; subsequent censuses were taken in 1921, 1933, 1947, 1954, 1961, 1966, 1971, 1976, 1981, 1986 and 1991. The next census will be conducted in 1996.

**Scope of the Census**

The census is intended to count all people and dwellings in Australia. In 1986, for the first time, the census was extended to include people in Australia's external territories: Cocos (Keeling), Christmas and Norfolk Islands.

Diplomatic representatives of other governments and their staff and families having diplomatic immunity in accordance with international practice are excluded from censuses.

Data about the indigenous population have been included in every national census since Federation. However, before the 1971 Census, particulars of full-blood indigenous people were not included in census results in keeping with Section 127 of the Constitution. Following the repeal of this Section, the Australian Bureau of Statistics has attempted to collect data on the Aboriginal and Torres Strait Islander population which are as comprehensive as the data gathered from the rest of the Australian population.

The census is taken using a household form delivered to every private dwelling seeking information about all inhabitants and the dwelling. The census count includes babies born at or before midnight on Census night and excludes persons dying before midnight on Census night. Private dwellings include houses, flats, maisonettes, townhouses and caravans in caravan parks. Census forms are also delivered to ships in port or which will be travelling between Australian ports on Census night; and to non-private dwellings such as boarding schools, gaols, hotels and motels, hospitals and nursing homes. Dwellings excluded from census results are those occupied by accredited persons having diplomatic immunity.

**The 1991 Census**

The twelfth Census of Population and Housing was conducted in 1991 with Census night on Tuesday 6 August. There were forty-three questions on the 1991 Census Household Form, thirty-nine related to personal characteristics and four to household or dwelling characteristics. Up to forty-six responses were required from each person.

**5.3 CHARACTERISTICS OF THE POPULATION**

The following section provides summary information on various characteristics of the population obtained from recent censuses. A full listing of data items collected from the 1991 Census is included in the *1991 Census Dictionary* (2901.0). The data in this section are Census counts at place of enumeration *i.e.*, where people were on Census night.

**Marital status**

In August 1991, 27.6 per cent of all persons aged 15 years and over claimed to have never married, compared with 26.9 per cent in 1986. Married persons in 1991 represented 57.2 per cent of all persons aged 15 years and over, compared with 59.0 per cent in 1986. In 1991, 81.4 per cent of widowed persons were females.

Marital Status, Persons Aged 15 years and Over

Marital status	Census 30 June 1986		Census 6 August 1991	
	Males	Females	Males	Females
Never married. ....	158,634	124,023	169,195	135,505
Married. ....	309,308	309,909	313,989	317,006
Separated, not divorced. ....	12,174	14,286	14,342	16,319
Widowed. ....	12,155	58,564	13,942	60,915
Divorced. ....	22,114	28,692	27,302	35,178
<b>Total. ....</b>	<b>514,385</b>	<b>535,474</b>	<b>538,770</b>	<b>564,923</b>

The proportion of divorced persons increased from 3.7 per cent to 5.7 per cent over the ten year period from 1981 to 1991.

**Aboriginal and Torres Strait islanders**

Indigenous persons comprise almost 1.2 per cent of the State's population. For information on the Aboriginal and Torres Strait Islander population, *see* Part 5.7.

**Religion**

Answers to the only non-compulsory Census question, concerning religion, have revealed some marked changes over the past three Censuses. The proportion of persons reporting affiliation to Christian denominations has decreased from 74.5 per cent to 70.3 per cent and the number of adherents of non-Christian religions, while not large, grew from 7,128 (0.6 per cent) in 1981 to 18,118 (1.3 per cent) in 1991.

Religious Affiliation			
<i>Religious denomination</i>	<i>Census 1981</i>	<i>Census 1986</i>	<i>Census 1991</i>
<b>Christian:</b>			
Anglican .....	260,919	242,722	251,268
Baptist .....	22,287	21,415	27,395
Brethren .....	1,099	1,398	1,491
Catholic (a) .....	255,332	267,137	294,611
Church of Christ .....	18,657	16,629	11,517
Congregational .....	2,834	1,524	250
Jehovah's Witnesses .....	5,461	6,539	6,907
Latter Day Saints (Mormons) .....	3,617	3,515	3,364
Lutheran .....	63,860	64,851	71,866
Methodist .....	85,935	(b)	(b)
Orthodox .....	36,423	37,149	40,594
Pentecostal (c) .....	11,232	14,997	19,361
Presbyterian .....	21,725	18,566	27,247
Salvation Army .....	8,079	8,268	7,363
Seventh Day Adventist .....	3,139	2,944	2,536
Uniting Church .....	108,857	(d) 176,980	199,886
Other Christian .....	47,815	52,234	19,253
<b>Total .....</b>	<b>957,271</b>	<b>936,868</b>	<b>984,909</b>
<b>Non-Christian:</b>			
Buddhist .....	2,229	5,847	8,629
Hindu .....	(e)	1,171	1,629
Jewish .....	1,114	1,144	1,341
Islamic (Moslem) .....	1,456	2,486	3,110
Other non-Christian .....	2,329	3,195	3,509
<b>Total .....</b>	<b>7,128</b>	<b>13,843</b>	<b>18,118</b>
<b>Non-theistic .....</b> (e) 289 129			
Inadequately described .....	6,529	5,458	3,540
No religion (so described) .....	178,136	227,275	243,150
Not stated .....	135,970	162,212	150,776
<b>Total .....</b>	<b>1,285,034</b>	<b>1,345,945</b>	<b>1,400,622</b>

(a) Includes 'Roman Catholic' and 'Catholic'. (b) Included with Uniting Church from 1986.  
(c) Includes Assemblies of God. (d) Includes Methodist from 1986. (e) Not available for 1981.

**Country of birth** Of the persons in South Australia at the 1911 Census, 85.7 per cent were Australian born; this proportion had risen to 93.3 per cent by 1947. Overseas migration lowered the proportion of Australian born persons to 86.1 per cent in 1954, and to 76.1 per cent in 1991. The proportion of persons in South Australia born in the United Kingdom (including the Republic of Ireland) has decreased steadily from 12.7 per cent in 1976, to 10.9 per cent in 1986 and 10.4 per cent in 1991. The proportion of persons born in Asian countries increased from 2.0 per cent in 1986 to 2.3 per cent in 1991.

## Population

Country of birth	Country of Birth				
	Census 30 June 1986		Census 6 August 1991		Increase
	Persons	Males	Females	Persons	Persons
Australia . . . . .	1,029,470	522,803	542,481	1,065,284	35,814
New Zealand . . . . .	8,287	5,211	4,876	10,087	1,800
<b>Europe:</b>					
United Kingdom and Republic of Ireland . . . . .	146,404	71,439	74,433	145,872	-532
Germany . . . . .	14,664	6,906	7,442	14,348	-316
Greece . . . . .	13,456	7,056	6,573	13,629	173
Italy . . . . .	29,607	15,372	13,590	28,962	-645
Netherlands . . . . .	10,198	5,014	4,848	9,862	-336
Poland . . . . .	7,936	4,375	3,983	8,358	422
Yugoslavia . . . . .	8,774	5,003	4,041	9,044	270
Other . . . . .	20,824	8,826	7,758	16,584	-4,240
<b>Total Europe . . . . .</b>	<b>251,863</b>	<b>123,991</b>	<b>122,668</b>	<b>246,659</b>	<b>-5,204</b>
<b>Asia:</b>					
India . . . . .	2,642	1,508	1,471	2,979	337
Malaysia . . . . .	3,055	2,031	2,156	4,187	1,132
Vietnam . . . . .	6,986	4,944	4,327	9,271	2,285
Other . . . . .	14,730	7,245	9,079	16,324	1,594
<b>Total Asia . . . . .</b>	<b>27,413</b>	<b>15,728</b>	<b>17,033</b>	<b>32,761</b>	<b>5,348</b>
<b>Other countries . . . . .</b>	<b>12,181</b>	<b>11,689</b>	<b>11,498</b>	<b>23,187</b>	<b>11,006</b>
<b>Total born outside   Australia . . . . .</b>	<b>299,744</b>	<b>156,619</b>	<b>156,075</b>	<b>312,694</b>	<b>12,950</b>
<b>Total (including   not stated) . . . . .</b>	<b>1,345,945</b>	<b>690,768</b>	<b>709,854</b>	<b>1,400,622</b>	<b>54,677</b>

## Educational qualifications

The table below shows details concerning the highest level of educational qualifications obtained reported in the 1991 Census.

Educational Qualifications : Highest Level Obtained, Persons 15 Years of Age and Over, Census 1991

Level of qualification	Males	Females	Persons	Per cent
Higher degree . . . . .	6,385	2,139	8,524	0.8
Postgraduate diploma . . . . .	3,575	4,999	8,574	0.8
Bachelor degree . . . . .	29,052	24,004	53,056	4.8
Undergraduate diploma . . . . .	11,204	33,122	44,326	4.0
Associate diploma . . . . .	8,248	5,027	13,275	1.2
Skilled vocational . . . . .	97,560	13,016	110,576	10.0
Basic vocational . . . . .	15,282	21,126	36,408	3.3
No qualification . . . . .	308,480	398,048	706,528	64.0
Not stated, inadequately described . . . . .	58,508	63,518	122,026	11.1
<b>Total . . . . .</b>	<b>538,294</b>	<b>564,999</b>	<b>1,103,293</b>	<b>100.0</b>



The data highlight significant differences in the distribution of highest level qualifications obtained by males and females. Males have obtained more Bachelor and Higher degrees, while females have gained a larger number of undergraduate diplomas. Persons with no qualifications comprised 64.0 per cent of the population aged 15 years and over, compared with 70.3 per cent in 1981.

#### Family structures

The 1991 Census included questions seeking information on family composition. For Census purposes, a family is a group of related individuals, where at least one person is aged 15 years and over. The term related includes related by birth and by the formation of a marriage or marriage-like relationship.

There were 374,715 families in South Australia at the 1991 Census. Of these 128,737 (34.4 per cent) were two parent families with dependent children only; 36,625 (9.8 per cent) were two parent families with non-dependent offspring; 27,545 (7.4 per cent) were one parent families with dependent children only; 14,302 (3.8 per cent) were one parent families with non-dependent offspring and 129,619 (34.6 per cent) were couples without offspring.

Family Types by Number of Dependent Children, 1991 Census

Family type	Number of dependent children			Total
	None	One	Two or more	
One parent .....	14,752	17,706	15,701	(a)48,159
Two parent .....	37,364	52,255	100,992	(b)190,611
<b>Total</b> .....	<b>52,116</b>	<b>69,961</b>	<b>116,693</b>	<b>238,770</b>

(a) Includes the family combination of one parent, children and other related individuals. (b) Includes the family combination of two parents, children and other related individuals.

These data show that of all families with dependent children, 17.9 per cent were single parent families and 82.1 per cent were two parent families. Of all one parent families with dependent children, 47.2 per cent contained two or more children.

In the 1991 Census almost 8.0 per cent of all couples lived in *de facto* relationships, compared with 5.5 per cent in 1986. In 1991, 41.2 per cent of all *de facto* couples had dependent offspring.

The 1992 Survey of Australian Families indicated that there were 19,000 step or blended families in South Australia, containing 39,800 children, and that 55.4 per cent of persons in *de facto* relationships had never married, while 37.2 per cent were divorced.

## 5.4 MIGRATION

Under the Constitution, the Commonwealth makes laws governing migration. Persons wishing to enter Australia as permanent settlers must either:

- (a) have a spouse or fiancé, or parents, children, brothers or sisters, aunts or uncles legally resident in Australia who can sponsor them;
- (b) be refugees or in other special humanitarian need; or
- (c) have skills or personal qualities which will benefit Australia.

New Zealanders may enter Australia without prior authority if they hold a valid New Zealand passport.

### Overseas arrivals and departures

The following table gives details for 1993 of overseas arrivals who gave South Australia as their State of intended residence and people leaving for overseas who gave South Australia as their State of residence. Long-term refers to an intended stay of more than twelve months, and short-term as less than twelve months.

Overseas Arrivals and Departures : Category of Traveller, 1993

<i>Category of traveller</i>	<i>Males</i>	<i>Females</i>	<i>Total</i>
ARRIVALS			
Permanent settlers . . . . .	1,488	1,696	3,184
Long-term:			
Australian residents . . . . .	1,952	2,094	4,046
Overseas visitors . . . . .	1,346	1,231	2,577
<i>Total permanent and long-term</i> . . . . .	<i>4,786</i>	<i>5,021</i>	<i>9,807</i>
Short-term:			
Australian residents . . . . .	57,201	54,675	111,876
Overseas visitors . . . . .	35,272	31,796	67,068
<b>Total arrivals</b> . . . . .	<b>97,259</b>	<b>91,492</b>	<b>188,751</b>
DEPARTURES			
Permanent . . . . .	707	781	1,488
Long-term:			
Australian residents . . . . .	1,789	1,746	3,535
Overseas visitors . . . . .	1,034	880	1,914
<i>Total permanent and long-term</i> . . . . .	<i>3,530</i>	<i>3,407</i>	<i>6,937</i>
Short-term:			
Australian residents . . . . .	60,590	53,526	114,116
Overseas visitors . . . . .	34,283	30,326	64,609
<b>Total departures</b> . . . . .	<b>98,403</b>	<b>87,259</b>	<b>185,662</b>

### Visitors

Overseas residents are allowed to visit Australia for short periods for tourism, business, to see relatives or friends, or for pre-arranged medical treatment. Visitors are not to undertake a job or formal study while in Australia, and must leave at the end of their authorised period of stay.

<b>Overseas students</b>	Australia accepts foreign students and trainees in order to help build a strong and competitive international education and services sector. This also enables students and trainees to acquire skills and qualifications of benefit to themselves and their countries. Some are sponsored by their governments while others are private students.
<b>Temporary residents</b>	Permanent residents are given first priority for employment, but temporary residence may be granted to people from overseas, who possess expertise not available in Australia to enable them to engage in pre-arranged specialised activities. Persons seeking temporary residence for longer than twelve months are required to meet the health and character requirements which apply to permanent settlers.
<b>Citizenship</b>	The status of 'Australian Citizen' was created under the <i>Nationality and Citizenship Act 1948</i> (Cwlth), which came into force on 26 January 1949. The relevant Act is now the <i>Australian Citizenship Act 1948</i> (Cwlth) and under its provision all migrants, regardless of origin, are required to satisfy uniform requirements for the granting of citizenship. Citizenship is normally conferred at ceremonies conducted by local government authorities throughout the State.
<b>Further references</b>	Additional information may be found in the following ABS publications: 3101.0 <i>Australian Demographic Statistics</i> (Quarterly) 3401.0 <i>Overseas Arrivals and Departures, Australia</i> (Monthly) 3402.0 <i>Overseas Arrivals and Departures, Australia</i> (Quarterly) 3404.0 <i>Overseas Arrivals and Departures, Australia</i> (Annual)

## 5.5 BIRTHS AND DEATHS

Current legislation on compulsory registration of births and deaths is contained in the *Births, Deaths and Marriages Registration Act 1966* which came into operation on 1 January 1968. The administration of the Act is the responsibility of the Principal Registrar of Births, Deaths and Marriages.

The Principal Registrar maintains a register of all live births and of all deaths registered in the State. The current legislation does not require still births to be registered, but it provides for a 'Medical Certificate of Cause of Perinatal Death' to be filled in and forwarded to the Principal Registrar by the attending medical practitioner in respect of a 'child not born alive of at least twenty weeks gestation or four hundred grams weight'. The 'perinatal' certificates are also required from attending medical practitioners for children dying within twenty-eight days of birth. The birth of each live-born child is required to be registered by a parent within sixty days of the date of birth. Registration of a live birth after the expiration of sixty days following the date of birth requires the payment of a fee and a declaration in a form prescribed by the Act.

A death must be registered within fourteen days of the date of death by the occupier of the building or place in which the death occurred. Special provisions and penalties exist for the late registration of a death. A body may not be buried unless the undertaker is in possession of a 'Notice of signing of Medical Certificate of Cause of Death' signed by a medical practitioner or of an order by a coroner for burial, and the undertaker is required within seven days of the disposal of the body to notify the Principal Registrar of such disposal.

In accordance with international practice, statistics for a period are on the basis of the births and deaths which were registered during that period. However, numbers registered in a period usually differ from the number of occurrences in the same period and, mainly because of the longer period allowed for registration, such variations generally are more apparent in birth than in death figures. In this section, unless otherwise stated, details of births are on the basis of State of usual residence of the mother and details of deaths are on the basis of State of usual residence of the deceased, regardless of where in Australia the event occurred.

**Births**

In the following tables births to mothers usually resident in South Australia which took place overseas are excluded, while births to mothers usually resident overseas that occurred in South Australia are included. Similarly, deaths of South Australian residents which occurred overseas are excluded, and deaths of persons usually resident overseas that occurred in South Australia are included. The South Australian crude birth rate (number of births per thousand of mean estimated resident population) during 1993 was 13.7 compared with the Australian rate of 14.7.

Live Births

Year	Live births occurred (a)	Live births registered				Sex ratio (c)
		Total	Rate (b)	Males	Females	
1989 .....	19,503	19,610	13.8	10,152	9,458	107.3
1990 .....	19,664	19,863	13.9	10,170	9,693	104.9
1991 .....	19,386	19,640	13.6	10,175	9,465	107.5
1992 .....	19,643	19,311	13.3	9,957	9,354	106.4
1993 .....	n.y.a.	20,078	13.7	10,232	9,846	103.9

(a) Figures are subject to the addition of late registrations, particularly for 1993. (b) Number per 1,000 of mean estimated resident population. (c) Number of male births per 100 female births.

*Age-specific birth rates*

Age-specific birth rates are the live births registered during the year according to age of mother per 1,000 of the female resident population. Rates over the past twenty years reflect a tendency towards smaller families, and are consistent with an increase in the median age of mother at first nuptial confinement.

Age-specific Birth Rates and Total Fertility

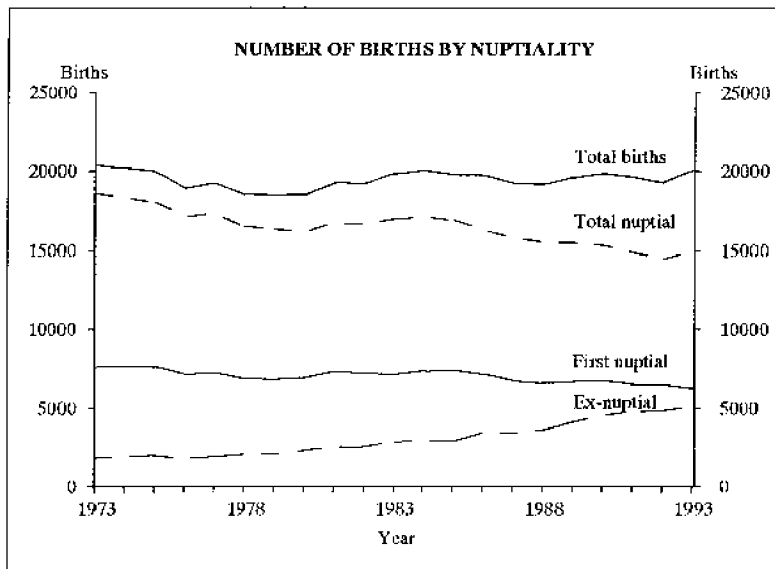
Year	Age group (years)							Total fertility (a)
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
1971 (b) ..	42.4	166.3	139.6	70.1	33.3	9.5	0.6	2,309
1976 (b) ..	29.6	126.5	137.4	59.2	17.3	4.2	0.3	1,886
1981 (b) ..	26.3	104.2	139.5	65.0	18.8	3.1	0.2	1,785
1986 (b) ..	21.3	90.1	136.5	79.6	21.5	3.4	0.2	1,763
1991 (b) ..	21.4	72.1	127.5	90.9	29.4	4.0	0.2	1,715
1993 .....	17.8	65.6	125.3	102.9	38.4	6.3	0.2	1,784

(a) The number of children 1,000 women would bear during their lifetimes if they experience the rates of the year shown. (b) Census year.

Age-specific birth rates for women aged 30 years and over decreased from 1961 until the late 1970s but have since increased significantly, while birth rates for women under 20 have fallen by more than 50 per cent. In 1993 the birth rate for women in the age group 20-24 continued to fall although less dramatically than in previous years, while rates for women aged 30 and above continued to rise.

Nuptiality

Live births are classified as nuptial where the father registered was married to the mother at the time of birth, or where the husband died during pregnancy. Children of tribally married Aboriginal mothers are considered nuptial. Other births are classified as ex-nuptial whether or not the parents were living together at the time of birth and whether or not the child may have been legitimised or adopted subsequently.



Since 1960 there has been a marked increase in the proportion of ex-nuptial births. For the previous forty years, the rate remained relatively steady at about 3 per 100 live births, but in recent years the rate has increased sharply, reaching a record level of 25.4 per 100 live births in 1993.

The age group with the highest ex-nuptiality rate in 1993 was the under 20 years, where 89.3 per cent were ex-nuptial followed by the 20-24 age group with 50.3 per cent.

The percentage of ex-nuptial births where paternity was acknowledged rose from 64.5 in 1982 to 82.3 in 1992.

*Gross and net reproduction rates*

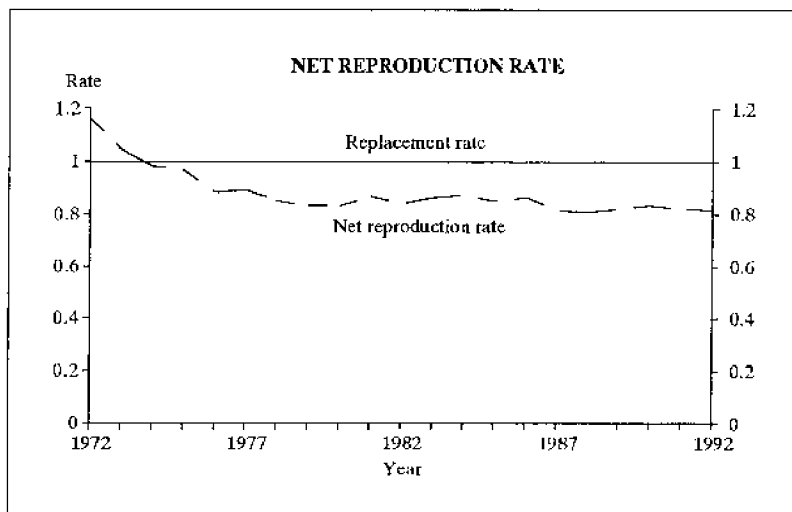
The gross reproduction rate is an indication of the number of live females that can be expected to be born to a woman through her child-bearing years. The net reproduction rate, which is a measure of the degree to which the population can replace itself, is derived from the gross reproduction rate by adjusting for the females who fail to survive to the end of their child-bearing period.

The following table shows a general decline in the net reproduction rate. The current level is lower than the point at which women produce only one female child to take their place in the reproductive cycle and, excluding the impact of migration, if this trend continues, zero population growth will be reached ultimately and the population will begin to decline. It should be realised, however, that this is not a forecast of what can be anticipated but only a hypothetical projection of what will happen if the given conditions upon which it has been based continue to apply.

Gross and Net Reproduction Rates

Year	Gross reproduction rate	Net reproduction rate	
		Rate	Mortality experience on which rate is based
1976 (a) .....	0.900	0.880	1975-1977
1981 (a) .....	0.880	0.866	1980-1982
1986 (a) .....	0.876	0.862	1985-1987
1991 (a) .....	0.833	0.821	1991
1992 .....	0.825	0.813	1992

(a) Census year.



**Deaths**

The 11,528 deaths of South Australian residents registered during 1993 represented a crude death rate of 7.9 per thousand of mean population. Although crude death rates in excess of 16.0 were recorded in the 1860s, the rate has not exceeded 9.0 since 1956. Other fluctuations in the number of deaths and the crude death rate over time can be seen in the Statistical Summary.

Deaths

Year	Numbers registered			Crude death rate (a)		
	Males	Females	Persons	Males	Females	Persons
1989 .....	6,094	5,254	11,348	8.6	7.3	8.0
1990 .....	5,833	5,105	10,938	8.1	7.1	7.6
1991 .....	5,924	5,252	11,176	8.3	7.2	7.7
1992 .....	5,812	5,113	10,925	8.0	7.0	7.5
1993 .....	6,015	5,513	11,528	8.3	7.5	7.9

(a) Number of deaths per 1,000 of mean estimated resident population.

In recent years male deaths have greatly outnumbered female deaths for persons aged less than 80 years, while for ages in excess of 80 the number of female deaths has been much higher. This is a reflection of the age and sex distribution of the population which has resulted mainly from the greater longevity experienced by females in the population.

Age group (years)	Age at Death					
	Males		Females		Persons	
	1992	1993	1992	1993	1992	1993
Under 1	68	59	49	45	117	104
1-4	12	23	10	10	22	33
5-9	8	15	10	5	18	20
10-14	7	10	9	9	16	19
15-19	41	44	20	29	61	73
20-24	70	71	23	26	93	97
25-29	76	75	28	27	104	102
30-34	60	95	39	34	99	129
35-39	83	84	35	62	118	146
40-44	97	86	58	50	155	136
45-49	140	117	82	73	222	190
50-54	177	165	115	112	292	277
55-59	266	279	149	156	415	435
60-64	469	421	241	250	710	671
65-69	739	749	392	436	1,131	1,185
70-74	866	939	567	611	1,433	1,550
75-79	1,013	1,004	763	852	1,776	1,856
80 and over	1,620	1,779	2,523	2,726	4,143	4,505
<b>All ages</b>	<b>5,812</b>	<b>6,015</b>	<b>5,113</b>	<b>5,513</b>	<b>10,925</b>	<b>11,528</b>

Age-specific death rates

The following tables show that age-specific death rates, *i.e.* deaths in each age group expressed as a rate per 1,000 of population in that age group, have generally fallen for males and females over the last 20 years. Because age composition of the population is known accurately only at censuses, the 3-year periods shown are those with a census year at their centre.

Age group (years)	Age-specific Death Rates : Males				
	Death rate (a)				
	1970-72	1975-77	1980-82	1985-87	1990-92
0-4	4.66	3.20	2.76	2.33	1.47
5-9	0.43	0.36	0.33	0.23	0.22
10-14	0.38	0.36	0.38	0.22	0.14
15-19	1.48	1.51	1.27	1.23	0.16
20-24	1.55	1.56	1.25	1.36	0.86
25-29	1.12	1.27	1.19	1.20	1.48
30-34	1.41	1.23	1.07	1.16	1.36
35-39	2.04	1.72	1.57	1.32	1.33
40-44	3.15	2.60	2.29	2.20	1.59
45-49	5.49	5.05	4.16	3.17	2.29
50-54	9.37	8.15	7.47	5.72	3.57
55-59	16.01	13.22	12.76	10.87	5.77
60-64	25.10	22.33	19.52	16.09	7.91
65-69	41.00	36.05	31.09	27.54	16.43
70-74	64.42	54.08	49.09	43.45	34.21
75-79	96.09	87.50	78.54	70.14	56.00
80-84	142.39	132.63	117.92	112.19	122.35
85 and over	230.02	211.49	201.85	187.97	388.26
<b>All ages</b>	<b>9.31</b>	<b>8.52</b>	<b>8.36</b>	<b>8.18</b>	<b>8.16</b>

(a) Average annual number of deaths per 1,000 of population at ages shown. From 1975-77 estimated resident population.



Age-specific Death Rates : Females

Age group (years)	Death rate (a)				
	1970-72	1975-77	1980-82	1985-87	1990-92
0-4	3.39	2.49	2.00	1.84	1.17
5-9	0.32	0.35	0.14	0.17	0.19
10-14	0.29	0.21	0.17	0.17	0.15
15-19	0.65	0.55	0.45	0.45	0.18
20-24	0.48	0.44	0.44	0.52	0.37
25-29	0.60	0.42	0.36	0.51	0.44
30-34	0.91	0.66	0.42	0.58	0.52
35-39	1.18	0.91	0.85	0.70	0.68
40-44	1.86	1.83	1.44	1.22	2.21
45-49	2.95	2.73	2.12	2.19	4.20
50-54	4.60	4.32	3.39	3.54	6.04
55-59	7.41	6.48	5.31	4.97	3.37
60-64	12.16	10.45	8.53	7.82	4.36
65-69	20.32	16.53	14.61	13.61	7.80
70-74	33.42	28.77	24.95	24.02	15.68
75-79	57.60	51.55	42.39	40.69	26.47
80-84	99.42	84.68	75.39	68.88	56.56
85 and over	186.55	176.26	163.02	146.38	233.72
<b>All ages</b>	<b>7.50</b>	<b>7.03</b>	<b>6.69</b>	<b>6.94</b>	<b>7.08</b>

(a) Average annual number of deaths per 1,000 of population at ages shown. From 1975-77 estimated resident population.

Infant mortality

The infant mortality rate, i.e. the number of deaths of children under one year to every 1,000 live births, has declined markedly in the last century. Rates around 200 were not uncommon in the 1850s and 1860s but by the early 1900s the rate was less than half this. Further rapid declines have been evident throughout this century with the 1992 rate being 6.1. The number of infant deaths and infant death rates since 1851 are shown in the Statistical Summary.

Infant Mortality : Age at Death

Year	Age at Death						Total under 12 months	
	Under 1 day	1 day and under 1 week	1 week and under 4 weeks	4 weeks and under 3 months	3 months and under 6 months	6 months and under 12 months	Number	Rate (a)
<b>MALES</b>								
1990	27	12	10	22	17	4	92	9.0
1991	28	5	3	11	10	8	65	6.4
1992	32	5	6	13	10	2	68	6.8
<b>FEMALES</b>								
1990	24	14	9	10	12	7	76	7.8
1991	14	9	6	8	3	4	44	4.6
1992	18	4	2	8	9	8	49	5.2
<b>TOTAL</b>								
1990	51	26	19	32	29	11	168	8.5
1991	42	14	9	19	13	12	109	5.5
1992	50	9	8	21	19	10	117	6.1

(a) Rate per 1,000 live births.

The fall in infant mortality is attributable to many factors, including better pre-natal care and obstetric management, which have led to safer births, and to the neonatal intensive care units at major maternity hospitals which have brought about a high survival rate for small and immature infants.

Statistics of infant mortality shown in the preceding table include the neonatal segment of perinatal deaths which are discussed in the following paragraph.

*Perinatal deaths*

Perinatal deaths comprise fetal deaths (stillbirths) and neonatal deaths (deaths within twenty-eight days of birth), of children weighing at least 500 grams at delivery or, when birthweight is unavailable, of at least twenty-two weeks gestation.

Live Births and Perinatal Deaths

Year	Live births (a) Number	Perinatal deaths					
		Fetal		Neonatal		Total perinatal	
		Number	Rate (b)	Number	Rate (b)	Number	Rate (b)
1990 ..	19,863	115	5.8	89	4.5	204	10.3
1991 ..	19,640	104	5.3	54	2.7	158	8.0
1992 ..	19,311	111	5.7	46	2.4	157	8.1
1993 ..	20,078	96	4.8	58	2.9	154	7.6

(a) Includes a very small number of live births that do not meet the definition of a perinatal death. These have been excluded from the denominator used to calculate the perinatal death rates.  
 (b) Fetal death rate is the number of fetal deaths per 1,000 of relevant births registered plus fetal deaths. Neonatal death rates are per 1,000 relevant live births registered. Perinatal death rates are per 1,000 relevant live births registered plus fetal deaths.

*Expectation of life*

Based on the mortality conditions prevailing in South Australia during 1992, the life expectancy at birth for males was 75.1 years and for females 80.9 years (see Part 5.3).

**Further references**

More detailed information on life expectancy, perinatal deaths and causes of death in South Australia are included in Part 5.3 Health, and additional information may be found in the following ABS publications:

- 3304.0 *Perinatal Deaths, Australia*
- 3311.4 *Demography, South Australia*
- 3312.4 *Deaths, South Australia*

## 5.6 MARRIAGES AND DIVORCES

**Marriages**

The current legislation relating to marriages in Australia is the *Marriage Act 1961* (Cwlth) and in South Australia this is administered by the Principal Registrar of Births, Deaths and Marriages. Details of persons marrying classified by previous marital status for the three years to 1993 are shown below.

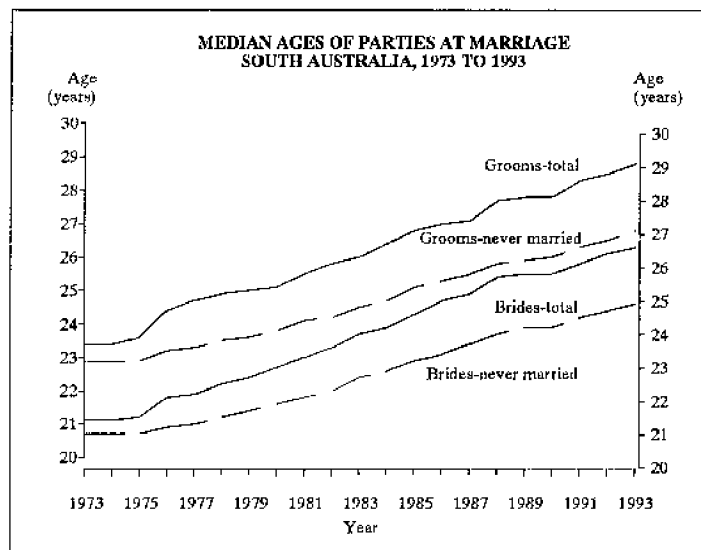
Previous Marital Status of Persons Marrying

Year	Bridegrooms			Brides			Total marriages	Rate (a)
	Never married	Widowed	Divorced	Never married	Widowed	Divorced		
1990 ...	7,107	243	2,259	7,241	276	2,092	9,609	6.7
1991 ...	6,955	248	2,189	7,120	289	1,983	9,392	6.5
1992 ...	6,976	263	2,184	7,057	276	2,090	9,423	6.5

(a) Per 1,000 of mean estimated resident population.

Marriage numbers and rates for selected years from 1846 are shown in the Statistical Summary. The crude marriage rate rose throughout the 1960s from 7.0 in 1960 to 9.4 in 1970, gradually declined to a level of 8.7 in 1974 and fell substantially to 7.8 in 1975. The 1976 rate of 8.6 coincided with the introduction of the Family Law Act and a significant increase in the number of divorced persons remarrying. The rate has declined since then even though the proportion of persons marrying who have been divorced has been consistently above 20 per cent.

During 1992 the median age of persons marrying for the first time was 26.5 years for males and 24.4 years for females, a difference of 2.1 years. As can be seen from the following graph the median age of both bridegrooms and brides has shown an upward trend for over fifteen years. This trend is apparent for persons who are marrying for the first time and those who have been married previously.



Median Age at Marriage and Previous Marital Status<sup>(a)</sup>

Year	Median age of bridegrooms (years)				Median age of brides (years)			
	Never married	Widowed	Divorced	Total	Never married	Widowed	Divorced	Total
	1990 . . .	26.0	62.5	39.4	27.8	23.9	52.3	36.3
1991 . . .	26.3	62.6	39.5	28.3	24.2	56.0	36.3	25.8
1992 . . .	26.5	62.2	39.9	28.5	24.4	56.3	36.5	26.1

(a) The term 'median age' refers to that age which divides total age distribution into two halves, one half being below the median age and one half above.

In 1992, slightly less than two-thirds of marriages (65.1 per cent) involved partners both of whom had never been married; one partner had been married previously in 18.8 per cent of marriages, and a remarriage for both partners took place in 16.1 per cent of ceremonies.

Marriage rites

Marriages performed by civil officers in South Australia during the decade from 1960 to 1969 accounted for 10.9 per cent of all marriages. This proportion has increased steadily since then and had reached 41.3 per cent in 1992. This is related to the increasing numbers of divorced persons remarrying. In 1992, 63.5 per cent of marriages involving at least one party remarrying were performed by civil celebrants.

Marriages : Category of Authorised Celebrant

Rites	Number of marriages			Proportion of total marriages (per cent)		
	1990	1991	1992	1990	1991	1992
Denomination:						
Anglican . . . . .	816	788	808	8.5	8.4	8.6
Baptist . . . . .	210	194	180	2.2	2.1	1.9
Catholic . . . . .	1,536	1,530	1,452	16.0	16.3	15.4
Churches of Christ . . . . .	194	185	191	2.0	2.0	2.0
Lutheran . . . . .	479	447	487	5.0	4.8	5.2
Orthodox . . . . .	250	291	247	2.6	3.1	2.6
Uniting Church . . . . .	1,663	1,537	1,551	17.3	16.4	16.5
Other denominations . . . . .	602	602	611	6.3	6.4	6.5
<b>Total . . . . .</b>	<b>5,750</b>	<b>5,574</b>	<b>5,527</b>	<b>59.8</b>	<b>59.3</b>	<b>58.7</b>
Civil ceremonies by:						
Official registrars . . . . .	1,381	1,256	1,128	14.4	13.4	12.0
Other civil celebrants . . . . .	2,478	2,562	2,768	25.8	27.3	29.4
<b>Total . . . . .</b>	<b>9,609</b>	<b>9,392</b>	<b>9,423</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Divorces

The South Australian Registry of the Family Court of Australia has had exclusive jurisdiction over divorces since 31 May 1976, under the *Family Law Act 1975* (Cwlth). This Act repealed the *Matrimonial Causes Act 1959* (Cwlth) which had granted jurisdiction to hear and determine divorces to the Supreme Courts of the States and Territories.

Under the provisions of the Family Law Act the sole ground for dissolution of marriage is irretrievable breakdown, established by twelve months separation. Prospective applicants are encouraged to seek help from marriage counsellors attached to the Family Court or from voluntary marriage guidance organisations.

In 1976, the first year of operation of the Family Law Act, there were 6,142 divorces granted in South Australia; 4,740 of these were granted under the new legislation and the remainder under the Matrimonial Causes Act which was repealed in that year. Since that year the highest number of divorces granted in a year was in 1982 when it was 4,526.

The following table gives details of divorces granted for the years 1991 to 1993.

Divorces				
<i>Particulars</i>	<i>Unit</i>	<i>1991</i>	<i>1992</i>	<i>1993</i>
Divorces granted . . . . .	No.	4,215	4,074	4,063
Crude divorce rate (a) . . . . .	per cent	2.9	2.8	2.8
Median duration of marriage . . . . .	years	10.6	10.9	11.3
Median interval between marriage and final separation . . . . .	years	7.7	7.9	8.3
Divorces involving children:				
Number . . . . .	No.	2,323	2,114	1,999
Percentage of total . . . . .	per cent	55.1	51.9	49.2
Average issue . . . . .	No.	1.9	1.9	1.9

(a) The crude divorce rate is the number of divorces granted per 1,000 of the mean estimated resident population.

Median ages at the time of marriage, separation and divorce continue to rise slowly for both husbands and wives.

	Divorces : Ages of Parties		
	<i>Median age at</i>		
	<i>Marriage</i>	<i>Separation</i>	<i>Divorce</i>
HUSBANDS			
1978 . . . . .	23.0	32.1	34.8
1988 . . . . .	24.2	35.2	37.8
1993 . . . . .	24.8	36.4	39.4
WIVES			
1978 . . . . .	20.6	29.5	32.2
1988 . . . . .	21.7	32.4	35.0
1993 . . . . .	22.3	33.7	36.6

The proportion of persons granted divorces who were divorced at the time of their marriage has been increasing steadily in recent years. The following table shows marital status at the time of the marriage for divorces granted in the years 1991, 1992 and 1993.

Divorces : Marital Status at Time of Marriage

<i>Marital status at marriage</i>	1991	1992	1993
HUSBANDS			
Never married .....	3,438	3,286	3,276
Widowed .....	44	44	37
Divorced .....	733	744	750
WIVES			
Never married .....	3,474	3,291	7,938
Widowed .....	66	62	168
Divorced .....	675	721	1,829

**Further references**

Additional information may be found in the following ABS publication:

3311.4 *Demography, South Australia*

## 5.7 ABORIGINAL AND TORRES STRAIT ISLANDER POPULATION

Statistics of the total Aboriginal and Torres Strait Islander population should be treated with caution as comparisons between numbers obtained from one census to another can be affected by changes in social attitudes, census awareness campaigns relating to Aboriginality and changes to the collection and processing procedures in an attempt to improve coverage and reporting.

There were 16,249 Aboriginal and Torres Strait Islander people counted in South Australia at the 1991 Census, comprising 7,926 males and 8,323 females. This was an increase of 1,958 since 1986. Australia's indigenous people comprise a little over one per cent of the State's total population.

The following table shows Census counts of the Aboriginal and Torres Strait Islander population at 1986 and 1991, for the major urban localities and communities.

## Location of the Aboriginal and Torres Strait Islander Population

Locality	Census count	
	1986	1991
Adelaide .....	5,692	6,688
Amata .....	277	374
Aparawatatja (Fregon) .....	268	310
Berri .....	93	101
Ceduna .....	402	406
Coober Pedy .....	244	162
Gerard .....	136	104
Indulkana .....	238	317
Koonibba .....	96	137
Mimili .....	145	213
Mount Gambier .....	131	168
Murray Bridge .....	298	345
Nepabunna .....	91	101
Oodnadatta .....	94	133
Pipalyatjara .....	102	144
Point Pearce .....	182	133
Port Augusta .....	1,415	1,345
Port Lincoln .....	394	467
Port Pirie .....	124	151
Pukatja (Ernabella) .....	365	471
Quorn .....	82	115
Raukkan (Point McLeay) .....	114	124
Umoona .....	86	119
Whyalla .....	515	395
Yalata .....	221	311
Rest of State .....	2,486	2,915
<b>Total .....</b>	<b>14,291</b>	<b>16,249</b>

In 1991, 59.6 per cent of the Aboriginal and Torres Strait Islander population were under 25 years of age compared to 36.5 per cent of the State population. Only 2.7 per cent were aged 65 years and over, while 12.7 per cent of the State population was in this age group.

**Births**

The number of Aboriginal and Torres Strait Islander births registered in South Australia fell by 32 (5.4 per cent) from 593 in 1991 to 561 in 1992. The sex ratio was 107.8 male births for every one hundred female births, compared with 112.0 for all South Australian births. The median age of indigenous mothers, for all confinements, was 23.8 years, compared with 28.7 years for all South Australian confinements.

Live Births and Confinements, Indigenous and Total

Particulars	Indigenous births and confinements			Indigenous mothers 1992	Total births 1992
	1990	1991	1992		
Births:					
Males .....	279	306	291	242	9,957
Females .....	309	287	270	216	9,354
<b>Total .....</b>	<b>588</b>	<b>593</b>	<b>561</b>	<b>458</b>	<b>19,311</b>
Sex ratio (a) .....	90.3	106.6	107.8	112.0	106.4
Confinements:					
Median age of mother .....	23.6	24.0	24.1	23.8	28.7
Median age of father (b) ..	26.6	27.7	26.9	26.8	31.4

(a) The number of male live births per 100 female live births. (b) Where paternity was acknowledged.

Deaths

There were 107 deaths of indigenous persons usually resident in South Australia in 1992. Of these deaths, 61 were male and 46 female, which represents a sex ratio of 132.6 male deaths for every 100 female deaths, compared with a sex ratio of 113.7 for the total population.

The median age at death for indigenous males was 37.5 years, while the median age for females was 54.0 years. These are significantly lower than the overall State medians of 73.4 and 79.8 years, for males and females respectively. Because of the small number of observations, it is possible that these figures will be subject to wide fluctuations from year to year, although figures for the last three years are relatively consistent.

There were 13 indigenous infant deaths recorded in 1992, representing an infant mortality rate of 23.2 deaths per 1,000 live births. This compares with the overall South Australian rate of 6.1.

Deaths, Indigenous and Total

Particulars	Indigenous deaths			Total deaths 1992
	1990	1991	1992	
Males .....	74	79	61	5,812
Females .....	44	56	46	5,113
<b>Persons .....</b>	<b>118</b>	<b>135</b>	<b>107</b>	<b>10,925</b>
Sex ratio (a) .....	168.2	141.1	132.6	113.7
Median age at death (years):				
Males .....	42.0	45.1	37.5	73.4
Females .....	57.0	49.8	54.0	79.8
Infant deaths:				
Number .....	11	12	13	117
Rate (b) .....	18.7	20.2	23.2	6.1

(a) The number of male live births per 100 female live births. (b) Per 1,000 live births.



## 6.1 LAW, ORDER AND PUBLIC SAFETY

### Law and administration

The law in force in South Australia consists of:

- so much of the common law of England and such English statute law as came into force on the original settlement of the colony in 1836;
- Acts passed by the Parliament of the State of South Australia, together with regulations, rules, orders etc. made thereunder;
- Acts passed by the Commonwealth Parliament within the scope of its allotted powers, together with regulations, rules, orders etc. made thereunder;
- Imperial law applying to South Australia as part of the British Commonwealth, as part of Australia or as a State – subject, since 1931, to the Statute of Westminster (this relates mainly to external affairs or matters of Imperial concern); and
- Case law (this consists of judicial decisions of the English, Commonwealth or State Courts, respectively, and represents an important part of the law in force in South Australia).

The scope of Commonwealth legislation is limited to the subjects specified in the Commonwealth Constitution. In some cases Commonwealth Government powers of legislation are exclusive of, in others concurrent with, those of the State. In all cases of conflict, valid Commonwealth laws override State laws.

### Attorney-General's Department

The role of the Attorney-General's Department is the provision of efficient legal and associated services to the Attorney-General, other Ministers of the Crown, Government departments and to specified public authorities.

The Attorney-General, who is a member of State Parliament and a Minister of the Crown, is the first law officer of the Crown in South Australia. The Attorney-General initiates and defends certain proceedings by and against the State as *parens patriae*. The Attorney-General also administers Acts of Parliament relating to justices, coroners, land titles, equal opportunity, business names, consumer affairs and the Electoral Commission.

Hospital  
separations

Of the 379,609 separations recorded in 1991, 7,487 (2.0 per cent) were recorded as Aboriginal or Torres Strait Islander. Excluding separations for haemodialysis this represents a separation rate of 426.6 per 1,000 estimated resident population compared with a rate of 250.9 for the total population. During 1991, 42.6 per cent of Aboriginal separations were persons aged less than 25 years compared with 24.1 per cent for total separations in this age group.

Aboriginal and Torres Strait Islander People : Separations<sup>(a)</sup>  
Principal Diagnosis by Sex, 1991

Principal diagnosis	Indigenous separations		Separation rates (b)			
			Indigenous		Total	
	1990	1991	1990	1991	1990	1991
Infectious and parasitic.....	182	256	11.6	16.0	3.7	3.5
Neoplasms.....	118	116	7.5	7.2	14.8	15.4
Endocrine, nutritional, metabolic, immunity .	157	177	10.0	11.0	3.3	3.6
Blood and blood forming organs.....	38	32	2.4	2.0	2.5	2.6
Mental disorders.....	371	367	23.6	22.9	6.7	6.7
Nervous system and sense organs.....	469	469	29.8	29.3	15.1	15.1
Circulatory system.....	306	336	19.4	21.0	21.0	21.6
Respiratory system.....	907	898	57.6	56.1	21.3	19.8
Digestive system.....	660	644	41.9	40.2	31.2	32.2
Genito-urinary system.....	361	324	22.9	20.2	19.4	19.6
Pregnancy, childbirth, and the puerperium..	689	676	43.8	42.2	23.8	24.0
Skin and subcutaneous tissue.....	284	280	18.0	17.5	5.5	5.2
Musculoskeletal system and connective tissue	199	229	12.6	14.3	21.1	19.8
Congenital anomalies.....	70	65	4.4	4.1	2.1	2.1
Perinatal.....	102	80	6.5	5.0	2.4	2.5
Symptoms, signs and ill-defined conditions	682	521	43.3	32.5	15.4	14.2
Injury and poisoning.....	1,049	1,021	66.6	63.7	23.8	23.1
Supplementary classifications.....	725	968	11.5	19.6	19.9	19.7
<b>Total (c).....</b>	<b>7,391</b>	<b>7,487</b>	<b>442.3</b>	<b>426.6</b>	<b>253.3</b>	<b>250.9</b>

(a) As recorded by the Inpatient Separations Information System of the SA Health Commission.

(b) Per 1,000 of the relevant population. Rates for supplementary classifications and the total exclude haemodialysis. (c) Includes separations for patients whose principal diagnosis is not known.

The Solicitor-General, at the request of the Attorney-General, acts as counsel for the Crown as well as providing formal legal advice to the Attorney-General, the Premier and to the State Government and its agencies.

Since February 1989, the roles of the Crown Solicitor and the Chief Executive Officer have been separate. The Chief Executive Officer has special responsibility for policy advice and development in the areas of responsibility of the Attorney-General's portfolio, while the Crown Solicitor is responsible for the Crown's professional legal practice and for the management of the Crown Solicitor's Office.

In July 1992 the first Director of Public Prosecutions (DPP) was appointed in South Australia. The DPP is responsible for prosecution policy in the State and has assumed responsibility for the laying of information in the case of indictable offences.

The Parliamentary Counsel is responsible to the Government for the preparation of all legislation initiated by the Government.

Courts

Under the judicial system in place in 1992, 35,540 cases were disposed of in the Magistrates Court, with only 52 defendants acquitted. In the Supreme and District Criminal Courts, 2,039 cases were completed where acquittals represented 6.6 per cent of all cases; and 6,586 offenders appeared before a Children's Court or Aid Panel.

Supreme Court

The Supreme Court is the superior court of record in and for the State and is constituted by the Chief Justice and puisne judges and the masters appointed under the *Supreme Court Act 1935*. The Supreme Court is a court of law and equity and is vested with jurisdiction in civil, criminal, testamentary, land and valuation, admiralty and appellate causes or matters. The Supreme Court Rules made by the Judges under the power contained in the Act regulate the practice and procedure of the Court.

The Supreme Court has unlimited civil and criminal jurisdiction, except in respect of matters which are reserved for the original jurisdiction of Commonwealth Courts which may transfer matters in appropriate cases to the Supreme Court.

Persons charged on information must be tried before a jury except where an accused person has elected to be tried before a judge alone.

In its appellate jurisdiction the Court reviews decisions of the lower courts and interprets and expounds the law. Subject to leave being granted, appeals lie from decisions of the Supreme Court to the High Court of Australia.

The Supreme Court in its testamentary causes jurisdiction is the only authority competent to grant probate of the will, or administration of the estate, of any deceased person who leaves real or personal property in the State.

District Court

The District Court was completely reconstituted by the *District Court Act 1991* which came into operation on 6 July 1992. The Court is divided into four Divisions and the Judges of the Court are not required to specialise in the work of any one Division. The four Divisions are the Civil Division, the Criminal Division, the Criminal Injuries Division, and the Administrative Appeals Division.

In the Civil Division, the Court has the same civil jurisdiction (both at law and in equity) as the Supreme Court at first instance, but it has no jurisdiction in probate or admiralty, no supervisory jurisdiction, and no jurisdiction to grant relief in the nature of a prerogative writ. It has such other civil jurisdiction as may be conferred by statute.

In the Criminal Division, the Court has jurisdiction to try a charge of any offence except treason or murder, or a conspiracy or an attempt to commit, or assault with intent to commit, either of those offences.

In the Criminal Injuries Division, the Court has exclusive jurisdiction to deal with all claims under the *Criminal Injuries Compensation Act 1978*.

In the Administrative Appeals Division, the Court (which may be required to comprise a judge and assessors) has jurisdiction in matters conferred by statute.

The Court judiciary is comprised of a Chief Judge, Judges and Masters. The Court's administrative and ancillary staff comprises the Registrar who is the principal administrative officer; Deputy Registrars; and other persons appointed to the non-judicial staff of the Court, including library staff.

Rules of Court, made by the Chief Judge and two Judges, regulate the business of the Court and the duties of the various officers of the Court; authorise the Masters to exercise any part of the jurisdiction of the Court; regulate the practice and procedure of the Court and the form in which evidence may be taken; give law clerks limited rights of appearance before the Court; regulate costs; and deal with any other matter necessary or expedient for the effective and efficient operation of the Court.

Environment,  
Resources and  
Development  
Court

The Environment, Resources and Development Court, established under the *Environment, Resources and Development Court Act 1993*, came into operation on 21 January 1994. The Court has jurisdiction conferred by statute including the *Development Act 1993*, the *Heritage Act 1993*, and the *Environment Prohibition Act 1993*. The Court judiciary is comprised of the Presiding Member (a judge of the District Court); a Judge (also a judge of the District Court); a Magistrate and Master; and Commissioners.

The Court's administrative and ancillary staff comprise the Registrar (the principal administrative officer); the Assistant Registrar; and other persons appointed to the staff of the Court.

Rules of Court, made by the Presiding Member and a judge, regulate the practice and procedure of the Court and provide for any other matter necessary or expedient for the effective and efficient operation of the Court.

Magistrates  
Courts

The Magistrates Court of South Australia is constituted under the *Magistrates Court Act 1991*. It is divided into three Divisions, namely Civil (General Claims), Civil (Minor Claims), and Criminal.

For the purposes of the Summary Procedure Act, the Court, in its Criminal Division, is a Court of Summary Jurisdiction. Within its civil jurisdiction the court is empowered to hear and determine actions at law or in equity for a sum of money where the claim does not exceed \$60,000 in relation to actions for damages or compensation for injury, damage or loss caused by, or arising out of, the use of a motor vehicle, or \$30,000 in all other cases. It may also hear and determine an action at law or in equity to obtain or recover title to, or possession of, real or personal property not exceeding in value a sum of \$60,000.

The minor claims jurisdiction includes monetary claims for \$5,000 or less, an application under the Fences Act not involving a monetary claim exceeding \$5,000, and neighbourhood disputes based on allegations of trespass or nuisance.

In its criminal jurisdiction the Magistrates Court has power to conduct a preliminary examination of the charge of an indictable offence, to hear and determine a charge of a minor indictable offence, and to hear and determine any charge of a summary offence.

Youth Court  
(previously  
Children's Court)

Proceedings in the Youth Court are regulated by the *Youth Act 1993*, the *Young Offenders Act 1993*, and the *Children's Protection Act 1993*. In its criminal jurisdiction, the Court deals with youths over 10 and under 18 years of age. In its civil jurisdiction (child protection proceedings), the Court deals with all children under 18 years of age.

In the criminal jurisdiction, specialist police officers decide if a young offender is to be dealt with by way of formal or informal caution, referred to a Family Conference, or referred to the Youth Court. Before a youth can be dealt with by way of caution or family conference, there must be an admission of guilt by the offender. Police cautions and family conferences deal with most first-time offenders or with less serious offences.

The Youth Court may not try homicide offences. Where a youth commits a serious offence, or persists in serious offending, an order for the youth to be tried in an adult court may be obtained. A youth can elect to be tried as an adult and, if found guilty, be subject to penalties set by the Youth Court.

Under the Children's Protection Act, the Court deals with neglected or abused children. Where abuse is suspected, the Chief Executive Officer of the Department for Family and Community Services may apply to the Court for an Investigation Order or a Care and Protection Order. These applications may result in a child being placed under the guardianship of the Minister of Family and Community Services.

Coroners Court

The principal function of the office of Coroner is the detection and deterrence of secret homicide. The Coroner performs an investigative role into both natural and unnatural deaths, and examines deaths related to civil matters, e.g. workers compensation. Although from time to time the Coroner has been given a criminal jurisdiction, this is not currently the case.

The Coroner also inquires into the causes and origins of all fires causing damage to persons or property and into the disappearance from or within the State of any person.

Jury system

The procedure in relation to juries is governed by the *Juries Act 1927*. Indictable offences are tried before a judge and twelve jurors sitting in the criminal jurisdiction of either the Supreme Court or District Court, depending on the gravity of the offence. The Juries Act provides that an accused may elect to be tried by a judge alone.

The areas of the Adelaide, Northern and South Eastern Jury Districts are fixed by proclamation pursuant to the Juries Act and a jury list is compiled annually for each jury district. The names of persons included in the list are selected at random by computer process from the appropriate House of Assembly electoral rolls at the direction of the Sheriff. The jurors are summoned for jury service and are then selected by ballot to hear and determine charges against persons accused of committing criminal offences. Accused persons and the Crown each have the right to challenge three jurors without assigning reasons.

Liquor licensing authority

The licensing of hotels and other outlets to sell liquor is governed by the *Liquor Licensing Act 1985*, under which is constituted a licensing authority, consisting of a Licensing Court Judge and a Liquor Licensing Commissioner. Licences are divided into two categories as follows:

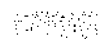
*Category A*

hotel licence  
retail liquor merchant's licence  
wholesale liquor merchant's licence  
entertainment venue licence  
general facility licence

*Category B*

club licence  
producer's licence  
residential licence  
restaurant licence  
limited licence

All matters concerning Category B licences, and some matters relating to Category A licences, are determined by the Liquor Licensing Commissioner. The Licensing Court Judge determines the remaining matters.



Licence fees, except for limited licences, are assessed as a percentage of the value of liquor purchases (or in some cases sales) during the previous twelve months. In 1993, 3,466 licences were held.

*Bankruptcy*

Since 1928 bankruptcy has been under Commonwealth Government jurisdiction. Under the *Bankruptcy Act 1966* (Cwlth) South Australia is a bankruptcy 'district' and jurisdiction is exercised by the Federal Court of Australia. Bankruptcy proceedings can be instituted either by a debtor filing a petition or by a creditor issuing a petition whereupon the Federal Court may make a sequestration order against that debtor's estate. Bankrupts are entitled to an automatic discharge from bankruptcy on the expiration of three years from the date the statement of affairs was filed, unless granted an earlier discharge by their trustee, or an objection has been filed with the Registrar in Bankruptcy. In 1992-93 there were 1,804 bankruptcies declared, the second highest on record.

*Consumer protection*

Consumer protection in South Australia, as with the other States, is a responsibility divided between the Commonwealth and State Governments. Consumer law in South Australia includes a range of sanctions against unfair trading practices and places emphasis on the promotion of fair trading. Commonwealth provisions dealing with misleading and deceptive conduct are incorporated within South Australian legislation, and extend to cover all businesses. The major arm of Commonwealth responsibility is the Trade Practices Commission and the relevant State agent is the Commissioner for Consumer Affairs, who is represented by the Office of Consumer and Business Affairs, a Division of the Attorney-General's Department. The Commissioner also administers the Residential Tenancies Act.

There were almost 250,000 inquiries handled by the Office of Consumer and Business Affairs in the year ended June 1993. Over one-half of these were related to residential tenancy matters. Of the 16,834 consumer complaints which were investigated over the same period, 10,326 concerned residential tenancy matters.

*The State Ombudsman*

The Office of Ombudsman was established under the *Ombudsman Act 1972*. The Ombudsman is able to investigate complaints about administrative actions of State Government Departments, State statutory authorities and local councils. The Ombudsman is not able to investigate complaints about the actions of the police, Ministers, Cabinet, or decisions of courts.

A person or organisation making a complaint is expected to be directly affected by the action which is the subject of the complaint, and would also be expected to have made reasonable efforts to resolve the matter before approaching the Ombudsman. Complaints may be made by telephone, personal visit or in writing. The Ombudsman has substantial powers to investigate a complaint and may recommend remedial action by the agency, if considered appropriate. There is no charge for an investigation by the Ombudsman. The complainant is advised of the outcome of the investigation.

The State Ombudsman also has the responsibility to conduct external reviews of determinations made by agencies under the *Freedom of Information Act 1991* and the *Local Government (Freedom of Information) Amendment Act 1991*, and can direct agencies to make a revised determination in the terms specified by the Ombudsman if he considers that the determination was not properly made.

The Ombudsman is also an appropriate authority to review the disclosure of public interest information relating to a public officer (other than a member of the police force or a member of the judiciary) under the *Whistleblowers' Protection Act 1992*.

During 1992–93 the Ombudsman received 2,478 complaints and 23 applications for review under the Freedom of Information legislation.

### Equal Opportunity Commission

The Commissioner for Equal Opportunity is responsible for the administration of the *Equal Opportunity Act 1984*, the *Sex Discrimination Act 1984* (Cwlth), the *Racial Discrimination Act 1975* (Cwlth) and has statutory responsibilities in relation to the *Local Government Act 1991* and the *Senior Secondary Assessment Board of South Australia Act 1983*.

The Equal Opportunity Commission performs the wide range of functions which flow from these statutory responsibilities. The Commission's core services are:

- to develop and implement outreach, awareness and education programs, to foster and encourage unprejudiced attitudes and inform the community of their rights and responsibilities under the laws;
- to provide expert legislative and policy advice to assist with compliance of the laws;
- to undertake enquiry, complaint handling and legal services which ensure South Australians achieve appropriate and fair redress for their complaints of discrimination;
- to collect data and disseminate information about the laws;
- to make recommendations for reform of legislation and public policy;
- to receive, report and provide advice and assistance to the local government sector on the implementation of Equal Employment Opportunity Programs in councils;
- to conduct enquiries and undertake research to enhance community understanding of equal opportunity and human rights issues and assist in the development of public policy.



Demand for the Commission's complaint handling, education and consultation services rose in 1992-93 by 8.9 per cent. In 1992-93 the Commission received a record number of complaints, with 13,457 informal complaints and 922 formal complaints recorded.

*Legal Services Commission*

The Legal Services Commission, constituted under the provisions of the *Legal Services Commission Act 1977*, is responsible for the provision of legal assistance in South Australia.

The Commission is an independent statutory body with representation from State and Commonwealth Governments and a variety of groups in the community. The staff of the Commission provide free advice and minor assistance in most legal matters, from a central office, and regional offices in Elizabeth, Port Adelaide, Modbury, Noarlunga and Whyalla.

Legal representation is subject to a means test, a merit test and to other guidelines laid down from time to time. Other services include a telephone advice service, community education programs, and publications and training courses about the law for the general public.

In 1992-93 the Commission received 69,125 inquiries through the Telephone Advice Service, and gave 28,584 advice interviews. There were 8,328 duty solicitor attendances, and 19,518 approvals of legal aid.

*Public Trustee*

The Office of Public Trustee was established in 1881 and is regulated by the *Administration and Probate Act 1919*. The Public Trustee provides a service to the public by preparing wills, administering estates, and protecting infants and absentee beneficiaries in estates administered by private administrators. A person may appoint the Public Trustee to be the executor and trustee of a will or the trustee of any disposition of property creating a trust. Wills which appoint the Public Trustee as executor and which are held in safe custody number more than 154,000. Approximately twenty-five per cent of all deceased estates in South Australia are administered by the Public Trustee.

Trust Funds have grown from \$2,800 (£1,400) in 1881 to \$370 million at 30 June 1994.

**Police and correctional services**

*Australian Federal Police*

The Australian Federal Police, established in 1979, is the major law enforcement agency of the Commonwealth Government. It investigates breaches of Commonwealth law and also has the responsibility for all policing in the Australian Capital Territory. Its priority areas are investigation into drug trafficking, all organised crime, major fraud and specific references from the Government (*e.g.* organised crime). It assists Royal Commissions as well as participating in joint State Police Force and/or other law enforcement agency task forces. Its members are stationed in every State/Territory, as well as in many overseas locations.

South  
Australian  
Police Force

The police force was first established in South Australia in 1838 and has been administered by a Commissioner of Police since 1840. Since that time the Force has grown to such an extent that a Deputy Commissioner, four Assistant Commissioners and a Director have been introduced. Each Assistant Commissioner has control of one of four major areas of the Force which have been designated Operations, Personnel, Crime and Services. The Director has control of the fifth major area of the force designated as Corporate Services Command.

Police Personnel, at 30 June

Personnel	1992	1993	1994
Executive officers (a) .....	50	51	48
Inspectors .....	79	79	83
Sergeants .....	641	652	667
Constables (b) .....	3,004	3,001	3,015
<b>Total</b> .....	<b>3,774</b>	<b>3,783</b>	<b>3,813</b>

(a) Includes superintendents. (b) Includes trainees, cadets, probationary constables and police aides.

The objectives of the South Australian Police Force include the preservation of civil order; the protection of persons and property; the prevention or reduction of the incidence of crime; the provision of assistance to the community on general police matters; the provision for the general security of the State, and the provision of emergency services in disaster situations.

Offences

The following crime statistics are compiled from Criminal Offence Reports which were completed for offences which became known to the police during 1992-93 and should be regarded only as an indication of changing levels of criminality.

Total Offences Reported or Becoming Known to Police, 1992-93

Offence type	Number of offences	Number of offences cleared	Number of offenders involved in cleared offences
Homicide .....	120	106	124
Assault .....	12,172	9,474	6,145
Sexual assault .....	2,914	1,980	786
Robbery .....	1,594	472	581
Other offences against the person .....	2,335	1,606	909
<b>Total offences against the person</b> .....	<b>19,135</b>	<b>13,638</b>	<b>8,545</b>
Break and enter .....	41,596	3,525	4,353
Fraud, forgery and misappropriation .....	7,711	4,246	1,839
Receiving and unlawful possession .....	2,157	2,149	2,542
Larceny/illegal use of motor vehicle .....	11,299	1,661	1,982
Illegal interference of motor vehicle .....	6,598	572	736
Larceny from vehicle .....	13,577	795	881
Larceny from shop .....	8,341	6,721	7,530
Other theft .....	32,156	3,656	2,642
Property damage .....	26,407	4,673	3,911
<b>Total offences against property</b> .....	<b>149,842</b>	<b>27,998</b>	<b>26,416</b>

## Total Offences Reported or Becoming Known to Police, 1992-93 (continued)

<i>Offence type</i>	<i>Number of offences</i>	<i>Number of offences cleared</i>	<i>Number of offenders involved in cleared offences</i>
Hinder/resist police. . . . .	1,878	1,870	1,866
Firearm/weapon offences . . . . .	1,914	1,868	1,852
Disorderly/offensive behaviour . . . . .	6,153	4,152	3,775
Drug offences. . . . .	4,182	4,164	4,133
Drink driving offences. . . . .	6,855	6,855	6,849
Dangerous, reckless driving . . . . .	2,236	2,233	2,223
Other offences against public order. . . . .	11,683	10,022	9,649
<i>Total offences against public order . . . . .</i>	<i>34,901</i>	<i>31,164</i>	<i>30,347</i>
<b>Total recorded offences . . . . .</b>	<b>203,878</b>	<b>72,800</b>	<b>65,308</b>

Please refer to the Office of Crime Statistics for more information.

## Crime prevention

In line with the increased emphasis placed upon involving the community in crime prevention programs, the South Australian Police Department is currently pursuing a number of programs which encourage community participation.

## Correctional services

## Prisons

There are eight prisons administered by the South Australian Department for Correctional Services. In addition, police prisons situated mainly in the more remote country areas serve as short-term detention centres for the Department for Correctional Services. James Nash House, situated in the grounds of Hillcrest Hospital, accommodates the criminally insane and those undergoing short-term psychiatric care and assessment. This hospital is administered by the Department for Correctional Services and staffed by trained medical personnel from the South Australian Health Commission and provides specialised treatment programs.

Home Detention, a scheme introduced in 1987, allows selected prisoners who have served at least one-half of their non-parole period, or those serving a sentence of less than twelve months to complete the last part of their sentence in an approved residence in the community under close supervision. Persons charged before a court may request that Home Detention be granted as an alternative to being remanded in custody.

Cottage accommodation is provided for low security prisoners at Northfield, Cadell and Port Augusta. This accommodation encourages prisoners to develop essential living skills, including cooking and cleaning, before their release.

Prisons : Numbers of Sentenced Persons Received by Major Offence Type

Major offence type	1990-91		1991-92		1992-93p	
	Persons	Per cent	Persons	Per cent	Persons	Per cent
Homicide .....	17	0.6	14	0.3	31	0.5
Assault .....	251	8.9	310	6.0	361	6.4
Sexual assault .....	44	1.6	45	0.9	69	1.2
Robbery and extortion .....	52	1.8	64	1.2	84	1.5
Fraud and forgery .....	78	2.8	109	2.1	131	2.3
Theft, break and enter .....	483	17.2	585	11.3	631	11.1
Property damage .....	58	2.1	158	3.1	171	3.0
Driving and related offences .	585	20.8	(a)1,321	25.6	1,551	27.3
Drink driving .....	405	14.4	796	15.4	567	10.0
Drugs .....	74	2.6	340	6.6	397	7.0
Against good order .....	259	9.2	434	8.4	501	8.8
Offensive behaviour .....	55	2.0	206	4.0	272	4.8
Breach of recognizance, suspended sentence, parole	398	14.1	640	12.4	764	13.4
Other .....	56	2.0	140	2.7	155	2.7
<b>Total .....</b>	<b>2,815</b>	<b>100.0</b>	<b>5,162</b>	<b>100.0</b>	<b>5,685</b>	<b>100.0</b>

(a) Increase because of fine default admissions.

Community Corrections

The Community Corrections Division is responsible for providing supervision and social casework services to probationers and parolees. Probation officers provide a professional social work service, including a wide range of treatment and management alternatives for offenders. The Community Service Order Scheme provides participating courts with a further alternative to imprisonment. A Fine Option Scheme allows offenders, who have been fined and are unable to pay, to work out the amount of the fine in community service work as an alternative to prison.

Public safety

State Emergency Service

The South Australian State Emergency Service (SES) provides protection for the public against the effects of national disasters and is involved in counter-disaster measures. The SES is identified as a functional service under the State Disaster Plan.

Permanent officers are involved in the preparation of counter-disaster plans at all levels, while volunteer members respond to emergency situations on a day-to-day basis throughout the State. These volunteers undertake training to develop their counter-disaster skills. In the main, the courses are conducted by permanent SES staff in South Australia, but some selected persons attend courses conducted at the Australian Emergency Management Institute, Mount Macedon, Victoria.

Fire services

Metropolitan Fire Service

The establishment and maintenance of fire brigades in South Australia is under the control and management of the South Australian Metropolitan Fire Service Corporation.

The Corporation maintains equipped fire brigades in the Adelaide Metropolitan Area and in country towns. At 1 July 1993 there were thirty-seven fire brigade stations of which nineteen were metropolitan and eighteen were country. During 1993-94 these brigades received 13,395 calls. Some of these brigades are staffed by permanent personnel and others by auxiliary firefighters.

The expenses and maintenance of brigades are financed in the proportions, three-quarters by insurance companies, one-eighth by the State Treasury and one-eighth by the municipalities and district councils serviced. Total expenses in 1993-94 amounted to \$48.324 million.

Country Fire Service

The South Australian Country Fire Service (CFS) exists to protect life, property and the environment by:

- preventing and suppressing fires and responding to emergencies in areas under CFS Board responsibility;
- promoting public awareness of the threat of fire and other emergencies, fire safety, community responsibility, and legislative obligations when using fire;
- ensuring the right balance of education, prevention, advisory and suppression services.

CFS services an area of 886,000 square kilometres, or approximately 90 per cent of South Australia. Volunteer members in 440 registered brigades report through a group and regional command structure.

South Australian Country Fire Service

Particulars	1991	1992	1993
Strength of service at 30 June:			
Affiliated organisations	466	449	440
Volunteer members	19,634	19,026	18,269
Fires attended in year ended 30 June:			
Structural/vehicle	759	1,265	1,133
Rural	3,197	2,644	1,907
Area destroyed in bushfires (ha)	799,000	227,000	7,544
Financial losses (\$'000):			
Structural/vehicle	18,414	27,400	14,787
Rural	20,000	47,000	5,757
Total brigade callouts	6,615	6,395	6,258

National Safety Council

The National Safety Council of Australia SA Division Limited is a not-for-profit, non-government, independent, tripartite organisation. Its activities are controlled by a Board of Directors representative of industry, unions, government and the community. The Council's objectives are to encourage safety awareness practices throughout Australia, and to be an authoritative source of information, opinion and advice to industry, unions, governments, media and the community.

The Council provides services on a fee-for-service basis in all areas of Health and Safety Consultancy and Training and specialises in the implementation of Systematic Occupational Health and Safety Systems. Training programs and seminars are offered and the sale of posters, publications and materials covering all facets of safety are available. Additionally, the Council offers the NSCA Diploma in Occupational Health & Safety Management.

Finance is derived from membership fees, and the sale of consultancy and training services to members. The Community Safety department receives a small grant from the South Australian Government to assist in community safety projects.

*Water safety  
and life saving*

Royal Life Saving  
Society

The Royal Life Saving Society specialises in the teaching of water safety, survival swimming, lifesaving and resuscitation techniques. In excess of 30,000 (mainly young) persons participate in the Society's programs each year.

The voluntary work of the Society is funded mainly by its own fundraising, donations, sponsorships, membership fees and a government grant.

Surf Life Saving  
South Australia

Surf Life Saving South Australia has the prime objective of supplying a community service of surveillance and rescue patrols at Adelaide's beaches. There are eighteen affiliated clubs with a membership joining age of 7 years. The gaining of the Surf Bronze Medallion at 15 years allows men and women the opportunity of serving the community as patrolling members at their respective beaches during the summer season, which is normally from the beginning of November until the end of March.

A Surf Safety Program which educates thousands of school children is conducted each year on the dangers of the ocean and environs. Surf's activities are mainly financed by its own fundraising with assistance from government.

VACSWIM

Vacation swimming classes organised by the Education Department were first established in January 1956. The program is now called VACSWIM. In January each year, the nine day program is provided at more than 200 centres throughout the State. It is available to children from 5 years onwards and is conducted at school pools, public and private pools, lakes, rivers and beaches. Every year, more than 32,000 children take advantage of the free instruction provided by qualified instructors in a controlled environment.

The program aims to impart water safety knowledge, teach survival and safe swimming skills and to enable children to assist with a rescue by the safest and quickest method available.

*Victims of crime* A national household survey of crime and safety conducted by the ABS found that in the twelve months to April 1993 an estimated 8.1 per cent of the 557,000 households in South Australia were victims of at least one actual or attempted break and enter offence. This compares with only 6.4 per cent of households who were such victims in 1983, and a reported 10.3 per cent in 1991.

The victimisation rate (as a percentage of households) was lowest for couple families without children (5.9 per cent whom were victims), followed by couple families with children (9.1 per cent). Persons living alone, and single parents suffered a victimisation rate of 12.5 and 12.6 per cent respectively.

In the year covered by the survey, an estimated 1.3 per cent of persons aged 15 years and over in South Australia were the victims of at least one robbery, and 2.5 per cent were victims of assault. An apparent decrease in the number of victims of assault, from 41,300 in 1983 to 27,900 in 1993, could be due in part to different collection methodologies, or differences between respondents understandings of the term 'assault'.

The age group with the highest incidence of victimisation was 15–24 years, with 8.0 per cent of males, and 9.5 per cent of females being victims of personal crime. The next highest victimisation rate was 25–34 year old females, 4.7 per cent of whom had suffered from crimes against the person.

*Compensation* The Criminal Injuries Compensation Fund paid out \$13.4 million to 1,083 people in 1993–94. This was appreciably more than the \$8.7 million paid to 813 people in 1992–93, with the increase being attributed to greater public awareness of the relatively new scheme. The Fund is supported by Consolidated Revenue, but in 1993–94, \$4.5 million came from fines, court levies and the confiscation of profits of crime.

Victims of minor assault were the most frequently compensated (423 persons), with two victims receiving the maximum compensation of \$50,000. In all, 15 victims (13 of whom had suffered assault causing grievous bodily harm) were given maximum compensation.

A total of 170 victims of assault causing grievous bodily harm, and 95 rape victims (6 males and 89 females) received compensation.

**Further references**

Additional information may be found in the following ABS publications:

- 4509.4 *Crime and Safety, South Australia*
- 4509.0 *Crime and Safety, Australia, April 1993*

## 6.2 CULTURE AND RECREATION

A survey of major venues staging music and performing arts events in capital cities in Australia was conducted by the ABS during 1991. The number of Adelaide venues was 14 with a total seating capacity of 21,649.

Performances and Attendances at Music and Performing Arts Events Held in Major Venues, Adelaide, 1991<sup>(a)</sup>

	<i>Number of performances</i>	<i>Total attendances</i>
		'000
Popular music performances . . . . .	210	505
Symphony orchestras, chamber and choral groups . . . . .	190	124
Dance . . . . .	100	60
Opera and music theatre . . . . .	370	342
Theatre (excluding opera and music theatre) . . . . .	530	213
Other performing arts . . . . .	280	125
<b>Total . . . . .</b>	<b>1,680</b>	<b>1,369</b>

(a) Excludes free performances.

### The performing arts

#### *Adelaide Festival Centre*

The Adelaide Festival Centre is South Australia's major performing arts complex. It is home to the biennial Adelaide Festival, the Adelaide Festival Centre Trust, the State Theatre Company, and the Performing Arts Collection of South Australia. It is a major tourist attraction.

Completed in 1977 at a cost of \$25 million, the Centre was the first of Australia's major arts complexes. It houses the Festival Theatre (a 1,978-seat multi-purpose concert hall and lyric theatre); the 600-seat Playhouse, the highly flexible Space Studio Theatre, and a 1,000-seat open air amphitheatre.

The Adelaide Festival Centre Theatre Trust, which administers the Centre, present over half of all performances in these venues, more than 500 performances per year for well over 300,000 people.

As well as performing arts, the Adelaide Festival Centre has an active visual arts program. Broad ranges of exhibitions are held in the Artspace and the Festival Theatre foyer. Other facilities include The Bistro, The Piano Bar, and Lyrics Restaurant.

#### *Adelaide Festival of Arts*

Founded in 1958 and first held in 1960, the biennial Adelaide Festival is regarded as Australia's foremost arts and cultural event. The Festival is based in the Adelaide Festival Centre theatre complex, but utilises some forty venues in and around the city to present its three-week program. In 1994 the Festival presented over 950 artists from 21 countries, with 540 performances of 200 events - many free of admission charges - bringing attendances of over 600,000.



As a major national tourist and cultural attraction, the Festival receives funding from the South Australian Government, as well as generous support from corporate sponsors. The next Festival, which is to be directed by Barrie Kosky, will be held from 1 to 18 March 1996.

*Adelaide  
Fringe Inc.*

The Adelaide Fringe Inc. is involved in a range of organisations and events, including the Adelaide Fringe Festival, the Australian Writers' Workshop Festival, the Lion Theatre and Bar, Event Management and Consultancy Services, and the biennial Adelaide Fringe Festival. In 1994, the Adelaide Fringe Festival, now 34 years old, generated an income of \$1.8 million, and attracted more than 520,000 people.

*Come Out  
Festival*

The Come Out Festival is a biennial festival celebrating the art for and by young people. Since 1975, Come Out has grown to be one of the largest and longest running youth arts festival in the world.

The Festival is supported by State Government funds and sponsorship. It provides excellence, access and participation for young people in every area of the arts, dance, music, literature, art/craft, theatre and film. It is estimated the Festival reaches more than 400,000 South Australians every two years.

The '93 Festival saw over 2,200 performers presenting 300 performances in the core program, with over 173,000 young school students involved in Statewide Education Come Out Events.

*Other  
performing arts*

The State Theatre Company, established in 1965, became a statutory body in 1972. The Company, based at the Playhouse, Adelaide Festival Centre, is South Australia's leading drama company presenting each year a major season of plays, including classics, modern drama, new works from overseas and new Australian writing.

The Adelaide based Meryl Tankard Australian Dance Theatre is one of Australia's leading performing arts companies. Founded in 1965, it is recognised for its innovative mix of physical theatre and visual imagery. The company has performed locally, nationally, and internationally.

The State Opera of South Australia is one of the State's leading performing arts organisations presenting music and operatic performances ranging from small recitals to grand operas. The Company was established in 1976 as a statutory authority and relies on State Government grants, private sponsorships and box office incomes. Emphasising a varied program throughout its history, the Company has premiered many major works in Australia including Strauss' *Elektra*, Adams' *Nixon in China* and staged works not previously seen in South Australia including Verdi's *Otello* and Cilea's *Adriana Lecouvreur*. Additionally, the Company has a commitment to accessible performances for the general community including the free *Opera in the Park* presentations in Elder Park and various workshops and performances for school students. The State Opera employs artists of national and international renown, and offers employment opportunities to many local artists on stage and backstage.

The Australian Broadcasting Corporation, through its Concerts Service, supports the Adelaide Symphony Orchestra (ASO). In 1992-93 the ASO played in 100 concerts, attended by a total of 114,604 people. Nearly half of these attendances (48.5 per cent) were at five free concerts.

The ASO increased the number of concerts for schools from 8 to 31, in 1992-93, but the total attendance was less than in the previous twelve months (down 1,071 to 3,429 attendees).

### *Regional arts*

The South Australian Country Arts Trust (SACAT) serves the cultural needs of country regions through its five Country Arts Boards. Four of these Boards run theatre complexes in Mount Gambier, Renmark, Port Pirie and Whyalla.

SACAT employs sixteen Regional Arts Development Officers attached to the Boards to support arts organisations, groups and individuals in country regions and to provide information and advice to assist development of the regions cultural activities.

SACAT coordinates the work of the Boards and provides assistance for locally based arts initiatives and creative projects in the regions. It operates a Touring Program for performing arts and a Touring Exhibitions Program (SATEP) for visual arts.

### *Carclew Youth Arts Centre*

Carclew Youth Arts Centre provides a focus for activities in all art forms for young people, advises the government on youth arts policy, and, through the South Australian Youth Arts Board, allocates grants for companies and individuals working with or for young people.

It also has programs of its own, and supports a choir, a dance company, and Artists in Schools. Its facilities include a band rehearsal room and sound studio and photographic darkrooms. It holds drama classes, holiday programs and exhibitions.

Carclew operates the *Odeon* young people's theatre and promotes and assists professional performances for children and young people.

### *Adelaide Entertainment Centre*

The Adelaide Entertainment Centre opened at Hindmarsh in 1991 to provide a venue for large scale musical entertainment and indoor sports events. It has a seating capacity of 12,000.

### **Visual arts**

#### *Art Gallery of South Australia*

The Art Gallery of South Australia is a Division of the South Australian Department for the Arts and Cultural Development. Its operations are assisted by the Art Gallery of South Australia Foundation, which helps raise substantial funds towards major acquisitions, and by the Friends of the Art Gallery of South Australia. The Gallery's annual program of changing exhibitions has been supported from 1990 to 1994 by a major sponsorship from Santos Ltd.

The Gallery's holdings include paintings, sculptures, prints, drawings, photographs and decorative arts. The collections are broad and include a fine representative selection of Australian, European and Asian art, including one of the finest South-East Asian ceramic collections. Holdings have been enriched over time through bequests and gifts.

Works by established European and Australian artists are always on display as well as changing displays of contemporary art. South Australian art is well represented and is featured throughout the Gallery's displays. Besides its own exhibitions, the Gallery's programming includes major national and international touring exhibitions.

*Lion Arts Centre*

Framing the entry to the Lion Arts Centre is the historic Fowler's Lion Building (1906). Located on this site is a mix of arts activities including first release and specialised exhibition at the Mercury Cinema, bilingual theatre at Doppio Teatro, and a variety of exhibition and performance spaces including the Experimental Art Foundation, Multicultural Artworkers Committee Nexus venues and the Lion Theatre and Bar.

Also located on the site is the Jam Factory Craft and Design Centre. The Centre comprises five interrelated activity areas for the development and support of the crafts in South Australia. These are: training workshops (in hot blown glass, ceramics, metal and furniture design); low-rental tenant workshops; a retail craft shop and exhibition galleries.

The aims of the Jam Factory are to foster and promote standards of excellence in craft and design, and to assist designers/makers to develop and maintain financially viable careers as craft practitioners.

*Other visual arts venues*

Other galleries are operated by a number of organisations and individual proprietors in both metropolitan and country areas including in Adelaide, the Adelaide Festival Centre Trust, the Royal South Australian Society of Arts and the Contemporary Arts Centre.

**Media**

*Film production and festivals*

The South Australian Film Corporation (SAFC) was constituted under the *South Australian Film Corporation Act 1972*.

SAFC operations and staff are centred at Hindon in a complex which comprises complete film production facilities of a fully professional standard and the South Australian Film and Video Centre.

The SAFC has two principal roles, the promotion of a South Australian film industry through the production and marketing of feature films, documentary films and television drama series, and the provision of studio and sound mixing facilities; and the management and operation of the South Australian Film and Video Centre which is a lending resource serving education, business, government and community groups in South Australia.

The Media Resource Centre, a non-profit cultural body devoted to the development of an active film culture, offers equipment and editing facilities hire to members. It also administers the Mercury Cinema in the Lion Arts Centre and mounts the Frames: Festival of Film and Video, a leading biennial festival of independent Australian film and video.

### Radio and television

Details of radio and television in South Australia may be found in Part 15.4 Communication.

### The Press

Adelaide has one morning newspaper, *The Advertiser*, which is published from Monday to Saturday, and one Sunday paper, the *Sunday Mail*. *The News*, an afternoon paper which traced its origins to the 1860s, ceased publication in 1992.

*The Advertiser* was first issued in 1858 as *The South Australian Advertiser* and absorbed *The Register* in 1931. It is distributed throughout the State, with about 75 per cent of its sales being in the metropolitan area. The average weekday circulation of *The Advertiser*, in the six months to 30 March 1994, was 211,042, while the Saturday issue had a circulation of 268,778.

*The Sunday Mail*, printed on Saturday evenings and distributed mainly on Sunday mornings, first appeared under this name in 1955 following a merger between *The Mail*, first printed in 1912, and the *Sunday Advertiser*, which was introduced in 1953. *The Sunday Mail* has a circulation of 319,979, with about 27 per cent of sales being in country districts.

The combined reach of *The Advertiser* and *Sunday Mail* now exceeds 948,000 or 80 per cent of the population of South Australia.

*The Stock Journal*, previously the *Adelaide Stock and Station Journal*, was established in 1904. It is published weekly and provides up-to-date information on stock and wool markets and the technical aspects of farming and property management.

There are about thirty newspapers operating in the State's country areas. Of those still existing *The Border Watch* (Mount Gambier) in 1861 and *The Bunyip* (Gawler) in 1863 were first to appear. District papers printed by Messenger Newspapers Pty Ltd, containing items of local interest, are circulated in a number of suburbs of Adelaide, and a number of community newspapers are published.

A literary monthly, the *Adelaide Review*, is available free of charge through various outlets and has an audited circulation in excess of 38,000.

### Libraries

#### State Library of South Australia

The State Library of South Australia is a Division of the Department for the Arts and Cultural Development. Its aim is to deliver high quality information, preservation and collection services which contribute to the cultural, social, educational and economic well-being of the South Australian community and beyond.

The Libraries Board of South Australia, as established under the *Libraries Act 1982* and antecedent legislation, is a statutory body responsible for administration of the State Library of South Australia and the public library system. It also administers and allocates funds for community information services.

The Mortlock Library of South Australiana was established within the State Library of South Australia in 1986, when important archival and published collections relating to South Australia were brought together. These collections document South Australia from the early 1830s to the present day, and the Northern Territory to 1911. All material published in the State, including audiovisual material and computer disks must be deposited in the Mortlock Library.

Important collections within the Mortlock Library of South Australiana include the Sir Donald Bradman Collection, the J.D. Somerville Oral History Collection, the Ephemera Collection and the Pictorial Collection. Trained staff and user friendly technology assist the general public in the use of the collections. The Family History Collection has been boosted by the provision of 187 million names on the microfiche edition of the International Genealogical Index Videodisk has made 54,000 images from the Mortlock Pictorial Collection immediately available.

The Bray Reference Collection comprises over one million items, including monographs, newspapers, periodicals, maps, photographs, audiovisual materials and computerised databases. The South Australian Library and Information Network (SALINET), the State Library of South Australia's on-line public access catalogue is also available by a free telephone dial-in service. Access *via* SALINET to the Australian Academic Research Network and to other libraries world-wide through INTERNET has increased the State Library of South Australia's capacity to meet research and document delivery demands.

The State Library of South Australia has been expanding its services to the community by developing and implementing collections, programs and services for indigenous people, people from diverse cultural backgrounds, people with low literacy skills and people with disabilities. It also provides BIZLINE, a fee paying service for business and industry.

The State Library of South Australia is open to the public every day except public holidays.

*Public libraries*

PLAIN (Public Libraries Automated Information Network) Central Services provides centralised acquisition, cataloguing and distribution services to all public libraries in the State enabling full access to the 2.3 million catalogued items in all libraries by computer. PLAIN Central Services administers the State Government subsidy contribution to public library operating expenditure and provides central services which lower unit costs to libraries. Public library services result from a joint agreement between the State Government and the Local Government Association of South Australia.

In June 1993, 122 authorities were operating 136 public libraries including 46 school/community libraries and 10 mobile libraries under the provisions of the *Libraries Act 1982*. There were also 15 depots operating.

Local Public Libraries<sup>(a)</sup>

Year	Libraries at end of year	Registered readers (b)	Items loaned	Stocks at end of year (c)
1988-89	137	604,065	13,356,222	2,012,596
1989-90	135	625,148	13,292,240	2,113,869
1990-91	136	669,148	13,876,524	2,189,100
1991-92	136	712,819	14,610,408	2,276,618
1992-93	136	753,595	14,739,576	2,313,019

(a) Figures exclude the lending service in the State Library building, formerly part of the State Library and now run by the City of Adelaide. (b) Three year average. (c) Catalogued material only.

*Other libraries*

Significant specialist libraries are held by tertiary institutions. For example, the University of Adelaide has an extensive law library, while the University of Adelaide and Flinders University have branch libraries for medicine. Many organisations, both public and private, have specialist libraries catering for their particular interests. Parliament House is served by its own Parliamentary Library.

*State records*

State Records (formerly the Public Record Office of South Australia) is a Business Unit of the Department of State Services and is the official repository for the public records of South Australia. Under its Charter, the unit provides records management advice, records storage and retrieval to all public sector agencies, as well as its archival and public reference functions.

**Museums**

*South Australian Museum*

The South Australian Museum is a Division of the Department for the Arts and Cultural Development. The aim of the Museum is to increase knowledge and understanding of our natural and cultural heritage. The Museum serves the community by acquiring, preserving, making intelligible and presenting to the public, material evidence concerning people and nature. The South Australian Museum was founded on 18 June 1856, and opened its doors to the public on 2 January 1862.

The Museum has a wide representation of disciplines, but its main work is in the fields of anthropology, natural history and geology. The research of its social scientists primarily involves the study of Australian Aboriginal and Torres Strait Islander cultures. The work of its natural scientists involves the identification, classification, description and study of animals and minerals with special emphasis on arid lands and southern waters. The Museum's scientific staff are available for consultative projects and their expertise is sought worldwide.

Many of the Museum's collections are among the finest in existence. Of particular importance are its ethnographic collections of Australian Aboriginal and Torres Strait Islander, and early Pacific cultures. Its natural history collections of minerals, extinct and endangered Australian animals, birds, insects and marine invertebrates are also significant.

The Museum mounts permanent and temporary exhibitions each year. It has an annual visitation rate of more than 500,000. An Education Service caters for more than 60,000 school students each year. Travelling education exhibitions, serving more than 15,000 students annually, ensure that children and communities have access to the Museum's resources. A unique Information Centre answers queries about natural history and anthropology. The Museum Shop is a commercial enterprise which stocks a wide range of merchandise including material developed by the Museum. The Museum has a specialist reference library available for public use. The Friends of the South Australian Museum support the work of the Museum and have been responsible for notable additions to the collections.

*Carrick Hill*

Carrick Hill was bequeathed to the people of South Australia in 1983 by Sir Edward and Lady Hayward. Carrick Hill is a Division of the South Australian Department for the Arts and Cultural Development, and opened to the general public in March 1986 as an art gallery, museum and heritage garden. The Tudor-style mansion houses a fine collection of nineteenth and twentieth century art and sculpture, together with 17th century oak furniture. The gardens and surrounding park total 39 hectares and provide walks through English formal gardens, with specialist collections of heritage roses and apples. A sculpture park in an Australian bush setting gives generous views of Adelaide. Carrick Hill attracts about 40,000 visitors a year.

*The History Trust*

The History Trust of South Australia is a statutory authority, established in 1981, responsible for the management of several important museums, including the National Motor Museum, the South Australian Maritime Museum, the State History Centre at Old Parliament House, and the Migration Museum. The History Trust also oversaw the development of the Port Dock Station Railway Museum as a Bicentennial commemorative project.

The State History Centre formulates policy relating to local and specialist museums, provides policy advice and information on historical matters to the community and all levels of Government, administers the Museums Accreditation and Grants Program, the Community History Fund and generally promotes history through publications, workshops, lectures and the mass media. The Museums Accreditation and Grants Program is designed to assist the development of local and specialist museums. A wide range of museums, often based on a particular theme or subject, can be found throughout the State – some are commercially run, although most are the work of groups of dedicated volunteers.

The Trust's information services include advice on the location of historical source material, guidance on research techniques and contact addresses for historical societies and museums. There are over 300 museums, historical societies and National Trust branches in the State. The History Trust and local museums combined are estimated to attract over 1.2 million visitors annually.

### Conservation and heritage

#### *Natural Resources Group*

The Natural Resources Group of the Department of Environment and Natural Resources manages South Australia's reserves system and is responsible for the protection of the State's native animals and plants. Progressive additions to the reserves system have brought the total area of South Australia's National Parks and Wildlife Act reserves to over 20.3 million hectares which represents almost 21 per cent of the total area of the State. The State's 255 parks and reserves are of crucial value for the protection of natural systems and their biodiversity and cultural heritage. Parks are also an important resource for tourism, recreation and education.

A focus in recent years has been the creation of a comprehensive arid zone reserves system. Desert lands are no longer regarded as vacant Crown lands, but recognised for their conservation value and wilderness qualities.

Protection of South Australia's wilderness areas is being extended under the Wilderness Protection Act with five Wilderness Protection Areas proclaimed on Kangaroo Island. Responsibility for the conservation and management of the State's natural heritage outside the reserves system is shared between a number of branches of the Natural Resources Group.

#### *Wildlife research and protection*

The National Parks and Wildlife Act provides the legislative infrastructure for the management of the State's reserves system and the protection of flora and fauna throughout the State.

Permit provisions ensure that wildlife is appropriately monitored and controlled. The Monarto Fauna Complex is used for the care of seized fauna, and for rare and endangered special breeding programs. The Department of Environment and Natural Resources is responsible for animal welfare, and the administration of the *Prevention of Cruelty to Animals Act 1988*.

To help conserve South Australia's wildlife, biological surveys are carried out to monitor wildlife populations and distribution of species. In recent years species recovery plans have led to the successful re-introduction of stick-nest rats and brush-tailed bettongs to islands off the South Australian coast.



Introduced pest animals and plants cause enormous economic and environmental loss in South Australia. Consequently the Service is cooperating with the Commonwealth and other States in the development of measures for the biological control of species such as rabbits, bridal creeper, and boneseed.

*Native  
vegetation*

In 1985 the South Australian Government enacted legislation to control the clearing of the State's remaining native vegetation. Controls on clearance and assistance for landholders are now provided for under the *Native Vegetation Act 1991*. The Natural Resources Group works closely with landholders in developing programs for the long-term maintenance of native vegetation. At June 1994, 575,000 hectares of privately-owned native vegetation were conserved in perpetuity in 980 heritage agreements. These programs help to prevent the degradation of land which occurs through loss of tree cover, soil erosion and salinity, and aid the conservation of the State's biological diversity.

*Pastoral  
management*

South Australia's pastoral lands cover about 407,000 square kilometres, virtually all of which is located in the far north of the State and in the eastern border district, north of the River Murray. In 1989 the government introduced the Pastoral Land Management and Conservation Act to ensure that landcare and sustainability principles are applied in the management and use of pastoral lease land.

*Coastal  
management*

South Australia's 3,700 kilometre coastline is an important aspect of the State's natural heritage, as well as being a vital recreational and tourism resource. The Coast Protection Board administers the Coast Protection Act, through the Coastal Management Branch of the Natural Resources Group by providing advice and grants to local government, and advice to other government agencies, the public, and community groups. The Branch provides technical advice on coastal management issues including development control, to reduce the risks of erosion or flooding. A biennial dredging operation is undertaken to replenish the sand on our metropolitan beaches as part of a protection strategy as well as the maintenance of a viable recreation and tourist facility.

*Indigenous  
heritage*

The South Australian environment has been influenced by the occupation of indigenous people for more than 40,000 years. Evidence of this occupation can be seen in sites of archaeological and mythological significance including campsites, ceremonial grounds, mythological sites, cave paintings, rock engravings, burial places, and ochre mines among other sites. In 1989 the Aboriginal Heritage Act was enacted to provide for the protection of sites of significance to indigenous people, their remains and artefacts. Since the passing of this Act, local Aboriginal heritage committees and a State Aboriginal Heritage Committee have been established to strengthen the role of indigenous communities in identifying, researching and managing their heritage. The Act also requires that a central Register of sites and objects be established for the

safe-keeping of information on Aboriginal and Torres Strait Islander-heritage. The Register is now part of the Culture and Site Services Section of the Department of State Aboriginal Affairs. This Section also administers all other aspects of the Aboriginal Heritage Act.

*Non-indigenous heritage*

The State Heritage Branch of the Department of Environment and Natural Resources administers the government's programs for conserving South Australia's non-indigenous cultural heritage under the *South Australian Heritage Act 1978*, the *Historic Shipwrecks Act 1981* and sections of the *Planning Act 1982*. There were 1,722 entries on the Register of State Heritage Items at the end of June 1993.

The Branch identifies heritage items and recommends them for registration. Advice is also provided on changes to registered items and the development of heritage sites for public use. Other important tasks include heritage surveys, maritime archaeology research and promotion of the recreational and educational value of historic shipwrecks.

*Artlab Australia*

Artlab Australia, specialises in the scientific conservation and preservation of works of art and items of historical, cultural and personal value.

A Division of the Department for the Arts and Cultural Development, it was established in 1985 to lead the preservation of the movable heritage of South Australia.

Artlab Australia operates the largest and most advanced conservation facility of its type in Australia. It maintains a series of highly specialised laboratories throughout Australia for the treatment of works on paper, books, paintings, textiles and other artefacts and a scientific analysis unit and fumigation chamber.

As well as being responsible for the conservation and preservation needs of the State's major cultural institutions, Artlab Australia provides a full commercial consulting and treatment service to businesses, community organisations and groups, and private individuals.

**The Botanic Gardens and State Herbarium**

The Botanic Gardens, established in 1855, comprises the Adelaide Botanic Garden and Botanic Park in the City, the Wittunga Botanic Garden at Blackwood and the Mount Lofty Botanic Garden. A Board manages the garden system for the community and is responsible to the Minister for Environment and Natural Resources.

The Botanic Gardens are responsible for the heritage garden 'Beechwood' at Stirling, maintaining the grounds of Government House and managing the Black Hill Flora Centre for applied research at Athelstone. There are also seven experimental plantations maintained in various parts of the State, and technical support is given to the Australian Arid Lands Botanic Garden at Port Augusta.

The Botanic Gardens fulfil important recreational, educational, advisory, and conservation and scientific roles, and the range of sites covered by the Gardens facilitates cultivation of a wide range of plants.

The Adelaide Botanic Garden also houses the Museum of Economic Botany, a specialist library, the State Herbarium and the Bicentennial Conservatory, the largest glasshouse in the Southern Hemisphere. Another important feature is the Old Palm House, which is architecturally unique while 'Beechwood' contains the oldest conservatory in Australia. The Herbarium contains about 800,000 specimens and is the centre of all significant research on native plants of South Australia.

Although primarily serving the State, the organisation has strong links with other Australian and overseas botanic gardens, being active in promotion of commercial use of plant products and plant biodiversity conservation.

Some 21,000 schoolchildren used the education service, over 34,000 inquiries were made of the advisory service, and an estimated one and a half million visitors went to all gardens in 1993, including 987,731 to Adelaide Botanic Garden.

#### **Adelaide Zoo**

The Adelaide Zoo is administered by the Royal Zoological Society of South Australia Inc., a non-profit society with almost 5,000 members. The Society was founded in 1878 and the Adelaide Zoological Gardens were opened to the public in 1883.

Revenue for maintaining and developing the Zoo comes mainly from gate receipts, fund-raising through sponsorship programs and an annual State Government grant through the Department of Environment and Natural Resources.

Adelaide Zoo has as its major goals public education and recreation and the conservation and study of rare and endangered species. Two Education Officers conduct education programs for students and assist in interpreting the Zoo as a living classroom for visitors. Volunteers provide information, undertake animal watches and conduct guided tours.

Although Adelaide Zoo is small in area (only 8 hectares) it contains an excellent collection of mammals, birds and reptiles exhibited in open-plan naturalistic habitats. Two walk-through aviaries, a children's zoo, a nocturnal house and reptile house are important features. At 30 June 1994, 1,353 specimens of 286 species were on display. About 350,000 people visited the Zoo during the year ended 30 June 1994.

The Society also operates a 1,000-hectare Zoological Park at Monarto, 70 kilometres east of Adelaide, which opened to the public in October 1993. Approximately 200 hectares are devoted to the breeding and display of rare animals, particularly herds of grazing animals, with the balance being dedicated to the conservation and display of indigenous fauna and flora. There were 306 specimens of 24 species on display at 30 June 1994.

### Recreation and sport

#### *Recreational space and facilities*

The City of Adelaide is surrounded by 693 hectares of parklands. These contain sporting facilities, which have been mainly developed by user organisations, on annual, seasonal permit or long-term lease. Lease facilities include national and regional standard venues such as the Adelaide Cricket Oval, Memorial Drive Tennis Club, Victoria Park Horse Racing Track, The Adelaide Aquatic Centre and part of the Australian Formula One Motor Racing Track.

The parklands are also extensively used by individuals and groups from wider Adelaide and tourists for a wide range of casual and organised activities such as walking and cycling (commuting and recreational), major community events, arts festivals, exhibitions, concerts and family picnics.

The parklands programs include not only cultural and recreational activities, but also sports from local community activity to major international events such as Rio Tennis, World Title Boxing, Test Cricket and Rugby League.

Facilities and open space for a wide range of sporting and leisure activities are located throughout the metropolitan area and most country towns have ovals and other sporting facilities.

#### *Recreation, Sport and Racing*

The Office for Recreation, Sport and Racing was established to support community efforts to develop and promote recreation and sporting opportunities for all South Australians. Most of its community services are provided by Recreation SA, and the Division of Sport, incorporating the South Australian Sports Institute (SASI). The Racing Division administers the Racing Act.

#### *Division of Sport*

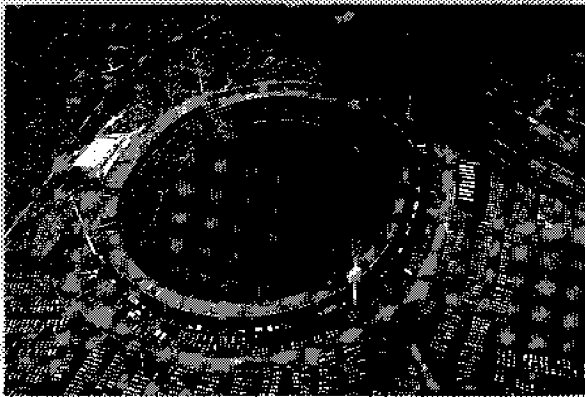
The aims of the Division of Sport in South Australia are the promotion and development of sport in this State.

A part of the Division of Sport is the South Australian Sports Institute, which operates in the area of elite athlete development through the provision of scholarships and specialist support services.

The Sports Division offers programs in the areas of sports funding, coaching, sport development, junior sport development, sport physiology and psychology, as well as providing a specialist sports library and coaching resource centre.

## FOOTBALL PARK

In December 1971 the South Australian National Football League (SANFL) announced that it would develop its own football headquarters complex at West Lakes, the new urban development west of the city. Construction began in 1972 and the complex named Football Park hosted its first game on 1 May 1974 between North Adelaide and Central Districts (won by Central). Finals series from 1974 were transferred to Football Park and the first Grand Final played there was between Glenelg and Sturt (won by Sturt). Since then many changes have been implemented. From one Sunday match a year being approved in 1975 Football Park now hosts many Australian Football League (AFL) and SANFL Sunday matches throughout the football season. Although floodlighting of Football Park was announced in December 1978 installation was delayed and the first match under lights did not occur until 2 March 1984, a pre-season match between West Torrens and Woodville. Current programming sees many AFL and SANFL matches played under lights with the highlight being the State-of-origin matches. Twenty years of Football Park was celebrated by a State-of-origin match under lights on 3 May 1994 between Victoria and South Australia. Before a capacity crowd South Australia just won a very high quality spectacle by 2 points. The 1991 season saw the entry of the composite SANFL team, the Adelaide Football Club (Crows) into the AFL competition and Football Park as its home ground. In the last 20 years many improvements have been made in the facilities the complex provides. All spectators are now seated and the stadium capacity is 46,700. Before all-seating was installed the capacity was larger and a record crowd of 66,887 watched the 1976 Grand Final between Port Adelaide and Sturt (won by Sturt). Also over this period Convention, TAB, bistro, licensed bars, electronic magnetic card turnstiles at all gates and poker facilities have been installed.



A Crows match at Football Park

Photo: SANFL

*Recreation SA* Recreation SA is responsible for the provision, promotion and development of active recreation and leisure opportunities for all South Australians.

Recreation SA offers programs in recreation development, including a community grants program, development of outdoor recreation facilities including the world famous 1,500-kilometre Heysen Trail, Mawson and Riesling Trails and other walking and cycling trails, State association professional development, playground and children's recreation development, annual VACSWIM program for 32,000 participants, and recreation policy and planning.

*Major sporting events* A large number of sporting and recreational events take place in South Australia on a regular basis attracting local, interstate and overseas visitors.

A round of the World Formula One Grand Prix has been held in Adelaide each year since 1985. The event is staged on a street circuit in the eastern part of the City of Adelaide and surrounding parklands with a lap distance of 3.78 kilometres. The Australian Formula One Grand Prix is seen by some 120,000 people on the track and by a worldwide television audience.

Other major sporting events with more local appeal include the Oakbank Race Meeting at Easter, the Adelaide Cup in May and the South Australian National Football League Grand Final in October.

**Gambling** Legal gambling in South Australia is regulated by the Lottery and Gaming Act, the Gaming Machines Act, the Liquor Licensing Act, the Racing Act, the State Lotteries Act and the Casino Act.

At 30 June 1994 there were 664 Lotteries Commission agents operating (mainly from shops and hotels) and total sales of the Commission for the year were \$264.8 million.

At 30 June 1994 there were 61 bookmakers and 614 clerks and agents licensed with the Bookmakers Licensing Board operating on- and off-course betting on horse racing, harness racing, greyhound racing, foot running and approved sporting events.

Totalisator betting takes place through the Totalizator Agency Board (TAB) and on-course totalisators licensed by racing clubs. Off-course betting was provided on galloping, harness racing and greyhound meetings. In addition, betting was provided on Australian Rules Football and the Australian Formula One Grand Prix. The following table shows turnover for the last three years for these forms of legal gambling in South Australia.

Legal Gambling Turnover  
(\$ million)

Type of gambling	Turnover		
	1991-92	1992-93	1993-94
TAB:			
Racing codes .....	494.5	503.2	526.9
Other sporting events .....	1.8	1.8	1.8
<i>Total TAB</i> .....	<i>496.3</i>	<i>505.0</i>	<i>528.7</i>
On-course totalisator .....	58.6	56.1	60.7
Bookmakers:			
On-course .....	106.7	97.9	143.0
Off-course .....	7.8	6.0	5.0
<i>Total bookmakers</i> .....	<i>114.5</i>	<i>103.9</i>	<i>148.0</i>
Lotteries Commission:			
Oz Lotto .....	—	—	5.5
Instant Money Game .....	40.4	44.2	35.4
Saturday Cross Lotto .....	103.1	100.0	101.0
Thursday Cross Lotto .....	35.5	32.2	30.5
Super 66 .....	5.7	5.5	4.5
The Pools .....	1.1	1.3	2.1
Club Keno .....	45.9	56.8	69.7
X Lotto Extra .....	16.8	16.3	16.1
<i>Total Lotteries Commission</i> .....	<i>248.5</i>	<i>256.3</i>	<i>264.8</i>
Lottery and Gaming Section .....	88.3	93.2	101.0
<b>Total</b> .....	<b>1,006.2</b>	<b>1,014.5</b>	<b>1,103.2</b>

The Adelaide Casino, opened in December 1985, is part of the Adelaide Railway Station redevelopment and the three levels of the Casino include 89 gaming tables.

In 1991 the Casino was authorised to operate video gaming and spinning reel machines, and 864 machines were installed in a refurbished area.

The Casino is operated by a company appointed by the Lotteries Commission to establish and operate a casino on its behalf. The monies received by the Commission from the Casino operator, representing unclaimed prizes, licence fees, 13.75 per cent of net gaming revenue from tables, and 4.0 per cent of net gaming revenue from machines, are paid in the proportions of one per cent to the Housing Improvement Fund with the balance to the Consolidated Account. In the year ending 30 June 1994 the amount paid to the Government was \$24.13 million.

Poker machines were introduced into hotels on 25 July 1994 when 682 machines came on-line at 28 venues. They are monitored by the Independent Gaming Corporation and regulated by the Liquor Licensing Commission (Gaming Division).

### 6.3 HEALTH

**Commonwealth Government** The Commonwealth Government has a limited role in health care and is mainly concerned with the formulation of broad national policies, the provision of benefits and grants to individuals and organisations and the regulation of health insurance. Direct services are provided through the Repatriation General Hospital system and the Department of Human Services and Health through its Rehabilitation Units and Hearing Centres.

**South Australian Health Commission** Primary responsibility for the planning and provision of health services lies with the State Government, although policy is influenced by financial arrangements between the Commonwealth and State Governments, by South Australia's budget allocations and by arrangements with local governments and voluntary and private agencies.

The Health Commission maintains, operates and assists a wide range of health services including: hospital services; mental health services; services for the intellectually disabled; drug and alcohol services; services for indigenous people, the aged, the physically disabled, and children and families; community health and health promotion services; and public health and occupational health services.

The Public and Environmental Health Division is responsible for occupational and environmental health administration. Services carried out in the regulatory, inspectorial, licensing and monitoring functions include Epidemiology and Infectious Disease Control; Health Surveying; Occupational Health and Radiation Control; Pharmaceutical and Hazardous Chemical Control; and the licensing and inspection of private hospitals, nursing homes and rest homes.

Every local government authority is authorised under health and food legislation to maintain regulatory responsibility for public health in its area. The Health Commission has general responsibility for the public health of the entire State.

**Health services** The control of hospitals in South Australia is vested in several authorities including the South Australian Health Commission, the Commonwealth Department of Veterans Affairs, religious and charitable organisations, local community committees and private owners.

South Australian Hospitals : Staff and Selected Activities<sup>(a)</sup>

Item	1990-91	1991-92	1992-93
Average staff employed (a) . . . . .	17,750	17,333	17,426
Occupied bed days ('000) . . . . .	2,302	2,242	2,253
Bed occupancy rate (per cent) . . . . .	72.9	72.3	74.2
Mean length of stay (days) . . . . .	5.8	5.6	5.5

(a) Excludes private and Commonwealth hospitals.



The following table shows the details of number of hospitals, hospital beds and separations from 1990-91 to 1992-93. Separations occur when an inpatient or same day patient leaves hospital to return home, transfers to another hospital or dies at the hospital; for psychiatric hospitals, however, the figures refer to admissions.

Summary of Hospital Statistics

<i>Hospital</i>	1990-91	1991-92	1992-93
<b>Public:</b>			
Recognised;			
Number .....	81	81	81
Average number of beds available .....	5,421	5,281	5,108
Separations .....	270,987	271,587	274,145
Commonwealth;			
Number .....	2	2	2
Average number of beds available .....	(a)331	(a)302	256
Separations .....	10,645	12,075	10,663
Psychiatric;			
Number .....	2	2	2
Average no. of beds available .....	718	694	665
Admissions .....	4,544	4,318	4,393
<b>Private:</b>			
General;			
Number .....	34	34	35
Approved beds .....	2,048	2,067	2,067
Separations .....	111,334	112,396	119,777
Psychiatric;			
Number .....	4	4	4
Approved beds .....	197	197	197
Admissions .....	2,327	2,420	2,448
<b>Total:</b>			
Number .....	123	123	124
Separations .....	399,837	402,796	411,426
Separations per 1,000 of estimated resident population .....	276.3	278.5	281.5

(a) Approved beds.

#### *Recognised hospitals*

Recognised hospitals are those recognised under the Medicare agreement between the Commonwealth and State Governments in relation to the provision of hospital services. The agreement provides for financial assistance towards comprehensive hospital care, including medical treatment for eligible persons.

Of the recognised hospitals sixty-eight are located outside the Adelaide Statistical Division, providing services to local communities from Mount Gambier in the south east, to Oodnadatta in the north, and as far west as Cook. A small number of strategically placed hospitals provide some specialist medical and community health services to the region or sub-region they serve. An increasing number of hospitals are becoming involved in a variety of services including community health, and nursing home and hostel accommodation for the aged.

Of the 13 recognised metropolitan hospitals, five are teaching hospitals through association with a university medical school. These hospitals offer the super-specialities traditionally located at only one or two hospitals in each State (e.g. intensive care, burns units, cardiac surgery and neonatal intensive care). Recognised hospitals also provide State-wide services for casualty patients.

*Private hospitals*

At 30 June 1993 there were 39 private hospitals with 2,264 beds operating within South Australia, either as profit making ventures, or run by charitable or community organisations. Thirty-two of these hospitals are located within metropolitan Adelaide with the remaining seven in country areas. Four of the metropolitan hospitals provide psychiatric care, one specialising in the treatment of adolescents. The remaining are general hospitals and offer a range of medical, surgical and obstetric services.

*Repatriation hospital*

The Department of Veterans' Affairs maintains the Repatriation General Hospital, Daw Park, which is an acute care teaching hospital. It also has a Hospice Unit which is administered in conjunction with the South Australian Health Commission. Medical, surgical and psychiatric in-patient and out-patient treatment is provided for eligible veterans and dependants, serving members of the forces and under certain conditions, for non-eligible veterans and civilians. The Commonwealth Government is currently investigating the possibility of integrating the Daw Park Repatriation General Hospital into the State health system.

The Repatriation Artificial Limb and Appliance Centre, Daw Park, serves the community's disabled under the Commonwealth Free Limbs Scheme.

*Hospital separations*

The remaining commentary and data in this section relate to separations from recognised and private hospitals only.

Separations, Principal Surgical Procedures by Length of Stay, 1992

Principal procedure	Length of stay						Total
	Same day discharge	1 to 2 days	3 to 4 days	5 to 7 days	8 to 14 days	Over 15 days	
Surgical procedures:							
Nervous system . . . . .	3,119	2,327	826	626	878	473	8,249
Endocrine system . . . . .	11	38	196	227	63	32	567
Eyes . . . . .	3,851	3,442	1,119	422	247	71	9,152
Ear . . . . .	4,207	1,593	629	138	61	27	6,655
Nose, mouth, pharynx . . . . .	5,537	10,939	2,876	484	195	128	20,158
Respiratory system . . . . .	635	868	371	392	677	511	3,454
Cardiovascular system . . . . .	1,082	2,665	1,824	1,215	2,614	1,191	10,591
Haemic and lymphatic systems	280	264	149	178	244	185	1,300
Digestive systems . . . . .	20,871	6,881	6,696	4,693	4,150	2,264	45,555
Urinary tract . . . . .	2,106	3,716	1,227	876	968	485	9,378
Male genital organs . . . . .	3,332	1,439	1,156	1,014	452	201	7,594
Female genital organs . . . . .	9,390	6,134	1,085	2,465	2,389	257	21,720
Obstetric procedures . . . . .	4,764	2,491	4,317	8,918	3,839	393	24,722
Musculoskeletal system . . . . .	4,993	9,944	4,749	3,157	3,554	1,914	28,311
Breast . . . . .	478	1,009	609	507	353	55	3,011
Skin and subcutaneous tissue . . . . .	4,447	3,544	1,249	811	864	729	11,644
<b>Total . . . . .</b>	<b>69,103</b>	<b>57,294</b>	<b>29,077</b>	<b>26,123</b>	<b>21,548</b>	<b>8,916</b>	<b>212,061</b>

Details of principal procedures performed by length of stay of patient in hospital are shown in the previous table. It should be noted that haemodialysis has not been included in operations on the cardiovascular system.

From the following table it can be seen that as people age they are more likely to require hospital services. This phenomenon is particularly noticeable for inpatients whose principal diagnosis is related to diseases of the circulatory system or neoplasms.

Separations, Principal Diagnosis by Age, 1992

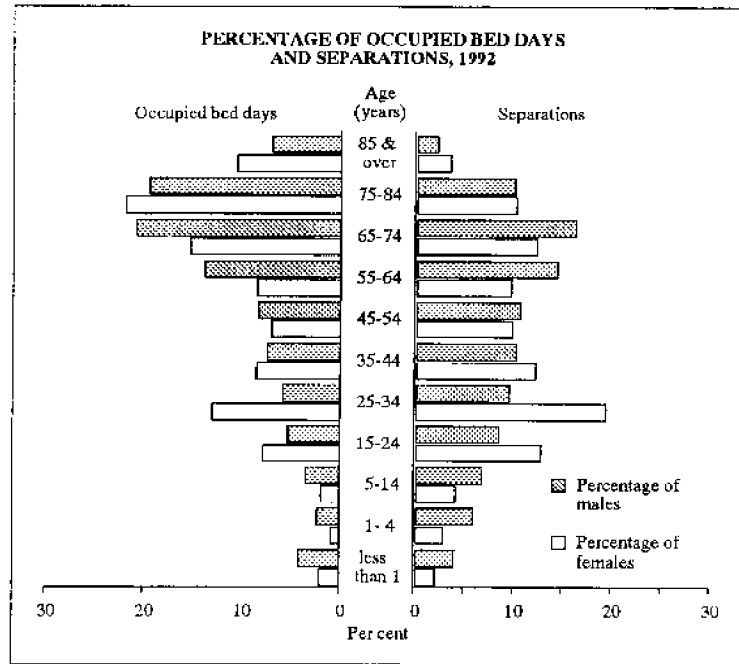
Principal diagnosis	Age (years)						Total (a)
	0-4	5-14	15-24	25-44	45-64	65 and over	
Infectious and parasitic diseases	1,184	625	766	1,088	627	747	5,037
Neoplasms	285	459	634	3,323	7,839	10,092	22,632
Endocrine, nutritional and metabolic diseases and immunity disorders	137	335	400	1,067	1,326	1,839	5,104
Diseases of the blood and blood-forming organs	130	295	486	709	781	1,722	4,123
Mental disorders	65	294	1,458	4,426	2,362	2,410	11,015
Diseases of the nervous system and sense organs	4,042	2,479	873	3,126	3,698	7,920	22,138
Diseases of the circulatory system	67	97	298	3,101	9,662	19,302	32,527
Diseases of the respiratory system	7,699	5,991	2,825	4,159	4,338	6,906	31,918
Diseases of the digestive system	2,812	2,163	5,523	11,122	12,061	11,539	46,220
Diseases of the genitourinary system	630	709	2,714	10,555	8,478	5,586	28,672
Complications of pregnancy, childbirth and the puerperium	4	49	11,183	23,849	35	19	35,139
Diseases of the skin and subcutaneous tissue	342	589	1,042	1,786	1,515	1,945	7,219
Diseases of the musculoskeletal system, and connective tissue	160	726	3,225	10,036	8,992	7,277	30,416
Congenital anomalies	1,418	706	272	304	131	85	2,916
Conditions arising in the perinatal period	3,797	2	4	4	2	-	3,809
Symptoms, signs and ill-defined conditions	2,248	1,208	1,764	4,505	5,453	5,473	20,651
Injury and poisoning	1,918	3,585	6,040	8,541	5,156	7,145	32,385
Supplementary (b)	1,682	1,077	2,449	12,392	13,708	17,373	48,681
<b>Total principal diagnoses (c)</b>	<b>28,658</b>	<b>21,413</b>	<b>43,020</b>	<b>104,246</b>	<b>86,242</b>	<b>107,513</b>	<b>391,092</b>

(a) Includes separations for patients whose age is not known.

(b) Includes haemodialysis treatment.

(c) Includes separations for patients whose principal diagnosis is not known.

The following graph shows the percentage of occupied bed days and separations in 1992 for males and females.



*Nursing homes*

There are four State-funded nursing homes operating in South Australia, with the Julia Farr Centre at Fullarton being the largest of these. It provides accommodation and nursing care for those suffering from chronic disability or disease.

A further 158 nursing homes run by non-government groups provide additional nursing home places throughout the State. These largely cater for aged care, however there are a number which offer care for people with disabilities. The total number of nursing home places in South Australia was 7,130 in 1993.

*Mental health*

The South Australian Mental Health Services is the key government agency responsible to the South Australian Health Commission for the provision and coordination of comprehensive, integrated mental health services to the residents of South Australia. The authority administers two psychiatric hospitals, Glenside and Hillcrest, two community mental health clinics, Beaufort and Carramar and the Community Accommodation Support Scheme.

A number of acute beds from Hillcrest Hospital are relocated within general hospitals (Lyell McEwin, Noarlunga and Queen Elizabeth II hospital). Specialised inpatient psychiatric care is provided in six general hospitals with acute psychiatric wards and in four private psychiatric hospitals.

A process of restructuring existing services and development comprehensive, decentralised and integrated treatment and support services for seriously mentally ill patients, especially those with psychosocial disability, is in process. Eastern, northern, southern and western regional community based mental health services are being established in the metropolitan area. Additional country services are established.

*Drug and alcohol services*

Services related to drug and alcohol issues are provided by the Drug and Alcohol Services Council (DASC). DASC is a State-wide organisation offering a range of preventative and treatment services. DASC also funds a number of non-government agencies to provide such services.

DASC provides an information service, undertakes community education programs on drug and alcohol issues and has a specialist library that is available to the general public. The Monitoring, Evaluation and Research Unit provides statistical and research-based information on drug and alcohol use in the community, and related issues.

*National Health Survey*

The 1989-90 National Health Survey conducted by the ABS provided information on a wide range of health topics, such as illness conditions, health related actions and health risk factors. A summary of South Australian results from the survey were included in the *South Australian Year Book 1994*. Detailed information is available from the many bulletins published.

*Community health*

*Services and centres*

There are in excess of 50 community health centres and services located within South Australia. They provide a range of services including counselling, early detection and treatment of health problems, health promotion and education, home nursing and dental services.

Most centres are concerned primarily with improving the health status of a specific local community or a target group through illness prevention and health education, however there are a number which provide general services to the South Australian community.

*Domiciliary care*

In 1993 four metropolitan and fifteen country domiciliary care services operated within South Australia. In addition, a number of health care units throughout the State provided home based health care services. These included hospitals (through their outreach services) and community health centres and services.

At 30 June 1993 the Domiciliary Care Services had 18,548 active clients registered, and in 1992-93, 563,255 client contacts were undertaken. Professional staff and paramedical aides offer the following services: aged care consultation; psychiatric consultation; personal care; home help; respite care and sitter services; artisans for minor home modifications; provision of equipment and aids; home dental care through the State Dental Service; and home nursing and terminal care in cooperation with the Royal District Nursing Society.

The Aged Care Assessment Program of the Commonwealth Department of Human Services and Health funds aged care assessment teams which undertake comprehensive, multi-disciplinary assessment of people requesting nursing home entry. In South Australia, these teams are associated with the Domiciliary Care Services, to ensure that people not approved for entry to a nursing home will receive the services necessary to enable them to continue to live in their own private accommodation.

*Child, adolescent  
and family health*

The Child, Adolescent and Family Health Service (CAFHS) is the largest community based child health service in South Australia and plays a major role in the provision of primary health care to families across the State.

CAFHS provides a number of general services for children, including the telephone advisory service, health surveillance, parent education and school screening.

There are also a number of special services which are targeted at a particular group or community, and include Torrens House, Outreach, a schools program, the Hearing Assessment Centre, Medical assessment, the Hills Childhood Development Program and counselling service.

Friends of CAFHS is the voluntary arm of CAFHS and operates branches made up of groups of parents throughout South Australia. They organise activities in their local area as an extension of CAFHS. Special Project Volunteers participate by assisting CAFHS staff and clients in a number of roles.

These client services are supported by information services and computing facilities. The Magarey Institute which is a centre for child and youth health studies incorporates an extensive library, staff development programs, a policy unit and project and research staff.

*Services for  
women*

There are four metropolitan women's health centres which provide services that integrate clinical services, health education, health promotion and preventative health care for women.

In country South Australia, ten country women's health services have been established under the National Women's Health Program, a Commonwealth-State initiative, to provide comprehensive primary health care services for women.

The South Australian Breast X-Ray Service has been established to provide a mobile mammography screening service across the State, including rural and remote areas, with the aim of reducing breast cancer. The Cervix Screening Service aims to reduce cervix cancer through the implementation of an organised approach with general practitioners, community agencies and pathology services.

Other services and programs for women include the Pregnancy Advisory Centre, Statewide Rape and Sexual Assault Services and Alternative Birthing Services Program.

*Aboriginal  
Health Council*

The Aboriginal Health Council (incorporated under the South Australian Health Commission Act) is an advocate for the indigenous community of South Australia in health and health related matters. The Council is also formally responsible for the provision of advice on indigenous health matters to the South Australian Minister of Health through the South Australian Health Commission, and the provision of primary health care to those indigenous communities not served by the independent Aboriginal Health Services (AHS).

AHS currently operate in metropolitan Adelaide, the Port Augusta region, the Anangu Pitjantjatjara Lands, Ceduna-Koonibba, and Yalata Maralinga. The expansion of services to the Port Lincoln, Port Pirie and Riverland communities is also under consideration as part of the National Aboriginal Health Strategy.

*Dental health*

Government funded dental services for school children, pensioners and disadvantaged persons are the responsibility of the South Australian Dental Service. The School Dental Service offers care to all pre-school, primary, and secondary school children in the State until 18 years of age.

The Commonwealth Dental Health Program provides additional funding to the State to treat eligible patients. General dental care for pensioners and beneficiaries, is available through public dental clinics throughout the metropolitan area and in major country centres. In some cases this care may be provided through private dental practitioners on the issue of a specific authority.

The Adelaide Dental Hospital is the only Dental Teaching Hospital in the State and provides specialist dental services as well as general dental care for pensioners and other social welfare beneficiaries.

*Other health  
services*

A number of independent organisations provide important health services in South Australia, and many of these organisations receive major support in the form of government grants.

*Blood  
transfusion*

The Red Cross Blood Transfusion Service collects and processes blood at the Service's centre in Adelaide, through a mobile unit which visits metropolitan and country centres, and at regional centres. Blood donations collected by the Service are used for emergency and routine needs and stored at major and subsidiary bloodbanks at metropolitan hospitals and regional blood transfusion centres. All donor blood is tested, including screening for syphilis, the HIV-1 and HIV-2 viral antibodies, hepatitis B and hepatitis C antibodies, and antibodies to HTLV-1. The Service administers the South Australian Tissue Typing Service and is also the location of the South Australian Branch of the Australian Bone Marrow Donor Registry and associated laboratory. The Service, which is linked with Flinders Medical Centre and Flinders University in the Centre for Transfusion Medicine and Immunology, was designated in April 1993 as a World Health Organisation Collaborating Centre for Transfusion Medicine.

Home nursing      The Royal District Nursing Service of SA Inc. (RDNS) is an independent, non-profit organisation providing comprehensive nursing care to individuals in the community setting and nursing clinics.

Nursing care is offered according to assessed need, over a 24-hour period, to young and aged people, the frail and disabled, the acute and chronically ill, to those requiring care following day surgery and to the terminally ill.

Nursing staff are employed as specialist consultants in the areas of diabetes management, continence promotion, palliative care, AIDS/HIV care and developmental disabilities.

Multi-disciplinary courses are offered in palliative care, continence promotion and dementia care. Nursing specialist courses are available by distance education.

In 1993-94 the full-time equivalent of 299 registered nurses made 466,604 visits to a monthly average of 5,394 clients while 27,823 other nursing activities were undertaken. To achieve this 2.3 million kilometres were travelled in 196 cars.

The RDNS operates from administrative headquarters in Adelaide with regional and district centres located in the metropolitan and some country areas. The main source of funding comes through the Home and Community Care Program, the South Australian Health Commission and Medicare. Donations from clients and the community, RDNS branches of the Foundation (established in 1994 to raise funds), service clubs and local government provide additional funds to support the work of the Service.

Flying Doctor Service

The Royal Flying Doctor Service (Central Section) is responsible for the aviation management of all aero-medical retrieval and air ambulance aircraft in South Australia. It also provides an aerial medical service on a routine and emergency basis to remote areas of South Australia and the southern half of the Northern Territory, covering an area of some 2.2 million square kilometres. It has control bases at Port Augusta and Alice Springs. The Royal Flying Doctor Service undertook 3,983 retrieval and hospital to hospital transfers out of Adelaide Airport during 1993-94.

The Royal Flying Doctor Service provides an important communication link to people living, working and touring in outback Australia.

SA St John Ambulance Service

SA St John Ambulance Service Inc. provides the ambulance service for the State operating from bases throughout the metropolitan and country areas, as well as operating air ambulances jointly with the Royal Flying Doctor Service.

The Service is established as a joint venture between the Minister of Health and the national office of St John.



St John Volunteers	St John foundations provide voluntary first aid services at numerous functions throughout the State, and perform important first aid training to the general public and industry.
Other health services	Important services are also provided by other independent health-related organisations such as the National Heart Foundation, the Anti-Cancer Foundation and the Family Planning Association.
Public health	<p>The Public and Environmental Health Service of the South Australian Health Commission is concerned with the prevention and control of disease, illness and injury, and the promotion of health of South Australians. The Service is comprised of a number of specialist operational units which monitor health status, plan and deliver programs to reduce illness and injury, and monitor and control environmental and other factors affecting health.</p> <p>The Service hosts and has an executive responsibility for the Central Board of Health, the Public and Environmental Health Council, the Food Quality Committee, the Controlled Substances Advisory Council, the Radiation Protection Committee and interdepartmental committees dealing with the health aspects of water quality and electromagnetic radiation. The core functions of the Service, as the State's public health authority, are assessment, policy development and assurance.</p> <p>The Service also oversees the Port Pirie Lead Program, which is a major, innovative public health program involving blood and environmental monitoring, community education, house decontamination and green-ing activities.</p>
Environmental Health	This branch is concerned with such aspects of public health as the quality of water and food supply, shelter, disease vectors, hazardous substances and waste disposal. It also administers legislation and provides education and advice on drugs of addiction; medicinal, domestic, industrial and agricultural poisons; pest control activities; and therapeutic substances and devices.
Radiation Protection	This branch provides a consultancy and advisory service, carries out education and training and conducts research and promotion in radiation protection matters. It administers the Radiation Protection and Control Act.
Epidemiology	In broad terms the Epidemiology Branch is responsible for monitoring the health status of the South Australian population and for control measures to improve health, giving priority to: immunisation; responding to outbreaks or clusters of infectious diseases, cancers, birth defects, fetal deaths and other outcomes of pregnancy; injury prevention; cancer prevention, screening for early detection and providing support services to improve treatment and palliative care; advancing the antenatal, neo-natal, and postnatal health of babies, especially with respect to indigenous people, home births and other births potentially at risk.

## Infectious and Notifiable Diseases : Cases Notified

<i>Diseases</i>	<i>1991</i>	<i>1992</i>	<i>1993</i>
Acquired Immune Deficiency Syndrome (AIDS) (a)	39	33	43
Arbovirus infection	72	116	774
Atypical mycobacterium infections	51	49	67
Brucellosis	—	—	—
Campylobacter infection	1,598	2,190	1,613
Chlamydia trachomatis	1,070	937	742
Congenital rubella	—	—	—
Gonorrhoea	199	165	142
Hepatitis A	117	104	112
Hepatitis B	28	22	35
Hepatitis C	n.a.	2	4
Hepatitis unspecified	4	4	5
Human Immunodeficiency Virus	45	34	56
Hydatid disease	—	1	—
Legionellosis	21	23	16
Leprosy	—	—	—
Leptospirosis	5	9	5
Malaria	42	35	25
Measles	155	163	26
Meningitis (Hib)	36	35	21
Meningitis (Meningococcal)	12	8	9
Meningococcal infection (other)	10	13	4
Ornithosis	34	18	21
Pertussis (whooping cough)	44	75	1,315
Q-fever	30	12	13
Rubeilla	92	121	275
Salmonella infections	494	352	395
Shigella infections	90	88	84
Syphilis	69	98	58
Tetanus	1	2	1
Tuberculosis	62	62	66
Typhoid	3	5	1
Vibrio Parahaemolyticus infection	—	2	1
Yersinia infections	183	172	80

(a) Data for AIDS pertain to clinical disease in Category A. Data for AIDS – Related Complex and Lymphadenopathy Syndrome are not included.

## Termination of pregnancy

In South Australia, legal termination of pregnancy for specified medical and related conditions requires certification of the grounds for termination usually from two legally qualified medical practitioners, one of whom performs the operation. All such operations are required to be performed in hospitals prescribed for this purpose. Terminations are notified to the Health Commission, and the following table shows the number of terminations by age group for the years 1991 to 1993.

## Terminations of Pregnancy Notified : Age Distribution

<i>Age group (years)</i>	<i>1991</i>	<i>1992</i>	<i>1993</i>
Under 15	20	23	20
15–19	956	938	1,023
20–24	1,438	1,413	1,583
25–29	936	996	960
30–34	759	746	785
35–39	450	437	438
40–44	129	137	133
45 and over	8	14	15
<b>Total</b>	<b>4,696</b>	<b>4,704</b>	<b>4,957</b>

Terminations of Pregnancy Notified : Marital Status

<i>Marital status</i>	1991	1992	1993
Never married.....	2,824	2,571	2,743
Married.....	1,033	1,055	1,109
De facto.....	278	313	413
Widowed.....	13	17	17
Divorced/separated.....	478	563	547
Not known.....	70	185	128
<b>Total.....</b>	<b>4,696</b>	<b>4,704</b>	<b>4,957</b>

*Sexually Transmitted Disease*

This service has, in addition to clinical service and epidemiological surveillance and analytical roles, responsibility for prevention and education with regard to sexually transmitted diseases including HIV (AIDS).

*Disabled and handicapped persons*

An ABS Survey of Disability, Ageing and Carers was conducted in 1993 and provided data on the types of disability; the level and severity of handicap; the need for and provision of help, and the effects of the caring role on carers. The data augments information available from two surveys conducted in 1981 (Survey of Handicapped Persons) and 1988 (Survey of Disabled and Aged Persons).

Some examples of disabilities and impairments included in the survey are: loss of sight (even when wearing glasses or contact lenses); loss of hearing; blackouts and fits; slowness at learning or understanding; incomplete use of arms or legs; and restrictions in engaging in physical activities.

A handicapped person was defined as a disabled person who was limited in his/her ability to perform certain tasks. These were tasks associated with: self-care (showering, bathing, eating, dressing); mobility (difficulties in using public transport, moving about at home, walking 200 metres, climbing stairs); verbal communication (difficulties in understanding a person or being understood); schooling (attending a special school, having difficulties at school because of a disabling condition etc.); and employment (permanently unable to work, restricted in the type of work, often needed time off work etc.).

In 1993 it was estimated that 300,800 persons, or 20.6 per cent of the South Australian population, had a disability. Four-fifths (80.3 per cent) of disabled persons were handicapped by their disabilities. Disability and handicap are strongly related to age, and the age group with the highest rates for males and females was that of 75 years and over. Only 15,700 (5.2 per cent of disabled persons) lived in nursing homes, with 222,200 (73.9 per cent) living with other people, and 62,900 (20.9 per cent) living alone.

The area in which 91,500 disabled persons reported a need for help was that of home maintenance. Only 85,300 (89.7 per cent) stated that they received help with that activity. Of all disabled persons aged over 5 years, living in households, and who needed help, 6.4 per cent (9,100) needed help with verbal communication.

In general, the majority of help received by disabled persons living in households was informal, and supplied by relatives or friends.

Additional information may be found in the publication *Disability, Ageing and Carers, Australia, 1993* (4430.0).

*Disability Services*

The South Australian Disability Services Office (DSO) reports directly to the State Minister for Health. The DSO is responsible for all planning, funding and evaluation of disability services in South Australia, with the exception of mental health services.

**Mortality**

*Causes of death*

Causes of death in South Australia are classified according to the *International Classification of Diseases, Ninth Revision (ICD9)*.

Figures for deaths in this section are based on the State or Territory of usual residence of the deceased and relate to the date of registration of death, not the date of occurrence. Australian residents who die overseas are excluded from the figures, but deaths of persons usually resident overseas are included in the figures of the State or Territory where the death occurred.

Causes of Death<sup>(a)</sup>, 1992

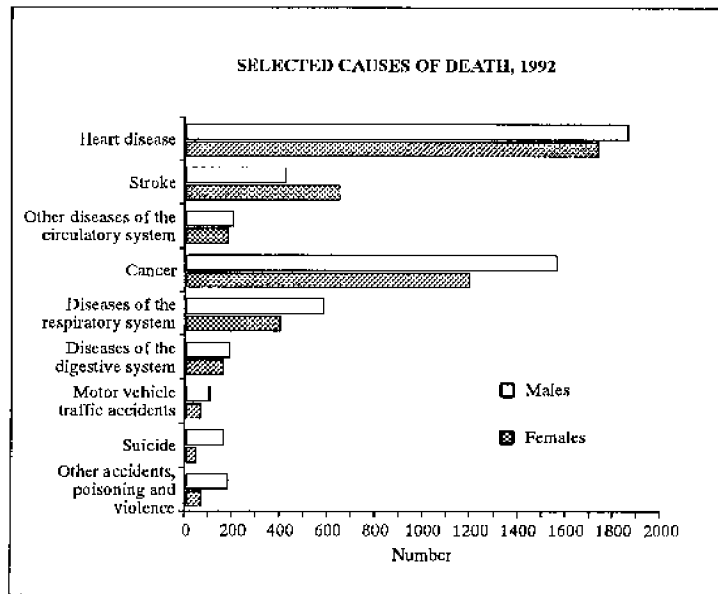
Cause of death	Number of deaths			Rate (b) persons	Proportion of total deaths per cent
	Males	Females	Persons		
Infectious and parasitic diseases:	34	32	66	4.5	0.6
Intestinal infectious diseases . . .	—	1	1	0.1	—
Tuberculosis . . . . .	3	4	7	0.5	0.1
Meningococcal infection . . . . .	—	1	1	0.1	—
Septicaemia . . . . .	18	14	32	2.2	0.3
All other infectious and parasitic diseases . . . . .	13	12	25	1.7	0.2
Malignant neoplasms: . . . . .	1,564	1,198	2,762	190.2	25.3
Malignant neoplasm of stomach . . . . .	75	39	114	7.9	1.0
Malignant neoplasm of colon . . . . .	121	101	222	15.3	2.0
Malignant neoplasm of rectum, rectosigmoid junction and anus . . . . .	78	61	139	9.6	1.3
Malignant neoplasm of trachea, bronchus and lung . . . . .	416	146	562	38.7	5.1
Malignant neoplasm of female breast . . . . .	—	214	214	14.7	2.0

Causes of Death<sup>(a)</sup>, 1992 (continued)

Cause of death	Number of deaths			Rate (b) persons	Proportion of total deaths per cent
	Males	Females	Persons		
Malignant neoplasm of cervix uteri . . . . .	—	17	17	1.2	0.2
Leukaemia . . . . .	61	45	106	7.3	1.0
All other malignant neoplasms . . . . .	813	575	1,388	95.6	12.7
Diabetes mellitus . . . . .	79	109	188	12.9	1.7
Other protein-calorie malnutrition . . . . .	1	—	1	0.1	—
Anaemias . . . . .	2	10	12	0.8	0.1
Meningitis . . . . .	2	1	3	0.2	—
Diseases of the circulatory system: . . . . .	2,496	2,576	5,072	349.3	46.4
Acute rheumatic fever . . . . .	—	—	—	—	—
Chronic rheumatic heart disease . . . . .	11	20	31	2.1	0.3
Hypertensive disease . . . . .	43	58	101	7.0	0.9
Ischaemic heart disease: . . . . .	1,556	1,337	2,893	199.2	26.5
Acute myocardial infarction . . . . .	1,101	905	2,006	138.2	18.4
Other ischaemic heart disease . . . . .	455	432	887	61.1	8.1
Cerebrovascular disease . . . . .	426	653	1,079	74.3	9.9
Atherosclerosis . . . . .	36	56	92	6.3	0.8
All other diseases of the circulatory system . . . . .	424	452	876	60.3	8.0
Pneumonia . . . . .	123	159	282	19.4	2.6
Influenza . . . . .	5	6	11	0.8	0.1
Bronchitis, emphysema and asthma . . . . .	107	62	169	11.6	1.5
Ulcer of stomach and duodenum . . . . .	40	33	73	5.0	0.7
Appendicitis . . . . .	3	1	4	0.3	—
Chronic liver disease and cirrhosis . . . . .	71	27	98	6.7	0.9
Nephritis, nephrotic syndrome and nephrosis . . . . .	38	44	82	5.6	0.8
Hyperplasia of prostate . . . . .	4	—	4	0.3	—
Direct obstetric deaths . . . . .	—	—	—	—	—
Congenital anomalies . . . . .	23	22	45	3.1	0.4
Certain conditions originating in the perinatal period: . . . . .	35	18	53	3.7	0.5
Hypoxia, birth asphyxia and other respiratory conditions . . . . .	6	6	12	0.8	0.1
Other conditions originating in the perinatal period . . . . .	29	12	41	2.8	0.4
Signs, symptoms and ill-defined conditions . . . . .	27	33	60	4.1	0.5
All other conditions . . . . .	704	594	1,298	89.4	11.9
Accidents and adverse affects: . . . . .	272	131	403	27.8	3.7
Motor vehicle traffic accidents . . . . .	105	68	173	11.9	1.6
Accidental falls . . . . .	35	27	62	4.3	0.6
All other accidents . . . . .	132	36	168	11.6	1.5
Suicide . . . . .	165	48	213	14.7	1.9
Homicide . . . . .	11	9	20	1.4	0.2
All other external causes . . . . .	6	—	6	0.4	0.1
<b>All causes . . . . .</b>	<b>5,812</b>	<b>5,113</b>	<b>10,925</b>	<b>752.4</b>	<b>100.0</b>

(a) The classification uses the *Mortality List of Fifty Causes* recommended by ICD 9.  
(b) The number of deaths by specified cause per 100,000 of mean resident population.

In 1992, the three leading causes of death were ischaemic heart disease, malignant neoplasms (cancer) and cerebrovascular disease (stroke). The proportions of deaths from the various causes are related to the age composition of the population, and there are marked differences in main causes of death by age and sex.



Perinatal deaths

Perinatal deaths comprise *fetal deaths* (any child born weighing at least 500 grams at delivery or, when birthweight is unavailable, of at least 22 weeks gestation, which did not at any time after being born, breathe or show any other sign of life) and *neonatal deaths* (any child weighing at least 500 grams at delivery or, when birthweight is unavailable, of at least 22 weeks gestation, who was born alive and died within 28 days of birth). Further information on death statistics is included in Part 5.5 Births and Deaths.

Causes of Perinatal Deaths : Condition in Child by Condition in Mother, 1993

Condition in child	Condition in mother				Total (incl. other)
	Maternal conditions which may be unrelated to present pregnancy	Maternal complications of pregnancy	Complications of placenta, cord and membranes	No condition reported	
Slow fetal growth, fetal malnutrition and immaturity	5	6	6	2	20
Birth trauma	1	1	-	1	3
Intrauterine hypoxia and birth asphyxia	1	3	9	11	24
Respiratory distress syndrome	-	1	1	1	3
Other respiratory conditions of fetus and newborn	-	-	1	1	3
Fetal and neonatal haemorrhage	-	-	7	-	7
Other conditions originating in the perinatal period	6	6	21	24	58
Congenital anomalies	1	3	-	25	33
All other causes	-	-	-	3	3
<b>Total perinatal deaths</b>	<b>14</b>	<b>20</b>	<b>45</b>	<b>68</b>	<b>154</b>

## Life expectancy

Life expectancy is the expected years of life remaining to a person of specified age if present patterns of mortality do not change during that lifetime. Life expectancy tables provide a useful indicator of long-term changes in health status.

Expectation of Life<sup>(a)</sup>

Period	At age (years)								
	0	10	20	30	40	50	60	70	80
MALES									
1988 .....	73.62	64.53	54.98	45.66	36.18	27.00	18.59	11.88	6.96
1989 .....	73.76	64.53	54.91	45.57	36.13	26.87	18.49	11.45	6.60
1990 .....	74.08	64.92	55.29	46.13	36.73	27.47	19.05	12.23	7.04
1991 .....	74.69	65.25	55.56	46.26	36.86	27.64	19.10	12.03	6.75
1992 .....	75.05	65.70	55.96	46.61	37.11	27.89	19.40	12.34	7.02
FEMALES									
1988 .....	80.35	71.00	61.17	51.41	41.66	32.18	23.22	15.25	8.60
1989 .....	79.80	70.60	60.77	51.06	41.39	31.96	23.08	15.15	8.67
1990 .....	80.30	71.04	61.23	51.48	41.80	32.28	23.30	15.29	8.78
1991 .....	80.49	71.00	61.20	51.51	41.85	32.38	23.42	15.35	8.70
1992 .....	80.92	71.51	61.68	51.95	42.25	32.79	23.88	15.70	8.93

(a) Based on Annual Life Tables calculated by the Australian Statistician. Because of the method of calculation, these figures are subject to annual fluctuations which may not be indicative of a longer term trend.

## Occupational health and safety

From July 1994, WorkCover Corporation assumed responsibility as South Australia's principal government agency for workers compensation, rehabilitation and occupational health and safety. It is a statutory body comprising a board of management and a staff of approximately 730 employees under a Chief Executive Officer.

Following legislative amendments passed in the South Australian Parliament in May 1994, the functions of the Occupational Health and Safety Commission have been transferred to WorkCover. The Corporation retained responsibility for compensating and rehabilitating injured workers and adopted the additional objective of promoting the prevention of work injury throughout the State.

The functions of the Corporation are to administer the *Occupational Health, Safety and Welfare Act 1986*; the *Workers Rehabilitation and Compensation Act 1986*; and other legislation prescribed by regulation.

WorkCover has a wide range of responsibilities under the legislation which include encouraging associations in promoting injury prevention, rehabilitation and appropriate compensation for persons who suffer disabilities arising from employment; encouraging consultation in relation to injury prevention, rehabilitation and workers compensation arrangements; promoting awareness of the value of effective occupational health, safety and welfare strategies and programs; promoting the rehabilitation of injured workers who suffer disabilities arising from their

employment; ensuring the efficient and economic operation of the Workers Rehabilitation and Compensation Act; and monitoring the enforcement of codes of practice and standards of occupational health, safety and welfare and conducting public inquiries in relation to matters which arise under an Act administered by the Corporation.

The Corporation has a role in conducting, supporting or promoting research or projects relating to occupational health and safety, work-related disabilities, workers rehabilitation or workers compensation and an obligation to collect, analyse and public information and statistics.

## 6.4 SOCIAL WELFARE

The Commonwealth, State and local governments and a large number of voluntary agencies provide social welfare services for South Australians.

The Commonwealth Government is concerned largely with providing income maintenance in the form of pensions, benefits and allowances, and repatriation services. It provides also, either directly or through State and local government authorities and voluntary agencies, a wide range of welfare services for people with special needs.

The Department for Family and Community Services is the main State agency and operates in the field of child and family welfare and distributes emergency financial assistance in certain circumstances.

Local government and voluntary agencies, many of which receive government funding, also provide a range of welfare-related services.

**Commonwealth Social Security** The Department of Social Security is responsible under the *Social Security Act 1991* (Cwth) for social security entitlements and related services.

*Pensions* The Department of Social Security pays, subject to income and assets tests and certain residential requirements, the age pension; disability support pension; wife's pension; carer's pension; widow's pension; and sole parent's pension, and rehabilitation allowances (under conditions similar to those applying to pensions).

Eligible recipients of these payments may receive additional amounts for each dependent child, or for rent assistance or an allowance for remote areas. Pension rates are subject to twice-yearly indexation in accordance with increases in the Consumer Price Index.



Pension Recipients<sup>(a)</sup>

Type of pension	At 30 June		
	1991	1992	1993
Age pension	141,864	147,964	150,583
Invalid pension (b)	34,224	..	..
Disability support pension (b)	..	37,383	38,592
Wife's/carer's pension	13,920	13,757	15,434
Widow's pension	6,308	5,821	5,189
Sole parent's pension	24,509	25,815	26,011
Sheltered employment allowance (b)	1,223	..	..
Rehabilitation allowance	396	173	33

(a) Includes figures for Broken Hill Region (NSW). (b) The disability support pension was introduced on 12 November 1991. All recipients of the invalid pension and sheltered employment allowance now receive the disability support pension.

## Benefits

The Department of Social Security pays eligible persons, subject to an income test, newstart allowance and job search allowance (to unemployed people); sickness allowance; and special benefit (payable in circumstances of special need to persons not eligible for other pensions or benefits).

Average Number of Benefit Recipients<sup>(a)</sup>

Type of benefit	1990-91	1991-92	1992-93
Unemployment benefit (b)	50,197	..	..
Job search and newstart allowances (c)	..	69,034	78,468
Sickness allowance	5,290	4,729	3,897
Special benefit	1,780	2,039	1,863

(a) Includes figures for Broken Hill Region (NSW). (b) Includes job search allowance. (c) Before 1 July 1991 people on these benefits received either a job search allowance or unemployment benefit.

As for pensions, eligible recipients may receive additional payments for children, rent assistance and remote area allowance, and benefit rates are indexed to the Consumer Price Index.

## Family payments

The Department of Social Security pays allowances to assist families, subject to eligibility requirements, including basic family payment (payable per dependent child); child disability allowance; double orphan's pension; and additional family payment (for certain low income families).

Number of Allowances<sup>(a)</sup>

Type of allowance	At 30 June		
	1991	1992	1993
Basic family payment	308,836	302,326	301,399
Additional family payment	n.a.	50,071	139,737
Child disability allowance	4,504	4,717	5,520
Double orphans pension	167	145	147

(a) Includes Broken Hill Region (NSW).

**Repatriation benefits**

The Commonwealth Department of Veterans' Affairs is responsible under the provisions of the *Veterans' Entitlement Act 1986* (Cwlth) for providing assistance, including medical care, income support and compensation, to veterans and their dependants. Details on health services provided to veterans are included in Part 6.3 Health.

Income support in the form of Service Pensions and compensation in the form of Disability Pensions are provided to eligible veterans and their dependants. Certain other benefits may also be available, with some subject to income and assets testing. The major veterans pensions are paid at similar rates to Social Security pensions and benefits and are similarly linked to increases in the Consumer Price Index.

Repatriation Pensions by Type  
(Number)

Type of pension	At 30 June		
	1991	1992	1993
Disability Pension payable to:			
Incapacitated veterans .....	12,143	13,632	13,449
Dependants of incapacitated veterans .....	9,428	9,772	9,253
Dependants of deceased veterans .....	6,873	6,999	7,154
<b>Total Disability Pensions payable .....</b>	<b>28,444</b>	<b>30,403</b>	<b>29,856</b>
Service Pension payable to:			
Veterans .....	22,175	21,826	21,311
Wives and widows of veterans .....	16,397	16,127	15,677
<b>Total Service Pensions payable .....</b>	<b>38,572</b>	<b>37,953</b>	<b>36,988</b>

**Community welfare**

The South Australian Department for Family and Community Services is responsible for promoting the welfare of individuals, families, groups and the community, with priority being given to those most disadvantaged. It encourages the community to develop its own welfare services by encouraging the coordination and collaboration of government and non-government welfare services, and through direct service delivery.

Welfare services provided by the Department include funding to other welfare organisations; individual and family support through general counselling, custody and access counselling, advice and counselling on family maintenance, budgeting advice and crisis care services; emergency financial assistance; administering concession schemes for electricity, council, water and sewerage rates and public transport; child protection; substitute family care for children including foster care, residential care and adoptions; assisting young offenders through the Youth Court, secure and non-secure residential care and supervision in the community; and State disaster relief.

The following table provides a summary of selected major activities by the Department.

Department for Family and Community Services, Selected Services

Type of service	1990-91	1991-92	1992-93
Financial Counselling Service, new clients counselled	4,329	4,474	4,483
Family maintenance advice and counselling cases	3,238	2,744	1,873
Crisis Care Service, home visit assistance	2,387	2,000	1,502
Emergency Financial Assistance, successful applicants	33,763	37,124	30,208
Child protection incidents	3,462	4,542	5,736
Children's Aid Panel appearances, number of offenders	4,920	3,636	3,264
Children's Court appearances, number of offenders	2,167	2,018	1,816
Number of children placed on bonds with supervision	522	503	522
Psychological services, number of client referrals	731	1,117	773

Adoptions

There are two major categories of adoptions for which adoption orders are granted. Placement adoptions (Australian, Inter-country or Special Needs) are those where an Australian child, or one from another country, is adopted by new adoptive parents. Special Needs adoptions find permanent placement for children with physical, intellectual and emotional disabilities. Particular child adoptions (Australian) are those by a near relative, by foster parents who have cared for the child for some time, or by a natural parent and his or her spouse who is not the other natural parent.

Adoption Orders Granted

Type of adoption order granted	1990-91	1991-92	1992-93
Placement adoption:			
Australian	26	20	20
Inter-country	44	55	41
Special needs	5	-	4
Particular child adoption:			
Australian	33	41	49
Inter-country	-	-	2
<b>Total</b>	<b>108</b>	<b>116</b>	<b>116</b>

Other welfare services

The South Australian Housing Trust and Emergency Housing Office provide a number of housing-related services directed towards pensioners, beneficiaries, low income recipients and other disadvantaged groups. Details of services provided are in Part 10.2 Building.

A number of non-government agencies and community groups provide welfare related services in South Australia, and many receive funding through Family and Community Development Grants. These grants are administered by the Department for Family and Community Services.

Details of organisations concerned with social welfare are contained in the *Directory of Social Welfare Resources* published jointly by the South Australian Council of Social Services and the Citizens Advice Bureau. The Citizens Advice Bureau advises those in need on how best to use the wide range of services provided by government and non-government bodies.

**Commonwealth  
human  
services**

Through a combination of direct funding and service provision, together with substantial grants to the States and Territories, the Department of Human Services and Health is responsible for programs that assist children and their families, people with disabilities, aged persons, and others with special needs, as well as providing for the health of all Australians.

The Department's programs focus on frail, aged people in nursing homes and hostels and in their own homes through aged care assessment teams, Home and Community Care, capital and recurrent funding of nursing homes and hostels, payment of Domiciliary Nursing Care Benefit and ensuring adequate standards of care in residential facilities are met; the provision of funding for child care services (except pre-schools); disability services such as employment support and advocacy programs; rehabilitation services; funding of hospital and other health services, as well as programs that promote health and prevent illness; and the provision of grants-in-aid towards the operating costs of national organisations representing the welfare interests of people who are clients of the Department.

**ATSIC**

The Aboriginal and Torres Strait Islander Commission (ATSIC) advises the Government on all matters concerning indigenous people, formulates policy and develops and implements and/or coordinates programs directed towards the advancement of these people. Consultation is mandatory in carrying out these functions.

The Economic Division is responsible for the development of national policies and strategies for indigenous people in the areas of employment; development; education and training; commercial enterprises; housing loans; and regional support. The Social Division has responsibility for land, heritage and environment; health; social justice; and infrastructure.

**Office of the  
Commissioner  
for the Ageing**

The Office of the Commissioner for the Ageing operates under the *Commissioner for the Ageing Act 1984*. The objectives of the Act are orientated to the enhancement of the quality of life of elderly people and the reciprocal enrichment of the community in which elderly people live.

The functions of the Commissioner include advising the South Australian Government on the implementation of programs and services for or affecting the ageing (including special needs groups within the population of the ageing) in consultation with the aged; monitoring the effects on the ageing of legislation and practices at all levels of government; and, to compile, analyse and disseminate information concerning the ageing.

South Australia has had a Commissioner for the Ageing since 1985.

## 7.1 EDUCATION

Education is available to all South Australians in a variety of forms, most being provided or supported by government agencies. Constitutionally, education is a State responsibility, but the Commonwealth makes funds available through Consolidated Revenue and Special Purpose Grants.

Once students leave the school system they may be further educated and trained at other educational institutions or in the workplace. They may also take advantage of community service courses, or other public and private resources. Provision also exists for adults to re-enter the education system.

The present system of government schools and compulsory education dates from the *Education Act 1875*. Education in South Australia is now governed by the *Education Act 1972*. A historical summary of education in South Australia was included on pages 153-4 of the *South Australian Year Book 1969*.

### Early childhood services

Established on 1 July 1985, the Children's Services Office (CSO) is an organisation which coordinates a range of early childhood services. This involves the provision of pre-school education, child care, family day care, outside school hours care, vacation care, play centres and toy libraries, and liaison with and assistance to other bodies which also provide these services. CSO, now part of the Department for Education and Children's Services, also has the responsibility for licensing of child care centres in South Australia.

In June 1993, 321 CSO pre-school centres provided 16,137 eligible children with sessional pre-school programs and 3,293 children participated in other early childhood programs. These centres were staffed by the equivalent of 681 full-time staff, including teachers and pre-school assistants.

The CSO provides support to children with special needs and employs special education teachers, psychologists, speech pathologists and social workers.

The Department for Education and Children's Services also provides pre-school education in 100 child/parent centres. The majority of these centres are integrated in junior primary, primary, area, Aboriginal and Anangu schools. In July 1993 there were 160 full-time staff (including teachers and ancillary staff) working in child/parent centres, providing pre-school programs for 3,190 eligible children.

Centre-based Pre-school Education and  
Subsidised Child Care Services, 1993

Age last birthday (years)	Children using pre-school services			Children using subsidised child care centres
	Pre- school centres	Child/ parent centres	Total	
Under 3.....	75	n.a.	n.a.	6,101
3.....	2,321	97	n.a.	4,297
4.....	15,845	2,968	18,813	2,361
5.....	1,154	125	1,279	195
6.....	-	-	-	70
Over 6.....	-	-	-	136
<b>Total .....</b>	<b>19,430</b>	<b>n.a.</b>	<b>n.a.</b>	<b>13,160</b>

There were seventy-three non-funded centres which provided child care during 1993. Most of these centres were commercial enterprises although some were non-profit establishments. In addition there were 11,604 children registered with Family Day Care.

**Primary and  
secondary  
education**

Education at the primary and secondary level is available at government schools which are administered and managed by the School Education Section within the Department for Education and Children's Services (DECS), and at non-government schools which are, for the most part, identified with various religious denominations, and which must be registered with the Non-Government Schools Registration Board. Attendance at school is compulsory for children from six years of age until they have turned fifteen. No child may be enrolled for the first time at a government school, other than a child/parent centre, before the age of five years. The admission policy allows for children to begin school soon after they turn five. Government schools are required to have a minimum of four intakes each year but are encouraged to have more.

The word 'Year' is used to denote class level in both primary and secondary schools. Primary classes are designated Reception then Year 1 through to Year 7, while Years 8 to 12 and 13 represent the levels of secondary education.

In July 1993 there were 247,227 students attending 861 schools in South Australia. DECS was responsible for the operation of 677 of these, comprising 67 junior primary schools, 406 primary schools, 2 primary-secondary schools, 88 secondary schools, 53 area schools, 22 special schools, 21 rural schools, 16 Aboriginal schools, 1 intensive English-as-a-second-language school and the Open Access College at Marden. About 100 of these schools have pre-schools, called child/parent centres, on site. Ten schools are designated as specialist schools for adults re-entering the education system.

The 184 non-government schools included 104 Catholic schools, 72 of which were primary, and 12 Anglican schools, 7 of which were mixed primary-secondary.

Compared to 1988, there were 38 fewer government and 6 more non-government schools operating in 1993. The total number of full-time equivalent teachers fell from 17,253 to 16,884 in this period. The proportion of teachers in non-government schools has risen from 20.1 per cent in 1988 to 23.1 per cent in 1993, while the proportion of students has risen from 23.1 to 25.3 per cent, reflecting an increase in student numbers at non-government schools, evident since 1979.

Full-time Students by Level of Study and Category of School  
at or about 1 July

Students	1991	1992	1993
Primary:			
Government .....	122,139	124,254	124,802
Non-government .....	33,925	35,123	36,481
<b>Total .....</b>	<b>156,064</b>	<b>159,377</b>	<b>161,283</b>
Secondary:			
Government .....	64,675	63,302	59,818
Non-government .....	26,094	26,123	26,126
<b>Total .....</b>	<b>90,769</b>	<b>89,425</b>	<b>85,944</b>
<b>Total students .....</b>	<b>246,833</b>	<b>248,802</b>	<b>247,227</b>

Between 1980 and 1988 the number of full-time students enrolled fell. They then rose steadily, until they peaked at 248,802 in 1992. In 1993 student numbers fell by 0.6 per cent to 247,227.

Full-time Students : Age Of Students and Category of School, 1993

Age at 1 July (years)	Government schools	Non- government schools	All schools
Under 6 .....	15,821	4,677	20,498
6 .....	15,554	4,532	20,086
7 .....	15,971	4,463	20,434
8 .....	15,992	4,489	20,481
9 .....	16,147	4,649	20,796
10 .....	15,759	4,618	20,377
11 .....	15,498	4,537	20,035
12 .....	14,685	4,968	19,653
13 .....	13,507	5,758	19,265
14 .....	13,279	5,671	18,950
15 .....	12,408	5,555	17,963
16 .....	10,550	5,212	15,762
17 .....	6,079	2,758	8,837
18 .....	1,653	529	2,182
19 .....	426	116	542
20 and over (a) .....	1,291	75	1,366
<b>All students .....</b>	<b>184,620</b>	<b>62,607</b>	<b>247,227</b>

(a) Includes students of unknown age at time of census.

### *Primary education*

Children normally begin their schooling at the age of five years, and spend eight years at the primary level. Teachers provide for the development of a broad range of knowledge, skills, attitudes and understanding in the areas of languages (English and languages other than English), Mathematics, Science, the Arts, Society and Environment, Health and Personal Development, and Technology. Children are encouraged to take an active part in their own learning, and the aim is to provide a broad and balanced education for all students.

Non-government primary schools largely follow the government schools in their curricula, however, DECS exercises no formal authority over these schools beyond requiring them to submit certain statistical returns relating to compulsory attendance.

### *Secondary education*

Students who have completed Year 7 in primary school are required to attend a secondary school until they turn fifteen. Students living in urban areas who attend government high schools usually attend their local high school.

In country areas government secondary education is provided by area schools or high schools, depending on the size of the population being served. Area schools cater for both primary and secondary students, whereas high schools provide courses for secondary students only. Both area and high schools offer students a broad secondary curriculum. This may be provided within individual schools, through the Open Access College or through cooperative arrangements between schools.

Non-government schools may also provide courses in technical, business and commercial, and general education, together with academic courses for those seeking admission to tertiary education after Year 12. Typing, shorthand, computing studies and certain academic courses are provided at privately owned business colleges.

Opportunities exist for students to study in a single-sex environment. There are three girls secondary schools within DECS and numerous separate girls and boys schools in the Catholic Education and Independent Schools sectors.

During the first three years of secondary education at government schools, students are introduced to a wide range of subjects within the required areas of study. Each school is free to develop its own combination of subjects within the framework provided by departmental guidelines.

Specialisation increases in Years 11 and 12 but the compulsory curriculum pattern of the South Australian Certificate of Education (SACE) ensures that a broadly based education is provided. Work education is provided across the curriculum in various forms.



Numbers of Full-time Students in Year 12

Category of school	Year		
	1991	1992	1993
Female:			
Government .....	5,758	6,203	5,555
Non-government .....	2,726	2,800	2,533
<b>Total .....</b>	<b>8,484</b>	<b>9,003</b>	<b>8,088</b>
Male:			
Government .....	5,718	6,292	5,423
Non-government .....	2,554	2,600	2,557
<b>Total .....</b>	<b>8,272</b>	<b>8,892</b>	<b>7,980</b>

The apparent retention rate (the number of students at a particular level of secondary schooling expressed as a percentage of the size of the same group when in Year 8) is another indicator of demand for certificated education.

In 1984 the overall retention rate for full-time students in Year 12 was 50.1 per cent. By 1987 this had risen to 60.2 per cent, being 53.4 per cent in government schools and 88.2 per cent in non-government schools. In 1993 the retention rate for Year 12 was 80.5 per cent in government schools and 102.1 per cent in non-government schools. Over 40 per cent of secondary school students attended non-government schools.

There has been also a dramatic increase in the number of part-time students, most of whom attend government schools, particularly the Open Access College.

*Upper secondary curriculum and assessment*

The historical similarity between courses in government and non-government secondary schools before 1984 was the result of a number of influences, including the Public Examinations Board of South Australia and its control over syllabuses and examinations.

In 1984 responsibility for syllabuses and assessment in Year 12 of schooling was taken over by the Senior Secondary Assessment Board of South Australia (SSABSA). Assessment then moved away from essentially sole reliance on public examinations to a mixture of public examinations and school assessment. At year 12 level, students can study publicly examined subjects (PES), which are assessed on 50 per cent external examination, and 50 per cent moderated school assessment; or school-assessed subjects (SAS), which are assessed on 100 per cent moderated school assessment or, a combination of both.

In 1992 students in Year 11 began studying the new South Australian Certificate of Education (SACE) which was issued to students who successfully completed Year 12 in 1993.

The SACE includes compulsory studies at Stage 1 (Year 11) in English or English as a Second Language, Australian Studies, and Mathematics. In addition, students must study at least one subject from Arts/Humanities/Social and Cultural Studies, and one subject from Mathematics/Science/Technology. At Stage 2 (Year 12), students must study at least one subject from the Language Rich group, and the Quantitative Experimental group. The SACE requires that students study 22 units taken from Stage 1 and Stage 2 and record 'successful achievement' in at least 16.

There is no time limit for completion of the SACE. However, students who wish to proceed to higher education must complete Stage 2 in two years, although the two years do not have to be consecutive.

The SACE has a number of credit transfer arrangements in place with Institutes of TAFE. A number of subjects available within the TAFE courses receive recognition within the SACE pattern, enhancing the study pathways available, and providing additional completion options for students in South Australia.

*Open Access  
College*

A multi-campus college, the Open Access College consists of three schools of distance education, the Open Access Materials Unit, and Outreach Education Services. Two of the schools (Reception to Year 10 and Senior Secondary) and the Open Access Materials Unit are co-sited with the Marden Senior College. The third school, covering Reception to Year 12, is located at Port Augusta.

The schools provide educational services for geographically remote and isolated families as well as isolated students who are not able to attend their local school. Students already enrolled at a school may enrol for specific subjects not available at their school but offered by the college. The college is an identified adult re-entry school.

*Special  
education*

DECS provides Special Education Support for students with disabilities in a variety of educational settings. The settings include special schools, special classes, centres for hearing impaired students, and the neighbourhood school. The general policy is that students with disabilities should attend a setting which is appropriate to their curriculum needs. Special Education also is available at four non-government special schools.

*Multiculturalism  
in education*

The provision of English as a Second Language programs for students from non-English speaking backgrounds, particularly those who are new arrivals in Australia, together with the provision of programs in languages other than English, constitute major strategies in the pursuit of a culturally inclusive education for all students.

*Aboriginal  
Education Unit*

The Aboriginal Education Unit of DECS has responsibility for the implementation of the National Aboriginal and Torres Strait Islander Education Policy and relevant recommendations arising from the Royal Commission into Black Deaths in Custody. The Unit provides support to Aboriginal students and their teachers, and supports the implementation of Aboriginal Studies across the State, including the development of curricula for Aboriginal schools. Operational control of Anangu (north-west) schools by the local indigenous people through the Pitjantjatjara-Yankunytjatjara Education Committee is being phased in over the next few years.

Aboriginal Education employs specialist staff, the majority of whom are Aboriginal Education Workers based in schools across the State. The number of full-time indigenous students rose from 3,822 in 1989 to 4,772 in 1993, with 94.5 per cent attending government schools. Indigenous students comprised 1.9 per cent of the total school population.

*Post-secondary  
education*

Post-secondary education covers higher education at universities, vocational education at Institutes of TAFE, community and neighbourhood studies, on-the-job training and personal development.

The main governmental authorities which take responsibility for this education are the Commonwealth Department of Employment, Education and Training (DEET) (including its many programs designed to improve training for and access to the labour market) and the State Department for Employment, Training and Further Education.

*Community  
adult education*

Community and adult education is generally provided, in response to community demand by Institutes of TAFE and non-government community groups such as the Workers' Educational Association, community and neighbourhood houses and centres, and ethnic, church and welfare groups.

*Inservice  
training*

The Department for Employment, Training and Further Education administers the State Government's employment and training policies, including programs specifically designed to benefit youth, through its Employment Policy and Programs Unit. The Department's Industrial and Commercial Training Commission staff include Regional Training Officers (field staff) who assist and advise on all aspects of training programs throughout the State. The Commission evaluates training already being provided, develops trainee schemes, examines the training needs of special groups, organises and supervises contracts of training, encourages skills centres for off-the-job training and advises the Minister on training matters.

A major part of the Commission's work involves the administration and support of traineeships. Although the Commission does not provide training or technical education it has the statutory responsibility to determine the training and courses of instruction to be undertaken by other trainees. It is also required to approve the training providers in both the public and private employment sectors.

Apprenticeships and Traineeships

Particulars	1992-93	1993-94
Traineeships commenced .....	2,797	3,047
Training completed .....	4,262	4,277
Training cancelled .....	935	931
Trainees employed .....	11,064	11,413

Vocational education

The Department for Employment, Training and Further Education is responsible for a wide range of tertiary education conducted through its ten Institutes of TAFE. The Institutes were formed in 1993 with the merging of 19 TAFE colleges across the State. Most vocational training is undertaken in this sector.

More than 300 part-time and full-time TAFE courses are offered either within an Institute campus or by distance education, or by using the Open Learning Program which is a mixture of both.

Courses are tailored to meet the needs of industry, commerce and government sectors. These courses range from the Introduction to Vocational Education certificate through to diploma level providing a clear career pathway. Credit transfer arrangements in an increasing number of disciplines have been developed between TAFE and university courses. In this way students are able to progress through stages to achieve degree status.

Vocational education certificate courses enable students to prepare for employment or to decide on further study to achieve their career goals.

Vocational Education : Student Enrolments by Program

Program	1991	1992	1993
Vocational .....	61,910	62,545	61,722
Foundation .....	13,819	13,476	12,567
Community and adult education .....	18,575	15,376	12,687
<b>Reconciled total (a) .....</b>	<b>89,794</b>	<b>87,775</b>	<b>83,628</b>

(a) Includes students who are enrolled across program areas.

Higher education institutions

The three universities in South Australia are autonomous bodies which were established under State legislation but which are largely funded by the Commonwealth under the *Higher Education Funding Act 1988* (Cwlth). Just under 20 per cent of the universities income is provided by students under the Higher Education Contribution Scheme (HECS).

Students

Total student numbers in South Australian Universities grew from 42,935 in 1991 to 44,471 in 1993. The following tables give an overview of the student population of the institutions of higher education in 1993.

All Students by Institution and Level of Course, 1993

Institution	Higher degree		Other than higher degree			Total
	Research	Course work	Post-graduate	Bachelor	Other (a)	
University of Adelaide . . . . .	1,242	520	696	9,553	810	12,821
University of South Australia . . . . .	360	887	2,923	14,933	2,264	21,367
<b>Total . . . . .</b>	<b>2,127</b>	<b>1,981</b>	<b>4,360</b>	<b>32,746</b>	<b>3,257</b>	<b>44,471</b>

(a) Includes students enrolled in non-award and enabling courses.

All Students by Institution and Field of Study, 1993

Field of study	University			Total
	Flinders	Adelaide	South Australia	
Agriculture, animal husbandry . . . . .	--	1,403	171	1,574
Architecture, building . . . . .	--	292	823	1,115
Arts, humanities, social sciences . . . . .	3,280	3,324	3,878	10,482
Business administration, economics . . . . .	1,205	1,229	4,774	7,208
Education . . . . .	1,050	450	4,535	6,035
Engineering, surveying . . . . .	81	1,066	1,986	3,133
Health . . . . .	2,848	1,434	3,677	7,959
Law, legal studies . . . . .	162	736	136	1,034
Science . . . . .	1,548	2,743	1,316	5,607
Non-award . . . . .	109	144	71	324
<b>Total . . . . .</b>	<b>10,283</b>	<b>12,821</b>	<b>21,367</b>	<b>44,471</b>

All Students by Institution, Type of Enrolment and Sex, 1993<sup>(a)</sup>

University	Type of enrolment			Sex	
	Full-time	Part-time	External	Males	Females
Flinders University . . . . .	5,914	3,581	788	3,869	6,414
University of Adelaide . . . . .	9,341	2,903	577	6,965	5,856
University of South Australia . . . . .	11,237	7,189	2,941	9,340	12,027
<b>Total . . . . .</b>	<b>26,492</b>	<b>13,673</b>	<b>4,306</b>	<b>20,174</b>	<b>24,297</b>

(a) Students enrolled at more than one institution are only counted once.

University of Adelaide

The University of Adelaide was established in 1874, and the academic work of the University began in March 1876. Courses in Law were introduced in 1883 and Medicine in 1885.

On 1 January 1991 the University amalgamated with Roseworthy Agricultural College and the City campus of the South Australian College of Advanced Education. As a result of the amalgamation the Faculty of Agricultural and National Resource Sciences and the Faculty of Performing Arts were created, and the Faculty of Arts experienced considerable growth. The Faculty of Agricultural and National Resource Sciences is predominantly based at the Roseworthy and Waite campuses.

In 1993 there were eleven faculties at the University. Higher degrees are offered in all faculties. Postgraduate diploma courses are provided in approximately twenty disciplines ranging from Archaeology to Clinical Dentistry, and Mathematical Science to Jazz. Further education programs are conducted through the University's radio station 5UV and the Office of Continuing Education.

*Flinders University*

Initially planned as an extension of the University of Adelaide on a site eleven kilometres from the centre of Adelaide, 'The Flinders University of South Australia' was given full autonomy by the South Australian Government in 1965.

The academic work of the University is organised in four faculties: Faculty of Health Sciences; Faculty of Science and Engineering; Faculty of Social Sciences; and Faculty of Education, Humanities, Law and Theology. Within these faculties are the Schools of Medicine, Nursing, Information Science and Technology, Physical Sciences, Biological Sciences, Earth Sciences, Education, Humanities, Law and Theology. Flinders University and the Sturt Campus of the former South Australian College of Advanced Education merged in January 1991.

The University offers 22 undergraduate degrees or diplomas, as well as a vast range of postgraduate coursework and research degrees. These cover postgraduate bachelor graduate diploma and master level awards. Doctorates may be conferred in Philosophy, Letters, Science and Medicine.

*University of South Australia*

The University of South Australia was established on 1 January 1991 as South Australia's third and largest (in terms of student numbers) University. It was formed by the merger of the Salisbury, Magill and Underdale campuses of the former South Australian College of Advanced Education and the Whyalla, North Terrace and Levels campuses of the South Australian Institute of Technology.

The University offers a wide range of courses in Aboriginal Studies, Architecture, Art, Arts and Humanities, Biomedical Sciences, Business and Economics, Communication, Design, Education, Engineering, Health Sciences, International Studies, Journalism, Legal Studies, Nursing Studies, Recreation, Science, Social Sciences, Technology, Wildlife and Park Management, and Women's Studies. Courses are available at associate diploma, degree and postgraduate levels.

At the postgraduate level doctoral and masters programs are available by research, together with a number of masters degrees by coursework. There is also a wide range of graduate diploma and graduate certificate courses available by coursework.

**Outlays on education**

The Commonwealth Government, the State Government and various private benefactors provide assistance to various categories of primary, secondary and tertiary students.

## Government

Government funds and facilities are provided by the Department of Education and Children's Services (DECS), the Department of Housing and Construction (which is responsible for the purchase, maintenance and security of all DECS buildings), the Commonwealth Department of Employment, Education and Training (which directs funding through its portfolio), and local government (which may receive grants for community education, or may fund such activities independently). Other sources include the Departments of Family and Community Services, Primary Industries, Environment and Natural Resources, Premier and Cabinet, Engineering and Water Supply, and Attorney-General.

The Commonwealth Government provides a Scheme of Assistance for Isolated Children and through the AUSTUDY scheme provides income and assets tested assistance to secondary and tertiary students aged sixteen years or more. The ABSTUDY scheme gives assistance to full-time secondary and tertiary Aboriginal students.

The State Government provides a School Support Grant to all government schools on a per head basis. The Education Department spends approximately 58.0 per cent of its recurrent expenditure on salaries for teachers, 23.5 per cent on other salaries, 15.2 per cent on non-salary expenditure and 3.3 per cent on other recurrent payments. In 1992-93 the State Government spent \$1,662 million, or 23.4 per cent of its total outlays on education.

Approvals for the School Card Concession Scheme, which provides financial assistance to lower income families for school expenses, rose from 15.0 per cent of all enrolments in 1982 to 18.9 per cent in 1987 and 39.9 per cent in 1993.

Assistance for postgraduate students is provided in the form of research grants and postgraduate awards and scholarships.

Commonwealth Grants Received for Educational Purposes  
(\$ million)

Purpose	1990-91	1991-92	1992-93
<b>Current grants:</b>			
Primary and secondary .....	152	191	166
Tertiary:			
University and other higher .....	233	235	251
Technical and further .....	13	18	30
Other .....	2	6	6
<b>Total current grants .....</b>	<b>400</b>	<b>449</b>	<b>452</b>
<b>Capital grants:</b>			
Primary and secondary .....	21	25	30
Tertiary:			
University and other higher .....	12	12	19
Technical and further .....	23	14	20
Other .....	-	-	-
<b>Total capital grants .....</b>	<b>55</b>	<b>51</b>	<b>68</b>
<b>Total grants .....</b>	<b>455</b>	<b>500</b>	<b>520</b>

State and Local Government : Outlay on Education  
(\$ million)

Purpose	1990-91	1991-92	1992-93
Current outlay:			
Primary and secondary .....	873	917	936
Tertiary:			
University and other higher .....	267	280	298
Technical and further .....	134	179	192
Tertiary n.e.c. ....	1	1	1
Pre-school education and education not defined by level .....	71	81	84
Transportation of students .....	38	37	35
Other .....	2	1	1
<b>Total current outlay .....</b>	<b>1,386</b>	<b>1,497</b>	<b>1,546</b>
Capital outlay:			
Primary and secondary .....	62	60	71
Tertiary:			
University and other higher .....	13	13	19
Technical and further .....	32	17	26
Pre-school education and education not defined by level .....	3	3	-
Transportation of students .....	2	-	-
Other .....	-	-	-
<b>Total capital outlay .....</b>	<b>112</b>	<b>94</b>	<b>116</b>

Private

Private benefactors provide assistance to various types of educational institutions and students. Voluntary helpers provide an auxiliary staff function in both government and non-government schools. Many institutions benefit from endowments. Education and training in specific areas is provided through the print and audio/video media by both profit and non-profit bodies. These bodies include the Workers' Educational Association, trade unions, business and professional associations, church and welfare groups, cultural and sporting associations and interest groups involved with the maintenance of civil defence.

Further references

Additional information may be found in the following publications:

- 4221.0 *Schools, Australia*
- 5510.0 *Expenditure on Education, Australia*
- 6227.0 *Transition from Education to Work, Australia*
- 6235.0 *Labour Force Status and Educational Attainment, Australia*
- 6272.0 *Participation in Education, Australia*
- 6353.0 *Employer Training Expenditure, Australia*

7.2 SCIENTIFIC AND RESEARCH ORGANISATIONS

There are more than 260 scientific and research organisations in Adelaide, with almost 23,000 staff employed in various areas of research.



**CSIRO** The Commonwealth Scientific and Industrial Research Organisation (CSIRO) is an independent statutory authority established and operating under the *Science and Industry Research Act 1949* (Cwth). CSIRO is Australia's largest scientific research organisation. Its role is to develop and improve technologies to benefit Australian industry, people and environment.

Research in CSIRO is carried out in 34 Divisions and Units, within six Institutes, throughout Australia. The Institute of Plant Production and Processing and the Divisions of Horticulture, Human Nutrition, Soils and Water Resources have their headquarters in South Australia. The Divisions of Manufacturing Technology, Mathematics and Statistics and Entomology have laboratories in Adelaide, and the Division of Forestry's Plantation Research Centre is at Mount Gambier.

In 1994 there were approximately 400 people working for CSIRO in South Australia as scientists, technicians, administrative and support staff.

*Horticulture* The Division of Horticulture undertakes production and post-harvest research on Australian horticultural crops of the temperate, subtropical and tropical zones. The aim is to improve quality, efficiency and sustainability of horticultural production on-farm and improve product specification and post-harvest handling off-farm. The Division's work centres around high value crops where maintenance and harvest can be mechanised for maximum efficiency and return to the grower.

Work in the Adelaide laboratory is concentrated on the use of molecular biology for plant improvement and the physiology of the interaction of plants with the environment.

*Human nutrition* The Division of Human Nutrition has its headquarters and main laboratories in the grounds of Adelaide University, and has further facilities at its 'Glenthorne' property at O'Halloran Hill. The Division carries out research into the nutritional factors involved in heart disease, high blood pressure, cancer and obesity. There are also major programs in growth-promoting factors, dietary facts, dietary fibre, and environmental health.

The Division operates on an annual budget of approximately \$8 million, one-third of which is externally sourced. The main client groups are rural industry, research and development corporations, the pharmaceutical and food industries, and public health bodies such as the Anti-Cancer and National Heart Foundations.

*Soils* The Division of Soils has its headquarters in Adelaide, with laboratories in Canberra, Perth and Townsville. It is allied with the SA Research and Development Institute and the University of Adelaide in a Cooperative Research Centre for Soil and Land Management.

### *Manufacturing technology*

The Division of Manufacturing Technology has its headquarters in Preston, Victoria, with laboratories at Woodville North, Lindfield (NSW) and Pinjarra Hills (Qld). The Adelaide laboratory conducts research into joining and fabrication technology, production management systems, and surface engineering.

### *Water resources*

The Division provides public agencies and the private sector with improved methods for the definition, use and management of Australia's water resources. Of particular importance is the maintenance of the quantity and quality of urban, rural and industrial water supplies. The Division's headquarters is in Adelaide, with laboratories in Perth, Griffith and Canberra. Some staff are also based at the Murray Darling Freshwater Research Centre in Albury. The Adelaide laboratory has a close association with the Adelaide-based Centre for Groundwater Studies, and conducts research in a range of groundwater and salinity issues. The laboratory also provides a world class commercial isotope analysis service.

### **DSTO Salisbury**

The Defence Science and Technology Organisation (DSTO) is the research and development arm of the Australian Department of Defence, providing scientific and technological support for the Australian Defence Force (ADF).

The DSTO complex at Salisbury is Australia's largest research centre, specialising in electronics and surveillance. Approximately 1,700 DSTO scientists, engineers and support staff are employed, whilst numerous defence industries and elements of the ADF are also housed on the site.

Research Divisions at Salisbury are the High Frequency Radar; Optoelectronics; Communication; Information Technology; Microwave Radar; Electronic Warfare; and Guided Weapons. They have achieved international acclaim for innovation and research excellence. (DSTO's Melbourne-based Materials Research Laboratory and Aeronautical Research Laboratory also have components based at Salisbury.)

Among the major projects at Salisbury are:

- JINDALEE, the over-the-horizon surveillance radar;
- AUSAR, the synthetic aperture radar;
- LADS, the laser airborne depth sounder;
- NULKA anti-ship missile decoy; and
- KARIWARA, the towed array for detecting submarines.

DSTO transfers technology and development work, to industry and provides strong support to higher education institutions. DSTO technologies also benefit the wider community – LADS discovered a large uncharted shoal, making maritime travel in South Australian waters safer, and the Jindalee radar also provides Customs and Immigration surveillance of Australia's northern shores as well as providing crucial weather predictions for meteorological authorities.

**Department of  
Defence**

*Woomera*

The Woomera Range was established in 1947 as a site for testing experimental ballistic and guided weapons. Defence and other trials, training and exercises are still carried out in the Woomera Prohibited Area although at a much reduced level than in the past. The major activity in Woomera now centres around the Australia/United States Joint Defence Facility, Nurrungar. This facility employs some 500 persons and is part of the US Defence Support Program which provides ballistic missile early warning and other information related to missile launches, surveillance and the detonation of nuclear weapons. The Defence Support Centre Woomera provides a residential and support base for the Joint Defence Facility, Nurrungar, and support to Defence activities at the Woomera Range.

**The Australian  
Wine Research  
Institute**

The Australian Wine Research Institute, established in 1955 from a small research unit formed within the University of Adelaide in 1934, promotes research and other scientific work for the Australian wine industry.

The Institute is administered by a ten-member council consisting of representatives from the Australian wine industry, the Commonwealth Scientific and Industrial Research Organisation, the University of Adelaide, the Charles Sturt University, with the Director of the Institute an ex-officio member. It is funded by the Grape and Wine Research and Development Corporation, income from a trust fund, and commercial activities.

At its laboratories situated at Urrbrae, the Institute conducts applied research into the microbiology and chemistry of the production of wine and brandy. Extension services assist commercial winemakers with technical problems, provide tested yeast and bacterial cultures for wine fermentation and communicate research developments to the wine industry. Analytical services are also offered, for a fee.

The John Fornachon Memorial Library maintained by the Institute is a specialised library of technical literature on wine and grapes.

**MFP  
Development  
Corporation  
(MFP Australia)**

The multi function polis will be a unique community of advanced urban design. MFP Australia is responsible for the development of the project, which was established by the State and Commonwealth Governments in 1991, and which will be implemented progressively over the next 20 to 30 years.

The three major functions of the MFP will be urban development, featuring advanced physical and social design; the restoration and management of the environment of the MFP site and the adjacent marine environment; and investment and creation of jobs, particularly in areas of education, environmental management and information technology, to underpin the economic health of the MFP community.

MFP Australia owns and manages South Australia's two research parks, which have been developed to provide a base for research, and the commercialisation of new technology.

The first stage of the MFP urban development will be on a site which incorporates Technology Park, adjacent to the Levels campus of the University of South Australia. Technology Park provides a focus for companies active in the information technology, telecommunications, electronics and space related projects. It is anticipated that Stage One will be progressively developed over a ten to twelve year period to provide residential accommodation for up to 12,000 people, and on-site employment opportunities for approximately 5,000 people in industrial/commercial and support activities.

Science Park is adjacent to Flinders University, and provides a focus for companies working in health and medical technologies.

### Other research activities

#### *Amdel Limited*

Amdel Limited is involved in mineral technology and materials services. Available services include the design and manufacture of analytical instrumentation, mineral processing testwork at bench and pilot scale, geological services and geoanalytical and environmental analysis. Materials services provided are testing, product and quality control, and failure analysis.

#### *IMVS*

The Institute of Medical and Veterinary Science (IMVS), which is subject to the control and direction of the Minister of Health under the *Institute of Medical and Veterinary Science Act 1982*, provides diagnostic facilities in all branches of laboratory medicine for the Royal Adelaide Hospital and other metropolitan and country hospitals, public health authorities, industry, and private practitioners. It undertakes some work in veterinary pathology for the Department of Primary Industry (SA). Research is conducted into selected problems connected with human disease, particularly biological product development (import replacement and export), and animal stress physiology. The staff of the Institute take part in the teaching of the medical sciences to graduates, students and technicians.

At the Royal Adelaide Hospital the Institute operates a Blood Transfusion Service, and undertakes all required autopsies. Institute medical staff also take an active part in patient care by providing the clinical requirements of certain wards of the Royal Adelaide Hospital. To meet the need for laboratory services and blood transfusions in rural areas, the Institute operates eleven regional laboratories.

The Institute's research and development projects are assisted by the National Health and Medical Research Council, other research-funding bodies, certain private firms and benefactors.

Medvet Science Pty Ltd is the associated private company set up to market the intellectual property of the medical and scientific staff of the IMVS.

The Institute administers the Hanson Centre for Cancer Research. This Centre comprises a series of research laboratories which are shared between the Institute and Royal Adelaide Hospital. The Hanson Centre has been established for the specific purpose of conducting research into various aspects of cancer.

*The University  
of Adelaide*

The University places strong emphasis on research and has the growth of graduate education as a major strategic objective. The research activities of the University attract considerable outside funding in addition to Commonwealth recurrent funding for teaching and research.

All academic staff members are engaged to undertake research. Significant concentrations of research work are to be found in the Co-operative Research Centres for Materials Welding and Joining, Sensor Signal and Information Processing, Soil and Land Management, Tissue Growth and Repair, and Viticulture, Australian Petroleum, New Technologies for Power Generation from Low-rank Coal and the Research Data Network CRC. Examples of other research centres are the Centres for Amphibian Studies, Basic and Applied Plant Molecular Biology and South Australian Economic Studies. Research units include the Dental Statistics and Research Unit, the Research Centre for Women's Studies, the Teletraffic Research Centre and the Road Accident Research Unit.

To encourage technology transfer from the University to the market place, Luminis Pty Ltd was established in 1984 to seek out new opportunities for contract research and consulting.

*Waite Institute  
and Roseworthy  
College*

The Waite Institute, established as a research institute of the University of Adelaide at Urrbrae, and Roseworthy Agricultural College, 50 kilometres north of Adelaide, merged in 1991 to form the Faculty of Agricultural and Natural Resource Sciences of the University of Adelaide.

Among the many research programs currently being undertaken are: case studies of business strategies in agriculture-related industries; the agronomic aspects of minimal tillage and management of legume pastures in rotations; aspects of the physiology, gene mapping and breeding of sheep and cattle; fundamental aspects of the biological control of insects and the resistance of plants to viral, bacterial and fungal infections; weed control; the biota of the arid zone and use of expert systems for the management of rangelands; the domestication of native plants as ornamentals; viticulture and aspects of the chemistry of wines; plant biotechnology and the breeding of wheat, barley and faba beans; soil biology and fertility in relation to land management and many other projects of vital importance to agriculture in Australia and overseas.

The University of Adelaide Waite Campus is the home of the Special Research Centre for Basic and Applied Plant Molecular Biology, the Cooperative Research Centre for Soil and Land Management and the Cooperative Research Centre for Viticulture, together with the main laboratories of the CSIRO Division of Soils, the CSIRO Division of Horticulture, the South Australian Research and Development Institute and the Australian Wine Research Institute, to form an integrated centre of agricultural research and teaching unique in Australia and comparable with major institutions overseas.

*Flinders  
University*

Research is conducted at the University by staff in all four Faculties and in the following specialised research centres: The Flinders Institutes for Atmospheric and Marine Sciences, Atomic Studies, Australasian Geodynamics, the Study of Teaching, the Study of Learning Difficulties and Public Policy and Management; the Centres for Transfusion Medicine and Immunology, Neuroscience, Health Advancement, Plant Membrane Biology, Research in the New Literatures in English, Development Studies, Groundwater Studies, Multicultural Studies, Scandinavian Studies, Ageing Studies, Applied Philosophy, Environment and Sustainable Development, Multimedia Educational Technology, Nursing Research Inc., Sensor Signal and Information Processing, Continuing Education in Nursing and Health, South Australian Centre for Economic Studies, South Australian Centre for Australian Studies, the National Key Centre for Education and Training on Addiction, the Cancer Research Unit, the National Institute of Labour Studies Inc., the Centre for Electronic Structure of Materials, the National Centre for Petroleum Geology and Geophysics (with the Universities of Adelaide and South Australia), the Liver Research Centre, the Pan Pacific Institute, the National Tidal Facility and National Police Research Unit.

Flinders Technologies has been established by Flinders University to develop and market intellectual property and expertise. The company commenced operations in July 1987 and has been running successfully ever since. It has strategic commercial arrangements with other corporations in Australia and overseas, that have led to significant income to the State.

*University of  
South Australia*

The University of South Australia has a strong research base with well established research centres in high technology and applied sciences. It is also fostering significant research in the humanities, social sciences and education. Funding, derived from industry and from the government through the Australian Research Council continued to rise sharply as the reputations of the University's research centres have become more widely recognised in Australia and overseas.

The 75 active research groups in 1993 include the Particle and Surface Technology Research Group, the Digital Communications Group, the Agricultural Machinery Research and Design Centre, the Surface Engineering Research Group, the Aboriginal Research Institute, the Sensor Science Engineering Group, the Centre for Advanced Manufacturing Research Group, the Education and Social Justice Research Group and the Centre for Advanced Biomedical and Pharmaceutical Studies.

The University also participates in two cooperative research centres: The Centre for Sensor Signal and Information Processing and the Australian Petroleum Co-operative Research Centre.

Techsearch, the business development arm of the University, constructively supports, assesses and markets the intellectual products and services of the University within Australia and overseas, provides professional growth opportunities for University staff and initiates infrastructural developments complementing the University's profile. Techsearch promotes the expertise and physical resources of the University.

#### Other bodies

South Australian  
Research and  
Development  
Institute (SARDI)

SARDI, a research and development organisation established by the South Australian Government as a leading focus for economic development, was formed by the amalgamation of the research components of the former Departments of Fisheries, Agriculture, and Woods and Forests. SARDI's charter is to fulfil the needs of primary industries and to ensure its natural resource base is maintained. SARDI's research is applied towards providing practical solutions for South Australia's primary industries.

The current research areas in SARDI are aquatic science (fisheries, aquaculture, ecological and environmental studies of aquatic habitats and oceanography); crops (cereal and grain legume breeding, weeds, pathology and crop evaluation, and agronomy); pastures (breeding, agronomy, and soil and land management); livestock (sheep, dairy, beef, pigs and poultry); and horticulture.

Department of  
Primary Industries  
(SA) - Forestry

The commercial forest industries in South Australia are mostly dependent on a single softwood species. This necessitates continued research into the sustainability and long-term improvement of *Pinus radiata* plantation resources, and forestry in general, in ways that are cost-efficient as well as sound ecologically and has undertaken research for private industry and government agencies. The Group maintains a research team of forest scientists and technicians who specialise in applied research and who cooperate in technology transfer. Research will eventually be directed from the South Australian Research and Development Institute, formed in 1993. The team has worked closely with the CSIRO Division of Forestry, Plantation Forestry Research Station at Mount Gambier for more than 50 years.

The Group has followed a holistic approach and cooperative research is undertaken with external research agencies. The Group participates in research into advanced generation breeding of pine and eucalypt species coordinated by the Southern Tree Breeding Association, the national tree breeding cooperative, of which the Group, as the Woods and Forests Department, was a founder member. The Group has expertise in the determination of breeding values for milling and wood quality characteristics of timber products.

Forestry research aims to increase the productivity of commercial plantations through practical, cost-effective methods which, through site-specific application, achieve ecologically sustainable development of the natural resource.

Other research is directed at forestry practices needed for environmental protection and management practices able to maintain or enhance the integrity and biodiversity of native forest reserves. A recent innovation has been to conduct research into the growth and suitability of native hardwood species suited to the disposal or re-use of effluent waste waters and the production of commercial timbers, mainly in the semi-arid zone of the State.

Australian Centre  
for Medical Laser  
Technology Inc.

The Australian Centre for Medical Laser Technology Inc., an independent, non-profit organisation, is Australia's first national medical laser centre which aims to establish national training programs, provide information on the research and development of new technologies and their applications, and accreditation facilities.

As well as working with major hospitals throughout Australia and the University of South Australia, the Australian Centre for Medical Laser Technology is also a collaborative centre of the Australian Institute of Health.

**Expenditure on  
research and  
experimental  
development**

The United Nations Organisation of Economic Cooperation and Development defines Research and Development as comprising creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications. The Australian Bureau of Statistics follows these guidelines, and provides comprehensive data on research and experimental development activities through the publications listed at the end of this chapter.

In 1992-93 total research and development expenditure in South Australia for all industries except agriculture was \$147.6 million, with the private sector contribution being 93.7 per cent of the total. Research and development expenditure in manufacturing was \$110.1 million.



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Department of  
Primary Industries  
(SA) - Forestry

The commercial forest industries in South Australia are mostly dependent on a single softwood species. This necessitates continued research into the sustainability and long-term improvement of *Pinus radiata* plantation resources, and forestry in general, in ways that are cost-efficient as well as sound ecologically and has undertaken research for private industry and government agencies. The Group maintains a research team of forest scientists and technicians who specialise in applied research and who cooperate in technology transfer. Research will eventually be directed from the South Australian Research and Development Institute, formed in 1993. The team has worked closely with the CSIRO Division of Forestry, Plantation Forestry Research Station at Mount Gambier for more than 50 years.

The Group has followed a holistic approach and cooperative research is undertaken with external research agencies. The Group participates in research into advanced generation breeding of pine and eucalypt species coordinated by the Southern Tree Breeding Association, the national tree breeding cooperative, of which the Group, as the Woods and Forests Department, was a founder member. The Group has expertise in the determination of breeding values for milling and wood quality characteristics of timber products.

Forestry research aims to increase the productivity of commercial plantations through practical, cost-effective methods which, through site-specific application, achieve ecologically sustainable development of the natural resource.

Other research is directed at forestry practices needed for environmental protection and management practices able to maintain or enhance the integrity and biodiversity of native forest reserves. A recent innovation has been to conduct research into the growth and suitability of native hardwood species suited to the disposal or re-use of effluent waste waters and the production of commercial timbers, mainly in the semi-arid zone of the State.

Australian Centre  
for Medical Laser  
Technology Inc.

The Australian Centre for Medical Laser Technology Inc., an independent, non-profit organisation, is Australia's first national medical laser centre which aims to establish national training programs, provide information on the research and development of new technologies and their applications, and accreditation facilities.

As well as working with major hospitals throughout Australia and the University of South Australia, the Australian Centre for Medical Laser Technology is also a collaborative centre of the Australian Institute of Health.

**Expenditure on  
research and  
experimental  
development**

The United Nations Organisation of Economic Cooperation and Development defines Research and Development as comprising creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications. The Australian Bureau of Statistics follows these guidelines, and provides comprehensive data on research and experimental development activities through the publications listed at the end of this chapter.

In 1992-93 total research and development expenditure in South Australia for all industries except agriculture was \$147.6 million, with the private sector contribution being 93.7 per cent of the total. Research and development expenditure in manufacturing was \$110.1 million.

## 8.1 EMPLOYMENT

**The labour force**

Particulars of the number of persons who constitute the labour force in South Australia are available from periodic population censuses. For the 1986 Census the definition of the labour force was revised to accord with the recommendations of the Thirteenth International Conference of Labour Statisticians (1982), and the revised approach was adopted for the monthly labour force survey.

**Labour Force Survey**

In addition to complete census counts, estimates of the civilian labour force are prepared from the results of surveys based on a sample of dwellings throughout Australia. These surveys began in 1960 on a quarterly basis and were initially confined to the six State capital cities, but in 1964 were extended to include non-metropolitan urban and rural areas, thereby enabling derivation of estimates of the total civilian labour force in Australia. From February 1978, the surveys have been conducted on a monthly basis. The proportion of the population included in the surveys varies from State to State (approximately 0.7 per cent in South Australia) but in aggregate about 0.5 per cent of the Australian population is included.

Labour Force Status of the Civilian Population  
Aged 15 Years and Over

May (a)	Employed '000	Unem- ployed '000	Labour force '000	Not in labour force '000	Civilian popu- lation aged 15 years and over '000	Unem- ployment rate (b) per cent	Partici- pation rate (c) per cent
MALES							
1989 .....	375.9	32.8	408.7	139.9	548.6	8.0	74.5
1990 .....	386.0	30.0	416.0	138.6	554.7	7.2	75.0
1991 .....	373.3	40.5	413.8	146.6	560.5	9.8	73.8
1992 .....	359.5	53.8	413.3	152.3	565.6	13.0	73.1
1993 .....	366.7	48.5	415.2	153.3	568.5	11.7	73.0
1994 .....	363.8	43.8	407.6	164.3	571.9	10.7	71.3

**Further  
references**

Additional information may be found in the following publications.

- 8104.0 *Research and Experimental Development, Business Enterprises, Australia*
- 8109.0 *Research and Experimental Development, General Government and Private Non-profit Organisations, Australia*
- 8111.0 *Research and Experimental Development, Higher Education Organisations, Australia*
- 8112.0 *Research and Experimental Development, All-Sector Summary, Australia*
- 8114.0 *Research and Experimental Development, Business Enterprises (Inter Year Survey), Australia*
- 8122.0 *Research and Experimental Development, All-Sector Summary, Australia (Inter Year Survey)*

Labour Force Status of the Civilian Population  
Aged 15 Years and Over (continued)

May (a)	Employed '000	Unem- ployed '000	Labour force '000	Not in labour force '000	Civilian popu- lation aged 15 years and over '000	Unem- ployment rate (b) per cent	Partici- pation rate (c) per cent
FEMALES							
1989 .....	268.3	21.6	289.9	279.4	569.3	7.5	50.9
1990 .....	272.5	21.2	293.7	282.2	575.8	7.2	51.0
1991 .....	275.6	27.4	303.0	279.2	582.2	9.0	52.9
1992 .....	264.8	32.2	297.0	290.0	587.0	10.8	50.6
1993 .....	271.3	26.1	297.4	292.6	590.0	8.8	50.4
1994 .....	274.3	31.0	305.3	287.8	593.1	10.2	51.5
PERSONS							
1989 .....	644.3	54.4	698.7	419.3	1,117.9	7.8	62.5
1990 .....	658.5	51.2	709.7	420.8	1,130.5	7.2	62.8
1991 .....	648.9	67.9	716.8	425.8	1,142.6	9.5	62.7
1992 .....	624.3	86.0	710.3	442.3	1,152.6	12.1	61.6
1993 .....	638.0	74.6	712.6	445.9	1,158.5	10.5	61.5
1994 .....	638.1	74.8	712.9	452.2	1,165.0	10.5	61.2

(a) Data have been revised back to 1989 to incorporate results from the 1991 Census. (b) The unemployment rate for any group is the number unemployed expressed as a percentage of the labour force (i.e. employed plus unemployed) in the same group. (c) The labour force participation rate for any group is the civilian labour force expressed as a percentage of the civilian population aged 15 years and over in the same group.

Statistics obtained from the surveys include numbers employed and unemployed; labour force participation and unemployment rates; duration of unemployment; reasons for working less than 35 hours per week; and age, birthplace, family status, occupation and industry characteristics.

A revised definition of employed persons was introduced from April 1986. It includes all persons aged 15 years and over who during the survey week worked for one hour or more without pay in a family business or on a farm (i.e. unpaid family helpers), whereas before April 1986 only those working 15 hours or more in the survey week were included.

Employed Persons : Status of Worker  
( '000)

May (a)	Wage and salary earners			Employers and self-employed		
	Males	Females	Persons	Males	Females	Persons
1989 .....	307.4	231.4	538.8	64.8	34.3	99.1
1990 .....	318.1	234.1	552.1	66.0	34.8	100.8
1991 .....	300.7	236.0	536.7	68.4	35.8	104.2
1992 .....	286.2	228.0	514.2	70.1	32.4	102.5
1993 .....	287.5	232.7	520.2	75.0	35.0	110.0
1994 .....	291.5	232.3	523.8	68.9	37.0	105.9

(a) Data have been revised back to 1989 to incorporate results from the 1991 Census.

The following table shows employed persons classified according to the Australian Standard Classification of Occupations (ASCO), which was introduced in the August 1986 Labour Force Survey. The structure of ASCO is based on the type of work performed and is defined in terms of skill level and specialisation. The classification is broken down into major group, minor group, unit group and individual occupation levels.

Employed Persons : Major Occupation Groups, May 1994

Major occupation groups (a)	Persons			
	Males	Females	Number	Proportion of total
	'000	'000	'000	per cent
Managers and administrators . . . . .	63.0	24.0	87.0	13.6
Professionals . . . . .	46.3	31.8	78.1	12.2
Para-professionals . . . . .	21.5	19.1	40.6	6.4
Tradespersons . . . . .	83.0	12.6	95.6	15.0
Clerks . . . . .	19.8	73.2	93.0	14.6
Sales and personal service workers . . . . .	29.9	68.5	98.3	15.4
Plant and machine operators and drivers . . . . .	40.5	5.9	46.4	7.3
Labourers and related workers . . . . .	59.9	39.3	99.1	15.5
<b>Total</b> . . . . .	<b>363.8</b>	<b>274.3</b>	<b>638.1</b>	<b>100.0</b>

(a) Classified according to the Australian Standard Classification of Occupations.

'Industry' refers to the branch of productive activity, trade or service in which an individual works or carries out an occupation. The Australian Standard Industrial Classification (ASIC), designed primarily as a system for classifying establishments (*e.g.* individual mines, factories, shops etc.) by industry, is used to classify persons in the labour force survey by the industry in which they are employed, as shown in the following table.

Employed Persons : Industry, May 1994

Industry	Persons			
	Males	Females	Number	Proportion of total
	'000	'000	'000	per cent
Agriculture, forestry, fishing etc. . . . .	35.1	16.4	51.5	8.1
Mining . . . . .	5.6	(a)0.4	6.0	0.9
Manufacturing . . . . .	79.3	22.4	101.7	15.9
Electricity, gas and water . . . . .	5.4	(a)0.6	6.0	0.9
Construction . . . . .	27.1	4.3	31.3	4.9
Wholesale and retail trade . . . . .	71.9	62.5	134.4	21.1
Transport and storage . . . . .	22.0	5.9	27.9	4.4
Communication . . . . .	6.5	2.4	8.9	1.4
Finance, business services etc. . . . .	31.3	28.0	59.3	9.3
Public administration, defence . . . . .	11.0	10.9	21.8	3.4
Community services . . . . .	46.6	92.8	139.3	21.8
Recreation, personal services etc. . . . .	22.0	27.8	49.8	7.8
<b>Total</b> . . . . .	<b>363.8</b>	<b>274.3</b>	<b>638.1</b>	<b>100.0</b>

(a) Subject to sampling variability too high for most practical uses.

The following table provides figures for the labour force and participation rates by age group for males and females. Further details may be obtained from the following bulletins: *The Labour Force, Australia, Preliminary* (6202.0); *The Labour Force, Australia* (6203.0).

## Civilian Labour Force : Age Group, May 1994

Age group (years)	Number ('000)			Participation rate (a) (per cent)		
	Males	Females	Persons	Males	Females	Persons
15-19 .....	27.0	25.3	52.3	52.9	52.2	52.6
20-24 .....	49.9	41.2	91.0	87.0	74.7	81.0
25-34 .....	106.9	75.7	182.7	93.2	66.8	80.1
35-44 .....	101.6	83.4	185.0	91.9	75.1	83.5
45-54 .....	77.3	58.5	135.9	87.2	67.0	77.2
55-59 .....	25.2	13.8	38.9	76.5	41.7	59.1
60-64 .....	13.3	4.9	18.2	43.2	15.6	29.3
65 and over .....	6.4	2.5	8.9	7.5	2.2	4.5
<b>Total labour force ..</b>	<b>407.6</b>	<b>305.3</b>	<b>712.9</b>	<b>71.3</b>	<b>51.5</b>	<b>61.2</b>

(a) The participation rate for any group is the civilian labour force expressed as a percentage of the civilian population aged 15 years and over in the same group.

## Special studies

A supplementary survey seeking information about educational attainment was run in association with the February 1993 labour force survey. Similar surveys have been conducted annually since February 1979. Some of the results of the supplementary survey were published in *Labour Force Status and Educational Attainment, Australia, February 1993* (6235.0). The information sought included field of study, year and country in which highest qualification obtained, type of institution attended and whether attendance was for the full academic year.

## Educational Attainment : Persons Aged 15 to 69, February 1993

Educational attainment	Employed	Unemployed	Total civilian population	Unemploy- ment rate per cent
With post-school qualifications: .....	321,754	34,143	428,839	9.6
Degree .....	73,753	6,644	88,575	8.3
Trade .....	102,955	10,670	138,442	9.4
Certificate or diploma .....	141,934	15,796	196,660	10.0
Other .....	3,112	(a)1,033	5,163	(a)24.9
Without post-school qualifications: .....	308,855	50,584	555,460	14.1
Attended the highest level of secondary school available .....	103,215	19,235	157,642	15.7
Did not attend the highest level of secondary school available; .....	205,368	31,349	396,286	13.2
Left at age,				
18 years and over .....	2,516	(a)724	5,613	(a)22.4
17 years .....	17,984	3,110	27,662	14.7
16 years .....	67,889	9,402	104,778	12.2
15 years .....	76,275	11,000	139,582	12.6
14 years .....	26,183	5,030	79,506	16.1
13 years and under .....	14,520	(a)2,083	39,154	(a)12.5
Never attended school .....	(a)272	(a)	(a)1,533	(a)
Still at school .....	9,625	3,687	44,959	27.1
<b>Total .....</b>	<b>640,234</b>	<b>88,414</b>	<b>1,029,259</b>	<b>12.1</b>

(a) Subject to sampling variability too high for most practical uses.

There were 1,029,259 persons aged 15 to 69 in South Australia in February 1993 and 428,839 (41.7%) possessed a post-school qualification. The highest proportion of persons with these qualifications possessed a certificate or diploma (45.9%) followed by persons with trade qualifications (32.3%) and persons with a degree (20.7%).

**Employed wage and salary earners**

In the September quarter of 1983 a quarterly Survey of Employment and Earnings was introduced to obtain information from employers on the numbers of wage and salary earners employed each month and their quarterly earnings. (The earnings data is input into the estimates of national income for the quarterly Australian National Accounts.) The series provides a measure of occupied jobs with no adjustment for multiple job holding.

Employed Wage and Salary Earners  
('000)

May	Industry				Sector		
	Manufac- turing	Wholesale and retail trade	Community services	Other	Government		Private
					Common- wealth	State	
MALES							
1988 . . . .	73.2	53.7	42.2	113.0	25.9	55.0	195.2
1989 . . . .	76.7	56.7	41.0	113.6	23.3	55.3	203.6
1990 . . . .	76.1	53.3	44.7	115.0	22.8	56.0	204.3
1991 . . . .	72.7	51.7	45.6	111.3	20.6	54.7	199.9
1992 . . . .	67.5	51.6	44.3	102.0	19.3	53.1	186.6
1993 . . . .	67.2	50.8	43.4	96.1	17.6	51.9	181.5
FEMALES							
1988 . . . .	24.2	46.9	73.2	66.2	9.5	52.1	146.4
1989 . . . .	26.6	54.0	77.0	67.4	9.6	52.8	160.0
1990 . . . .	25.8	51.2	82.1	71.3	10.0	55.5	162.3
1991 . . . .	25.8	52.8	87.7	71.0	10.2	57.0	167.4
1992 . . . .	23.4	44.4	80.3	67.7	9.4	54.7	148.8
1993 . . . .	19.2	43.2	88.6	63.3	9.1	56.3	145.9
PERSONS							
1988 . . . .	97.4	100.6	115.4	179.2	35.4	107.1	341.7
1989 . . . .	103.2	110.7	118.0	181.0	33.0	108.1	363.6
1990 . . . .	101.9	104.5	126.8	186.3	32.8	111.5	366.6
1991 . . . .	98.4	104.5	133.3	182.3	30.8	111.8	367.4
1992 . . . .	91.0	95.9	124.6	169.7	28.7	107.8	335.4
1993 . . . .	86.4	93.9	132.0	159.4	26.7	108.2	327.4

The survey covers a sample of private employers and government units. Not all employer groups are covered; the principal exclusions are private employers engaged in agriculture, forestry, fishing and hunting, private households and the permanent defence forces. For further information see *Employed Wage and Salary Earners, Australia* (6248.0).



## Unemployment

Labour force  
surveys

For the purpose of the survey, unemployed persons are those aged 15 years and over who were not employed during the survey week and:

- (a) had actively looked for full-time or part-time work at any time in the four weeks up to the end of the survey week and;
- (i) were available for work in the survey week, or would have been available except for temporary illness (*i.e.* lasting for less than four weeks to the end of the survey week); or
- (ii) were waiting to start a new job within four weeks from the end of the survey week and would have started in the survey week if the job had been available then; or
- (b) were waiting to be called back to a full-time or part-time job from which they had been stood down without pay for less than four weeks up to the end of the survey week (including the whole of the survey week) for reasons other than bad weather or plant break-down.

May (a)	Unemployed Persons				
	Looking for full-time work			Looking for part-time work	Total
	Aged 15-19 years	Aged 20 years and over	Total		
NUMBER ('000)					
1989	8.3	37.2	45.4	9.0	54.4
1990	8.8	32.5	41.3	9.9	51.2
1991	9.2	48.9	58.1	9.8	67.9
1992	12.6	63.0	75.6	10.4	86.0
1993	9.7	52.6	62.3	12.3	74.6
1994	11.3	51.3	62.6	12.2	74.8
UNEMPLOYMENT RATE (per cent) (a)					
1989	17.4	7.6	8.4	5.6	7.8
1990	21.4	6.5	7.6	6.0	7.2
1991	27.5	9.7	10.8	5.4	9.5
1992	44.7	12.5	14.2	5.8	12.1
1993	35.3	10.4	11.7	6.8	10.5
1994	40.6	10.3	11.9	6.6	10.5

(a) Data have been revised back to 1989 to incorporate results from the 1991 Census. (b) The unemployment rate for any group is the number unemployed expressed as a percentage of the labour force (*i.e.* employed plus unemployed) in the same group.

Further details may be obtained from the following bulletins: *The Labour Force, Australia, Preliminary* (6202.0); *The Labour Force, Australia* (6203.0).

## Job vacancies

Estimates of the number of job vacancies are derived from quarterly sample surveys of employers conducted by telephone. Detailed figures can be found in *Job Vacancies and Overtime, Australia* (6354.0).

**Employment services**

The Commonwealth Employment Service (CES), administered by the Department of Employment, Education and Training (DEET), assists people seeking employment to obtain positions best suited to their training, experience, abilities and qualifications and assists employers seeking labour to obtain employees best suited to the demands of the employers' particular class of work. DEET has a wide range of labour market and training programs which have been developed to meet these objectives.

The State Government is also involved directly in employment and training programs designed to alleviate unemployment. The Commission for Public Employment is responsible for developing and administering some of these schemes. There are also a number of private employment agencies, all of which are required to register with the Commission.

## 8.2 INDUSTRIAL RELATIONS

In Australia a unique system of conciliation and arbitration by Government tribunals has been developed, with the Commonwealth and the State Parliaments each passing their own industrial legislation.

Under Section 51 of the Constitution, the Commonwealth Parliament may make laws in relation to 'conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one State'. The *Industrial Relations Act 1988* (Cwlth) is binding only on the parties to a dispute and decisions need not be of general application to an industry.

Employees not specifically covered by Federal awards are subject to State industrial jurisdiction, but where an award or determination of a State industrial tribunal is inconsistent with an award of a Federal tribunal the latter prevails to the extent of the inconsistency.

**Industrial tribunals**

The Australian Industrial Relations Commission makes determinations on standard hours, national wage cases, equal pay principles and leave.

The South Australian legislation governing State intervention in industrial relations is the *Industrial and Employees Relations Act (South Australia) 1994* which provides for an Industrial Relations Court, an Industrial Relations Commission and an Independent Employee Ombudsman.

Major features of the new *Industrial and Employees Relations Act (South Australia) 1994* include:

- provisions for enterprise agreements, with award conditions as a safety net;

- provisions for enterprise agreements to be formed without union participation;
- the maintenance of the award system as an alternative to enterprise agreements, with provisions for updates every three years;
- restructuring of the Industrial Relations Commission, including a new Enterprise Agreement Commissioner;
- a new Independent Employee Ombudsman; and
- prohibition of compulsory unionism, 'closed shop' practices and preference to union members in the workplace.

Further details regarding State industrial tribunals may be found in the annual reports of the Industrial Relations Commission and the Industrial Relations Court.

#### Employee associations

At 30 June 1993 there were 68 separate unions with a total membership of 294,000 operating in South Australia. Although a number of unions exist only in this State, branches of interstate or federated unions account for the majority of total membership. The central labour organisation for the State is the United Trades and Labor Council of South Australia, founded in 1884.

At 30 June	Trade Unions					
	Members			Proportion of members to total employees		
	Males	Females	Persons	Males	Females	Persons
	'000	'000	'000	per cent	per cent	per cent
1988 .....	183.9	95.3	279.2	63	41	55
1989 .....	187.3	110.6	297.9	63	48	57
1990 .....	189.4	114.8	304.3	63	49	57
1991 .....	186.8	119.2	306.0	64	50	58
1992 .....	176.8	120.4	297.2	64	55	60
1993 .....	174.6	119.3	294.0	66	55	61

Further details are contained in the bulletin *Trade Union Statistics, Australia* (6323.0).

#### Employer associations

At the end of December 1992 there were 18 associations of employers registered with the South Australian Industrial Court and Commission. In industrial matters four are dominant:

- (a) the Chamber of Commerce and Industry (SA) Inc. has individual members who subscribe directly to the Chamber for the industrial and other services provided. Where appropriate, members are grouped into trade associations. The Chamber's industrial advocates represent members in the making and variation of awards, and assist members in the settlement of disputes. The Chamber monitors Bills presented to the Parliaments and, where appropriate, makes representations on behalf of its members seeking amendments to legislation;
- (b) the Engineering Employers Association, South Australia, represents the varied interests of the State's metal and engineering industry in all facets of industrial relations, education and training (including a group apprenticeship scheme), trade, economic and legislative matters;
- (c) the Motor Trade Association of SA Inc. is an industrial organisation aimed at representing the interests of employers in the motor industry, both in the retail sector and in the distribution and manufacturing sectors; and
- (d) the South Australian Employers' Federation Inc. is an industrial relations oriented employer body which provides advice and representation to employers engaged in all facets of South Australian industry.

**Industrial disputes**

Estimates of industrial disputes are compiled from data obtained from employers, trade unions and government authorities. The statistics relate only to disputes involving stoppages of work of ten work days or more at the establishments where the stoppages occurred.

Year ended 31 December	Industrial Disputes			
	Disputes	Employees involved	Working days lost	
			Total	Per thousand employees
No.	'000	'000	No.	
1988 .....	87	39.9	47.0	93
1989 .....	68	37.4	35.0	67
1990 .....	53	73.8	125.8	236
1991 .....	67	34.9	59.3	112
1992 .....	32	23.2	12.2	25
1993 .....	38	21.7	25.6	53

Particulars of all disputes in progress during the year are included in the annual figures. Consequently, details of the number of disputes and of workers involved in the disputes which commenced in any year, and were still in progress during the following year are included in the figures for both years. Working days lost are included in the appropriate year. Employees involved in more than one dispute during the year are counted once for each dispute. Employees laid off at the establishment where the stoppages occurred, but who are not themselves parties to the dispute, are included.

Estimates of working days lost per thousand employees are calculated using estimates of employees from the Survey of Employment and Earnings, combined with estimates of employees in agriculture and in private households from the Labour Force Survey, to derive the denominator. Because of difficulties in identifying all participants in each dispute the statistics should be regarded as giving only a broad measure of the extent of work stoppages. For more information, see *Industrial Disputes, Australia* (6322.0).

### 8.3 WAGES, HOURS AND LABOUR COSTS

#### Wages

The Industrial Relations Commission, previously the Industrial Commission of South Australia, has for many years granted flow-ons of the National determination to State awards, largely using the Australian Industrial Relations Commission guidelines but with special provisions to allow for South Australian situations. Some details for recent years may be found in the annual reports of the former Industrial Court and Commission of South Australia and for earlier years on pages 302–3 of the *South Australian Year Book 1984*.

Award rates of pay indexes are produced for full-time adult wage and salary earners whose minimum rates of pay are normally varied in accordance with awards, determinations and collective agreements. The indexes are constructed for males and females separately and are based on minimum weekly and hourly award rates. They measure only the relative trends in award rates and have a base of 100.0 at June 1985. They do not reflect any subsequent effects of compositional changes in the labour force or in industry structure. Payments specified under enterprise bargaining agreements are excluded from the compilation of these indexes. For more information, see *Award Rates of Pay Indexes, Australia* (6312.0).

Index of Weekly Award Rates of Pay : Full-time Adult Employees, Industry  
(Base of Index: June 1985 = 100.0)

Industry	April 1993	April 1994
MALES		
Mining . . . . .	136.5	138.8
Manufacturing: . . . . .	144.8	147.1
Food, beverages and tobacco . . . . .	146.8	150.7
Metal products, machinery and equipment . . . . .	142.5	144.3
Transport equipment . . . . .	139.7	140.4
Other manufacturing (a) . . . . .	147.4	149.9
Construction . . . . .	140.4	144.8
Wholesale trade . . . . .	146.5	149.9
Retail trade . . . . .	154.7	161.0
Finance, property and business services . . . . .	138.5	138.7
Community services . . . . .	140.9	141.2
All industries (b) . . . . .	142.3	144.3

Index of Weekly Award Rates of Pay : Full-time Adult Employees, Industry  
(continued)  
(Base of Index: June 1985 = 100.0)

Industry	April 1993	April 1994
FEMALES		
Manufacturing: . . . . .	146.6	149.7
Food, beverages and tobacco . . . . .	143.9	146.9
Metal products, machinery and equipment . . . . .	147.1	150.1
Other manufacturing . . . . .	147.3	149.7
Wholesale trade . . . . .	153.4	156.7
Retail trade . . . . .	152.1	155.2
Finance, property and business services . . . . .	146.3	147.9
Community services . . . . .	142.7	143.0
All industries (b) . . . . .	145.6	147.3

(a) Includes wood, wood products and furniture, non-metallic mineral products and miscellaneous manufacturing. (b) Excludes employees in agriculture, forestry, fishing and hunting and in private households.

## Earnings

The principal measure of earnings of employees is the quarterly average weekly earnings series. This sample survey of employers collects information on earnings in respect of a specified pay week generally at or about the middle of each quarter. Average weekly ordinary time earnings refers to one week's earnings attributable to award, standard or agreed hours of work. It is calculated before taxation and other deductions and includes over-award and penalty pay, shift and other allowances, commissions, retainers and bonus payments.

Average Weekly Earnings of Employees  
(Dollars)

Period	Males			Females		
	Full-time adults			Full-time adults		
	Ordinary time	Total	All males	Ordinary time	Total	All females
November 1992 . . . . .	610.30	647.60	547.10	532.80	543.90	377.00
February 1993 . . . . .	610.10	648.50	559.50	533.30	543.90	381.60
May . . . . .	610.00	645.10	565.50	543.70	557.10	385.30
August . . . . .	631.00	673.30	599.70	546.90	559.50	394.20
November . . . . .	626.50	667.10	583.50	543.20	554.90	386.70
February 1994 . . . . .	619.90	665.30	601.30	548.80	558.80	405.50

Weekly total earnings is weekly ordinary time earnings plus weekly over-time earnings. Changes in the average may be affected by changes in the level of earnings of employees and also by changes in the composition of the labour force, such as variations in the proportion of part-time or junior employees and in the occupational distribution.

A second measure of average weekly earnings is obtained from the employer based Survey of Employee Earnings and Hours which has been conducted in May of each year since 1974, except in 1982 and 1984.

The survey provides a measure of the size of and movements in the various components of earnings (*i.e.* award and over-award pay, overtime pay and payment by measured result) and in earnings by occupation. It also produces median earnings (the level where half of recipients receive less and half receive more) for many different groupings of employees as well as data on average hourly earnings and a distribution of employees by levels of earnings. For more information on the survey, see *Distribution and Composition of Earnings and Hours of Employees, Australia (6306.0)*.

A third source of data on average weekly earnings of employed wage and salary earners is an annual household based survey conducted each August in conjunction with the labour force survey.

It is a second source of distribution of earnings data, with variables such as age and industry being available. However, weekly earnings refer to the amount of 'last total pay' (or weekly equivalent) prior to the interview with no adjustment being made for any back pay or prepayment. For more information, see *Weekly Earnings of Employees (Distribution), Australia (6310.0)*.

Distribution of Weekly Earnings in All Jobs

Weekly earnings	Males			Females		
	July 1991	August 1992	August 1993	July 1991	August 1992	August 1993
	PER CENT					
Under \$160 . . . . .	6.2	7.0	5.3	20.0	19.6	15.7
\$160 and under \$240 . . .	4.6	3.4	4.2	11.6	12.2	10.8
\$240 and under \$320 . . .	7.3	6.6	5.0	14.7	13.1	11.6
\$320 and under \$400 . . .	14.8	13.4	11.4	17.5	16.3	17.0
\$400 and under \$480 . . .	18.5	18.1	15.6	14.6	16.1	15.1
\$480 and under \$560 . . .	17.0	16.6	16.8	9.6	9.7	12.1
\$560 and under \$640 . . .	8.4	9.8	12.0	4.5	5.1	6.9
\$640 and under \$720 . . .	6.2	7.4	7.5	3.0	2.9	3.6
\$720 and over . . . . .	17.0	17.7	22.3	4.4	5.1	7.2
<b>Total . . . . .</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
	DOLLARS					
Mean weekly earnings . . .	506.00	521.10	551.90	344.80	350.80	385.50

#### Hours of work

The following table shows the relative distribution of employed persons in South Australia according to the number of hours worked in a specified week, as recorded in the May labour force surveys.

The distribution is based on actual hours worked in all jobs including overtime, rather than hours paid for, and is therefore affected by public holidays, leave, absenteeism, temporary absence from work because of sickness, accident and industrial disputes, and work stoppages caused by plant breakdowns and weather.

Employed Persons : Hours Worked<sup>(a)</sup>

May (b)	Percentage who worked the following hours in the specified week							Total
	0	1-29	30-34	35-39	40	41-48	49 and over	
1989 .....	5.0	21.8	7.3	19.8	16.9	13.1	16.1	100.0
1990 .....	4.8	23.2	6.7	21.1	14.4	13.2	16.5	100.0
1991 .....	4.9	24.6	7.3	18.4	14.8	12.9	17.1	100.0
1992 .....	4.3	25.6	7.5	18.6	14.5	11.5	18.0	100.0
1993 .....	4.3	24.1	8.1	18.6	14.0	11.4	19.5	100.0
1994 .....	4.0	25.1	7.0	17.9	14.7	12.4	18.9	100.0

(a) Employed civilian population, fifteen years of age and over. (b) Data have been revised to incorporate results from the 1991 Census.

## Overtime

Information about overtime hours worked is obtained from a quarterly sample survey of employers. For the purposes of the survey, 'overtime' is time worked in excess of award, standard or agreed hours of work for which payment is received. Excluded is any overtime for which employees would not receive payment, e.g. unpaid overtime worked by managers, normal shiftwork and standard hours paid at penalty rates. Overtime hours represent the number of hours for which overtime is paid.

## Overtime

May	Average weekly overtime hours				Percentage of employees in the survey working overtime	
	Per employee in the survey		Per employee working overtime		Per cent	Standard error
	Hours	Standard error	Hours	Standard error		
1989 .....	1.12	0.06	6.83	0.20	16.45	0.74
1990 .....	1.24	0.09	6.83	0.40	18.10	1.08
1991 .....	0.99	0.12	6.50	0.57	15.19	1.05
1992 .....	0.87	0.10	5.63	0.22	15.40	1.50
1993 .....	0.96	0.07	5.65	0.24	16.92	1.06
1994 .....	0.98	0.08	5.65	0.19	17.33	1.21

For more information see *Job Vacancies and Overtime, Australia* (6354.0).



**Labour costs**

A comprehensive Survey of Labour Costs has been conducted by the ABS since 1985-86. This two-part survey of employers measures costs incurred in employing labour, and amounts paid for time worked and not worked. Included are details of annual leave, sick leave, long service leave, infrequent bonuses, public holidays and total hours paid. The other part of the survey measures the 'labour costs' to employers of gross wages and salaries, payroll tax, workers' compensation payments, contributions for superannuation and fringe benefits tax.

## Major Labour Costs

Type of cost	1990-91		1991-92	
	Private	Public	Private	Public
AVERAGE COSTS PER EMPLOYEE (Dollars)				
Earnings .....	22,868	29,175	23,877	31,320
Other labour costs: .....	2,761	3,778	2,885	4,302
Superannuation .....	913	1,890	972	2,193
Payroll tax .....	868	1,070	922	1,246
Workers compensation .....	820	712	817	730
Fringe benefits tax .....	161	106	174	134
<b>Labour costs .....</b>	<b>25,629</b>	<b>32,953</b>	<b>26,762</b>	<b>35,622</b>
AS A PERCENTAGE OF TOTAL LABOUR COSTS				
Earnings .....	89.2	88.5	89.2	87.9
Other labour costs: .....	10.8	11.5	10.8	12.1
Superannuation .....	3.6	5.7	3.6	6.2
Payroll tax .....	3.4	3.2	3.4	3.5
Workers compensation .....	3.2	2.2	3.1	2.0
Fringe benefits tax .....	0.6	0.3	0.7	0.4
<b>Labour costs .....</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Superannuation Costs<sup>(a)</sup>

Particulars	1990-91		1991-92	
	Private	Public	Private	Public
Percentage of employees covered	70.3	70.9	97.9	98.7

(a) For further information see *Labour Costs, Australia* (6348.0).

Note: Due to the different funding arrangements adopted in the private and public sectors, estimates of superannuation are not directly comparable between the two sectors.

**Holidays and leave***Public holidays*

A number of days are observed each year throughout the State as public holidays and additional days may be proclaimed either on a State-wide or regional basis. Authorised public holidays are:

New Year's Day (1 January or the following Monday if  
that day falls on a Saturday or Sunday),

Australia Day (first Monday after 25 January),  
Good Friday,  
Easter Saturday,  
Easter Monday,  
Anzac Day (25 April or the following Monday if 25 falls  
on a Sunday),  
Adelaide Cup Day (third Monday in May),  
Queen's Birthday (second Monday in June),  
Labour Day (first Monday in October),  
Christmas Day (25 December or the following Monday  
if 25 falls on a Saturday or Sunday), and  
Proclamation Day (28 December or the following Mon-  
day if 28 falls on a Saturday or Sunday).

*Annual leave*

Under Federal awards four weeks paid annual leave is generally granted to employees who have completed twelve months continuous service and this has flowed on to most State awards. Certain employees in special occupations or where regular shift work is involved *e.g.* police officers, nurses etc. are entitled to annual leave in excess of four weeks. In 1973 the South Australian Industrial Commission handed down a decision which enabled part-time workers, when taking annual leave, to be paid the normal weekly wage that they would have received had they been at work.

Payment in lieu of annual leave or proportionate leave on termination of employment must be made to all employees, whether subject to an award or not, irrespective of the reason for, or manner of, termination of the employment.

*Sick leave*

The *Industrial and Employees Relations (South Australia) Act 1994* provides that all full-time employees whether bound by an award or not shall be eligible to receive annually not less than ten days cumulative sick leave on full pay. Most Federal awards provide for two weeks sick leave a year.

*Long service leave*

The South Australian *Long Service Leave Act 1967* entitles employees in respect of continuous service after 1 January 1972 to thirteen weeks leave for each ten years service. The obligation to grant leave is imposed on all employers in South Australia although the Industrial Relations Commission has the power to exempt an employer where the employees involved have access to benefits not less favourable than those prescribed by the Act.

Entitlement to long service leave also applies to casual employees provided that the service with the employer is continuous within the meaning of the Long Service Leave Act.

## 9.1 LAND TENURE

### Identification of land

To facilitate the identification of land, the southern portion of the State encompassing all the arable land and certain pastoral areas has been subdivided into counties and these in turn generally have been subdivided into smaller units known as hundreds.

There are currently forty-nine counties (covering 23 per cent of the State), the last of these being declared in 1933. The counties have an average size of 463,000 hectares, varying from County Light, north of Adelaide, with 217,470 hectares to County Jervois on Eyre Peninsula with 959,000 hectares.

Counties are generally subdivided into hundreds, although four northern counties remain undivided and a number of others are only partly subdivided. There is considerable variation in the size of hundreds, while the number of hundreds in a completely subdivided county varies from eight in Counties Alfred and Kintore to thirty-four in County Jervois. There are 536 hundreds, and no more will be created. Hundreds are further subdivided into sections which in turn may be divided into allotments or occasionally blocks.

For the purposes of title, land is identified by the county, hundred, and section, and, where appropriate, block or allotment within which it falls. However, with the introduction of this State's computerised Land Ownership and Tenure System (LOTS) this method has been gradually replaced by a system of unique land parcel numbers identified on survey plans lodged in the Land Titles Office.

### Torrens System of land registration

Land transactions in South Australia are conducted under the Torrens System of land registration as provided by the *Real Property Act 1886*. This system, first introduced by the *Real Property Act 1858*, was named after its author, Sir Robert Torrens, who was at that time Registrar-General of the Colony.

The Torrens System provides that the matter of title to land shall be a government responsibility. Each piece of land is represented by a certificate of title which, with very few (and in practice unimportant) exceptions, is guaranteed by the State. Retrospective examination which is necessary with general law title is eliminated and thus the costs and time involved in conveyancing can be kept to a minimum.

State and local government employees are in general entitled to ninety calendar days leave after ten years service. However, from 1 July 1975, State public servants with over fifteen years continuous service accumulate long service leave at the rate of fifteen days leave per year for each year of service after the fifteenth. Commonwealth Government employees are entitled to three months after ten years of service, while those covered by other Federal awards or agreements generally receive at least 13 weeks leave after 15 years of service.

The various long service leave arrangements provide for additional *pro rata* periods of leave for service in excess of the minimum, and for *pro rata* payments for employees who have completed a specified term of service but who, through the termination of their services or through death, do not complete the full entitlement period.

*Maternity leave*

Maternity leave provisions are inserted in most South Australian awards. The South Australian provisions are based on those granted in March 1979 by the Australian Conciliation and Arbitration Commission for Federal awards. The provisions allow full-time or part-time employees with not less than twelve months continuous service, to take a minimum of six weeks or a maximum of fifty-two weeks maternity leave without pay. Seasonal and casual workers are not eligible.

Legislation passed in 1990 authorised the conversion of the Torrens Register to a computer-based system which is expected to be completed in 1997.

An amendment to the Real Property Act provided for the creation of interests in land by a three-dimensional division of the land into strata units by means of strata plans. The *Strata Titles Act 1988* has repealed and replaced this provision. The new Act maintains the strata concept and introduced reforms towards its enhancement. A strata plan creates individual private rights (as well as common entitlements in the property depicted in the plan).

An amendment to the Strata Title Act in 1992 provides a resolution of disputes mechanism by way of inexpensive application to the Small Claims Division of the Local Court. The Local Court has power to refer any matter to a higher court if deemed necessary.

**Land  
administration**

Approximately fifty-nine per cent of the State comprises Crown Tenures controlled by the Department of Environment and Natural Resources. The other forty-one per cent is freehold, national park or Aboriginal reserve.

There is very limited allocation of Crown land to private individuals and this is usually arranged through a competitive process including auctions. This land may be allocated to private individuals either as a separate lease (pastoral or miscellaneous), freehold or added to an existing perpetual lease. Sale of freehold from the Crown is for cash or by Agreement to Purchase.

Pastoral land is held under leases which may be extended after fourteen years to a maximum of forty-two years dependent on good land management. Rent is based on fair market rent for the stock levels carried.

Perpetual leases cover approximately 7.5 per cent of the State. No new lands are released in this tenure. In the safe agricultural areas these leases may be converted to freehold.

Land used for public purposes is dedicated as a reserve for a particular purpose and allocated to an agency or group for its control. This includes national parks, forest and Aboriginal reserves.

Aboriginal freehold land has been granted to the Pitjantjatjara and Maralinga peoples. This freehold is inalienable from the indigenous people.

*Current tenure*

In the table below, land in South Australia is classified according to its present form of tenure. Land sold, dedicated and under agreement to purchase does not represent the accumulated total of all alienated lands as certain alienated lands repurchased by the Crown are currently held under leases.

Land and Reserves Tenure, 30 June 1993

<i>Particulars</i>	<i>Area</i>	<i>Proportion</i>
	<i>hectares</i>	<i>per cent</i>
Lands sold and dedicated . . . . .	26,088,296	26.50
Lands held under agreement to purchase . . . . .	44,081	0.04
Lands held under lease . . . . .	45,721,439	46.45
Fresh water and salt water lakes and lagoons . . . . .	1,816,551	1.85
National parks . . . . .	20,327,982	20.65
Aboriginal reserves . . . . .	778,908	0.79
Unleased vacant lands etc. . . . .	3,660,521	3.72
<b>Total area of South Australia . . . . .</b>	<b>98,437,778</b>	<b>100.00</b>

In 1901 the area sold, dedicated and held under lease and agreement to purchase, *i.e.* the area occupied, was 37,934,751 hectares, increasing to 57,472,548 in 1924, but falling to 52,370,744 in 1931 because of decreased areas under pastoral lease.

## 9.2 URBAN AND REGIONAL PLANNING

### Planning

The majority of South Australians live in an urban environment – either in Adelaide or in country towns. The quality of this environment is affected by competing pressures for commercial development, new housing, industry, transport, recreational facilities and conservation of our resources. Careful planning is needed to meet the changing needs of the community in a way that facilitates development and maintains quality of life.

Planning and development assessment are the responsibilities of the Department of Housing and Urban Development, which was established in 1993 as part of the State Government's restructuring process. In working towards its objectives, the Office of Planning and Urban Development within the department manages a wide range of strategic planning and structure planning projects, and provides general planning and environmental advice on major initiatives. This means there is a 'whole of government' approach, where all of the State Government's interests in development are directed at common goals expressed in the Planning Strategy – the policy document that sets out the range of social, economic and environmental issues which form the overall vision for the future of the State. The Planning Strategy, in conjunction with the Development Plans, provides the framework for development assessment against which applications are evaluated.

The Department of Housing and Urban Development is responsible for the preparation of a metropolitan development program to assess likely growth patterns in the coming five years. This program forms the basis for the staged release of land for urban development. In metropolitan Adelaide emphasis is placed on urban consolidation and medium density housing.

The *Development Act 1993* which came into effect on 15 January 1994 is the major piece of legislation governing the preparation of Development Plans and the development assessment process in South Australia. Under the Act, councils are responsible for development policies and most assessment decisions. These decisions by councils are guided by the policies set out in Development Plans – statutory documents based on each council area prepared by local government in consultation with the community. Local councils consider development proposals and can amend or add to Development Plan policies relating to their areas. This process involves extensive public consultation which may lead to plan amendment reports.

When development proposals are judged to be of major social, economic or environmental importance, the Minister of Housing and Urban Development may require an Environmental Impact Statement to ensure that all of the effects of proposed developments are fully considered. This process involves the preparation of a draft environmental impact statement by the proposer of the development, evaluation by an assessment team, and public consultation.

The Commonwealth Department of Housing and Regional Development works cooperatively with State and Local Governments, the private and the community sectors promoting development approaches which are consistent with national economic, social and environmental objectives but which also take into account the diversity of regional circumstances.

The Commonwealth has allocated \$150 million over four years towards its National Regional Development Strategy.

### 9.3 WATER SUPPLY AND SEWERAGE

#### Water supply

The *Waterworks Act 1932* gives the Minister for Infrastructure the power to supply water to any part of the State.

The Minister is empowered to construct, maintain and operate the infrastructure necessary to deliver water to consumers and to charge a rate for this service.

The *Water Resources Act 1990* provides for the management of the water resources of the State by the Minister of Water Resources to preserve water quality and to provide for the sharing of available water on a fair basis.

Its provisions include the establishment of a South Australian Water Resources Council, Regional Water Resources Committees, the Water Resources Appeal Tribunal and Water Well Drilling Committee.

The aggregate storage capacity at 30 June 1993 for Adelaide Metropolitan reservoirs was 195,540 megalitres and 32,678 megalitres for country reservoirs. Storage includes service reservoirs. Natural intake and River Murray water are stored in Northern and Metropolitan reservoirs. The total length of water mains at 30 June 1994 was 24,219 kilometres.

The *Water Conservation Act 1936* provides for the control of small reservoirs, bores, tanks etc. established in certain remote areas to provide for local stock and domestic water supplies.

The *Irrigation Act 1994* provides for the formation and management of Irrigation Districts (Government and private), and the distribution and drainage of irrigation water within these districts.

### *Water filtration*

Adelaide's first water filtration plant at Hope Valley began supplying filtered water to the Metropolitan Distribution System in November 1977. Since then, plants have been commissioned at Anstey Hill, Barossa, Little Para and Happy Valley. The sixth and final plant to serve Metropolitan Adelaide, at Myponga was completed in 1993. A plant at Morgan serves the mid-North and Yorke Peninsula.

### **Distribution of water resources**

#### *Drainage systems*

In agreement with the States, the Australian Water Resources Council has divided Australia into twelve surface water drainage divisions. The divisions which constitute major surface water resources for South Australia are the South Australian Gulf Drainage Division, which lies wholly within the State and in which are located all important State reservoirs, and the Murray-Darling Division, of which only a part is located in South Australia, and the waters of which are allocated between this State, Victoria, and New South Wales in accordance with the terms of the Murray-Darling Basin Agreement (*see* Part 9.4 Irrigation and Drainage).

Part of the large Lake Eyre Drainage Division covers the northern and eastern areas of the State, but, although streams in the area may flood extensively on occasions, they are generally unreliable and significant only to the local pastoral industry. The section of the South-East Coast Drainage Division which intrudes into the south-east corner of South Australia has no good dam sites but a high rainfall in the area provides a good underground water resource of considerable importance to the State. Underground resources on the seaward edge of the Western Plateau Division, which covers the south-western part of the State, are recharged also from local rainfall.

#### South Australian Gulf Drainage Division

The eastern boundary of this Division is formed partly by the Mount Lofty Ranges, which rise to a maximum of 727 metres east of Adelaide and to over 1,000 metres north of Burra, and further north it follows the Flinders Ranges which reach a height of 1,168 metres at St Mary Peak. The boundary then rounds Lake Torrens and, further south, the western boundary is formed by a discontinuous line of hills on Eyre Peninsula.



Kangaroo Island is also included, so that in all, the Division covers the whole perimeter of the South Australian gulfs. The individual river basins in this Division are all very small. Most of the South Australian reservoirs are situated in this Division.

Major Reservoirs, 30 June 1994

Reservoir	Capacity	Area at full supply level	Catchment area
	megalitres	hectares	km <sup>2</sup>
South Para .....	44,800	400	221
Mount Bold .....	45,900	308	388
Myponga .....	26,800	280	124
Little Para Dam .....	20,800	150	82
Kangaroo Creek .....	19,000	104	290
Millbrook .....	16,500	178	(a)
Happy Valley .....	12,700	188	(a)
Tod River .....	11,300	134	(a)
Bundaleer .....	6,370	80	(a)
Baroota .....	6,120	63	129
Warren .....	4,770	105	(a)
Barossa .....	4,510	62	(a)
Hope Valley .....	3,470	60	(a)

(a) Offstream reservoir. Water is largely diverted from other catchments.

Rainfall in excess of 750 millimetres a year occurs only on a very small area in the Mount Lofty Ranges, while in the north-west of the Division the annual average is less than 150 millimetres. In the southern parts of the Division, average precipitation generally exceeds potential evaporation only from May to August, and over most of the Division monthly evaporation rates exceed rainfall throughout the year.

After the major dam sites in the Mount Lofty Ranges had been developed, because of the small size of the individual catchments in the Division and the relatively low run-off and its high variability, it was found more economical to provide additional water to Adelaide and other high demand centres *via* pipelines from the River Murray. No further reservoirs or major pipelines for metropolitan Adelaide will need to be built this century. When augmentation of the water supply system is necessary in the first part of the next century it is likely that the supply source will be the River Murray, possibly by way of another pipeline plus a new reservoir in the Mount Lofty Ranges to act as a balancing storage for River Murray water.

#### River Murray

The River Murray is the most important source of water supply for South Australia. Under the terms of the *Murray-Darling Basin Act 1983* (see Part 9.4 Irrigation and Drainage), South Australia is entitled to 1,850,000 megalitres of water annually, subject to the declaration of restriction by the Murray-Darling Basin Commission. In recent years, irrigation diversions have averaged 480,000 megalitres per annum and town, domestic, industrial and stock supplies have averaged 110,000 megalitres per annum.

Adelaide metropolitan water supplies are supplemented by River Murray water through the Mannum-Adelaide (67 kilometres) and Murray Bridge-Onkaparinga (48 kilometres) pipelines.

The Morgan-Whyalla (359 kilometres), Swan Reach-Stockwell (53 kilometres) and Taillem Bend-Keith (143 kilometres) pipelines provide the water supply for country areas or augment local resources in these areas.

Metropolitan water supply

In the following table, details of metropolitan services as well as revenue and expenditure are given for the metropolitan water supply district.

Adelaide Metropolitan Waterworks<sup>(a)</sup>

Particulars	1991-92	1992-93	1993-94
Length of mains (kilometres) . . . . .	8,464	8,543	8,634
Number of services . . . . .	384,610	391,080	397,856
		\$'000	
Revenue:			
Rates and other services . . . . .	160,485	146,019	107,523
Expenditure:			
Working expenses and depreciation . . . . .	87,288	90,139	89,825
Interest . . . . .	47,122	40,317	42,321
Total . . . . .	134,410	130,456	132,146
Surplus/deficit . . . . .	26,075	15,563	38,377

(a) Includes particulars relating to near country areas supplied by extensions of the Metropolitan distribution system.

Water consumption

The following table gives details of water used during the year and storage capacity of major reservoirs at the end of the year for metropolitan and country districts for the last three years. The quantity of water pumped from the River Murray through the major pipelines is also shown.

Water Storage and Consumption (Megalitres)

Particulars	1991-92	1992-93	1993-94
Capacity of major storages (at end of year):			
Adelaide metropolitan water supply (a) . . . . .	202,040	195,540	195,540
Country water supply . . . . .	32,678	32,678	32,678
Water consumption:			
Adelaide metropolitan water supply (b) . . . . .	167,000	150,000	187,000
Country water supply (c) . . . . .	74,000	65,000	n.a.
Pumped from River Murray:			
Mannum-Adelaide Pipeline . . . . .	48,600	8,500	44,000
Murray Bridge-Onkaparinga Pipeline . . . . .	23,400	8,000	60,000
Morgan-Whyalla Pipeline . . . . .	25,600	22,000	20,000
Other supply systems . . . . .	15,100	19,500	n.a.

(a) Includes storages on the Mannum-Adelaide and Murray Bridge-Onkaparinga Pipelines.

(b) Consumption within the Adelaide Statistical Division.

(c) Includes consumption in various areas outside of the Adelaide Statistical Division supplied from the Metropolitan distribution system.

*Other water resources*

Underground basins, augmented to a small degree by water pumped from the River Tor, provide most of the water supply on Eyre Peninsula. In contrast, the South East is well endowed with natural spring waters. There are considerable underground water resources in this region.

Many other areas of the State are dependent on underground supplies, particularly for stock drinking water. The aquifers of the Northern Adelaide Plains provide the major source of water for market gardens and related irrigation, but the demand level has been found to be beyond the permanent capability of the area and usage is subject to controls by a licensing system and metering of wells.

**Sewerage**

Sewerage of cities and towns in South Australia is undertaken by the State Government under the authority of the *Sewerage Act 1929*. The Act is administered by the Engineering and Water Supply Department for the Minister for Infrastructure and provides for water borne sanitary sewerage schemes within proclaimed drainage areas. It also empowers the Minister to determine and police the standard of private plumbing connected to the system as part of total sanitation. As a general rule Government sewerage schemes are provided only in densely populated cities and towns where they are essential for public health, or in areas where it is necessary to protect surface or underground water resources from pollution by domestic or industrial wastes.

Local government authorities are empowered under the *Local Government Act 1934* to provide sanitary drainage schemes and since 1962 these authorities have installed common effluent drainage schemes in 84 townships providing more than 40,000 connections throughout the State.

*Metropolitan sewerage*

Sewerage for Adelaide was first authorised by an Act of Parliament in 1878. Construction began in 1879 and by 1881 sewage from the city and inner suburbs was admitted to a sewage farm at Islington. Since then continual expansion of sewerage systems has kept pace with development of the metropolitan area as far as physical and financial factors permit and Adelaide is now the most completely sewered of the Australian capital cities.

Metropolitan Sewers

<i>Particulars</i>	1991-92	1992-93	1993-94
Adelaide drainage area (km <sup>2</sup> )	722	722	724
Length of sewers (km)	6,015	6,078	6,151
Number of house drainage units	401,785	411,061	418,831
		\$'000	
Revenue:			
Rates and other services	119,405	125,084	154,085
Expenditure:			
Working expenses	56,156	52,434	58,313
Interest	28,216	26,122	31,736
<i>Total</i>	<i>84,372</i>	<i>78,556</i>	<i>90,049</i>
Surplus	35,033	46,528	64,036

A large number of common effluent drainage systems have been installed in fringe areas by local government authorities and some of these have been, or are planned to be, connected to the sewerage systems. A charge for each house connected is levied against local government authorities whose common effluent drainage systems discharge to sewer mains. Property owners pay an annual rate for the service to the local government authority concerned.

*Country sewerage*

At 30 June 1993 the drainage areas of country sewerage schemes constructed and operated by the Engineering and Water Supply Department totalled 17,620.7 hectares; the length of sewers laid was 1,025 kilometres and the number of house drainage units connected totalled 50,727. Sewerage schemes are located at Aldinga, Angaston, Balhannah-Oakbank, Gumeracha, Hahndorf, Lobethal, Mannum, Millicent, Mount Gambier, Murray Bridge, Myponga, Naracoorte, Port Augusta, Port Lincoln, Port Pirie, Stirling, Victor Harbor, Whyalla, Woodside, Mount Burr and Nangwarry.

#### 9.4 IRRIGATION AND DRAINAGE

*Irrigation*

Since 1978 the administrative authority for irrigation in irrigation areas has been the Engineering and Water Supply Department and the constructing authority is the Minister of Water Resources.

A more detailed historical discussion of irrigation in South Australia was included on pages 314-6 of the *South Australian Year Book 1970*.

Irrigation areas are confined almost exclusively to the Murray Valley and can be classified into two groups; highland areas requiring the pumping of water, and reclaimed lands watered by gravitation. During 1992-93, 394,000 megalitres of water were diverted from the River Murray in South Australia for irrigation purposes.

*Highland areas*

With the major exception of the Mypolonga Irrigation Area, highland irrigation is located in the hot and dry zone along the River Murray between Morgan and the Victorian border.

These areas are largely devoted to vineyards and citrus and stone fruit orchards which are irrigated by water pumped and distributed *via* open concrete-lined channels or low pressure piped mains. The Government is currently engaged in a major program of rehabilitating those areas still using channels, which are being replaced by sealed pipe mains and metered connections to each property in the Government irrigation areas.

Landholders on Government controlled areas and in private areas constituted under special Parliamentary Acts, pay an annual rate for irrigation and a charge is made for additional water, either on a measurement basis

where meters have been installed, or on an hourly basis where channels are still utilised. The Renmark Irrigation Trust also supplies water on a volume basis to landholders in its district.

Irrigation systems must also provide for the removal of surplus water which accumulates beneath the surface of the land. Holdings have internal drainage systems leading to comprehensive drainage systems which convey the water to evaporation basins.

In 1991-92 there were 13,000 hectares of highland in Government-controlled areas and 2,000 hectares in non-government areas.

*Reclaimed areas*

On the Lower Murray between Mannum and Wellington, a series of swamp and overflow areas have been reclaimed by Government and private agencies. In 1991-92 there were 3,500 hectares of reclaimed land in Government-controlled areas and 2,000 hectares in non-government areas.

**Murray-Darling Basin Agreement**

The *River Murray Waters Act Amendment Act 1987*, ratified the Murray-Darling Basin Agreement of October 1987. It also amended the previous *River Murray Waters Act 1983* (Cwlth) to unite this Agreement and the existing *River Murray Waters Agreement 1982* (Cwlth) as the agreed basis between the Governments of New South Wales, Victoria, South Australia and the Commonwealth for managing the natural resources of the Murray-Darling Basin, and changed the title of the River Murray Waters Act to the Murray-Darling Basin Act.

The Act provides for constitution of the Murray-Darling Basin Ministerial Council, the Murray-Darling Basin Commission and a Community Advisory Committee as the institutional foundation for joint government and community action.

The Commission encompasses the regulatory responsibilities previously provided for under the River Murray Waters Agreement as well as responsibilities for land, environmental and water matters not covered in that Agreement.

A new Murray-Darling Basin Agreement was signed by the Prime Minister and the Premiers of the above three States in June 1992. The new Agreement broadens and strengthens the Commission's role, formalises the Salinity and Drainage Strategy approved in 1989 and provides for implementation of other strategies, for instance the Nutrient Management Strategy, which are yet to be finalised.

Negotiations have been concluded with Queensland to become a party to the Murray-Darling Basin initiative. Parliamentary approval of the new Agreement will be sought and Queensland's participation will be formalised once this has been obtained.

### Rural drainage

With the exception of the reclaimed areas along the lower Murray and certain works associated with metropolitan development, drainage schemes in South Australia are confined to the south-east corner of the State. The area of main benefit has been assessed at 697,430 hectares.

Approximately 1,855 kilometres of drains and 1,226 associated structures, e.g. bridges, weirs etc., have been constructed over the past 125 years. These drains vary considerably in size from only a few metres to over 90 metres bottom width.

The system is controlled by the South-Eastern Water Conservation and Drainage Board under the *South-Eastern Water Conservation and Drainage Act 1992*.

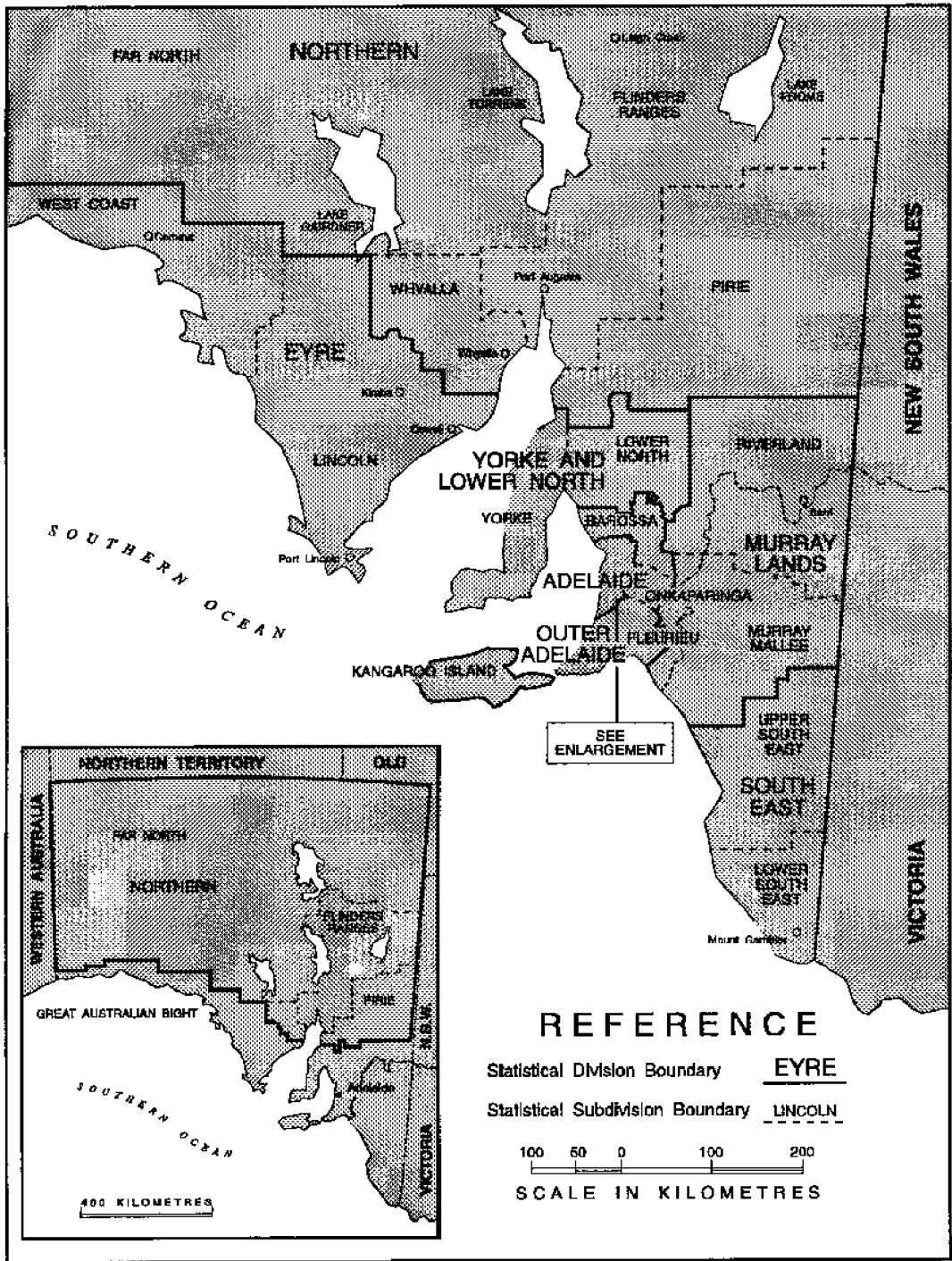
## 9.5 STATISTICAL DIVISIONS AND SUBDIVISIONS

For the purpose of presenting the statistical series of South Australia, the State is divided into a number of areas which are entitled statistical divisions. The divisions are designed to represent closely allied and meaningful areas of production and community interest and where areas smaller than divisions are considered to be important, subdivisions have been established.

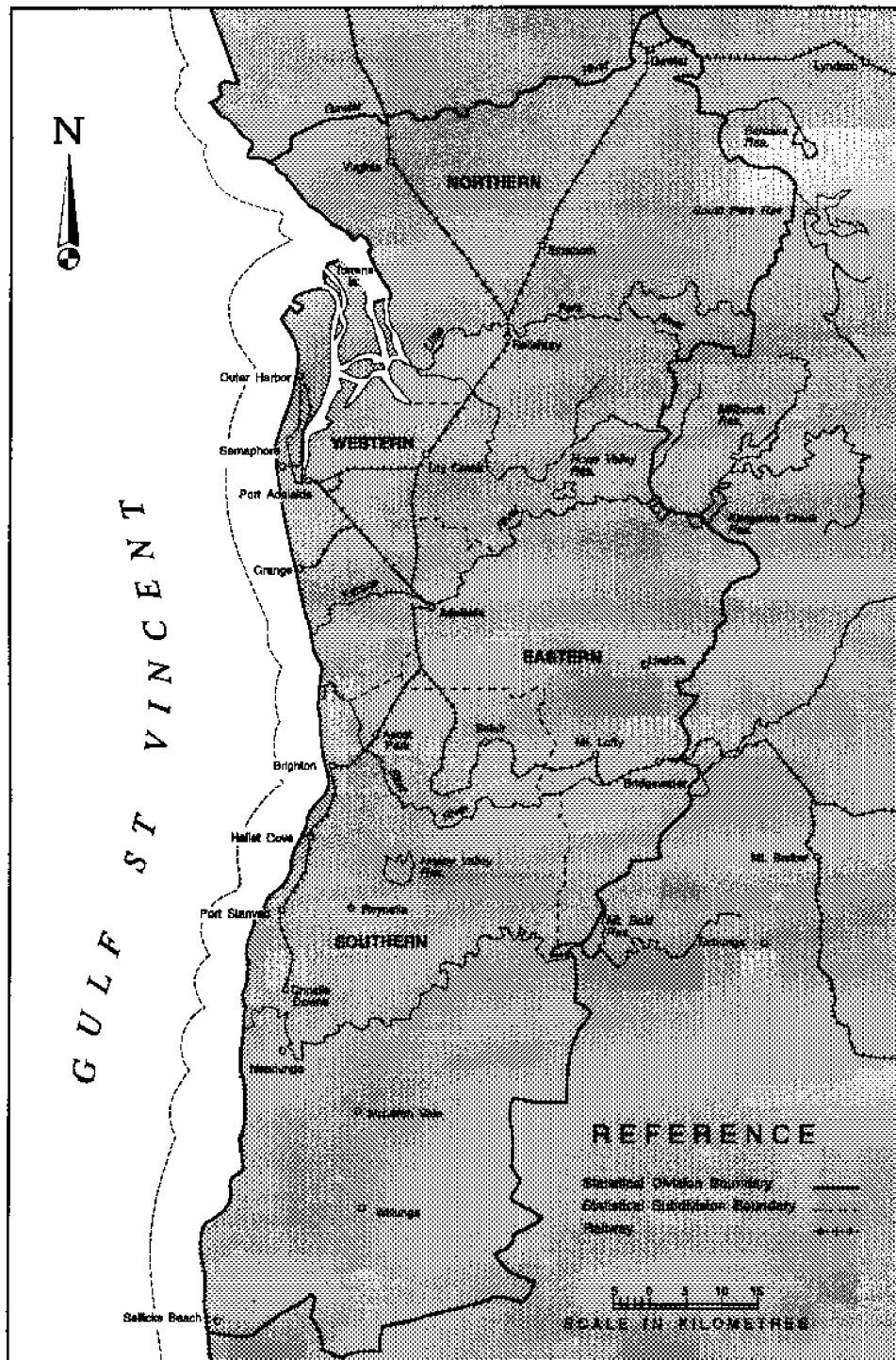
Maps showing statistical divisions and subdivisions are on the following pages. A more detailed article together with descriptions of the divisions and subdivisions was included on pages 135–43 of the *South Australian Year Book 1977*.

The major change since 1977 occurred on 1 July 1992 when the boundaries of the Riverland and Murray Mallee SSDs were adjusted. The District Council of Truro was merged with Ridley (DC) to form Ridley-Truro (DC) which is included in the Murray Mallee SSD.

SOUTH AUSTRALIA  
STATISTICAL DIVISIONS AND SUBDIVISIONS



PORTION OF SOUTH AUSTRALIA  
ADELAIDE STATISTICAL DIVISION





## 10.1 HOUSING

Dwellings :  
Census data

Information on housing is obtained mainly from particulars of dwellings collected at each Census. For Census purposes a dwelling equates to a household. A household is defined as either a person living alone or a group of people living together as a single domestic unit with common eating arrangements. This means that the total number of dwellings counted in the Census may be more than the total number of known structures in any given area. For the 1991 Census dwellings are classified into three basic groups: occupied private dwellings, unoccupied private dwellings and non-private dwellings. Further details of the Census definitions can be obtained from the *Census Dictionary* (2901.0).

From the 1986 Census persons living in caravans etc. in caravan parks are treated as separate households in the same way as persons living in private dwellings, whereas in previous Censuses they were treated as part of a non-private dwelling.

Dwelling counts from the eleven Censuses to 1991 are shown in the next table. Figures for Censuses before 1966 exclude dwellings occupied solely by full-blood indigenous people, and, because of the revised treatment of caravans in caravan parks, data from 1986 are not directly comparable with those from previous Censuses.

Dwellings, Censuses 1921 to 1991

Census	Occupied			Unoccupied	Total dwellings
	Private	Non-private	Total		
1921 . . . . .	104,295	3,619	107,914	4,431	112,345
1933 . . . . .	136,611	2,663	139,274	5,353	144,627
1947 . . . . .	166,118	2,420	168,538	3,547	172,085
1954 . . . . .	212,095	3,206	215,301	8,524	223,825
1961 . . . . .	259,344	2,564	261,908	17,061	278,969
1966 . . . . .	299,933	2,693	302,626	25,110	327,736
1971 . . . . .	342,064	2,048	344,112	30,553	374,665
1976 . . . . .	390,514	1,739	392,253	39,768	432,021
1981 . . . . .	432,136	1,703	433,839	42,407	476,246
1986 . . . . .	(a)475,987	1,631	(a)477,618	48,546	(a)526,164
1991 . . . . .	(b)515,721	1,539	(b)517,260	53,534	(b)570,794

(a) Includes 3,162 caravans etc. in caravan parks.

(b) Includes 3,710 caravans etc. in caravan parks.

### Dwelling structure

The next table provides details on the structure of all dwellings, from the 1991 Census.

Structure of Dwellings, Census 1991

Structure	Dwellings	
	Number	Proportion of total
Separate house .....	437,934	76.7
Semi-detached, row or terrace house:		
1 storey .....	67,874	11.9
2 or more storeys .....	7,574	1.3
Flat or apartment:		
1 or 2 storey block .....	36,576	6.4
3 or more storey block .....	4,936	0.9
Attached to a house .....	1,736	0.3
Caravan etc. in caravan park .....	3,710	0.6
Other caravan, houseboat etc. ....	1,505	0.3
Improvised home, campers out .....	1,084	0.2
House or flat attached to shop or office .....	2,374	0.4
Not stated, not applicable .....	5,491	1.0
<b>Total dwellings (a) .....</b>	<b>570,794</b>	<b>100.0</b>

(a) Total includes both occupied and unoccupied private and non-private dwellings.

## 10.2 BUILDING

### Building control

Before 15 January 1994, all non-government building work was subject to the *Building Act 1971*. Local government authorities were responsible for approving applications from landowners before any building work commenced. Local government building inspectors usually visited the building site during the construction period to ensure that proper standards were being met.

The Building Act was repealed and all aspects of building regulation (including procedures for applications, approvals, appeals and enforcement) became subject to the new *Development Act 1993*. This Act introduced a new integrated planning and development assessment system, whereby all policies and procedures for assessment of a proposed *development* were coordinated, leading to the issue of one combined *development approval*, after all consents required have been obtained. Such an approval replaced consents or approvals previously required under the Planning Act, Building Act, Heritage Act and the Strata Titles Act. Therefore, under the Development Act, there is no longer a building approval, although a *building consent* is required where proposed development includes building work. For administrative convenience, the *building consent* may be given as an endorsement on the *development approval* form. Building work cannot be commenced until a *development approval* is issued. The definition of *development* includes building work, a change in the use of land, division of an allotment and certain prescribed work on State and local heritage sites.

The Building Code of Australia remains the technical basis for building design and assessment, and local government authorities continue to be responsible for approving applications. However, there is now less requirement on such authorities to inspect building work in progress to ensure that proper standards are maintained as this is the responsibility of the owner and the builder. The Code regulates a wide range of matters including structural stability, access and egress, fire detection and suppression, and health and amenity.

Builders are licensed and regulated by the Commercial Tribunal under the *Builders Licensing Act 1986*.

**Building statistics**

These statistics relate to building activity which includes construction of new buildings and alterations and additions to existing buildings. Construction activity not defined as building (e.g. construction of roads, bridges, railways, earthworks etc.) is excluded.

In relation to work carried out on existing buildings, the statistics include details of non-structural renovation and refurbishment work and the installation of integral building fixtures for which building approval was obtained. The statistics were compiled from information supplied by local and other government authorities, builders and other individuals and organisations engaged in building activity.

The *ownership of a building* is classified as either *Public Sector* or *Private Sector* according to the sector of the intended owner of the completed building as evident at the time of approval.

**Building approvals**

Statistics of building work approved were compiled from permits issued by local government authorities in areas subject to building control by those authorities; and contracts let or day labour work authorised by Commonwealth, State, semi-government and local government authorities.

Major building activity which takes place in areas not subject to the normal administrative approval processes (e.g. buildings on remote mine sites) is also included.

From July 1990 the statistics cover all approved new residential building jobs valued at \$10,000 or more (previously \$5,000); approved alterations and additions to residential buildings valued at \$10,000 or more (unchanged); all approved non-residential building jobs valued at \$50,000 or more (previously \$30,000). These changes mainly affect non-residential building data. In particular, care should be taken in interpreting data for specific classes of non-residential building.

In using approvals as an indicator of building activity it should be noted that certain projects may be cancelled, delayed or altered and resubmitted for approval, that large projects may be spread over a number of years, and that building costs may vary over the period of construction.

Building Approvals  
(\$ million)

Type of building	1992-93		1993-94	
	Private	Public	Private	Public
New houses .....	691.4	22.3	695.1	27.5
New other residential buildings .....	106.4	20.8	98.5	17.8
Alterations and additions to residential buildings ..	129.9	2.6	120.7	1.5
Hotels etc. ....	5.4	1.0	5.0	0.9
Shops .....	35.9	3.9	40.8	3.0
Factories .....	17.9	3.5	18.2	3.2
Offices .....	27.7	64.9	39.1	25.0
Other business premises .....	32.0	7.8	24.8	7.0
Educational .....	14.3	99.2	18.2	100.2
Religious .....	5.8	-	1.9	-
Health .....	19.7	29.0	26.9	9.5
Entertainment and recreational .....	4.4	7.1	15.9	4.4
Miscellaneous .....	10.9	28.0	17.6	13.6
<b>Total value of building .....</b>	<b>1,101.8</b>	<b>290.1</b>	<b>1,122.8</b>	<b>213.5</b>

In recent years the greatest residential building development in the Adelaide Statistical Division has occurred in the statistical local areas of Noarlunga, Tea Tree Gully, Salisbury and Munno Para. In the Rest of the State, the statistical local areas of Mount Barker, Mount Gambier, Murray Bridge, Port Elliot and Goolwa and Victor Harbor provided the highest level of residential building activity. The number of new dwelling units approved in these areas and other selected statistical local areas during the last three years are included in the following table.

Number and Location of New Dwelling Units Approved

Statistical local area	1991-92	1992-93	1993-94
<b>ADELAIDE STATISTICAL DIVISION</b>			
Adelaide (C) .....	150	171	123
Burnside (C) .....	136	250	299
Campbelltown (C) .....	374	481	439
Enfield(C) Pt A & Pt B .....	201	195	474
Gawler (M) .....	269	216	181
Happy Valley (C) .....	338	363	394
Hindmarsh (M) .....	102	73	82
Marion (C) .....	578	525	463
Mitcham (C) .....	148	163	181
Munno Para (C) .....	607	750	627
Noarlunga (C) .....	1,682	1,626	1,143
Port Adelaide (C) .....	269	222	190
Salisbury (C) .....	784	1,116	1,092
Stirling (DC) .....	91	87	108
Tea Tree Gully (C) .....	1,241	1,416	1,361
Unley (C) .....	132	48	122
West Torrens (C) .....	182	295	176
Willunga (DC) .....	290	276	217
Woodville (C) .....	349	261	285
Other .....	637	693	658
<b>Total .....</b>	<b>8,560</b>	<b>9,227</b>	<b>8,615</b>

Number and Location of New Dwelling Units Approved (*continued*)

<i>Statistical local area</i>	<i>1991-92</i>	<i>1992-93</i>	<i>1993-94</i>
REST OF STATE			
Mallala (DC) . . . . .	103	125	95
Mount Barker (DC) . . . . .	399	452	401
Mount Gambier (C) . . . . .	187	229	194
Murray Bridge (RC) . . . . .	119	133	134
Northern Yorke Peninsula (DC) . . . . .	75	69	125
Port Augusta (C) . . . . .	31	26	43
Port Elliot and Goolwa (DC) . . . . .	181	240	181
Port Lincoln (C) . . . . .	63	84	86
Port Pirie (C) . . . . .	52	52	66
Renmark (C) . . . . .	50	57	35
Roxby Downs (M) . . . . .	33	5	34
Strathalbyn (DC) . . . . .	67	60	67
Victor Harbor (DC) . . . . .	185	271	306
Other . . . . .	1,152	1,281	1,376
<i>Total</i> . . . . .	<i>2,697</i>	<i>3,084</i>	<i>3,143</i>
<b>South Australia</b> . . . . .	<b>11,257</b>	<b>12,311</b>	<b>11,758</b>

(C) Municipality with city status (DC) District Council (M) Municipality (RC) Rural City

*Building Activity Survey*

Building activity data is collected quarterly from builders and other individuals and organisations engaged in building activity. It consists of two components:

- (a) a sample survey of private sector house building activity involving new house construction or alterations and additions valued at \$10,000 or more to houses; and
- (b) a complete enumeration of jobs involving construction of new residential buildings other than private sector houses, all alterations and additions to residential buildings (other than private sector houses) with an approval value of \$10,000 or more, and all non-residential building jobs with an approval value of \$50,000 or more.

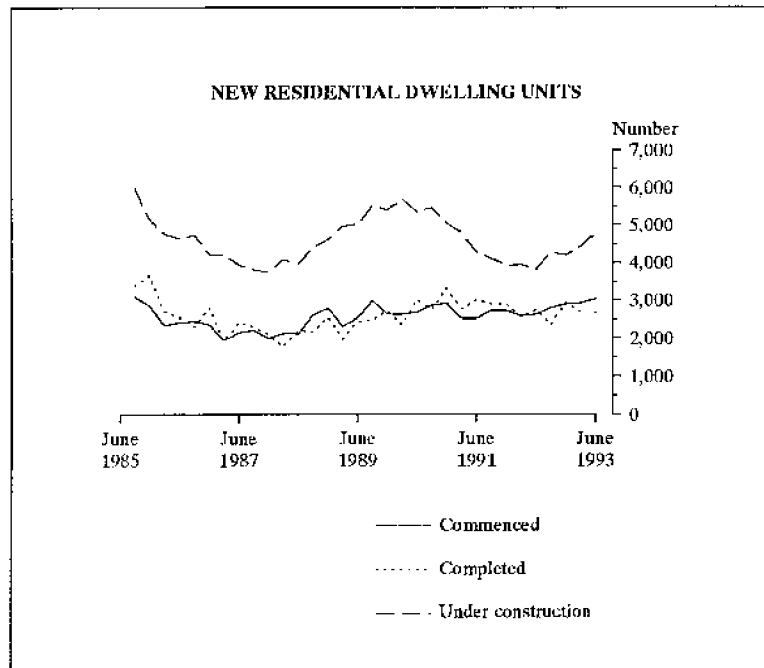
From the data collected in the survey, a considerable amount of information about the building industry in South Australia can be derived. This includes statistics about building work commenced, work done and completed in each period as outlined in the following paragraphs. All values shown exclude the value of land and unless otherwise stated represent the anticipated or actual value of buildings upon completion.

A building is regarded as having been commenced when expenditure on building work is first reported. Commencement data for the last three years are shown in the following table.

Buildings Commenced<sup>(a)</sup>

Type of building	1990-91	1991-92	1992-93
<b>New houses:</b>			
Number .....	8,177	8,344	9,416
Value (\$m) .....	580.7	599.7	685.3
<b>New other residential buildings:</b>			
Number of dwelling units .....	2,644	2,327	2,219
Value (\$m) .....	146.8	127.5	130.9
		\$ million	
<b>Alterations and additions to residential buildings .....</b>	<b>118.2</b>	<b>125.1</b>	<b>122.4</b>
Hotels etc. ....	15.0	12.8	5.4
Shops .....	103.4	51.1	53.8
Factories .....	75.4	47.8	22.9
Offices .....	90.4	117.8	99.8
Other business premises .....	72.9	102.0	53.4
Educational .....	90.1	92.3	117.6
Religious .....	5.0	6.4	6.1
Health .....	32.8	86.1	50.3
Entertainment and recreational .....	29.4	56.7	13.5
Miscellaneous .....	39.5	34.7	35.8
<b>Total non-residential buildings .....</b>	<b>553.9</b>	<b>607.8</b>	<b>458.7</b>
<b>Total building .....</b>	<b>1,399.6</b>	<b>1,460.2</b>	<b>1,397.2</b>

(a) Anticipated completion value.



Details of buildings completed in the last three years are given in the next table.

Buildings Completed			
Type of building	1990-91	1991-92	1992-93
New houses:			
Number.....	8,308	8,432	8,708
Value (\$m).....	595.7	616.0	637.7
New other residential buildings:			
Number.....	3,538	2,670	1,938
Value (\$m).....	212.5	149.6	110.4
		\$ million	
Alterations and additions to residential buildings.....	128.0	121.5	126.9
Hotels etc.....	76.3	8.6	10.8
Shops.....	60.9	378.9	85.8
Factories.....	120.5	44.9	35.8
Offices.....	223.4	63.7	110.4
Other business premises.....	124.6	59.5	66.0
Educational.....	72.2	91.3	59.1
Religious.....	4.9	5.3	6.4
Health.....	53.3	71.0	46.5
Entertainment and recreational.....	90.0	32.1	40.4
Miscellaneous.....	41.4	38.3	19.1
Total non-residential buildings.....	867.4	793.7	480.3
<b>Total building.....</b>	<b>1,803.7</b>	<b>1,680.9</b>	<b>1,355.3</b>

Another measure of building activity is that of value of work done, *i.e.* of work actually carried out on buildings during the period. Details of value of work done for the last three years are given in the following table.

Buildings : Value of Work Done (\$ million)			
Type of building	1990-91	1991-92	1992-93
New houses.....	600.2	607.5	660.9
New other residential buildings.....	182.1	141.0	119.7
Alterations and additions to residential buildings.....	122.0	125.1	127.1
Hotels etc.....	42.7	9.1	8.6
Shops.....	257.3	89.4	62.6
Factories.....	91.5	34.9	46.6
Offices.....	111.2	79.1	119.7
Other business premises.....	100.8	68.3	82.1
Educational.....	100.8	67.5	103.7
Religious.....	4.8	7.1	4.6
Health.....	56.6	52.6	65.8
Entertainment and recreational.....	68.0	37.1	34.7
Miscellaneous.....	42.9	38.9	42.4
Total non-residential buildings.....	876.6	484.1	570.9
<b>Total building.....</b>	<b>1,780.8</b>	<b>1,357.6</b>	<b>1,478.6</b>

**Engineering Construction Survey**

Estimates of engineering construction activity by both public and private sector organisations are compiled from a quarterly Engineering Construction Survey. Data are obtained from all enterprises classified to the construction (including construction of engineering structures) industry.

The cost of land and the value of building construction is excluded from the survey. Machinery and equipment installed are included in the statistics only if they are an integral part of a construction project.

In the table below, the value of engineering construction work at the various stages of construction is shown for the last three years. The estimates, together with results from the Building Activity Survey, provide a complete picture of building and construction activity in South Australia.

Stage of construction	1990-91	1991-92	1992-93
Value of work commenced . . . . .	853.5	673.5	733.8
Value of work done . . . . .	854.6	763.7	734.9
Value of work yet to be done (a) . . . . .	216.4	128.7	198.2

(a) The value of outstanding work for projects at the end of the period.

Further detailed information is available from the publication *Engineering Construction Activity, Australia (8762.0)*.

**The South Australian Housing Trust**

The South Australian Housing Trust was established under the *South Australian Housing Trust Act 1936* as the public housing authority. Its charter is to provide housing and related services for those in need, and to do so in ways which contribute, as far as possible, to the social well-being and economic development of the State.

The Trust's sources of funds are loans and grants from the Commonwealth and South Australian Governments, rents and other payments by tenants, repayments under mortgage and the proceeds from the sale of its houses and other assets.

At 30 June 1994 the Trust had 62,322 dwellings in its rental stock. During 1993-94, 783 dwellings were completed. Of these, 32 were for other organisations. Dwellings purchased on the open market numbered 232, of which 56 were housing for indigenous people and 107 for other organisations. During 1993-94, 15,620 applications for rental housing were received while 8,138 households were allocated a dwelling. At the end of June 1994 there were 41,222 households on the waiting list.

At 30 June 1994, 77.5 per cent of the Trust's tenants were paying reduced rent because of financial hardship or social disadvantage.



Assistance is also provided to other disadvantaged members of the community. The Rent Relief Scheme, commenced in 1982, with funds made available by the Commonwealth and South Australian Governments, provides assistance to households on low incomes who face genuine hardship in meeting private rental commitments. At 30 June 1994 there were 11,334 households in receipt at an average value of \$16.28 per week.

Information on housing, bond assistance, advocacy and counselling is provided for people in a housing crisis and during 1993-94, 25,309 persons were assisted.

The Trust also has a pool of emergency dwellings for short-term lease. At June 1994, 242 dwellings were used for this purpose.

The *Housing Improvement Act 1940* established minimum standards by which a dwelling may be considered suitable for human habitation. The Act vests in the Trust the power to control the rent of any house which it has declared to be sub-standard. During 1993-94, 529 notices of intention were issued for sub-standard housing. Rents were fixed or revised in respect of 426 houses and 365 houses were released from control of the Act as a result of landlords spending \$6.49 million in repairs and renovations.

As well as its public housing role the Trust provides a substantial contribution to the Government's program for the establishment of new industry and the expansion of existing industry within South Australia. This support takes the form of developing and making available industrial land for sale and lease, and the provision of resources for the establishment of factory premises through the Trust's Factory Construction Scheme in collaboration with the South Australian Economic Development Authority.

### Further references

Additional information may be found in the following ABS publications:

- 8731.0 *Building Approvals, Australia*
- 8731.4 *Building Approvals, South Australia*
- 8741.4 *Dwelling Unit Commencements Reported by Approving Authorities, South Australia*
- 8750.0 *Building Activity: Dwelling Unit Commencements, Australia, Preliminary*
- 8752.0 *Building Activity, Australia*
- 8752.4 *Building Activity, South Australia*
- 8762.0 *Engineering Construction Activity, Australia*

### 10.3 HOUSING FINANCE

Information on secured finance commitments to individuals for the construction or purchase of dwellings for owner occupation is provided by major lenders. These lenders include banks, permanent building societies, credit unions, insurance companies, finance companies, superannuation funds and general government enterprises.

In the following tables, values shown for 'construction of dwellings' represent commitments made to individuals to fund, by way of progress payments, the erection of dwellings which they will occupy. Values for 'purchase of newly erected dwellings' represent the purchase of dwellings which have been completed within a period of twelve months preceding lodgment of the loan application where the applicant is, or will be, the first occupant. 'Purchase of established dwellings' refers to those completed for a period greater than twelve months preceding the lodgment of the loan application or, if purchased within twelve months, the applicant is not the original occupant.

Number of Dwelling Units for which Loans were Approved to Individuals by Type of Lender

<i>Period</i>	<i>All banks</i>	<i>Permanent building societies</i>	<i>Other lenders</i>	<i>Total</i>
1990-91 .....	18,213	3,254	7,227	28,694
1991-92 .....	23,308	4,479	3,978	31,765
1992-93 .....	28,241	5,586	3,133	36,960

Value of Lending Commitments to Individuals for Construction or Purchase of Dwellings by Type of Lender(a)  
(S million)

<i>Period</i>	<i>All banks</i>	<i>Permanent building societies</i>	<i>Other lenders</i>	<i>Total</i>
1990-91 .....	1,128.0	214.0	448.0	1,790.0
1991-92 .....	1,570.7	336.8	265.1	2,172.7
1992-93 .....	2,085.9	384.8	201.6	2,672.3

(a) Includes alterations and additions.

Lending Commitments to Individuals for Construction or Purchase of Dwellings, All Lenders(a)

<i>Period</i>	<i>For construction of dwellings</i>		<i>For purchase of newly erected dwellings</i>		<i>For purchase of established dwellings</i>	
	<i>No.</i>	<i>\$m</i>	<i>No.</i>	<i>\$m</i>	<i>No.</i>	<i>\$m</i>
1990-91 ....	6,680	385.1	2,759	173.8	19,255	1,172.2
1991-92 ....	6,608	401.0	3,221	215.1	21,936	1,467.9
1992-93 ....	7,490	484.6	3,589	262.1	25,931	1,822.9

(a) Excludes alterations and additions.

## 11.1 RURAL INDUSTRIES

The principal source of statistics relating to the rural sector is the Integrated Agricultural Commodity Census, which is conducted throughout Australia at 31 March each year. Data are collected from those establishments engaged in significant agricultural activity, regardless of the main activity of the establishment. Where harvesting of some crops (mainly fruit and vegetables) has not been completed by 31 March, growers are asked to estimate production or provide details at a later date. An establishment generally comprises the operations of a legal entity from a single physical location or from more than one location, provided that these locations are within the same local government area.

Those establishments which make only a small contribution to overall agricultural production are excluded from the Census. The 1992-93 Census included all establishments which had an estimated value of agricultural operations (EVAO) of \$22,500 or more. For the 1992-93 season the Agricultural Census included 14,077 establishments operating on 56,554,511 hectares of land or approximately 57.5 per cent of the total area of South Australia.

Agricultural Establishments: Industry and Estimated Value of  
Agricultural Operations, 1992-93

Industry of establishment Description	Estimated value of agricultural operations (\$'000)								Total
	Less than 20	20-39	40-59	60-79	80-99	100- 149	150- 199	200 and over	
Poultry for meat . . . . .	1	-	1	1	1	1	1	64	70
Poultry for eggs . . . . .	-	6	2	-	2	4	3	36	53
Grapes . . . . .	58	264	228	194	118	133	50	70	1,115
Orchard fruit . . . . .	58	211	212	158	102	164	89	198	1,192
Potatoes . . . . .	1	7	5	6	6	14	12	94	145
Vegetables . . . . .	37	66	59	37	28	35	19	121	402
Cereals . . . . .	33	149	147	206	220	529	490	1,107	2,881
Sheep-cereal grain . . . . .	37	241	365	387	398	768	435	538	3,169
Meat cattle-cereal grain . . . . .	3	18	10	17	16	30	14	37	145
Sheep-meat cattle . . . . .	27	119	141	115	106	179	112	188	987
Sheep . . . . .	118	257	240	192	163	238	130	175	1,513
Meat cattle . . . . .	74	143	69	34	42	49	31	96	538
Milk cattle . . . . .	4	31	61	92	84	233	170	186	861
Pigs . . . . .	6	21	13	30	12	44	32	106	264
Nurseries . . . . .	28	34	33	14	12	15	9	20	165
Agriculture n.e.c. . . . .	84	76	48	34	21	36	20	46	365
Total agriculture . . . . .	569	1,643	1,634	1,517	1,331	2,472	1,617	3,082	13,865
Other industries . . . . .	111	24	18	11	10	14	8	16	212
Total all industries . . . . .	680	1,667	1,652	1,528	1,341	2,486	1,625	3,098	14,077

**Commonwealth  
housing  
programs**

The Commonwealth Department of Housing and Regional Development, with the State Government, provides funding to assist people, particularly low to moderate income earners, to access affordable and appropriate housing. It funds the construction, acquisition and ongoing operation of crisis accommodation and support services for homeless people. The Department monitors and assesses the operations of housing markets and provides a role in housing research and the development of housing policy.

**HomeStart  
Loan Scheme**

HomeStart Finance was introduced by the State Government in 1989 to provide affordable home finance opportunities for South Australians. HomeStart offers low to moderate income earners a home loan, based on a variable interest rate and fixed yearly repayments.

Repayments are based on 25 per cent of income and increase annually, in line with inflation, as measured by the Consumer Price Index. Since its inception in 1989, HomeStart has provided loans to more than 17,000 households.

Rural Establishments : Statistical Divisions

Statistical Division	Establishments		Area of establishments	
	1991-92	1992-93	1991-92	1992-93
	number	number	'000 ha	'000 ha
Adelaide .....	709	750	38	37
Outer Adelaide .....	2,417	2,404	762	763
Yorke and Lower North .....	2,087	2,122	1,670	1,670
Murray Lands .....	3,459	3,514	3,587	3,585
South East .....	2,328	2,319	1,695	1,688
Eyre .....	1,654	1,633	4,575	4,611
Northern .....	1,336	1,335	44,529	44,200
<b>Total .....</b>	<b>13,990</b>	<b>14,077</b>	<b>56,857</b>	<b>56,555</b>

*Agricultural  
Finance Survey*

Statistics on the financial performance of the rural sector are obtained from the Agricultural Finance Survey, which was conducted periodically by the ABS from 1976-77 and annually since 1986-87. This survey provides estimates of turnover, expenditure, cash operating surplus, capital expenditure and indebtedness. Detailed definitions and explanatory notes relating to this Survey are published in *Agricultural Industries, Financial Statistics, Australia, 1992-93* (7507.0).

Financial Estimates of Agricultural Enterprises  
(\$ million)

Items	1990-91	1991-92	1992-93
Sale of crops .....	808.2	1,010.5	971.4
Sales of livestock .....	289.0	376.5	395.9
Sales of livestock products .....	480.1	410.3	403.6
Turnover .....	1,689.9	1,920.2	1,910.7
Purchases and selected expenses ..	972.0	1,082.6	1,054.5
Value added .....	599.8	903.7	962.7
Adjusted value added .....	474.8	770.1	822.6
Gross operating surplus .....	316.9	641.2	643.8
Cash operating surplus .....	289.6	460.0	425.8
Total net capital expenditure .....	108.9	172.9	177.2
Gross indebtedness .....	1,392.3	1,342.6	1,486.0

**Land  
utilisation**

The pattern of land use attributed to agricultural establishments included in the annual Integrated Agricultural Commodity Census indicates that vast tracts of land have no attributed land use. These include areas of saltbush, scrub, native vegetation, non-arable land and land not utilised during the particular census period.

Crops were sown to 3.1 million hectares of land during the 1992-93 season, a 5.2% increase from the previous year. Climatic conditions, particularly the relatively low winter rainfall and the hot dry summer, favour cereal growing; one advantage being the low incidence of stem rust, a serious disease in the moist areas of the Australian wheat belt.

Sown pastures and grasses accounted for 3.4 million hectares of land in 1992-93. The pattern of land use in South Australia over the past three years is shown in the following table.

Land Utilisation of Establishments with Agricultural Activity  
Year Ended 31 March

Particulars	1991	1992	1993
Total establishments .....	14,482	13,990	14,077
Number of establishments:			
Growing crops .....	11,429	11,120	11,245
With sown pastures and grasses .....	7,630	7,514	6,833
Total area of establishments (hectares)	56,954,110	56,857,088	56,554,511
Total area (hectares):			
Used for crops (a)/(b) .....	2,933,367	2,919,760	3,072,580
Under sown pastures and grasses ..	3,647,749	3,614,474	3,379,058

(a) Excludes pastures harvested for hay and seed which have been included in 'area under sown pastures and grasses'. (b) Areas of land used for sowing more than one crop in a season have been counted for each crop.

**Irrigation**

The following table shows the area of all irrigated culture in South Australia for selected seasons from 1986-87 to 1992-93.

Area Under Irrigation<sup>(a)</sup>  
(Hectares)

Season	Vegetables (including potatoes)	Fruit	Vineyards	Other crops	Pastures	Total
1986-87 .....	6,244	11,865	16,418	5,666	51,573	91,765
1989-90 .....	7,395	13,410	18,151	6,760	53,191	98,907
1990-91 .....	9,400	15,816	21,119	6,056	57,795	110,186
1991-92 .....	9,655	15,027	20,532	6,142	52,699	104,055
1992-93 .....	9,164	15,604	20,564	9,904	61,881	117,117

(a) Irrigation details collected on an irregular basis.

In 1992-93 there were 3,811 establishments irrigated. The most important irrigation areas are those located in the Murray Valley. The main crops in the Upper Murray irrigation areas are grapes, citrus fruit and stone fruit while the reclaimed swamp areas of the Lower Murray irrigation areas are used mainly for pastures.

**Fertilisers**

Nearly all soils in the agricultural areas of South Australia are deficient in phosphorus and superphosphate is used on both crops and pastures in large quantities to overcome this deficiency. In some areas trace elements (manganese, copper, zinc and molybdenum) are added to the superphosphate to rectify the chronic shortage of these elements.

Total Crops and Pasture Fertilised

Year	Area fertilised	Fertiliser used	Per hectare
	'000 ha	tonnes	kg
1988-89	4,463	516,242	116
1989-90	4,418	496,447	112
1990-91	3,833	386,558	101
1991-92	3,403	323,089	95
1992-93	3,471	322,818	93

**Wheat**

The area sown to wheat for grain in South Australia during the 1992-93 season was 1,419,451 hectares which yielded 2,421,214 tonnes. This represented 17.1 per cent and 16.4 per cent of the Australian total respectively.

In the past twenty years a feature of the industry has been that average yields have fluctuated around a higher level mainly because of improved farming practices, including the adoption of nitrogen-building legumes in the crop rotation cycle. The average yield for the 1992-93 season was 1.71 tonnes per hectare, up from 1.65 tonnes per hectare in 1991-92.

*Wheatgrowing districts*

Wheatgrowing in South Australia is virtually restricted to the belt between the 200 millimetre and 450 millimetre rainfall isohyets for the period April to November. The principal wheat producing districts are in the Eyre, Yorke and Lower North, Murray Lands and Northern Statistical Divisions. These districts accounted for 95.5 per cent of the area sown in 1992-93.

Wheat for Grain by Statistical Division

Particulars	Area		Production	
	1991-92	1992-93	1991-92	1992-93
	'000 ha	'000 ha	'000 tonnes	'000 tonnes
Statistical Division:				
Adelaide	1	1	2	3
Outer Adelaide	31	35	62	85
Yorke and Lower North	231	257	556	582
Murray Lands	192	226	196	336
South East	19	27	45	75
Eyre	663	697	978	986
Northern	160	176	302	355
<b>Total for grain</b>	<b>1,297</b>	<b>1,419</b>	<b>2,141</b>	<b>2,421</b>

*Varieties*

In each of the Australian States a committee examines and recommends the wheat varieties which should be grown by farmers. The South Australian Advisory Committee on Wheat Quality was established in 1962. Dividing the State into five zones, recommendations of wheat varieties are decided each year by bringing together relevant available information on breeding, testing, commercial production, handling and end use of wheat. Protein content and potential yield are key factors in these recommendations.

The South Australian Department of Primary Industries and the Australian Wheat Board encourage growers to produce wheat with uniform characteristics in both the Hard class and Australian Standard White (ASW) class. This can be done more successfully if only a few of the better varieties are grown by farmers.

*Marketing*

Australian Wheat Board

The Australian Wheat Board was formed on 21 September 1939 and given powers to run the domestic and export marketing of Australia's wheat crop.

Under the *Wheat Marketing Act 1989* (Cwlth), all sales of wheat within Australia were deregulated from 1 July 1989. The Australian Wheat Board has retained full control of wheat sold for export from Australia. The Board will continue to buy on the domestic market along with other buyers who can now engage in such operations. The legislation permits the Board to trade in other grains and legumes on both the domestic and export markets.

Deliveries to the Australian Wheat Board  
('000 tonnes)

Season	South Australia	Australia
1983-84	2,715	21,067
1984-85	1,921	17,546
1985-86	1,773	15,099
1986-87	2,377	15,310
1987-88	1,823	10,740
1988-89	1,318	12,953
1989-90	2,701	12,969
1990-91	2,030	13,522
1991-92	2,040	8,075
1992-93	2,450	13,584

Source: Australian Wheat Board.

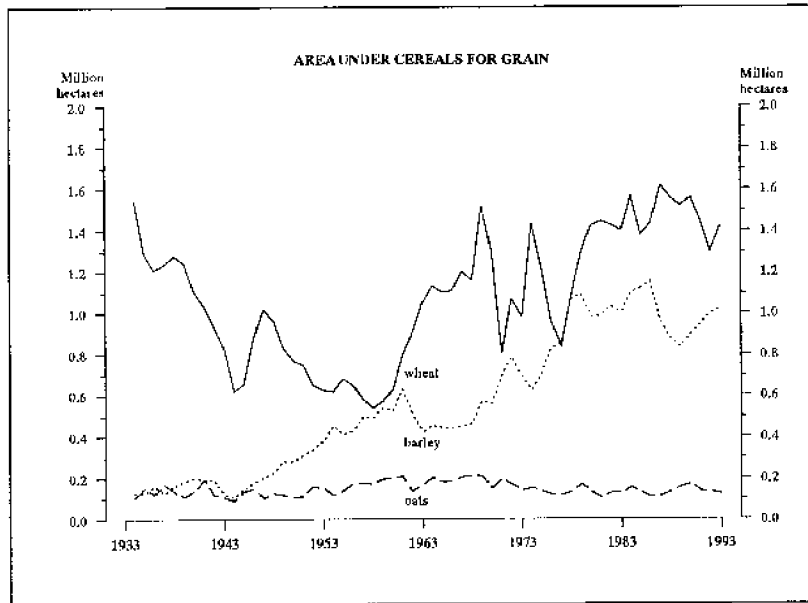
**Barley**

*Production*

Barley is grown in all States of Australia, with the major producing area being South Australia. It is grown principally as a grain crop, although in some areas it is used as a fodder crop for grazing with grain being subsequently harvested if conditions are suitable. Barley is used primarily for stockfeed and malting purposes and, on a small scale, for human consumption.

The area sown to barley for grain in South Australia during the 1992-93 season was 1,023,310 hectares which yielded a production of 1,855,320 tonnes. This represented 34.7 per cent and 34.4 per cent of the Australian total respectively. The Yorke and Lower North Statistical Division, which includes the Yorke Peninsula, accounted for 713,998 tonnes or 38.5 per cent of the State's production during this period.





The ideal malting barley has a dry, plump, undamaged grain with a low protein content. Production of malting barley requires an area of dependable rainfall and a ripening period somewhat prolonged by cool conditions without high temperatures and drying winds.

Yorke Peninsula is the major barley producing district in South Australia, accounting for 27.6 per cent of the total South Australian crop. This area generally has an ideal climate for barley production as the moisture laden breezes off the Gulfs retard ripening.

Barley for Grain by Statistical Division

Particulars	Area		Production	
	1991-92	1992-93	1991-92	1992-93
	'000 ha	'000 ha	'000 tonnes	'000 tonnes
Statistical Division:				
Adelaide .....	2	1	4	3
Outer Adelaide .....	43	44	88	87
Yorke and Lower North .....	341	334	815	714
Murray Lands .....	234	244	254	363
South East .....	28	28	48	53
Eyre .....	255	274	465	437
Northern .....	97	98	209	198
<b>Total .....</b>	<b>999</b>	<b>1,023</b>	<b>1,882</b>	<b>1,855</b>

Varieties

A number of improved barley varieties (Chebec, Franklin, Schooner, Skiff, Tallon) have been released to farmers over the last decade. Schooner, a high yielding malting variety, bred by the Waite Agricultural Research Institute and released in 1983 has become the predominant malting variety grown in South Australia.

Percentage of Area Planted to Barley Varieties

Variety	Type	1991-92	1992-93	1993-94
Schooner .....	Malting	34.9	34.1	35.6
Franklin .....	Malting	0.2	0.5	1.2
Clipper .....	Malting	1.2	1.1	1.0
Weeah .....	Malting	0.4	0.4	0.1
Skiff .....	Feed	3.1	3.2	3.4
Galleon .....	Feed	53.0	52.9	46.6
Forrest .....	Feed	5.0	4.6	3.2
Chebec .....	Feed	-	-	6.0
Other .....	..	2.4	3.2	2.9

Source: Australian Barley Board.

### Marketing

The Australian Barley Board, which commenced operations in 1939, is the statutory marketing authority for barley and oats grown in South Australia and for barley grown in Victoria. In 1990 its area of operations was expanded to include the marketing of field peas, faba beans, lupins, chick peas and vetch in both States and oats in Victoria. In 1994 this was again expanded to include the oilseed, canola. The Board classifies barley on sample at the time of delivery for grower payment purposes. Classification takes into account the physical characteristics of variety. The Board normally receives two major grades of barley, namely, malting and feed, with each of these being subdivided into further categories depending on seasonal conditions and/or market requirements. The classification system used by the Board segregates low protein barley for use by the malting and brewing industries while the higher protein barley is included in the feed grade.

Australian Barley Board Receipts  
('000 tonnes)

Season	Malting	Schooner No. 3 malting	Feed	Total
1991-92 .....	352	145	1,264	1,760
1992-93 .....	325	148	1,271	1,744
1993-94 .....	605	85	1,426	2,116

Source: Australian Barley Board.

### Oats

Oats is an extremely versatile crop, providing not only valuable winter grazing when pastures are dormant but also a grain which is a valuable cereal food for both livestock and human consumption. The majority of the crop is used locally for animal fodder with only a small proportion exported. As with barley some of the area sown for grain and hay is grazed until June or July, then allowed to re-grow to produce a crop which is subsequently cut for hay or harvested.

The Australian Barley Board is the marketing authority for oats grown in South Australia and Victoria.

The main oat growing regions in South Australia are the Eyre Peninsula, the Lower North, and the Murray Mallee regions. During the 1992-93 season 191,929 hectares of land were sown to oats in South Australia, 11.5 per cent of the Australian total.

Oats Grown by Statistical Division

Use and geographical area	Area		Production	
	1991-92	1992-93	1991-92	1992-93
	'000 ha	'000 ha	'000 tonnes	'000 tonnes
For grain:				
Statistical Division:				
Adelaide .....	0.2	0.1	0.5	0.1
Outer Adelaide .....	10.7	9.7	20.1	13.2
Yorke and Lower North .....	20.1	16.7	35.0	29.5
Murray Lands .....	19.6	20.4	17.1	25.2
South East .....	12.2	14.1	21.1	27.3
Eyre .....	56.0	54.3	63.4	57.1
Northern .....	10.4	7.8	15.4	12.0
<b>Total for grain</b> .....	<b>129.3</b>	<b>123.0</b>	<b>172.5</b>	<b>164.5</b>
For hay .....	59.3	47.7	210.9	188.5
Fed off or cut for green feed or silage .....	26.5	21.3	..	..
<b>Total all oats</b> .....	<b>215.1</b>	<b>191.9</b>	<b>..</b>	<b>..</b>

**Rye**

Rye is a minor crop, but it is used to control sand drift and particularly to stabilise the light soils of the Murray Mallee. Because the sands are deficient in two main nutrients (nitrogen and phosphorus), a mixed superphosphate-ammonia fertiliser is sown with the rye seed early in the season. The rapid early growth of the rye while the ground is still warm and before the strong winds of winter cause sandblast is the most effective form of controlling drifting sand.

Rye provides early greenfeed while some grain is produced on a number of farms. Although most grain is used for stockfeed, varying quantities are exported in different years for milling. Rye hay is of poor nutritional quality and only a few hundred tonnes are produced each year. In 1992-93, 28,697 hectares of rye for grain yielded 9,466 tonnes.

**Pastures**

The area reported as being under various types of pasture is shown in the following table.

Area Under Pasture at 31 March  
(Hectares)

Type of pasture	1991	1992	1993
Pure lucerne .....	131,631	100,213	98,363
Clovers and/or medics .....	3,516,118	478,715	387,358
Sown grasses only .....		213,339	190,458
Mixtures of grasses, legumes etc. ....	15,815,242	2,822,208	2,702,880
Native pasture .....		18,993,261	19,191,604
<b>Total</b> .....	<b>19,462,991</b>	<b>22,607,736</b>	<b>22,570,663</b>

The Murray Mallee and Eyre Peninsula have been transformed from unstable farming districts to productive areas through the sowing of improved pastures. The South East Statistical Division has more improved pastures than other statistical divisions in the State.

Pastures Other Than Native Pasture at 31 March  
('000 hectares)

<i>Statistical Division</i>	<i>1991</i>	<i>1992</i>	<i>1993</i>
Adelaide .....	10	10	9
Outer Adelaide .....	356	359	341
Yorke and Lower North .....	277	280	265
Murray Lands .....	829	843	791
South East .....	1,314	1,219	1,189
Eyre .....	723	771	672
Northern .....	139	131	112
<b>Total .....</b>	<b>3,648</b>	<b>3,614</b>	<b>3,379</b>

The following table shows the area and production of pastures cut for hay, as well as the area cut for green feed or silage, for the past two years.

Production of Hay and Green Feed from Pastures

<i>Use</i>	<i>Area</i>		<i>Production</i>	
	<i>1991-92</i>	<i>1992-93</i>	<i>1991-92</i>	<i>1992-93</i>
	<i>hectares</i>	<i>hectares</i>	<i>tonnes</i>	<i>tonnes</i>
Cut for hay:				
Pure lucerne .....	21,440	20,589	89,122	78,030
Other pastures .....	118,937	100,830	374,058	341,515
Cut for green feed or silage ...	7,571	6,994	..	..
<b>Total .....</b>	<b>147,948</b>	<b>128,413</b>	<b>..</b>	<b>..</b>

**Vegetables**

Much of the production of the market garden industry comes from properties with easy access to the Adelaide market. Of the total area of 10,635 hectares devoted to market gardens, districts adjacent to Adelaide account for 4,009 hectares producing all types of vegetables.

In the South East Division 2,718 hectares of vegetables are cultivated, 2,371 hectares being potatoes. An area of some 28 hectares in the Northern Division (mainly on the coastal plains near Port Pirie) is used for the production of vegetables and of this area, 16 hectares is used for pea and potato production.

Along the River Murray 3,414 hectares are devoted to the production of potatoes, onions, carrots, tomatoes, pumpkins and rock melons with a total of 462 hectares used for growing most other vegetable varieties for local and interstate markets.

Although the Mount Gambier and nearby district is the major potato producing area, districts adjacent to Adelaide and the River Murray are also important. The 1992-93 average yield for the State was 29 tonnes per hectare.

Principal Vegetables Grown for Human Consumption

Vegetable	Area		Production	
	1991-92	1992-93	1991-92	1992-93
	hectares	hectares	tonnes	tonnes
Broccoli	480	325	2,970	2,048
Brussels sprouts	153	140	3,124	2,241
Cabbages (a)	200	207	6,212	6,113
Carrots	520	582	16,033	22,970
Cauliflowers	274	257	8,339	7,290
Celery	51	43	4,235	2,496
Cucumbers	44	40	1,655	1,507
Lettuces	313	329	9,369	9,217
Melons, rock	298	218	7,563	4,876
Onions, white and brown	1,204	905	58,188	35,120
Potatoes:				
Early crop	3,553	2,971	121,866	95,115
Main crop	2,401	3,305	76,778	84,158
Pumpkins	436	512	8,919	10,374
Sweetcorn	56	71	730	835
Tomatoes:				
Field	156	166	5,436	5,147
Glasshouse	39	34	2,070	1,525
<b>Total (incl. other)</b>	<b>10,699</b>	<b>10,635</b>	<b>..</b>	<b>..</b>

(a) Includes Chinese cabbage.

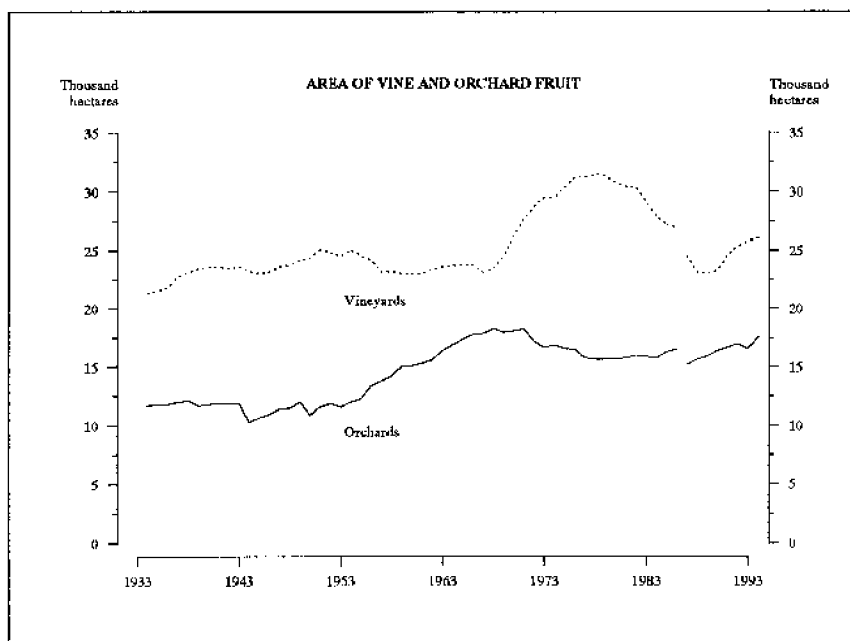
**Grapes**

Approximately 42 per cent of Australia's vineyard area is located in South Australia where in 1992-93, 96 per cent of the grapes were used for winemaking. South Australia in the same year produced 274,856 tonnes of grapes for winemaking, 8,914 tonnes for the production of dried fruit, and 2,367 tonnes for other purposes.

Area and Production of Vineyards

Season	Vines		Production of grapes for		
	Bearing	Not yet bearing	Wine	Table	Drying (fresh weight)
	hectares	hectares	tonnes	tonnes	tonnes
1989-90	22,295	2,352	316,423	2,799	21,562
1990-91	22,684	2,739	290,832	3,189	22,848
1991-92	23,443	2,341	327,839	3,092	23,080
1992-93	23,983	2,151	274,856	2,367	8,914

The area planted to vines at harvest 1993 was 26,134 hectares and total production was 286,138 tonnes.



The steady decline in the area of vineyards during the 1980s has now been reversed. There has been a major increase in plantings in the Adelaide Hills, Barossa and South East areas over the past five years.

*Grape growing districts*

The grape growing districts of South Australia are subject to substantial variety in geographical location, climatic variation and soil condition and can be divided into seven easily recognisable regions ranging from the Clare-Watervale district in the north to the southern limit of the grape growing area at Coonawarra in the south-east of the State, and bounded by the irrigated areas of the River Murray to the east.

*Grape varieties*

Premium varieties, including Cabernet Sauvignon and Chardonnay have recorded increases in area, whilst areas of other varieties such as Grenache and Doradillo declined. The decline in plantings of Shiraz has been reversed, with significant new plantings being made in recent years.

Area of Principal Varieties of Vine (Hectares)

Variety	1990-91	1991-92	1992-93
<b>Red grapes:</b>			
Cabernet Sauvignon .....	3,333	3,679	3,898
Currant .....	422	403	417
Grenache .....	1,800	1,752	1,673
Mataro .....	491	482	484
Pinot Noir .....	590	552	549
Shiraz .....	3,336	3,603	3,852

Area of Principal Varieties of Vine (continued)  
(Hectares)

Variety	1990-91	1991-92	1992-93
White grapes:			
Chardonnay .....	2,196	2,345	2,752
Doradillo .....	600	553	490
Muscat Gordo Blanco .....	1,723	1,651	1,621
Palomino and Pedro Ximenes .....	942	801	666
Riesling .....	2,918	2,859	2,778
Sauvignon Blanc .....	506	510	512
Semillon .....	840	888	963
Sultana .....	1,798	1,775	1,684

**Orchard fruit**

A wide variety of fruit crops is grown in South Australia. The main types are oranges, peaches and apricots (predominantly grown in the irrigation settlements of the Riverland) and apples (nearly all grown in the Adelaide Hills).

Generally, trees aged 6 years or more predominate, as do navel and valencia orange trees. The numbers of citrus trees aged 6 years or more and production from citrus trees of all ages are shown in the following table.

Citrus Fruit : Trees and Production

Season	Oranges		Other	Lemons and limes	Mandarins	Grape- fruit	Total(a)
	Navel	Valencia					
TREES 6 YEARS AND OVER ('000)							
1989-90 .....	537	1,106	3	90	85	69	1,895
1990-91 .....	577	1,182	2	89	97	66	2,023
1991-92 .....	573	1,191	2	90	108	60	2,036
1992-93 .....	589	1,233	4	90	114	56	2,104
PRODUCTION (tonnes)(b)							
1989-90 .....	53,569	120,483	299	13,879	7,111	10,498	206,266
1990-91 .....	53,794	117,193	189	12,389	7,967	9,159	201,144
1991-92 .....	58,932	128,646	190	14,222	9,459	9,281	221,498
1992-93 .....	70,981	145,532	452	16,055	10,879	8,011	253,522

(a) Includes other citrus. (b) From trees of all ages.

Citrus growing is concentrated in the irrigation settlements of the Riverland. Over the last four years production of navels, valencias and total citrus has recovered from a low in 1988-89, with production of all types of oranges recording a 50% increase in the four years to 1992-93. For a number of years the Australian citrus industry has been exposed to competition from developing overseas plantations. Achievements over this period have been the development of export markets for fresh citrus and import substitution by the industry.

Apple growing is the principal non-citrus fruit industry of South Australia and is concentrated in the Adelaide Hills where approximately 18,000 tonnes were produced in 1992-93.

The stone fruits industry became important following development of the irrigation schemes. South Australia is the major apricot-producing State, with the greater part of the crop being dried.

A large proportion of Australia's almonds are produced in South Australia, mainly grown in the Riverland region. In 1992-93, 1,682 tonnes were produced from 418,000 trees of bearing age in South Australia.

Avocados, cherries, pears, plums and prunes, and strawberries are the most important of the remaining crops.

The Upper Murray irrigation areas and the Barossa Valley of South Australia account for almost the entire Australian production of dried apricots, peaches, pears and nectarines. A small proportion of Australian dried prunes are produced in the Barossa Valley and Noarlunga districts.

Non-citrus Orchard Fruit : Trees and Production

Season	Apples	Apricots	Cherries	Peaches	Pears	Plums and prunes
TREES 6 YEARS AND OVER ('000)						
1989-90 .....	325	319	30	127	73	59
1990-91 .....	397	314	28	112	68	71
1991-92 .....	370	317	32	109	73	72
1992-93 .....	442	344	42	126	78	78
PRODUCTION (tonnes) (a)						
1989-90 .....	21,709	17,959	399	8,800	5,097	1,531
1990-91 .....	20,166	14,882	325	8,207	5,333	1,498
1991-92 .....	21,576	19,625	515	8,222	5,597	2,721
1992-93 .....	26,634	17,171	236	8,339	6,144	3,568

(a) From trees of all ages.

**Other crops**

Low world prices for wheat have made many graingrowers seek alternative crops. Legumes and oilseeds have been used in rotation programs for many years as cereal disease-break crops. Legumes have the added advantage of fixing atmospheric nitrogen (*via* the nodules of rhizobia on their roots) thus increasing yields of cereal crops. Over the past decade areas sown to field peas and lupins have more than doubled, reaching 143,690 and 57,638 hectares respectively in the year ending March 1993. Other legumes have increased by higher proportions with, for example, field beans reaching 35,074 hectares. While the area of vetches for seed quadrupled over the last two years to 32,157 hectares, chick peas declined to 11,908 hectares in the year ended March 1993.



The development of canola from rapeseed and lanola from linseed have made these crops more suited to domestic use particularly as an alternative to sunflower oil for margarine. This has led to an increase in the area sown and production of these two oilseeds in recent years. Total area of the four main oilseeds in the State in 1992-93 was 14,289 hectares, a decline of 6.7 per cent from the previous year.

Pasture and grass seed, vegetable seed and coriander are other crops recording large area increases over the decade. Pasture and grass seed were sown on 42,767 hectares, vegetable seed on 1,922 hectares and coriander on 3,466 hectares in 1992-93.

A considerable portion of the area devoted to nurseries is found in the vicinity of Adelaide and there are several fruit tree nurseries in the horticultural districts of the River Murray.

**Value of agricultural production**

The value of agricultural production is expressed in terms of gross value and local value. Gross value is defined as the value placed on recorded production at wholesale prices realised in principal markets. Where products are absorbed at a local point or become raw material for a secondary industry the value in each case is presumed to be the value of the principal market. Local value is the gross value of production less marketing costs.

*Value and prices of crops*

The gross value of crops (including pastures) in South Australia for the 1992-93 season was estimated at \$1,355 million.

Gross Value of Principal Crops  
(S'000)

<i>Commodity</i>	<i>1990-91</i>	<i>1991-92</i>	<i>1992-93</i>
Cereals:			
Wheat .....	274,893	430,448	436,350
Barley .....	193,897	266,060	247,604
Oats .....	12,437	18,474	17,573
Rye .....	1,881	2,653	1,515
Crops for hay .....	22,604	30,781	21,013
Lupins for grain .....	6,023	9,826	17,029
Canola/rapeseed .....	1,643	2,721	2,952
Field peas .....	31,533	40,482	33,250
Field beans .....	6,722	11,092	10,471
Fruit (excluding grapes):			
Citrus .....	64,105	82,816	89,359
Apples .....	23,662	26,957	32,081
Apricots .....	16,311	23,912	21,199
Peaches .....	4,852	4,935	5,181
Pears .....	4,975	6,965	7,140
Strawberries .....	6,396	6,182	5,542
Other .....	14,498	19,299	21,847
Vine fruit:			
Wine grapes .....	100,991	130,005	107,377
Table grapes .....	3,146	2,412	2,367
Dried currants, raisins, etc. ....	11,137	11,708	5,142

## Agriculture, Forestry and Fisheries

Gross Value of Principal Crops (*continued*)  
(\$'000)

Commodity	1990-91	1991-92	1992-93
Vegetables:			
Carrots .....	9,852	10,559	14,681
Lettuce .....	10,106	9,041	7,031
Potatoes .....	56,330	57,719	58,860
Tomatoes .....	9,021	9,295	8,387
Onions .....	22,521	17,807	16,832
Other .....	42,707	47,576	39,869
Other crops .....	28,194	36,369	55,433
<i>Total crops (excluding pastures) .....</i>	<i>980,437</i>	<i>1,316,095</i>	<i>1,286,085</i>
Pastures:			
Pasture seed .....	17,928	21,029	21,805
Pastures cut for hay .....	42,453	42,190	47,243
<i>Total pastures .....</i>	<i>60,381</i>	<i>63,219</i>	<i>69,048</i>
<b>Gross value of crops .....</b>	<b>1,040,818</b>	<b>1,379,314</b>	<b>1,355,133</b>

Prices of Principal Crops  
(Dollars per tonne)

Commodity	1990-91	1991-92	1992-93
Cereals:			
Wheat (a) .....	136.03	201.05	180.22
Barley (a) .....	128.77	141.40	133.46
Oats .....	84.25	107.10	106.81
Rye .....	168.98	205.00	160.00
Fruit:			
Apples .....	1,173.41	1,249.38	1,204.53
Apricots .....	1,096.01	1,218.43	1,234.60
Peaches .....	591.26	600.16	621.22
Pears .....	807.73	1,126.95	1,022.80
Oranges:			
Navel (a) .....	362.95	358.73	374.86
Other (a) .....	302.93	391.11	336.26
Grapes:			
Table .....	986.66	779.72	999.64
Wine (b) .....	347.25	396.55	390.67
Vegetables:			
Potatoes (a) .....	321.28	290.57	328.33
Onions .....	403.75	306.03	479.27
Tomatoes (a) .....	1,011.08	1,238.35	1,257.02

(a) Average price realised. (b) Weighted average price at winery.

### Pastoral and dairying

Pastoral activities, with sheep grazing predominant, are widespread in South Australia under varying climatic conditions from the arid saltbush plains in the Far North through to the lush, well-watered pastures of the South East. South Australia has approximately 11 per cent of the nation's sheep and 4 per cent of its cattle.

*The dog fence*

This fence is an unbroken barrier of wire netting about two metres high extending for more than 8,000 kilometres through South Australia, along the South Australia–New South Wales and the New South Wales–Queensland borders and through part of Queensland. It has been erected to protect the sheep lands of these States from dingoes.

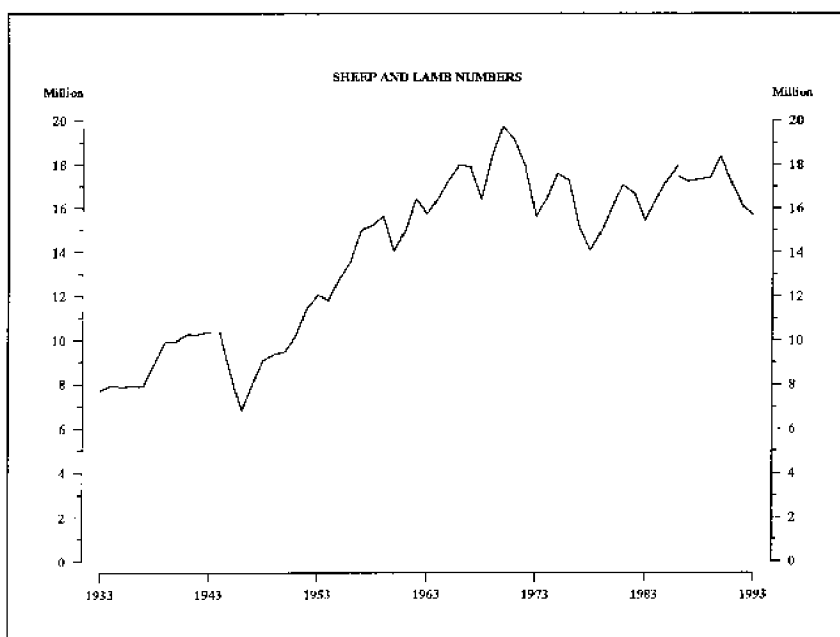
**Sheep**

*Numbers and distribution*

At 31 March 1993 sheep in South Australia numbered 15,701,756. The next table shows the total number of sheep in statistical divisions at 31 March for the years 1991 to 1993.

Sheep Numbers : Statistical Divisions, at 31 March ('000)

Statistical Division	1991	1992	1993
Adelaide .....	34	31	27
Outer Adelaide .....	2,087	2,005	1,957
Yorke and Lower North .....	2,013	1,985	1,975
Murray Lands .....	2,332	2,105	2,098
South East .....	4,743	4,354	4,180
Eyre .....	2,610	2,594	2,492
Northern .....	3,333	2,997	2,973
<b>Total.....</b>	<b>17,153</b>	<b>16,072</b>	<b>15,702</b>



*Breeds of sheep*

The predominant breed in South Australia is the Merino, which, because of its robust constitution and capacity to travel long distances to water, has adapted well to the hot, dry conditions of the interior.

Of the remaining recognised breeds, the Australasian breeds, Corriedale and Polwarth, are most important. The Corriedale and Polwarth are dual purpose sheep breeds used for meat but at the same time producing wool of good quality. The Corriedale is a fixed cross between Lincoln rams and Merino ewes while the Polwarth is a fixed comeback breed from the mating of Merino rams with Lincoln-Merino ewes.

British longwools (Border Leicester, Cheviot and Romney Marsh) are used for mating with the Merino or crossbred ewes to produce fat lambs, but useful types of comeback and crossbred wools are also yielded. British shortwools (Dorset Horn, Ryeland, Suffolk, Southdown and Shropshire) are used principally for production of export lambs.

Composition of Sheep Flock, at 31 March ('000)

Year	Rams	Breeding ewes	Other ewes	Wethers	Lambs and hoggets (under one year)	Total sheep
1989	223	8,542	465	4,259	3,925	17,414
1990	226	8,565	505	4,778	4,290	18,363
1991	210	7,464	1,079	4,612	3,788	17,153
1992	201	7,483	782	4,320	3,286	16,072
1993	187	7,379	663	3,922	3,551	15,702

*Lambing*

During the year ended 31 March 1993, 6,853,725 ewes were mated and the number of lambs marked totalled 5,778,277. The following table provides details of lambing activity during the years 1990-91 to 1992-93.

Ewes Mated and Lambing During Season

Description	Unit	1990-91	1991-92	1992-93
Breeding ewes at 31 March	number	7,463,774	7,483,370	7,378,756
Intended matings for lambing during season	number	7,892,018	6,570,584	7,063,054
Actual matings during season	number	7,282,470	6,343,548	6,853,725
Actual matings to intended matings	per cent	92.3	96.5	97.0
Lambs marked	number	5,831,773	4,913,450	5,778,277
Lambs marked to:				
Actual matings	per cent	80.1	77.5	84.3
Breeding ewes	per cent	78.1	65.7	78.3

*Shearing and wool-clip*

In the agricultural areas of the State most shearing takes place during the late winter and spring months, August to November. Shearing in the South East Division occurs somewhat later, with most of the wool-clip being obtained in the periods October-November, February-March and August-September.

Approximately 92 per cent of the total shorn wool is obtained from adult sheep. The average fleeceweight in South Australia for 1992-93 was 6.2 kg a head for adult sheep, with a record 6.6 kg a head being achieved in 1983-84. This is much higher than the yield obtained in other States, and is primarily because of the larger size of the South Australian Merino, its broader wool quality and longer thicker-stapled fleece.

Sheep and Lambs Shorn : Wool-clip and Average Fleeceweight

Classification	1990-91	1991-92	1992-93
NUMBER SHORN ('000)			
Sheep .....	16,530	15,507	14,733
Lambs .....	4,291	3,400	3,901
<b>Total .....</b>	<b>20,821</b>	<b>18,907</b>	<b>18,634</b>
WOOL-CLIP ('000 kg)			
Sheep .....	88,996	83,950	87,040
Lambs .....	7,470	6,130	7,570
Crutchings .....	4,519	4,118	4,285
<b>Total .....</b>	<b>100,985</b>	<b>94,197</b>	<b>98,894</b>
AVERAGE FLEECEWEIGHT (kg)(a)			
Sheep .....	5.7	5.7	6.2
Sheep and lambs .....	4.9	5.0	5.3

(a) Includes crutchings.

A breakdown of the figures for 1992-93 by statistical division is given in the next table. This shows the high average fleeceweight obtained in the northern pastoral areas. The relatively light average fleece obtained in the South East Division is explained partly by the lower proportion of Merino sheep, but more importantly by the lighter wool quality of the smaller framed sheep in this area.

Sheep and Lambs Shorn : Wool-clip, Statistical Divisions, 1992-93

Statistical Division	Number shorn			Wool-clip		
	Sheep	Lambs	Total	Sheep (a)	Lambs	Total (a)
	'000	'000	'000	'000 kg	'000 kg	'000 kg
Adelaide .....	53	2	55	142	3	146
Outer Adelaide .....	1,885	383	2,268	11,770	704	12,475
Yorke and Lower North ..	1,820	506	2,326	11,619	968	12,587
Murray Lands .....	1,930	574	2,504	12,314	1,059	13,374
South East .....	3,990	1,053	5,043	23,194	2,010	25,204
Eyre .....	2,378	547	2,925	14,940	958	15,898
Northern .....	2,677	835	3,512	17,345	1,866	19,211
<b>Total .....</b>	<b>14,733</b>	<b>3,901</b>	<b>18,634</b>	<b>91,325</b>	<b>7,570</b>	<b>98,894</b>

(a) Includes crutchings.

**Wool industry**

*Production*

Total wool production consists of shorn wool (including crutchings) plus dead wool and wool exported on skins. The next table shows wool production and value from 1990-91 to 1992-93. After the collapse in wool prices in 1990-91 the gross value of production has fallen to \$319.9 million in 1992-93 from the peak of \$612.2 million in 1988-89.

Wool Production and Value

Year	Production			Value of wool production \$'000
	Receivals of shorn wool (a)	Other(b)	Total	
	'000 kg	'000 kg	'000 kg	
1990-91	112,083	6,486	118,569	395,816
1991-92	105,005	5,845	110,850	324,043
1992-93	110,179	5,419	115,598	319,866

(a) Source: The National Council of Wool Selling Brokers of Australia and ABS Dealers Collection.  
(b) Includes fallmorgered wool, dead wool, and wool exported on skins.

*Prices*

Prices paid for wool sold in South Australia tend to be on average less than prices realised in other States. This is attributable partly to the large proportion of medium to broad quality wools grown in South Australia and in western New South Wales.

**Cattle**

In comparison with other States, cattle grazing is not a major industry in South Australia. Of the cattle in Australia at 31 March 1993, 4.5 per cent of those used mainly for meat production and 5.7 per cent of those for milk production were in South Australia. At 31 March 1993 the total number of cattle was 1,104,179.

Cattle Numbers at 31 March

Description	1991	1992	1993
<b>Cattle for meat production:</b>			
Cows and heifers	442,670	434,933	517,603
Bulls and bull calves (a)	25,805	24,422	26,430
Other calves	219,837	238,672	238,322
Other cattle	168,337	181,310	179,534
<b>Total</b>	<b>856,649</b>	<b>879,337</b>	<b>961,889</b>
<b>Cattle for milk production:</b>			
Cows	87,268	88,814	92,266
Heifers and heifer calves (b)	244,590	46,903	48,479
Bulls and bull calves (a)	1,543	1,427	1,545
<b>Total (b)</b>	<b>133,401</b>	<b>137,144</b>	<b>142,290</b>
<b>Total cattle (b)</b>	<b>990,050</b>	<b>1,016,481</b>	<b>1,104,179</b>

(a) Used or intended for service.  
(b) Excluding house cows.

Cattle Numbers : Statistical Divisions, at 31 March 1993  
( '000)

Description	Statistical Divisions						
	Adelaide	Outer Adelaide	Yorke and Lower North	Murray Lands	South East	Eyre	Northern
Cattle:							
For meat production . .	7.0	84.0	48.3	100.9	477.2	28.7	215.8
For milk production . . .	6.2	59.1	4.4	43.2	28.0	0.3	1.1
<b>Total</b> . . . . .	<b>13.2</b>	<b>143.1</b>	<b>52.7</b>	<b>144.1</b>	<b>505.2</b>	<b>29.0</b>	<b>216.9</b>

*Cattle for meat production*

The number of cattle for meat production at 31 March 1993 was 961,889. This was a 9.4 per cent increase on the previous year and continues the steady rate of increase evident over the last decade.

In the northern pastoral areas, Shorthorns are the predominant breed while there are fewer Herefords. In the South East, Herefords and Shorthorns are the main breeds and there are substantial numbers of Aberdeen Angus. Near Adelaide where a number of studs are located, several breeds are well represented. In recent years several European breeds have been introduced, most notably the Charolais.

*Cattle for milk production*

There has been a decline in the total number of cattle for milk production over the last decade. However, the total number has increased over the last two years and at 31 March 1993 was 142,290, a 3.8 per cent increase on the previous year.

Properties in South Australia on which dairying is the main activity are situated mainly in the areas where high rainfall or irrigation permits the growing of sown pastures. Many of the mixed farms in the better cereal growing areas carry herds used mainly for milk production.

**Dairy produce**

*Milk*

Total milk production in any one year is not known precisely. However, as details are known of two major components of total milk utilisation in South Australia, namely the amount consumed by factories in the production of milk, cheese, butter and other milk products and the amount used for home consumption, an estimate can be made.

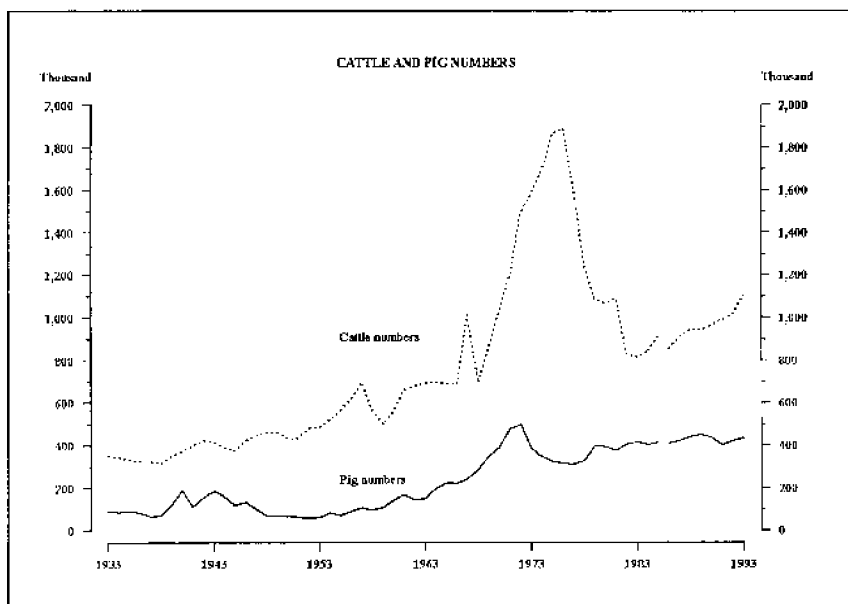
Production and Utilisation of Milk  
( '000 litres)

Year	Total milk produced	Milk used for	
		Factory cheese (a)	Home consumption
1990-91 . . . . .	366,016	229,540	154,200
1991-92 . . . . .	410,982	220,000	155,375
1992-93 . . . . .	435,580	254,466	153,244

(a) Factory production accounts for virtually all cheese produced. Source: Australian Dairy Corporation.

Pigs

In past years pigs were kept in South Australia as a sideline on mixed farms or in conjunction with dairy cattle, but now most pig production comes from establishments specialising in pigs. At 31 March 1993 there were 434,665 pigs, approximately 59 per cent of which were in Outer Adelaide and the Murray Lands Statistical Divisions. The principal breeds in South Australia are Large White and Landrace. Specialised sire line breeds which include the American breeds Duroc and Hampshire are used more now.



Pig Numbers, at 31 March

Description	1991	1992	1993
Boars .....	3,288	3,575	3,479
Breeding sows and gilts .....	46,387	48,830	50,008
Other pigs .....	350,363	367,636	381,178
<b>Total .....</b>	<b>400,038</b>	<b>420,041</b>	<b>434,665</b>

Meat production and marketing

South Australia provided 8.6 per cent of total Australian red meat production during 1992-93. The following table shows the number of livestock slaughtered for human consumption (including exports) and the production of red meat during the last six years. Slaughtering and meat production on rural establishments are included in these figures.



Livestock Slaughtered and Red Meat Produced

Year	Livestock slaughtered for human consumption			Red meat production (carcass weight)			
	Cattle and calves	Sheep and lambs	Pigs	Beef and veal	Mutton and lamb	Pigmeat	Total
	'000	'000	'000	tonnes	tonnes	tonnes	tonnes
1987-88 . . . .	453	4,154	602	92,818	79,897	36,671	209,386
1988-89 . . . .	408	3,961	659	88,143	78,362	40,364	206,868
1989-90 . . . .	457	4,580	621	100,457	88,991	40,815	230,263
1990-91 . . . .	398	4,786	599	87,619	97,472	38,644	223,734
1991-92 . . . .	405	4,869	524	91,100	102,519	34,538	228,156
1992-93 . . . .	418	4,832	568	96,658	105,023	38,153	239,833

Livestock, Average Prices at Adelaide Market<sup>(a)</sup>  
(Dollars)

Class of stock	1990-91	1991-92	1992-93
<b>Cattle:</b>			
Bullocks and steers;			
Young, 120-160 kg medium . . . . .	314.75	303.04	316.02
Steers, 250-300 kg medium . . . . .	579.90	562.00	562.56
Bullocks, 300-350 kg medium . . . . .	669.89	640.71	675.89
Cows;			
160-250 kg medium . . . . .	406.25	416.09	396.14
Calves;			
Prime vealers . . . . .	235.98	244.71	280.74
<b>Sheep:</b>			
Wethers;			
Over 22 kg medium . . . . .	8.68	11.65	14.18
Ewes;			
Under 22 kg medium . . . . .	8.00	8.95	10.88
Lambs;			
Young, 16-19 kg medium . . . . .	18.98	23.12	31.22
16-19 kg medium . . . . .	20.02	22.78	30.10
<b>Pigs:</b>			
Choppers . . . . .	226.49	215.06	202.56
Baconers . . . . .	139.80	138.20	141.17
Porkers . . . . .	95.76	95.97	92.76

(a) Based on average weekly prices at the abattoir market, for year ended 30 June.

**Gross value**

Gross value is the value placed on recorded production at the wholesale prices realised in principal markets. The following table shows for the past three years the gross value of livestock products, and livestock slaughtering and disposals.

Gross Value of Livestock Products and Livestock Slaughtering and Disposals

Particulars	1990-91	1991-92	1992-93
<b>LIVESTOCK PRODUCTS (\$'000)</b>			
Wool .....	395,816	324,043	319,866
Whole milk intake by factories:			
Manufactured .....	45,530	45,933	58,895
Market sales (a) .....	64,449	67,246	66,876
Eggs .....	23,078	23,792	23,609
Honey and beeswax .....	2,788	3,614	5,403
<b>Total livestock products .....</b>	<b>531,662</b>	<b>464,627</b>	<b>474,649</b>
<b>LIVESTOCK SLAUGHTERINGS AND DISPOSALS (\$'000)</b>			
Cattle and calves .....	149,815	153,682	154,419
Sheep and lambs .....	46,101	67,007	109,994
Pigs .....	82,232	63,672	68,920
Poultry .....	48,062	50,408	54,323
<b>Total livestock slaughterings and disposals .....</b>	<b>326,210</b>	<b>334,769</b>	<b>387,657</b>

(a) Market sales include white, flavoured, high and low fat milk, and UHT milk.

Other rural industries

Poultry farming

Poultry farming is a specialised and distinct industry and it is from the specialised hatcheries and chicken-raising establishments that the bulk of commercial production is obtained. The industry can be divided into two categories; the production of eggs, and the raising of poultry for meat. Chickens, scientifically bred for rapid weight gain and known as 'broilers', account for approximately 98 per cent of total poultry slaughtered.

The main production centres for both categories of this industry are located within an 80 kilometre radius of Adelaide, near the processing works and main consumption outlets. Particular concentrations of growers are at Murray Bridge and Gawler, with some broiler growers established in the Adelaide Hills.

Poultry Numbers at 31 March ('000)

Particulars	1991	1992	1993
Hens and pullets for egg production ..	796	722	785
Other fowls and chickens .....	4,006	4,167	4,668
Other poultry (a) .....	32	35	69
<b>Total .....</b>	<b>4,834</b>	<b>4,925</b>	<b>5,523</b>

(a) Includes ducks, turkeys, quail, pheasants etc.

The trend in the egg industry in South Australia is towards a reduction in the total number of poultry farms, but an increase in average flock size. Housing of birds for commercial purposes is largely planned on the intensive principle, with deep litter pens or single and multiple bird cage units. Laying stock consists mainly of a specially produced crossbreed between the White Leghorn and Australian breeds.

Egg production in 1992-93, as reported by the South Australian Agricultural Census, totalled approximately 14.1 million dozen. However, these figures do not take into account small producers and the movement of eggs interstate, which may represent a significant proportion of total egg production.

#### Broiler industry

The following table shows details of poultry slaughtered for human consumption for the last five years.

Poultry Slaughtered for Human Consumption

Year	Chickens (broilers, fryers or roasters)	Hens, stags and others (a)	Total
NUMBER SLAUGHTERED ('000)			
1988-89	25,548	460	26,008
1989-90	27,198	562	27,760
1990-91	23,730	409	24,139
1991-92	26,416	483	26,899
1992-93	25,397	602	25,999
DRESSED WEIGHT OF POULTRY SLAUGHTERED (tonnes)(b)			
1988-89	32,946	1,123	34,069
1989-90	35,248	1,502	36,750
1990-91	31,945	1,269	33,214
1991-92	36,978	1,502	38,480
1992-93	38,619	1,686	40,306

(a) Includes ducks, turkeys, quail, pheasants etc. (b) Dressed weight of whole birds, pieces and giblets as reported by producers.

Broilers are specially bred meat strain birds of either sex, that are slaughtered between eight and ten weeks of age at a live weight of approximately 1.5 kg. This rapid growth and efficient conversion of feed to meat has been achieved by extensive breeding programs; the use of specially prepared poultry feeds high in protein and energy value; growth promotion and disease control drugs; and broiler houses, with controlled temperature, ventilation and light, conducive to fast growth.

#### Beekeeping

Beekeeping in South Australia is a small industry - in 1992-93 there were 155 beekeepers with forty or more hives. Most commercial apiarists operate on a migratory basis, following the flowering of the various species of honey flora. The production of honey and beeswax fluctuates considerably from year to year, depending upon seasonal conditions.

**Landcare**

There are more than 250 Landcare groups throughout the State. Groups undertake a range of activities from the development of property management plans and the adoption of sustainable farming practices to tree planting, nature conservation, water quality monitoring and erosion control. Support is provided by State Government agencies.

The Commonwealth Government through the National Landcare Program provides support for land and water management, vegetation establishment, corridor development, habitat retention and management for wildlife.

Twenty-six Soil Conservation Boards operate throughout the State. Currently, a new Board, the Eastern Districts Soil Conservation Board, is being established in pastoral lands north of the River Murray to the New South Wales border.

Murray Mallee, West Broughton, Yorke Peninsula, and Eastern Eyre Peninsula have so far released final District Plans identifying sustainable management practices for the land types which occur in their Districts. Many other Boards are in the process of releasing draft District Plans for public comment and it is expected that these will be completed by the end of 1994.

In urban areas, awareness of the importance of land and water care is increasing, with groups participating in water quality monitoring and catchment management, including litter collection and stream revegetation. Other groups are becoming interested in Coast care. More than 400 schools are participating in the Landcare Program, including monitoring salinity levels in water supplies through Saltwatch, the Waterwatch program for monitoring water quality, monitoring frogs and their habitat in Frogwatch and gaining a better understanding of the soil through Wormwatch.

## **11.2 FORESTRY**

There are an estimated six million hectares of land classified as wooded in South Australia but much of this is too small or scattered to be of current economic value for wood production or is better retained in its present form for environmental protection. Some 780,000 hectares carry forest or forest woodland, a minor part of which is still used for fencing or firewood materials. Many of the forested or wooded areas are of considerable value for soil conservation, watershed protection, shelter, shade and conservation of indigenous plants and animals. The plantation forest estate is of particular economic significance in South Australia, which because of climatic factors is very deficient in natural timber resources.

Of the State's forest reserve totalling 127,126 hectares, at 30 June 1994, 75,609 hectares were under pine plantation (mainly *Pinus radiata*). It is estimated an additional 27,000 hectares were under plantation by private forestry organisations and individuals.

**Indigenous forests**

The natural forests of South Australia consist of eucalypt hardwoods restricted principally to the Mount Lofty Ranges, the lower Flinders Ranges, the southern portion of Eyre Peninsula, and the South East. These are managed primarily for conservation purposes.

Since the 1983 bushfire damage of forest plantations in the South Eastern and Central regions, an extensive replanting program was undertaken and completed in 1993. Salvaged logs that were placed in Lake Bonney for storage have been removed and tests have shown that retrieved logs suffered no significant deterioration in strength or durability.

The majority of the planted forest is in the Lower South East. The 625 mm rainfall line roughly divides the South East in two; the Lower South East, with an annual rainfall in excess of 625 mm is quite suitable for commercial forestry, but the Upper South East is not.

**State forests**

State forests were administered by Woods and Forests under the auspices of Primary Industries (SA) which was responsible for the establishment, maintenance and utilisation of State forests, including the management of forest reserves and operation of mills for processing timber produced by those forests. The Forest Reserves are organised into Districts and are under the charge of professional foresters. From 1 July 1993 following a government reorganisation of the former Woods and Forests Department, the forestry aspect of the agency was transferred to the newly formed Primary Industries (SA) department and the timber products and manufacturing market area was formed into a fully government-owned company called Forwood Products Pty Ltd.

Location	State Forests (Hectares)					
	Planted during 1993			Plantations at 30 June 1994		
	Softwoods			Softwoods		
	<i>Pinus radiata</i>	Other <i>Pinus</i>	Hard-woods	<i>Pinus radiata</i>	Other <i>Pinus</i>	Hard-woods
<b>Northern Region:</b>						
Bundaleer .....	—	—	—	1,229.3	20.3	347.3
Wirrabara .....	59.8	—	—	1,853.6	54.6	48.9
Other forests .....	—	—	—	—	—	146.6
<b>Total Northern .....</b>	<b>59.8</b>	<b>—</b>	<b>—</b>	<b>3,082.9</b>	<b>74.9</b>	<b>542.8</b>
<b>Central Region:</b>						
Mount Crawford .....	121.5	—	9.5	4,567.3	234.7	158.3
Kuitpo .....	74.5	—	0.2	1,971.3	209.4	110.5
Second Valley .....	—	—	—	2,233.6	140.1	11.7
Other forests .....	—	—	—	—	—	—
<b>Total Central .....</b>	<b>196.0</b>	<b>—</b>	<b>9.7</b>	<b>8,772.2</b>	<b>584.2</b>	<b>280.5</b>

State Forests (continued)  
(Hectares)

Location	Planted during 1993			Plantations at 30 June 1994		
	Softwoods			Softwoods		
	Pinus radiata	Other Pinus	Hard-woods	Pinus radiata	Other Pinus	Hard-woods
South Eastern Region:						
Penola .....	636.2	-	-	13,468.5	502.3	53.2
Comaum .....	-	-	-	2,958.5	282.8	9.3
Cave Range .....	-	-	-	201.1	106.1	-
Mount Burr .....	702.7	-	2.4	16,457.0	588.0	87.2
Noolook .....	87.5	-	-	4,845.1	4.4	-
Mount Gambier .....	-	-	14.2	8,703.9	229.9	83.9
Myora .....	311.5	-	23.4	13,368.5	370.3	75.4
Total South Eastern .....	1,737.9	-	40.0	60,002.6	2,083.8	309.0
Waterworks reserves .....	-	-	-	897.4	111.1	7.6
<b>Total State forests .....</b>	<b>1,993.7</b>	<b>-</b>	<b>49.7</b>	<b>72,755.1</b>	<b>2,854.0</b>	<b>1,139.9</b>

Source: Primary Industries (SA) Forestry.

Production

Log production is met from final felling and thinning operations, and planned forest management ensures that the amount of timber cut each year does not exceed new growth. The logging system used is from stump direct to mill. Primary Industries (SA) also supplies logs to private processing plants in South Australia.

Forwood Products, CSR-Softwoods and S.E.A.S.-Sapfor Ltd are major wood processors based in the south east of the State. Forwood Products comprises three sawmills in the South East at Mount Gambier, Nangwarry and Mount Burr, a panel and plywood plant at Nangwarry and a specialist furniture component factory at Mount Gambier. CSR-Softwoods operates the only particle board plants in South Australia and its three sawmills at Kuitpo, Mount Gambier and Jamestown have been progressively updated. S.E.A.S.-Sapfor operates mills at Tarpeena and Kalangadoo.

Forest Log Production<sup>(a)</sup>  
(Cubic metres)

Year	Softwood
1989-90 .....	710,487
1990-91 .....	685,348
1991-92 .....	800,683
1992-93 .....	867,039
1993-94 .....	1,032,419

(a) Source: Primary Industries (SA) Forestry. Does not include production by the larger private forest growers.

Production of Sawn Wood<sup>(a)</sup>

Year	Cubic metres	Proportion of Australian total (per cent)
1989-90 .....	228,156	7.3
1990-91 .....	240,193	8.7
1991-92 .....	271,800	9.3
1992-93 .....	317,100	10.2
1993-94 .....	364,960	n.y.a.

(a) Source: Australian Bureau of Agricultural and Resource Economics. Includes sawn equivalent of plywood and veneer, but excludes railway sleepers.

Total log production from State forests for Departmental sawmills and private industry deliveries includes logs for sawlog, preservation, peeler log and pulpwood.

**Employment** The number of employees directly employed by Primary Industries (SA) Forestry was 271 at 30 June 1994.

**Research** The virtual dependence of the South Australian forestry industry on a single species necessitates continued research into the maintenance and improvement of *Pinus radiata* resources, as well as into forestry in general.

Primary Industries (SA) Forestry maintains its own research facilities and works very closely with the South Australian Regional Station of the Division of Forest Research of the Commonwealth Scientific and Industrial Research Organisation (CSIRO) at Mount Gambier. Certain aspects of forestry research are also undertaken by the Soils Division of CSIRO, the Waite Agricultural Research Institute, the University of Adelaide, the Flinders University and the Department of Forestry of the Australian National University.

Joint research is being carried out into tree breeding through the Southern Tree Breeding Association whose South Australian members include the Primary Industries (SA) Forestry, CSR-Softwoods and S.E.A.S.-Sapfor Ltd. The Association is producing seed of improved quality to grow seedlings for planting in radiata pine forest areas.

Research activities aimed at an expansion of forestry production include the development of fertiliser use, both to stimulate growth and to bring into production land previously considered unsuitable, and the improvement of planting stock through selective breeding. Silvicultural research is concerned with the maintenance of soil fertility and with combating various diseases and pests. Permanent sample plots are maintained in Departmental forests for research into various aspects of forest yield and management.

**Forest protection**

Primary Industries (SA) Forestry has developed an extensive forest protection network, including the development of specialised off-road 4-wheel drive fire fighting and support vehicles. The organisation's forest fire fighting units are registered as 12 Country Fire Service brigades and form part of local groups.

The clearing of undergrowth, the maintenance of fire-breaks, the staffing of observation towers and the constant readiness of fire fighting units are all an integral part of forestry practice.

Other protective measures include herbicide application to prevent plant disorders, measures to control insect pests in the forest, and the eradication of the various weeds and pests which threaten young plants.

A large outbreak of the *Sirex* wood wasp which occurred in the commercial forests following the summer of 1986-87 is being successfully controlled with a nematode inoculation program which sterilises *Sirex* eggs.

### **11.3 FISHERIES**

Commercial fishing is undertaken along the entire South Australian coastline. In the sheltered waters of the Gulfs and the West Coast bays, operators take prawns or various marine scale fish species, while in offshore waters southern bluefin tuna and shark are sought.

Rock lobster is taken along the more exposed parts of the coast, while abalone is dived for in most areas. A small quantity of freshwater fish is caught in the River Murray and associated lakes.

The most commercially valuable species are rock lobster, prawns, tuna and abalone, with shark and whiting also making significant contributions. The general marine scale fishery supports the greatest number of fishermen, both recreational and commercial.

The total value of fisheries produce landed commercially in South Australia in 1992-93 was \$172.0 million.

There were 1,132 licensed fishermen operating in South Australian waters at 30 June 1993. The number of licence holders in each of the fisheries was; general marine 662, rock lobster 277, prawn 52, Lakes and Coorong 39, Reach (River Murray) 41, abalone 34, and miscellaneous 27. There are approximately 50 Commonwealth licensed fishermen fishing for tuna in South Australia. In addition, there is an average of one employee fisherman engaged in the industry for each licensed fishing operation, although the number of employees on each vessel varies according to the fishing operation.



*Administration* The exploitation of fish resources adjacent to South Australia is controlled by three Acts, the South Australian *Fisheries Act 1982*, the Commonwealth *Fisheries Act 1952* and the *Continental Shelf (Living and Natural Resources) Act 1968* (Cwlth). The *Fisheries Act 1982* was proclaimed and regulations gazetted in June 1984.

Under the State Act, which is administered by the Department of Primary Industries (Fisheries), provision is made for the licensing of fishermen and the registration of boats and gear. Control of fishing activity is maintained by licensing, zoning and seasonal closures, the establishment of size limits, bag limits and closed areas, the regulation of amount and type of gear, the prohibition of the use of explosive or noxious substances in any waters and the establishment of aquatic reserves. Controls of this nature are considered necessary for the orderly and efficient use of fish resources, which are in effect 'common property' resources.

*Finfish* The major marine species of finfish taken in South Australian waters are tuna, shark, oceanjacket, Australian salmon, whiting, garfish and snapper.

Finfish : Production by Major Species<sup>(a)</sup>  
( '000 kg)

Species	1990-91	1991-92	1992-93
<b>Marine:</b>			
Australian salmon	513	624	589
Garfish	453	514	515
Leatherjacket	158	140	64
Mullet	381	332	349
Mulloway	50	53	50
Oceanjacket	949	1,007	842
Orange roughy	983	218	48
Tommy ruff	309	363	332
Shark	2,301	2,181	2,249
Snook	99	100	21
Snapper	457	437	386
Tuna	2,565	1,786	1,480
Whiting (King George)	741	797	793
<i>Total (incl. other)</i>	<i>13,528</i>	<i>12,996</i>	<i>12,434</i>
<b>Freshwater:</b>			
Golden perch (Callop)	164	157	279
Murray cod	-	-	-
Bony bream	977	1,129	702
European carp	657	1,154	863
<i>Total (incl. other)</i>	<i>1,835</i>	<i>2,473</i>	<i>1,885</i>
<b>Total finfish production</b>	<b>15,363</b>	<b>15,469</b>	<b>14,319</b>

(a) Includes catches made in the new Great Australian Bight and South East Trawl Fisheries.  
Source: South Australian Research and Development Institute (SARDI).

Tuna are taken in the waters west and south of Eyre Peninsula and Kangaroo Island. Occasional catches are taken beyond the continental shelf. The use of spotting aircraft has increased the efficiency of fishing operations. Traditionally most tuna have been landed at Port Lincoln or Sreaky Bay although in recent years a significant proportion of the catch

has been off-loaded onto Japanese 'carrier' freezer vessels for direct shipment to the Japanese markets. For 1992-93 the tuna fishery operated with an Australian quota of 5,265 tonnes.

Shark fishing extends along the entire coastline. The main ports of landing are Port Lincoln, Robe, Thevenard/Ceduna, Victor Harbor, Port Adelaide and the south-east rock lobster ports. The two most important species, namely school and gummy sharks, are mainly taken with large mesh gill nets and, to a lesser extent, with long-lines. The Commonwealth Government has prepared a management plan for the southern shark fishery to control the total effort in the fishery.

Operators using purse-seine nets take Australian salmon in waters adjacent to the moderately exposed coastline of southern Yorke and Eyre Peninsulas, Kangaroo Island and the West Coast. A total catch quota of 1,126 tonnes for South Australia has been imposed as emigrants from the South Australian stock are an important component of the Western Australian fishery. The main species of whiting taken is King George whiting which is captured commercially in Spencer Gulf and the West Coast bays. Of the other species garfish, mulloway, black bream and snapper are regarded highly as table fish. Mulloway and black bream are netted mainly in the Coorong and waters adjacent to the River Murray Mouth area.

Snapper are mainly taken by hand-line throughout State waters. In recent years the catches being made by long-lines have increased.

Finfish : Gross Value of Production by Major Species<sup>(a)</sup>  
(S'000)

Species	1990-91	1991-92	1992-93
Orange roughy .....	1,230	435	178
Tuna (b) .....	12,395	10,070	36,632
Whiting .....	4,355	5,468	5,017
Snapper .....	1,745	1,770	1,796
Garfish .....	1,315	1,645	1,789
Australian salmon .....	502	693	747
Shark .....	5,822	5,828	5,702
<b>Total (incl. other) .....</b>	<b>34,107</b>	<b>33,717</b>	<b>60,083</b>

(a) Includes catches made in the new Great Australian Bight and South East Trawl Fisheries.

(b) Price includes a component for value added.

Source: South Australian Research and Development Institute (SARDI).

The River Murray, Lakes area and Coorong are the only commercial sources of fresh water fish in the State because of the general lack of permanent streams and lakes. The River Murray has been sectioned into 'reaches' and 'reserves' for fishing purposes and each commercial river fisherman is issued with a permit to fish a separate reach.

*Crustaceans*

Prawn trawling is undertaken in Spencer Gulf and off the West Coast of the State. Management of the prawn fisheries has been greatly enhanced by the adoption of permanent and seasonal closures designed to protect small and reproducing prawns. This maximises the value of the catch by directing fishing to periods when prawns are larger and of higher quality.

Prawn Production

<i>Particulars</i>		1990-91	1991-92	1992-93
Estimated gross weight . . . . .	'000 kg	2,085	2,155	1,645
Value . . . . .	\$'000	21,717	19,653	19,709

*Source:* South Australian Research and Development Institute (SARDI).

Pots by which southern rock lobster are taken are positioned from the shore to the edge of the continental shelf. The south-east coast between Kingston and the Victoria border is the main fishing area. Good catches are also taken from grounds around Kangaroo Island, near the Althorpe Islands and Port Lincoln, and along the West Coast.

Rock Lobster Production

<i>Particulars</i>		1990-91	1991-92	1992-93
Estimated gross weight . . . . .	'000 kg	2,666	3,162	2,818
Value . . . . .	\$'000	44,931	57,752	55,339

*Source:* South Australian Research and Development Institute (SARDI).

To prevent over exploitation, almost all South Australian fisheries are 'limited entry' fisheries with constraints being placed on the number and size of vessels that may fish and the type or number of units of gear that may be used.

Although prawns and rock lobsters are the principal species of crustaceans fished in South Australia, there has been a recent increase in commercial fishing for blue crabs and sand crabs.

*Molluscs*

Abalone is by far the most important mollusc taken in South Australia and is found in greatest numbers at depths of 12 to 30 metres on the extensive reef substrata off the shores of western Eyre Peninsula. Smaller numbers are taken around Kangaroo Island and off the south-east coast. The two species exploited are greenlip and blacklip.

The abalone fishery is also subject to licence limitation with each diver required to have an authority to take abalone on his commercial fishing licence.

Abalone Production

Particulars		1990-91	1991-92	1992-93
Gross (in shell) weight .....	'000 kg	863	885	869
Value .....	\$'000	14,008	15,095	23,726

Source: South Australian Research and Development Institute (SARDI).

Oyster production is growing. Of the 77 approved leases, approximately half are fully commercial and the gross value of sales per annum amount to several million dollars.

Other molluscs taken in South Australian waters include squid (valued at \$1,291,000 in 1992-93), octopus (\$549,000), and scallops (\$248,000).

**Marketing and processing**

Marketing and processing arrangements vary according to the species. Traditionally, most of the tuna landed in South Australia is canned (not necessarily in South Australia) for domestic consumption. With the introduction of Individual Transferable Quotas and subsequent restructuring of the industry, the higher valued *sashimi* (raw fish) market in Japan is being examined. Southern rock lobster are tailed and frozen for export at most of the main ports, but some are cooked for local consumption. Some prawns are cooked and sold locally but most are frozen and exported. Abalone are either canned or frozen for export. Sharks are gutted and headed at sea and are frozen at the port of landing for interstate markets. Other fish are generally iced for dispatch to the Adelaide market or are scaled, filleted and frozen for general distribution. A proportion of the prime species landed in South Australia are sold for Australian east coast markets.

**Research**

Continuing research is important for effective fisheries management. The South Australian Research and Development Institute conducts rock lobster, prawn, Australian salmon, abalone, freshwater fish, whiting, snapper and oyster research programs including tagging, stock sampling, and market measuring. The Department of Primary Industries (Fisheries) also undertakes research into aspects of its fisheries management programs.

**Conservation**

The State Department of Primary Industries (Fisheries) has pioneered, in Australia, the concept of marine national parks and has created thirteen aquatic reserves with a total area of 14,971 hectares. Scal colonies, mangrove communities and areas of scientific and educational interest have been protected. Mangrove communities and allied samphire flats have received particular attention because of their recognised contribution to the productivity of the near-shore marine environment. All mangroves in South Australia are fully protected.

**Manufacturing industry statistics**

From 1968–69 Censuses of Manufacturing and Electricity and Gas Establishments have been conducted on an integrated basis with Censuses of Mining, Retail Trade and Selected Services, and Wholesale Trade. From 1974–75 to 1989–90 the statistics excluded single establishment enterprises employing fewer than four persons. These businesses are included again from 1990–91.

The unit for which detailed statistics are reported in the Manufacturing Census is the establishment. In general, an establishment covers all operations at a physical location, but may consist of a group of locations provided they are within the same State or Territory. The majority of establishments operate at one location only. Data in the tables below are for either establishments or locations.

Full-scale censuses are now conducted on a triennial basis, with small-scale censuses being conducted in each of the intervening years. For the small-scale censuses, businesses provide details relating to employment at end of June, wages and salaries paid, turnover, and issues relating to environmental protection.

**Structure and location**

The tendency for manufacturing industries, particularly those supplying consumer goods, to congregate near their market has resulted in a heavy concentration of South Australian secondary industries in or near Adelaide. The following tables show this concentration of manufacturing activity in the Adelaide Statistical Division (ASD).

Manufacturing Locations : Summary of Operations, 1991–92

<i>Item</i>	<i>Unit</i>	<i>Adelaide Statistical Division</i>	<i>South Australia</i>	<i>ASD as percentage of SA</i>
Locations at 30 June . . . . .	Number	2,568	3,249	79
Employment at end of June . . . . .	Number	68,964	86,244	80
Wages and salaries . . . . .	\$m	1,957.1	2,410.2	81
Turnover . . . . .	\$m	12,394.6	15,443.3	80

Generally, industrial plants outside the Adelaide Statistical Division are located near the sources of supply of raw materials. These include the sawmills and paper pulp industries of the South East, the fruit processing plants of the Riverland, the wineries and distilleries of the Barossa Valley and the Riverland, and various dairy produce, meat slaughtering, fish processing and cement manufacturing plants.

Manufacturing Locations : Summary of Manufacturing Operations  
by Statistical Division, 1991-92

Statistical Division	Locations at 30 June	Employ- ment at end of June	Wages and salaries	Turnover
	number	number	\$m	\$m
Adelaide .....	2,568	68,964	1,957.1	12,394.6
Outer Adelaide .....	218	3,987	91.4	567.2
Yorke and Lower North .....	75	778	13.3	102.9
Murray Lands .....	117	2,411	59.1	434.1
South East .....	124	4,527	128.7	678.0
Eyre .....	57	690	12.7	88.6
Northern .....	90	4,887	206.7	1,177.9
<b>Total State .....</b>	<b>3,249</b>	<b>86,244</b>	<b>2,410.2</b>	<b>15,443.3</b>

The number of manufacturing locations in South Australia increased from 3,236 in 1990-91 to 3,249 in 1991-92. Employment at the end of June 1992 was 86,244, a decrease of 8.5 per cent from the June 1991 figure of 94,224. The industry subdivisions basic metal products and textiles recorded the largest percentage decreases in employment of 18.6 and 12.5 respectively.

A summary of manufacturing operations by industry subdivision within the Adelaide Statistical Division is detailed below and the distribution of activity between this Division and the rest of the State can be seen by comparing this and the subsequent table.

Manufacturing Locations : Summary of Operations  
by Industry Subdivision, Adelaide Statistical Division, 1991-92

Industry Subdivision	Locations at 30 June	Employ- ment at end of June	Wages and salaries	Turnover
	number	number	\$m	\$m
Food, beverages and tobacco .....	232	8,744	231.6	1,633.4
Textiles .....	62	1,919	n.p.	n.p.
Clothing and footwear .....	110	3,153	n.p.	n.p.
Wood, wood products and furniture .....	405	4,423	97.3	433.8
Paper, paper products, printing and publishing .....	268	5,189	159.3	689.3
Chemical, petroleum and coal products .....	69	2,311	85.7	1,164.5
Non-metallic mineral products .....	113	2,536	77.5	451.6
Basic metal products .....	50	2,087	62.4	414.2
Fabricated metal products .....	417	6,033	156.1	739.3
Transport equipment .....	149	14,168	438.2	3,889.3
Other machinery and equipment .....	410	12,076	343.3	1,494.3
Miscellaneous manufacturing .....	283	6,325	169.3	781.6
<b>Total manufacturing .....</b>	<b>2,568</b>	<b>68,964</b>	<b>1,957.1</b>	<b>12,394.6</b>

Manufacturing Locations : Summary of Operations  
by Industry Subdivision, 1991-92

Industry Subdivision	Locations at 30 June	Employ- ment at end of June	Wages and salaries	Turnover
	number	number	\$m	\$m
Food, beverages and tobacco . . . . .	441	14,990	377.8	2,704.9
Textiles . . . . .	69	2,151	70.2	435.5
Clothing and footwear . . . . .	122	3,363	76.3	319.1
Wood, wood products and furniture.	505	6,799	155.0	678.4
Paper, paper products, printing and publishing . . . . .	321	6,757	213.4	929.5
Chemical, petroleum and coal products	83	2,614	93.0	1,260.4
Non-metallic mineral products . . . . .	161	2,891	87.8	508.1
Basic metal products . . . . .	62	6,062	247.5	1,486.2
Fabricated metal products . . . . .	512	6,785	173.0	831.4
Transport equipment . . . . .	179	14,431	444.1	3,917.6
Other machinery and equipment . . . . .	482	12,944	359.6	1,578.0
Miscellaneous manufacturing . . . . .	312	6,457	171.3	794.1
<b>Total manufacturing . . . . .</b>	<b>3,249</b>	<b>86,244</b>	<b>2,410.2</b>	<b>15,443.3</b>

The importance of the manufacturing industry in South Australia relative to Australia as a whole can be gauged from the following comparison.

Manufacturing Establishments : Summary of Operations  
South Australia and Australia, 1991-92

Item	Unit	South Australia as a percentage of Australia		
		South Australia	Australia	percentage of Australia
Establishments at 30 June . . . . .	Number	3,160	41,480	7.6
Employment at end of June . . . . .	'000	86.5	906.9	9.5
Wages and salaries . . . . .	\$m	2,474.9	27,068.0	9.1
Turnover . . . . .	\$m	15,481.4	168,018.7	9.2

Although there were 3,160 establishments operating at 30 June 1992 only 144 or 4.6 per cent employed 100 persons or more, while 2,531 establishments, or 80.1 per cent of the total, employed fewer than 20 persons. The 20 largest establishments employed 24,073 persons, or 27.8 per cent of the total.

In the following table manufacturing establishments are grouped according to the number of persons employed.

## Manufacturing

Manufacturing Establishments : Selected Variables by Size of Establishment, 30 June 1992

Employment size group	Establishments at 30 June	Employment at end of June	Wages and salaries	Turnover
	number	number	\$m	\$m
Fewer than 20 .....	2,531	15,106	310.3	1,677.0
20 but fewer than 50 .....	356	10,923	274.7	1,391.0
50 but fewer than 100 .....	129	9,247	256.3	1,810.1
100 but fewer than 200 .....	68	9,427	281.2	1,641.1
200 but fewer than 500 .....	56	17,685	514.0	2,932.4
500 or more .....	20	24,073	819.4	5,940.2

### Individual industries

In this section details are given of major South Australian secondary industries. However, in order to maintain confidentiality of details for individual businesses, statistics relating to a number of important industries are not published. The classification used is based on the 1983 edition of the Australian Standard Industrial Classification (ASIC).

### Meat

Most of the abattoirs in South Australia are located in country areas. Details of country butchers who slaughter livestock mainly for sale in their own retail shops are not included in the following table.

Meat (except smallgoods or poultry)

Year	Establishments at 30 June	Employment at end of June	Wages and salaries	Turnover
	number	number	\$m	\$m
1988-89 .....	40	2,759	55.4	382.6
1989-90 .....	43	3,375	75.9	449.8
1990-91 (a) .....	39	3,051	77.5	427.5
1991-92 .....	42	2,782	70.4	397.3

(a) From 1990-91 includes single establishments with fewer than four persons employed.

### Wine and brandy

South Australia is the leading State in wine and brandy production. In 1991-92, 37 per cent of Australian establishments classified to this industry were located in this State and their contribution to national totals was 48 per cent of employment, 51 per cent of wages and salaries and 45 per cent of turnover.



Wine and Brandy

Year	Establishments at 30 June	Employment at end of June	Wages and salaries	Turnover
	number	number	\$m	\$m
1988-89 .....	83	2,696	60.7	508.6
1989-90 .....	72	2,438	63.3	494.4
1990-91 (a) .....	85	2,877	64.5	470.7
1991-92 .....	87	2,425	62.1	434.9

(a) From 1990-91 includes single establishments with fewer than four persons employed.

Wood and  
wood products

The major activities in this sector of manufacturing are log sawmilling, resawn and dressed timber and joinery and wooden structural fittings industries.

Wood and Wood Products

Year	Establishments at 30 June	Employment at end of June	Wages and salaries	Turnover
	number	number	\$m	\$m
1988-89 .....	208	4,863	100.6	504.5
1989-90 .....	175	4,409	101.1	451.7
1990-91 (a) .....	251	4,080	103.1	471.5
1991-92 .....	240	4,148	100.4	451.4

(a) From 1990-91 includes single establishments with fewer than four persons employed.

Printing and  
allied industries

There was one large establishment in 1991-92 producing daily newspapers in Adelaide. Newspaper printing offices are also located in most large towns, and a number of these produce newspapers for more than one locality. Particulars of general printing establishments, including the activities of the Stateprint Division of the Department of State Services, are also incorporated in the following table.

Printing and Allied Industries

Year	Establishments at 30 June	Employment at end of June	Wages and salaries	Turnover
	number	number	\$m	\$m
1988-89 .....	223	5,893	138.7	538.8
1989-90 .....	212	5,603	146.4	570.2
1990-91 (a) .....	283	5,641	154.9	569.7
1991-92 .....	290	5,216	154.3	614.2

(a) From 1990-91 includes single establishments with fewer than four persons employed.

*Cement and concrete products*

There was one large firm producing cement in South Australia, its two manufacturing plants being at Birkenhead and Angaston. The Angaston plant, based on the limestone deposits, is an example of a manufacturing location being established near the source of the raw material.

Cement and Concrete Products

Year	Establishments at 30 June	Employment at end of June	Wages and salaries	Turnover
	number	number	\$m	\$m
1988-89	72	2,153	53.5	342.7
1989-90	68	2,120	63.8	393.6
1990-91 (a)	72	1,635	52.0	332.6
1991-92	63	1,522	48.7	298.1

(a) From 1990-91 includes single establishments with fewer than four persons employed.

*Basic iron and steel*

In 1941 a blast furnace was installed at Whyalla to utilise iron ore from the Middleback Ranges. This ore is transported by rail a distance of fifty-five kilometres to Whyalla. The main items of production are structural steel sections (such as girders and beams) and rails.

In 1991-92, the 38 establishments in South Australia, classified to this industry group, reported total employment at June 1992 of 4,248; wages and salaries \$175.3 million and turnover \$828.2 million.

*Motor vehicles*

The largest single industry in South Australia is the motor vehicle industry. However, as there were only four firms engaged in motor vehicle production in 1991-92, confidentiality reasons prevent publication of detailed figures. These four firms employed 8,569 persons at the end of June 1992 and accounted for 9.9 per cent of total manufacturing employment in South Australia.

*Appliances and electrical equipment*

For many years South Australia has been one of the leading States in the production of the larger household appliances, including refrigerators, washing machines, cooking stoves and ranges. These items constitute a significant part of the total activity shown in the next table. Also represented are manufacturers of radio and television components, water-heating systems, batteries and other electrical machinery and equipment.

This group of industries is the second most important in the State and in 1991-92 accounted for 9.5 per cent of total manufacturing employment in South Australia.

### 13.1 MINING

South Australia has a well developed mineral industry and in recent years crude oil and natural gas have surpassed coal and iron ore as the major products. The State also has important resources of industrial minerals which make up a significant proportion of the total annual value of mineral production.

The *Mining Act 1971* reserves all minerals to the Crown and regulates and controls all mining operations in South Australia.

The state and conditions of the mine, machinery, ventilation, and all other matters relating to the safety, health and well-being of the employees and general public are regulated by the *Occupational Health, Safety and Welfare Act 1986* and the *Mines and Works Inspection Act 1920*. The *Petroleum Act 1940*, *Petroleum (Submerged Lands) Act 1982*, *Cooper Basin (Ratification) Act 1975*, *Stony Point (Liquids Project) Ratification Act 1981* and the *Petroleum Shortages Act 1980* provide for the control of petroleum exploration and the production, conservation and distribution of petroleum by pipeline. The administration of these Acts is the responsibility of the Minister for Mines and Energy and the Director-General, Department of Mines and Energy.

#### Mining claims leases and licences

The granting of leases and licences and the pegging of new claims is governed by the *Mining Act 1971*. A total of 270 private mines were current at 30 June 1994. Mineral royalties received by the Department of Mines and Energy during 1993-94 amounted to \$60 million.

The following table shows tenements held under the *Mining Act 1971* and the *Petroleum Act 1940* for the last three years.

Tenements Held Under Mining and Petroleum Acts

Particulars	At 30 June		
	1992	1993	1994
Mineral claims .....	108	118	111
Precious stones claims .....	2,208	2,014	2,064
Leases .....	1,612	1,606	1,613
Exploration licences .....	130	127	188
Petroleum exploration and production licences and permits .....	93	96	99

## Appliances and Electrical Equipment

Year	Establish- ments at 30 June	Employ- ment at end of June	Wages and salaries	Turnover
	number	number	\$m	\$m
1988-89 .....	113	9,215	195.3	897.9
1989-90 .....	102	7,660	181.5	892.2
1990-91 (a) .....	131	7,993	220.0	1,089.8
1991-92 .....	137	8,184	228.3	1,120.8

(a) From 1990-91 includes single establishments with fewer than four persons employed.

### Environmental protection

In 1991-92, 5 per cent of manufacturing establishments in South Australia reported conducting environmental impact assessments or audits (for new or existing production processes). Return of own containers or packaging was permitted and/or encouraged by 26 per cent compared with 22 per cent for Australia. Only 6 per cent reported that they were engaged in the marketing or production of goods or services for monitoring, maintaining or improving the environment.

Manufacturing establishments had a current expenditure on environmental protection of \$31.0 million. Capital expenditure to abate pollution was \$39.9 million with over three-quarters (77.7 per cent) spent by two industry subdivisions, chemical, petroleum and coal products (\$16.2 million) and basic metal products \$14.8 million).

### Further references

Additional information may be found in the following ABS publications:

- 4603.0 *Cost of Environment Protection, Australia: Selected Industries*
- 8202.0 *Manufacturing Industry, Summary of Operations, Australia*
- 8211.0 *Constant Price Estimates of Manufacturing Production, Australia*
- 8221.0 *Manufacturing Industry, Australia*
- 8221.4 *Manufacturing Industry, South Australia*
- 8365.0 *Manufacturing Production, Australia: Principal Commodities Produced*

*Minerals resumed*

The mineral rights on private land were resumed by the Crown in July 1972 so that all minerals are the property of the Crown.

A royalty of 2.5 per cent (5 per cent for extractive minerals) of the value of the minerals, realised upon their sale, is payable to the Minister for Mines and Energy on all minerals (except precious stones) recovered and sold or used for commercial purposes. No royalty is payable on precious stones.

*Extractive minerals*

Extractive minerals are defined as sand, gravel, stone, shell, shale or clay but this does not include any such minerals that are mined for a prescribed purpose, nor fire-clay, bentonite or kaolin.

The royalties collected from the mining of extractive minerals are paid into the Extractive Areas Rehabilitation Fund to be used in rehabilitating land disturbed by mining operations. The Fund may also be used for research into methods of mining engineering and practice with a view to reducing environmental damage or impairment.

*General conditions*

A current miners right or, in the case of precious stones, a precious stones prospecting permit must be held by every prospector to authorise the pegging of the appropriate class of claim.

At least three weeks notice of entry for prospecting or mining purposes must be given to the landholder if the land is freehold or held on perpetual lease. Three weeks notice must also be given to any landholder before 'declared equipment' can be used on the land. In either case the landholder may lodge an objection with the Warden's Court.

A claim (other than a precious stones claim) has a maximum term of twelve months, is not transferable and must be converted to a lease before minerals can be removed for sale or used for commercial purposes.

Exploration licences have a maximum term of five years and a maximum area of 2,500 square kilometres and are subject to the terms agreed. Twenty-eight days notice must be given in the *South Australian Government Gazette* before an exploration licence is granted.

*Mineral industry*

A mining establishment is one predominantly engaged in an activity specified in Division B of the Australian and New Zealand Standard Industrial Classification (ANZSIC).

The scope of the Mining division includes all units mainly engaged in 'mining', in exploration for minerals, and in the provision of a wide variety of services to mining and mineral exploration, as well as mining units under development.

The term 'mining' is used in the broad sense to include the extraction of minerals occurring naturally as solids such as coal and ores, liquids such as crude petroleum, or gases such as natural gas. Extraction of minerals is undertaken by such processes as underground or open cut mining, dredging, quarrying, the operation of wells or evaporation pans, or by recovery from ore dumps or tailings, and all supplementary activities aimed at preparing the crude materials for marketing.

Activities include milling, dressing and beneficiation of ores, screening, washing and flotation. These activities are generally carried out at or near mine sites as an integral part of mining operations. Natural gas absorption, purifying and similar treatment plants are also included in this division.

From 1988-89 the annual Mining Census has been restricted to metallic minerals, coal, oil and gas. However, on a triennial basis, including 1989-90, data will be collected for construction materials and other non-metallic minerals. As a consequence it is not possible to relate overall Census totals between years.

In addition, changes to the business units definitions have caused some discontinuities, particularly in relation to the count of establishments. The new treatment of Unincorporated Joint Ventures has led to an increase in the number of establishments in certain industries, e.g. gold and oil and gas, and this masks normal fluctuations in these industries. It is not possible to reconcile the count of establishments with the number of mine sites.

Mining Establishments : Summary of Operations  
by Industry Subdivision, 1992-93

Industry Subdivision	Number of establishments operating at 30 June 1993	Persons employed (a)	Wages and salaries \$ million	Turnover \$ million	Purchases, transfers in and selected expenses \$ million	Value added \$ million
Metal ore mining.....	6 )					
Coal mining .....	1 )					
Oil and gas extraction .....	9 )	2,878	129.3	1,249.1	263.2	984.3
Construction material mining and mining n.e.c.....	51 )					

(a) At 30 June 1993 and includes working proprietors.

**Mineral commodities**

Mineral commodity statistics published in the *South Australian Year Book* are those recorded by the Director-General of Mines and Energy.

Mining and Quarrying Production<sup>(a)</sup>

Mineral	Unit of quantity	Quantity		Value (b)	
		1991-92	1992-93	1991-92	1992-93
				\$'000	\$'000
<b>Metallic:</b>					
Copper	'000 tonnes	67	77	186,295	208,227
Gold	kg	785	1,148	11,433	17,923
Iron ore	'000 tonnes	2,264	2,514	20,373	22,626
Uranium oxide	tonnes	1,484	1,105	62,886	37,038
Lead	tonnes	14	5	9	4
Zinc ore	'000 tonnes	7	1	1,708	114
Silver	tonnes	18	13	3,004	2,198
<b>Non-metallic:</b>					
Barite	'000 tonnes	6	8	412	492
Coal	'000 tonnes	2,820	2,778	62,291	54,691
Dolomite	'000 tonnes	757	982	4,607	5,093
Gypsum	'000 tonnes	1,179	1,261	2,740	2,520
Kaolin	'000 tonnes	4	5	309	456
Limestone	'000 tonnes	2,003	2,429	11,530	12,312
Opal (c)	..	..	..	38,841	39,157
Salt	'000 tonnes	822	753	4,359	3,846
Silica	'000 tonnes	120	136	2,439	2,367
Talc	'000 tonnes	11	13	873	1,162
Other	..	..	..	279	221
<b>Construction material, quarrying</b>					
Natural sand products	'000 tonnes	9,171	11,544	63,374	82,073
Natural clay products	'000 tonnes	3,226	3,129	23,177	21,903
Natural gas (d)	'000 tonnes	1,033	1,013	3,008	2,841
Condensates	Millions of m <sup>3</sup>	4,339	4,200	375,372	370,997
Crude oil	Kilolitres	826,346	709,112	155,392	135,073
Liquefied petroleum gas	Kilolitres	1,298,472	952,953	225,922	175,717
	'000 tonnes	510	451	110,532	113,184
<b>Total</b>	..	..	..	<b>1,371,165</b>	<b>1,312,234</b>

(a) Quantities disposed of as recorded by the Department of Mines and Energy. (b) Ex-mine site.  
(c) Estimated. (d) Value of gas ex-Moomba plant includes value of CO<sub>2</sub> from Caroline No. 1 well and also value of ethane.

## Copper

Copper mining was very important in the early days of the settlement of South Australia. The rich discoveries at Kapunda in 1842, Burra in 1845, and Wallaroo-Moonta in 1859-60 came at a time when the colony's development was stagnating and severe financial difficulties were being encountered.

Copper production fluctuated over the years but renewed interest in copper during the 1960s led to the discovery of new, but lower grade, ore bodies at the old copper fields of Kanmantoo and Mount Gunson, and to the working of remnant low-grade ore at Burra. After five years, both mining from open-cut and underground deposits near Moonta and the processing of the ore at Kadina, to produce a copper-gold concentrate for sale, have ended. A total of 476,000 tonnes of ore was recovered from the Poona and Wheel Hughes deposits, averaging 4.0 per cent copper and 1.0 gram per tonne of gold. Cupric oxide is produced at Burra for the manufacture of timber preservatives, catalysts, friction materials for brakes and clutches, copper chemicals and as a trace element in agriculture.

The Olympic Dam deposit at Roxby Downs, which has an area of twenty square kilometres, has indicated ore reserves of at least 2,000 million tonnes averaging 1.6 per cent copper, 0.6 kg/tonne uranium oxide, 0.6 gm/tonne gold and 4gm/tonne silver. Detailed infill drilling has indicated a higher grade zone of ore reserves. The joint venture partners (Western Mining Corporation Ltd and the BP Group) commenced production of this \$850 million project in mid-1988. During 1993, 66,468 tonnes of copper, 1,558 tonnes of uranium oxide, 827 kg of gold and 11,631 kg of silver were produced.

A further expansion program (Optimisation No. 2) commenced during 1993. This will increase the rated production capacity from 2.4 to 3.0 million tonnes per annum of ore and enable the production of 85,000 tonnes of refined copper per year by 1996.

Western Mining Corporation took full control of the Olympic Dam mine during March 1993 by purchasing BP's 49 per cent interest.

### *Iron ore*

Iron ore is mined in the Middleback Ranges on upper Eyre Peninsula. These ranges lie to the west of Whyalla and extend discontinuously from Iron Knob in the north to Iron Duke nearly 65 kilometres to the south. In excess of 190 million tonnes of ore have been mined since 1900. Production for 1993 was 2.6 million tonnes.

### *Uranium*

Uranium was first discovered at Radium Hill in 1906 and at Mount Painter in 1910. These areas were mined intermittently for radium until 1944 and 1934 respectively.

The demand for uranium at the end of 1939-45 War led to detailed investigations by the Mines Department and the reopening of the Radium Hill Mine in 1954. It was worked until 1962 when the contracts for sale of ore were completed and known reserves were almost depleted.

In late 1988, mining of the vast Olympic Dam ore-body at Roxby Downs commenced which included the recovery of uranium together with copper, gold and silver.

The uranium ore is processed and refined on-site to the uranium oxide ( $U_3O_8$ ) or 'yellow-cake' stage for export to overseas power generating facilities. Olympic Dam is currently producing up to 1,500 tonnes of uranium oxide per annum.

### *Gypsum*

The largest Australian reserves of gypsum are located in South Australia. The deposits have in general formed in coastal basins, the largest of these occurring at Lake MacDonnell. Other deposits are found at Streaky Bay, Lake Fowler, Cooke Plains and the Morgan-Blanchetown area.

These deposits have been worked extensively over the past fifty years to provide the bulk of Australasian requirements for the plaster industry and for Portland cement manufacture. In 1993, 1.3 million tonnes were produced.



- Salt** Conditions in South Australia are ideal for the production of salt from sea water by solar evaporation. Large solar salt works are located at Dry Creek (near Adelaide), Port Price (Gulf St Vincent), and Whyalla. Salt is also harvested from several saline lakes, in particular Lake Bumbunga and Lake MacDonnell. Production for 1993 was 780,000 tonnes.
- Opal** The opal fields at Coober Pedy, Mintabie and Andamooka, together with fields in New South Wales, supply most of the world's precious opal. The estimated value of raw opal production in South Australia was \$38.8 million in 1993. Most of this is exported to Hong Kong, Japan, USA and Germany.
- Coal** Several large coalfields have been discovered in South Australia but only the Leigh Creek coalfield operated by the Electricity Trust of South Australia is being mined. To date more than 50 million tonnes of coal has been delivered to the power stations at Port Augusta. Production was 2.6 million tonnes during 1993.
- Oil and natural gas** The Cooper Basin Liquids Project, completed in September 1984, is the largest onshore petroleum development in Australia.
- Production during 1993 amounted to 924,000 kilolitres of crude oil, 634,000 kilolitres of condensate, 432,000 tonnes of liquefied petroleum gas and 4,200 million cubic metres of natural gas. Thus, the South Australian portion of the Cooper Basin contributed a significant proportion of the nation's crude oil and condensate production, LPG output and natural gas requirements.
- Limestone and dolomite** Principal deposits include dolomite at Ardrossan for the steel industry; limestone at Penrice, near Angaston, for the chemical and cement industries; and limestone at Klein Point and Rapid Bay for the cement industry. During 1993 production of limestone was 2.6 million tonnes and of dolomite 0.9 million tonnes.
- Mineral developments** In the South Australian portion of the Cooper/Eromanga Basins petroleum province, located in the far north-east of the State, numerous oil and gas fields were on production in the area where petroleum was first found at Gidgealpa Field in 1962. Most fields now onstream have preliminary fluid treatment facilities plus a network of separate gas and oil flowlines and trunklines laid to bring all production into the central Moomba treatment plant for final processing.
- At Moomba, the incoming raw gas stream initially has water and carbon dioxide removed. Next, the liquids recovery plant extracts the valuable condensate, ethane and LPG from the gas stream. The resultant sales gas is then pipelined to Sydney and Adelaide markets. The separated gas liquids plus the stabilised crude oil from oil fields are finally put into the liquids pipeline leading to the fractionation plant at Port Bonython on Spencer Gulf.

SANTOS Ltd is the operator and principal partner in the production of Cooper Basin oil and gas, and acts as marketing agent for all Port Bonython crude oil. The other producers are Delhi Petroleum Pty Ltd, Bridge Oil Ltd, SAGASCO Resources Ltd, Crusader Ltd, Basin Oil NL, Bridge Oil Developments Pty Ltd, Vamgas Ltd and Reef Oil NL.

Natural gas was discovered at Katnook in late 1987, approximately 10 kilometres south of Penola in the Otway Basin. A gas contract between the Pipelines Authority of South Australia (PASA) and the Petroleum Production Licence No. 62 licensees was signed in August 1990 to supply 1.5 petajoules of gas per year for 15 years. Gas production commenced on 15 February 1991. Further gas and oil discoveries were made in early 1994.

Developments continued at the Olympic Dam mine and the mining project has been expanded a second time at a cost of \$75 million. This expansion will enable production to be maximised, based on the treatment of 3.0 million tonnes of ore annually.

As future power generation in South Australia will most probably require an increase in the use of coal, deposits at Lochiel, Sedan, Bowmans, Kingston and Wintinna continue to be evaluated.

Private Mineral Exploration (Other than Petroleum)  
Expenditure by Type of Mineral Sought (a)  
(\$ million)

Type of mineral	1990-91	1991-92	1992-93
Copper, lead, zinc, silver, nickel, cobalt . .	7.9	11.2	13.6
Gold . . . . .	1.3	1.5	2.4
Iron ore . . . . .	-	-	-
Mineral sands . . . . .	2.3	0.9	n.p.
Tin, tungsten, scheelite, wolfram . . . . .	n.p.	-	-
Uranium . . . . .	1.0	3.3	n.p.
Coal . . . . .	n.p.	-	-
Construction materials (b) . . . . .	n.p.	-	-
Diamonds . . . . .	2.9	2.6	0.9
Other (c) . . . . .	0.1	0.1	2.2
<b>Total . . . . .</b>	<b>15.5</b>	<b>19.7</b>	<b>21.3</b>

(a) Excludes details of mineral explorers reporting less than \$5,000 per quarter.  
(b) Comprises aggregate, sand, gravel and all stone used for construction purposes.  
(c) Includes precious metals other than gold and silver, and gemstones other than diamonds.

Details of private petroleum exploration and development for South Australia are shown in the following table for the years 1991 to 1993.

## Private Petroleum Exploration and Development

<i>Particulars</i>	<i>Unit</i>	<i>1991</i>	<i>1992</i>	<i>1993</i>
<b>Wells drilled (a):</b>				
Exploration .....	No.	40	22	10
Development .....	No.	31	18	16
<b>Depth drilled:</b>				
Exploration .....	'000m	100.3	56.3	31.8
Development .....	'000m	63.9	39.2	40.6
<b>Expenditure:</b>				
Private sources:				
Exploration .....	\$'000	53,700	60,400	69,000
Development .....	\$'000	273,600	239,000	249,000

(a) Number of wells reaching total depth during year.  
*Source:* South Australian Department of Mines and Energy.

## 13.2 ENERGY

### Energy resources

Although South Australia has a reasonably varied energy resource base, the State depends almost entirely on non-renewable fossil fuels for its energy needs. Details of these resources are given below.

### Coal

South Australia has one open cut coal mine, located 550 kilometres north of Adelaide at Leigh Creek. It is expected that coal mining will continue at Leigh Creek until the year 2025, supplying coal to both the present 210 megawatts (MW) Thomas Playford B Power Station and the adjoining new 2 x 250 MW Northern Power Station, as well as a possible third 250 MW unit.

During 1992-93 the Electricity Trust of South Australia used 2.8 million tonnes of Leigh Creek coal to meet 41.8 per cent of its total generation commitments, excluding interconnection. The bulk of the remaining requirements were met by natural gas with a small quantity of oil also used.

A significant quantity of high rank bituminous coal is imported into South Australia from the eastern States for the production of coke in the iron and steel industry at Whyalla, and also for use in the lead-zinc smelters at Port Pirie.

A number of longer term energy scenarios for the State have indicated that the proportion of electricity generated from coal may increase during the next century. Consequently the State has been examining the feasibility of using local low grade coals which are in abundant supply.

### Natural gas

Over the last twenty years natural gas (largely methane) has become a vital part of South Australia's energy consumption pattern. In January 1994 remaining gas reserves in South Australia were estimated to be 2,780 petajoules.

The State was one of the earliest users of natural gas in Australia with first supplies arriving in Adelaide from the Cooper Basin in November 1969. More than half this gas is presently consumed in electric power generation at the Electricity Trust of South Australia power stations at Torrens Island, Dry Creek and Mintaro. The Trust's use of natural gas provided the economic justification for the construction of the 790-kilometre pipeline needed to deliver the gas to Adelaide, Peterborough, Port Pirie, Mintaro and Angaston. The remainder is reticulated to homes, industry and commercial premises for use directly in heating and drying applications. In 1976 gas production commenced from the South Australian area of the Cooper Basin to the Australian Gas Light Company for the New South Wales market. The gas is transported through a 1,299-kilometre pipeline. The contract ends in September 2006. In early 1989 the existing gas pipeline spur to Port Pirie township and smelters was extended across Spencer Gulf to supply Whyalla's blast furnace and the Port Bonython plant, plus local domestic users. The present gas contract with the Pipelines Authority of South Australia ends in 2003.

At the end of 1987, natural gas was discovered at Katnook No. 1, approximately 10 kilometres south-west of Penola in the Otway Basin. Further drilling in 1988 and 1989 and the discovery of a second field at Ladbroke Grove in 1989 increased the proven gas reserves. In 1990 a gas contract was signed to supply the State's South East commercial and domestic customers for 15 years. A 67-kilometre pipeline was completed early in 1991 and gas production commenced in February of that year. In 1994 oil and gas were discovered at Wynn 1, south east of Katnook, and gas was discovered at Haselgrove 1, east of the Katnook gas plant.

In July 1991 a contract was signed to supply gas from South West Queensland to South Australia *via* Moomba. The 200-kilometre pipeline was completed in 1993. The gas is transported through the pipeline with 300 petajoules to be purchased by South Australia over a ten year period commencing 1 January 1994.

*Liquid petroleum gas (LPG)*

Recoverable LPG reserves in the Cooper Basin in January 1994 were about 6.3 million tonnes. LPG (propane and butane) is recognised as an important substitute for petrol in South Australia. LPG is used in the production of synthetic natural gas, which is reticulated as town gas in Renmark and Roxby Downs.

The Cooper Basin producers have constructed an LPG storage and loading terminal at Port Bonython, near Whyalla, which is connected to the Moomba processing facilities by a liquids pipeline. The bulk of South Australia's LPG requirements are now supplied from this facility, although the Port Stanvac refinery will continue to supply small amounts to the local market. Sales of commercial LPG commenced in June 1984 with the first overseas exports taking place in August 1984.

*Crude oil and condensate*

Crude oil and condensate in this State currently satisfies about 45 per cent of energy demand. While 50 per cent of feedstock requirements was produced in South Australia in 1992-93, most of this production was exported. As a consequence, 92 per cent of feedstock used in this State was imported from overseas.

Information provided by the South Australian Department of Mines and Energy indicates that discovered fields in the South Australian segment of the Cooper and Eromanga Basins contain 7.0 million kilolitres of recoverable crude oil and 7.9 million kilolitres of condensate (liquids recoverable from gas wells) at January 1994.

*Wood*

Approximately 2 per cent of this State's annual energy demand is met by wood. Its main use is in the domestic sector as a heating fuel, although some (largely wood waste) is used in industry, particularly in the forestry industry and for generating some electricity in the south-east of the State. Currently, most wood supplies come from the State's forestry areas in the South East and from the Riverland mallee scrub.

*Electricity*

The Electricity Trust of South Australia (ETSA), a public corporation, is responsible for electricity generation and distribution throughout most of the State. ETSA is an autonomous body, which reports to Parliament through the Minister of Infrastructure. It is responsible for its own finances (including loan raising) and pays all normal State taxes such as payroll tax, land tax and local government rates.

There are seven power stations in South Australia controlled by ETSA. Torrens Island Power Station, with a generating capacity of 1,280 MW, is the largest, while the Northern Power Station, commissioned in 1985, has a generating capacity of 500 MW. ETSA's total capacity at 30 June 1994 was 2,230 MW.

To meet future demand, the installation of 100 MW of peak load generating plant will be required in 1997 and 1999.

The three-State interconnection linking South Australia to the Victoria/New South Wales power grid was first connected on 30 November 1989 and commenced commercial operation on 1 March 1990. The interconnection project provided the equivalent of 250 MW of peaking capacity through the sharing of reserves with Victoria and New South Wales. This allowed the retirement in March 1990 of the remaining plant at Osborne Power Station and has deferred the need for extra capacity until at least 1996-97. Furthermore, 200 MW of capacity is available to ETSA under contract from the State Electricity Commission of Victoria in addition to the 250 MW available through reserve sharing.

ETSA relies on natural gas as its main fuel with near 52 per cent of its total generation in 1993-94 coming from this source. Gas has been used at the Torrens Island Power Station since 1969, at the Dry Creek Power Station since 1973, and at Mintaro since 1984.

Leigh Creek coal is used exclusively in the Thomas Playford Power Station and the Northern Power Station at Port Augusta and provided approximately 36 per cent of total generation.

The remaining 12 per cent of the State's electrical energy came from interconnection with the eastern States. New trading arrangements are being developed to move to a National Grid concept. The development of any future capacity will come under protocols being developed.

About 90 per cent of new housing subdivisions are underground mains areas. In these subdivisions 11 KV and low voltage lines are installed underground and developers pay a contribution towards ETSA's costs. ETSA and local government authorities share the costs of conversion schemes from overhead to underground reticulation in areas where aesthetic benefits to the general public are possible.

Electricity Trust of South Australia, Sales of Electricity (GWh)

Particulars	1992	1993	1994
Residential .....	3,072.7	3,255.2	3,166.7
Industrial (a) .....	2,786.9	2,939.4	3,056.3
General purpose .....	1,940.9	2,014.2	2,066.3
Bulk supply .....	22.1	20.9	20.7
Public lighting .....	64.4	66.1	68.8
Pumping for major water pipelines ...	187.1	91.8	202.5
<b>Total</b> .....	<b>8,074.0</b>	<b>8,387.4</b>	<b>8,581.4</b>

(a) Includes sales to farms.

At 30 June 1994 the Trust supplied 687,317 customers accounting for almost 99 per cent of all electricity customers in the State. The South Australian Government pays subsidies to reduce the price of electricity by independently owned and operated electricity undertakings in remote areas of the State. These include 1,500 customers supplied by diesel plant operated by the District Council of Coober Pedy. There are a further 17 small towns and isolated outback communities equipped with diesel generating plant and supplying 1,000 customers.

Gas

The South Australian Gas Company, was a privately owned company incorporated and regulated by an 1861 Act of Parliament to supply gas to Adelaide and surrounding villages. The first gas was produced at Brompton in 1863 and subsequent plants were opened at Port Adelaide in 1866 and Glenelg in 1875. Gas was first produced at Port Pirie in 1892.

In June 1988 the Gas Company merged with the Government owned South Australian Oil and Gas Corporation (SAOG) to form a new company, SAGASCO Holdings Ltd. The utility is now known as South Australian Gas Company Limited and SAOG has been renamed SAGASCO Resources Ltd. A new company, SAGASCO LPG Pty Ltd was formed to control the LPG portion of the business. In October 1993, Boral Ltd acquired the SAGASCO Holdings group of companies.

## 14.1 INTERNAL TRADE

### Retail trade

Estimates of the value of turnover of retail establishments are calculated from monthly returns received from a sample of retail and selected service establishments. This survey uses as its sampling frame the ABS register of businesses which is regularly updated to take account of new businesses and those ceasing operation.

Turnover of Retail Establishments at Current Prices by Industry  
(\$ million)

Industry	1991-92	1992-93	1993-94
Grocers, confectioners, tobacconists . . . .	2,300.8	2,330.1	2,537.7
Butchers . . . . .	135.9	117.9	100.9
Other food stores . . . . .	603.1	476.3	444.7
Hotels, liquor stores, licensed clubs . . . . .	778.5	738.8	872.2
Cafes and restaurants . . . . .	326.4	318.9	290.5
Clothing and fabric stores . . . . .	384.6	355.2	388.7
Department and general stores . . . . .	1,078.2	1,092.1	1,098.4
Footwear stores . . . . .	101.0	101.7	108.2
Domestic hardware stores, jewellers . . . . .	207.1	259.3	249.7
Electrical goods stores . . . . .	419.9	372.9	422.1
Furniture stores . . . . .	174.3	199.3	201.1
Floor coverings stores . . . . .	49.8	46.1	62.1
Pharmacies . . . . .	298.6	366.7	413.3
Newsagents . . . . .	126.2	143.8	193.7
Other retail industries . . . . .	357.4	357.6	331.4
<b>Total . . . . .</b>	<b>7,341.2</b>	<b>7,358.7</b>	<b>7,714.9</b>

### Retail Census

Another source of statistics on the retail industry is the Retail Census. The last Retail Census was conducted for the year ended 30 June 1992. The results from the Census showed that in South Australia there were 14,317 Shopfront Retailing establishments employing 83,306 people. The total turnover was \$7,412 million and wages and salaries paid totalled \$851 million.

### Service Industries

The 1991-92 Service Industries Survey was comprised of the following industries: amusement and theme parks; motor vehicle hire; casinos; cafes and restaurants; hotels; accommodation; licensed bowling clubs; licensed golf clubs and licensed clubs not elsewhere classified.

Since the 1950s a considerable expansion of the distribution system has taken place. This is evident from the following table which gives details of the number of consumers and length of mains in selected years.

South Australian Gas Company Limited, Consumers and Mains

<i>Particulars</i>	<i>At 30 June</i>			<i>31 Dec.</i>	
	<i>1970</i>	<i>1980</i>	<i>1990</i>	<i>1992</i>	<i>1993</i>
Number of consumers . . . .	186,670	250,545	317,123	(a)295,407	301,596
Length of mains (km) . . . . .	3,603	4,967	5,890	6,181	6,318

(a) SAGASCO LPG customers have been excluded from 1991. In 1990 they totalled 38,000.

Natural gas from the Cooper Basin became available in 1969. By 1971, all appliances in the Adelaide metropolitan area had been converted to natural gas, and all coal carbonising and carburetted water gas making plants were shut down.

Natural gas is reticulated through most of the Adelaide metropolitan area, as well as Port Pirie (since 1976), Angaston (1983), Peterborough (1987), Whyalla (1988) and Mount Gambier (1991). Mount Gambier is supplied from the Katnook gas field located 80 kilometres north of the city. Liquefied petroleum gas is reticulated to consumers in Roxby Downs.



The 1992-93 Service Industries Surveys covered a range of business and professional services. The industries surveyed were real estate agents; architectural services, surveying services; consultant engineering services; legal services; accounting services; computer services; advertising services; market research, and business management services.

Tourism

The quarterly Survey of Tourist Accommodation measures the availability and occupancy of commercial short-term accommodation facilities. The current scope of the statistical collection comprises two groups.

- (a) Establishments which provide predominantly short-term accommodation (*i.e.* for periods of less than two months) available to the general public, including: hotels, motels and guesthouses; holiday flats, units and houses; and visitor hostels.
- (b) Caravan parks which provide either short-term or long-term accommodation.

Tourist Accommodation Survey

Particulars	Unit	1990	1991	1992	1993
<b>LICENSED HOTELS WITH FACILITIES (a)</b>					
Establishments (b)	Number	129	128	125	114
Guest rooms (b)	Number	4,413	4,490	4,573	4,479
Room occupancy rate	Per cent	45.0	45.3	46.3	47.1
Takings	\$'000	55,909	60,813	63,063	66,067
<b>MOTELS AND GUESTHOUSES WITH FACILITIES (a)</b>					
Establishments (b)	Number	249	249	242	228
Guest rooms (b)	Number	6,130	6,210	6,190	6,171
Room occupancy rate	Per cent	53.5	48.0	46.9	47.9
Takings	\$'000	72,893	88,963	67,346	68,536
<b>HOLIDAY FLATS, UNITS AND HOUSES</b>					
Letting entities (b)	Number	81	84	84	87
Flats, units etc. (b)	Number	1,178	1,301	1,323	1,377
Unit occupancy rate	Per cent	47.9	41.8	39.9	40.8
Takings	\$'000	11,076	10,296	10,637	11,463
<b>VISITOR HOSTELS</b>					
Establishments (b)	Number	n.a.	32	40	42
Bed spaces (b)	Number	n.a.	1,511	1,992	2,037
Bed occupancy rates	Per cent	n.a.	n.a.	33.2	29.1
Takings	\$'000	n.a.	n.a.	2,005	2,139
<b>SHORT-TERM CARAVAN PARKS</b>					
Establishments (b)	Number	172	177	173	167
Sites (b)	Number	19,872	20,540	20,462	19,925
Site occupancy rate	Per cent	18.0	17.5	(c)	23.0
Takings	\$'000	17,829	18,616	19,637	20,331
<b>LONG-TERM CARAVAN PARKS</b>					
Establishments (b)	Number	34	33	38	44
Sites (b)	Number	4,005	3,845	3,845	4,523
Site occupancy rate	Per cent	43.2	42.0	(c)	38.5
Takings	\$'000	4,895	5,396	5,333	5,958

(a) From December quarter 1993, excludes hotels, motels and guesthouses with fewer than five rooms. (b) At 31 December. (c) From September quarter 1992, caravan park sites etc. permanently reserved are included irrespective of site nights occupied. Occupancy rates are therefore not comparable with those from previous periods.

In the three years from 1990 to 1993, capacity in hotels, motels and guesthouses remained relatively stable. The annual room occupancy rate for licensed hotels rose from 45.0 to 47.1 per cent over the period and takings from accommodation have increased by 18.2 per cent from \$55.9 million in 1990 to \$66.1 million in 1993. For motels and guesthouses, however, the annual room occupancy rate decreased over the period from 53.5 per cent to 47.9 per cent and takings have fallen by 6.0 per cent from \$72.9 million in 1990 to \$68.5 million in 1993.

For holiday flats, units and houses, capacity increased from 1,178 flats and units etc. in 1990 to 1,377 in 1993, occupancy decreased from 47.9 per cent to 40.8 per cent, and annual takings increased by 3.5 per cent from \$11.1 million in 1990 to \$11.5 million in 1993. Visitor hostels recorded a bed occupancy rate of 29.1 per cent in 1993 and accommodation takings of \$2.1 million.

Predominantly short-term caravan parks offered 19,925 sites in 1993, recorded an occupancy rate of 23.0 per cent and takings of \$20.3 million, compared with 4,523 sites etc. in predominantly long-term caravan parks with an occupancy rate of 38.5 per cent and takings of \$6.0 million.

Tourist Accommodation by Statistical Division and Subdivision, 1993<sup>(a)</sup>

Statistical Division and Subdivision	Licensed hotels, motels and guesthouses with facilities (a)			Caravan parks		
	Establishments Dec. 1993	Guest rooms Dec. 1993	Average room occupancy rate, 1993	Establishments Dec. 1993	Sites Dec. 1993	Site occupancy rate, 1993
	number	number	per cent	number	number	per cent
Northern	18	395	37.3	7	1,058	66.5
Western	15	305	44.8	5	997	44.9
Eastern	54	3,762	58.1			
Southern	27	917	51.5	14	1,631	40.1
Adelaide	114	5,379	54.6	26	3,686	49.0
Barossa	13	268	40.3	8	1,386	12.5
Kangaroo Island	9	199	41.6	6	477	24.4
Onkaparinga	22	519	42.9			
Fleurieu	44	986	41.9	15	2,690	33.6
Outer Adelaide				29	4,453	25.9
Yorke	24	378	39.5	27	2,698	39.3
Lower North				9	561	21.5
Yorke and Lower North	24	378	39.5	36	3,259	36.3
Riverland	19	605	35.6	13	1,809	24.7
Murray Mallee	14	213	36.6	21	1,596	18.6
Murray Lands	33	818	35.9	34	3,405	21.8
Upper South East	21	391	37.4	10	1,040	12.4
Lower South East	31	777	47.0	14	1,828	14.9
South East	52	1,168	43.7	24	2,868	14.0
Lincoln	21	345	36.9	14	1,658	15.1
West Coast	9	280	31.1	9	1,022	14.2
Eyre	30	625	34.4	23	2,680	14.8
Whyalla	12	288	43.8	13	1,693	16.5
Far North	9	377	34.8			
Pirie	8	163	50.1	10	641	12.0
Flinders Ranges	16	468	44.9	16	1,763	14.9
Northern	45	1,296	42.4	39	4,097	15.1
<b>South Australia</b>	<b>342</b>	<b>10,650</b>	<b>47.6</b>	<b>211</b>	<b>24,448</b>	<b>25.8</b>

(a) From December quarter 1993 excludes hotels, motels and guesthouses with less than five rooms.

In 1993 Adelaide Statistical Division provided 5,379 rooms or 50.5 per cent of the total capacity of the 10,650 rooms available in South Australian hotels, motels and guesthouses with facilities. The room occupancy rate of 54.6 per cent compared with a State average of 47.6 per cent and takings from accommodation of \$91.1 million were 67.7 per cent of the State total of \$134.6 million.

Tourist Accommodation: Details by Size of Establishment, 1993

Particulars	Unit	Size of establishment (number of rooms)					Total
		1-9	10-15	16-25	26-50	51 and over	
LICENSED HOTELS WITH FACILITIES (a)							
Establishments (b) .	Number	24	31	17	23	19	114
Guest rooms (b) . . .	Number	183	367	345	754	2,830	4,479
Room occupancy rate	Per cent	27.0	33.2	34.6	44.6	52.6	47.1
Takings . . . . .	\$'000	742	1,654	1,577	7,242	54,862	66,067
MOTELS AND GUESTHOUSES WITH FACILITIES (a)							
Establishments (b) .	Number	28	54	53	73	20	228
Guest rooms (b) . . .	Number	204	691	1,103	2,696	1,477	6,171
Room occupancy rate	Per cent	32.4	43.2	42.0	48.1	56.7	47.9
Takings . . . . .	\$'000	1,665	5,629	9,461	30,416	21,364	68,536
Particulars	Unit	Size of establishment (number of sites)				Total	
		1-50	51-100	101-200	201 and over		
SHORT-TERM CARAVAN PARKS							
Establishments (b) .	Number	34	55	57	21	167	
Sites (b) . . . . .	Number	1,147	3,996	7,852	6,930	19,925	
Site occupancy rate	Per cent	15.2	25.6	26.1	19.3	23.0	
Takings . . . . .	\$'000	779	3,727	9,423	6,402	20,331	
LONG-TERM CARAVAN PARKS							
Establishments (b) .	Number	11	14	16	3	44	
Sites (b) . . . . .	Number	380	1,193	2,234	716	4,523	
Site occupancy rate	Per cent	36.3	34.2	34.4	54.1	38.5	
Takings . . . . .	\$'000	445	1,442	2,366	1,705	5,958	

(a) From December quarter 1993, excludes hotels, motels and guesthouses with fewer than five rooms. (b) At 31 December.

Room occupancy rates in 1993 for hotels, motels and guesthouses correlated with establishment size, ranging for hotels from 52.6 per cent for establishments with more than 50 rooms to 27.0 per cent for those with fewer than 10 rooms, and for motels from 56.7 per cent for establishments with more than 50 rooms to 32.4 per cent for those with fewer than 10 rooms.

**Further references**

Additional information may be found in the following ABS publications:

- 8501.0 *Retail Trade, Australia* (Monthly)
- 8623.4 *Retailing in South Australia, 1991-92*
- 8635.0 *Tourist Accommodation, Australia* (Quarterly)
- 8635.4 *Tourist Accommodation, South Australia* (Quarterly)
- 3401.0 *Overseas Arrivals and Departures, Australia* (Monthly)
- 3402.0 *Overseas Arrivals and Departures, Australia* (Quarterly)
- 1130.0 *Directory of Tourism Statistics, 1991*

## 14.2 FOREIGN TRADE

**Administration**

Under the Constitution of Australia, the Commonwealth Parliament is responsible for legislation relating to trade and commerce with other countries. Matters relating to trade and commerce are dealt with by these Commonwealth Government Departments.

The Department of Foreign Affairs and Trade is responsible for developing and maintaining Australia's position as a world trading nation through international trade and commodity commitments and agreements, developing export markets, and formulating proposals for the Government on Australia's international trade policy and trading objectives. It is also responsible for matters related to the commercial development, marketing, and export of minerals and fuels. It has Trade Commissioners at various overseas centres.

The Department of Industry, Technology and Regional Development, through the encouragement of world-class enterprises and the pursuit of regional development, promotes the integration of Australian industry with global markets through investment, trade finance and industrial, scientific and technological collaboration. It cooperates with the Department of Foreign Affairs and Trade in international market access negotiations. The Australian Customs Service is responsible for the collection of customs and excise duties and for the detailed administration of various controls over the import and export of goods.

The Department of Primary Industries and Energy administers Commonwealth policy relating to production and marketing arrangements for primary products. It cooperates with the Department of Foreign Affairs and Trade in the negotiation of international trade and commodity agreements, in participation in international conferences, and in the administration of provisions relating to primary products in existing international agreements. The Australian Quarantine and Inspection Service is responsible for the inspection, grading, and labelling of primary produce submitted for export.

The State Government is represented overseas by South Australia's Agent-General in London whose functions are to foster Australian trade, investment and tourism from the United Kingdom and Western Europe. Other agencies with similar responsibilities are in Hong Kong, Singapore and Tokyo.

**Recording method**

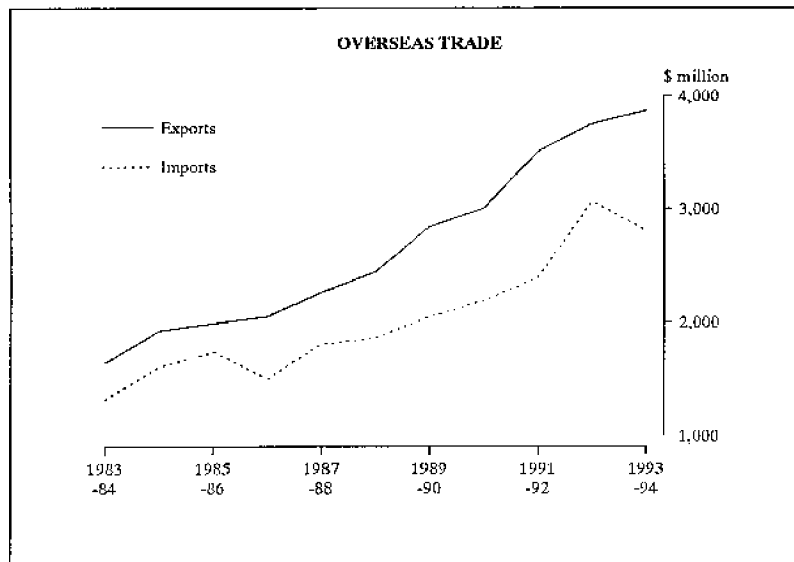
Foreign trade statistics are compiled by the Australian Bureau of Statistics from documentation submitted by exporters and importers, or their agents, to the Australian Customs Service as required by the Customs Act.

Export statistics for South Australia relate to goods for which the final stage of production or manufacture occurred in South Australia and exclude re-exported goods. The value of goods is on a free-on-board basis, expressed in Australian dollars.

Import statistics for South Australia relate to goods for which import entries were lodged in this State. These statistics do not provide a record of the overseas goods used or consumed in South Australia as some of the goods subsequently pass to other States and, more commonly, some goods imported through other States pass into South Australia. The recorded value is known as the customs value and the system of valuation is currently based on the General Agreement on Tariffs and Trade (GATT) rules.

All export and import commodity data in this section are classified according to the United Nations Standard International Trade Classification, Revision 3 (SITC). Data are subject to revision at future dates.

Restrictions are placed on the release of statistics for certain commodities for reasons of confidentiality. These restrictions do not affect total export or import figures but may affect commodity details for State or Country.



**Foreign trade** Overseas exports of South Australian produced goods reached \$3,873.1 million in 1993-94, an increase of 3.1 per cent from 1992-93. Overseas imports of goods for which documentation was lodged in this State fell 8.6 per cent to \$2,803.4 million over the same time period. In 1993-94 exports exceeded imports by \$1,069.6 million.

**Exports** The total value of exports of South Australian origin during 1993-94 was \$3,873.1 million which represented 6.3 per cent of all Australian exports.

The main groups of commodities exported from South Australian in 1993-94 were food (\$1,152.4 million, 29.8 per cent of exports) and machinery and transport equipment (\$581.2 million, 15.0 per cent).

The following table outlines exports for each broad commodity group, and details the major commodity groups within these categories.

Exports, Major Commodity Groups  
(S'000)

<i>Commodity group</i>	<i>1991-92</i>	<i>1992-93</i>	<i>1993-94</i>
Food and live animals: . . . . .	1,149,573	1,208,229	1,152,356
Meat and meat preparations . . . . .	270,169	282,165	323,856
Fish, seafood and their preparations . . . . .	147,309	154,593	186,603
Cereals and cereal preparations . . . . .	565,430	573,375	435,153
Vegetables and fruit . . . . .	107,949	102,248	121,012
Beverages and tobacco . . . . .	168,196	193,715	239,103
Beverages . . . . .	168,145	193,679	239,073
Crude materials, inedible (except fuels): . . . . .	434,263	376,244	348,708
Textile fibres and their wastes . . . . .	342,271	311,015	280,626
Mineral fuels, lubricants and related materials . . . . .	347,682	391,194	317,124
Petroleum and petroleum products . . . . .	341,883	371,869	273,462
Animal and vegetable oils, fats and waxes . . . . .	3,289	12,755	16,369
Chemicals and related products n.e.c. . . . .	62,254	50,591	54,385
Manufactured goods classified chiefly by material:	643,446	567,814	556,250
Iron and steel . . . . .	108,841	70,700	137,964
Non-ferrous metals . . . . .	409,786	365,726	279,646
Machinery and transport equipment: . . . . .	319,988	558,927	581,168
Power generating machinery and equipment . . . . .	61,897	93,769	77,057
Road vehicles . . . . .	137,088	338,359	350,822
Miscellaneous manufactured articles . . . . .	84,678	108,457	112,448
Commodities and transactions n.e.c. . . . .	291,737	288,419	495,142
Confidential items of trade . . . . .	283,484	282,686	488,991
<b>Total . . . . .</b>	<b>3,505,106</b>	<b>3,756,344</b>	<b>3,873,052</b>

Wheat was South Australia's most valuable export commodity during 1993-94 and accounted for 17.1 per cent of wheat exported from Australia.

The export value of passenger motor vehicles manufactured in South Australia has increased in recent years to become the State's second most valuable export commodity in 1993-94, with wool falling to third place.

Liquefied petroleum gas (LPG) is a principal export commodity, but because of confidentiality restrictions, no details are available at the State level.

The following table details the major export commodities for the three years to 1993-94.

Major Exports

Commodity	1991-92	1992-93	1993-94
GROSS WEIGHT (tonnes) (a)			
Beef fresh, chilled or frozen . . . . .	45,632	40,988	40,238
Other meat and offal fresh, chilled or frozen . . . . .	74,116	60,427	69,831
Crustaceans, molluscs and aquatic invertebrates . . . . .	7,221	7,014	6,557
Wheat . . . . .	1,819,613	1,680,327	2,509,920
Barley (b) . . . . .	1,165,047	1,315,405	n.p.
Vegetables fresh, chilled, frozen or preserved . . . . .	156,281	163,871	211,057
Alcoholic beverages . . . . .	85,926	109,864	132,948
Wool . . . . .	86,671	77,022	74,345
Petroleum oils and oils from bituminous minerals:			
Crude . . . . .	999,700	1,067,941	916,233
Not crude . . . . .	583,257	460,954	381,954
Primary forms of iron and steel . . . . .	368,196	230,789	394,018
Copper . . . . .	47,241	49,453	43,423
Lead . . . . .	183,572	170,336	158,105
Passenger motor vehicles . . . . .	6,740	20,005	20,078
VALUE (\$'000)			
Beef fresh, chilled or frozen . . . . .	139,897	133,385	156,047
Other meat and offal fresh, chilled or frozen . . . . .	129,751	146,885	166,998
Crustaceans, molluscs and aquatic invertebrates . . . . .	123,133	123,507	136,046
Wheat . . . . .	345,964	325,231	391,402
Barley (b) . . . . .	168,565	194,726	n.p.
Vegetables fresh, chilled, frozen or preserved . . . . .	44,978	45,125	57,927
Alcoholic beverages . . . . .	167,885	193,620	239,028
Wool . . . . .	341,752	310,729	280,127
Petroleum oils and oils from bituminous minerals:			
Crude . . . . .	232,535	261,677	183,323
Not crude . . . . .	109,349	110,191	90,140
Primary forms of iron and steel . . . . .	98,837	61,478	117,972
Copper . . . . .	137,364	153,742	115,790
Lead . . . . .	221,377	143,919	120,437
Passenger motor vehicles . . . . .	78,812	280,533	296,479

(a) Gross weight is shipping weight (i.e. total weight including outside packages but excluding weight of international containers). (b) Not available from 1993-94 because of confidentiality restrictions.

Export trading partners

In 1993-94 the major export trading partners of South Australia were Japan (\$622.6 million), followed by the USA (\$392.3 million), New Zealand (\$312.4 million) and the United Kingdom (\$259.5 million).

Japan replaced the United Kingdom as South Australia's principal export market in 1966-67 and retained that position until 1978-79. For the next three years the USSR was the principal export market, but from 1982-83 Japan once again became the country of consignment with the highest value of exports. In 1993-94 Japan accounted for 16.1 per cent of all South Australian exports.

Exports by Region  
(\$'000)

Region	1991-92	1992-93	1993-94p
United States .....	304,257	352,761	392,278
Middle East .....	382,695	313,951	280,055
European Community: .....	511,629	565,086	537,079
United Kingdom .....	219,941	237,520	259,472
Other European Community .....	291,688	327,566	277,607
New Zealand .....	214,481	288,375	312,446
East Asia: .....	1,695,039	1,817,137	1,890,118
Japan .....	656,784	647,618	622,618
China .....	147,204	208,051	219,868
Hong Kong .....	108,715	171,743	164,960
ASEAN .....	461,241	475,150	526,302
Other East Asia .....	321,095	314,575	356,370
Other .....	397,005	419,034	461,076
<b>Total .....</b>	<b>3,505,106</b>	<b>3,756,344</b>	<b>3,873,052</b>

(a) The former USSR has changed and care should be taken when comparing data.

Exports of  
wheat

In 1993-94, 2.5 million tonnes of South Australian wheat with a value of \$391.4 million were exported overseas. This compares with 1.7 million tonnes (\$325.2 million) in 1992-93, and 1.8 million tonnes (\$346.0 million) in 1991-92. No details are available on country of destination because of confidentiality restrictions.

Exports of  
passenger  
motor vehicles

In 1993-94 the export value of passenger motor vehicles manufactured in South Australia was \$296.5 million, almost four times the value of such exports in 1991-92 (\$78.8 million). In 1993-94 the major export markets were New Zealand (\$116.1 million, 39.2 per cent of passenger motor vehicle exports) and the USA (\$81.1 million, 27.4 per cent).

Exports of Passenger Motor Vehicles<sup>(a)</sup>

Country of destination	1991-92	1992-93	1993-94p
New Zealand .....	71,826	99,824	116,081
United States of America .....	105	108,627	81,093
Japan .....	358	10,743	36,302
Germany .....	-	35,247	32,520
Brunei .....	1,377	5,001	9,647
Other .....	5,146	21,092	20,835
<b>Total .....</b>	<b>78,812</b>	<b>280,533</b>	<b>296,479</b>

(a) SITC 781. Motor vehicles principally designed for transport of persons (excluding public-transport type, including racing cars).



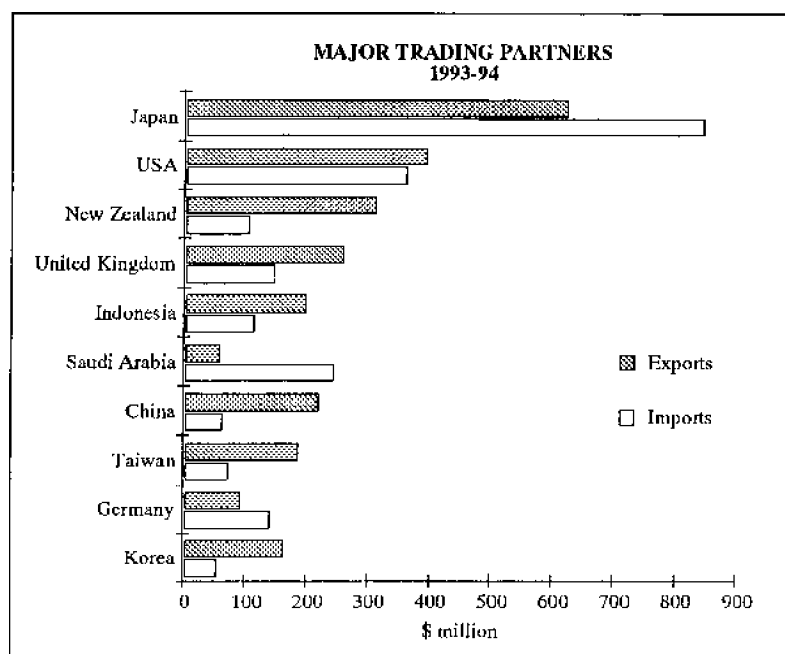
Exports of wool

In 1993-94 the largest export market for South Australian wool was China (\$102.4 million) which accounted for 36.6 per cent of wool exports, more than three times that of the second highest export market, Korea (11.7 per cent, \$32.9 million).

Exports of Wool<sup>(a)</sup>  
(\$'000)

Country of destination	1991-92	1992-93	1993-94p
China .....	78,042	115,850	102,439
Korea, Republic of .....	27,088	19,804	32,876
Hong Kong .....	9,756	29,675	21,033
Taiwan .....	28,193	22,423	17,584
Italy .....	17,993	16,826	17,435
Japan .....	40,564	28,038	17,384
France .....	27,561	10,682	16,846
United States of America .....	11,000	8,130	7,874
Germany .....	19,924	9,709	7,175
United Kingdom .....	12,050	8,092	5,664
Other .....	69,581	41,500	33,817
<b>Total .....</b>	<b>341,752</b>	<b>310,729</b>	<b>280,127</b>

(a) SITC 268, Wool and other animal hair (includes wool tops).



Imports

During 1993-94 the total value of imports for which documentation was lodged in South Australia was \$2,803.4 million. This represented 1.3 per cent of Australian imports.

The largest group of commodities imported into South Australia in 1993-94 was machinery and transport equipment at \$1,279.1 million, comprising almost half (45.6 per cent) of all imports.

The following table outlines imports for each broad commodity group, and details the major commodity groups within these categories.

Imports, Major Commodity Groups  
(S'000)

<i>Commodity group</i>	<i>1991-92</i>	<i>1992-93</i>	<i>1993-94</i>
Food and live animals: . . . . .	62,867	70,991	73,253
Fish, seafood and their preparations . . . . .	19,283	20,087	24,271
Beverages and tobacco . . . . .	19,221	20,765	25,924
Beverages . . . . .	18,141	19,311	24,182
Crude materials, inedible (except fuels): . . . . .	82,953	90,226	97,792
Cork and wood . . . . .	40,426	44,370	54,804
Mineral fuels, lubricants and related materials . . .	363,059	570,614	404,969
Petroleum and petroleum products . . . . .	362,776	570,334	404,626
Animal and vegetable oils, fats and waxes . . . . .	2,997	3,387	3,203
Chemicals and related products n.e.c.: . . . . .	151,029	186,001	200,207
Organic chemicals . . . . .	24,884	29,204	30,738
Fertilisers (excl. crude) . . . . .	44,256	57,952	60,712
Plastics in non-primary forms . . . . .	15,359	18,506	26,846
Manufactured goods classified chiefly by material:	396,297	520,703	434,625
Rubber manufactures n.e.c. . . . .	37,692	42,051	45,553
Cork and wood manufactures (excl. furniture) . .	37,512	42,267	49,568
Paper, paperboard and manufactures thereof . .	62,039	64,894	66,014
Textile yarn, fabrics and made-up articles . . . .	62,884	57,434	60,173
Non-metallic mineral manufactures n.e.c. . . . .	43,090	53,243	46,973
Iron and steel . . . . .	69,002	81,924	85,196
Manufactures of metal n.e.c. . . . .	72,005	164,361	64,098
Machinery and transport equipment: . . . . .	1,071,000	1,302,701	1,279,084
Power generating machinery and equipment . . . . .	75,657	97,995	86,789
Machinery specialised for particular industries . . . . .	63,983	74,222	89,951
Metalworking machinery . . . . .	65,485	16,857	22,921
General industrial machinery and equipment, and machine parts n.e.c. . . . .	135,806	165,858	159,868
Office machines and computers . . . . .	28,550	27,516	31,965
Telecommunications and sound recording and reproducing apparatus and equipment . . .	21,118	43,127	35,514
Electrical machinery, apparatus, appliances and parts . . . . .	130,408	183,633	168,426
Road vehicles . . . . .	435,098	661,714	663,645
Transport equipment (excl. road vehicles) . . . .	114,895	31,778	20,004
Miscellaneous manufactured articles: . . . . .	213,293	282,600	251,118
Professional, scientific and controlling instruments n.e.s. . . . .	62,585	111,488	76,723
Photographic and optical goods; clocks and watches . . . . .	23,402	27,448	24,191
Commodities and transactions n.e.c. . . . .	34,221	20,092	33,253
Confidential items of trade . . . . .	31,722	19,097	30,865
<b>Total . . . . .</b>	<b>2,396,935</b>	<b>3,068,118</b>	<b>2,803,427</b>

The principal commodities imported into South Australia in 1993–94 were motor vehicle parts and accessories (\$359.0 million, of which 88.8 per cent came from Japan), fuel oils (\$252.3 million, 57.7 per cent from Saudi Arabia and 35.8 per cent from Indonesia) and passenger motor vehicles (\$164.1 million, 87.0 per cent from Japan).

Japan was the major source of imports into South Australia in 1993–94 with \$845.1 million, followed by the USA (\$362.2 million), Saudi Arabia (\$243.9 million) and the United Kingdom (\$146.3 million). The proportions of imports obtained from the State's major trading partners have changed considerably in the years since the 1939–45 War *e.g.* in 1953–54 Japan supplied only 0.5 per cent of the total value of imports into South Australia but in 1993–94 accounted for 30.1 per cent; the United Kingdom which supplied over half the imports in 1953–54 accounted for only 5.2 per cent in 1993–94.

Imports by Region  
(S'000)

Region	1991–92	1992–93	1993–94 <sup>p</sup>
United States .....	369,625	452,641	362,201
Middle East .....	183,890	299,807	322,325
European Community .....	541,393	517,767	516,431
United Kingdom .....	215,219	156,985	146,278
Other European Community .....	326,174	360,782	370,153
New Zealand .....	88,224	95,717	104,415
East Asia .....	1,048,634	1,426,761	1,311,593
Japan .....	561,779	825,739	845,107
China .....	41,440	49,551	63,637
Hong Kong .....	23,176	21,517	16,641
ASEAN .....	306,594	413,570	256,893
Other East Asia .....	115,645	116,384	129,315
Other .....	165,169	275,425	186,462
<b>Total .....</b>	<b>2,396,935</b>	<b>3,068,118</b>	<b>2,803,427</b>

### 14.3 PRICES

The prices of a wide range of commodities and services are recorded at regular intervals by the ABS for the purpose of compiling various price indexes. Price indexes aim to measure the degree of change in price levels of specified quantities and qualities of a list of selected items. It is traditional to select a certain year, known as the base year, and to equate the average aggregate price (of the list of items) in that year to 100. Index numbers then represent the change in prices from that period.

When index numbers for different places are compared (*e.g.* Consumer Price Index, Capital Cities) the only legitimate comparison is the relative change *i.e.* that prices increased or decreased more in one place than another. The actual levels of prices may differ substantially.

Retail price indexes

Consumer Price Index

The Consumer Price Index (CPI) measures price changes relating to the spending pattern of a large proportion of metropolitan employee households, where employee households have been defined as those households which obtain at least three-quarters of their total income from wages and salaries, excluding the top 10 per cent (in terms of income) of such households.

The CPI is a chain of linked indexes with significant changes in composition and weighting effected at regular intervals. During each period between links the weighting pattern remains unchanged. At times of linking the weighting pattern is brought up-to-date and the content of the index is reviewed.

The twelfth series of the index was introduced in the September quarter 1992 with a weighting pattern derived from the Household Expenditure Survey 1988-89 and a reference base 1989-90 = 100. There are 107 expenditure classes or groupings of like items within the index and each class has its own weight or measure of relative importance. In calculating the index, price changes for the various expenditure classes are combined using these weights.

The wide range of commodities and services in the CPI are arranged in eight major groups, with index numbers compiled for each of these as well as a total for all items. Index numbers for Adelaide for these individual groups and for 'All Groups' are recorded in the next table.

Consumer Price Index, Adelaide  
(Base Year : 1989-90 = 100.0)

Quarter	Food	Clothing	Housing	Household equipment and operation	Transportation	Tobacco and alcohol	Health and personal care	Recreation and education	All groups
<i>1991 -</i>									
Sept. . . .	104.9	105.1	102.3	107.1	109.2	117.3	121.2	106.2	108.0
Dec. . . .	105.9	104.9	102.3	107.6	110.5	118.1	124.2	106.8	108.8
<i>1992 -</i>									
Mar. . . .	106.4	105.2	99.8	107.3	110.9	119.2	134.1	108.8	109.5
June . . .	106.9	106.1	97.3	108.1	111.2	119.6	131.6	108.9	109.4
Sept. . . .	107.3	106.0	95.4	108.1	113.7	126.5	131.5	108.9	110.1
Dec. . . .	108.1	107.2	94.0	108.1	115.1	130.4	132.2	109.9	110.7
<i>1993 -</i>									
Mar. . . .	111.3	107.2	94.0	106.7	114.9	131.3	136.8	111.7	111.6
June . . .	110.4	107.6	93.8	107.3	116.1	136.4	138.9	112.3	112.3
Sept. . . .	110.4	107.5	93.3	107.5	117.3	138.8	139.7	112.8	112.7
Dec. . . .	111.3	107.1	91.6	108.2	117.6	140.0	138.4	113.0	112.8
<i>1994 -</i>									
Mar. . . .	112.0	106.0	91.6	107.9	117.6	142.6	145.5	114.1	113.6
June . . .	113.0	105.8	91.9	108.2	118.5	144.5	148.2	114.8	114.4

*Household expenditure surveys*

During 1988–89, the ABS conducted a survey to obtain information about the expenditure patterns of private households. A household is defined as a group of people who live together and have common provision for food and other essentials of living, and may contain more than one income unit.

Expenditure in this survey relates to the value of goods and services as they were acquired (e.g. bankcard purchases are counted as expenditure at the time of acquisition, and not at the time the bankcard bill was paid). Household expenditure surveys were previously conducted in 1974–75, 1975–76 and 1984.

The collection of data relating to expenditure at the household level is important in providing information for use in improving the representation of the items and the weighting pattern used to compile the Consumer Price Index. Details of this survey were included on pages 253–255 of the *South Australian Year Book 1994*.

**Other price indexes**

The following indexes covering non-retail sectors of the economy are published by the Australian Statistician:

- Export Price Index,
- Import Price Index,
- Price Indexes of Copper Materials,
- Price Index of Materials Used in Manufacturing Industries,
- Price Indexes of Materials Used in Coal Mining,
- Price Index of Articles Produced by Manufacturing Industry,
- Price Index of Materials Used in House Building,
- Price Index of Materials Used in Building Other than House Building,
- House Price Indexes

Separate State figures are published for the last three indexes, and these are further explained below.

*Materials used in building other than house building*

This index measures changes in prices of selected materials used in the construction of buildings other than houses. It is a fixed weights index, with the items selected and weighted in accordance with the estimated average values of materials used in the construction of buildings other than houses completed in the five years ended June 1992. The reference base of the index is the year 1989–90 = 100.0.

Prices are collected at or near the mid-point of the month to which the index refers. They relate to specified standards of each material and are obtained in all State capital cities from representative suppliers of materials used in building. Index numbers for separate groups of materials and the 'All Groups' index for Adelaide are shown in the following table.

Price Index of Materials Used in Building Other than House Building, Adelaide  
(Base of each Index : 1989-90 = 100.0)

Group	1990-91	1991-92	1992-93
Structural timber	103.5	99.3	109.8
Clay bricks	106.6	112.4	113.7
Ready-mixed concrete	102.7	98.6	90.8
Pre-cast concrete products	109.6	113.3	114.4
Steel decking and cladding	105.6	103.8	103.9
Structural steel	102.6	99.9	99.7
Reinforcing steel bar, fabric and mesh	106.5	103.8	103.8
Aluminium windows	103.4	103.1	102.8
Fabricated steel products	102.4	102.2	102.3
Builders hardware	105.0	110.1	112.8
Sand and aggregate	109.1	112.6	113.2
Carpet	104.2	102.5	101.1
Paint and other coatings	103.1	108.2	105.9
Non-ferrous pipes and fittings	104.0	103.5	111.0
Special purpose index (a)	104.5	104.2	103.9
All electrical materials	109.0	108.0	106.0
All mechanical services	106.9	109.8	110.3
All plumbing materials	104.6	104.8	105.3
<b>All groups</b>	<b>105.3</b>	<b>105.4</b>	<b>105.1</b>

(a) All groups excluding electrical materials and mechanical services.

Further information on the method of compiling the index may be found in the publication *Price Index of Materials Used in Building Other than House Building (6407.0)*.

Materials used  
in house  
building

This index measures changes in prices of selected materials used in the construction of houses. It is a fixed weights index, the composition of which is in accordance with the usage of materials in actual houses which were selected as representative for the purpose. The index does not purport to represent buildings of any kind other than houses.

Price Index of Materials Used in House Building, Adelaide  
(Base Year: 1985-86 = 100.0)

Group	1990-91	1991-92	1992-93
All groups	136.2	135.5	137.8

House price  
indexes

These indexes reflect price movements for both established houses and project homes. The house price indexes are compiled by the ABS for use in calculating the Mortgage Interest Charges component of the CPI, however they are published separately because of the widespread interest in information specifically relating to housing.

Established houses are defined as detached residential dwellings on their own block of land where the houses can be new or secondhand. Price changes therefore relate to the house and land as a package. Project homes are houses that are built on a client's block of land and price changes only apply to the dwelling.

House Price Indexes, Adelaide  
(Base of each index: 1989-90 = 100.0)

Group	1991-92	1992-93	1993-94
Established house .....	106.5	110.1	109.1
Project home .....	105.4	105.4	111.4

Commodity prices

Retail prices of food

The next table shows the average retail prices of selected food items in Adelaide during recent years.

Average Retail Prices of Selected Food and Grocery Items, Adelaide  
December Quarter  
(Cents)

Item	Unit	1991	1992	1993
Milk, carton, supermarket sales .....	1 litre	84	86	95
Cheese, processed, sliced, wrapped. . . .	500 g	330	344	337
Butter .....	500 g	151	156	161
Bread, white loaf, sliced, supermarket sales	680 g	104	114	122
Biscuits, dry .....	250 g	117	136	139
Breakfast cereal, corn based .....	550 g	250	292	301
Flour, self-raising .....	2 kg	186	198	188
Rice, medium grain .....	1 kg	98	104	103
Beef:				
Rib (without bone) .....	1 kg	569	591	606
Rump steak .....	1 kg	1,085	1,063	1,086
Corned silverside .....	1 kg	630	632	612
Sausages .....	1 kg	352	367	365
Lamb:				
Leg .....	1 kg	423	461	501
Loin chops .....	1 kg	540	584	665
Forequarter chops .....	1 kg	405	436	482
Pork:				
Leg .....	1 kg	601	603	609
Loin chops .....	1 kg	746	754	738
Chicken, frozen .....	1 kg	333	318	330
Bacon, middle rashers, pre-packed . . . .	250 g	254	289	273
Salmon, pink .....	210 g	211	244	244
Potatoes .....	1 kg	77	95	72
Onions .....	1 kg	83	118	215
Peaches, canned .....	825 g	182	183	196
Peas, frozen .....	500 g	131	118	111
Eggs (55 grams) .....	doz.	176	191	180
Sugar, white .....	2 kg	170	153	193
Tea .....	250 g	144	156	169
Coffee, instant, jar .....	150 g	410	409	397
Tomato sauce .....	600 mL	141	156	170
Margarine, polyunsaturated .....	500 g	145	144	142

Further  
references

Additional information may be found in the following ABS publications:

- 6401.0 *Consumer Price Index, Australia*
- 6407.0 *Price Index of Materials Used in Building other than House Building, Australia*
- 6408.0 *Price Index of Materials Used in House Building, Australia*
- 6416.0 *House Price Indexes, Australia*
- 6419.0 *Producer and Foreign Trade Price Indexes – Concepts, Sources and Methods*
- 6440.0 *A Guide to the Consumer Price Index, Australia*
- 6461.0 *The Australian Consumer Price Index – Concepts, Sources and Methods*
- 6527.0 *1988–89 Household Expenditure Survey, Australia*
- 6530.0 *1988–89 Household Expenditure Survey, Australia: Summary of Results*



## 15.1 LAND TRANSPORT

### Roads

Roads in South Australia are officially classified as national highways, arterial roads, and local roads; these classifications have been determined by the Commonwealth Government in consultation with the South Australian Government.

The Road Transport Agency within the Department of Transport is the road authority for South Australia. Its key objective is to serve the transport needs of the community by developing and managing the road network and its use as an integrated part of the transport system. Responsibility for the construction and maintenance of roads is shared between the Department and the various local government authorities. The Department is responsible for the construction, reconstruction, maintenance and improvement of the whole national highway network in the State (2,749 kilometres), nearly all of the arterial road network (9,520 kilometres) and 12.5 per cent (10,350 kilometres) of the local road network. Most of the local roads maintained by the Department are located in the unincorporated areas of the State.

The following table shows the length of roads according to class of road and type of surface at 30 June 1994.

Length of Roads : Type of Surface, 30 June 1994  
(Kilometres)

Class of road	Type of surface		Total
	Sealed	Unsealed	
National highways (a) .....	2,749	—	2,749
Arterial roads (b):			
Rural .....	8,170	467	8,637
Urban .....	920	—	920
Local roads (c):			
Rural .....	6,995	68,620	75,615
Urban .....	6,485	819	7,304
<b>Total</b> .....	<b>25,319</b>	<b>69,906</b>	<b>95,225</b>

(a) Roads declared by the Commonwealth Minister for Transport to be national highways under the provisions of the *Australian Land Transport Development Act 1988* (Cwlth). They are selected roads linking Adelaide with other State capital cities including Darwin and Canberra.

(b) Roads declared by the Commonwealth Minister for Transport to be arterial roads under the provisions of the *Australian Land Transport Development Act 1988* (Cwlth).

(c) Roads not included in above categories.

The Road Transport Agency maintains approximately 1,300 bridges and major culverts throughout the State. The River Murray in South Australia is bridged at five locations (four of which are on two interstate routes) and the Department provides free and continuous ferry services across the river at thirteen places. A free ferry service also operates across Cooper Creek on the Birdsville Track in the far north of the State when the creek is in flood.

### Road finance

For South Australia, the main sources of funds for road works during 1993-94 were:

- Commonwealth Government grants to the States and Territories pursuant to the *Australian Land Transport Development Act 1988* (Cwlth);
- Commonwealth Government grants to the States and Territories pursuant to the *Interstate Road Transport Act 1985* (Cwlth) and the *Interstate Road Transport Charges Act 1985* (Cwlth);
- the net proceeds of fees imposed by the State Government for the registration of motor vehicles and the licensing of drivers;
- an allocation from the collection of motor fuel licence fees levied pursuant to the *Business Franchise (Petroleum Products) Act 1979*;
- rental income from properties owned by the Road Transport Agency and proceeds from the sale of Agency land and plant;
- advances for capital purposes from the State Consolidated Account; and
- property rates and other levies imposed by municipal and district councils

### Railways

Railway systems in South Australia are operated by both the Commonwealth and South Australian Governments. Management of the Australian National railways is vested in the Australian National Railways Commission (ANRC).

At 30 June 1993 ANRC operated 5,451 route kilometres on mainland Australia, of which 4,415 was in South Australia. This included part of the 1,435 mm gauge Trans-Australia Railway from Kalgoorlie to Broken Hill; the 1,435 mm gauge Tarcoola to Alice Springs line; and other 1,600 mm and 1,067 mm gauge lines, including the isolated Eyre Peninsula system (1,067 mm gauge).

At 30 June 1993 TransAdelaide operated 120 route kilometres of metropolitan (1,600 mm gauge) rail track in South Australia.

**TransAdelaide** On 1 July 1994 the State Transport Authority became TransAdelaide under the *Passenger Transport Act 1994*. The main function of TransAdelaide is to provide passenger transport services for the people of Adelaide in the metropolitan area, through an integrated network of bus, tram and rail services.

TransAdelaide Operations  
('000)

Item	1990-91	1991-92	1992-93
Passenger journeys (a) .....	56,865	52,802	49,094
Traffic vehicle kilometres run:			
Bus .....	40,039	39,475	38,075
Tram .....	720	688	733
Rail .....	6,730	6,537	5,972

(a) Initial passenger boardings.

At 30 June 1993 TransAdelaide services 1,121 kilometres of bus, 11 kilometres of tram and 120 kilometres of rail routes. Its vehicle fleet consisted 714 buses, 21 tram cars and 108 rail cars. Employment totalled 3,019 persons.

**Other road passenger transport**

*Private bus services*

Legislation covering the regulation of private bus operations in South Australia is included in the *Passenger Transport Act 1994*, and is administered by the Passenger Transport Board.

Private operations are regulated through the issuing of licences for route service, tour and charter, community bus, school children and other special categories. Route service licences have a currency of five years, with other licences having tenures of twelve months.

*Country town bus services*

Financial responsibility for the provision of urban bus services outside the metropolitan area is vested in the local government authority with the State Government funding two-thirds of the operating loss. Councils have the option of acquiring local bus fleets or arranging for a local bus proprietor to provide the bus service under contract.

Contract services are operated in Port Pirie, Port Augusta, Port Lincoln, Mount Gambier and Murray Bridge. In Whyalla the bus service is municipally owned and operated.

*Interstate and country services*

Regular interstate coach services and special charters and tours operate to all mainland States. In addition, a network of bus route services operates on radial routes from Adelaide to all parts of the State. These services are provided by private companies under licences issued by the Passenger Transport Board. Most operate from adjacent terminals in Franklin Street, Adelaide.

### THE BAY TRAM

The Adelaide to Glenelg ('The Bay') tram is an important transport service to the south-western suburbs of Adelaide and also provides a unique way to travel the 11.2 kilometres to this popular sea-side resort, the 'birthplace of South Australia'. It was opened by the then Municipal Tramways Trust (MTT) on 14 December 1929. The MTT had acquired the former railway line from the South Australian Railways (SAR) in 1929 and changed it to suit the running of a tram. Trains had serviced this route from 1873 with the SAR taking over the private service in 1899.

The 'H' tramcars were built by A. Pengelley & Co., Edwardstown, and 21 of these cars still service the route with 12 cars handling the peak hours traffic. It is the only service to employ ticket conductors.

From 1930 until 1962 the service delivered mail from the GPO to Glenelg and from 1930 until 1936 it also carried horses to Morphettville Racecourse in specially constructed horse-boxes. Phai Lap was one of the first horses transported. The largest numbers of persons ever transported in one day was 88,422 by 81 trams on 28 December 1936 when South Australia celebrated its Centenary. Until 1958 early morning trams terminated at the Adelaide Railway Station but with the removal of all other tram services in 1958 the new and still current terminus became Victoria Square.



The Bay Tram at Glenelg  
*Photo: TransAdelaide*

*Taxi-cabs*

The *Passenger Transport Act 1994*, administered by the Passenger Transport Board, is the governing legislation providing for the control of taxi-cabs and hire cars within the Metropolitan Planning Area and the Municipality of Gawler. The Board is responsible for the granting of licences or permits to operate taxi-cabs and the charging of permit fees.

Licences issued at 30 June 1994 include general taxi-cabs (890) licensed standby (23), licensed special purpose (*i.e.* wheelchair carrying capability) (42), and licensed chauffeured vehicles (284). Total current vehicle drivers licences were 3,947, and owners licences numbered 653.

In areas not under the control of the Passenger Transport Board, taxi licences are issued by local government authorities under the provisions of the Local Government Act.

**Motor vehicles**

*Control of road traffic*

Legislation covering the registration of motor vehicles, licensing of drivers and third party insurance in South Australia is contained in the *Motor Vehicles Act 1959*. The present legislation for the control of road traffic in South Australia is set out in the *Road Traffic Act 1961* and the *Motor Vehicles Act 1959*.

*Registration of motor vehicles*

New motor vehicle registrations during the financial years 1991-92 to 1993-94 are shown in the following table.

New Motor Vehicle Registrations<sup>(a)</sup>

Type of vehicle	1991-92	1992-93	1993-94
Passenger vehicles . . . . .	32,351	32,894	32,806
Light commercial vehicles . . . . .	4,296	4,555	4,899
Trucks - Rigid . . . . .	582	519	364
- Articulated . . . . .	202	224	243
- Non-freight carrying (b) . . . . .	134	103	100
Buses . . . . .	119	176	173
Motor cycles . . . . .	1,375	1,469	1,400
<b>Total . . . . .</b>	<b>39,059</b>	<b>39,940</b>	<b>39,985</b>

(a) Includes Commonwealth Government owned vehicles except defence services vehicles.  
 (b) Includes tow trucks, fire engines, ambulances and hearses.

Under the provisions of the *Motor Vehicles Act 1959* all motor vehicles, unless specifically exempted, must be registered with the Registrar of Motor Vehicles at the Motor Registration Section of the Department of Transport before being driven on any road.

Motor Vehicles on Register<sup>(a)</sup> at 30 June

Type of vehicle	1992	1993	1994
'000			
Passenger vehicles .....	719.6	731.9	746.4
Other motor vehicles .....	141.8	145.0	146.8
Motor cycles .....	28.1	27.7	27.0
<b>Total on register .....</b>	<b>889.5</b>	<b>904.6</b>	<b>920.2</b>
PER 1,000 ESTIMATED RESIDENT POPULATION			
Motor vehicles .....	610.1	618.4	n.y.a.
'000			
Plant and equipment .....	9.2	9.7	9.4
Trailers and caravans .....	214.9	218.8	224.1
Traders plates .....	(b)3.3	3.3	3.3

(a) Includes Commonwealth Government owned vehicles except defence services vehicles.  
 (b) At 31 December.

*Drivers licences*

From 3 June 1991, fourteen classes of drivers licences have applied in South Australia, the most common being Class Car. These are held by persons who are able to drive any motor vehicle the gross vehicle mass (GVM) of which does not exceed 4.5 tonnes (except a motor omnibus designed or adapted to carry more than 12 persons (including the driver), an articulated motor vehicle, a heavy trailer combination, or a motor cycle).

Other classes include motor cycle, wheelchair and those related to weight and passenger restrictions.

The minimum age for the issue of a probationary driver's licence is 16 years 6 months while the minimum age for the issue of a learner's permit is 16 years. Probationary drivers are subject to probationary conditions until age 19 or for a period of twelve months. Drivers and riders licences current at 30 June 1994 totalled 949,318.

*Third Party (bodily injury) insurance*

Under the *Motor Vehicles Act 1959* every motor vehicle driven on a road, unless specifically exempted, must be covered by an insurance policy which insures the owner of the motor vehicle and any other person who at any time drives the vehicle in respect of all liability that may be incurred in respect of the death of, or bodily injury to, any person caused by, or arising out of the use of the vehicle in any part of Australia.

A person claiming damages in respect of death or bodily injury caused by negligence in the use of an uninsured motor vehicle on a road may bring an action for the recovery of those damages against the nominal defendant appointed by the Minister for Transport and published in the Government Gazette. Payments made by the nominal defendant are recoverable from the driver of the motor vehicle or any person liable for the negligence of that driver.

Motor vehicle usage

An ABS survey was conducted throughout Australia in late 1991 on the usage of motor vehicles. The period covered was for the twelve months ended 30 September 1991. Previous surveys were conducted in 1963, 1971, 1976, 1979, 1982, 1985 and 1988.

Motor Vehicle Usage : Average Annual Distance Travelled  
Twelve Months Ended 30 September 1991

Type of vehicle	Average annual distance travelled		Average annual distance travelled for business purposes	
	'000km	SE%	'000km	SE%
Passenger vehicles . . . . .	13.5	(3)	11.5	(9)
Motor cycles . . . . .	4.7	(6)	2.4	(14)
Light commercial vehicles . . . . .	15.6	(4)	14.1	(5)
Rigid trucks . . . . .	15.4	(8)	15.9	(8)
Articulated trucks . . . . .	80.0	(2)	80.3	(2)
Other truck types . . . . .	14.6	(21)	16.4	(21)
Buses . . . . .	46.8	(4)	49.3	(4)
<b>Total . . . . .</b>	<b>13.9</b>	<b>(3)</b>	<b>14.1</b>	<b>(5)</b>

The survey population from which the sample was drawn was extracted from the registration systems of the Commonwealth Government and State motor vehicle registration authorities. It was then stratified according to body type and characteristics such as age, weight and engine capacity of vehicle.

Of the vehicles selected for the 1991 sample, 58 per cent were commercial vehicles; 27 per cent were private passenger vehicles and 15 per cent buses. The emphasis on commercial vehicles was necessary because of the diverse usage characteristics of commercial vehicles and because a major interest of users is road freight transport.

Motor Vehicle Usage : Average Rate of Fuel Consumption  
Twelve Months Ended 30 September 1991

Type of vehicle	Petrol		Diesel or distillate		LPG/LNG dual fuel	
	Litres per 100 km	SE%	Litres per 100 km	SE%	Litres per 100 km	SE%
Passenger vehicles . . . . .	12.2	(1)	15.3	(13)	15.4	(5)
Motor cycles . . . . .	6.3	(5)	-	(-)	-	(-)
Light commercial vehicles . . . . .	13.9	(2)	11.7	(4)	18.3	(9)
Rigid trucks . . . . .	25.3	(5)	26.9	(6)	34.4	(9)
Articulated trucks . . . . .	47.1	(25)	51.1	(1)	-	(-)
Other truck types . . . . .	21.3	(7)	23.7	(14)	24.8	(4)
Buses . . . . .	25.8	(9)	37.9	(1)	41.1	(3)
<b>Total . . . . .</b>	<b>12.4</b>	<b>(1)</b>	<b>29.3</b>	<b>(3)</b>	<b>16.2</b>	<b>(5)</b>

## Transport and Communication

### Census of motor vehicles

A census of motor vehicles on the register in Australia at 30 June 1993 was completed during 1993. The following table classifies motor vehicles by type of vehicle and year of manufacture for South Australia.

Motor Vehicles on Register : Type of Vehicle and Year of Manufacture  
30 June 1993<sup>(a)</sup>

Year of manufacture	Type of vehicle						Total (a)
	Passenger vehicles	Light commercial vehicles	Rigid trucks	Articulated trucks	Non-freight carrying trucks	Buses	
To 1930 . . . . .	699	67	1	—	3	—	770
1931-1958 . . . . .	2,728	595	547	3	50	6	3,929
1959-1970 . . . . .	39,637	5,942	4,923	159	597	163	51,421
1971-1974 . . . . .	61,185	10,353	2,970	318	1,098	229	76,153
1975-1978 . . . . .	115,925	18,234	4,829	807	1,660	548	142,003
1979-1982 . . . . .	147,513	21,716	4,190	1,002	1,025	635	175,981
1983-1986 . . . . .	166,633	23,766	4,390	1,207	1,102	762	197,860
1987-1988 . . . . .	64,703	7,692	1,339	648	423	318	75,123
1989 . . . . .	37,948	5,157	870	329	273	147	44,724
1990 . . . . .	40,416	5,321	1,065	311	222	198	47,533
1991 . . . . .	31,006	4,104	677	209	113	135	36,244
1992 . . . . .	31,650	4,296	611	172	125	129	36,983
1993 . . . . .	11,918	1,702	146	103	20	56	13,945
<b>Total (incl. not stated) . .</b>	<b>752,254</b>	<b>109,187</b>	<b>26,863</b>	<b>5,280</b>	<b>6,725</b>	<b>3,292</b>	<b>903,601</b>

(a) Excludes motor cycles 29,220.

### Road accident prevention

The Department of Transport is responsible for the development of road safety policy through the Office of Road Safety. A Road Safety Management and Coordination Group, comprising chief executives from Transport, Education and Children's Services, and Police Departments, the South Australian Health Commission, and a nominee of the Local Government Association coordinates a government-wide effort in road safety by the development of a Road Safety Strategic Plan.

The Road Safety Advisory Council remains an advisory body to the Minister.

Road safety programs are conducted by the Department of Transport, local government authorities, the Police, and Education and Children's Services Departments, the South Australian Health Commission, and the National Health and Medical Research Council's Road Accident Research Unit.

### Road traffic accidents

Statistics of road traffic crashes are compiled from reports made to members of the South Australian Police Department by persons involved in such incidents.

For the purpose of the following statistics, only those casualty crashes which occurred because of the presence of a moving vehicle on a road or



other public thoroughfare (e.g. public car park, beach) and which also involved a fatality or the hospitalisation of injured persons have been included. Thus the casualty statistics refer to:

- (a) the death of any person within a period of thirty days of the crash; or
- (b) bodily injury to any person to an extent requiring hospitalisation.

During 1993 the total number of road traffic crashes increased by 0.7 per cent. The number of crashes which resulted in fatalities increased by 34.5 per cent (from 142 in 1992 to 191 in 1993). Despite these increases the total number of road traffic crashes fell by 35.2 per cent from 1989, while the number of fatal crashes fell by 5.0 per cent.

## Road Traffic Accidents

Year	Total accidents (a)	Fatal accidents	Persons killed	Persons injured	Rate per 100,000 of mean population		
					Total accidents	Persons killed	Persons injured
1989	2,132	201	222	2,492	160	14	175
1990	2,112	186	225	2,397	148	16	167
1991	1,733	166	184	2,058	120	13	142
1992	1,371	142	165	1,601	94	11	110
1993	1,381	191	218	1,550	94	15	106

(a) Includes only those accidents involving a fatality or the hospitalisation of injured persons.

Drivers (including motor cyclists) under twenty-one years of age accounted for 16 per cent of drivers killed and 17 per cent of drivers injured during 1993. For drivers aged twenty-one to twenty-nine years deaths were 32 per cent and injuries 31 per cent. Pedestrians sixty years and over accounted for 17 per cent of pedestrians injured and 45 per cent of pedestrians killed. In the following table, the types of road users killed and injured are shown according to age groups.

## Road Traffic Crashes : Age Groups of Casualties, 1993

Age group of casualty (years)	Drivers of motor vehicles	Motor cyclists	Pedal cyclists	Passengers (a)	Pedestrians	All other	Total
PERSONS KILLED							
Under 5	—	—	—	2	—	—	2
5-6	—	—	—	—	—	—	—
7-16	1	—	1	9	2	—	13
17-20	15	2	1	15	5	—	38
21-25	15	9	—	9	2	—	35
26-29	7	5	—	5	1	—	18
30-39	19	9	—	6	4	—	38
40-49	12	2	2	7	1	—	24
50-59	5	—	—	3	2	—	10
60 and over	11	—	1	9	15	—	36
Not stated	—	—	1	2	1	—	4
<b>Total</b>	<b>85</b>	<b>27</b>	<b>6</b>	<b>67</b>	<b>33</b>	<b>—</b>	<b>218</b>

Road Traffic Crashes : Age Groups of Casualties, 1993 (continued)

Age group of casualty (years)	Drivers of motor vehicles	Motor cyclists	Pedal cyclists	Passengers (a)	Pedestrians	All other	Total
PERSONS INJURED							
Under 5 . . . . .	—	—	—	15	8	—	23
5-6 . . . . .	—	—	1	7	6	—	14
7-16 . . . . .	10	7	23	83	31	—	154
17-20 . . . . .	99	21	6	94	17	—	237
21-25 . . . . .	116	39	9	68	18	—	250
26-29 . . . . .	65	34	3	27	5	—	134
30-39 . . . . .	116	38	13	50	11	—	228
40-49 . . . . .	83	16	4	27	12	—	142
50-59 . . . . .	57	4	5	18	10	—	94
60 and over . . . . .	95	—	7	38	29	—	169
Not stated . . . . .	17	6	2	53	27	—	105
<b>Total . . . . .</b>	<b>658</b>	<b>165</b>	<b>73</b>	<b>480</b>	<b>174</b>	<b>—</b>	<b>1,550</b>

(a) Passengers include pillion motor cyclists.  
Source: Department of Transport, Office of Road Safety.

The following table shows casualties by type of road user in each of the three years to 1993.

Road Traffic Crashes : Casualties

Year	Drivers of motor vehicles	Motor cyclists	Pedal cyclists	Passengers (a)	Pedestrians	All other	Total
PERSONS KILLED							
1991 . . . . .	81	22	10	47	24	—	184
1992 . . . . .	66	13	2	53	31	—	165
1993 . . . . .	85	27	6	67	33	—	218
PERSONS INJURED							
1991 . . . . .	876	263	106	614	198	1	2,058
1992 . . . . .	674	188	88	480	170	1	1,601
1993 . . . . .	658	165	73	480	174	—	1,550

(a) Passengers include pillion motor cyclists.  
Source: Department of Transport, Office of Road Safety.

## 15.2 SEA TRANSPORT

### Harbours

The South Australian commercial ports system comprises the State commercial deep sea ports of Port Adelaide, Port Pirie, Port Bonython, Thevenard, Port Giles, Wallaroo, and Port Lincoln; and the privately operated commercial deep sea ports of Whyalla, Port Stanvac, Proper Bay and Ardrossan.

The Marine and Harbors Agency within the Department of Transport also maintains jetties and wharves for promenade and fishing purposes at many minor ports no longer used by commercial vessels. The Marine and Harbors Agency is responsible for the provision of a shipping service between Port Adelaide and Kangaroo Island.

The control of all harbours (including the River Murray) is vested in the Minister for Transport. This Ministry is responsible for the control of navigation within harbours and for all harbour facilities including lights, buoys, beacons, bulk loading plants and fishing boat accommodation, and monitors the competency of masters and others in charge of intra-state vessels. Legislation administered by the Marine and Harbors Agency includes the *Harbors Act 1936*, the *Marine Act 1936*, the *Prevention of Pollution of Waters by Oil Act 1961* and the *Boating Act 1974*.

In 1993–94 the State-owned ports handled 13,601,000 tonnes of cargo or approximately 64.7 per cent of the total tonnage of 21,021,000 tonnes passing through all the ports in South Australia.

### Shipping

#### *Control of shipping*

The Commonwealth is empowered under the Constitution to make laws in respect of trade and commerce with other countries and among the States. Navigation and shipping are regulated under the *Navigation Act 1912* (Cwlth) which applies to ships registered in Australia (except those engaged solely in the domestic trade of any one State) and other British ships whose first port of clearance and whose port of destination are within Australia.

Other shipping Acts under the trade and commerce power are the *Sea-Carriage of Goods Act 1924* (Cwlth), the *Seamen's Compensation Act 1911* (Cwlth), the *Seamen's War Pensions and Allowance Act 1940* (Cwlth), the *Australian Coastal Shipping Commission Act 1966* (Cwlth), the *Australian Coastal Shipping Agreement Act 1956* (Cwlth) and the *Stevedoring Industry Act 1956* (Cwlth).

Shipping in South Australia is further controlled by the *Harbors Act 1936* and the *Marine Act 1936*. Both of the State Acts are administered by the Marine and Harbors Agency.

#### *Registration of ships*

The Australian Register of Ships is established in Canberra by the Commonwealth Government. Registration of a ship provides proof of nationality and ownership, and enables the registration of encumbrances over a ship.

#### *Distances to overseas ports*

Distances in kilometres from Port Adelaide to principal overseas ports are shown in the following table.

Distances from Port Adelaide to Principal Overseas Ports

Port Adelaide to:	Kilometres	Port Adelaide to:	Kilometres
Africa:		North America:	
Cape Town .....	10,377	East Coast:	
Asia:		Baltimore .....	(a)23,135 (c)19,059
Colombo .....	7,982	Montreal .....	(a)23,541 (c)21,368
Djakarta .....	5,643	New York .....	(a)22,961 (c)19,200
Hong Kong .....	8,856	West Coast:	
Singapore .....	6,510	San Francisco .....	13,653
Yokohama .....	9,780	Vancouver .....	14,357
Europe:		Central America:	
Liverpool .....	(a)21,630 (b)19,774	Panama .....	15,385
London .....	(a)21,705 (b)19,839	South America:	
Marseilles .....	(a)21,144 (b)16,688	East Coast:	
Naples .....	(a)21,663 (b)15,940	Buenos Aires .....	(d)14,388
New Zealand:		Rio de Janeiro .....	(d)15,901
Auckland .....	3,769	West Coast:	
Wellington .....	3,482	Valparaiso .....	12,353

(a) Via Cape Town. (b) Via Suez Canal. (c) Via Panama Canal. (d) Via Cape Horn.

Overseas shipping

Overseas shipping cargo statistics are compiled from returns submitted by shipping companies, or their representatives, to Customs Houses at each port in South Australia.

The statistics relate to overseas ships calling at or departing from South Australian ports for the purpose of carrying cargo from or to overseas ports. Excluded are naval ships, yachts and other craft used for pleasure, foreign fishing ships that neither load nor discharge cargo, geophysical, oceanographic research and seismic survey ships, offshore oil drilling rigs and related service ships, Australian registered fishing ships operating from Australian ports and all ships of 200 registered net tonnes and under. Cargo statistics are recorded in gross weight tonnes. Gross weight is the total weight of cargo, excluding the weight of containers.

Of the 741 commercial vessels arriving at South Australian ports in 1993, 421 arrived at Port Adelaide, 61 at Port Stanvac, 59 at Whyalla, 51 at Port Pirie, 48 at Port Lincoln, 30 at Port Bonython and 71 at Wallaroo, Port Giles and Ardrossan.

Shipping : Overseas Cargo Discharged and Loaded

Year	Discharged		Loaded	
	Gross weight	Value	Gross weight	Value
	'000 tonnes	\$m	'000 tonnes	\$m
1990 .....	2,189	1,278	6,665	2,056
1991 .....	2,875	1,402	7,230	1,963
1992 .....	3,546	1,855	7,635	2,453
1993 .....	3,624	1,959	6,512	2,320

Cargo handled

The South Australian Marine and Harbors Agency records details of cargo handled at the larger ports in this State.

Cargo Handled at Major Ports  
('000 tonnes)

Port	1991-92	1992-93	1993-94
Ardrossan .....	1,073	1,152	911
Ballast Head .....	205	16	-
Kingscote .....	43	45	42
Klein Point .....	1,229	1,540	1,627
Port Adelaide .....	4,087	5,114	5,339
Port Bonython .....	2,040	1,641	1,526
Port Giles .....	217	393	187
Port Lincoln .....	1,382	1,100	1,661
Port Pirie .....	1,129	888	1,201
Port Stanvac .....	3,592	3,844	3,559
Proper Bay .....	36	-	3
Rapid Bay .....	12	-	-
Thevenard .....	1,193	1,291	1,317
Walleroo .....	685	557	702
Whyalla .....	2,674	2,734	2,947
<b>Total .....</b>	<b>19,597</b>	<b>20,315</b>	<b>21,021</b>

### 15.3 AIR TRANSPORT

Control of civil aviation

In Australia, civil aviation is subject to the *Air Navigation Act 1920* (Cwlth) and the *Civil Aviation Act 1988* (Cwlth), and regulations made under those Acts.

Regulations, administered by the Department of Transport, the Civil Aviation Authority and the Federal Airports Corporation, cover the registration of aircraft and the issue of certificates of airworthiness, the licensing of aircraft services, aircraft operating crews, aerodromes, flying training schools, and the rules of the air.

The Civil Aviation Authority (CAA) is responsible for safety regulation, air traffic services, rescue and fire fighting services, the provision of services to and coordination of aviation search and rescue operations. The CAA is responsible also for monitoring of noise caused by air traffic.

Aerodromes

The main airport in South Australia is the Adelaide Airport located six kilometres west of the city. The airport has both a domestic and an international terminal, the latter having scheduled services to Europe, the Far East and New Zealand. The aerodrome at Parafield, about eighteen kilometres north of Adelaide, is restricted principally to light aircraft.

Adelaide and Parafield airports are owned and operated by the Federal Airports Corporation (FAC) which is a statutory body designed to place the airports, with their terminals, runways and associated facilities on a proper commercial basis.

In July 1994 there were 27 licensed aerodromes in South Australia, including the two airports operated by the FAC. Of these, 14 have a regular public transport service.

Civil Aviation Regulation aerodromes used by aircraft with more than 30 passenger seats and/or engaged in regular public transport operations require to be licensed.

In addition to the civil aerodromes there are two major aerodromes, one at Woomera controlled by the Department of Defence through the Defence Research Centre, and the other at Salisbury (Edinburgh Airfield), which are used by aircraft associated with trials operations. Edinburgh Airfield is also the base for two Royal Australian Air Force maritime squadrons.

**Aircraft on register**

At 30 June 1993 the number of registered aircraft based in the South Australia-Northern Territory Region was 756 for general aviation and 276 for transport.

**General air services**

International air services commenced through Adelaide on 2 November 1982. At June 1993, there were seven international carriers, Qantas, British Airways, Singapore Airlines, Garuda Airlines, Malaysian Airlines, Air New Zealand and Cathay Pacific, providing international services to Adelaide.

Domestic air services to South Australia are provided by Ansett Transport Industries (Operations) Ltd, operating as Ansett Australia, and Qantas Airways. The airlines provide direct services from Adelaide to the following major centres: Alice Springs, Brisbane, Canberra, Coolangatta, Darwin, Melbourne, Perth and Sydney. In addition, there were nine commuter operators providing services in South Australia at June 1992.

The commuter sector of the Australian aviation industry is defined as those operators performing regular public transport services whose fleet contain exclusively aircraft with a maximum seating capacity of 38 or a maximum payload of 4,200 kilograms. Commuters served twenty South Australian ports at June 1992, as well as a number of isolated communities and stations on mail/parcel runs.

Principal Airports : Traffic Data

<i>Airport</i>	<i>1990-91</i>	<i>1991-92</i>	<i>1992-93</i>
PASSENGERS (a)			
Adelaide .....	2,266,739	2,806,282	2,808,709
Adelaide International .....	184,874	193,658	213,495
Ceduna .....	5,240	5,328	5,958
Kingscote .....	37,213	40,775	41,874
Mount Gambier .....	56,713	48,802	50,633
Port Lincoln .....	69,371	76,827	80,257
Whyalla .....	48,973	47,003	44,731

Principal Airports : Traffic Data (continued)

Airport	1990-91	1991-92	1992-93
FREIGHT-TONNES (a)			
Adelaide .....	13,245	14,061	15,236
Adelaide International .....	8,007	8,914	9,545
Ceduna .....	3	1	-
Kingscote .....	35	33	13
Mount Gambier .....	36	26	24
Port Lincoln .....	35	36	16
Whyalla .....	16	20	14
AIRCRAFT MOVEMENTS			
Adelaide .....	48,095	53,403	54,586
Adelaide International .....	2,220	2,394	2,286
Ceduna .....	625	681	681
Kingscote .....	4,415	7,309	6,953
Mount Gambier .....	7,674	6,374	6,397
Port Lincoln .....	5,846	5,982	5,591
Whyalla .....	4,250	4,094	4,314

(a) Includes all domestic and commuter services.

## 15.4 COMMUNICATION

**Postal services** Australia Post is a business enterprise wholly owned by the Commonwealth of Australia and established under the *Australian Postal Corporation Act 1989*. Australia Post operates letter and parcel delivery services within Australia and internationally, and it provides a range of related services. The Act requires Australia Post to provide all Australians with access to a uniform rate delivery service for Standard Letters.

Australia Post provides agency services for other organisations such as the Commonwealth Bank, private sector businesses and State and Commonwealth Government services. Electronic counter services have been extended to offer customers access for paying bills and transferring funds at their local post office. Known as the One Spot Billpay Service, this facility has been installed at over 220 Post Offices, Post Office Agencies and licensed Post Offices throughout South Australia and the Northern Territory.

Recent advances in mail processing have been the introduction of Optical Character Reading (OCR) and Flats Sorting Machines (FSM) which collectively have streamlined the processing of articles through the mail exchange.

At 30 June 1994 there were 2,874 persons employed by Australia Post in South Australia and the Northern Territory comprising 2,453 full-time staff, 360 part-time staff and 61 Post Office Agency staff.

## Transport and Communication

### Postal articles handled

Details of articles handled by post offices in South Australia and the Northern Territory during the years 1991-92 to 1993-94 are shown in the following table.

Postal Articles Handled, South Australia and Northern Territory ('000)

Year	Standard letters	Other letters and parcels	Security post	All articles
Posted for delivery:				
Within Australia:				
1991-92 .....	257,454	34,499	204	292,157
1992-93 .....	250,421	39,455	259	290,135
1993-94 .....	250,586	42,459	203	293,248
Beyond Australia:				
1991-92 .....	7,843	717	32	8,592
1992-93 .....	8,918	777	41	9,736
1993-94 .....	9,700	793	40	10,533
Received from beyond Australia:				
1991-92 .....	3,927	951	14	4,892
1992-93 .....	3,667	915	18	4,600
1993-94 .....	4,126	883	18	5,027

### Telecommunications

A new entity was established on 1 February 1992 through the merger of the Australian Telecommunications Corporation (Telecom Australia) and the Overseas Telecommunications Corporation Limited (OTC). Known as the Telstra Corporation Limited which trades as Telecom Australia for domestic services and Telstra for international, it provides an array of products and services for clients. Telstra is a publicly owned government business enterprise which pays a profit dividend to the Commonwealth Government.

A private enterprise network carrier, Optus Communications, began trading in July 1992 with the introduction of mobile and long distance services.

### Radio and television

There are twenty-two medium frequency amplitude modulated (AM) services operating in South Australia. Of these, eight are in Adelaide and one is a new type of broadcasting service, high power open narrowcasting. Services of this type are limited in some way (targeted to a special interest group, or for limited locations, or provided for a limited period or of limited appeal). Fourteen services are in country areas.

Of forty-seven VHF frequency modulation (FM) services in South Australia, eleven are based in Adelaide with the remaining in regional areas, including one high power open narrowcasting service.

Low power open narrowcasting information services (maximum power of 1 watt) operate in the FM sub-band 87.5 to 88.0 MHz. They provide information programming in formats such as foreign language, tourist features and religious matters. Services are operating at Glenclg, Lyndoch, Hahndorf and Bordertown.



## 16.1 FRAMEWORK OF PUBLIC FINANCE

### Structure

The collection of public revenue and the expenditure of public money in South Australia are the responsibility of three groups of authorities: (i) Commonwealth Government; (ii) South Australian Government and State public corporations which together make up State authorities; and (iii) local government.

Reference is made to the revenue and expenditure of the Commonwealth Government only to the extent that it affects the finances of the State Government. The transactions which are included represent only a small proportion of total expenditure by the Commonwealth Government within South Australia.

The power to raise revenue from taxation is vested in the various governments and authorities by Acts of Parliament. Other revenue comes from the proceeds of the sale of goods and services to the public and to other governments and authorities. A major proportion of the revenue of the State Government, and a smaller proportion of the revenue of local government authorities and some public corporations is derived from grants from other levels of government. A further source of funds is the loan market; government securities are issued for loan raisings in Australia and overseas.

### Financial management

#### State Government

The financial administration legislation under which the State's finances are managed is the *Public Finance and Audit Act 1987*. The Act provides the framework within which the Government exercises control over the money which Parliament has appropriated.

The Act has established several types of accounts which, when taken together, comprise the Public Accounts. The most important of these accounts are the Consolidated Account; Special Deposit Accounts; and Deposit Accounts.

#### Consolidated Account

The Consolidated Account is the Treasurer's main operating account and until recently, the account in which all receipts and payments referred to in the Budget were recorded.

The first television service in South Australia commenced operation in September 1959. The Adelaide services are supported by ten translators and twenty-four community-owned re-transmission facilities transmitters.

UHF channel 31 is used in Adelaide by a community television consortium and is operating as an open narrowcasting service, pending a review of broadcasting before 1 July 1997.

There are four commercial television services in regional South Australia available through thirty-four outlets. The Commonwealth provides twenty-six transmission facilities.

**Further  
references**

Additional information may be found in the following ABS publications:

- 9206.0 *Shipping and Air Cargo Commodity Statistics, Australia*
- 9208.0 *Survey of Motor Vehicle Use, Australia*
- 9303.0 *Motor Vehicle Registrations, Australia*
- 9304.0 *Motor Vehicle Registrations, Australia*
- 9309.0 *Motor Vehicle Census, Australia*

From July 1991, most departmental financial operations have been conducted through Special Deposit Accounts rather than the Consolidated Account. Parliament now appropriates a single amount ('net draw-down') to each Department which is credited to a Special Deposit Account established for the purpose of recording the financial transactions of the Department.

The Consolidated Account is credited with State taxes, fines, regulatory fees, royalties, borrowings, and Commonwealth general and special purpose grants which form the basis for appropriation to departments.

*Deposit Accounts* These are principally moneys lodged with the Treasurer by public authorities and other bodies on current account; funds held for specific purposes pursuant to legislation, not necessarily expendable in any one year; contractors' and statutory deposits and unclaimed moneys. The terms and conditions on which deposits are accepted are determined by the Treasurer.

*Special Deposit Accounts* Special Deposit Accounts have been established to facilitate accounting for and control of recurrent and capital financial operations of departments and specific administrative arrangements *e.g.* the Highways Fund. Accounts are credited with Parliamentary appropriations, departmental fees and charges, receipt from the sale of assets, Commonwealth specific purpose grants and, at the Treasurer's discretion, interest on the account balance. Funds are applied to meet recurrent and capital payments.

*Public corporations* A public corporation is defined as a body (other than a local government authority) created by or under legislation to carry out an activity or activities on behalf of a government, or a body in which a government has a controlling interest.

Most public corporations enjoy considerable freedom in the conduct of their financial affairs. Section 7 of the Public Finance and Audit Act permits money received by an instrumentality of the Crown, that would otherwise be paid into the Consolidated Account, to be applied by the instrumentality without Parliamentary appropriation for the purpose of carrying out its functions.

There are numerous examples of bodies which operate in this way but some of the more prominent are the South Australian Government Financing Authority (SAFA), TransAdelaide, the Electricity Trust and the Pipelines Authority.

*Local government authorities* The relevant legislation under which local government finances are managed is the Local Government Act and the 'Local Government Accounting Regulations 1993'. The Regulations provide for uniformity in local government accounting and the adoption, as far as possible, of accepted accounting principles.

## 16.2 INTER-GOVERNMENTAL FINANCIAL RELATIONS

The Commonwealth Government's financial relations with the State and local government sectors comprise three broad types:

- (a) the provision of financial assistance in the form of grants or advances;
- (b) the Commonwealth undertaking borrowings of amounts determined by the Australian Loan Council on behalf of the States; and
- (c) the determination by Loan Council of the level of borrowings that can be undertaken each financial year by State semi-government and local authorities, government-owned companies and trusts.

*Financial assistance to State Government*

Commonwealth financial assistance to the States is provided in three main forms namely:

- (1) *General revenue assistance* – these are untied grants to assist in meeting recurrent State outlays. This is the largest inter-government transfer, accounting for 45 per cent of Commonwealth payments to the six States and Northern Territory in 1993–94.
- (2) *General purpose capital payments* – these are untied payments to assist with State outlays for capital purposes. They comprise the proceeds of borrowings by the Commonwealth on behalf of the States along with grants from the Commonwealth provided in lieu of such borrowings. In addition, the States are permitted to nominate amounts from within the borrowing component of the program for public housing purposes. These latter amounts are provided as loans from the Commonwealth on concessional terms and conditions.
- (3) *Specific purpose payments* – these are payments to the States which are tied to particular Commonwealth expenditure objectives. The administration of these funds by the States is subject to guidelines agreed with the Commonwealth. In 1993–94, approximately 81 per cent of the payments were for recurrent purposes and virtually all were provided as grants. Some of these payments are passed on by States to local government authorities.

Commonwealth Payments and Loan Council Borrowings  
(\$ million)

Particulars	1991-92	1992-93	1993-94
General purpose funds:			
Revenue .....	1,482.5	1,529.9	1,440.5
Capital grants .....	39.0	57.7	47.2
<b>Total general purpose .....</b>	<b>1,521.5</b>	<b>1,587.6</b>	<b>1,487.8</b>
Specific purpose:			
Recurrent .....	1,051.4	1,263.0	1,297.6
Capital .....	244.4	401.4	341.3
<b>Total specific purpose .....</b>	<b>1,295.8</b>	<b>1,664.4</b>	<b>1,638.9</b>
<b>Total gross Commonwealth payments .....</b>	<b>2,817.3</b>	<b>3,252.0</b>	<b>3,126.6</b>

Financial  
assistance to  
local government

The Commonwealth's financial relations with local government consist of payments from the Commonwealth Budget made directly or through State Governments, and Loan Council arrangements on local government borrowings.

General purpose  
assistance

General purpose assistance comprises untied grants which are the local government equivalent of general purpose assistance to the State Government Sector. The grants are paid initially to the States who are required to pass on the full amounts to local government authorities. Arrangements are embodied in the *Local Government (Financial Assistance) Act 1986* (Cwlth).

## Direct payments

There are a number of programs under which local government authorities are eligible for Commonwealth assistance. The grants are required to be spent on specific purposes designated by the Commonwealth e.g. child care.

Some of the funds provided to the States for specific purposes are passed on to local government. The amounts passed on are generally at the discretion of State governments, although in certain instances (such as road funding) the amounts passed on are subject to the approval of the Commonwealth.

Commonwealth Payments to Local Government  
(\$ million)

Particulars	1991-92	1992-93	1993-94
General purpose assistance (a) .....	78.8	80.7	80.7
Direct payments:			
Current .....	4.0	4.2	4.4
Capital .....	0.2	(b)30.7	5.6
<b>Total direct .....</b>	<b>4.2</b>	<b>34.9</b>	<b>10.1</b>
Specific purpose assistance on-passed by the State (c) .....	3.9	8.2	n.y.a.
<b>Total Commonwealth payments .....</b>	<b>86.9</b>	<b>123.8</b>	<b>n.y.a.</b>

(a) General purpose assistance is paid in the first instance to the State Government. (b) Includes \$30.7 million under Local Capital Works Program. (c) From 1991-92 specific purpose assistance for roads included under general purpose assistance.

### 16.3 STATE AUTHORITY FINANCE

The financial statistics for the public sector essentially are a reclassification of information published in accounting statements of the public authorities supplemented by additional dissections of the reported transactions.

Transfers between funds and accounts within the accounting systems and transfers between public authorities are eliminated on consolidation.

Public financial enterprises such as banks and insurance companies are excluded from the statistics as the merging of their income and outlay on capital transactions with equivalent transactions of other public authorities would provide a less accurate account of public sector activity.

*Classification schemes*

The two main transactions classifications used in the compilation of government finance statistics are the economic transactions framework (ETF) and government purpose classification (GPC).

The economic transactions framework categorises outlays, revenue and grants received and financing transactions according to their economic character to facilitate study of the macro-economic effect of government activity on the economy and to provide basic building blocks for grouping transactions for incorporation into the Australian National Accounts.

The government purpose classification is used to group outlays with similar functions in order to facilitate study of the broad purposes of public sector spending and to assess the effectiveness of outlays in meeting government policy objectives. To enable international comparisons the GPC classification closely follows the same classification principles as the United Nations 'Classifications of the Functions of Government' (COFOG).

Details of definitions and classifications used in public finance statistics are given in *Classifications Manual for Government Finance Statistics, Australia* (1217.0).

**Receipts and financing**

Details of receipts and financing transactions of South Australian State authorities have been consolidated from the accounts of the State Government departments and corporations and are classified in the following table to show the major sources of funds. The Personal Income Tax Sharing Entitlement grants are the largest revenue source of State authorities.

State Authorities : Receipts and Financing Transactions  
(\$ million)

<i>Classification</i>	<i>1990-91</i>	<i>1991-92</i>	<i>1993-94</i>
<b>Revenue and grants received:</b>			
Taxes, fees and fines .....	1,472.3	1,596.3	1,754.4
Net operating surplus of trading enterprises:			
Operating revenue .....	2,859.3	3,094.7	3,251.8
Operating expenditure .....	2,377.8	2,639.7	2,749.4
Property income:			
Income from public financial enterprises ...	157.6	(a)-3.1	62.6
Interest received .....	217.8	293.5	381.4
Other .....	88.5	80.1	81.0
Other revenue .....	64.0	71.0	69.7
Grants received:			
From the Commonwealth,			
For current purposes .....	2,417.1	2,601.5	2,727.9
For capital purposes .....	255.6	225.8	556.2
From local authorities .....	0.2	-	-
<b>Total revenue and grants received .....</b>	<b>5,154.5</b>	<b>5,320.2</b>	<b>6,135.5</b>
<b>Financing transactions:</b>			
Advances from the Commonwealth (net) .....	-281.8	-235.3	-193.2
Net borrowing:			
General government .....	787.7	3,847.9	4,172.5
Public trading enterprises .....	-72.2	-10.9	-35.3
Deposits received (net) .....	117.1	-9.5	-36.8
Decrease in investments .....	180.0	-643.7	-3,940.9
Decrease in currency and deposits .....	101.6	-623.5	576.1
Increase in provisions .....	323.3	307.2	353.8
Equity capital .....	2.9	5.8	9.9
Other funds available .....	-141.3	173.8	-6.6
<b>Total financing transactions .....</b>	<b>1,017.1</b>	<b>2,811.7</b>	<b>899.4</b>
<b>Total funds available .....</b>	<b>6,171.7</b>	<b>8,131.9</b>	<b>7,034.9</b>

(a) Includes \$36 million paid to SGIC as compensation for the Compulsory Third Party Fund.

## State Taxation

The major forms of taxation available to the State are payroll tax, motor tax, succession and stamp duties, and land tax. Stamp duty is payable on a range of instalment purchase, leasing and other lending transactions.

In 1977-78 each State was given the right to impose a surcharge or grant a rebate on personal income tax in its State. To date no State has imposed a surcharge or granted a rebate under the income tax sharing arrangements.

State Authorities : Taxation  
(\$ million)

<i>Particulars</i>	<i>1990-91</i>	<i>1991-92</i>	<i>1992-93</i>
Employers' payroll taxes .....	389.5	393.8	389.5
Taxes on property:			
Land taxes .....	76.0	75.6	75.2
Taxes on immovable property n.e.c. ....	3.7	3.6	3.5
Financial institutions transactions taxes .....	103.8	132.3	140.3
Stamp duties .....	172.8	175.6	207.2
Government borrowing guarantee levies .....	2.9	2.9	3.6
Taxes on provision of goods and services:			
Excises:			
Agricultural production taxes .....	0.1	-	-
Levies on statutory corporations .....	39.9	41.5	43.2

State Authorities : Taxation (continued)  
(\$ million)

Particulars	1990-91	1991-92	1992-93
Taxes on gambling;			
Taxes on government lotteries .....	76.5	82.9	78.1
Taxes on private lotteries .....	2.1	0.7	0.7
Casino taxes .....	16.5	17.0	19.1
Race betting taxes .....	38.5	40.2	38.6
Taxes on insurance;			
Insurance companies' contributions to fire brigades .....	37.7	40.0	42.8
Third party insurance taxes .....	7.5	12.8	12.8
Taxes on insurance n.e.c. ....	57.2	68.1	71.8
Taxes on use of goods and performance of activities:			
Motor vehicle taxes;			
Vehicle registration fees and taxes .....	110.1	118.8	130.2
Stamp duty on vehicle registration .....	61.4	61.3	66.6
Drivers licences .....	11.4	25.1	24.4
Road transport and maintenance taxes .....	0.4	0.4	0.4
Franchise taxes;			
Gas franchise taxes .....	7.8	7.7	8.6
Petroleum products franchise taxes .....	70.1	86.3	127.7
Tobacco franchise taxes .....	85.3	92.2	145.2
Liquor franchise taxes .....	42.6	43.9	47.4
Other taxes on use of goods etc. ....	2.0	4.2	3.9
Fees and fines:			
Fees from regulatory services .....	31.4	35.9	37.8
Fines .....	24.9	33.5	36.0
<b>Total taxation .....</b>	<b>1,472.3</b>	<b>1,596.3</b>	<b>1,754.4</b>

## Outlays

The next table shows outlay classified by purpose of public sector spending. Education accounted for 23.6 and health 15.5 per cent of outlay in 1992-93.

State Authorities : Outlay by Purpose  
(\$ million)

Classification	1990-91	1991-92	1992-93
General public services .....	709.7	(a)2,311.3	793.3
Public order and safety .....	421.7	430.1	430.2
Education .....	1,498.9	1,590.3	1,661.8
Health .....	1,048.9	1,075.8	1,091.3
Social security and welfare .....	223.5	244.2	262.3
Housing and community amenities .....	318.1	181.4	328.6
Recreation and culture .....	188.3	184.3	157.9
Fuel and energy .....	150.0	220.6	213.7
Agriculture, forestry, fishing and hunting .....	39.1	146.1	231.9
Mining, manufacturing, construction .....	45.4	18.1	23.7
Transport and communications .....	419.3	427.7	483.4
Other economic affairs .....	79.9	74.1	92.0
Other purposes .....	1,028.9	1,227.9	1,264.8
<b>Total outlay .....</b>	<b>6,171.7</b>	<b>8,131.9</b>	<b>7,034.9</b>

(a) Includes \$1,800 million paid to State Bank as part of the State Bank rescue package and \$267 million to SGIC re 333 Collins Street, Melbourne put option.

Outlays of State authorities are shown in the following table grouped according to whether they are current or capital. Fundamental distinction between the two rests on whether the transactions are 'used up' over a period of one year or represent assets which generate a future stream of



assets. Grants and other transfers between State authorities have been eliminated on consolidation in the following table.

State Authorities : Outlay  
(S million)

Classification	1990-91	1991-92	1992-93
<b>Current outlay:</b>			
Final consumption expenditure;			
Gross current expenditure.....	3,956.4	4,276.7	4,619.6
Offsetting receipts from sales.....	789.3	908.3	1,152.3
Required current transfer payments;			
Interest payments,			
To Commonwealth on advances.....	238.5	198.5	175.4
Other.....	691.5	962.8	1,021.6
Land rent, royalties, dividends paid.....	3.7	4.6	5.9
Unrequited current transfer payments;			
Subsidies paid.....	240.2	246.3	282.4
Personal benefit payments.....	104.0	101.8	99.1
Current grants,			
To non-profit institutions.....	273.8	297.6	303.8
To local authorities.....	71.1	90.6	91.0
Other current transfers.....	23.5	8.6	5.1
<b>Total current outlay.....</b>	<b>4,813.3</b>	<b>5,279.2</b>	<b>5,451.3</b>
<b>Capital outlay:</b>			
Gross fixed capital expenditure.....	868.2	788.6	820.5
Increase in stocks.....	-37.9	31.5	106.6
Expenditure on land and intangible assets.....	10.4	-3.5	29.1
Capital transfer payments;			
Capital grants,			
To private sector and public financial enterprises.....	10.3	9.9	12.9
To local authorities.....	26.9	11.0	16.6
Advances paid (net);			
To public financial enterprises.....	499.9	(a)2,066.5	620.9
To private sector.....	-15.0	-50.5	-23.1
Other.....	-4.4	-0.8	-0.3
<b>Total capital outlay.....</b>	<b>1,358.4</b>	<b>2,852.7</b>	<b>1,583.4</b>
<b>Total outlay.....</b>	<b>6,171.7</b>	<b>8,131.9</b>	<b>7,034.9</b>

(a) Includes \$1,800 million paid to State Bank as part of the State Bank rescue package and \$267 million to SGIC re 333 Collins Street, Melbourne put option.

Further  
references

Additional information may be found in the ABS publication *Government Finance Statistics, Australia* (5512.0).

## 16.4 LOCAL GOVERNMENT FINANCE

For the purpose of determining the scope of local government finance statistics, a local government authority is defined as:

- (a) an authority set up under a local government Act to carry out the functions of local government in a defined area (known as a municipality or district council) the members of which are elected by persons enrolled as electors for the House of Assembly in respect of an address within the area, or who are ratepayers in respect of rateable property within the area. A body corporate is enrolled under the name of a nominated agent; or

- (b) an authority created or acquired by a local government authority (as defined above) or by two or more local government authorities (in South Australia an authority established under Part XIII or Section 199 of the *Local Government Act 1934*).

**Revenue transactions**

Rates and government grants are the principal sources of revenue of local government authorities and represented 51.5 per cent and 19.5 per cent respectively of total revenue in 1992-93.

Details of revenue from ordinary services, as distinct from business undertakings, and loan receipts during the three years to 1992-93 are as follows.

Local Government Authorities : Ordinary Services  
Revenue and Loan Receipts  
(\$ million)

Particulars	1990-91	1991-92	1992-93
Rates (including penalties).....	338.0	364.6	386.7
Licences, fees and fines .....	15.3	16.4	16.7
Charges for services .....	78.0	88.0	92.1
Contributions and donations .....	6.3	5.0	5.2
Reimbursements received.....	16.2	13.2	16.2
Interest received.....	23.7	17.5	13.8
Sale of land and other fixed assets .....	26.2	31.3	29.8
Other.....	2.9	2.5	2.7
Government grants:			
General purpose .....	59.7	60.6	62.4
Specific purpose .....	47.7	48.4	84.3
<b>Total revenue .....</b>	<b>613.9</b>	<b>647.5</b>	<b>709.9</b>
Loan receipts .....	54.9	56.6	41.6
<b>Total revenue and loan receipts.....</b>	<b>668.8</b>	<b>704.0</b>	<b>751.4</b>

**Loan receipts**

Loans raised by local government authorities during 1992-93 totalled \$41.6 million for ordinary services. Most of these loans were raised with the Local Government Finance Authority.

**Outlay transactions**

A number of differences occur between the presentation of local government finance statistics and those of other levels of government. Public sector finance statistics generally are prepared on a net basis in which selected receipts are offset against relevant outlays, but in local government finance statistics transactions are shown as gross values and subsequently adjusted to the net basis when consolidated into the State and local government sector accounts. For this reason the tables which follow show 'current outlay on goods, services and land' rather than the net concept of final consumption expenditure.

A summary of ordinary services outlay of local government authorities during the three years to 1992-93 is shown in the next table.

Local Government Authorities : Ordinary Services, Outlay  
(\$ million)

Particulars	1990-91	1991-92	1992-93
Outlay on goods, services and land:			
Capital:			
New fixed assets:			
Roadworks construction	63.7	57.6	72.1
Other	107.8	107.6	126.2
Land and other fixed assets	16.9	15.1	9.6
Current:			
General public services	81.6	87.6	95.8
Roadworks, maintenance	67.6	74.6	77.7
Other	239.8	257.4	268.3
Total outlay on goods etc.	577.4	599.8	649.7
Debt charges:			
Interest	40.6	41.5	41.0
Debt redemption	34.4	34.8	37.7
Levies paid to government	7.0	7.6	7.7
Donations paid	3.1	3.7	3.5
Other	1.5	1.8	1.6
<b>Total outlay</b>	<b>664.0</b>	<b>689.2</b>	<b>741.3</b>

**Electricity undertakings**

Three councils in the northern area of the State, Roxby Downs (M), Peterborough (M) and Hawker (DC) owned and operated electricity supply schemes during 1992-93; Coober Pedy (DC) owns electricity supply equipment which the Cowell Electric Supply Co. Ltd operates.

Current outlay consisting of working expenses and interest paid on loans raised for the schemes totalled \$5.2 million, gross capital formation and debt redemption principal repayments totalled an additional \$0.5 million.

Electricity undertakings are classified as trading activities in local government finance statistics and details of the transactions are not included in the ordinary services of local government authorities.

**Further references**

Additional information may be found in the ABS publication *Government Finance Statistics, Australia* (5512.0).

**16.5 AUSTRALIAN NATIONAL ACCOUNTS**

National accounting aims to provide systematic summary of the transactions taking place in the economy, especially of those that relate to the production and use of goods and services, and to transfers of income or capital between sectors of the economy. Major interest is focused on the domestic production account and within that, gross domestic product (GDP).

Estimates of State Accounts have been prepared in recent years. These estimates are a dissection of the Australian National Accounts and in some cases have been built up using the same data sources as those used in the National Accounts; in others the dissections are based on a variety of sources ranging from those directly related, for example the economic censuses, to general indicators of activity such as population changes and household income.

A full presentation of Australian National Accounts is contained in the bulletins *Australian National Accounts, National Income, Expenditure and Product* (5204.0) (annual) and *Australian National Accounts: National Income, Expenditure and Product* (5206.0) (quarterly) and the other publications in this series.

**State accounts**

While national estimates are based on the concepts and conventions embodied in the United Nations *A System of National Accounts* (SNA) 1968, no such standard is available for sub-national (Regional/State) accounts. The national concepts generally are applicable to State Accounts but a number of conceptual and measurement issues which are important to State Accounts either do not apply or are insignificant at the national level. Most of the problems arise in the context of State gross product for the transport and communication industries where a number of conceptual views are possible. A detailed discussion of the issues surrounding the compilation of State Accounts together with a description of the available data sources and the estimation methodology are contained in the *State Accounts, Australia: Issues and Experimental Estimates* (ABS Occasional Paper 1984/4).

The following are the fundamental concepts of gross domestic product.

*Gross Domestic Product at Market Prices* (usually referred to as Gross Domestic Product) is the total market value of goods and services produced, after deducting the cost of goods and services used up in the production process but before deducting allowances for the consumption of fixed capital (or depreciation allowances). In concept it is the sum, for all producers, of the value of their sales (including any indirect taxes levied thereon), plus increases in their stocks, less the purchase of intermediate goods and services from other producers. For those producers, like general government, who do not generally sell their output, it includes output valued at cost instead of sales.

*Gross Domestic Product at Factor Cost* is that part of gross domestic product accounted for by gross payments to factors of production. It is equivalent to gross domestic product less indirect taxes plus subsidies.

*Methodology*

There are three distinct approaches which can be taken to measure gross domestic product, namely, the income approach, the expenditure approach, and the production approach.

## 17.1 BANKING AND CURRENCY

### Banking

The banking system in Australia in 1994 comprised a central bank (the Reserve Bank of Australia), forty-three banks (one owned by the Commonwealth Government, three by State Governments, and thirty-nine privately owned), the Commonwealth Development Bank and the Australian Resources Development Bank (specialist banks, owned respectively by the Commonwealth Government and a consortium of the four major Australian banks). Fourteen banks, plus the Reserve Bank, have branches in South Australia.

The conduct of banking business in Australia is governed by the *Banking Act 1959* (Cwlth). The Reserve Bank has explicit powers for the prudential supervision of banks.

On 26 February 1992 the Government announced that new foreign banks would be permitted to apply for a banking authority in Australia and that foreign banks, including those presently in Australia, would be allowed to operate with a branch structure, provided they were able to meet the Reserve Bank prudential requirements.

Additional historical information on banking is contained in the 1986 edition of the *South Australian Year Book* and the *Year Book Australia*.

### Reserve Bank of Australia

The Reserve Bank of Australia functions as a central bank, controls the Australian note issue and acts as banker to the Commonwealth and some of the States. As part of its responsibility under the Banking Act to protect the interests of bank depositors, the Reserve Bank conducts prudential supervision of banks.

The ultimate responsibility for sound management of a bank resides with that bank's board and management, but in consultation with banks the Reserve Bank maintains a framework of prudential standards within which a bank must operate. The standards cover a bank's capital, liquidity management, large credit exposures and various other aspects of its operations.

### Commonwealth Banking Corporation

The Commonwealth Banking Corporation was established under the *Commonwealth Banks Act 1959* (Cwlth). It is the controlling body for the Commonwealth Bank and the Commonwealth Development Bank.

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Gross State product shown in the following table is derived using the income approach as it was not possible to prepare an expenditure-based estimate using available data sources. For example, for some States interstate trade statistics are seriously incomplete for goods and virtually non-existent for services and data for Commonwealth Government final expenditure by State are not available.

Gross State Product (\$ million)			
<i>Particulars</i>	<i>1990-91</i>	<i>1991-92</i>	<i>1992-93</i>
Wages, salaries and supplements. . . . .	15,069	15,129	15,687
Gross operating surplus. . . . .	10,348	10,729	11,232
<i>Gross State Product at Factor Costs</i> . . . . .	<i>25,417</i>	<i>25,858</i>	<i>26,919</i>
Indirect taxes less subsidies . . . . .	3,131	3,050	3,227
<i>Gross State Product at Market Prices</i> . . . . .	<i>28,548</i>	<i>28,908</i>	<i>30,146</i>
<i>Total per head of mean population (\$)</i> . . . . .	<i>19,836</i>	<i>19,910</i>	<i>20,644</i>
<i>Total as a percentage of national gross domestic product (per cent)</i> . . . . .	<i>7.5</i>	<i>7.4</i>	<i>7.4</i>

**Further  
references**

Additional information may be found in the following ABS publications:

- 5204.0 *Australian National Accounts: National Income, Expenditure and Product (annual)*
- 5206.0 *Australian National Accounts: National Income, Expenditure and Product (quarterly)*
- 5220.0 *Australian National Accounts, State Accounts*

**Commonwealth Development Bank** The Commonwealth Development Bank is a supplementary source of finance for primary production and for the establishment or development of small business undertakings. It does not compete with conventional lenders, but provides financial help when finance is not otherwise available on suitable terms.

**Australian Resources Development Bank Limited** This corporation was formed by the major trading banks with the support of the Reserve Bank and was given bank status by an amendment to the Banking Act in 1967. It provides finance for the development of Australia's natural resources, mainly in the form of refinanced bank loans, but also by direct lending and equity participation.

**Banks originating in South Australia** The Savings Bank of South Australia commenced operations on 11 March 1848 and merged with the State Bank of South Australia on 1 July 1984. In 1991 the Bank was restructured with the Group Asset Management Division being given the responsibility to manage the impaired assets separated from the core Bank.

On 1 July 1994 the State Bank of South Australia was corporatised with part of the Bank transferred to a separate legal entity, Bank of South Australia Limited (BankSA) with the remaining part renamed South Australian Asset Management Corporation (SAAMC).

BankSA is a major provider of housing, commercial and personal finance to the South Australian community. SAAMC's role is to manage, realise and otherwise deal with its assets and liabilities; it has a number of offshore offices.

The first trading bank promoted in South Australia was the Bank of Adelaide which opened for business on 11 December 1865. The Australia and New Zealand Banking Group (ANZ) took over its operations from 1 October 1980.

**Branches and agencies**

The fourteen banks listed below have branches in South Australia.

*Government banks*

Commonwealth Bank of Australia	Bank of South Australia (BankSA)
--------------------------------	----------------------------------

*Private banks*

Advance Bank Australia Limited	Citibank
Australia and New Zealand Banking Group (ANZ)	NatWest Australia Bank Limited
Bank of New Zealand	National Australia Bank Limited
Bankers Trust Australia Limited	Primary Industry Bank of Australia
Challenge Bank	Standard Chartered Bank Australia
Chase Manhattan Bank	Westpac Banking Corporation

## Banks : Branches and Agencies at 30 June 1993

<i>Banks</i>	<i>Branches</i>	<i>Agencies</i>
Commonwealth Bank of Australia .....	92	417
State Bank of South Australia (a) .....	174	135
Australia and New Zealand Banking Group ..	132	63
Westpac Banking Corporation .....	85	4
National Australia Bank .....	84	15
Other banks .....	10	-
<i>Total - Metropolitan area .....</i>	<i>338</i>	<i>363</i>
<i>Country .....</i>	<i>239</i>	<i>271</i>
<b>Total State .....</b>	<b>577</b>	<b>634</b>

(a) From 1 July 1994 the State Bank of South Australia became the Bank of South Australia (BankSA).

Banks : Balance of Deposits and Advances to Customers Accounts<sup>(a)</sup>  
(S million)

<i>Year</i>	<i>Depositors balances</i>			<i>Loans, advances and bills discounted</i>
	<i>Bearing interest</i>	<i>Not bearing interest</i>	<i>Total</i>	
1989 .....	8,600	722	9,322	n.a.
1990 .....	11,274	800	12,074	13,771
1991 .....	12,060	649	12,709	15,853
1992 .....	12,163	887	13,050	16,054
1993 .....	13,087	901	13,988	17,133

(a) Average of weekly figures for month of June.

*Interest rates*

Bank interest rates are not formally determined under the Banking Act. Maximum rates are fixed after discussions between the Reserve Bank and the banks, and with the approval of the Treasurer. State Government banks, although not bound by rulings of the Reserve Bank, tend to conform.

*School banking*

Special banking facilities for school children were introduced into South Australia with the inauguration of the School Banking Department of the Savings Bank of South Australia on 28 April 1908. The State Bank of South Australia assumed this role after merger with the Savings Bank of South Australia on 1 July 1984. The Commonwealth Bank of Australia and some private banks provide similar services at some schools.

*Currency*

The Commonwealth Treasurer is empowered by legislation to arrange for the making and issuing of coins of specified denominations. Australia's coin requirements are met by the Royal Australian Mint in Canberra.

Australian notes are printed by Note Printing Australia, a division of the Reserve Bank in Melbourne. Notes in circulation are of the denominations \$5, \$10, \$20, \$50 and \$100. In May 1990 the Bank announced that a new series of currency notes would be issued, commencing with the \$5



note which was released on 7 July 1992. The new series is printed on plastic and incorporates optically variable devices like that pioneered on the commemorative \$10 note. Coins in circulation are 1 cent and 2 cent (bronze), 5, 10, 20 and 50 cents (cupro-nickel), \$1 and \$2. The \$1 and \$2 notes were replaced by coins in 1984 and 1988 respectively. Reissue of 1 and 2 cent coins ceased from 1 February 1992 and, over the following five months, \$10 million or 2,500 tonnes of these coins were returned by banks to the Reserve Bank.

## 17.2 OTHER PRIVATE FINANCE

### Australian Stock Exchange Limited

The Stock Exchange of Adelaide was formed in 1887 by the amalgamation of the Adelaide Stock Exchange and the Stock Exchange of South Australia. One hundred years later the six State capital city exchanges were amalgamated into one national Exchange, the Australian Stock Exchange Limited (ASX), which commenced business on 1 April 1987. The ASX has transformed the share market industry through the development of computer trading. The hubbub of the trading floor disappeared in Adelaide on 31 August 1990. On that date the trading floor in Adelaide closed and all stocks were incorporated into the computer trading system.

### Australian Financial Institutions Commission

Legislation was introduced on 1 July 1992 to provide for a national regulatory body, the Australian Financial Institutions Commission (AFIC), overseeing the operation of Australian non-bank financial institutions.

### New fixed capital expenditure

Estimates of capital expenditure are obtained from a sample of private enterprises other than in the agriculture and community services industries. State dissections are achieved by allocating expenditure to the State where the assets have or will be used.

*New fixed capital expenditure* refers to expenditure on new fixed tangible assets including major improvements, alterations and additions. Further details are available in the quarterly bulletin *State Estimates of Private New Capital Expenditure* (5646.0).

Private New Fixed Capital Expenditure  
(\$ million)

Period	Selected industry			Total	Type of asset	
	Manufac- turing	Finance, property and business services	Other selected industries		New building and structures (a)	Other new capital equipment
1990-91 . . . .	745	412	673	1,830	628	1,203
1991-92 . . . .	766	158	701	1,625	392	1,233
1992-93 . . . .	571	274	668	1,513	413	1,101

(a) Includes mine development.

**Building societies**

The operations of building societies in South Australia are regulated by the *Building Societies Act 1975* which is administered by the State Business and Corporate Affairs Office, with whom they must be registered. There are two categories of building society in South Australia – permanent and terminating (Starr-Bowkett) societies. Three Starr-Bowkett societies remain in South Australia and only one is expected to operate after 1995.

A permanent building society is an organisation that has not by its rules any fixed date or certain event or result when it is to terminate, is authorised to accept money on deposit, and operates on a cooperative basis by borrowing predominantly from its members and providing finance to its members principally in the form of housing loans. The Adelaide Bank Limited was formed on 1 January 1994 after the merger of several building societies.

**Credit Unions**

Credit Unions are registered under the *Credit Unions Act 1989* which is administered by the State Business and Corporate Affairs Office. Credit Unions operate on a cooperative basis by borrowing predominantly from and providing finance to their own members. The following table shows details of Credit Unions' assets and liabilities.

Credit Unions			
Particulars	1990-91	1991-92	1992-93
NUMBER			
Societies .....	16	15	15
Members at end of period .....	245,111	256,853	327,124
\$'000			
<b>Income:</b>			
Interest on loans to members .....	123,070	118,096	113,651
Other .....	24,875	29,068	33,150
<b>Total .....</b>	<b>147,945</b>	<b>147,164</b>	<b>146,801</b>
<b>Expenditure:</b>			
Interest on deposits .....	82,330	70,800	59,544
Other .....	57,354	62,295	71,736
<b>Total .....</b>	<b>139,684</b>	<b>133,095</b>	<b>131,280</b>
<b>Assets:</b>			
<b>Financial:</b>			
Loan outstandings .....	703,528	815,570	988,281
Cash on hand .....	4,159	4,852	6,942
Placements and deposits .....	116,454	146,776	195,396
Securities .....	9,875	5,652	(a)
Other financial .....	14,483	16,315	48,026
Other .....	26,280	28,236	29,623
<b>Total .....</b>	<b>874,778</b>	<b>1,017,401</b>	<b>1,268,267</b>
<b>Liabilities:</b>			
<b>Share capital and reserves;</b>			
Paid-up share capital .....	1,464	1,500	(b)750
Reserves .....	45,157	57,764	73,663
<b>Borrowings;</b>			
Deposits .....	813,763	939,335	1,160,063
Other .....	5,957	6,683	12,036
Other .....	8,437	12,119	21,755
<b>Total .....</b>	<b>874,778</b>	<b>1,017,401</b>	<b>1,268,267</b>

(a) Included with other. (b) Changes in accounting treatment has caused a fall in this category.

In 1992-93 the Australian Bureau of Statistics changed its method of collection of Credit Union finance figures from surveying financial organisations to obtain data from the Australian Financial Institutions Commission. Northern Territory figures have been included with South Australia from 1992-93.

**Finance commitments**

Details of personal, commercial and lease finance are provided by banks, insurance companies, finance companies, superannuation funds and other financial corporations registered under the *Financial Corporations Act 1974* (Cwlth). Details of personal and lease finance are also provided by permanent building societies and credit unions.

*Finance companies*

Finance companies are incorporated companies mainly engaged in providing to the general public, personal loans, wholesale finance, factoring, other consumer and commercial loans, financial leasing of business plant and equipment and bills of exchange. A company is mainly engaged in providing these credit facilities if 50 per cent or more of its assets consist of balances outstanding with respect to these types of financing, or if 50 per cent or more of its income is derived from such types of financing. Particulars of housing finance for owner occupation are not included in personal, commercial and lease finance; but are included in Part 10.3 Housing Finance.

*Personal finance*

Personal loans comprise all loans to persons and are used predominantly for the purchase of consumer durables with loans for the purchase of housing excluded. The following table shows finance commitments made by significant lenders to individuals for their private use. Credit Unions accounted for \$287 million of total personal finance commitments during 1992-93, nearly 70 per cent of the 'other lenders' category.

Personal Finance Commitments  
(\$ million)

Purpose of commitment	1991-92			1992-93		
	Banks	Finance companies	Other lenders	Banks	Finance companies	Other lenders
Commitments under fixed loan facilities:						
Purchase of:						
Motor vehicles . . . . .	141.0	184.7	107.9	155.5	216.6	128.4
Boats, caravans and trailers . . . . .	7.0	1.8	4.0	7.6	2.3	4.5
Household and personal goods . . . . .	16.8	7.3	17.5	22.4	7.4	15.8
Land and dwellings (a) . . . . .	47.2	4.1	13.7	58.1	5.4	15.2
Travel and holidays . . . . .	8.2	2.4	8.9	9.0	2.8	9.8
Debt consolidation . . . . .	25.7	4.0	50.8	34.5	4.3	58.5
Refinancing . . . . .	106.2	13.3	7.5	143.3	15.0	15.0
Other . . . . .	101.9	7.8	63.5	112.9	9.7	76.8
Commitments under revolving credit facilities:						
New and increased credit limits . . . . .	377.2	65.8	45.7	406.4	32.5	87.1
<b>Total personal finance commitments . . . . .</b>	<b>831.2</b>	<b>291.2</b>	<b>319.5</b>	<b>949.7</b>	<b>295.9</b>	<b>411.2</b>

(a) Includes alterations and additions.

*Commercial finance*

Commercial finance covers finance commitments made by significant lenders to government, private and public enterprises, non-profit organisations and to individuals for investment and business purposes. Commitments under revolving credit facilities are distinctive in that a borrowing limit is set for a specific period and during that time, any amount may be borrowed up to that limit; any repayments of principal increase the amount of credit available.

Commercial Finance Commitments  
(\$ million)

Purpose of commitment	1991-92			1992-93		
	Banks	Finance companies	Other lenders	Banks	Finance companies	Other lenders
Commitments under fixed loan facilities:						
Erection of buildings	182.0	55.9	11.6	62.6	49.8	-
Purchase of real estate	241.1	95.5	1.9	476.2	40.4	8.4
Rural property	56.1	1.8	-	75.8	-	-
Wholesale finance	138.9	5.3	100.0	21.0	1.3	116.7
Purchase of plant and equipment	91.8	167.6	10.5	141.5	211.1	13.0
Refinancing	605.7	8.7	-	548.8	1.1	-
Other	1,367.4	106.4	1.1	551.3	109.5	1.2
Commitments under revolving credit facilities:						
New and increased credit limits	3,145.0	373.8	-	2,328.0	384.6	-
<b>Total commercial finance commitments</b>	<b>5,727.8</b>	<b>815.0</b>	<b>125.1</b>	<b>4,205.4</b>	<b>772.8</b>	<b>139.3</b>

*Lease finance*

A finance lease refers to the leasing of tangible assets under an agreement which transfers from the lessor to the lessee substantially all the risks and benefits incident to ownership of the asset without actually transferring legal ownership.

The following table shows lease finance commitments made by significant lenders to private and public enterprises.

Value of Goods Under New Finance Lease Commitments  
(\$ million)

Particulars	1991-92			1992-93		
	Banks	Finance companies	Other lenders	Banks	Finance companies	Other lenders
Motor cars	30.3	110.3	1.0	44.4	80.8	6.1
Other motor vehicles	3.6	22.5	-	4.2	16.3	3.0
Construction, earthmoving and agricultural equipment	2.3	6.4	-	3.3	5.3	5.4
Automatic data processing equipment and office machines	4.9	8.9	5.0	3.4	6.4	26.7
Shop and office furniture and equipment	6.7	7.1	-	13.9	3.9	0.1
Other	31.1	17.5	-	17.2	9.4	0.5
<b>Total</b>	<b>78.8</b>	<b>172.5</b>	<b>6.0</b>	<b>86.0</b>	<b>121.7</b>	<b>41.7</b>

In the next twenty-one pages, a historical summary of some of the more important statistics relating to South Australia is shown. This is intended to present a general picture of the development of the State. Naturally the range of statistics available for the early years of the colony is very limited, and in addition it is not always possible to achieve perfect comparability in presenting details covering a period in excess of 150 years. Generally, all series on each page relate to either financial or calendar years but some financial year series have been included on pages which contain information shown in calendar years.

The first year shown on each page is the earliest for which any series on that page is available. Blanks at the top of some columns indicate that information relating to these particular series either was not collected or is not available for these early years, or is not available on a basis comparable to more recent statistics.

All major breaks in series are covered by footnotes, but minor changes are not so recorded, and the statistics should be interpreted with this in mind. An example can be quoted from the table on deaths from principal causes where comparability is affected somewhat by changes in classification, particularly in 1950, but no footnote to this effect has been included.

The following standard symbols have been used throughout the summary:

- n.a. not collected
- n.y.a. not yet available
- p preliminary figure or series subject to revision
- .. not applicable
- nil or less than half the final digit shown
- break in continuity of figures

**Tourism**

The Whyalla Corporation first established a Tourist Information Office in 1972. In the early 1980s, the original *HMAS Whyalla*, a 1939–45 War corvette which was the first vessel constructed at the former Whyalla Shipyard, became available from Melbourne. It was decided that the ship would be incorporated as a tourist attraction, and thus was created the concept of the Whyalla Maritime Museum at the main northern highway entrance.

Other tourist attractions include the Whyalla Wildlife and Reptile Sanctuary, Mount Laura Homestead, various museums, parks and gardens, and tours of the steelworks and mines. A comprehensive range of accommodation is available to visitors with four motels, two hotel/motels, and five hotels providing 280 rooms or units, and two caravan parks offering 260 powered sites, 25 on-site caravans and 15 units.

POPULATION AND DEMOGRAPHY<sup>(a)</sup>

Year	Population estimate at 31 December			Annual population growth			
	Males	Females	Persons	Recorded natural increase (b)	Rate of natural increase (c)	Total increase	Rate of population growth per cent
1836.....	309	237	546			546	
1841.....	8,755	6,730	15,485			855	5.84
1846.....	14,711	11,182	25,893	577	22.29	3,433	15.29
1851.....	37,321	29,217	66,538	1,786	26.85	2,838	4.46
1856.....	56,264	61,622	107,886	3,341	30.97	10,499	10.78
1861.....	67,409	63,403	130,812	3,589	28.00	5,230	4.17
1866.....	88,024	80,883	168,907	4,029	24.39	7,430	4.60
1871.....	97,019	91,625	188,644	4,704	25.21	4,098	2.22
1876.....	116,894	107,666	224,560	4,674	21.51	14,484	6.89
1881.....	152,453	133,518	285,971	6,696	23.81	9,578	3.47
1886.....	160,814	145,896	306,710	6,943	22.54	-2,603	-0.84
1891.....	168,826	155,895	324,721	6,526	20.23	5,774	1.81
1896.....	179,024	173,043	352,067	5,974	16.95	99	0.03
1901.....	(a)180,440	(a)178,890	(a)359,330	(a)5,105	14.29	(d)2,080	0.58
1906.....	184,803	181,710	366,513	5,049	13.90	3,892	1.07
1911.....	214,061	205,331	419,392	7,019	17.05	12,530	3.08
1916 (e).....	212,585	229,253	441,838	6,780	15.35	-4,147	-0.93
1921.....	251,170	250,572	501,742	6,992	14.07	10,736	2.19
1926.....	285,013	275,912	560,925	6,606	11.92	13,877	2.54
1931.....	289,397	287,682	577,079	4,191	7.28	2,612	0.45
1941 (e).....	301,645	304,721	606,366	4,677	7.78	7,310	1.22
1946 (e).....	317,238	323,180	640,418	9,352	14.72	9,536	1.51
1951.....	375,188	368,597	743,785	10,279	14.03	20,942	2.90
1956.....	436,807	425,145	861,952	11,371	13.40	27,291	3.27
1961.....	494,600	484,800	979,400	14,584	15.03	22,400	2.68
1966.....	554,000	549,800	1,103,700	11,017	10.07	20,700	1.92
1971.....	602,000	606,700	1,208,700	..	..	..	..
1976.....	637,800	642,300	1,280,200	8,902	6.98	9,500	0.75
1977.....	643,200	649,100	1,292,300	9,406	7.31	12,100	0.94
1978.....	645,400	653,200	1,298,600	8,781	6.78	6,300	0.49
1979.....	648,200	656,400	1,304,600	8,753	6.73	6,000	0.46
1980.....	651,600	661,100	1,312,600	8,861	6.77	8,000	0.61
1981.....	657,000	668,200	1,325,200	9,550	7.24	12,600	0.96
1982.....	663,600	674,100	1,337,800	8,761	6.57	12,600	0.95
1983.....	671,700	681,500	1,353,200	9,961	7.40	15,400	1.15
1984.....	678,000	687,400	1,365,300	9,952	7.32	12,100	0.89
1985.....	684,400	692,400	1,376,800	9,295	6.78	11,500	0.84
1986.....	689,800	697,300	1,387,100	9,413	6.81	10,300	0.75
1987.....	695,000	704,000	1,399,000	8,704	6.25	11,900	0.86
1988.....	701,200	711,200	1,412,300	8,465	6.02	13,300	0.95
1989.....	707,400	718,000	1,425,500	8,262	5.82	13,200	0.93
1990.....	713,900	725,000	1,438,900	8,925	6.23	13,400	0.94
1991.....	720,500	731,400	1,451,900	8,484	5.87	13,000	0.90
1992.....	725,000	735,400	1,460,400	8,406	5.77	8,500	0.59
1993p.....	729,100	738,500	1,466,500	8,527	5.83	6,100	0.42

(a) Figures before January 1962 exclude full-blood Aborigines. Figures from 1971 are estimated resident population. (b) Births and deaths of full-blood Aborigines, where identified, have been excluded from natural increase before 1 January 1962. (c) Excess of births over deaths per 1,000 of mean population. From 1971 mean estimated resident population. (d) Includes Northern Territory before 1901. (e) During the 1914-18 War, defence personnel leaving the State were treated as departures, but during the 1939-45 War they were retained in the population, and troops of other States and countries were excluded. (f) Effect of Cyclone Tracy.

BIRTHS AND SOCIAL

Year	Live births			Adoptions (b)	Marriages		Divorces (c)	
	Number	Rate (a)	Ex-nuptial (%)	Number	Total	Rate (a)	Total	Rate (a)
1846	937	36.2			220	8.5		
1851	2,759	41.5			189	2.8		
1856	4,488	41.6		57	1,171	10.9		
1861	5,551	43.3		49	1,158	9.0		
1866	6,782	41.1		43	1,299	7.9		
1871	7,082	38.0		67	1,250	6.7		
1876	8,224	37.8		93	1,852	8.5		
1881	10,708	38.1	2.3	84	2,308	8.2		
1886	11,177	36.3	2.4	82	1,976	6.4	10	0.0
1891	10,737	33.4	2.9	63	2,315	7.2	5	0.0
1896	10,012	28.4	3.5	76	2,183	6.2	6	0.0
1901	9,079	25.4	4.0	67	2,304	6.5	6	0.0
1906	8,921	24.6	4.0	85	2,679	7.4	3	0.0
1911	11,057	28.9	4.2	60	4,036	9.8	20	0.0
1916	11,857	26.9	3.8	104	3,602	8.2	14	0.0
1921	11,974	24.1	3.1	111	4,383	8.8	88	0.2
1926	11,483	20.7	3.1	216	4,503	8.1	71	0.1
1931	9,079	15.7	3.3	241	3,069	5.3	138	0.2
1936	8,911	15.2	3.1	297	5,182	8.8	213	0.4
1941	10,965	18.2	2.8	319	6,855	11.4	273	0.5
1946	15,813	24.9	3.2	371	6,700	10.6	654	1.0
1951	17,463	23.8	2.9	399	6,646	9.1	637	0.9
1956	18,964	22.4	3.4	402	6,277	7.4	567	0.7
1961	22,399	23.1	4.6	594	6,804	7.0	718	0.7
1966(d)	20,362	18.6	6.8	783	9,051	8.3	1,069	1.0
1967	20,386	18.4	6.7	839	9,434	8.5	929	0.8
1968	21,207	18.9	7.4	780	9,662	8.6	915	0.8
1969	21,977	19.3	6.9	797	10,699	9.3	963	0.8
1970	22,617	19.5	7.6	834	10,864	9.4	939	0.8
1971	22,996	19.4	7.8	879	10,833	9.2	1,264	1.1
1972	21,844	18.2	8.3	776	10,829	9.1	1,235	1.0
1973	20,407	16.8	8.8	649	10,806	9.0	1,582	1.3
1974	20,181	16.3	9.3	558	10,769	8.8	1,551	1.3
1975	19,986	16.0	9.7	551	9,843	8.0	1,812	1.4
1976	18,947	14.9	9.4	549	10,902	8.6	(f)6,142	4.8
1977	19,280	15.0	9.8	658	10,126	7.9	4,419	3.4
1978	18,558	14.3	11.0	508	9,800	7.6	3,805	2.9
1979	18,478	14.2	11.4	415	9,778	7.6	3,794	2.9
1980	18,499	14.1	12.5	475	10,064	7.8	4,203	3.2
1981	19,351	14.7	13.0	505	10,252	7.8	4,132	3.1
1982	19,294	14.6	13.1	396	10,935	8.2	4,526	3.4
1983	(e)19,830	14.8	14.3	424	10,550	7.9	4,431	3.3
1984	20,052	14.8	14.5	438	10,643	7.9	4,114	3.0
1985	19,790	14.5	14.6	222	10,148	7.4	4,216	3.1
1986	19,741	14.4	17.5	347	9,878	7.2	3,776	2.8
1987	19,235	13.8	17.8	346	9,695	7.0	4,050	2.9
1988	19,155	13.6	18.8	244	10,128	7.2	4,031	2.9
1989	19,610	13.8	21.0	229	9,776	6.9	3,740	2.6
1990	19,863	13.9	22.8	147	9,609	6.7	4,066	2.8
1991	19,640	13.6	24.3	108	9,392	6.5	4,215	2.9
1992	19,311	13.3	25.0	116	9,423	6.5	4,074	2.8
1993	20,078	13.7	25.3	116	9,114	6.2	3,939	2.7

(a) Rate per 1,000 of mean population. From 1976 mean resident population. (b) Year ended 30 June. (c) Until 1945, includes only nullities and judicial separations. From 1945, divorces are defined as decrees made absolute in SA. (d) Vital events of full-blood Aborigines, where identified in registrations, were excluded before 1966. (e) From 1983 State of usual residence not State of registration. (f) The Family Law Act 1975 (Cwlth) came into operation throughout Australia in 1976.



DEATHS

Year	Number	Rate (a)	Rates from principal causes (a)		Infant (b)	
			Diseases of the heart	Cancer	Number	Rate (c)
1841						
1846	360	14.0				
1851	973	14.6			539	195.4
1856	1,147	10.6		0.1	610	135.9
1861	1,962	15.3		0.1	1,064	191.7
1866	2,753	16.7		0.2	1,385	204.2
1871	2,378	12.7		0.2	851	120.2
1876	3,550	16.3		0.4	1,228	149.3
1881	4,012	14.3		0.3	1,364	127.4
1886	4,234	13.8		0.3	1,409	126.1
1891	4,211	13.1		0.5	976	90.8
1896	4,038	11.5		0.5	1,015	101.0
1901	3,974	11.1		0.6	909	100.1
1906	3,872	10.7		0.8	675	75.7
1911	4,038	9.8	1.0	0.7	670	60.6
1916	5,077	11.5	1.3	0.8	868	73.2
1921	4,982	10.0	1.1	0.9	784	65.5
1926	4,877	8.8	1.0	1.0	509	44.3
1931	4,888	8.5	1.4	1.2	330	36.4
1936	5,464	9.3	1.9	1.3	277	31.1
1941	6,288	10.5	2.6	1.3	356	32.5
1946	6,461	10.2	3.0	1.3	428	27.1
1951	7,184	9.8	3.2	1.2	428	24.5
1956	7,593	9.0	3.2	1.2	377	19.9
1961	7,815	8.1	2.9	1.3	448	20.0
1966(d)	9,345	8.5	3.2	1.3	364	17.9
1967	9,071	8.2	3.1	1.4	346	17.0
1968	9,916	8.8	3.3	1.4	345	16.3
1969	9,337	8.2	3.0	1.5	347	15.8
1970	10,138	8.8	3.2	1.4	367	16.2
1971	9,686	8.2	2.9	1.4	366	15.9
1972	9,764	8.1	2.9	1.5	367	16.8
1973	9,835	8.1	3.0	1.5	276	13.5
1974	10,236	8.3	3.0	1.5	312	15.5
1975	9,947	7.9	2.9	1.5	222	11.1
1976	9,999	7.8	2.9	1.5	276	14.6
1977	9,784	7.6	2.8	1.5	221	11.5
1978	9,763	7.5	2.8	1.5	227	12.2
1979	9,661	7.4	2.8	1.5	166	9.0
1980	9,580	7.3	2.6	1.6	187	10.1
1981	9,706	7.4	2.6	1.7	157	8.1
1982	10,457	7.9	2.8	1.7	221	11.5
1983(e)	9,869	7.3	2.6	1.7	183	9.2
1984	10,099	7.4	2.6	1.8	162	7.6
1985	10,496	7.7	2.7	1.8	188	9.5
1986	10,328	7.5	2.7	1.8	146	7.4
1987	10,531	7.6	2.7	1.8	165	8.6
1988	10,690	7.6	2.7	1.9	152	7.9
1989	11,348	8.0	2.7	1.9	146	7.4
1990	10,938	7.6	2.5	2.0	168	8.5
1991	11,176	7.7	2.5	2.0	109	5.5
1992	10,925	7.5	2.5	1.9	117	6.1
1993	11,528	7.9	n.y.a.	n.y.a.	104	5.2

(a) Rate per 1,000 of mean population. From 1976 mean resident population. (b) Under one year of age from 1871, previously under two years of age. (c) Rate per 1,000 live births registered. (d) Vital events of full-blood Aborigines, where identified in registrations, were excluded before 1966. (e) From 1983 State of usual residence not State of registration.

## EDUCATION

Year	Primary and secondary								
	Government schools (a)			Non-government schools			Tertiary students		
	No.	Students		No.	Students		Universities (b)	Colleges of Advanced Education	Technical and Further Education
		Primary	Secondary		Primary	Secondary			
1851.....	115	3,031							
1856.....	147	6,516							
1861.....	219	10,711		236					
1866.....	292	14,690		n.a.					
1871.....	307	15,791		n.a.					
1876.....	281	25,889		326			58		
1881.....	405	36,888		363			74		
1886.....	504	44,405		n.a.			197		
1891.....	552	47,094		285			246		
1896.....	639	59,944		232			320		
1901.....	706	63,183		230			591		
1906.....	708	57,270		215	(c)9,753		626		
1911.....	743	53,494		179	(c)11,121		641		
1916.....	857	63,935		(d)218	(d)12,785		491		
1921.....	973	77,111	3,067	171	13,951	1,338			
1926.....	1,019	79,204	6,527	188	16,139	1,575			
1931.....	1,075	81,218	10,503	186	14,310	2,092			
1936.....	1,100	75,411	9,280	174	13,993	2,025			
1941.....	1,006	63,303	10,781	167	13,915	2,211			
1946.....	811	61,242	11,870	145	16,310	3,723			
1951.....	728	81,642	14,106	146	20,677	3,720			
1956.....	699	118,365	22,134	163	29,050	3,828			
1961.....	688	135,274	41,889	165	35,652	6,250			
1966.....	700	154,253	60,834	172	(e)24,188	(e)12,999	9,364		
1971.....	662	156,458	74,982	169	22,669	15,018	10,682	4,242	
1972.....	(f)615	154,886	77,926	163	22,232	15,233	11,124	(g)4,291	78,540
1973.....	614	152,698	79,088	163	21,929	15,806	11,497	6,662	78,214
1974.....	613	152,901	79,578	157	22,399	16,494	12,264	12,163	88,154
1975.....	619	151,975	82,737	151	22,479	16,818	12,876	13,773	91,421
1976.....	625	151,499	82,115	147	22,177	17,122	13,493	14,560	124,305
1977.....	626	152,079	81,131	145	22,361	17,085	13,390	15,168	139,651
1978.....	628	149,954	80,491	151	22,353	17,088	12,904	15,996	137,837
1979.....	632	146,793	77,732	155	22,591	17,381	12,840	16,042	147,329
1980.....	638	142,290	76,392	159	23,347	17,769	12,677	16,976	149,437
1981.....	638	137,860	75,173	163	24,729	18,583	12,811	17,558	163,440
1982.....	(h)716	131,250	75,266	169	25,805	19,952	12,892	17,031	168,007
1983.....	714	127,334	78,183	173	27,183	21,087	13,242	17,158	177,913
1984.....	708	121,615	79,605	174	(i)27,427	21,957	13,584	18,277	169,430
1985.....	708	117,588	78,648	175	28,133	23,113	13,833	18,434	139,129
1986.....	711	115,388	75,686	178	28,729	24,059	13,971	19,742	140,892
1987.....	717	112,311	73,670	177	29,125	24,834	14,407	18,903	140,500
1988.....	715	112,349	71,108	178	29,912	25,333	15,142	20,178	(j)101,246
1989.....	708	117,266	67,259	183	31,127	25,236	16,069	21,836	102,526
1990.....	706	119,490	65,378	185	32,179	25,688	18,274	n.a.	101,016
1991.....	696	122,139	64,675	184	33,925	26,094	(k)43,291		94,304
1992.....	682	124,254	63,302	184	35,123	26,123	44,285		91,397
1993.....	677	124,802	59,818	184	36,481	26,126	44,471		83,628

(a) Net enrolment to 1969, thereafter at census date (at or about 1 August, or 1 July). Includes Northern Territory before 1958.

(b) Excludes students at Conservatorium of Music not also enrolled for degree or diploma subject. (c) On last school day.

(d) Non-government schools compulsorily registered, previous years incomplete. From 1916 to 1961 net enrolment including Northern Territory. (e) From 1962 at census date. Excludes Northern Territory. (f) From 1972 includes only primary and secondary, before 1972 included technical institutions. (g) In approved courses at colleges of advanced education. (h) Government junior primary schools counted separate from 1982. (i) From 1984 includes a small number of special students. (j) Data are not comparable to previous years because of reduction of double counting of individuals. (k) Figures are an amalgamation of all campuses of the former SACAE with the University of Adelaide, Flinders University and the recently formed University of South Australia.

HEALTH

Year	Recognised public hospitals		Mental hospitals admissions during year (a)	Medical practitioners registered
	Number of hospitals	Admissions		
1846	1		10	22
1851	1	413	9	68
1856	1	559	69	101
1861	1	795	68	111
1866	1	1,257	88	85
1871	1	1,433	111	77
1876	1	2,282	149	94
1881	1	2,258	199	113
1886	1	2,022	207	152
1891	1	2,301	224	177
1896	1	2,633	195	279
1901	1	3,554	214	341
1906	9	4,476	231	242
1911	21	8,547	273	299
1916	27	12,453	302	326
1921	31	15,642	272	360
1926	45	22,436	249	445
1931	51	26,505	250	457
1936	52	34,014	272	477
1941	55	40,593	247	814
1946	(b)58	(b)46,696	(b)302	947
1951	60	57,401	452	1,172
1956	65	69,295	553	1,395
1961	66	87,386	1,846	1,739
1966	67	111,313	2,810	2,175
1967	65	117,693	2,866	2,282
1968	65	122,835	2,733	2,372
1969	65	132,864	2,964	2,474
1970	66	135,433	3,378	2,568
1971	67	135,927	3,527	2,707
1972	68	147,058	3,602	3,054
1973	69	158,261	3,225	3,154
1974	70	164,797	3,309	3,348
1975	71	168,832	3,410	3,767
1976	73	179,733	3,666	4,531
1977	81	190,806	3,489	4,574
1978	81	202,802	3,648	4,783
1979	81	216,315	3,971	4,800
1980	81	220,138	4,470	5,100
1981	81	228,593	6,279	5,500
1982	81	222,319	6,790	4,778
1983	81	237,625	5,867	4,991
1984	81	249,572	6,084	5,200
1985	81	241,123	7,026	5,247
1986	81	242,709	7,700	5,271
1987	81	246,004	6,210	5,318
1988	81	251,148	5,456	5,331
1989	81	257,665	4,530	5,475
1990	81	265,932	4,634	5,651
1991	81	270,946	4,447	5,693
1992	81	271,587	4,318	5,676
1993	81	274,145	4,393	5,263

(a) From 1959-60 covers all in-patients (certified and voluntary) in institutions. Before this covered only certified patients in two 'long-term' institutions. (b) Year ended 30 June from 1946.

LAW AND ORDER : SOCIAL WELFARE

Year	Courts				Pensioners (d)	
	Matters proven (a)		Police personnel	Bank-ruptcies	Age and invalid	Disability and service
	Higher courts (b)	Lower courts (c)				
1841	37			36		
1846	40			16		
1851	103		127	106		
1856	85	2,919	174	88		
1861	62	3,026	151	115		
1866	107	4,341	208	252		
1871	91	4,864	187	247		
1876	129	7,905	257	200		
1881	213	13,231	371	696		
1886	121	6,808	401	535		
1891	85	6,918	388	142		
1896	110	5,149	347	240		
1901	98	4,968	359	165		
1906	92	5,249	373	172		
1911	74	7,303	423	190		
1916	52	7,145	541	324	10,993	794
1921	97	8,968	566	155	12,320	14,663
1926	174	21,417	633	439	14,098	16,144
1931	274	14,760	763	996	20,602	16,653
1936	171	14,920	701	551	26,134	15,997
1941	177	21,990	707	284	29,642	15,424
1946	231	(e)20,585	(e)830	23	29,512	30,687
1951	307	28,675	913	53	36,582	51,589
1956	362	28,221	1,018	150	47,754	66,535
1961	606	52,155	1,376	561	60,483	72,695
1966	738	71,694	1,595	648	67,999	68,439
1971	(f)931	110,543	1,971	(g)626	88,936	60,406
1976	1,080	(h)95,758	2,548	351	130,229	(i)59,536
1977	1,075	105,224	2,718	456	136,473	60,492
1978	1,258	105,413	2,879	673	141,941	61,642
1979	1,281	88,404	3,093	847	146,860	62,505
1980	n.a.	n.a.	(j)3,423	1,016	159,599	65,109
1981	n.a.	n.a.	3,427	1,012	153,210	67,696
1982	1,321	(k)15,384	3,400	860	155,924	69,924
1983	1,935	(l)31,102	3,357	962	160,694	73,812
1984	2,213	32,526	3,361	817	(m)171,418	76,686
1985	2,923	29,455	3,373	706	172,064	77,967
1986	2,549	31,918	3,492	922	174,057	78,401
1987	3,096	30,235	3,661	1,353	175,795	74,944
1988	2,639	n.a.	3,573	1,414	180,973	74,342
1989	3,976	n.a.	3,565	1,326	183,330	72,393
1990	n.a.	n.a.	3,550	1,322	185,048	71,158
1991	n.a.	n.a.	3,756	1,653	190,008	67,016
1992	n.a.	n.a.	3,774	2,031	(n)199,104	68,356
1993	n.a.	n.a.	3,783	1,804	204,609	66,844

(a) Each offence counted separately when there are multiple charges against an individual. (b) Distinct persons only. From 1982 includes corporate bodies. (c) Year ended 30 June from 1943 to 1983. (d) Year ended 30 June. (e) Year ended 30 June from 1943. (f) Year ended 30 June from 1971 to 1979. (g) Year ended 30 June from 1971. (h) Excludes juvenile offenders from 1973. (i) From 1974-75, war pensions known as disability pensions. (j) From 1980 includes trainees, cadets and probationary constables. (k) Excludes offences relating to the Road Traffic Act. (l) From 1983 excludes minor traffic offences. (m) Includes carer pensions from 1984. (n) From 1992 Disability Support pension replaced the invalid pension and sheltered employment allowance.

## EMPLOYMENT AND UNEMPLOYMENT

Year	Civilian labour force (a)		Civilian employment (a)		Factory employment (b)		Unemployed (a)		
							Number		Rate (c)
	Males	Females	Males	Females	Males	Females	Males	Females	Persons
	'000	'000	'000	'000	'000	'000	'000	'000	per cent
1911.....					22.6	5.3			
1916-17.....					20.8	5.2			
1920-21.....					24.5	5.9			
1925-26.....					33.1	6.9			
1930-31.....					19.3	4.6			
1935-36.....					31.4	7.1			
1940-41.....					40.1	10.8			
1945-46.....					49.5	13.7			
1950-51.....					66.8	16.2			
1955-56.....					76.1	16.4			
1956-57.....					75.5	16.4			
1957-58.....					75.9	16.6			
1958-59.....					77.4	16.7			
1959-60.....					81.3	17.7			
1960-61.....					81.9	18.1			
1961-62.....					81.8	17.3			
1962-63.....					86.7	18.6			
1963-64.....					90.9	19.9			
1964-65.....					94.7	21.5			
1965-66.....					96.2	22.1			
1966-67.....	321.9	143.5	316.6	136.5	96.1	22.1	5.3	7.0	2.6
1967-68.....	319.8	144.5	315.0	138.1	98.9	22.5	4.9	6.4	2.4
1968-69.....	328.7	152.1	323.9	146.0	(d)93.3	(d)23.0	4.9	6.2	2.3
1969-70.....	332.7	161.2	329.3	155.8	95.4	24.4	3.4	5.4	1.8
1970-71.....	335.4	168.1	331.4	163.1	n.a.	n.a.	4.0	5.0	1.8
1971-72.....	343.2	170.1	338.0	162.1	96.3	25.4	5.1	7.9	2.5
1972-73.....	348.9	182.2	341.5	172.6	97.8	27.7	7.5	9.6	3.2
1973-74.....	358.3	196.5	352.9	188.0	100.6	30.8	5.3	8.4	2.5
1974-75.....	364.3	200.9	358.5	190.9	(e)91.8	(e)25.6	5.8	10.0	2.8
1975-76.....	366.5	211.3	355.0	194.3	91.0	26.1	11.5	17.0	4.9
1976-77.....	372.0	217.0	361.0	203.2	89.2	24.9	11.0	13.7	4.2
1977-78.....	(f)380.1	(f)223.0	(f)356.0	(f)206.5	82.9	22.9	(f)24.1	(f)16.5	(f)6.7
1978-79.....	376.1	224.0	352.2	203.2	82.8	23.7	23.9	20.8	7.4
1979-80.....	376.2	222.2	349.8	200.4	82.6	23.0	26.4	21.8	8.1
1980-81.....	375.7	229.7	350.7	210.3	80.9	23.1	25.0	19.5	7.3
1981-82.....	374.2	229.5	348.7	208.6	81.0	22.6	25.5	20.8	7.7
1982-83.....	382.1	224.5	338.9	199.7	70.5	19.9	43.1	24.8	11.2
1983-84.....	(g)384.5	(g)236.7	(g)349.9	(g)214.6	70.9	20.8	(g)34.6	(g)22.0	(g)9.1
1984-85.....	390.0	248.1	358.0	226.0	71.3	21.2	32.0	22.1	8.5
1985-86.....	(h)396.5	(h)260.7	(h)365.5	(h)241.2	n.a.	n.a.	(h)31.0	(h)19.5	(h)7.7
1986-87.....	396.2	269.3	362.9	245.9	67.7	22.5	33.2	23.5	8.5
1987-88.....	399.0	279.7	364.8	255.8	71.7	23.5	34.2	23.9	8.6
1988-89.....	406.1	286.2	378.0	265.5	77.3	25.8	28.1	20.7	7.0
1989-90.....	416.9	289.4	389.0	269.2	73.3	23.4	27.9	20.2	6.8
1990-91.....	412.3	299.0	371.9	274.8		93.3	40.4	24.2	9.1
1991-92.....	411.2	297.5	358.1	267.3		86.8	53.1	30.1	11.7
1992-93.....	410.6	299.3	362.0	273.9		82.7	48.6	25.3	10.4

(a) From the June Labour Force Survey from 1978; August in earlier years. (b) Average employment (including working proprietors), over the year to 1967-68. From 1968-69 employment at 30 June. (c) The unemployment rate is the number unemployed as a proportion of the labour force. (d) Direct comparisons with previous years are not possible because of changes in scope. (e) From 1974-75 excludes single establishment enterprises employing fewer than four persons. (f) Labour force before 1977-78 are based on 1976 Census benchmarks. From 1977-78 based on 1981 Census benchmarks. (g) From 1983-84 based on 1986 Census benchmarks. (h) Estimates before April 1986 are based on old definition of employed persons.

# Statistical Summary

## WAGES

31 December	State living wage		Basic and minimum wage rates (a)		Minimum weekly wage rates (b)		Award rates of pay indexes (c)	
	Males	Females	Males	Females	Males	Females	Males	Females
	\$	\$	\$	\$	\$	\$		
1911.....			5.10					
1916.....	5.40		6.15		5.90	2.48		
1921.....	7.95	3.50	7.95		8.94	4.52		
1926.....	8.55	3.95	8.55		9.57	5.00		
1931.....	6.30	3.15	5.81		7.50	4.39		
1936.....	6.60	3.30	6.90		7.95	4.33		
1941.....	8.70	4.35	8.40		10.58	5.54		
1946.....	9.85	5.50	10.20		12.41	7.60		
1951.....	19.50	14.60	19.50	14.60	23.60	17.02		
1956.....	24.10	18.05	24.10	18.05	29.63	20.92		
1957.....	25.10	18.80	25.10	18.80	20.69	21.95		
1958.....	25.60	19.20	25.60	19.20	31.24	22.38		
1959.....	27.10	20.30	27.10	20.30	33.99	23.92		
1960.....	27.10	20.30	27.10	20.30	34.22	24.29		
1961.....	28.30	21.20	28.30	21.20	35.46	25.20		
1962.....	28.30	21.20	28.30	21.20	35.65	25.23		
1963.....	28.30	21.20	28.30	21.20	36.40	25.52		
1964.....	30.30	22.70	30.30	22.70	38.69	27.29		
1965.....	30.30	22.70	30.30	22.70	39.46	27.75		
1966.....	32.30	24.20	32.30	24.20	41.75	29.42		
1967.....	33.30	25.20	(a)37.05		43.79	31.32		
1968.....	34.65	26.55	38.40		48.23	33.60		
1969.....	(d)34.65	(d)26.55	41.90		50.76	35.94		
1970.....	(d)34.65	(d)26.55	41.90		52.12	37.51		
1971.....	37.85	29.00	45.90		59.38	44.16		
1972.....	39.85	31.00	50.60		65.82	50.50		
1973.....	43.15	34.10	59.60		75.20	62.11		
1974.....	46.50	37.30	67.60	(e)60.80	103.32	91.47		
1975.....	(f)	(f)	82.40		115.13	103.34		
1976.....			100.20		132.20	125.62	104.3	104.4
1977.....			111.80		145.69	139.06	115.1	114.8
1978.....			119.60		158.53	149.15	124.2	123.1
1979.....			123.40		167.12	154.58	131.1	128.0
1980.....			134.40		184.39	172.56	146.2	144.8
1981.....			144.40		215.25	192.63	167.1	160.5
1982.....			144.40		(g)229.10	(g)209.52	186.1	181.2
1983.....			150.60		(h)	(h)	195.8	191.6
1984.....			156.80				204.8	202.9
1985.....			168.50				(i)103.8	(i)103.8
1986.....			172.40				106.3	106.7
1987.....			182.40				111.5	111.9
1988.....			188.40				119.1	119.5
1989.....			204.10				127.3	127.4
1990.....			(j)				132.7	132.4
1991.....							139.1	140.5
1992.....							140.8	142.6
1993.....							142.3	144.4

(a) Provisions for minimum wages (adult males only) inserted in Commonwealth Awards in July 1966 and basic wages were replaced by the total wage concept in July 1967. (b) Adult rates for all industries excluding rural. (c) Base: weighted average minimum award rate, June 1975 = 100.0. Includes wage and salary earners for all industries except rural, permanent defence forces and private households employing staff. (d) An economic loading of 3 per cent of the sum of the living wage plus margin was added to all award rates of pay from December 1969 to January 1971. (e) Between May 1974 and June 1975 the minimum wage for adult males was extended to adult females in three steps. (f) Increased to \$48.20 and \$38.60 for males and females respectively from May 1975 and abolished in September 1975, award rates thereafter being specified as total wages. (g) At 1 August. (h) Discontinued and replaced by award rates of pay indexes. (i) Base: June 1985 = 100.0. (j) Discontinued. Minimum wage rates are now determined for individual State Awards.

## PRICES

Year	Retail price indexes: Adelaide			Agricultural produce at principal markets					
	'C' Series (a)			Consumer (b)			Wheat (per tonne) (c)	Barley (per tonne)	Wool (per kg)
	Food and groceries	Rent	All groups	Food	Housing	All groups			
							\$	\$	cents
1901.....	575								
1911.....	570						12.71	16.53	15.59
1921.....	941	819	989				29.39	19.49	24.74
1926.....	1,045	927	1,026				22.82	17.64	27.45
1931.....	789	755	837				8.41	9.92	12.52
1936.....	798	795	839				14.07	9.83	21.89
1941.....	905	893	988				16.42	21.43	21.76
1946.....	1,006	894	1,120				29.47	27.91	24.78
1951.....	1,931	949	1,833	48.2	42.5	54.6	53.76	51.54	237.28
1956.....	2,871	1,358	2,466	76.2	67.6	78.1	49.60	46.74	103.57
1957.....	2,710	1,468	2,463	78.9	72.3	81.2	53.28	48.50	135.63
1958.....	2,768	1,592	2,536	76.9	74.9	81.8	53.50	52.38	103.09
1959.....	2,998	1,674	2,647	80.7	76.7	83.6	51.51	49.43	83.84
1960.....				84.6	78.3	86.2	53.83	44.53	98.88
1961.....				90.9	83.2	89.8	55.37	40.39	88.49
1962.....				87.7	85.9	89.5	55.70	49.43	91.69
1963.....				86.6	86.7	89.1	53.94	48.94	98.92
1964.....				88.8	88.7	90.2	52.65	49.12	119.53
1965.....				93.9	92.1	93.9	51.88	50.84	97.31
1966.....				97.1	95.7	97.0	55.15	51.85	102.98
1967.....				100.0	100.0	100.0	54.67	52.56	99.69
1968.....				104.7	102.1	102.9	58.86	52.47	82.87
1969.....				106.4	104.7	105.3	50.01	41.09	91.76
1970.....				107.1	109.3	108.2	61.88	36.82	75.02
1971.....				109.5	115.9	112.5	52.98	49.21	59.74
1972.....				113.6	124.4	119.2	55.26	40.96	72.21
1973.....		Not calculated		123.1	133.3	126.5	56.09	59.30	178.07
1974.....				148.3	150.6	143.9	103.20	87.59	176.54
1975.....				183.7	185.3	169.7	111.21	106.11	120.12
1976.....				180.6	222.1	190.5	104.46	98.14	134.46
1977.....				(d)34.7	(d)34.3	(d)35.0	90.36	106.52	173.39
1978.....				38.7	37.2	38.5	102.20	88.37	179.03
1979.....				42.7	39.0	41.4	127.83	83.95	193.65
1980.....				48.1	41.8	45.5	153.24	126.84	224.56
1981.....				52.9	45.4	49.7	154.92	144.99	245.55
1982.....				57.6	50.0	54.9	159.61	139.47	262.85
1983.....				62.9	56.0	61.4	177.64	155.35	260.24
1984.....				67.3	61.8	65.8	164.86	153.95	281.10
1985.....				71.2	68.3	68.9	173.72	136.06	281.83
1986.....				77.0	73.4	74.6	170.63	122.58	304.92
1987.....				83.2	76.9	81.5	149.69	115.85	343.44
1988.....				87.6	79.4	87.0	169.07	123.36	493.03
1989.....				95.2	86.9	93.3	215.62	168.65	540.61
1990.....				100.0	100.0	100.0	199.39	167.63	469.60
1991.....				103.8	104.1	106.2	136.03	128.77	347.07
1992.....				106.0	100.4	108.9	201.05	141.40	303.59
1993.....				109.3	94.3	111.2	180.22	133.46	285.69

(a) Base: average all groups, six capital cities 1923 to 1927 = 1,000. (b) Base of each group 1966-67 = 100.0. Index numbers are average for year ended 30 June in the year stated. (c) Bulk wheat from 1962, previously bagged. (d) Base of each group 1989-90 = 100.0.

METEOROLOGY, ADELAIDE

Year	Rainfall		Evaporation	Sunshine	Temperature		
	Days of rain	Total	Total	Total	Extreme maximum	Extreme minimum	Mean
	days	mm	mm	hours	°C	°C	°C
1841.....	93	459					
1846.....	114	651					
1851.....	128	786					
1856.....	118	635					
1861.....	147	602			42.8	1.7	17.4
1866.....	121	514			43.1	2.9	17.7
1871.....	125	592	1,345		44.1	3.0	17.8
1876.....	104	344	1,548		45.7	0.3	16.9
1881.....	127	460	1,422		41.0	1.8	16.7
1886.....	118	368	1,421	2,588	44.7	2.0	17.1
1891.....	109	353	1,322	2,753	39.3	2.3	16.8
1896.....	121	385	1,397	2,644	44.0	1.3	17.4
1901.....	119	459	1,494	2,523	43.3	1.8	17.5
1906.....	130	674	1,400	2,366	45.1	2.3	17.6
1911.....	127	408	1,233	2,415	39.3	1.6	17.2
1916.....	142	715	1,411	2,512	41.9	3.5	16.7
1921.....	100	575	1,478	2,658	43.1	2.8	18.2
1926.....	116	429	1,473	2,689	40.1	3.0	17.3
1931.....	146	667	1,517	2,534	45.9	3.1	16.8
1936.....	123	493	1,525	2,431	39.8	2.8	17.1
1941.....	125	575	1,604	2,472	43.3	3.3	16.9
1946.....	135	575	1,385	2,301	41.3	2.0	16.3
1951.....	135	648	1,645	2,339	40.5	2.6	16.9
1956.....	154	692	1,638	2,379	38.3	4.1	16.4
1961.....	122	380	n.a.	2,586	40.8	2.9	17.8
1966.....	123	495	1,612	2,432	40.7	3.3	16.9
1967.....	89	256	1,939	2,841	39.0	3.9	17.3
1968.....	141	656	1,870	2,410	43.1	2.2	17.0
1969.....	112	526	1,783	2,665	41.1	3.9	16.7
1970.....	149	484	1,886	2,658	40.5	2.9	16.6
1971.....	147	674	1,813	2,624	39.6	4.2	17.1
1972.....	106	448	1,947	2,967	39.6	2.3	17.3
1973.....	129	677	1,740	2,686	40.5	3.7	17.7
1974.....	136	638	1,561	2,584	38.9	3.6	17.2
1975.....	142	523	1,635	2,596	41.2	3.8	17.2
1976.....	110	367	1,636	2,831	40.5	3.3	16.7
1977.....	117	400	1,665	2,876	40.3	3.6	17.2
1978 (a).....	127	588	1,533	2,723	39.3	2.2	16.4
1979.....	137	660	1,557	2,702	42.0	3.0	17.2
1980.....	119	527	1,616	2,897	43.3	3.3	17.5
1981.....	119	671	1,542	2,789	43.4	2.4	17.4
1982.....	105	357	1,571	2,878	44.2	-0.4	17.4
1983.....	127	692	1,446	2,745	42.8	0.7	17.0
1984.....	130	518	1,460	2,802	37.7	1.9	16.7
1985.....	123	562	1,421	2,716	41.8	1.5	16.9
1986.....	126	605	1,406	2,705	41.9	1.7	16.5
1987.....	121	575	1,381	2,780	40.7	1.6	16.8
1988.....	126	545	1,458	2,777	40.9	3.0	17.8
1989.....	119	503	1,396	2,650	40.3	1.0	17.2
1990.....	117	482	1,406	n.a.	42.0	2.0	17.0
1991.....	116	508	1,498	2,673	43.3	2.6	17.4
1992.....	152	883	1,267	2,338	39.9	2.7	16.4
1993.....	123	526	1,426	2,717	41.5	2.2	17.3

(a) Recorded at Bureau of Meteorology, Kent Town from 1978, previously West Terrace, Adelaide.



## RURAL PRODUCTION

## Land Cultivation

Year	Rural establish- ments No.	Area of rural establish- ments '000 ha	Area under crop (b)		Area of pastures fertilised '000 ha	Area under irigation '000 ha
			Total '000 ha	Fertilised '000 ha		
1846-47			14			
1856-57			82			
1861-62			162			
1866-67			245			
1871-72			339			
1876-77			497			
1881-82			873			
1886-87			925			
1891-92			780			
1896-97			830			
1901-02			905	335		
1906-07			873	629		
1911-12	27,120	47,012	1,200	1,010		
1916-17	29,278	52,475	1,468	1,156		
1921-22	29,693	54,311	1,367	1,197		9.1
1926-27	29,654	54,867	1,572	1,430	66	14.3
1931-32	30,648	52,354	2,112	1,705	56	17.3
1936-37	31,321	55,433	1,619	1,853	366	17.1
1941-42	30,565	58,936	1,609	1,409	427	18.5
1946-47	28,040	59,154	1,572	1,366	450	18.7
1951-52	28,698	61,425	1,496	1,284	870	23.6
1956-57	27,936	60,675	1,610	1,376	1,488	26.7
1961-62	28,886	63,494	1,825	1,644	1,450	43.9
1966-67	28,957	65,361	2,322	2,073	2,119	56.2
1967-68	29,058	65,059	2,270	2,037	2,076	70.1
1968-69	29,137	65,603	2,783	2,431	1,728	70.4
1969-70	29,035	65,839	2,407	2,138	2,008	75.3
1970-71	29,087	65,795	2,141	1,884	1,938	77.3
1971-72	29,095	65,146	2,478	2,113	1,822	76.1
1972-73	29,001	65,372	2,084	1,864	2,033	83.1
1973-74	28,738	64,843	2,451	2,146	2,425	80.2
1974-75	28,185	63,825	2,257	1,986	2,138	78.9
1975-76	(a)25,143	63,577	2,116	1,821	1,133	77.9
1976-77	(a)21,597	63,052	2,036	1,785	1,408	n.a.
1977-78	21,909	62,494	2,565	2,309	1,607	n.a.
1978-79	22,022	62,655	2,827	2,596	1,614	78.4
1979-80	23,155	62,786	2,772	n.a.	1,811	n.a.
1980-81	22,249	62,437	2,773	n.a.	1,894	79.5
1981-82	21,402	62,897	2,865	2,677	1,782	n.a.
1982-83	21,172	60,196	2,856	n.a.	1,610	n.a.
1983-84	19,923	62,063	3,108	n.a.	1,631	86.0
1984-85	19,915	62,616	2,908	2,633	1,754	n.a.
1985-86 (c)	14,488	57,854	3,000	2,630	1,551	n.a.
1986-87	15,369	59,471	3,066	2,663	1,522	91.8
1987-88	14,768	59,958	2,990	2,699	1,722	n.a.
1988-89	14,565	58,029	2,961	2,457	2,006	n.a.
1989-90	14,636	57,480	3,042	2,491	1,927	98.9
1990-91	14,482	56,954	2,933		3,833	110.2
1991-92 (c)	13,990	56,857	2,920		3,403	104.1
1992-93	14,077	56,555	3,073		3,471	117.1

(a) Changes in scope of the Agricultural Census. (b) Excludes pastures grown for crops. (c) From 1985-86 establishments with an estimated value of agricultural operations of \$20,000 or more and from 1991-92, \$22,500 or more.

## RURAL PRODUCTION

## Crop Areas and Yields

Year	Cereals for grain						Hay (a)	Orchards (b)(c)	Vineyards (b)
	Wheat		Barley		Oats				
	Area '000 ha	Yield per hectare tonnes	Area '000 ha	Yield per hectare tonnes	Area '000 ha	Yield per hectare tonnes			
1841-42.....	2	1.40	—	1.12	—	1.12			
1851-52.....	22	0.85	2	0.92	1	0.98			0.1
1856-57.....	66	1.68	3	1.19	1	0.90	9	0.4	0.3
1861-62.....	126	0.74	4	0.89	1	0.91	25	0.7	1.6
1866-67.....	186	0.96	5	1.13	2	1.00	45	0.9	2.6
1871-72.....	280	0.39	7	0.53	2	0.49	40	1.1	2.2
1876-77.....	439	0.36	4	0.60	1	0.48	37	1.3	1.8
1881-82.....	716	0.31	6	0.64	1	0.48	135	1.8	1.7
1886-87 (d).....	797	0.37	7	0.73	3	0.56	128	n.a.	2.1
1891-92.....	628	0.28	5	0.52	5	0.29	123	3.6	5.0
1901-02.....	706	0.31	6	0.88	14	0.61	150	6.6	8.4
1906-07.....	683	0.70	11	0.98	23	0.70	121	7.4	9.1
1911-12.....	887	0.62	17	0.97	44	0.56	211	9.4	9.7
1916-17.....	1,124	1.11	42	0.94	61	0.54	196	11.7	11.8
1921-22.....	965	0.70	69	1.08	51	0.46	226	13.1	16.8
1926-27.....	1,120	0.86	104	1.01	62	0.50	201	12.8	20.3
1931-32.....	1,648	0.79	98	1.06	84	0.50	218	11.8	21.2
1936-37.....	1,238	0.63	123	0.78	168	0.26	218	12.0	22.7
1941-42.....	941	0.88	194	1.37	118	0.58	226	12.0	23.5
1946-47.....	1,019	0.75	203	0.94	102	0.49	133	11.4	23.6
1951-52.....	653	1.14	337	1.13	157	0.63	104	11.9	24.8
1956-57.....	582	1.47	494	1.56	173	0.87	121	13.8	23.2
1961-62.....	902	1.02	614	0.94	131	0.61	84	15.6	23.4
1966-67.....	1,198	1.22	448	1.20	206	0.91	195	17.9	23.1
1971-72.....	1,069	1.32	784	1.34	169	0.98	245	17.2	28.8
1973-74.....	1,432	1.25	627	1.26	152	0.93	268	16.9	29.6
1974-75.....	1,220	1.22	701	1.62	135	0.83	190	16.6	30.4
1975-76.....	958	1.19	832	1.32	119	0.90	159	16.5	31.2
1976-77.....	839	0.99	855	1.04	117	0.77	164	15.8	31.2
1977-78.....	1,090	0.47	1,073	0.55	130	0.43	138	15.7	31.5
1978-79.....	1,295	1.61	1,091	1.30	171	1.04	219	15.7	31.3
1979-80.....	1,424	1.65	984	1.55	129	1.12	160	15.7	30.7
1980-81.....	1,445	1.14	989	1.17	105	0.91	161	15.8	30.4
1981-82.....	1,427	1.18	1,032	1.19	127	0.76	194	16.0	30.3
1982-83.....	1,398	0.49	1,005	0.66	124	0.52	152	15.9	29.1
1983-84.....	1,564	1.81	1,104	1.64	153	1.17	258	15.8	27.9
1984-85.....	1,378	1.47	1,122	1.64	128	1.03	161	16.3	27.0
1985-86 (e).....	1,432	1.24	1,153	1.46	107	1.01	143	15.2	24.5
1986-87.....	1,616	1.40	955	1.67	113	1.32	199	15.7	23.1
1987-88.....	1,556	1.16	876	1.44	132	1.02	180	16.0	23.0
1988-89.....	1,520	0.90	837	1.24	156	0.85	195	16.5	23.3
1989-90.....	1,557	1.67	900	1.92	172	1.45	248	16.9	24.6
1990-91.....	1,448	1.40	945	1.59	135	1.10	207	17.1	25.4
1991-92 (e).....	1,297	1.65	999	1.88	129	1.33	221	16.6	25.8
1992-93.....	1,419	1.71	1,023	1.81	123	1.34	234	17.6	26.1

(a) Wheaten only to 1906-07, thence all kinds. (b) Bearing and non-bearing. (c) From 1951-52, private orchards and those no longer worked have been omitted. (d) Statistics not collected and particulars estimated. (e) From 1985-86 establishments with an estimated value of agricultural operations of \$20,000 or more and \$22,500 or more from 1991-92.

## RURAL PRODUCTION

## Livestock and Associated Produce

Year	Livestock numbers				Slaughterings			Wool production (a) '000 kg	Milk production '000 L
	Cattle		Pigs	Sheep and lambs	Cattle and calves	Pigs			
	Sheep	Total					Dairy cows		
	'000	'000	'000	'000	'000	'000	'000	'000	
1846-47	681	57							
1851-52	1,250	100							
1856-57	1,962	273		28					
1861-62	3,038	265		69			5,971		
1866-67	3,912	124		60			8,954		
1871-72	4,412	143		96			11,752		
1876-77	6,133	219		102			19,253		
1881-82	6,804	294		120			22,118		
1886-87	6,542	285		140			22,934		
1891-92	7,646	399	90	82			26,133		
1901-02	5,012	225	75	89			20,209		
1906-07	6,625	326	98	111			22,193		
1911-12	6,172	394	122	93	1,276	87	27,372	127,077	
1916-17	5,091	289	144	119	686	62	17,025	136,174	
1921-22	6,257	419	166	88	1,208	95	26,202	188,199	
1926-27	7,284	340	127	79	1,091	143	32,824	183,817	
1931-32	6,609	265	128	110	1,379	81	30,400	227,309	
1936-37	7,905	328	170	85	1,697	166	34,747	289,581	
1941-42	10,246	399	179	114	2,070	154	47,683	358,687	
1946-47	7,959	424	187	134	1,662	146	42,193	426,878	
1951-52	11,470	437	176	63	1,547	216	61,454	393,237	
1956-57	14,984	622	195	92	2,329	252	85,642	408,694	
1961-62	16,415	659	183	170	3,140	201	93,886	434,152	
1966-67	17,864	687	170	222	3,358	265	107,725	448,699	
1971-72	17,970	1,495	151	479	5,144	290	117,922	457,732	
1973-74	16,431	1,692	138	385	2,595	359	100,131	434,107	
1974-75	17,621	1,869	142	349	2,984	465	107,452	426,371	
1975-76	17,279	1,891	142	326	3,561	549	101,912	397,500	
1976-77	15,132	1,608	126	317	3,426	656	98,442	354,912	
1977-78	14,073	1,242	117	311	3,240	744	87,092	316,681	
1978-79	14,940	1,086	110	330	2,523	659	87,355	321,199	
1979-80	16,046	1,067	107	398	3,451	502	95,459	331,345	
1980-81	17,056	1,091	104	394	3,549	539	105,052	319,438	
1981-82	16,709	1,013	102	374	3,339	580	103,617	305,648	
1982-83	15,448	828	101	405	4,072	629	103,007	340,292	
1983-84	16,368	813	101	416	2,846	447	106,913	381,484	
1984-85	17,263	846	102	402	3,428	434	108,463	371,942	
1985-86 (b)	17,506	854	100	408	3,856	429	111,564	364,480	
1986-87	17,234	912	100	422	4,009	461	115,805	373,642	
1987-88	17,352	947	97	441	4,154	453	122,420	377,062	
1988-89	17,414	943	92	450	3,961	408	120,298	369,528	
1989-90	18,363	969	89	437	4,580	456	136,294	355,979	
1990-91	17,153	990	87	400	4,786	398	118,569	366,016	
1991-92 (b)	16,072	1,016	89	420	4,869	405	110,850	410,982	
1992-93 (b)	15,702	1,104	92	435	4,832	418	115,598	435,580	

(a) Year ended March to 1979-80. (b) From 1985-86 establishments with an estimated value of agricultural operations of \$20,000 or more and \$22,500 or more from 1991-92.

**GROSS VALUE OF RURAL PRODUCTION**  
(S'000)

Year	Agricultural				Pastoral			Total rural production
	Wheat	Barley	Fruit (including vines)	Total crops	Wool (a)	Total	Dairying	
1916-17	21,729	599	1,653	27,677	4,274	11,200	2,759	42,909
1921-22	12,577	1,227	3,491	23,221	5,752	8,296	3,678	37,273
1926-27	19,052	1,685	4,082	30,181	8,937	12,140	3,895	48,357
1931-32	17,163	1,383	3,442	25,291	3,843	5,452	3,140	35,444
1936-37	14,955	1,766	4,191	26,044	8,720	12,315	4,310	44,366
1941-42	13,913	4,490	4,725	30,142	10,294	13,875	6,735	53,016
1946-47	27,685	7,598	8,283	51,209	17,092	22,602	10,950	90,106
1951-52	45,288	27,706	20,382	120,507	72,394	86,034	21,145	234,587
1952-53	57,302	42,128	19,161	139,160	97,158	109,154	23,527	279,982
1953-54	43,939	28,804	20,788	115,744	88,866	105,950	24,238	254,537
1954-55	41,591	23,243	17,426	104,914	83,204	101,059	25,037	239,022
1955-56	38,514	25,227	20,335	110,570	79,822	100,882	30,826	250,685
1956-57	44,846	34,022	23,265	129,994	114,578	138,118	29,003	305,365
1957-58	20,970	19,573	24,435	90,089	84,708	111,027	25,384	235,337
1958-59	43,791	39,889	23,984	140,858	67,595	99,135	32,103	280,007
1959-60	16,495	10,999	21,394	71,092	85,382	123,351	29,454	231,751
1960-61	68,001	37,977	24,525	161,437	70,484	94,451	30,306	294,087
1961-62	51,515	22,952	27,051	124,022	85,801	111,850	29,848	273,451
1962-63	56,285	19,152	25,857	128,417	92,514	127,386	31,968	295,043
1963-64	77,660	26,399	29,557	165,634	113,409	150,466	34,267	358,802
1964-65	74,550	30,135	36,200	178,132	94,328	135,916	37,533	360,507
1965-66	59,559	20,234	31,411	144,017	103,635	152,244	39,293	345,015
1966-67	79,612	26,912	36,779	184,090	104,588	169,226	40,303	404,864
1967-68	42,183	12,818	32,423	127,288	79,925	129,504	37,163	306,222
1968-69	112,551	25,657	37,815	221,097	95,054	136,070	39,016	408,842
1969-70	82,332	23,724	43,330	184,284	91,224	148,939	40,834	386,041
1970-71	40,562	34,902	45,991	164,895	65,525	123,858	43,918	347,038
1971-72	75,381	40,295	49,753	213,206	85,701	153,068	47,262	430,704
1972-73	44,588	27,506	54,415	177,768	164,577	251,753	47,808	503,315
1973-74	196,444	68,276	52,347	392,747	173,180	n.a.	(b)27,541	772,523
1974-75	163,922	119,305	77,719	432,455	122,442	n.a.	31,498	705,446
1975-76	118,063	105,865	77,401	373,062	131,865	n.a.	30,170	676,873
1976-77	73,726	93,807	90,318	330,398	153,550	n.a.	30,436	709,603
1977-78	50,349	50,553	99,747	287,931	145,277	n.a.	34,293	696,739
1978-79	265,159	118,303	110,481	607,348	161,985	n.a.	37,407	1,080,204
1979-80	357,058	192,758	120,174	785,848	215,423	n.a.	42,341	1,341,567
1980-81	253,598	165,418	129,307	692,726	246,645	n.a.	48,953	1,321,495
1981-82	269,453	168,727	149,173	759,240	260,548	n.a.	51,912	1,428,587
1982-83	120,849	98,132	132,924	505,432	258,848	n.a.	67,412	1,194,336
1983-84	466,138	273,466	155,067	1,119,546	289,266	n.a.	73,996	1,785,028
1984-85	350,518	249,179	184,522	958,753	297,183	n.a.	70,372	1,634,301
1985-86	327,881	207,314	183,078	916,462	330,150	n.a.	74,529	1,598,917
1986-87 (c)	334,283	182,175	194,946	975,433	389,279	n.a.	80,758	1,816,446
1987-88	301,342	151,162	215,053	937,043	575,348	n.a.	87,496	2,017,035
1988-89	289,677	167,437	289,841	1,064,627	612,190	n.a.	93,542	2,220,652
1989-90	516,195	281,752	284,581	1,442,421	597,295	n.a.	98,860	2,566,927
1990-91	274,893	193,897	250,073	1,040,818	395,816	n.a.	109,979	1,898,690
1991-92	430,448	266,060	315,192	1,379,314	324,043	n.a.	113,179	2,178,711
1992-93	436,350	247,604	297,234	1,355,133	319,866	n.a.	125,771	2,217,439

(a) Shares of profits from sale of wool under war-time disposal schemes excluded. (b) Dairying before 1973-74 included the value of dairy cattle and pigs slaughtered. From 1973-74 dairying consists of milk intake by factories for market milk sales and manufacture. (c) From 1985-86 figures are based on Agricultural Census production except for wool. Before 1985-86 the valuation is adjusted to industry estimates e.g. Wheat Board receipts. Wool valuation is based on industry estimates.

MANUFACTURING

Year	Establishments at 30 June	Employment at end of June (a)	Wages and salaries (b)	Value added					All groups
				Food etc.	Basic metal products	Transport equipment	Paper etc.		
1968-69	2,994	116,254	347.6	89.8	64.5	158.2	42.0	643.1	
1969-70	2,977	119,856	385.8	104.0	79.9	157.2	49.4	714.6	
1970-71			Census not conducted for 1970-71						
1971-72	2,979	121,678	469.3	134.5	80.0	141.3	61.1	803.0	
1972-73	2,914	125,489	523.2	152.8	93.5	155.1	66.2	896.7	
1973-74	2,984	131,368	665.3	176.3	134.8	187.1	76.6	1,109.7	
1974-75(c)	2,131	117,394	796.8	216.9	164.8	249.8	88.8	1,335.3	
1975-76	2,287	117,099	871.6	252.9	135.7	285.4	102.9	1,485.7	
1976-77	2,242	114,103	981.4	293.8	153.2	249.1	113.3	1,597.0	
1977-78	2,170	105,832	1,015.2	315.4	148.2	257.3	128.6	1,672.2	
1978-79	2,119	106,440	1,052.0	332.5	206.9	301.4	136.6	1,851.4	
1979-80	2,143	105,621	1,185.9	356.0	248.5	447.9	156.5	2,233.0	
1980-81	2,131	104,086	1,283.0	422.8	246.5	426.6	172.6	2,387.4	
1981-82	2,219	103,624	1,445.7	485.7	242.9	445.6	197.3	2,620.4	
1982-83	2,099	90,372	1,502.3	547.4	214.4	551.6	206.9	2,708.6	
1983-84	2,110	91,698	1,472.2	534.4	270.6	449.7	218.2	2,841.5	
1984-85	2,196	92,533	1,604.0	528.9	286.7	490.1	279.0	3,095.0	
1985-86			Census not conducted for 1985-86						
1986-87	2,267	90,258	1,809.1	623.5	411.9	625.6	317.8	3,732.5	
1987-88	2,505	95,168	2,003.4	n.a.	n.a.	n.a.	n.a.	n.a.	
1988-89	2,543	103,096	2,315.1	n.a.	n.a.	n.a.	n.a.	n.a.	
1989-90(c)	2,382	96,702	2,438.7	1,054.4	423.4	2,207.4	406.1	6,952.0	
1990-91	3,184	94,349	2,551.6	n.a.	n.a.	n.a.	n.a.	n.a.	
1991-92	3,160	86,481	2,474.9	n.a.	n.a.	n.a.	n.a.	n.a.	

(a) Includes working proprietors. (b) Excludes the drawings of working proprietors. (c) From 1974-75 to 1989-90 excludes single establishment enterprises employing fewer than four persons.

NOTE: Comparable details of above industry classifications before 1968-69 are not available. However data on Factories was collected before 1968-69.

## MINING PRODUCTION

Year	Principal minerals produced							Value of production (b)
	Copper and concentrate	Iron ore (a)	Coal	Natural gas	Crude oil	Condensates	LPG	
	tonnes	'000 tonnes	'000 tonnes	millions m <sup>3</sup>	'000 kilolitres	'000 kilolitres	'000 tonnes	
1846.....	6,565							0.3
1856.....	11,980							0.8
1861.....	11,440							0.9
1866.....	23,661							1.7
1871.....	26,948							1.3
1876.....	28,597							1.2
1881.....	25,871							0.8
1886.....	18,713							0.6
1891.....	16,894	7						0.6
1896.....	5,030	—						0.5
1901.....	8,743	—						1.1
1906.....	8,340	76						1.7
1911.....	6,017	43						0.9
1916.....	7,396	191						2.5
1921.....	1,557	515						2.1
1926.....	235	593						2.9
1931.....	22	293						1.3
1936.....	458	1,918						5.2
1941.....	615	2,276						7.1
1946.....	—	1,847	138					6.1
1951.....	2	2,439	395					9.9
1956.....	12	3,645	489					(c)47.9
1961.....	8	4,055	1,133					58.2
1966.....	143	4,876	2,053					72.3
1967.....	1,470	4,645	2,077					69.3
1968.....	518	5,566	2,112					77.4
1969.....	3,666	7,042	2,245					98.5
1970(d).....	(e)249	7,425	2,155	628				104.2
1971.....	2,287	7,400	1,626	909				112.3
1972.....	2,819	6,301	1,536	964				111.6
1973.....	9,662	5,874	1,571	1,095				134.3
1974.....	8,830	6,065	1,494	1,255				131.4
1975.....	10,037	5,442	1,798	1,263				126.0
1976.....	18,433	4,479	1,819	1,447				131.9
1977.....	16,390	3,450	1,920	2,006				153.1
1978.....	11,975	2,189	1,757	2,516				144.6
1979.....	14,784	2,705	1,514	2,860				174.2
1980.....	14,183	2,701	1,723	3,430				224.0
1981.....	12,955	2,370	1,737	3,870				226.1
1982.....	16,310	2,241	1,425	4,260				259.4
1983.....	16,287	1,337	1,435	4,440	208.9	87.4		404.9
1984.....	15,578	1,469	1,269	4,489	1,047.6	168.8		641.9
1985.....	7,456	1,676	1,757	4,733	1,105.4	741.1	366	971.7
1986.....	10,609	1,876	2,182	4,864	1,441.0	843.5	525	1,099.2
1987.....	—	2,056	2,435	4,792	1,402.6	718.8	464	899.9
1988.....	1,686	1,975	2,557	4,747	1,308.9	860.4	523	949.7
1989.....	17,352	2,346	2,675	4,827	1,650.7	752.3	579	1,080.8
1990.....	48,564	2,439	2,922	4,891	1,492.0	647.8	494	1,221.9
1991.....	50,657	2,313	2,469	4,364	1,325.7	613.5	486	1,370.2
1992.....	66,880	2,264	2,820	4,339	1,298.5	826.3	510	1,371.2
1993.....	76,844	2,514	2,778	4,200	953.0	709.1	451	1,312.2

(a) Includes jaspilite. (b) Value at site of production. Quarries included from 1916. (c) Comparability affected by revaluation of iron ore. (d) Year ended 30 June from 1970. (e) Metallic content from 1969–70.

Source: South Australian Department of Mines and Energy.

## TRADE

## Overseas Exports

Year	Value of exports				Proportion of total exports: selected countries of destination				
	Total	Wheat and flour		Wool (b)	Japan	New Zealand	UK	USA	Other coun- tries
		\$'000	\$'000						
1861.....	1,837	76		1,302		3.42	89.46		7.12
1871.....	3,630	578		1,948		4.00	89.62	n.a.	6.38
1876.....	5,928	2,146		2,884		1.96	89.58	0.07	8.39
1881.....	6,311	1,846		3,496		0.71	82.03	—	17.26
1886.....	5,877	420		3,508		0.69	86.90	0.04	12.37
1891.....	11,197	2,728		3,776	0.01	0.29	80.82	0.90	17.98
1896.....	8,111	222		3,038	1.38	0.48	56.39	0.28	41.47
1901.....	8,866	2,232		2,208	0.07	0.65	51.62	0.10	47.56
1906.....	13,742	4,780		3,360	—	0.26	51.68	0.24	47.82
1911.....	20,350	7,671	2	4,007	0.04	0.17	45.96	0.13	53.70
1915-16.....	12,272	3,511	19	2,824	—	1.01	42.92	21.15	34.92
1920-21.....	35,339	28,678	1,175	6,035	—	1.11	59.40	1.16	38.33
1925-26.....	38,900	14,825	275	8,865	6.88	1.70	51.94	1.16	38.32
1930-31.....	20,123	6,078	685	3,006	2.38	0.81	54.11	0.79	41.91
1935-36.....	30,762	9,020	707	7,561	6.66	2.05	67.44	1.11	22.74
1940-41.....	26,393	8,617	226	6,656	5.29	3.46	50.46	15.48	25.31
1945-46.....	40,307	7,407	718	14,917	—	4.95	25.45	26.43	43.17
1950-51.....	215,348	36,852	14,662	109,900	5.90	2.39	39.58	14.41	37.72
1955-56.....	195,332	26,266	14,069	70,063	6.71	7.47	38.70	10.71	36.41
1960-61.....	198,557	36,598	19,219	64,328	18.11	5.60	27.55	4.71	44.03
1965-66.....	296,276	45,864	7,050	94,486	18.38	5.89	22.81	10.37	42.55
1966-67.....	325,170	55,675	13,056	98,013	20.43	4.69	15.46	8.85	50.57
1967-68.....	282,767	31,432	2,321	77,008	21.81	5.05	18.20	11.03	43.91
1968-69.....	300,934	27,421	11,683	84,747	25.52	4.55	16.46	9.78	43.69
1969-70.....	417,030	59,457	16,133	81,797	19.02	5.58	17.03	9.41	48.96
1970-71.....	393,737	83,629	23,670	62,828	18.07	5.66	13.70	6.39	56.18
1971-72.....	394,064	64,599	35,652	68,189	18.64	7.21	13.83	5.84	54.48
1972-73.....	521,720	48,684	17,250	149,956	23.89	6.41	8.84	7.47	53.39
1973-74.....	662,881	103,168	40,790	153,202	19.47	9.18	7.44	4.23	59.68
1974-75.....	764,410	174,405	99,517	93,273	16.35	6.73	5.71	2.61	68.60
1975-76.....	685,029	109,526	90,290	115,580	19.69	5.41	5.65	3.55	65.70
1976-77.....	789,872	84,884	88,072	172,538	21.31	5.33	5.99	4.17	63.20
1977-78.....	661,887	51,915	39,512	114,517	16.21	6.50	4.10	6.25	66.94
1978-79(a).....	922,754	101,750	71,470	147,010	15.18	5.74	3.45	9.16	66.47
1979-80.....	1,599,199	376,726	191,806	183,745	11.00	4.42	2.01	6.45	76.12
1980-81.....	1,400,028	307,803	153,118	225,336	12.25	5.53	2.27	5.40	74.55
1981-82.....	1,275,938	212,636	105,280	213,237	11.00	5.87	2.11	7.26	73.76
1982-83.....	1,227,125	99,364	64,486	176,830	11.92	6.15	7.62	7.91	66.40
1983-84.....	1,635,825	272,454	229,422	202,681	11.07	5.94	6.61	7.52	68.86
1984-85.....	1,921,413	406,345	215,887	202,160	13.10	6.44	4.45	8.38	67.63
1985-86.....	1,988,233	305,995	236,026	231,253	17.96	5.21	3.66	6.83	66.34
1986-87.....	2,047,147	321,268	181,771	282,040	14.72	6.83	3.56	9.40	65.49
1987-88.....	2,263,360	286,086	102,454	378,065	17.37	7.30	4.15	9.52	61.66
1988-89.....	2,446,832	287,472	132,080	395,125	15.70	9.33	4.41	7.02	63.54
1989-90.....	2,841,290	438,411	243,151	269,184	12.43	10.34	4.16	8.41	64.66
1990-91.....	3,005,365	338,540	205,379	249,372	14.74	6.38	6.02	10.80	62.06
1991-92.....	3,505,106	352,291	168,565	341,752	18.74	6.12	6.27	8.68	60.19
1992-93.....	3,756,344	328,928	194,726	310,729	17.24	7.68	6.32	9.39	59.37
1993-94p.....	3,873,052	393,972	n.p.	280,127	16.08	8.07	6.70	10.13	59.02

(a) From 1978-79 statistics are 'State of Origin', previously 'State of Lodgement of Documents'. (b) From 1983-84 'Wool and other animal hair' (including wool tops).

## TRADE

## Overseas Imports; Retail Sales and Turnover

Year	Value of imports		Proportion of total imports: selected countries of origin				Retail sales of goods \$m	Turnover of retail establish- ments \$m
	Total	Metals, metal manufactures, and machinery (a)	Japan	UK	USA	Other		
			%	%	%	%		
	\$'000	\$'000						
1861.....	2,756	310		80.14	0.32	19.54		
1871.....	2,891	342		81.85	1.45	16.70		
1876.....	6,428	1,084		81.30	1.44	17.26		
1881.....	7,133	1,022		79.06	3.80	17.14		
1886.....	5,003	770	0.01	78.90	6.82	14.27		
1891.....	8,063	1,644	0.02	71.36	7.91	20.71		
1896.....	6,475	1,198	0.18	68.59	7.82	23.41		
1901.....	7,854	1,432	0.38	58.91	14.17	28.54		
1906.....	7,965	2,104	0.84	63.10	10.17	26.09		
1911.....	12,492	4,132	1.31	58.60	12.81	27.28		
1915-16.....	10,304	2,816	3.12	47.68	19.81	29.39		
1920-21.....	24,764	6,558	1.55	42.07	21.25	35.13		
1925-26.....	28,160	10,602	1.13	43.30	27.84	27.73		
1930-31.....	7,833	1,802	1.14	36.96	16.66	45.24		
1935-36.....	10,839	3,616	2.24	38.65	21.16	37.95		
1940-41.....	10,924	3,158	1.56	38.09	12.01	48.34		
1945-46.....	17,556	3,622	-	62.28	10.13	27.59		
1950-51.....	112,002	50,446	1.98	48.31	8.42	41.29		
1955-56.....	125,504	64,656	3.18	49.17	11.70	35.95	347.8	
1960-61.....	142,764	72,570	5.37	32.66	17.61	44.36	448.9	
1965-66.....	198,156	103,032	6.84	23.32	27.25	42.59	602.0	
1966-67.....	196,771	97,861	7.69	21.64	27.72	42.95	627.1	
1967-68.....	215,619	113,215	7.16	17.29	32.71	42.84	663.6	
1968-69.....	231,956	134,222	11.19	19.82	27.35	41.64	706.9	
1969-70.....	201,223	98,204	10.77	21.49	21.50	46.23	762.3	
1970-71.....	198,358	98,358	14.44	25.10	17.32	43.14	818.8	
1971-72.....	189,748	83,083	15.08	22.83	14.48	47.61	890.9	
1972-73.....	199,978	88,271	20.48	17.49	15.08	46.96	1,037.1	
1973-74.....	313,915	142,187	22.57	12.03	16.91	48.49	1,237.3	
1974-75.....	482,077	216,355	19.17	14.20	13.10	53.53	1,503.3	
1975-76.....	501,476	203,407	18.57	11.14	14.84	55.45	1,781.1	
1976-77.....	629,309	259,695	22.23	8.52	13.38	55.87	2,025.4	
1977-78.....	628,568	248,236	21.79	8.85	12.47	56.89	2,162.7	
1978-79.....	865,554	437,704	18.97	6.74	26.75	47.54	2,344.7	
1979-80.....	882,457	300,393	17.25	7.18	13.09	62.48	2,528.3	
1980-81.....	1,072,425	363,735	20.00	5.07	12.55	62.38	2,852.1	
1981-82.....	1,337,301	563,750	21.24	3.69	13.38	61.69	3,181.7	
1982-83.....	1,244,243	515,143	23.36	4.26	15.92	56.46	3,512.3	4,340.5
1983-84.....	1,318,693	504,009	24.32	3.93	16.33	55.42	3,840.0	4,738.4
1984-85.....	1,603,240	722,555	29.86	4.71	16.62	48.81	4,065.6	5,015.5
1985-86.....	1,736,757	953,754	38.62	4.71	15.22	41.44	4,484.8	5,529.2
1986-87.....	1,501,827	761,376	37.96	4.47	13.12	44.45	4,663.2	5,735.4
1987-88.....	1,804,614	959,309	35.99	6.66	12.37	44.98	4,910.8	6,056.2
1988-89.....	1,861,399	966,523	30.62	4.85	17.24	47.29	n.a.	6,458.4
1989-90.....	2,049,952	1,035,909	25.87	5.76	20.65	47.72	n.a.	6,829.4
1990-91.....	2,193,725	1,030,443	22.73	4.53	15.65	57.09	n.a.	7,247.4
1991-92.....	2,396,935	1,219,639	23.44	8.98	15.42	52.16	n.a.	7,358.7
1992-93.....	3,068,118	1,558,624	26.91	5.12	14.76	63.22	n.a.	7,281.1
1993-94.....	p2,803,427	p1,440,020	p30.16	p5.22	p12.92	p51.71	n.a.	7,714.9

(a) Includes motor vehicles and other transport equipment.



**TRANSPORT AND COMMUNICATION**  
(<sup>'000</sup>)

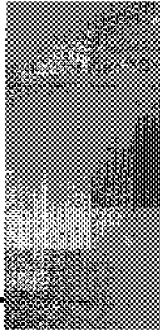
Year	Motor vehicles on register			Drivers and riders licences in force	Telephone services in operation (a)
	Passenger vehicles	Other motor vehicles	Total (incl. cycles, scooters)		
1901.....					1,831
1906.....					2,510
1911.....					6,086
1916.....					10,184
1921.....	13.2		21.4		15,984
1926.....	42.5	8.2	62.5	79,659	33,547
1931.....	(b)45.1	(b)12.1	(b)67.3	106,053	39,552
1936.....	53.7	19.4	84.3	92,227	39,911
1941.....	54.5	24.4	86.2	122,280	47,962
1946.....	64.4	31.4	107.2	137,979	53,126
1951.....	108.9	51.2	183.6	215,157	74,457
1956.....	161.4	73.2	257.5	299,158	107,649
1961.....	224.5	82.5	325.2	393,869	144,502
1962.....	238.9	82.5	338.1	397,803	152,785
1963.....	258.8	83.9	358.2	414,656	162,012
1964.....	280.1	86.3	380.5	427,717	173,314
1965.....	298.1	86.4	397.4	447,985	182,249
1966.....	314.0	87.3	413.5	464,778	192,922
1967.....	327.7	87.1	427.6	481,496	203,191
1968.....	342.9	87.6	443.9	491,765	212,842
1969.....	364.7	89.6	468.2	513,687	224,174
1970.....	384.0	90.7	490.1	535,184	239,452
1971.....	400.8	91.5	510.3	550,745	251,330
1972.....	420.4	92.8	536.0	570,562	261,608
1973.....	445.4	97.9	572.4	592,481	278,687
1974.....	468.6	100.6	601.3	612,693	298,300
1975.....	491.5	104.0	628.9	637,248	311,804
1976.....	513.0	112.7	657.9	658,671	334,948
1977.....	528.8	116.9	677.5	690,663	361,334
1978.....	536.5	118.7	685.6	716,991	390,852
1979.....	(c)542.0	(c)117.7	(c)689.3	737,410	420,871
1980.....	(d)554.9	(d)120.0	(d)708.6	751,458	449,724
1981.....	564.9	123.8	725.4	782,372	480,873
1982.....	(c)580.4	(c)126.8	(c)744.0	779,110	507,234
1983.....	593.3	132.6	763.7	797,971	532,107
1984.....	613.9	138.6	790.2	814,046	558,380
1985.....	634.7	144.9	816.9	833,118	591,448
1986.....	651.5	148.2	835.8	845,073	605,272
1987.....	654.2	148.0	834.9	858,931	628,541
1988.....	666.2	149.1	846.3	863,796	646,658
1989.....	680.3	152.1	862.5	882,176	674,037
1990.....	698.9	154.9	883.5	904,388	(e)707,176
1991.....	680.0	147.1	857.8	944,004	740,853
1992.....	719.6	141.8	889.5	941,493	n.a.
1993.....	731.9	145.0	904.6	947,134	n.a.
1994.....	746.4	146.8	920.2	949,318	805,478

(a) At 30 June from 1916; at 31 December in earlier years. (b) Previously all motor vehicles had to be registered but from 1930 only those in actual use on the roads. (c) At Census 30 September. (d) At 30 June from 1980. (e) Figures from 1990 include Northern Territory.

PUBLIC FINANCE

Year	State Government								
	Expenditure			Public debt		Local government revenue			
	Total revenue	From revenue	From loan (net)	Total	Per head	State taxation	From rates	Government grants	Total
\$'000	\$'000	\$'000	\$'000	\$	\$'000	\$'000	\$'000	\$'000	\$'000
1840-41	51	130							
1845-46	95	77							
1850-51	445	367				202			
1855-56	960	1,160		590	5.50	326		54	114
1860-61	1,117	966		1,733	13.30	282	46	40	114
1865-66	1,900	2,130		1,551	9.20	478	60	60	162
1870-71	1,566	1,519		4,335	23.00	498	80	74	194
1875-76	2,640	2,647		7,674	34.20	920	118	80	286
1880-81	4,344	4,108		22,394	78.30	1,168	188	136	488
1885-86	4,558	4,767	2,800	36,680	118.60	1,603	208	108	502
1890-91	5,464	5,207	968	43,315	135.80	1,655	276	254	702
1895-96	5,043	5,019	886	48,433	137.60	1,600	264	194	652
1900-01	5,648	5,693	845	52,129	146.40	1,203	302	222	738
1905-06	5,612	5,437	900	60,165	165.80	735	348	198	740
1910-11	8,383	7,929	3,752	(a)56,065	136.50	1,092	481	336	1,004
1915-16	8,714	9,483	4,371	79,049	179.40	1,403	652	302	1,150
1920-21	14,303	15,087	9,351	104,725	210.70	3,244	986	580	1,936
1925-26	20,948	20,922	12,860	160,521	290.10	5,428	1,640	942	3,441
1930-31	21,452	25,079	6,581	199,055	345.70	6,800	1,672	397	2,612
1935-36	22,819	22,521	2,502	211,397	359.70	6,409	1,665	509	2,824
1940-41	25,849	26,015	2,648	219,599	365.30	8,683	1,851	577	3,170
1945-46	32,687	32,687	3,419	221,498	348.80	(b)4,036	2,040	451	3,474
1950-51	67,344	66,885	33,871	296,776	405.20	8,104	3,830	1,963	7,579
1955-56	118,805	121,665	42,666	512,179	603.60	16,150	8,162	4,381	16,310
1960-61	172,559	170,182	44,739	722,038	743.20	23,425	13,076	(c)3,524	25,034
1965-66	236,816	243,650	55,089	955,128	872.30	37,636	20,412	4,106	38,020
1970-71	386,859	386,838	71,491	1,256,337	1,070.40	62,745	29,118	4,758	49,589
1975-76	1,036,985	1,034,698	160,602	1,394,702	1,094.66	272,760	65,670	33,551	123,287
1976-77	1,174,025	1,183,180	175,552	1,495,737	1,163.00	314,280	76,385	34,881	137,364
1977-78	1,167,196	1,192,063	171,329	1,605,834	1,243.10	323,502	85,680	38,052	166,074
1978-79	1,264,705	1,258,252	161,087	1,702,221	1,310.81	342,307	95,525	34,774	168,771
1979-80	1,384,589	1,384,589	149,584	1,781,600	1,365.84	369,490	104,891	38,501	186,925
1980-81	1,548,299	1,554,885	149,363	1,872,699	1,426.49	387,453	118,745	45,233	214,213
1981-82	1,705,499	1,766,772	84,913	1,962,590	1,481.20	438,152	132,691	52,097	240,507
1982-83	1,923,808	2,032,765	85,433	2,035,762	1,621.38	(d)537,148	150,923	64,814	288,107
1983-84	2,160,679	2,190,399	143,775	2,010,259	1,485.78	659,427	167,603	82,419	331,803
1984-85	2,639,937	2,626,240	173,877	1,990,537	1,457.63	788,143	187,089	100,118	384,267
1985-86	2,966,345	2,955,350	253,757	(e)3,664,000	2,661.24	837,600	206,899	103,163	417,693
1986-87	3,217,176	3,214,926	363,519	4,046,000	2,906.61	917,800	228,336	97,975	445,853
1987-88	4,225,669	4,215,265	295,823	4,004,000	2,851.85	1,076,200	252,148	104,685	488,353
1988-89	4,206,418	4,123,056	282,311	4,165,000	2,936.82	1,267,800	279,332	99,457	532,460
1989-90	4,554,612	4,483,597	251,494	4,303,000	3,007.62	1,349,300	307,909	100,479	573,373
1990-91	4,594,232	4,710,426	242,950	6,737,000	4,655.20	1,520,600	337,979	107,355	613,914
1991-92	4,400,744	4,682,684	188,063	7,373,000	5,058.33	1,658,700	364,565	108,993	647,477
1992-93	4,357,610	4,526,585	135,817	7,969,000	5,447.40	1,754,400	386,744	146,619	709,871

(a) Debt of Northern Territory and Port Augusta-Oodnadatta railway transferred to Commonwealth Government. (b) Uniform taxation in force from 1941-42. (c) Excludes reimbursement for work done on behalf of Highways Department from 1961. (d) Before 1982-83 excluded taxation paid to Special Funds and statutory authorities. From 1966-67 the coverage of this item does not completely coincide with SA Treasury classifications. (e) Source: State Treasury. From 1985-86 refers to State public sector net indebtedness, previously indebtedness to Commonwealth only.



## Regional Study – Whyalla

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### **Size and location**

Whyalla is the largest regional city in South Australia, situated on the western coastline of upper Spencer Gulf, 225 kilometres north-west by air from Adelaide and 75 kilometres south of Port Augusta.

Whyalla was established at the beginning of the twentieth century – then known as Hummock Hill – as a port to ship iron ore extracted from Iron Knob, 52 kilometres to the west, in the Middleback Ranges.

The city occupies an urban area of 41.5 square kilometres while the total area of the Corporation of the City of Whyalla comprises around 1,000 square kilometres. It extends along the coast 35 kilometres north and south of the urban area, and up to 18 kilometres inland.

### **Land formation soils and vegetation**

Generally the Whyalla area is of low relief with internal drainage or no drainage at all. South of Whyalla along the coastline there is a narrow continuous strip of salt marshes and white sand dunes, often fringed with mangroves on the seaward side. Beyond the marshes the land gradually rises to a flat plain, from 15 to 30 metres above sea level, which is covered with alluvium. The vegetation is mainly saltbush, bluebush, mallee and some myall trees. This plain which varies in width from three to 13 kilometres is covered with sand dunes in the south.

Adjacent to the coastal plain is an area rising to the west by a series of scarps ranging up to 50 metres in height. The upper plain is an undulating tableland standing at a general level of between 100 and 200 metres and extending westwards toward the Middleback Ranges.

### **Middleback Ranges**

The Middleback Ranges consist of a broken line of hills extending north and south for a distance of about 35 kilometres, 40 kilometres from the coast. Throughout their length the ranges have been dissected by gullies and the hill slopes are frequently heavily strewn with rock talus. In these sandstone ranges there have been great masses of ironstone.

In the east and north-west of the Whyalla region is a series of flat-topped sandstone hills – remnants of a tableland which was previously much more extensive. Along the coastline north of Whyalla is a distinctive geological feature dating back to the Pleistocene period – stranded shingle beach deposits which have been traced over a distance of some 50 kilometres, consisting of moderately sorted, rounded to sub-angular pebbles and

**Merchant  
banks**

Merchant banks operate as intermediaries in the professional sector of the capital market and have been responsible for a number of important changes in the Australian financial system. These include the development of the commercial bill market and expansion of the market for promissory notes and certificates of deposit. They have also enabled the expansion of domestic activities through a more widespread access to overseas funds.

Merchant banks are strongly involved in the short-term money market. Their dealings with the Stock Exchange include the underwriting of equity issues and the management of investment portfolios. Merchant banks also provide advice relating to mergers and takeovers, financial re-organisations and planning for expansion.

Merchant banks are predominantly regulated and supervised by the State Corporate Affairs Commission. The *Financial Corporations Act 1974* (Cwlth) requires them to be registered as Money Market Corporations. In addition they are required to be licensed under the Securities Industry Code in each State in order to deal in or advise on securities.

**Further  
references**

Additional information may be found in the following ABS publications:

- 5609.0 *Housing Finance for Owner Occupation, Australia*
- 5625.0 *Private New Capital Expenditure, Australia, Actual and Expected Expenditure, Preliminary*
- 5626.0 *Private New Capital Expenditure, Australia, Actual and Expected Expenditure*

cobbles. The deposits form sinuous, flat-topped and well preserved ridges three to five metres above present mean sea level. Most are usually narrow – no more than 10 to 15 metres wide and in some areas form cliffs behind the modern beach. The combination of a high sea level (three metres higher than today), strong easterly winds and high wave energy dissipation along the shoreline, were responsible for the deposits.

The most common soils in the area are solonised brown soils or mallee soils grading into desert loams. A characteristic feature of the solonised brown soils is the presence of large quantities of calcium carbonate – usually in the form of rubble or sheet travertine limestone either exposed at the surface or lying at shallow depths. In the southern and south-western portion of the region the country is covered by undulating sand dunes. Low outcrops or floors of weathered granite and granite gneiss are evident throughout the region.

*Vegetation*

The principal vegetation of the soil plains to the west and south-west of Whyalla comprises a tree-steppe community dominated by myall, sandalwood, and localised patches of black oak and mallee. Saltbush and bluebush are the predominant low shrubs. Mallee is found throughout the undulating sand dune belt with red and kong mallee being the most common varieties.

The vegetation is dependent on the soil type and depth. This causes local variations; for example, spinifex may occur on stony rises where wind-blown sand or weathered rock has provided sufficient soil while the growth of broom bush frequently indicates the presence of low outcrops or floors of weathered granite.

**Climate and meteorology**

Whyalla has warm to hot summers with mild winters, and a low annual rainfall.

The warmest weather occurs from November to March, with January recording the highest mean maximum daily temperature of 28.9°C. Hot days are experienced in these months and at least twenty days with a maximum in excess of 37.5°C can be expected. Whyalla's average maximum temperatures are about 3°C cooler than most inland towns of the same latitude because of the moderating influence of sea breezes from the Spencer Gulf.

The period from June to August experiences the coolest weather, but the mean maximum for July – the coldest month – is above 16°C. Monthly mean minima vary from 7.3°C in July to 18.8°C in February. Therefore, Whyalla's autumn, winter and spring weather may be described as generally mild and sunny.

Temperature and Rainfall, Whyalla

Period	Maximum	Minimum	Rainfall	Days of rain
	°C	°C	mm	No.
January.....	28.9	17.7	18	3
February.....	28.5	18.8	24	3
March.....	26.8	17.2	17	3
April.....	23.8	14.1	19	5
May.....	20.2	10.8	28	7
June.....	17.6	8.3	25	7
July.....	16.8	7.3	23	8
August.....	18.3	8.2	24	8
September.....	20.6	10.0	25	7
October.....	23.4	12.5	26	6
November.....	25.9	15.1	22	4
December.....	27.3	16.9	19	4

Whyalla has an average annual rainfall of 272 millimetres on 65 days, with about 60 per cent of rain falling between May and October. Rainfall throughout the year can be infrequent and erratic. Although winter and early spring are the most reliable for rainfall it is not adequate in a sufficient number of years to support agriculture. In most years summer rain is negligible but the February average of 24 millimetres can be affected by heavy rains associated with tropical cyclones moving into the region from the north in some years.

Average annual evaporation in Whyalla is high, being in excess of 2,000 millimetres.

**History**

On 9 March 1802, Matthew Flinders, Commander of the *Investigator*, discovered and named Hummock Hill which now forms the eastern end of the City of Whyalla. Although he was not impressed by the area's arid sweeping plains a small settlement based on sheep grazing grew up during the latter half of the nineteenth century.

In 1896 the Mount Minden Mining Company, which had held Iron Knob and Iron Monarch in the Middleback Ranges under lease and had worked the iron deposits in a small way, forfeited its leases because it had not paid rent for three years and had not observed labour conditions. Following this forfeiture, The Broken Hill Proprietary Company Ltd (the Company) pegged out and registered nine claims embracing Iron Knob and Iron Monarch. These deposits were secured to assure a supply of ironstone to be used as a flux at the Port Pirie smelting plant which had been established to treat the silver, lead and zinc ores mined at Broken Hill.

Quarried ironstone was initially taken by bullock teams to Port Augusta and from there it was shipped by barge to Port Pirie. In 1900 the Company applied to the South Australian Government for permission to construct a tramway from Iron Knob to Hummock Hill and to build a jetty at False Bay. The proposal was strongly opposed by residents of Port Augusta who

wanted the tramway from Iron Knob to terminate in Port Augusta but in the end the select committee investigating the project decided in favour of Hummock Hill.

On 10 January 1901, the *Cadell* left Port Pirie and arrived at Hummock Hill with about 30 workmen who were to commence construction of the tramway. Good progress was made and the first train travelled over the tramway on 28 August 1901. The jetty was completed in 1902 and the shipment of iron ore to Port Pirie by barge became a Company activity.

*Tramway*

The country surrounding the Hummock Hill settlement was held under pastoral lease and had been improved by the building of dams, but dingoes were so numerous that the station people could only keep as many sheep as they could shepherd. Other stations nearer Port Augusta and Iron Knob were in vermin districts (fenced to keep the dingoes out), and therefore were able to carry many sheep. The wool from these properties was transported to Hummock Hill on the tramway and shipped to Port Adelaide by ketch.

From 1902 women and children began to arrive at the settlement. Supplies were brought by ship or by bullock teams from Port Augusta. Fish were plentiful from the gulf while kangaroos, emus and wild turkey were a source of fresh meat. Goats were used for milk.

The first hotel was the Jetty Hotel, built of timber and galvanised iron. Mr G. Burton, the first hotel keeper, received his beer supplies by tug from Port Pirie or by driving his tip dray to Port Augusta. The hotel licence was transferred 30 years later to the Hotel Whyalla. In 1905 a public hall was opened on the Company's lease and was used as a school, for church services, for concerts and as an institute. The first medical officer, Dr Brown, was chairman and a lay preacher, Mr Dunstone, was secretary and librarian. A Miss O'Connell was the first teacher at the school which had an attendance of 18 children.

*Water*

Sufficient water came across from Port Pirie for domestic use and for the locomotives and some water was obtained from soaks near the settlement, but this was inadequate for all requirements. Subsequently the Government built a large underground storage tank on the outskirts of the town while most residents installed underground tanks to conserve water.

In 1907 the Company smelted a quantity of Iron Knob iron ore at Port Pirie and the resultant product was found to be of excellent quality. In 1911, when the population of Hummock Hill was 119 and Iron Knob 125, the company directors sent Mr G.D. Delprat (then general manager) abroad to gather the latest information on the practicability of establishing iron and steel works in Australia. As a result of the Company's investigations it was decided to establish a steelworks at Newcastle in New South Wales to manufacture steel from the iron ore of the Middleback Ranges.

*Whyalla*

On 16 April 1914, the settlement at the foot of Hummock Hill was officially proclaimed a new town to be known as Whyalla. From this time the town expanded rapidly. The jetty was lengthened to accommodate ships coming from Newcastle, a conveyor belt was installed to permit loading, and five secondary crushers and storage bins were erected. More and improved rolling stock were obtained and a small powerhouse was built near the jetty and completed in 1914.

In January 1915 the steamer *Emerald Wings*, later renamed the *Iron Baron*, loaded 2,800 tonnes of crushed ore and sailed for Newcastle. This development brought a substantial increase in population, more houses were built and electric light replaced kerosene lamps and candles in the homes. Production at Iron Monarch commenced in 1915, and in 1920 the Company acquired further leases at the northern tip of the Middleback Ranges, later securing other leases to the south. The first sale of land was held on 13 August 1914 when the average price of each block was about \$10. Further auctions were held in 1916, 1917, 1918 and 1920. There was very little activity in land sales between 1920 and 1936.

The first section of the Whyalla Central Primary School (later to be relocated and named the Whyalla Town Primary School) was built and several concrete houses were erected. No bricks were made locally at this time and the stone quarry had not been opened. Beach gravel and cement were mixed with salt water to form the concrete. Dingoes were still numerous and sheep were shepherded. It was not until 1919 that the area became a vermin district, and it took about three years to drive the dogs out. By the Census of 1921 the population of Whyalla had reached 866 and Iron Knob 528.

*Powerhouse*

In 1922 a new powerhouse was erected and the plant at the jetty was converted from manual to automatic control. Three years later the Company undertook a project to convert its operations at Iron Knob to electric power. This involved the erection of transmission lines, installation of electric shovels, electric locomotives and primary crushers, the work being completed in 1928.

Also in 1928 a Mr Shirley, of Port Augusta, was given a contract to bring the mail from Port Augusta to Whyalla. He used a motor car with trailer and was able to complete the journey in two hours. During this time hundreds of tonnes of sandalwood were being cut and sent to Port Augusta for shipment to China, the Company was sealing roads, and beach improvements were being undertaken. Houses built of sandstone and containing modern conveniences began to appear and the beautifying of the town with shrubs and trees commenced. However, water shortage was always a problem.

The population of Whyalla at the 1933 Census was 967. In this year the first section of the Hotel Whyalla was built, and the first stage of the police station was completed in the following year. The Company established a dairy with 11 bails for milking, a feed room and a separate building for



washing milk cans. Ships were now bringing water in ballast from Newcastle. The present Golf Club was formed in 1932, the Spencer Gulf Acro Club was formed in 1936, the band hall was built in 1938 and the present rifle range was established in 1939.

*Pig iron*

The next important development in the growth of Whyalla was the Company decision in 1938 to build a blast furnace to produce pig iron. The project also involved dredging to create a deep-water harbour, the building of a wharf, and the construction of a larger power station. Work to reclaim an area of 30 hectares began in August 1938, and the first pile of the wharf was driven on 20 January 1939. This was a period of unparalleled prosperity and expansion in the town, for example, building blocks that originally cost \$30 were sold for \$2,000. Construction of the wharf was so rapid that the *SS Iron Prince* was able to berth on 13 September 1939, just 13 months after dredging had commenced.

*Shipyard*

With the outbreak of war in September 1939, Whyalla was seen as an ideal location for a major shipyard and the first four orders were for patrol boats known as corvettes for the Royal Australian Navy. In May 1941 the first of these ships, *HMAS Whyalla*, was handed over to the Navy. The new blast furnace was 'blown in' during the same month. Over the next three years an electric steel plant and forge shops were constructed and the Company's engineering workshop was expanded.

Whyalla was an outstanding example of war-time growth. At the outbreak of war it had been merely a port for the shipment of ore mined from the Middleback Ranges, but by 1945 it had become the operating centre of one of the largest furnace units in the world and had a large shipbuilding yard. The population had increased from about 1,400 to 7,500. A heavy machine shop, marine gear cutting annexe and solar salt industry were all established shortly after the war.

*Pipeline*

The growth of Whyalla before the 1939–45 War had been restricted by lack of water, and with the vast plan for expansion during the 1940s it could be seen that the local water supply would be entirely inadequate. It was decided to supplement this local supply by means of a pipeline from the River Murray. The Morgan–Whyalla Pipeline *via* Port Augusta was commenced in 1940 and completed in 1944. A duplicate pipeline, including a submersible section under Spencer Gulf, was completed in 1967 to cater for further expansion.

The South Australian Housing Trust began building in Whyalla in 1940 when it completed 100 double units.

In 1945 the Whyalla Town Commission was established to carry out the duties of local government. The Commission comprised a chairman appointed by the State Government, four representatives elected by ratepayers and three appointed by the Company. The name was changed to the Whyalla City Commission when Whyalla was proclaimed a city in 1961, and replaced by the Corporation of the City of Whyalla when a fully elected city council assumed the commission's responsibilities in 1970.

*Hospital*

The Whyalla Hospital was opened in 1940 and the well-being of the community was increasingly catered for from this time with the building of several new schools, and the construction of hotels, libraries, shops, banks, police station, courthouse and several other facilities. Many sports clubs and associations were either formed or expanded in this period. At the 1947 Census the population had grown to 7,845.

Whyalla's next important step in development was in 1958 when an agreement was reached between the South Australian Government and the Company for the establishment of a steel industry. The site chosen for the steel plant was just north of the existing blast furnace. The area had to be cleared and access roads built before construction could begin. Much of the construction work was carried out by Company employees with the construction labour force reaching a peak of 1,600. Later, most of these workers were transferred to production units. The steelworks was officially opened by the Premier, Mr Frank Walsh, on 6 May 1965.

*Population*

An indication of the growth over this period can be seen by the rapid increase in population. At the 1954 Census it was 8,598, in 1961 it was 13,711, and by the 1966 Census it had reached 22,121.

In the 1950s and 1960s several new heavy engineering industries were established in Whyalla, some sub-contracting to the shipbuilding industry while others undertook work servicing projects throughout the State.

Whyalla continued to expand during the early 1970s and for local government, and community facilities it was a period of consolidation. At the 1976 Census, the population of Whyalla had reached 33,390. Many public facilities caught up with the boom of the previous decade, including a child care centre, fauna and reptile park, recreation and leisure centre, public libraries, upgrading of the city's public bus service, major extensions to the College of Technical and Further Education, and the announcement of plans for the multi-million dollar expansion of the Whyalla Hospital.

However, Whyalla entered the 1980s with its growth, services and population affected by both Australian and world economies. The shipyard closed in 1978, the steel industry saw a downturn which resulted in major restructuring of the Company and Whyalla's population declined throughout the decade. Nevertheless, new products like railway sleepers and line were developed; in 1984 a fractionation plant and shipping terminal were commissioned at Port Bonython; the Middleback Theatre opened in 1985; the Whyalla foreshore was redeveloped; work started on a multi-million dollar marina; tourism developments were undertaken; and the city became connected to natural gas through an under-sea pipeline connecting near Port Pirie.

**Population**

The following table shows the Whyalla population peaked at the 1976 Census. The population has declined by an average of 8 per cent every five years since the 1976 Census.

Population of Whyalla, Censuses 1947–1991<sup>(a)</sup>

<i>Census</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>
1947 .....	4,101	3,744	7,845
1954 .....	4,474	4,124	8,598
1961 .....	7,559	6,152	13,711
1966 .....	12,183	9,938	22,121
1971 .....	17,010	16,099	32,109
1976 .....	17,211	16,179	33,390
1981 .....	15,628	14,890	30,518
1986 .....	13,770	13,332	27,102
1991 .....	13,239	12,500	25,739

(a) Figures for this and other tables refer to the local government area of Whyalla.

The next table shows a continuing decrease in the proportion of Australian born population in Whyalla between the 1947 and 1971 Censuses. At the 1961 Census there were approximately equal numbers of United Kingdom and Ireland born, and European born. However, by the 1991 Census the percentage of Australian born had increased while those born in the United Kingdom and Ireland were three times more numerous than European born population.

Percentage Birthplace Distribution, Whyalla, Censuses 1947–1991  
(Per cent)

<i>Birthplace</i>	<i>1947</i>	<i>1961</i>	<i>1971</i>	<i>1981</i>	<i>1991</i>
Australia .....	94.7	73.2	57.4	64.9	69.9
UK and Ireland .....	4.5	13.1	29.2	24.0	18.8
Europe .....	0.5	13.0	11.7	7.4	6.2
Other .....	0.3	0.7	1.7	3.1	2.9
Not stated .....	–	–	–	0.6	2.2

## Age

Whyalla has a slightly younger age distribution than the State with a higher proportion aged under 35 years and a smaller proportion in the 35 to 44, and 65 and over age groups.

Percentage Age Distribution, 1991 Census  
(Per cent)

<i>Age</i>	<i>Whyalla</i>		<i>South Australia</i>	
	<i>Males</i>	<i>Females</i>	<i>Males</i>	<i>Females</i>
0–14 .....	24.4	23.7	22.0	20.4
15–24 .....	17.1	16.7	15.7	14.8
25–34 .....	17.8	17.6	16.2	15.9
35–44 .....	13.9	13.7	15.3	15.2
45–54 .....	10.8	11.1	10.9	10.6
55–64 .....	8.8	8.0	8.9	8.7
65 and over .....	7.3	9.2	10.4	14.5

In 1991 Whyalla had a greater proportion of never married and separated but a lower proportion of married males than South Australia, whereas the proportion of married and separated females was higher and the proportion of widowed females lower than the State aggregate.

Marital Status of Persons Aged 15 Years and Over 1991 Census  
(Per cent)

<i>Marital status</i>	<i>Whyalla</i>		<i>South Australia</i>	
	<i>Males</i>	<i>Females</i>	<i>Males</i>	<i>Females</i>
Never married.....	33.6	24.1	31.4	24.0
Married.....	55.4	57.4	58.3	55.6
Separated, not divorced.....	3.4	3.7	2.7	2.9
Divorced.....	5.4	6.4	5.1	6.2
Widowed.....	2.1	8.4	2.6	10.8

*Families*

Whyalla had a slightly higher proportion of one parent families (14.5 per cent) than the State as a whole (12.9 per cent) which is consistent with the marital status table which shows a higher proportion of separated and divorced persons in Whyalla than in South Australia.

Household Type: Whyalla, 1991 Census

<i>Household type</i>	<i>Persons</i>	<i>Families</i>
Family households:		
Couple only.....	4,282	2,178
One parent families.....	2,655	985
Two parent families.....	13,708	3,533
Other related households.....	226	108
Other households:		
Lone person household.....	2,074	2,074
Group household.....	781	371

In Whyalla 7,808 males and 4,786 females were in the labour force at the 1991 Census. As expected in an industrial town, a higher than average percentage of the male labour force in Whyalla were wage earners (76.9 per cent compared with South Australia 68.8 per cent). Unemployment was higher for both males and females in Whyalla (11.9 per cent and 7.4 per cent respectively) when compared with South Australia (9.5 per cent and 5.3 per cent).

*Employed*

The next table shows the employed population of Whyalla and South Australia classified by industry with 47.7 per cent of employed males in Whyalla working in the manufacturing industry, compared to 19.0 per cent for South Australia.

Industry of Employed Males and Females, 1991 Census  
(Per cent)

Industry	Whyalla		South Australia	
	Males	Females	Males	Females
Agriculture, forestry, fishing and hunting .....	0.5	0.2	6.5	3.8
Mining .....	1.8	0.2	1.0	0.2
Manufacturing .....	47.7	8.1	19.0	8.7
Electricity, gas and water .....	2.1	0.3	1.9	0.3
Construction .....	5.7	1.0	7.5	1.6
Wholesale and retail trade .....	9.9	18.7	17.7	18.5
Transport and storage .....	3.3	1.4	5.4	1.6
Communication .....	0.9	0.8	1.8	0.9
Finance, property and business services .....	5.6	8.4	8.3	11.2
Public administration and defence .....	1.2	2.6	5.4	3.9
Community services .....	8.6	33.5	11.4	30.1
Recreation, personal and other services .....	2.0	8.4	4.9	8.7
Not classifiable/not stated .....	10.7	16.4	9.2	10.5

*Occupation*

When classified by occupation a much greater proportion of employed males in Whyalla worked as tradespersons or plant and machine operators and drivers than South Australia. Less than half the proportion of males in Whyalla compared to the State worked as managers and administrators. The distribution of employed females in Whyalla is similar to South Australia with the two major occupation groups being clerks and sales and personal service workers.

Occupations of Employed Males and Females, 1991 Census  
(Per cent)

Occupation	Whyalla		South Australia	
	Males	Females	Males	Females
Managers and administrators .....	6.9	4.1	15.2	7.6
Professionals .....	10.2	11.5	11.6	11.8
Para-professionals .....	6.5	6.7	6.7	7.4
Tradespersons .....	26.5	4.0	20.8	3.7
Clerks .....	5.0	21.3	6.0	24.5
Sales and personal service workers ..	4.6	21.5	9.0	20.4
Plant and machine operators and drivers .....	16.7	2.1	10.3	2.6
Labourers and related workers .....	13.4	13.6	12.9	12.9
Inadequately described and not stated .....	10.2	15.2	7.6	9.0

Over the 20-year period from 1971 to 1991, the proportion of males and females who had no qualifications decreased from 59.7 per cent to 50.6 and 90.1 per cent to 73.3 per cent respectively. The high proportion of males in Whyalla with skilled vocational qualifications emphasises the importance of manufacturing to Whyalla.

Qualifications Obtained, 15 Years and Over, 1991 Census  
(Per cent)

Qualification obtained	Whyalla		South Australia	
	Males	Females	Males	Females
Higher degree .....	0.7	0.3	1.2	0.4
Post graduate diploma .....	0.5	0.8	0.6	0.9
Bachelor degree .....	4.0	2.9	5.4	4.2
Undergraduate diploma .....	1.5	4.5	2.1	5.9
Associate diploma .....	1.6	0.9	1.5	0.9
Skilled vocational .....	26.5	1.8	18.1	2.3
Basic vocational .....	2.9	3.5	2.8	3.7
No qualification .....	50.6	73.3	57.3	70.5
Inadequately described/not stated .....	11.6	12.1	10.9	11.2

**Births and deaths**

Because of the age profile of the Whyalla population the birth rate has been higher and the death rate lower than the State as a whole. The following tables give numbers of births and deaths and their rates for Whyalla and for South Australia in the five years to 1992.

Live Births and Birth Rates, Whyalla and South Australia

Year	Whyalla		South Australia	
	Number	Rate(a)	Number	Rate(a)
1988 .....	491	18.0	19,155	13.6
1989 .....	450	16.9	19,610	13.8
1990 .....	454	17.1	19,863	13.8
1991 .....	460	17.4	19,640	13.6
1992 .....	417	16.1	19,311	13.3

(a) Number per 1,000 of mean population.

Deaths: Numbers Registered and Rates, Whyalla and South Australia

Year	Whyalla		South Australia	
	Number	Rate (a)	Number	Rate (a)
1988 .....	146	5.3	10,690	7.6
1989 .....	135	5.1	11,348	8.0
1990 .....	141	5.3	10,938	7.6
1991 .....	168	6.3	11,176	7.7
1992 .....	128	5.0	10,925	7.5

(a) Number per 1,000 of mean population.

**Housing**

Before 1940 most of the homes in Whyalla were constructed by the Company. In that year the South Australian Housing Trust commenced operations and built 100 double units in the town.

The rapid increase in the number of dwellings since the 1939-45 War until the early 1970s is illustrated in the following table which gives the total number of dwellings at each Census.

## Intercensal Comparison of Private Dwellings, Whyalla

<i>Census</i>	<i>Total</i>
1947 .....	1,908
1954 .....	2,130
1961 .....	3,178
1966 .....	5,259
1971 .....	8,095
1976 .....	9,445
1981 .....	9,714
1986 .....	10,113
1991 .....	10,187

At the 1991 Census 5,265 or 51.7 per cent of dwellings were owned by the South Australian Housing Trust in Whyalla.

The stock owned by the Trust has declined in recent years because of an ongoing sales campaign which resulted in the sale of 177 dwellings in 1992-93 and 310 in 1993-94.

## Structure of Dwelling: All Private Dwellings, 1991 Census

<i>Dwelling class</i>	<i>Whyalla</i>		<i>South Australia</i>	
	<i>Number</i>	<i>Per cent</i>	<i>Number</i>	<i>Per cent</i>
Separate house .....	4,501	44.2	437896	76.9
Semi-detached, row or terrace house, townhouse etc. ....	4,805	47.1	75,414	13.2
Flat or apartment .....	708	7.0	43,269	7.6
Caravan etc. in caravan park.....	60	0.6	3,706	0.7
Caravan not in caravan park, houseboat etc.....	21	0.2	1,540	0.3
Improvised home, campers out.....	-	0.0	1,051	0.2
House or flat attached to shop, office etc.....	2.0	0.2	2,326	0.4
Not stated .....	72	0.7	3,961	0.7

At the 1991 Census, 60 per cent of all occupied private dwellings in Whyalla were rented compared with 27.7 per cent in South Australia.

The relatively large proportion of both semi-detached houses in Whyalla (47.1 per cent) and rented properties, highlights the impact of the Housing Trust on the overall housing stock in Whyalla.

**Water supply**

Whyalla's average annual rainfall of 272 millimetres has been insufficient for the area's industrial needs. For some time water was carried across Spencer Gulf in barges, and this means of supply was supplemented by a quantity obtained by distillation of sea-water. In 1911 the South Australian Government constructed a 500,000 litre masonry tank fed by surface catchment and later the Company constructed two excavated reservoirs north of the town with a combined capacity of 50 megalitres. Water in large quantities was also brought to Whyalla as ballast in ore ships.

However, the water available from these various sources was inadequate for the continued industrial development and growth of the town. Port Augusta and the northern farming areas also suffered from a shortage of water. These factors led to the decision to build a pipeline from the River Murray.

**Morgan–Whyalla pipeline**

Construction of this pipeline from the Murray at Morgan to Whyalla commenced in 1940 and was completed in 1944. This first Morgan–Whyalla pipeline is 359 kilometres long and follows a route from Morgan through Hanson, Spalding, Georgetown, Nelshaby (near Port Pirie) and Port Augusta to Whyalla. The pipeline is laid above ground on concrete supports except at road crossings and other places where it is laid underground.

Initially the scheme was designed to meet an annual demand of 9,500 megalitres, 5,500 being available for delivery at Whyalla with the balance available for Port Pirie, Port Augusta and the other northern areas. Water is pumped through pumping stations located at Morgan, Mount Mary, Geranium Plains and Robertstown over a distance of 82 kilometres to an elevation of 474 metres at Hanson. From the Hanson storages the water gravitates the remaining 277 kilometres to Whyalla. Along the route of the pipeline there are several storages and branch lines connected, so that a considerable proportion of the northern and mid–northern area of the State and Yorke Peninsula are supplied wholly or partly with water from the Morgan–Whyalla pipeline.

The rapid development of Whyalla, Port Augusta and other northern areas after the 1939–45 War, and particularly the Broken Hill Proprietary Company decision to manufacture steel at Whyalla, brought demands for water beyond the capacity of the pipeline. At first the capacity was increased by the installation of larger pumps at the pumping stations, but by 1962 it became necessary to construct a duplicate pipeline.

The second pipeline is for the most part parallel to the original pipeline, but a section was laid under the sea across Spencer Gulf making the duplicate 76 kilometres shorter than the original. The laying of all pipes was completed early in 1967.

The greater diameter of the duplicate pipeline, together with additional storages at Hanson, Whyalla and six other points on the line enables the dual pipelines to meet an annual demand of 66,000 megalitres, seven times the capacity of the first completed line in 1944.

**Sewerage**

Until 1959 sewage disposal was by means of a 'night cart' collection. In December 1959 the Whyalla Town Commission determined that all houses should have septic tanks installed. However the disposal of effluent from septic tanks in a concentrated housing area created problems and it was soon realised that a sewerage reticulation system was needed.





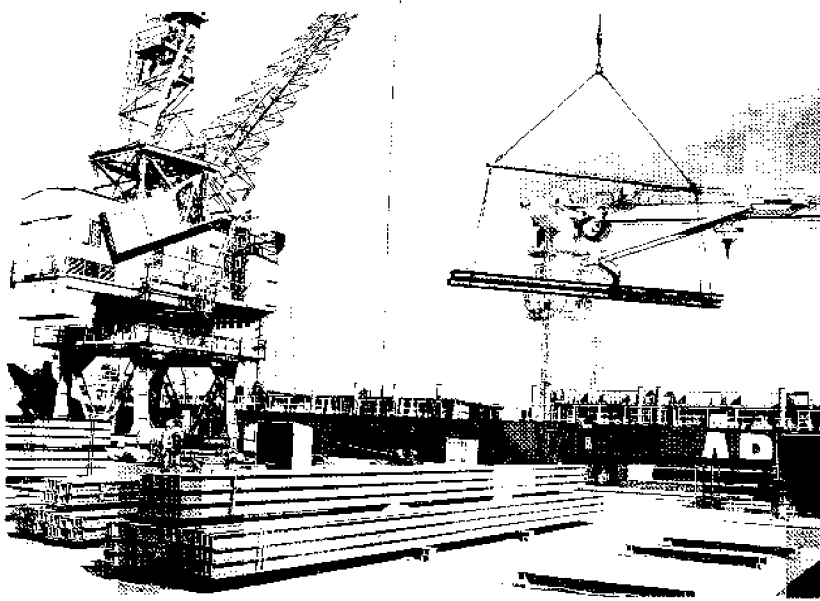
Mining operations at  
Iron Monarch near  
town of Iron Knob.

*BHP Whyalla*



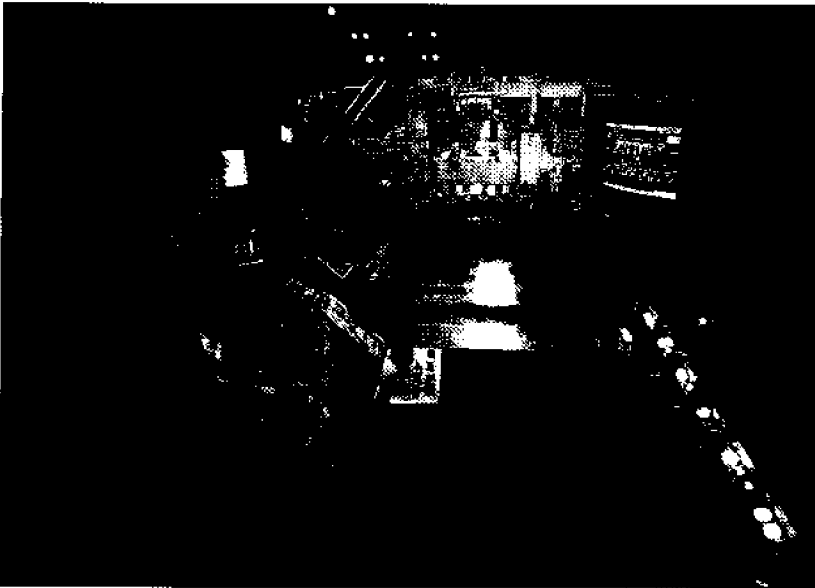
Ada Ryan Gardens.

*Whyalla Industrial  
Development  
Executive Inc.*



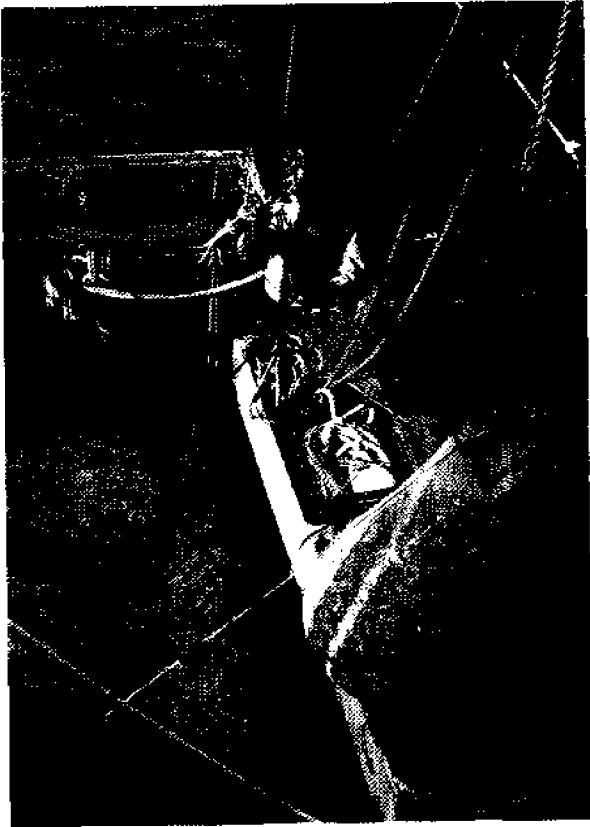
Loading structural  
steel beams at the  
BHP wharf.

*BHP Whyalla*



BHP Steel,  
Long Products Division  
control room.

*Whyalla Industrial  
Development  
Executive Inc.*



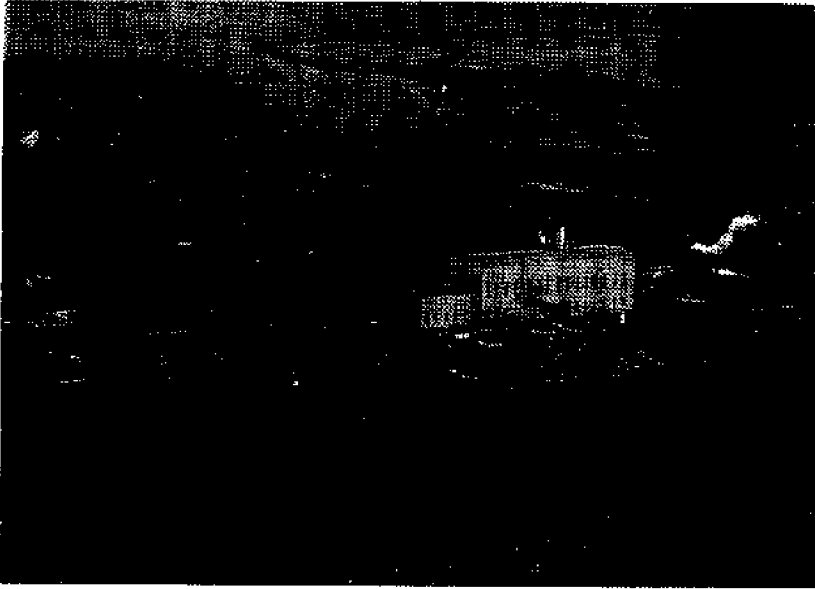
Unloading the prawn catch, Whyalla.

*Whyalla Industrial  
Development  
Executive Inc.*



BHP harbour, a deep sea port.

*Whyalla Industrial  
Development  
Executive Inc.*



Aerial view of BHP  
Whyalla Steelworks  
featuring the  
continuous caster.

*BHP Whyalla*



Mine blast at the  
Iron Monarch pit.

*BHP Whyalla*



Aerial view of the city  
and Whyalla campus  
of the University of  
South Australia.

*Whyalla Industrial  
Development  
Executive Inc.*



Betatene Ltd algae  
extraction plant and  
salt lakes for the  
production of  
beta carotene (food  
colouring).

*Whyalla Industrial  
Development  
Executive Inc.*



Santos refractation plant, Port Bonython.

*Whyalla Industrial Development Executive Inc.*



Snapper fishing near Whyalla.

*Whyalla Industrial Development Executive Inc.*

In August 1964 construction work on the sewerage scheme commenced and by the end of 1969 the town was completely sewered. Sewage is pumped from a station at the south end of the town to a treatment works approximately 1.5 kilometres south of the City boundary.

The sewage is treated in a series of lagoons. Three aerobic lagoons are in use at present. The sewage flows into the first lagoon where seven floating electrical aerators run continuously to provide oxygenation. Effluent then flows into a second lagoon where one aerator runs continuously. Finally the effluent flows into the remaining lagoon prior to discharge via the shallow outfall channel.

The present treatment works has the capacity to serve a population of 37,000 people.

**Electricity and gas supply**

Until 1964 Whyalla's electricity supply was provided from the Company power station which was fuelled by gas from the blast furnace. In this year the Electricity Trust of South Australia undertook the supply and distribution of electricity to the City.

Electricity generated at the Thomas Playford Power Station in Port Augusta is transmitted through 132 kV lines to a terminal substation near the steelworks at Whyalla. From this point, 33 kV transmission lines supply the Whyalla City and Whyalla Stuart substations and the townships of Iron Knob and Iron Baron.

The South Australian Gas Company first supplied gas to houses in Whyalla in 1968. The gas was transported in liquid form to a plant at Whyalla by tankers and distributed by underground mains to houses. In 1989 the City was connected to natural gas via an undersea pipeline from near Port Pirie. Approximately 5,000 homes have gas at their disposal for domestic use. However only 40 per cent of the supply is used domestically with industry, particularly BHP and the hospital, using the remainder. Bottled gas is used by many residents not served by underground mains.

**Local government**

Until May 1945 the functions of local government in Whyalla were administered by the Company which was responsible also for public utilities such as the supply of water and power.

On 1 May 1945 the Whyalla Town Commission was established. Three members were nominated by the Company, three were elected by the ratepayers in the three wards and the chairman was appointed by the South Australian Government. The chairman's functions were the same as those normally carried out by both the mayor and the town clerk of other local government authorities.

The name of the Commission changed to the City of Whyalla Commission on 1 November 1961 when Whyalla was proclaimed a city. The number of wards increased to four in July 1967 and this meant that the ratepayers elected another member, with the number nominated by the Company remaining at three.

The Commission was disbanded when the Corporation of the City of Whyalla came into being on 4 July 1970. The first mayor and eight councillors were all elected by the ratepayers. This followed the appointment of a State Parliamentary committee in September 1968, to investigate a possible changeover in administration from the Commission to administration under the Local Government Act.

Zoning was introduced in 1973 and the city was then able to control development through planning. The Corporation's boundaries were expanded in 1978 to include non-urban areas and the first Development Plan was introduced in 1979.

In 1981 three Aldermen were incorporated into the City Council, bringing the total number of elected members to twelve. A major revision of zoning and of the earlier Development Plan was introduced in 1982, but following a new State Planning Act a further revision became law in 1987. A Strategic Plan was conceived in 1991 which forms the basis of the focus on the future.

#### Transport

Whyalla is accessible by road, rail, air and sea, and all these modes of transport are used. Internal transport in Whyalla is provided by a public bus service, taxis and private vehicles.

By road, Whyalla is 384 kilometres from Adelaide and 75 kilometres from Port Augusta. The city is well serviced by bus from Adelaide with up to six return services daily, while other schedules extend to Port Lincoln *via* the coast or inland towns.

Whyalla is connected to the Transcontinental Railway by a 76 kilometre standard gauge spur line to Port Augusta which was opened on 6 October 1972. Originally providing passenger and freight services, it is now a freight only line with the last passenger services being phased out in the early 1990s.

Commuter air services provide Whyalla with up to six return flights to Adelaide daily. Since 1990, the terminal building has been upgraded and the runway rescaled.

One of South Australia's deep-sea ports, the Whyalla harbour is generally used to receive steelmaking materials, and to export a range of finished and semi-finished steel products around the world. However, it has been host to many visitors over the years, including gulf cruise ships.



General merchandise is freighted mainly by road and rail. Within Whyalla the Corporation maintains 200 kilometres of sealed roads.

**Education**

Whyalla is the State administration centre for the Western Region of South Australia and a Regional Education Office is located in the City. Whyalla has seven pre-schools and kindergartens, nine State and three private primary schools and the Whyalla Special School which caters for children with special needs. In the early 1990s three public high schools formed into the Whyalla College with each school remaining as a campus. The centrally located Edward John Eyre High School is the senior campus, with Whyalla High and Stuart High being junior campuses. In addition there is a private secondary college.

Whyalla has the only regional campus of the University of South Australia and from 1994 has been able to offer on-site accommodation for students.

**Media**

*Newspapers*

Whyalla is served by the local twice-weekly *Whyalla News* which is also the centre for the region's newspaper printing, covering Eyre Peninsular, Port Augusta, Port Pirie and Roxby Downs. *The Advertiser* and *Sunday Mail* are available in Whyalla.

*Television*

The Australian Broadcasting Authority is presently undertaking planning of television services in the Spencer Gulf area and expects to release a draft blueprint for television by the end of 1994.

The Central Television Network transmits from Port Pirie and has an office and production studio in Whyalla. It televises regional news and lifestyle programs weekdays with Whyalla contributing to both programs. The ABC in Adelaide relays programs to the region and other commercial Adelaide stations can be received, with the use of special antennas and boosters. In late 1993 SBS also transmitted to the region.

*Radio*

Two commercial regional stations cover the Whyalla area. An ABC station emanates from Port Pirie and Whyalla has its own non-profit FM station which broadcasts a variety of community, youth and ethnic programs.

**Industry**

Whyalla's early history is closely linked to BHP. Whyalla Industrial Development Executive Incorporated (WIDE) exists to attract, promote, develop and improve industrial, commercial and other business undertakings and employment opportunities to and in the City of Whyalla and its immediate environment. WIDE incorporates representatives of the community from diverse backgrounds.

WIDE initiated Tax-free Business Enterprise Zone which came into effect on 1 July 1993 and provides a 10-year tax-free period for qualifying industries establishing within the specified zone.

Industry present in Whyalla include steel making operations, the processing of raw petrochemicals, locomotive manufacturing and repair, and precision engineering.

Pacific Salt have their saltworks based at the Head of False Bay. Seawater is pumped into several lakes, evaporation leaves the salt behind which is purified and packaged ready for export or domestic use.

Betatec Limited has established an algae extraction plant near salt lakes to the north of Pacific Salt, where algae grows, producing beta carotene or pro-vitamin A. This is sold as a raw material for prawn feed production to feed mills – an algal powder containing beta carotene. Beta carotene is a safe source of vitamin A and is also used worldwide as a colouring in foodstuffs such as cheeses, pastas, margarines, cakes, lollies and fruit juices. The plant is the world's largest producer of natural beta carotene.

Morrison Knudsen of Australia opened a labour intensive locomotive manufacturing and repair plant in 1992. In Whyalla, they specialise in the total re-manufacture of wagons, rolling stock and locomotives for Australia and the Asia-Pacific area.

In 1992-93 there were 29 manufacturing establishments operating in Whyalla employing 2,879 persons.

*Whyalla  
steelworks*

BHP's Long Products Division operates one of four integrated steelworks in Australasia. This Division specialises in the production of steel sections for the building and construction industry. It produces a full range of rail track products, and semi-finished steel slabs and blooms. Other specialist products include iron ore pellets, coke, dolomite, sulphate of ammonia and tar.

The Whyalla No. 2 Blast Furnace, which was commissioned in October 1965, produces over 3,000 tonnes of molten iron (pig iron) a day. This is refined into steel at the Company's Basic Oxygen Steelmaking plant (BOS). From the BOS the molten steel is transported to the Continuous Caster (commissioned in May 1992) where it is moulded into steel slabs and blooms.

*Mining – iron ore*

The Iron Knob and Middleback Ranges mining areas are located only a short distance west of Whyalla. The Iron Knob mining area contains the Iron Monarch, Iron Knob and Iron Princess mines. In the North Middleback range mining area, is the almost depleted Iron Baron area which comprises Iron Prince (dolomite ore), Iron Baron, Iron Queen, Iron Baron South and Iron Cavalier. A further 30 kilometres south of Iron Baron, in the South Middleback Ranges mining area are the Iron Duke, Iron Duchess and Iron Knight deposits. Iron Duke is the newest mine and commenced operations in 1990.

The first iron ore deposit to be mined by The Broken Hill Proprietary Company Limited (BHP) was Iron Knob in November 1899. Initially the high grade ore was transported by bullock dray to Port Augusta and then by train to Port Pirie. At Port Pirie the ore was used as a flux to smelt ore mined at Broken Hill.

From 1915 when BHP opened a new iron and steelworks at Newcastle in New South Wales, high grade ore was shipped from Whyalla to Newcastle. Subsequently ore was also shipped to the Company's iron and steelworks at Port Kembla.

The iron ore is mined by open cut methods, crushed at the mine site and railed in 2,500 to 3,000 tonne loads to Whyalla. At present all the ore from Iron Duke is processed at the Company's Whyalla Pellet Plant, where it is made into iron ore pellets which are used as feed for the Whyalla Blast Furnace.

Iron Ore Production : Iron Knob and Middleback Ranges Mining Areas

Year ended 31 May	Tonnes
1984	1,897,676
1985	1,926,620
1986	2,025,861
1987	2,137,485
1988	2,028,944
1989	2,460,672
1990	2,617,300
1991	2,345,400
1992	2,426,900
1993	2,773,500
1994	2,825,000

### Port Bonython

At Port Bonython, located on the Spencer Gulf, 32 kilometres from Whyalla, Santos Ltd operates one of Australia's largest export businesses. This site, commissioned in 1984, employs approximately 100 people and was chosen because of its suitability as a deep-water, sheltered loading port. Santos operates the facility on behalf of the Joint Venture who are parties to the Cooper Basin Downstream Agreement.

Liquid hydrocarbons recovered from the Cooper-Eromanga Basins are processed in this facility. The gas liquids and crude oil are received as a mixture from Moomba via a 659-kilometre pipeline and are then separated by a fractionation plant.

Marine tankers are loaded at Port Bonython from a 2.4 kilometre long jetty. The products are pumped from storage tanks along a pipeline to the loading arms at the end of the jetty.

Over 100,000 tonnes of LPG per year is delivered to the domestic market by Santos using 20 tonne LPG road tankers.

Production and sales from Port Bonython currently amounts to approximately 1,400 tonnes per day of LPG, 16,000 barrels per day of crude and 12,500 barrels per day of naphtha.

Around 40 per cent of the LPG produced is sold into the Australian markets with the remaining 60 per cent exported, primarily to Japan.

**Rural production** Because of the area's low rainfall and susceptibility to drought, extensive cropping is not possible and most of the rural land is devoted to low density sheep farming.

**Shopping facilities** The main business centre of Whyalla is near the eastern boundary of the City where development first commenced. Since then further shopping centres have been built to serve the growing population. There are several minor shopping centres which include delicatessens and other small stores. Milk, bread and newspapers are obtainable by home delivery.

During 1991–92 there were 228 retail establishments operating in Whyalla and the value of retail sales was \$126.3 million. There were 1,307 persons employed in retail establishments at June 1992.

**Health services** The Whyalla Hospital and Health Services provides facilities for Whyalla and Eyre Peninsula. The first hospital building was opened on 9 April 1940. In 1966 it underwent a major re-building program with an additional multi-million dollar expansion in the early 1980s. The hospital provides patient accommodation of 131 beds for medical, surgical, obstetric and paediatric cases, and 14 beds for day surgical cases. Whyalla has resident specialists, provides services such as speech pathology, physiotherapy, social work, occupational therapy, podiatry and dietetics, while visiting specialists cover other services and dental care.

The Whyalla Community Health Service provides a range of services through community health, community mental health and domiciliary care teams and there are a number of support services and organisations operating.

Yeltana Nursing Home caters for elderly residents who require attention and cannot live at home; Annie Lockwood Court Hostel provides independent residential accommodation for the elderly; International offers hostel accommodation for the physically and intellectually disabled and for those who need respite care.

**Recreation and culture** Whyalla has a full range of sporting facilities and recreation areas are located throughout the city with some providing barbecue facilities.

The city also has two public libraries, a child care centre, the Middleback Theatre, service clubs, ethnic organisations, youth and senior citizen organisations and a broad range of religious communities.

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Year	Banking			Savings banks deposits at 30 June	General insurance revenue (a)	Friendly societies members at 30 June
	Trading banks		Savings banks deposits at 30 June			
	Advances	Deposits				
	\$m	\$m	\$m	\$'000	No.	
1856		1	—			
1861	3	1	—			
1866	6	3	—			
1871	6	3	1			
1876	9	7	2			
1881		10	2			
1886	13	10	3			
1891	19	10	3			
1896	16	16	4			
1901	9	15	6			
	9	13	8			
1906		16	10			
1911	11	22	15			
1916	17	27	20			65,540
1921	20	44	33	1,305		70,155
1926	27	52	44	2,045		77,791
1931	32					
1936	44	45	43	1,627		(b)
1941	44	52	51	1,859		71,658
1946	40	64	55	2,643		76,357
1951	32	93	132	2,705		80,419
	62	207	196	9,298		71,591
1956		241	272	20,590		57,216
1961	109	270	333	32,363		51,551
1966	147	270	333	32,363		51,551
1971	(c)274	(c)365	559	50,121		51,109
1972	411	436	788	76,020		50,488
1973	448	474	874	89,173		50,077
	516	620	1,060	98,678		50,664
1974		816	1,175			
1975	672	973	1,395	127,473		50,779
1976	749	1,214	1,617	(d)187,316		49,888
1977	914	1,301	1,781	231,649		48,057
1978	1,147	1,302	1,945	267,840		45,815
	1,419			(e)266,594		43,051
1979		1,437	2,138			
1980	1,728	1,652	2,277	263,903		41,575
1981	1,938	1,813	2,457	282,268		39,431
1982	2,149	1,901	2,596	307,453		38,061
1983	2,390	1,933	2,979	354,432		36,171
	2,562			428,695		35,017
1984		1,977	3,327			
1985	2,840	2,903	3,113	n.a.		n.a.
1986	3,430	3,750	2,971	n.a.		n.a.
1987	4,161	3,784	3,390	n.a.		n.a.
1988	4,625	4,521	3,808	n.a.		n.a.
	5,433			n.a.		n.a.
1989		5,728	3,594			
1990	6,536			n.a.		n.a.
	(f)13,771		(f)12,074	n.a.		n.a.
1991	15,853		12,709	n.a.		n.a.
1992	16,054		13,050	n.a.		n.a.
1993	17,133		13,988	n.a.		n.a.

(a) Year ended 30 June. (b) Membership at 30 June from 1932; previously 31 December. (c) Until 1961, average of balances at close of business on Wednesdays during June thereafter average of weekly figures for the month of June. (d) From 1974-75 premium income only; details of interest, dividends and rent no longer available. (e) Details of brokers are excluded from 1977-78. (f) From 1990 all banks.

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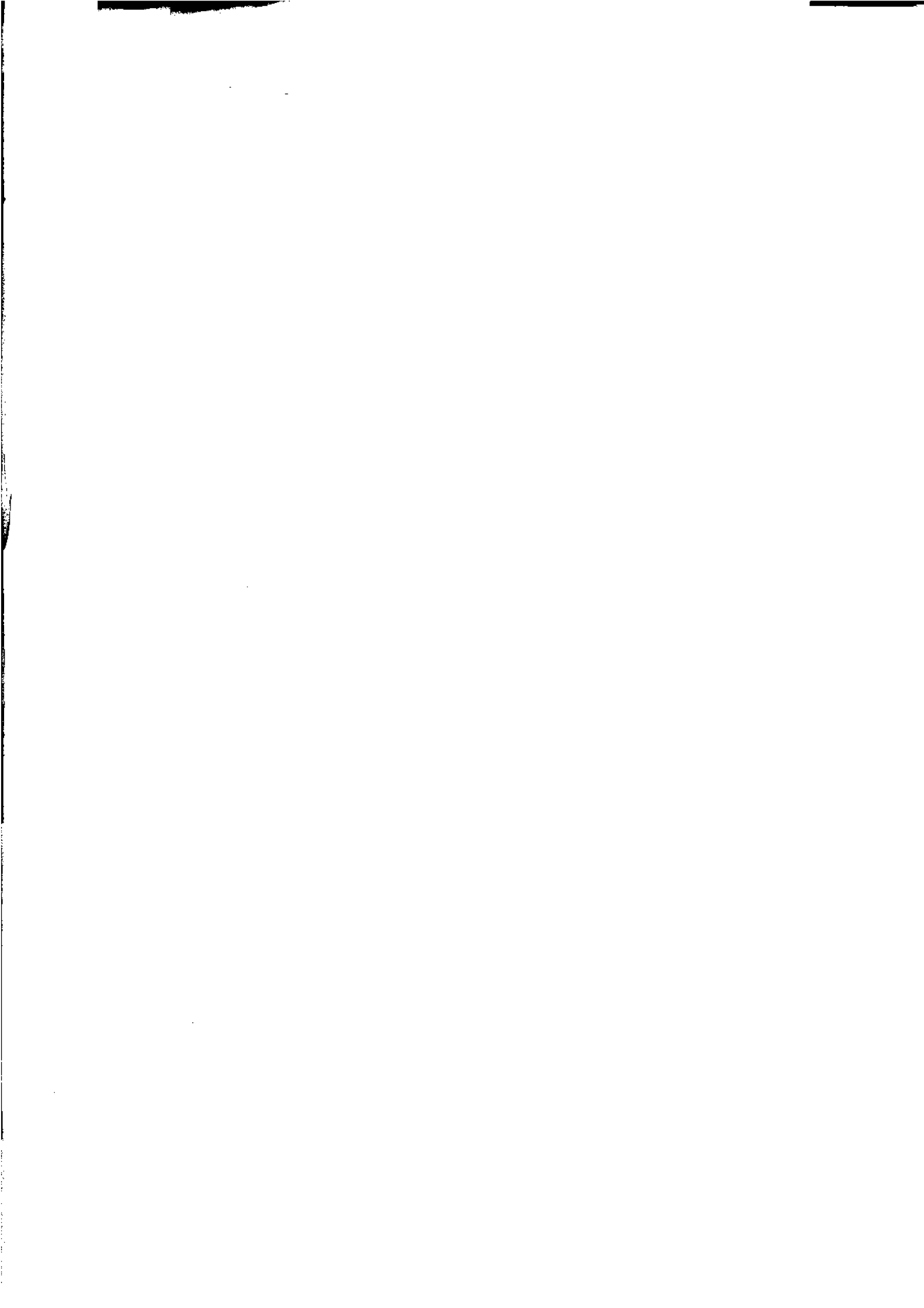
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