

New  
Issue

# **Environment Expenditure**

## **Local Government (Experimental Estimates)**

**Australia**

**1997-98**

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AUSTRALIAN BUREAU OF STATISTICS

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## INQUIRIES

- For more information about these and related statistics, contact Bob Harrison on Canberra 02 6252 7369, or Client Services in any ABS office as shown on the back page of this publication.

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# PREFACE

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## BACKGROUND

This publication presents estimates of expenditures on environment protection and natural resource use and management by local government authorities of Australia. The information is collected using an international framework known as the European System for the Collection of Economic Information on the Environment (SERIEE) developed by the European Statistical Office (Eurostat). SERIEE defines broader regions of environment protection and natural resources than government finance statistics.

The survey is the first of its type in Australia. Given the experimental nature of this type of collection, the ABS welcomes feedback from readers regarding the usefulness, range and quality of the data presented and explanations provided. Please send any comments to the Director, Environment and Energy Statistics Section, Australian Bureau of Statistics, PO Box 10, Belconnen, ACT 2616.

The results from the 1998–99 survey are expected to be published in mid-2000.

Dennis Trewin  
Acting Australian Statistician



# SUMMARY OF FINDINGS

## ENVIRONMENT PROTECTION AND NATURAL RESOURCES

### INTRODUCTION

This is the first in a series of annual publications that are designed to provide environment expenditure statistics for local government authorities. It is a part of the environmental accounts series for Australia. In particular, this data is linked to the *Environment Protection Expenditure Account for Australia* (Cat. no. 4603.0).

These statistics are based on a collection of local government funds used to protect the environment and the use and management of natural resources within its boundaries.

This publication provides a broad overview of the transactions that occur within councils which are related to the environment. Included are details of the financial transfers that relate to the environment which occur between Commonwealth, State and local government. The nature of the environment protection and natural resources accounts are discussed in depth in the Explanatory Notes.

### OVERVIEW

Funding for environment related activities accounts for 28% (\$2.8 billion) of all council revenues. Current expenditure on the environment by local government amounted to \$2.8 billion, or about 44% of all council outlays. Capital expenditure on the environment for local government accounted for 21% (\$725 million) of all capital outlays.

#### 1 ENVIRONMENT INCOME AND EXPENDITURE, By account—1997–98

Transaction	ENVIRONMENT PROTECTION..		NATURAL RESOURCES..		Total
	Total	Per capita	Total	Per capita	
	\$m	\$	\$m	\$	
<b>Income</b>					
Rates from household and industry	1 631	103	796	52	2 427
Government funding	91	5	45	2	136
Other miscellaneous	98	7	107	8	205
<b>Total</b>	<b>1 820</b>	<b>116</b>	<b>948</b>	<b>62</b>	<b>2 768</b>
<b>Current expenses</b>					
Wages and salaries	434	26	425	26	859
Operational expenses	1 251	76	659	44	1 910
<b>Total</b>	<b>1 685</b>	<b>102</b>	<b>1 084</b>	<b>71</b>	<b>2 769</b>
<b>Capital expenses</b>					
Acquisitions	143	16	100	8	243
Other	285	16	197	9	482
<b>Total</b>	<b>428</b>	<b>31</b>	<b>297</b>	<b>18</b>	<b>725</b>

## SUMMARY OF FINDINGS *continued*

### RESULTS BY ACCOUNT

#### Environment protection

Environment protection activities are described in the Explanatory Notes. Briefly, environment protection data shows expenditure on minimising economic impacts on the environment and the remediation of previous activity. It is the largest component of environment related accounts.

Income for environment protection activities comes mainly from rates collection. Approximately 90% of all environment protection income is from this source. State and Commonwealth government funding of environment protection activities contributes a further 5% (\$91 million) of total environment protection income (also see page 4).

Environment protection expenditure is primarily solid waste and waste water management. These two domains contributed \$1.5 billion or just over 85% of total environment protection expenditure. Expenses in solid waste (\$875 million) were greater than those in waste water management (\$598 million).

### 2 ENVIRONMENT PROTECTION, By domain—1997–98

#### DOMAIN.....

Transaction	Waste water \$'000	Solid waste \$'000	Biodiversity and landscape \$'000	Soil and groundwater \$'000	Air \$'000	Cultural heritage \$'000	Other \$'000	Total \$'000
<b>Income</b>								
Rates from household and industry	750 779	838 457	17 738	5 459	1 118	1 663	15 707	1 630 921
Government funding								
Specific subsidies	17 748	3 876	11 115	2 665	n.a.	1 848	13 983	51 235
Investment grants	24 262	1 580	7 188	1 718	—	290	4 479	39 517
Other	86 322	3 368	3 095	651	199	82	4 037	97 754
<b>Total</b>	<b>879 111</b>	<b>847 281</b>	<b>39 136</b>	<b>10 493</b>	<b>1 317</b>	<b>3 883</b>	<b>38 206</b>	<b>1 819 427</b>
<b>Current expenses</b>								
Wages and salaries	166 491	193 138	27 495	7 925	3 081	6 217	29 240	433 587
Operational expenses								
Contractors	49 850	463 781	13 419	3 454	491	4 494	45 067	580 556
Materials	156 727	113 540	12 491	8 405	1 241	1 654	13 826	307 884
Government payments	11 242	47 817	6 983	405	(a)	131	3 344	69 922
Other	213 533	56 521	5 514	654	1 416	676	14 441	292 755
<b>Total</b>	<b>597 843</b>	<b>874 797</b>	<b>65 902</b>	<b>20 843</b>	<b>6 229</b>	<b>13 172</b>	<b>105 918</b>	<b>1 684 704</b>
<b>Capital expenses</b>								
Acquisitions	113 931	49 344	15 293	1 512	319	1 246	6 065	187 710
Own account work	75 527	13 509	8 814	2 014	165	45	931	101 005
Contracted payments	142 197	17 603	4 183	2 335	—	15 275	2 289	183 882
<b>Total</b>	<b>331 655</b>	<b>80 456</b>	<b>28 290</b>	<b>5 861</b>	<b>484</b>	<b>16 566</b>	<b>9 285</b>	<b>472 597</b>

(a) Due to the size of the estimate, data is included in Other expenses.



## SUMMARY OF FINDINGS *continued*

### Natural resource use and management

The second component of the environment related account deals with natural resource use and management. Natural resource use and management activities are described in the Explanatory Notes. Briefly, natural resource use and management activities are those involved with the use of natural assets (trees, land, water, minerals, biodiversity) and their management to reduce the use of certain resources. Also included in this account are the activities associated with the recreational use of the environment.

As shown in table 3, the majority of natural resource use and management income comes from inland water activities (75% of total natural resources income or nearly \$710 million). The contribution of land management to total natural resource income is 23% (\$218 million).

Expenditure is mainly on land management expenses, contributing to nearly 50% (\$536 million) of total natural resource use and management expenses. Inland water accounts for just over 45% (\$498 million) of total natural resource expenditure.

Capital expenditure by local government is mainly aimed towards inland water supply, accounting for 59% (\$174 million) of total natural resource use and management capital expenditure. Land management is also a priority for local government, contributing to nearly 40% (\$114 million) of total capital expenses on natural resources.

### 3 NATURAL RESOURCE MANAGEMENT, By domain—1997–98

Transaction	DOMAIN.....			Total
	Inland water	Land management	Other	
	\$'000	\$'000	\$'000	\$'000
<b>Income</b>				
Rates from household and industry	618 872	155 071	22 247	796 190
Government funding				
Specific subsidies	14 225	6 354	159	20 738
Investment grants	25 111	5 096	20	30 227
Other	51 765	52 020	2 926	106 711
<b>Total</b>	<b>709 973</b>	<b>218 541</b>	<b>25 352</b>	<b>953 866</b>
<b>Current expenses</b>				
Wages and salaries	149 325	262 052	13 251	433 587
Operational expenses				
Contractors	24 743	75 708	13 689	580 556
Materials	161 606	130 242	20 071	307 884
Government payments	52 103	11 392	471	69 922
Other	110 375	57 079	1 422	292 755
<b>Total</b>	<b>498 152</b>	<b>536 473</b>	<b>48 904</b>	<b>1 083 529</b>
<b>Capital expenses</b>				
Acquisitions	57 359	37 816	4 775	99 950
Own account work	66 357	29 330	2 702	98 389
Contracted payments	50 456	47 290	978	98 724
<b>Total</b>	<b>174 172</b>	<b>114 436</b>	<b>8 455</b>	<b>297 063</b>

# SUMMARY OF FINDINGS *continued*

## INTERGOVERNMENT TRANSFERS

The results presented in this section shows part of the interaction between local, State and Commonwealth governments from the local government perspective. This section focuses on the subsidies and investment grants given to local government for environment related activity.

State government contributed \$107 million of funding for local government environmental activities. State funding of local government was separated into \$52 million for specific operating subsidies and \$55 million for investment grants. Commonwealth funding arrangements accounted for \$35 million, spending \$20 million on subsidies and \$15 million on investment grants for local government.

### 4 INTERGOVERNMENT FUNDING, By account—1997–98

	ACCOUNT.....		Total
	Environment protection	Natural resource	
Government	\$'000	\$'000	\$'000
.....			
Subsidies			
Commonwealth	14 204	5 611	19 815
State	37 031	15 127	52 189
Total	51 234	20 738	72 004
Investment grants			
Commonwealth	1 883	12 670	14 553
State	37 634	17 557	55 191
Total	39 517	30 227	69 744
<b>Total</b>	<b>90 752</b>	<b>50 965</b>	<b>141 717</b>

#### Environment protection

Environment protection subsidies accounted for over 70% (\$51 million) of total environment related subsidies for local government. Similarly, investment grants for environment protection contributed 60% (\$40 million) of total environment related investment grants.

State contributions to environment protection activities accounted for the majority of environment protection subsidies, funding \$75 million of local government activities. This amount was split evenly between specific purpose subsidies and investment grants.

#### Natural resource use and management

Natural resource use and management subsidies accounted for nearly 30% (\$21 million) of total environment related subsidies. Investment grants for this account contributed 40% (\$30 million) to total environment related investment grants.

State government contributions to natural resource use and management by local government accounted for 64% (\$33 million) of total natural resource intergovernment funding. Payments for subsidies and investment grants were evenly distributed. State government spent \$15 million on subsidies and \$18 million on investment grants.

# EXPLANATORY NOTES

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## INTERNATIONAL FRAMEWORKS

**1** Early statistics on environment protection in local government were collected from the Public Finance Statistics using a Government Purpose Classification designed to measure Sanitation and Other Protection of the Environment (GPC 0730). The disaggregation in the data allowed measurement of statistics that were guided by the Organisation for Economic Co-operation and Development (OECD) Pollution Abatement and Control (PAC) framework. This framework is discussed in detail in early editions of the Environment Protection Expenditure Accounts. These publications are titled, *Cost of Environment Protection, Australia, Selected Industries, 1990–91* and *1991–92* (Cat. no. 4603.0).

**2** Since 1994–95, disaggregated data for local government for the GPC 0730 classification has been unavailable. Plans for a survey of local government began in the 1995–96 year with the introduction of the Environment and Natural Resources survey.

**3** The Environment and Natural Resources survey is based on the European Statistical Office's (Eurostat) System for the Collection of Economic Information on the Environment (SERIEE). This document was produced in response to the United Nation's System of Integrated Economic and Environmental Accounts (SEEA).

**4** There are three main accounts that were developed by Eurostat:

- Environment protection expenditure account;
- Natural resource use and management account; and
- Repercussions of environmental damage account.

These accounts are designed to cover the interaction between the environment and the economy. However, only environment protection expenditure and natural resource use and management are covered by this collection as previous testing of this account has shown that only a limited response is available from councils.

## ENVIRONMENT PROTECTION EXPENDITURE ACCOUNT

**5** Environment protection expenditure account is the most developed of the economic-environment monetary accounts. It describes the interaction between economic processes and the environment; that is, the cost of protecting the environment from damage from development and the cost of remediating some of the effects of previous economic activity within the environment, e.g. mining, agriculture etc.

**6** Environment protection through the SERIEE framework focuses upon the interaction between three levels of environmental financial commitment:

- The supplier of the environment protection products and services;
- The purchaser of environment protection products and services; and
- The financier of purchases of environment protection products and services.

These interactions can be determined through the type of activities that a company or government agency performs as a majority of its functions. For instance, local government usually has units that are built into its management structure that are designated for environment protection, i.e. waste management.

**7** Environment protection depends upon a number of domains that determine both where the expenditure is going to and for what product or service it is purchasing. For example, sewerage operators (such as local government) pay for products, wages and salaries of staff and licensing fees to operate waste water equipment. Householders pay for waste water services via their rates.

## EXPLANATORY NOTES *continued*

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### ENVIRONMENT PROTECTION EXPENDITURE ACCOUNT *continued*

**8** Councils have an important role in the provision of waste water (sewerage) and solid waste management products and services. They are often — with the exception of some metropolitan councils — the only provider of these services. The councils receive income based on these products and services which are classified as market, or where the council is recovering costs, activities. This cost recovery activity gives them a unique role in these domains compared to main council functions.

**9** In other domains that are considered in SERIEE, councils are shown as purchasers of, or organisations that mainly buy, environmental products and services. These activities, that are typically carried out for their jurisdiction, are considered to be non-market, or where there is little to no cost recovery, products and services.

**10** Local Government is financed by their jurisdiction by market (explained in paragraph 8) services and by funding from other levels of government. Councils are financed by their jurisdiction via direct service charges or rates, though some income is derived from special levies where no direct service is given. Funding from other levels of government are administered subsidies or investment grants for specific projects.

**11** Environment protection expenditure is discussed in more detail in *Environment Protection Expenditure Account, Australia* (Cat. no. 4603.0).

### NATURAL RESOURCE USE AND MANAGEMENT

**12** The natural resource use and management account describes the extraction of natural resources and the expenditure on prolonging the use of a resource.

**13** Use and conservation of natural resources are two interactions with the environment that have an economic value for local government. For example, water is extracted for use by householders and restrictions are imposed to limit that usage. Land is developed for expansion of townships and for industrialisation.

**14** The main differences between environment protection and natural resource management is that natural resource management has an economic purpose to use the resource at a later stage or allow continuous use of a resource. The natural resource use and management account uses a similar economic relationship to the environment protection expenditure account.

### METHODOLOGY

**15** The statistics are estimated from a survey of local councils. The survey is a mail out questionnaire on environment protection and natural resources use and management.

**16** The survey was mailed to approximately half of the total number of local government authorities, not including Aboriginal regional councils. As this was a voluntary survey about 60% of the councils selected replied to the form. Only national estimates have been provided and no State level details are available.

**17** The estimation process used the number raised estimator. The majority of aggregated data presented in the results have a standard error of less than 15%. Some cells have been combined due to confidentiality and high standard errors.

### FUTURE DIRECTIONS AND ADDITIONAL INFORMATION

**18** The collection of information on local government environment-related accounts was a collaborative effort with the National Office of Local Government, University of Canberra and the Australian Bureau of Statistics. The participating organisations have reference material on environment accounting. This information is due to be put up on a website detailing environment accounting by local government by participants. This information can also be obtained from National Office of Local Government and University of Canberra.

**19** An aim of this collection is the development of a series of economic tools for local government to improve management of environment protection and natural resource development. These statistics also contribute to the development of more detailed environment protection expenditure accounts information for Australia.

**20** Changes to the survey for the future will include depreciation and disposal of environmental assets that have been built by the council. Depreciation of natural assets (or assets occurring in nature) are not considered to be in the scope of these accounts.

**21** The 1998–99 collection has been tabled in parliament and will not be an overtly voluntary collection. A higher level of cooperation is anticipated.

**22** There are limited additional data available from the collection; for example, the split between hazardous and non-hazardous waste may be available. Inquiries about data services can be made to Bob Harrison, Director, Environment and Energy Statistics Section, telephone Canberra 02 6252 7369.

## GLOSSARY

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**Biodiversity** The variety of life forms on earth: the different plants, animals and micro-organisms, the genes they contain, and the ecosystems they form. It is usually considered at four levels:

- genetic diversity;
- species diversity;
- ecosystem diversity; and
- community diversity.

**Domain** The environmental media used to classify environment protection expenditures and natural resource use and management expenditures. The seven domains used for environment protection are:

*Ambient air and climate protection.* Activities that encourage the reduction of air pollutants by the council, by business or by the householder.

*Waste water management.* Activities that correspond to sewerage operations and the reduction of waste elements reaching water bodies. Waste water reuse by council.

*Waste management.* Landfill and solid operations by council and the implementation of programs to reduce the amount of materials entering the solid waste stream.

*Protection of soil and groundwater.* Remediation of contaminated soils. Protection of existing soil and groundwater areas from contamination by wastes and degradation. Remediation of degraded (salinated, eroded) soils in crown land and national park regions.

*Protection of biodiversity and landscape.* Programs that focus on the preservation of natural species and landscape. Programs to re-establish native species back into the environment. The construction of barriers to halt damage from developments entering areas specified as having a value for biodiversity. Clean up and establishment of catchment zones for water bodies.

*Protection of cultural heritage.* Establishment and maintenance of cultural heritage sites. Programs to encourage the implementation of cultural heritage preservation by business and householders.

The two domains for natural resource use and management are:

*Inland water use and management.* The supply and use of inland water stocks. Maintenance of quality and purification of water supply. Programs to encourage water conservation plans. Implication of water restrictions.

*Land management and development.* The development by zoning of land resources. The management of recreational parks and sporting fields. Management of crown land not reserved for native biodiversity. The processing of development applications and associated costs.

**Household sector** In general terms private households or the Australian community. Some definitions include sole proprietorships and partnerships, but for the use of these statistics they are excluded from households.

**Investment grants** Unrequited capital payments received (usually from government) and intended to finance acquisition of fixed assets for environmental purposes.

## GLOSSARY *continued*

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- Subsidies on production** Government grants to local government which relates to their production of specific environmental activity and which is intended to allow the provision of goods and services at a reduced cost to the consumer.
- Transfers** A transaction in which one business or organisation provides a good, service or asset to another business or organisation without receiving from the latter any good, service or asset in return.