



ENVIRONMENTAL ISSUES AND USAGE OF NATIONAL PARKS, AUSTRALIA APRIL 1986

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MAIN FEATURES

The environment

At April 1986, of the civilian population aged 15 years and over, 47 per cent (about 5.5 million) were concerned about problems with the environment in Australia. The percentage was slightly higher for females than males, and the percentage in the 25-44 years age group was significantly higher than other age groups.

The problems that most people were concerned about were pollution (30 per cent of the civilian population aged 15 years and over), nature conservation of flora/fauna (21 per cent) and tree deforestation (19 per cent).

The number of persons actually registering complaints about pollution in the twelve months to April 1986 was 442 thousand, or about 4 per cent. Similarly the number of persons registering complaints about other environmental problems in the same period was 558 thousand or about 5 per cent.

Recycling of resources

At April 1986 34 per cent of households were actively involved in the recycling of glass and bottles. South Australia had the highest rate of participation with 51 per cent of households being involved.

A total of 1.6 million households or 29 per cent were involved in the recycling of paper, with the Australian Capital Territory (44 per cent), and Victoria (42 per cent) having the highest participation rates.

In contrast to the recycling of glass, bottles and paper, only 19 per cent of households were involved in the recycling of aluminium and steel cans with South Australia again having the highest participation rate with 33 per cent.

Usage of World Heritage Areas and other national parks
Of the civilian population aged 15 years and over, it is estimated that 790 thousand persons or about 7 per cent visited the World Heritage Areas in Australia in the twelve months to April 1986; the most frequently visited being the Great Barrier Reef which was visited by 486 thousand persons.

In the same period it is estimated that about 35 per cent of the civilian population aged 15 years and over had visited a national park in Australia (other than a World Heritage Area).

EXPLANATORY NOTES

Introduction

The monthly Population Survey (which is described in *The Labour Force, Australia* (6203.0)) comprises the monthly labour force survey and supplementary topics. This publication contains some results of a supplementary survey run in association with the April 1986 labour force survey conducted throughout Australia.

2. Of the respondents to the labour force survey, those who fell within the scope of the supplementary survey were asked additional questions. For this sub-set of respondents information was collected from any responsible adult on behalf of all other members of the household regarding their concerns and actions on environmental issues and programs. Specifically the information collected included:

- whether they were concerned about the environment;
- which environmental problems they were concerned about;
- whether they had registered complaints about pollution or other environmental problems in the previous twelve months; and
- whether households participated in the recycling of household refuse.

3. Information was also collected about the use of national parks and in particular World Heritage Areas in the previous twelve months.

Scope

4. The scope of the survey included all persons aged 15 years and over, except:

- members of the permanent defence force;
- certain diplomatic personnel of overseas governments, customarily excluded from census and estimated populations;
- overseas residents in Australia;
- members of non-Australian defence forces (and their dependants) stationed in Australia; and

- (e) boarding school students, patients in hospitals and homes, and inmates of reformatories, gaols, etc.

Definitions

5. National Parks are those designated as such under the national parks legislation of the Commonwealth and State Governments. For the purpose of this survey it comprised those parks listed as 'national parks' in the *Australian National Parks and Wildlife Service 'Occasional Paper No. 10 — Nature Conservation Reserves in Australia (1984)'*.

6. World Heritage Areas are those places which have been assessed by the World Heritage Committee as being of outstanding universal value and are inscribed on the UNESCO World Heritage List. Five Australian places have been nominated and accepted as World Heritage Areas: The Great Barrier Reef, Kakadu National Park, The Willandra Lakes Region, Western Tasmania Wilderness National Parks and The Lord Howe Island Group. For the purpose of this survey data were not collected in respect of The Lord Howe Island Group.

Reliability of the estimates

7. Two types of error are possible in an estimate based on a sample survey: sampling error and non sampling error. *Sampling error* is a measure of the variability that occurs by chance because a sample, rather than the entire population is surveyed. Since the estimates in this publication are based on information obtained from occupants of a sample of dwellings they are subject to sampling variability; that is, they may differ from the figures that would have been produced if all dwellings had been included in the survey. One measure of the likely difference is given by the standard error which indicates the extent to which an estimate might have varied by chance because only a sample of dwellings was included. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained if all dwellings had been included in the survey, and about nineteen chances in twenty that the difference will be less than two standard errors. A table of estimated standard errors for this survey is located at the back of this publication.

8. An example of the calculation and use of standard errors is given below:

From Table 1 an estimated 1,033,100 persons in Australia aged 15-24 were concerned about the environment. From the table of standard errors it will be seen that this estimate has a standard error of about 9800. Therefore there are two chances in three that the number that would have been obtained if all dwellings had been included in the survey would have been within the range 1,023,300 to 1,042,900 and about nineteen chances in twenty that it would have been within the range 1,013,500 to 1,052,700.

9. Another measure of sampling variability is the relative standard error which is obtained by expressing the standard error as a percentage of the estimate to which it refers. The relative standard error of estimates of proportions and percentages appearing in this publication

is approximately equal to the relative standard error of the numerator of the proportion. Estimates with a standard error of more than about 25 per cent have not been shown in this publication, as the degree of sampling variability would seriously detract from their value for most reasonable uses. Although figures for those small components can, in some cases be derived by subtraction they should not be regarded as reliable. More information about this topic can be found in *The Labour Force, Australia (6203.0)*.

10. *Non-sampling errors* are the inaccuracies that may occur because of imperfections in reporting by interviewers and respondents and errors made in the coding and processing of data. Such inaccuracies may occur in any enumeration whether it be a full count or a sample. Sources of potential error in this survey included;

(i) Any Responsible Adult Methodology — as mentioned in paragraph 2, information was collected from any responsible adult on behalf of all other members of the household. In situations where the respondent was unable to answer on behalf of other members of the household, they have been excluded from the tables and in the calculation of percentages. Approximately 1.5% of respondents fell into this category. Further, the responses received may differ from those that would have been received using a personal interview methodology.

(ii) Identification of National Parks — as the boundaries of some national parks and World Heritage Areas are not well delineated nor recognised by travellers or visitors, it is possible that respondents have indicated that they have visited a national park or World Heritage Areas when in fact they haven't and vice-versa.

11. Every effort has been made to reduce the non sampling error to a minimum by careful design of questionnaires, intensive training and supervision of interviewers and efficient operating procedures. However, it has not been possible to overcome the two specific sources of error referred to above.

Related publications

12. Users may wish to refer to *The Labour Force, Australia (6203.0)* — issued monthly (\$1.20, \$2.10 incl postage).

13. Current publications produced by the ABS are listed in the *Catalogue of Publications, Australia (1101.0)*. The ABS also issues on Tuesdays and Fridays, a *Publications Advice (1105.0)* which lists publications to be released in the next few days. The Catalogue and Publications Advice are available from any ABS office.

Symbols and other usages

* subject to sampling variability too high for most practical uses. See paragraph 9 above.

14. Because figures have been rounded, discrepancies may occur between sums of the component items and totals.

Electronic services

15. VIATEL. Key *656# for selected current economic, social and demographic statistics.

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TABLE 1. PERSONS CONCERNED ABOUT THE ENVIRONMENT: BY AGE GROUPS

TABLE 1. PERSONS CONCERNED ABOUT THE ENVIRONMENT BY AGE GROUP							
	Age group (years)						Total
	15-24	25-34	35-44	45-54	55-64	65 and over	
	Number ('000)						
Males	487.6	660.3	580.8	374.1	316.2	241.9	2,660.8
Females	545.5	702.1	603.8	338.1	330.5	292.8	2,862.7
Persons	1,033.1	1,362.4	1,184.5	702.3	646.6	534.6	5,523.5
	Proportion (per cent) (a)						
Males	37.9	52.8	52.5	48.0	44.7	36.8	46.0
Females	42.9	55.2	55.0	51.3	45.7	34.2	47.9
Persons	40.4	54.1	53.7	49.6	45.2	35.3	46.9

(a) Percentages are expressed as proportions of civilian population 15 years and over excluding those persons for which no answer was obtained — see paragraph 10(i) of Explanatory Notes.

TABLE 2. PERSONS CONCERNED ABOUT THE ENVIRONMENT BY AGE GROUPS: TYPE OF ENVIRONMENTAL PROBLEM

TABLE 2. PERSONS CONCERNED ABOUT THE ENVIRONMENT BY AGE GROUP							
Type of environmental problem	Age group (years)						Total
	15-24	25-34	35-44	45-54	55-64	65 and over	
	Number ('000) (a)						
Pollution	643.3	909.0	786.2	507.1	392.1	300.4	3,538.1
Nature conservation of flora/fauna	476.5	650.2	530.4	311.1	247.9	190.3	2,406.4
Tree deforestation	390.1	582.9	500.3	285.3	241.2	183.7	2,183.5
Nuclear issues/uranium	427.8	521.9	372.3	181.4	141.9	107.1	1,752.3
Development/planning issues	162.2	293.5	270.1	153.8	137.6	101.2	1,118.4
Soil erosion	160.6	295.1	260.2	142.1	125.2	91.0	1,074.2
Preserving buildings	138.3	240.3	224.6	124.3	102.3	78.7	908.4
Water salinity	131.3	246.8	211.7	112.9	96.4	66.7	865.9
Other	81.1	116.8	115.2	70.4	71.4	63.8	518.7
Proportion (per cent) (a)(b)							
Pollution	25.1	36.1	35.7	33.0	27.4	19.9	30.1
Nature conservation of flora/fauna	18.6	25.8	24.1	20.3	17.3	12.6	20.5
Tree deforestation	15.2	23.1	22.7	18.6	16.8	12.1	18.6
Nuclear issues/uranium	16.7	20.7	16.9	11.8	9.9	7.1	14.9
Development/planning issues	6.3	11.6	12.3	10.0	9.6	6.7	9.5
Soil erosion	6.3	11.7	11.8	9.3	8.7	6.0	9.1
Preserving buildings	5.4	9.5	10.2	8.1	7.1	5.2	7.7
Water salinity	5.1	9.8	9.6	7.4	6.7	4.4	7.4
Other	3.2	4.6	5.2	4.6	5.0	4.2	4.4

(a) Respondents were allowed to register more than one concern, therefore numbers and proportions do not add to those shown in Table 1. (b) Percentages are expressed as proportions of civilian population 15 years and over excluding those persons for which no answer was obtained — see paragraph 10(i) of Explanatory Notes.

TABLE 3. PERSONS CONCERNED ABOUT THE ENVIRONMENT: TYPE OF ENVIRONMENTAL PROBLEM, STATES AND TERRITORIES

Type of environmental problem	N.S.W.	Vic.	Qld	W.A.	S.A.	Tas.	N.T.	A.C.T.	Australia
Number ('000)									
Pollution	1,286.7	1,029.5	488.4	248.0	292.9	85.8	37.3	69.6	3,538.1
Nature conservation of flora/fauna	754.8	569.2	509.4	176.6	228.8	74.7	33.3	59.6	2,406.4
Tree deforestation	665.1	546.7	388.6	202.2	202.4	84.2	33.5	60.7	2,183.5
Nuclear issues/uranium	536.4	474.6	291.0	127.9	177.0	72.9	26.9	45.7	1,752.3
Development/planning issues	372.6	257.9	214.7	77.0	99.2	43.6	19.4	33.9	1,118.4
Soil erosion	315.0	256.0	228.3	67.5	113.7	37.9	21.2	34.6	1,074.2
Preserving buildings	268.2	214.1	185.4	62.8	90.7	45.0	16.1	26.2	908.4
Water salinity	225.8	256.9	111.0	70.0	135.4	27.7	13.3	25.8	865.9
Other	189.8	125.9	70.7	54.7	56.9	9.7	4.1	6.9	518.7
Proportion (per cent)(a)									
Pollution	31.4	32.9	26.1	23.9	28.6	26.3	38.1	38.3	30.1
Nature conservation of flora/fauna	18.4	18.2	27.2	17.0	22.3	22.9	34.0	32.8	20.5
Tree deforestation	16.2	17.5	20.7	19.5	19.7	25.8	34.2	33.4	18.6
Nuclear issues/uranium	13.1	15.2	15.5	12.3	17.3	22.4	27.5	25.2	14.9
Development/planning issues	9.1	8.2	11.5	7.4	9.7	13.4	19.8	18.7	9.5
Soil erosion	7.7	8.2	12.2	6.5	11.1	11.6	21.6	19.1	9.1
Preserving buildings	6.5	6.8	9.9	6.1	8.8	13.8	16.4	14.4	7.7
Water salinity	5.5	8.2	5.9	6.8	13.2	8.5	13.6	14.2	7.4
Other	4.6	4.0	3.8	5.3	5.5	3.0	4.2	3.8	4.4

(a) Percentages are expressed as proportions of civilian population 15 years and over excluding those persons for which no answer was obtained — see paragraph 10(i) of Explanatory Notes

TABLE 4. PERSONS REGISTERING COMPLAINTS ABOUT POLLUTION AND OTHER ENVIRONMENTAL PROBLEMS, TWELVE MONTHS ENDED APRIL 1986: STATES AND TERRITORIES

	Pollution		Other environmental problems	
	Number	Proportion (a)	Number	Proportion (a)
	('000)	(per cent)	('000)	(per cent)
N.S.W.	158.8	3.8	179.3	4.3
Vic.	134.3	4.3	131.9	4.2
Qld	64.6	3.4	122.7	6.5
W.A.	28.9	2.8	49.7	4.7
S.A.	35.4	3.4	41.7	4.0
Tas.	10.0	3.0	15.1	4.6
N.T.	4.1	4.1	6.1	6.1
A.C.T.	6.2	3.4	11.3	6.2
Australia	442.3	3.7	557.8	4.7

(a) Percentages are expressed as proportions of civilian population 15 years and over excluding those persons for which no answer was obtained — see paragraph 10(i) of Explanatory Notes.

TABLE 5. HOUSEHOLDS RECYCLING REFUSE: TYPE OF REFUSE, METHOD OF COLLECTION, STATES AND TERRITORIES

<i>Refuse recycled and method of collection</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>W.A.</i>	<i>S.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Australia</i>
<i>Number ('000)</i>									
Glass and bottles— taken to special area	156.9	217.4	141.1	100.1	166.7	43.0	*	26.0	851.7
collected from home	397.2	391.7	33.7	72.7	82.2	12.8	*	1.5	992.0
<i>Total</i>	<i>554.1</i>	<i>609.1</i>	<i>174.8</i>	<i>172.8</i>	<i>248.8</i>	<i>55.8</i>	<i>*</i>	<i>27.5</i>	<i>1,843.7</i>
Paper— taken to special area	105.3	166.7	40.8	43.5	45.2	9.0	*	18.0	429.9
collected from home	433.3	433.2	139.0	30.0	106.0	3.5	*	17.7	1,163.2
<i>Total</i>	<i>538.6</i>	<i>599.9</i>	<i>179.8</i>	<i>73.5</i>	<i>151.2</i>	<i>12.5</i>	<i>2.1</i>	<i>35.6</i>	<i>1,593.1</i>
Aluminium and steel cans— taken to special area	334.8	155.0	111.5	76.7	134.9	6.8	9.8	13.3	843.0
collected from home	77.9	56.5	23.0	20.5	26.7	2.2	*	1.5	209.6
<i>Total</i>	<i>412.7</i>	<i>211.5</i>	<i>134.5</i>	<i>97.2</i>	<i>161.6</i>	<i>9.0</i>	<i>11.1</i>	<i>14.9</i>	<i>1,052.6</i>
<i>Proportion (per cent)</i>									
Glass and bottles— taken to special area	8.3	15.3	16.3	21.0	34.3	27.3	*	31.9	15.7
collected from home	20.9	27.6	3.9	15.2	16.9	8.1	*	1.8	18.3
<i>Total</i>	<i>29.1</i>	<i>42.9</i>	<i>20.2</i>	<i>36.2</i>	<i>51.3</i>	<i>35.5</i>	<i>*</i>	<i>33.8</i>	<i>34.0</i>
Paper— taken to special area	5.5	11.7	4.7	9.1	9.3	5.7	*	22.1	7.9
collected from home	22.8	30.5	16.0	6.3	21.8	2.2	*	21.7	21.4
<i>Total</i>	<i>28.3</i>	<i>42.2</i>	<i>20.8</i>	<i>15.4</i>	<i>31.1</i>	<i>7.9</i>	<i>5.2</i>	<i>43.7</i>	<i>29.3</i>
Aluminium and steel cans— taken to special area	17.6	10.9	12.9	16.1	27.8	4.3	24.3	16.4	15.5
collected from home	4.1	4.0	2.7	4.3	5.5	1.4	*	1.9	3.9
<i>Total</i>	<i>21.7</i>	<i>14.9</i>	<i>15.6</i>	<i>20.4</i>	<i>33.3</i>	<i>5.7</i>	<i>27.6</i>	<i>18.3</i>	<i>19.4</i>

TABLE 6. PERSONS VISITING A WORLD HERITAGE AREA (a) IN THE TWELVE MONTHS ENDED APRIL 1986: STATES AND TERRITORIES

World Heritage Area					Total (c)
The Great Barrier Reef (QLD)	Kakadu National Park (N.T.)	The Willandra Lakes Region (N.S.W.)	Western Tasmania Wilderness National Parks		
Number ('000)(b)					
N.S.W.	134.2	31.0	12.9	53.7	215.6
Vic.	74.5	20.9	12.5	52.6	150.9
Qld	216.4	12.3	4.4	22.7	246.2
W.A.	16.8	7.8	*	7.5	30.9
S.A.	22.8	13.1	1.8	13.7	48.5
Tas.	7.2	1.1	*	47.2	53.7
N.T.	5.8	22.8	*	*	28.4
A.C.T.	8.6	2.7	*	4.9	16.0
Australia	486.2	111.8	34.7	283.5	796.8

(a) See paragraph 6 of Explanatory Notes. (b) See paragraph 10(ii) of Explanatory Notes. (c) Total may not equal sum of components as respondents may have visited more than one World Heritage Area.

TABLE 7. PERSONS VISITING A NATIONAL PARK (a), BY AGE GROUPS, TWELVE MONTHS ENDED APRIL 1986:
STATES AND TERRITORIES

	Age group (years)						Total
	15-24	25-34	35-44	45-54	55-64	65 and over	
	Number ('000)(b)						
N.S.W.	330.4	386.0	318.9	181.2	138.9	92.8	1,448.2
Vic.	226.4	257.1	212.0	119.1	97.8	61.0	973.4
Qld	167.2	180.0	151.8	83.9	64.4	34.4	681.6
W.A.	103.6	119.5	101.6	57.8	37.0	25.8	445.4
S.A.	79.7	103.7	91.7	44.5	40.3	27.3	387.1
Tas.	19.0	21.9	17.6	10.1	6.7	4.8	80.1
N.T.	3.4	6.9	5.9	*	*	*	18.3
A.C.T.	18.9	22.9	18.4	8.8	3.7	2.3	75.0
Australia	948.7	1,098.0	917.9	506.9	388.9	248.8	4,109.2
	Proportion (per cent)(c)						
N.S.W.	37.7	44.3	41.1	32.9	26.5	16.8	34.9
Vic.	32.4	39.0	36.7	29.0	25.3	14.6	30.9
Qld	39.7	44.2	42.3	34.7	28.9	14.2	36.0
W.A.	44.1	50.2	49.5	41.8	32.6	22.7	42.7
S.A.	35.7	47.5	48.6	33.5	29.7	19.4	37.3
Tas.	26.7	33.2	31.8	25.1	17.6	11.3	25.5
N.T.	12.9	23.0	25.4	*	*	*	18.2
A.C.T.	42.6	51.7	45.0	37.3	21.0	19.1	41.0
Australia	36.5	43.3	41.2	32.7	26.9	16.3	34.6

(a) See paragraph 5 of Explanatory Notes, excludes national parks which form part of World Heritage Areas. (b) See paragraph 10(ii) of Explanatory Notes. (c) Percentages are expressed as proportions of civilian population 15 years and over excluding those persons for which no answer was obtained — see paragraph 10(i) of Explanatory Notes.

STANDARD ERRORS OF ESTIMATES

Size of estimate	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia
	— number —								per cent of estimate
1,000						250			
1,300						280		310	
1,500						300		330	
1,800				430		330		410	
2,000				460	480	340		430	
2,500				500	530	380		470	
3,000			690	550	580	410		500	
3,500			750	590	620	440		530	
4,000	950	960	800	620	660	460		560	820
4,500	1,000	1,000	840	650	690	480		590	880
5,000	1,050	1,050	880	690	720	500		610	930
6,000	1,150	1,150	960	740	780	540		650	980
10,000	1,450	1,450	1,200	920	970	660		790	1,100
20,000	2,000	1,950	1,650	1,200	1,300	860	1,050	810	1,400
50,000	2,900	2,850	2,350	1,700	1,800	1,150	1,450	1,050	1,950
100,000	3,850	3,700	3,050	2,200	2,300	1,450		1,250	2,950
200,000	5,100	4,750	3,950	2,750	2,950	1,750			5,300
300,000	5,900	5,500	4,500	3,100	3,350				6,200
500,000	7,200	6,500	5,300	3,650	3,900				7,500
1,000,000	9,200	8,100	6,600						9,700
2,000,000	11,600	9,900							12,300
5,000,000									16,500