Australian Bureau of Statistics

Discussion Paper:

Towards an Environmental Expenditure Account, Australia

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ABBREVIATIONS

$b	billion (thousand million) dollars
$m	million dollars
%	percentage
ABS	Australian Bureau of Statistics
ANZSIC	Australian and New Zealand Standard Industrial Classification
cat.	catalogue
CE	compensation of employees
CEA	Classification of Environmental Activities
CFC	consumption of fixed capital
EAS	Economic Activity Survey
EEA	Environmental Expenditure Accounts
EGSS	Environmental Goods and Services Sector
EP	environmental protection
EU	European Union
EWES	Energy, Water and Environment Survey
GDP	gross domestic product
GG	General Government
GVA	gross value added
HH	household
IC	intermediate consumption
LGA	local government area
no.	number
NPIs	non–profit institutions
NPISH	non-profit institutions serving households
NRM	natural resource management
OECD	Organisation for Economic Co-operation and Development
R&D	research and development
SEEA	System of Environmental Economic Accounts
SNA	System of National Accounts
WAA	Water Account, Australia

DISCUSSION SUMMARY

INTRODUCTION

Purpose

This discussion paper responds to the growing demand for environmental expenditure information identified within environmental domains. The ABS has previously produced Environmental Protection Expenditure statistics, *Environment Protection, Mining and Manufacturing Industries, Australia, 2000–01* (cat. no. 4603.0) and *Environment Expenditure, Local Government, Australia, 2002–03* (cat. no. 4611.0). However, a scarcity of available information and data priorities which focussed on other areas, such as water and energy environmental–economic accounts, has meant that regular environmental expenditure accounts have not been produced.

The tables contained in this discussion paper are based on the United Nations System of Environmental–Economic Accounting (SEEA) Central Framework for expenditure on environmental protection and natural resource management. The SEEA is an international statistical standard that the ABS uses to produce a range of environmental–economic accounts including the ABS *Water Account, Australia* (cat. no. 4610.0) and the ABS *Energy Account, Australia* (cat. no. 4604.0). More information about the ABS environmental–economic accounts programme and its relationship to the SEEA can be found in the ABS *Information Paper: Towards the Australian Environmental–Economic Accounts, 2013* (cat. no. 4655.0.55.002).

Establishing accounts for environmental expenditure would identify and measure society's response to environmental concerns through the supply and demand for environmental protection services and through the adoption of production and consumption behaviour aimed at preventing environmental degradation. An Environmental Expenditure Account (EEA) would provide information on the value of environmental protection specific services produced across the economy and on the expenditure of resident units on all services for environmental protection and natural resource management purposes.

As a first step, the ABS is seeking feedback on this discussion paper from stakeholders on how an EEA might be used by policy and research agencies and on any technical issues where readers have expertise. Feedback is also sought on the identification and accessibility of appropriate information and data sources for the accounts. Please see Discussion/Future work section.

Background

Transactions between institutions within the economy which concern the preservation and protection of the environment are generally assumed to be recorded within the Australian System of National Accounts framework as part of wider aggregates and so will not always be separately identifiable. An EEA would describe the resources allocated for preserving and/or protecting the environment by different categories of economic units as well as the financing of these resources and activities. The purpose of the EEA is to provide a framework and structure to identify these environmental components within the key aggregates of the System of National Accounts (SNA).

The scope of the EEA is "...those economic activities whose primary purpose is to reduce or eliminate pressures on the environment or to make more efficient use of natural resources." (Chapter IV, para. 4.11 SEEA 2012 – Central Framework). The various activities are grouped into two broad types of environmental activities – Environmental Protection and Natural Resource Management. The Classification of Environmental Activities (CEA) outlined in the SEEA is the functional classification used to classify

Background continued

environmental activities, environmental products, and environmental expenditures and other transactions (for more details see Explanatory Notes, Figure 1).

The System of Environmental–Economic Accounts (SEEA) and international statistics

The SEEA Environmental Protection Expenditure (EPE) Accounts are presented by economic sectors (government, corporations, households) and by the environmental domain that is being protected or managed (such as air, water, biodiversity etc).

The SEEA proposes four sets of tables as the basis for a full set of EPE Accounts:

- Production of environmental protection specific products by resident producers where aggregates such as gross value added and net operating surplus, being measured consistently with SNA accounting conventions, can be compared with macro–economic aggregates for the whole economy
- Supply and use tables for environmental protection specific services with supply including those goods and services supplied by resident producers and through imports and use encompassing domestic consumption and exports
- Total national expenditure on environmental protection representing the total outlay by the economy on these activities including capital formation
- Financing of national expenditure on environmental protection. This seeks to shed light on how the environmental protection expenditure is funded. For example, an investment grant or subsidy from government may be funding industry and household investments in capital.

Many countries regularly produce environmental protection expenditure statistics, particularly in EU and OECD countries. For some countries (eg France, Belgium, Austria, Italy), EPE Accounts are compiled and reported systematically on a regular basis. For most countries, however, EPE Accounts are only partially compiled, typically reflecting the specific environmental issues at hand in each region.

Fewer countries produce fully compiled EPE Accounts in the form of a series of inter–linked tables as outlined and presented in this paper. Additionally, this paper extends the coverage to include natural resource management statistics. These statistics and accounts are less well developed internationally, but may also be produced (in whole or in part) using the same principles as those described in the EPE Accounts.

AUSTRALIAN ENVIRONMENTAL EXPENDITURE ACCOUNTS (EEA) – WHAT WOULD THEY COVER?

This paper explores the compilation of selected environmental protection and natural resource management transactions for Australia, utilising the SEEA framework for compiling EPE accounts. Experimental data is presented in the tables in the Appendix. Table 1 in the Appendix summarises the scope and coverage of the estimates provided.

Data included in this paper are considered experimental, and are used to illustrate the type of information that can be presented and derived from a suite of environmental expenditure accounts such as those described in the SEEA Central Framework. Estimates have been compiled to conceptually align with:

- Production (Output) of environmental services
- Supply and Use tables for environmental services
- National expenditure tables for selected environmental goods and services
- Financing of selected environmental goods and services.

AUSTRALIAN ENVIRONMENTAL EXPENDITURE ACCOUNTS (EEA) – WHAT WOULD THEY COVER? *continued*

The full suite of EEA tables is designed primarily to provide information on the output of environmental–specific services produced across the economy and the consumption (expenditure) on all services for environmental purposes.

The production of environmental services may be broken down to present output by type of environmental service supplied (Graph 1), or by the type of producer (Graph 2).

It should be noted that the EEA does NOT provide a complete view of the supply side for all relevant environmental goods and services. In particular it omits data on the production of connected products and adapted goods for environmental purposes. The *Handbook on Environmental Good and Services Sector* (Eurostat, 2009) describes the full range of environmental goods and services necessary to create a complete view.

The use (intermediate and final consumption) of these environmental services are also presented, and may be viewed by the type of service purchased, or by who is using the service (Graph 3), depending on policy or the interest of the data user.

The remaining tables (National Expenditure and Financing tables) are defined from a demand perspective, and broaden the scope to include connected products and adapted goods purchased by units undertaking environmental protection and natural resource management activities. This information may be used to show which economic units are investing in/purchasing environmental goods and services (Graph 4), and which units are financing these expenditures (Graph 5).

RESULTS

Production of Environmental Services, Australia

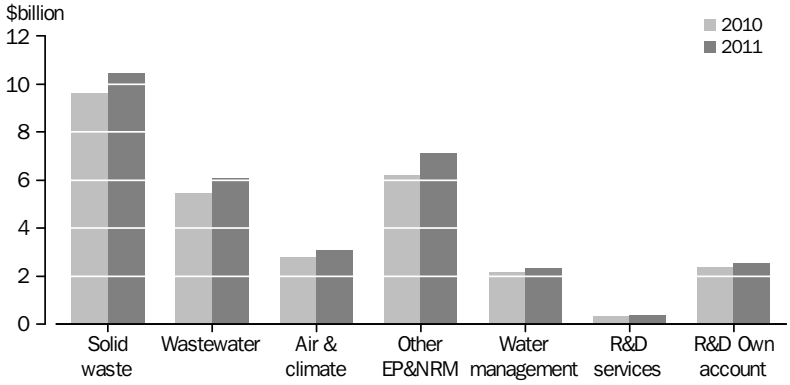
Graph 1 shows the output of environmental–specific services by the type of environmental service being supplied. This is the total output that includes both income generated by sales of these services and the provision of services by government departments. The total supply (and use) of environmental–specific services for Australia in 2010–11 was estimated at $31.9 billion. Solid waste management ($10.4 billion, almost 33% of total) and Waste water management ($6.1 billion, or 19% of total) are the largest environmental services supplied to the economy.

Other environmental domains separately identified were services for Air and climate protection ($3.1 billion), environmental Research and Development ($2.9 billion) and Water management ($2.3 billion). A further $7.1 billion of environmental services were produced for a variety of environmental protection and natural resource management activities including protection of biodiversity; protection and remediation of soil, groundwater and surface water; and other natural resource management activities.

For more information on supply/production of these services, see Tables 2.1, 2.3, 2.5 and 2.7 in the Appendix.

Production of Environmental Services, Australia continued

GRAPH 1: TOTAL OUTPUT OF ENVIRONMENTAL SERVICES, Australia



Notes: Other EP & NRM – Other Environmental Protection and Natural Resource Management.
R&D – Research and Development.

It may also be of interest to understand which entities in the economy are producing these services. The EEA are structured to identify the type of economic units supplying the various environmental services.

Specialised producers are those producers whose primary activity is the production of environmental services. Non–specialised producers are those units that produce environmental services only as a secondary activity.

Most environmental services are provided by specialist producers (around 88% – see Graph 2, and Tables 3.3 and 3.4 in Appendix). Waste and Wastewater management activities are primarily served by the private sector while government plays a larger role in providing services relating to all other environmental protection and natural resource management activities (roughly equivalent to the services supplied by the private sector for these activities).

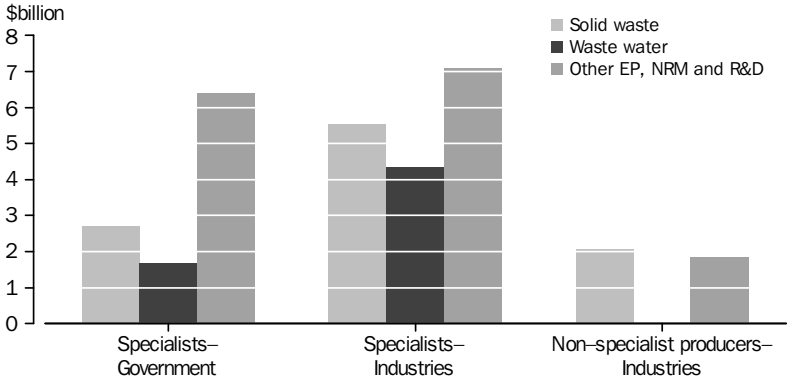
In 2010–11, around 12% of the value of environmental services were provided by units undertaking environmental activities as secondary activities.

Tables 3.3 and 3.4 present a broader range of production–related variables including intermediate consumption, value added, and compensation of employees related to the supply of some of these services.

This information would allow any shifts in the provision of services across the economy (eg government to private sector, increased environmental services undertaken as secondary activity) to be monitored and measured over time and assessed for their relevance to environmental and economic policies.

Production of Environmental Services, Australia continued

GRAPH 2: TOTAL OUTPUT OF SELECTED ENVIRONMENTAL SERVICES, by producer of Service, Australia, 2011



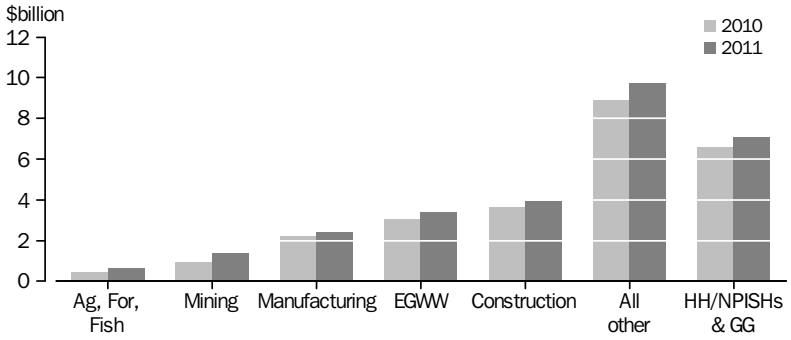
Note: Other EP, NRM and R&D – Other Environmental Protection, Natural Resource Management and Research and Development.

Use of Environmental Services, Australia

Graph 3 and Tables 2.2, 2.4, 2.6 and 2.8 in the Appendix present information on the use of the environmental services in the economy. Three–quarters (75%) of environmental services were consumed by Australian industry, with the bulk of the remainder used as final consumption by Households and General government.

Industries differed in the type and level of environmental service consumed. Manufacturing expenditure was dominated by Solid waste management and Other environmental protection and natural resource management (each around 30% of environmental services consumed by Manufacturing). Mining expenditure was primarily on Other environmental protection and natural resource management (64% of Mining total), and the Construction industry consumed primarily Solid waste management services (47% of Construction total), and Other environmental protection and natural resource management (37% of Construction total). Households and General government as final consumers were the largest consumers of Waste water management services (68% of total value of Waste water services, and 58% of Total final consumption on environmental services).

GRAPH 3: CONSUMPTION EXPENDITURE ON ENVIRONMENTAL SERVICES, by sector, Australia



Notes: Ag, For, Fish – Agriculture, Forestry and Fishery.
EGWW – Electricity, Gas, Water Supply, Drainage & Sewerage and Waste.
HH/NPISHs & GG – Households/ Non Profit Institutions Serving Households and General Government.

National Expenditure on Environmental protection and natural resource management

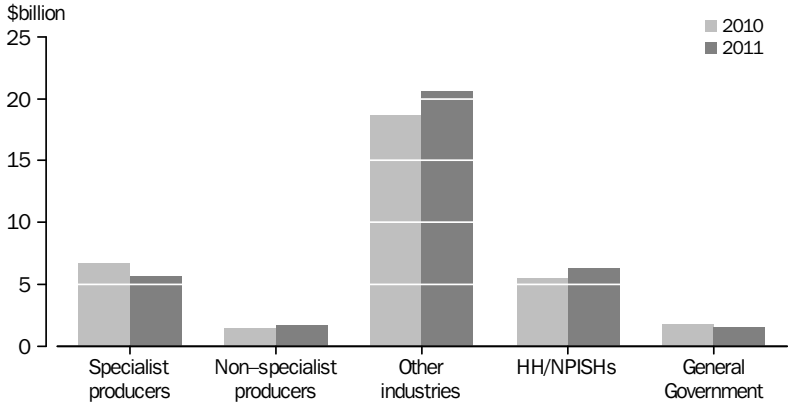
The graphs and tables referred to so far are limited to the supply and use of environmental protection and natural resource management related services. National expenditure on environmental protection and natural resource management (Tables 4.1, 4.2 in Appendix and Graph 4 below) broaden the scope of the EEA to include connected products and adapted goods purchased by those undertaking environmental activities. It also includes capital formation for environmental activities by producers, and relevant environmental transfers. The inclusion of these additional flows are intended to provide an estimate of total outlays by an economy on environmental protection and natural resource management, and present environmental expenditure from a demand perspective.

Over three–quarters (78%) of Australia's estimated national expenditure on environmental services and connected/adapted goods was by the corporate sector. The bulk of this was intermediate consumption of environment related services by Australian businesses (non–specialised producers plus other industries) to mitigate/minimise their impacts on the environment ($14.1 billion).

With regard to connected and adapted products for environmental purposes, including recyclable materials, rainwater tanks, solar panels etc, the corporate sector spent around $5 billion on the consumption of these goods.

Households and Non profit institutions serving households spent $6.3 billion on environmental goods and services, around 18% of Australia's national expenditure on environmental good and services.

GRAPH 4: NATIONAL EXPENDITURE ON SELECTED ENVIRONMENTAL SERVICES AND CONNECTED/ADAPTED GOODS, by user



Note: HH/NPISHs – Households/Non–Profit Institutions Serving Households.

Financing of Selected Environmental Goods and Services

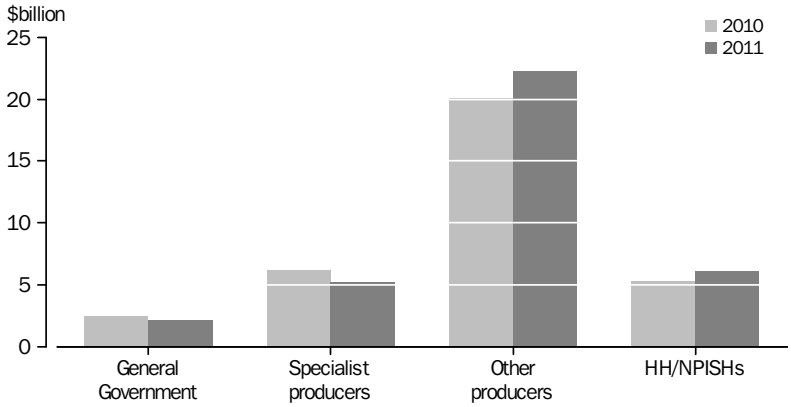
The final tables in the full suite of EEA are an extension of the National Expenditure tables to show the financing of national expenditure on environmental protection and natural resource management. These are presented in Tables 5.1 and 5.2 in the Appendix.

While the columns of the Financing tables resemble those in the National Expenditure tables, the rows present the financing units, taking into account transfers flowing between economic units such as grants and subsidies.

Financing of Selected Environmental Goods and Services continued

Tables 5.1 and 5.2 and Graph 5 below show that Australian industry financed over three–quarters (77% or $27.5 billion) of the expenditure on goods and services related to environmental protection and natural resource management. Households financed $6.1 billion, or around 17% of this expenditure, and government funded around 6%.

GRAPH 5: FINANCING OF SELECTED ENVIRONMENTAL GOODS AND SERVICES



Note: HH/NPISHs – Households/Non–Profit Institutions Serving Households.

DISCUSSION/FUTURE WORK

This paper presents experimental estimates to illustrate the potential of producing a full suite of EEA for Australia, and highlights some statistics which may be derived from these estimates. It should be acknowledged that these estimates are experimental and some information is based on partial estimates and modelled data (for a more detailed description see Table 1 in the Appendix and Explanatory Notes) and, as such, tables and graphs should be used as indicative only and for the purpose of understanding the type of information that can be produced.

Most data presented in this paper are highly aggregated as detailed disaggregations of information are presently unavailable. Better quality and more disaggregated information would result in more detailed information relating to, for example, further industry breakdowns and detailed industry estimates, and/or further breakdowns of information for different environmental domains eg biodiversity and landscape protection; protection and remediation of soil, groundwater and surface water; management of various (specific) resources etc.

In addition to deriving indicators to highlight change in key areas over time, using accounting conventions of the SNA means that data derived from the EEA may be compared to and combined with various macro–economic aggregates such as Gross Domestic Product (GDP) and Gross Value Add (GVA). Additional analyses would be supported by linking EEA data to physical data, such as quantities of waste to landfill, recovery rates, air emissions data etc to help analyse and review the effectiveness of environmental policies and expenditures.

Recent cuts to the ABS' environmental statistics programme (in particular the ABS *Waste Account, Australia* (cat. no. 4602.0.55.006)) will impact on the availability of data sources to compile a comprehensive EEA in the future.

Feedback is sought from potential users and providers of data on all aspects of an Australian Environmental Expenditure Account (EEA) including:

DISCUSSION/FUTURE WORK *continued*

- What are the key policy issues that your organisation is facing which would be supported by environmental expenditure information?
- What data do you hold, or are aware of, that could be used in the compilation of an EEA?
- What classifications and standards do you use relating to environmental expenditure?
- Should the scope of EEA focus on environmental protection; certain components of environmental protection; or Australian industry?
- What tables did you find the most useful?
- Do you have any other suggestions or comments about the production of an EEA?

Feedback can be forwarded to <*mark.lound@abs.gov.au*> or in hardcopy to Director, Centre of Environment Statistics, ABS, Locked Bag 10, Belconnen, ACT, 2616. Please provide comments by Friday, 6 September 2014. Alternatively, please contact Mark Lound on (02 6252 6325) during business hours. The *ABS Privacy Policy* outlines how the ABS will handle any personal information that you provide to the ABS.

EXPLANATORY NOTES

INTRODUCTION

1 This publication *Discussion Paper:Towards an Environmental Expenditure Account, Australia* seeks feedback from stakeholders on the content and format of a proposed Australian Environmental Expenditure Account (EEA), which could form part of the ABS environmental–economic accounts programme.

2 The publication consists of tables and graphs which present:

- supply and use (collectively referred to as flow tables) for selected environmental protection and natural resource management services
- production of environmental protection and natural resource management services
- national expenditure on environmental protection and natural resource management
- financing of national expenditure on environmental protection and natural resource management.

3 The estimates presented in this paper explore the concepts and methods of EEA and assess the quality and limitations of available data sources. The production of a regular EEA will be determined in consultation with stakeholders and is dependant upon the availability of resources and reliable data.

ENVIRONMENTAL ACCOUNTING FRAMEWORK

4 The tables presented in this publication were developed using the United Nations System of Environmental–Economic Accounts (SEEA), which is a measurement framework that provides a range of metrics that link information on the environment and the economy. The SEEA was first published by the United Nations in 1993 and was adopted as an international statistical standard in 2012 by the United Nations Statistical Commission. For further information on the SEEA and the ABS environmental accounts programme please see ABS *Completing the Picture – Environmental Accounting in Practice, 2012* (cat. no. 4628.0.55.001), ABS *Australian Environmental–Economic Accounts, 2014* (cat. no. 4655.0) and the ABS *Information Paper: Towards the Australian Environmental–Economic Accounts, 2013* (cat. no. 4655.0.55.002).

Scope

5 The scope of this publication follows the Classification of Environmental Activities (CEA), which was developed as part of the SEEA. The CEA is a functional classification used to classify environmental activities, environmental products and environmental expenditures and other transactions (see Figure 1). It covers environmental protection and natural resource management activities.

FIGURE 1: CLASSIFICATION OF ENVIRONMENTAL ACTIVITIES (CEA)

Group	*Class*
i. Environmental Protection (EP)	1. Protection of ambient air and climate
	2. Waste water management
	3. Waste management
	4. Protection and remediation of soil, ground water and surface water
	5. Noise and vibration abatement (excluding workplace protection)
	6. Protection of biodiversity and landscapes
	7. Protection against radiation (excluding external safety)
	8. Research and development for environmental protection
	9. Other environmental protection activities
ii. Natural Resource Management (NRM)	10. Management of mineral and energy resources
	11. Management of timber resources
	12. Management of aquatic resources
	13. Management of other biological resources (excluding timber and aquatic resources)
	14. Management of water resources
	15. Research and development activities for resource management
	16. Other resource management activities

TABLES 2.1 – 2.8: SUPPLY AND USE OF ENVIRONMENTAL PROTECTION AND NATURAL RESOURCE MANAGEMENT SERVICES

6 Tables 2.1 to 2.8 present aggregates in monetary ($m) terms of the supply and use (consumption expenditure) of selected environmental services in the Australian economy for the financial years 2009–10 and 2010–11.

Coverage

7 Coverage for environmental protection and natural resource management activities in the supply and use tables includes the following:

- Protection of ambient air and climate (including renewable energy production)
- Waste management services (confined to solid waste management that includes recycling of solid waste)
- Waste water management services (includes sewerage, drainage and storm water management services)
- Other environmental protection services (includes protection and remediation of soil, ground water, surface water, noise and vibration abatement, protection of biodiversity and landscapes)
- Management of water resources
- Other natural resource management services (includes management of marine environments, management of mineral resources, management of forests, national parks and other biological resources)
- Research and development related to environment protection and natural resource management.

8 The industry classifications used for the supply and use tables follow the ABS *Australian and New Zealand Standard Industrial Classification (ANZSIC), 2006* (cat. no. 1292.0). The categories used in the tables are:

- Agriculture, Forestry and Fishing (ANZSIC06 Division A)
- Mining (ANZSIC06 Division B)
- Manufacturing (ANZSIC06 Division C)
- Electricity, Gas, Water and Waste Services (ANZSIC06 Division D)
  - Water Supply (Division D Subdivision 28 Class 2811)
  - Sewerage and Drainage Services (Division D Subdivision 28 Class 2812)
  - Waste Collection, Treatment and Disposal Services (Division D Subdivision 29)

Coverage continued

- Construction (ANZSIC06 Division E)
- Local Government Administration (Division O Subdivision 75 Class 7530)
- All Other Industry (ANZSIC06 Divisions F to S excluding Division O Subdivision 75 Class 7530).

9 All Other Industry consists of the following industries:

- Wholesale Trade
- Retail Trade
- Accommodation and Food Services
- Transport, Postal and Warehousing
- Information Media and Telecommunications
- Financial and Insurance Services
- Rental, Hiring and Real Estate Services
- Professional, Scientific and Technical Services
- Administrative and Support Services
- Public Administration and Safety (excluding Division O Subdivision 75 Class 7530)
- Education and Training
- Health Care and Social Assistance
- Arts and Recreation Services
- Other Services.

Data Sources

10 The estimates were drawn using a range of ABS and non–ABS data sources, including:

- ABS Sources:
  - *Water Account, Australia* (cat. no. 4610.0)
  - *Waste Account, Australia* (cat. no. 4602.0.55.006)
  - *Australian System of National Accounts* (cat. no. 5204.0)
  - *Australian National Accounts: Input–Output Tables* (cat. no. 5209.0.55.001)
  - *Australian Industry* (cat. no. 8155.0)
  - *Research and Experimental Development, Government and Private Non–Profit Organisations, Australia, 2008–09* (cat. no. 8109.0)
  - *Research and Experimental Development, Businesses, Australia* (cat. no. 8104.0)
  - *Research and Experimental Development, Higher Education Organisations, Australia, 2012* (cat. no. 8111.0)
  - Energy, Water and Environment Survey, 2011–12 (EWES)
  - Local Government Authorities (LGA) finance data collection (unpublished data)
  - Research and Development (R&D) data collection (unpublished data)
- Non–ABS Sources:
  - Annual Financial Reports and Budget Reports for State/Territory and Commonwealth government departments delivering environment related goods and services.

METHODOLOGY

Supply – Output generated by the provision of environmental protection and natural resource management services

11 The output estimates for Waste water and Waste management services were directly sourced from the ABS *Water Account, Australia* (cat. no. 4610.0) and the ABS *Waste Account, Australia* (cat. no. 4602.0.55.006). Estimates for the total output of Research and Development services were obtained from the ABS Research and Development collection.

12 Output for the protection of Protection of air and climate, Other environmental protection and natural resource management and Water management were estimated based on:

- ABS Economic Activity Survey, data on income from sales of environmental goods and services
- ABS Local Government Authorities finance data collection

Supply – Output generated by the provision of environmental protection and natural resource management services continued

- Annual financial and budget report data for the Commonwealth and State/Territory departments delivering environmental services.

Use – Expenditure on the consumption of the environmental protection and natural resource management services

13 Intermediate consumption expenditure by industries, Final consumption expenditure by Households and General government for Waste water management, and Waste management services were directly sourced from the ABS *Water Account, Australia* (cat. no. 4610.0).

14 Total intermediate consumption expenditure on environment related research and development by all industries were sourced from the ABS Research and Development data collection. Industry allocations were based on data from ABS *Research and Development, Businesses, Australia* (cat. no. 8104.0). Final consumption expenditure on Research and development services by Households, Non–profit institutions serving households and General government were sourced from the ABS Research and Development data collection.

15 The intermediate consumption expenditure of Protection of air and climate, Other environmental protection and natural resource management, and Water resource management services were allocated on the basis of indicators derived from each ANZSIC industry division on the basis of the ABS Economic Activity Survey.

16 Final consumption expenditure by Households, Non–profit institutions serving households and General government were also estimated using the ABS Economic Activity Survey.

DATA QUALITY AND LIMITATIONS

Supply side

17 Supply side data are generally more reliable than use side data as they are mainly sourced from published data, particularly for Waste water management and Solid waste management. Supply side data are also typically provided by specialist producers of these services who maintain good information on sales activity.

18 Market and non–market output from government departments delivering environmental services were sourced from published financial reports of these agencies. Government department estimates are likely to be slightly understated as only major departments were included in the estimates.

Use side

19 For Air and climate change, Other environmental protection and natural resource management and Water resource management services, estimates were aligned with the supply estimates (based on the principle that total supply equals total use).

TABLES 3.1 – 3.4: OUTPUT OF ENVIRONMENTAL PROTECTION AND NATURAL RESOURCE MANAGEMENT SERVICES

Coverage

20 Tables 3.1 – 3.4 present the output of specific environmental services by service provider (Specialist and Non–specialist producers).

21 The coverage of environmental protection and natural resource management activities in the production tables includes the following three major environmental domains:

- Solid waste management services (includes recycling)
- Waste water management services (includes sewerage services, drainage services, storm water management services)
- Other environmental protection including Air and climate protection, Natural resource management services and Research and development services.

22 The production tables cover the following service providers:

- Specialist producers – Government
- Specialist producers – Other
- Non–specialist producers.

Coverage continued

23 Specialist producers are establishments whose primary activity is the production of environmental protection specific services. Specialist producers – Government are government funded programs with environmental protection as the primary activity. Specialist producers – Other are those non–governmental businesses providing these specialised environmental services as their primary activity. They include both private sector businesses and public trading enterprises. Non–specialist producers are those establishments that produce environmental protection specific services as secondary output but have a different primary activity.

Data sources

24 The estimates were drawn using a range of ABS and non–ABS data sources, including:

- ABS Sources:
  - *Water Account, Australia* (cat. no. 4610.0)
  - *Waste Account, Australia* (cat. no. 4602.0.55.006)
  - *Waste Management Services, Australia, 2009–10* (cat. no. 8698.0)
  - Energy, Water and Environment Survey, 2011–12 (EWES)
  - *Australian System of National Accounts* (cat. no. 5204.0)
  - *Australian Industry* (cat. no. 8155.0)
  - Local Government Authorities (LGA) finance data collection (unpublished data)
  - Research and Development data collection (unpublished data)
- Non–ABS Sources:
  - Annual Financial Reports and Budget Reports for State/Territory and Commonwealth government departments delivering environment related goods and services.

METHODOLOGY

Output of environmental services

25 Estimates for Waste management and Waste water management services were directly sourced from the ABS *Water Account, Australia* (cat. no. 4610.0), ABS *Waste Account, Australia* (cat. no. 4602.0.55.006) and ABS *Australian Industry* (cat. no. 8155.0).

26 Estimates for the Specialist producers – Government for Other environmental protection and natural resource management, Water management and Research and Development, were sourced from the ABS Local Government Authorities finance data collection and annual financial reports of government departments.

27 Output for Specialist producers – Other and Non–specialist producers for Other environmental protection and natural resource management, Water management and Research and Development were modelled based on estimates from the ABS *Waste Management Services, Australia , 2009–10* (cat. no. 8698.0).

Intermediate consumption expenditure

28 Intermediate consumption expenditure has two components: intermediate consumption expenditure on environmental services and intermediate consumption expenditure on other goods and services.

29 Intermediate consumption expenditure for Waste management and Waste water management services were directly sourced from the ABS *Water Account, Australia* (cat. no. 4610.0), ABS *Waste Account, Australia* (cat. no. 4602.0.55.006) and ABS *Australian Industry* (cat. no. 8155.0). Intermediate consumption expenditure on Other goods and services for the Waste management services industry were estimated from ABS *Waste Management Services, Australia , 2009–10* (cat. no. 8698.0), and for Waste water services from ABS *Australian Industry* (cat. no. 8155.0).

30 For Specialist producers – Government, estimates for intermediate consumption on Other environmental protection and natural resource management, Water management and Research and Development were sourced from the ABS Local Government Authorities finance data collection and government departments' annual financial reports. For Specialist producers – Other and Non–specialist producers, intermediate

Intermediate consumption expenditure continued

consumption expenditure on Other environmental protection and natural resource management, Water management and Research and Development were estimated from the ABS *Waste Management Services, Australia , 2009–10* (cat. no. 8698.0).

Gross value added

31 Gross value added was calculated using the formula: "Gross value added = Output – Intermediate Consumption".

Compensation of employees, Taxes and subsidies on production and Consumption of fixed capital

32 Waste management services information on Compensation of employees, Taxes and subsidies on production and Consumption of fixed capital were sourced from ABS *Waste Management Services, Australia , 2009–10* (cat. no. 8698.0) and ABS *Australian Industry* (cat. no. 8155.0). Estimates for Waste water management services were sourced from ABS *Australian Industry* (cat. no. 8155.0).

33 For Air and climate, Other environmental protection and natural resource management, Water management, Research and Development, Compensation of employees, Taxes and subsidies on production and Consumption of fixed capital, data were only available for Specialist producers – Government from the ABS Local Government Authorities finance data collection and government annual financial reports.

Data quality and limitations

34 There were no data sources for environmental services for Non–specialist producers. Output and intermediate expenditure for waste management were estimated from the ABS *Waste Management Services, Australia , 2009–10* (cat. no. 8698.0).

35 Government departments providing only small amounts of environmental protection and natural resource management services were not included in the estimates.

36 Estimates were not made for Non–Specialist producers – Compensation of employees, Taxes, subsidies and Consumption of fixed capital data.

TABLES 4.1 – 4.2 NATIONAL EXPENDITURE ON ENVIRONMENT PROTECTION AND NATURAL RESOURCE MANAGEMENT SERVICES

Coverage

37 Tables 4.1 – 4.2 present National Expenditure on environmental protection and natural resource management services related to Intermediate consumption, Final consumption and Gross fixed capital formation. Expenditure for environmental protection purposes is not limited to the use of environmental related services but covers expenditure on all goods and services used for environmental related activities. This includes:

- expenditure on environmental protection and natural resource management services
- expenditure related to environmental protection and natural resource management connected products
- expenditure on adapted goods.

38 Total national expenditure on environmental protection is defined as:

- Final consumption, intermediate consumption, and gross fixed capital formation on all environmental protection and resource management related goods and services (specific services, connected products and adapted goods), except intermediate consumption and gross fixed capital formation for characteristic activities
- **plus** Gross fixed capital formation (and acquisition less disposal of non–produced non–financial assets) for environmental protection characteristic activities
- **plus** Environmental protection/resource management related transfers by resident units not captured in the items above
- **plus** Environmental protection/resource management related transfers paid to the rest of the world
- **less** Environmental protection/resource management related transfers received from the rest of the world.

39 Coverage for environmental protection and natural resource management activities in the National Expenditure tables includes the following major environmental domains:

Coverage continued

- Solid waste management services (includes recycling)
- Waste water management services (includes sewerage services, drainage services, storm water management services)
- Other environmental protection including air and climate protection, natural resource management services and related connected/adapted goods
- Water resource management services and related connected/adapted goods
- Research and development related to environment protection and natural resource management.

Data sources

40 The estimates were drawn using a range of ABS and non–ABS data sources, including:

- ABS Sources:
  - *Water Account, Australia* (cat. no. 4610.0)
  - *Waste Account, Australia* (cat. no. 4602.0.55.006)
  - *Waste Management Services, Australia, 2009–10* (cat. no. 8698.0)
  - Energy, Water and Environment Survey, 2011–12 (EWES)
  - *Australian System of National Accounts* (cat. no. 5204.0)
  - *Australian Industry* (cat. no. 8155.0)
  - Non–Profit Institutions Survey, 2006–07 (unpublished data)
  - Local Government Authorities (LGA) finance data collection (unpublished data)
  - Research and Development data collection (unpublished data)
- Non–ABS Sources:
  - Annual Financial Reports and Budget Reports for State/Territory and Commonwealth government departments delivering environment related goods and services.

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Environmental specific services

41 Intermediate consumption expenditure, Final consumption expenditure and Gross fixed capital formation on environmental services for each environmental domain were sourced from the Use of Environmental Services tables 2.2, 2.4, 2.6 and 2.8.

Connected products and adapted goods

42 Environmental protection and natural resource management related connected products were estimated using the ABS Economic Activity Survey data on sales income from environmental goods and services. The allocation to ANZSIC industry division were modelled using industry estimates from the ABS *Australian System of National Accounts* (cat. no. 5204.0).

43 Recycled/recovered waste material are considered to be adapted goods under management of natural resources such as minerals (recycled/recovered glass, metal) and biological resources (recycled/recovered organics, paper and cardboard). Estimates were derived for expenditure on Environment related Connected/adapted goods from the ABS *Waste Account, Australia* (cat. no. 4602.0.55.006).

Gross fixed capital formation for Environmental protection characteristic activities and Environment specific transfers

44 Gross fixed capital formation (and acquisition less disposal of non–produced non–financial assets) for environmental protection characteristic activities related to Solid waste management were sourced from ABS *Waste Management Services, Australia, 2009–10* (cat. no. 8698.0). Data was not available to estimate the other domains.

45 Environmental protection transfers paid to the rest of the world were sourced from government departmental financial reports and the ABS Non–Profit Institutions Survey, 2006–07. No data was available for environmental related transfers received by Australia governments.

Data quality and limitations:

46 Estimates for Other environmental protection and natural resource management (including protection of air and climate) and Water resource management related goods (connected products and adapted goods) are based on the ABS Economic Activity Survey experimental data on income from environmental goods and services. It should be considered as indicative information only.

47 The estimates for Gross fixed capital formation for Environmental protection characteristic relate only to Solid waste management services.

TABLES 5.1 – 5.2 FINANCING OF NATIONAL EXPENDITURE ON ENVIRONMENT PROTECTION AND NATURAL RESOURCE MANAGEMENT SERVICES

48 Tables 5.1 – 5.2 presents information on the Financing of National Expenditure on environmental protection and natural resource management services to show which sectors are directly responsible for the expenditures and which directly bear the costs of financing. For both current and capital transfers related to environmental protection and natural resource management services, the sector making the transfer has an increase in expenditure and the unit receiving the transfers has a corresponding reduction.

Coverage

49 The coverage for financing environmental protection and natural resource management activities includes the following environmental domains:

- Solid waste management services (includes recycling)
- Waste water management services (includes sewerage services, drainage services, storm water management services)
- Other environmental protection including air and climate protection, natural resource management services and related connected products and adapted goods
- Water resource management services and related connected products
- Research and development services.

Data sources

50 The estimates were complied using a range of ABS and non–ABS data sources, including:

- ABS Sources:
  - *Waste Management Services, Australia, 2009–10* (cat. no. 8698.0)
  - *Australian Industry* (cat. no. 8155.0)
  - Local Government Authorities (LGA) finance data collection (unpublished data)
  - Non–Profit Institutions Survey, 2006–07 data (unpublished data)
- Non–ABS Sources:
  - Annual Financial Reports and Budget Reports for State/Territory and Commonwealth government departments delivering environment related goods and services
  - Australia's International Development Assistance: Statistical Summary, Department of Foreign Affairs and Trade.

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51 Estimates of Government grants (both current and capital) for Solid waste management were obtained from the ABS *Waste Management Services, Australia, 2009–10* (cat. no. 8698.0).

52 For the Private sector Waste water management services, Government grants (both current and capital) received were sourced from ABS *Australian Industry* (cat. no. 8155.0). Grants (both current and capital) received by Public sector service providers (mainly Local Government Authorities) were sourced from the ABS Local Government finance data collection.

53 The current and capital grants and subsidies provided by Commonwealth and State/Territory governments for Other environmental protection and natural resource management programmes were recorded from their annual financial and budget reports. Financing for Air and climate protection, Other environmental protection and natural resource management, Water resource management and Research and development was estimated from total government grants and subsidies on environmental protection and

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natural resource management projects. The agencies that provided data for this item were:

- Commonwealth government: Department of Environment, Department of Agriculture, Department of Industry, National Water Commission and the Bureau of Meteorology.
- State/territory governments: relevant jurisdictional departments for water, environment, waste, energy and resources.

54 There were no reports on Australia obtaining any overseas funding for environment related projects, and these cells were left blank.

55 Environment related overseas grants by Governments were sourced from annual financial reports for Commonwealth Department of Environment, Department of Agriculture, Department of Industry and Department of Foreign Affairs and Trade. Overseas grants from Australian non–profit organisations were estimated using the ABS Non–Profit Institutions Survey, 2006–07.

Data quality and limitations

56 Information on Government funding is not consistently reported across Commonwealth and State/Territory agencies. There is no common definition of environmental protection and natural resource management across government and this makes it difficult to allocate projects to the environmental sector. Machinery of Government changes can also result in inconsistency of reporting over time.

57 Estimates for the overseas funding by Australian non–profit institutions were estimated from the ABS Non–Profit Institutions Survey, 2006–07.

TABLE 1: DATA AVAILABILITY OF EXPERIMENTAL ENVIRONMENTAL EXPENDITURE ACCOUNT

	PRODUCTION OF ENVIRONMENTAL SERVICES		
	Specialist producers (a)	*Environmental services as secondary activities (non–specialist producers)* (b)	*Own account activities (non–specialist producers)* (c)
Agriculture, Forestry, Fishing	. .	E	na
Mining	. .	Y (waste)	na
Manufacturing	. .	Y, E (waste, R&D)	na
Construction	. .	Y (waste)	na
Electricity and Gas	P,E	E	na
Water supply	. .	E	na
Wastewater	Y	E	na
Waste	Y	E	na
Local Government authorities	Y	. .	. .
All other Industries	E	Y (waste, R&D), E (air, other EP&NRM, water)	na
Households/NPISH	. .	. .	na
General Government	P,E	. .	. .

	EXPENDITURE ON ENVIRONMENTAL GOODS AND SERVICES	
Domains	*Connected/ adapted products*	*Services*
Wastewater	na	Y
Water management	E	P,E
Waste management	P	Y
R&D	. .	P
Other EP & NRM	E	P,E

. . not applicable
na not available
(a) Units whose primary activity is the production of environmental services. Includes Waste and Wastewater management services plus Environment–specific services produced by Government and Other organisations.
(b) Units that produce environmental services as secondary output, but have a different primary activity.
(c) Units that produce environmental services but do not sell these services to other economic units and consume these outputs themselves. SEEA recommends that own–account production activities be separately identified wherever possible.
Note: Y – Available data. E – Modelled estimates. P – Partial data available. Other EP & NRM – Other Environmental Protection and Natural Resource Management. R&D – Research and Development. NPISH – Non Profit Institutions Serving Households.

TABLE 2.1: EXPERIMENTAL SUPPLY OF ENVIRONMENTAL SERVICES, by Product and Industry, 2009–10 ($m)

	INDUSTRIES (BY ANZSIC06 CATEGORIES)				
Products	*Agriculture, Forestry, Fishing*	*Mining*	*Manufacturing*	*Water supply and sewerage services*	*Waste management*
1.a. Waste water management	0	0	0	5 418	0
1.b. Solid waste management(a)	0	141	171	0	7 996
1.c. Protection of air and climate services	0	0	0	0	0
1.d. Other EP & NRM services(b)	0	0	0	0	0
1.e. Water management services	0	0	0	1 166	0
1.f. R&D services	0	0	21	0	0
1.g. R&D – own account	9	189	113	59	78
Total	**9**	**330**	**305**	**6 643**	**8 074**

	INDUSTRIES (BY ANZSIC06 CATEGORIES) *continued*						
Products	*Construction*	*Local government and Government departments*	*All other Industries*	*Total industries*	*Rest of the world (imports)*	*Taxes less subsidies on products*	*TOTAL*
1.a. Waste water management	0	0	0	5 418	np	np	5 452
1.b. Solid waste management(a)	752	0	488	9 548	0	74	9 622
1.c. Protection of air and climate services	0	721	2 073	2 794	0	1	2 795
1.d. Other EP & NRM services(b)	0	4 156	2 073	6 228	0	1	6 230
1.e. Water management services	0	519	461	2 146	0	0	2 146
1.f. R&D services	0	0	242	263	65	0	328
1.g. R&D – own account	141	0	1 792	2 382	0	0	2 382
Total	**893**	**5 396**	**7 129**	**28 779**	np	np	**28 955**

np not available for publication but included in totals where applicable, unless otherwise indicated

(a) Includes recycling services.

(b) Includes protection of biodiversity, protection and remediation of soil, groundwater and surface water, noise and vibration abatement, other environmental protection activities not stated elsewhere, other natural resource management (e.g. land, timber, aquatic resources).

Note: Other EP & NRM services – Other Environmental Protection and Natural Resource Management services. R&D – Research and Development.

TABLE 2.2: EXPERIMENTAL USE OF ENVIRONMENTAL SERVICES, by Product and Industry, 2009–10($m)

	INDUSTRIES (BY ANZSIC06 CATEGORIES)				
Products	*Agriculture, Forestry, Fishing*	*Mining*	*Manufacturing*	*Electricity, Gas, Water supply, Drainage and sewerage, Waste*	*Construction*
2.a. Waste water management	2	23	418	8	(a)na
2.b. Solid waste management(b)	54	62	675	2 964	1 725
2.c. Protection of air and climate services	36	248	302	18	587
2.d. Other EP & NRM services(c)	81	552	674	40	1 309
2.e. Water management services	294	18	123	30	11
2.f. R&D services	0	1	2	1	1
2.g. R&D – own account	0	0	0	0	0
Total	**467**	**904**	**2 194**	**3 061**	**3 633**

INDUSTRIES (BY ANZSIC06 CATEGORIES) *continued*

Products	*All other Industries*	*Total industries*	*Rest of the world (exports)*	*Final consumption by HH/NPISHs and GG*	*Capital formation*	*TOTAL*
2.a. Waste water management	1 237	1 688	0	3 764	. .	5 452
2.b. Solid waste management(b)	2 431	7 911	0	1 712	. .	9 622
2.c. Protection of air and climate services	1 330	2 521	0	58	216	2 795
2.d. Other EP & NRM services(c)	2 965	5 620	0	129	481	6 230
2.e. Water management services	863	1 340	0	807	0	2 146
2.f. R&D services	106	111	96	121	0	328
2.g. R&D – own account	0	0	0	0	2 382	2 382
Total	**8 932**	**19 191**	**96**	**6 591**	**3 079**	**28 955**

. . not applicable
na not available
(a) Included under All other industries.
(b) Includes recycling services.
(c) Includes protection of biodiversity, protection and remediation of soil, groundwater and surface water, noise and vibration abatement, other environmental protection activities not stated elsewhere, other natural resource management (e.g. land, timber, aquatic resources).

Note: Other EP & NRM services – Other Environmental Protection and Natural Resource Management services. R&D – Research and Development. GG – General Government. HH/NPISH – Households / Non Profit Institutions Serving Households.

TABLE 2.3: EXPERIMENTAL SUPPLY OF ENVIRONMENTAL SERVICES, by Product and Industry, 2010–11($m)

	INDUSTRIES (BY ANZSIC06 CATEGORIES)				
Products	*Agriculture, Forestry, Fishing*	*Mining*	*Manufacturing*	*Water supply and sewerage services*	*Waste management*
1.a. Waste water management	0	0	0	6 038	0
1.b. Solid waste management(a)	0	185	175	0	8 641
1.c. Protection of air and climate services	0	0	0	0	0
1.d. Other EP & NRM services(b)	0	0	0	0	0
1.e. Water management services	0	0	0	1 231	0
1.f. R&D services	0	0	22	0	0
1.g. R&D – own account	13	223	142	46	83
Total	**13**	**408**	**339**	**7 315**	**8 724**

	INDUSTRIES (BY ANZSIC06 CATEGORIES) *continued*						
Products	*Construction*	*Local government and Government departments*	*All other Industries*	*Total industries*	*Rest of the world (imports)*	*Taxes less subsidies on products*	*TOTAL*
1.a. Waste water management	0	0	0	6 038	np	np	6 077
1.b. Solid waste management(a)	810	0	535	10 346	0	85	10 431
1.c. Protection of air and climate services	0	854	2 203	3 056	0	1	3 057
1.d. Other EP & NRM services(b)	0	4 932	2 203	7 134	0	2	7 136
1.e. Water management services	0	614	489	2 334	0	1	2 335
1.f. R&D services	0	0	225	277	68	0	345
1.g. R&D – own account	147	0	1 891	2 546	0	0	2 546
Total	**957**	**6 400**	**7 546**	**31 731**	np	np	**31 927**

np not available for publication but included in totals where applicable, unless otherwise indicated

(a) Includes recycling services.

(b) Includes protection of biodiversity, protection and remediation of soil, groundwater and surface water, noise and vibration abatement, other environmental protection activities not stated elsewhere, other natural resource management (e.g. land, timber, aquatic resources).

Note: Other EP & NRM services – Other Environmental Protection and Natural Resource Management services. R&D – Research and Development.

TABLE 2.4: EXPERIMENTAL USE OF ENVIRONMENTAL SERVICES, by Product and Industry, 2010–11($m)

	INDUSTRIES (BY ANZSIC06 CATEGORIES)				
Products	*Agriculture, Forestry, Fishing*	*Mining*	*Manufacturing*	*Electricity, Gas, Water supply, Drainage and sewerage, Waste*	*Construction*
2.a. Waste water management	3	29	475	9	(a)na
2.b. Solid waste management(b)	58	66	720	3 290	1 841
2.c. Protection of air and climate services	51	367	311	18	615
2.d. Other EP & NRM services(c)	120	857	726	41	1 435
2.e. Water management services	393	26	129	33	13
2.f. R&D services	0	2	2	1	1
2.g. R&D – own account	0	0	0	0	0
Total	**625**	**1 347**	**2 363**	**3 392**	**3 905**

	INDUSTRIES (BY ANZSIC06 CATEGORIES) *continued*					
Products	*All other Industries*	*Total industries*	*Rest of the world (exports)*	*Final consumption by HH/NPISHs and GG*	*Capital formation*	*TOTAL*
2.a. Waste water management	1 456	1 972	0	4 105	. .	6 077
2.b. Solid waste management(b)	2 595	8 570	0	1 861	. .	10 431
2.c. Protection of air and climate services	1 386	2 748	0	63	245	3 057
2.d. Other EP & NRM services(c)	3 236	6 415	0	148	573	7 136
2.e. Water management services	957	1 550	0	784	0	2 335
2.f. R&D services	111	117	101	127	0	345
2.g. R&D – own account	0	0	0	0	2 546	2 546
Total	**9 741**	**21 372**	**101**	**7 088**	**3 364**	**31 927**

. . not applicable

na not available

(a) Included under All other industries.

(b) Includes recycling services.

(c) Includes protection of biodiversity, protection and remediation of soil, groundwater and surface water, noise and vibration abatement, other environmental protection activities not stated elsewhere, other natural resource management (e.g. land, timber, aquatic resources).

Note: Other EP & NRM services – Other Environmental Protection and Natural Resource Management services. R&D – Research and Development. GG – General Government. HH/NPISH – Households/Non Profit Institutions Serving Households.

TABLE 2.5: EXPERIMENTAL SUPPLY OF ENVIRONMENTAL SERVICES, by Industry and Domain, 2009–10($m)

	Waste water management	*Solid waste management* (a)	*Protection of air and climate*	*Other EP & NRM* (b)	*Water management*	*R&D services*	*R&D – own account*	*Total*
Agriculture, Forestry, Fishing	0	0	0	0	0	0	9	9
Mining	0	141	0	0	0	0	189	330
Manufacturing	0	171	0	0	0	21	113	305
Water supply and sewerage services	5 418	0	0	0	1 166	0	59	6 644
Waste management	0	7 996	0	0	0	0	78	8 074
Construction	0	752	0	0	0	0	141	893
Local government and Government departments	0	0	721	4 156	519	0	0	5 396
All other Industries	0	488	2 073	2 073	461	242	1 792	7 128
Total industries	**5 418**	**9 548**	**2 794**	**6 229**	**2 146**	**263**	**2 381**	**28 779**
Imports	np	0	0	0	0	65	0	np
Taxes less subsidies	np	74	1	1	0	0	0	np
TOTAL	**5 452**	**9 622**	**2 795**	**6 230**	**2 146**	**328**	**2 381**	**28 954**

np not available for publication but included in totals where applicable, unless otherwise indicated

(a) Includes recycling services.

(b) Includes protection of biodiversity, protection and remediation of soil, groundwater and surface water, noise and vibration abatement, other environmental protection activities not stated elsewhere, other natural resource management (e.g. land, timber, aquatic resources).

Note: Other EP & NRM services – Other Environmental Protection and Natural Resource Management services. R&D – Research and Development.

TABLE 2.6: EXPERIMENTAL USE OF ENVIRONMENTAL SERVICES, by Industry and Domain, 2009–10($m)

	Waste water management	*Solid waste management* (a)	*Protection of air and climate*	*Other EP & NRM* (b)	*Water management*	*R&D services*	*R&D – own account*	*Total*
Agriculture, Forestry, Fishing	2	54	36	81	294	0	0	467
Mining	23	62	248	552	18	1	0	903
Manufacturing	418	675	302	674	123	2	0	2 193
Electricity, Gas, Water supply, drainage sewerage and waste	8	2 964	18	40	30	1	0	3 061
Construction	(c)na	1 725	587	1 309	11	1	0	3 633
All other Industries	1 237	2 431	1 330	2 965	863	106	0	8 932
Total industries	**1 688**	**7 911**	**2 521**	**5 620**	**1 340**	**111**	**0**	**19 190**
Final consumption by HH/NPISHs and GG	3 764	1 712	58	129	807	121	0	6 590
TOTAL domestic consumption expenditure	**5 452**	**9 623**	**2 579**	**5 748**	**2 146**	**232**	**0**	**25 780**
Exports	0	0	0	0	0	96	0	96
Capital formation	. .	. .	216	481	0	0	2 382	3 080
TOTAL	**5 452**	**9 623**	**2 795**	**6 230**	**2 146**	**328**	**2 382**	**28 956**

. . not applicable
na not available
(a) Includes recycling services.
(b) Includes protection of biodiversity, protection and remediation of soil, groundwater and surface water, noise and vibration abatement, other environmental protection activities not stated elsewhere, other natural resource management (e.g. land, timber, aquatic resources).
(c) Included under All other industries.
Note: Other EP & NRM services – Other Environmental Protection and Natural Resource Management services. R&D – Research and Development. GG – General Government. HH/NPISH – Households / Non Profit Institutions Serving Households.

TABLE 2.7: EXPERIMENTAL SUPPLY OF ENVIRONMENTAL SERVICES, by Industry and Domain, 2010–11($m)

	Waste water management	*Solid waste management* (a)	*Protection of air and climate*	*Other EP & NRM* (b)	*Water management*	*R&D services*	*R&D – own account*	*Total*
Agriculture, Forestry, Fishing	0	0	0	0	0	0	13	13
Mining	0	185	0	0	0	0	223	408
Manufacturing	0	175	0	0	0	22	142	339
Water supply and sewerage services	6 038	0	0	0	1 231	0	46	7 315
Waste management	0	8 641	0	0	0	0	83	8 724
Construction	0	810	0	0	0	0	147	957
Local government and Government departments	0	0	854	4 932	614	0	0	6 400
All other Industries	0	535	2 203	2 203	489	255	1 891	7 575
Total industries	**6 038**	**10 346**	**3 056**	**7 134**	**2 334**	**277**	**2 546**	**31 371**
Imports	np	0	0	0	0	68	0	np
Taxes less subsidies	np	85	1	2	1	0	0	np
TOTAL	**6 077**	**10 431**	**3 057**	**7 136**	**2 335**	**345**	**2 546**	**31 927**

np not available for publication but included in totals where applicable, unless otherwise indicated

(a) Includes recycling services.

(b) Includes protection of biodiversity, protection and remediation of soil, groundwater and surface water, noise and vibration abatement, other environmental protection activities not stated elsewhere, other natural resource management (e.g. land, timber, aquatic resources).

Note: Other EP & NRM services – Other Environmental Protection and Natural Resource Management services. R&D – Research and Development.

TABLE 2.8: EXPERIMENTAL USE OF ENVIRONMENTAL SERVICES, by Industry and Domain, 2010–11($m)

	Waste water management	*Solid waste management* (a)	*Protection of air and climate*	*Other EP & NRM* (b)	*Water management*	*R&D services*	*R&D – own account*	*Total*
Agriculture, Forestry, Fishing	3	58	51	120	393	0	0	625
Mining	29	66	367	857	26	2	0	1 346
Manufacturing	475	720	311	726	129	2	0	2 363
Electricity, Gas, Water supply, drainage sewerage and waste	9	3 290	18	41	33	1	0	3 392
Construction	(c)na	1 841	615	1 435	13	1	0	3 904
All other Industries	1 456	2 595	1 386	3 236	957	111	0	9 742
Total industries	**1 972**	**8 570**	**2 748**	**6 415**	**1 550**	**117**	**0**	**21 373**
Final consumption by HH/NPISHs and GG	4 105	1 861	63	148	784	127	0	7 089
TOTAL domestic consumption expenditure	**6 077**	**10 431**	**2 811**	**6 563**	**2 334**	**244**	**0**	**28 462**
Exports	0	0	0	0	0	101	0	101
Capital formation	. .	. .	245	573	0	0	2 546	3 364
TOTAL	**6 077**	**10 431**	**3 056**	**7 136**	**2 334**	**345**	**2 546**	**31 926**

. . not applicable
na not available
(a) Includes recycling services.
(b) Includes protection of biodiversity, protection and remediation of soil, groundwater and surface water, noise and vibration abatement, other environmental protection activities not stated elsewhere, other natural resource management (e.g. land, timber, aquatic resources).
(c) Included under All other industries.
Note: Other EP & NRM services – Other Environmental Protection and Natural Resource Management services. R&D – Research and Development. GG – General Government. HH/NPISH – Households / Non Profit Institutions Serving Households.

TABLE 3.1: EXPERIMENTAL TOTAL OUTPUT OF ENVIRONMENTAL SERVICES, by type of Producer, 2009–10 ($m)

	SPECIALIST PRODUCERS		NON–SPECIALIST PRODUCERS	TOTAL
	Government	*Other*		
Total Output of environmental specific services	9 336	15 864	3 579	28 779
Intermediate consumption (IC)	4 581	10 711	2 523	17 815
Environmental specific goods and services	3 011	4 740	1 176	8 927
Other goods and services	1 570	5 971	1 347	8 888
Gross Value Added (GVA) Total = Output – IC	4 754	5 153	1 056	10 964
Compensation of employees (CE)(a)	3 569	2 695	na	. .
Taxes less subsidies on production (IT–SU)(a)	–1 068	20	na	. .
Consumption of fixed capital (CFC)(a)	1 070	1 299	na	. .
Net Operating Surplus = (GVA–(CE+(IT–SU)+CFC))	1 183	1 139	. .	. .

. . not applicable
na not available

(a) Only includes Solid waste management and Waste water management.

TABLE 3.2: EXPERIMENTAL TOTAL OUTPUT OF ENVIRONMENTAL SERVICES, by Domain, 2009–10($m)

	SPECIALIST AND NON–SPECIALIST PRODUCERS			
	Solid waste	*Wastewater*	*Other EP, NRM and R&D*(a)(b)	*Total*
Total Output of environmental specific services	9 548	5 418	13 814	28 779
Intermediate consumption (IC)	6 686	1 660	9 469	17 815
Environmental specific goods and services	3 446	0	5 481	8 927
Other goods and services	3 240	1 660	3 988	8 888
Gross Value Added (GVA) Total = Output – IC	2 862	3 757	4 345	10 964
Compensation of employees (CE)	(c)2 176	(c)1 074	(d)3 013	6 263
Taxes less subsidies on production (IT–SU)	(c)70	(c)–29	(d)–1 089	–1 048
Consumption of fixed capital (CFC)	(c)518	(c)1 427	(d)425	2 370
Net Operating Surplus = (GVA–(CE+(IT–SU)+CFC))	98	1 285	1 996	3 379

(a) Other EP, NRM and R&D data on Compensation of employees, Taxes less subsidies on production and Consumption of fixed capital includes only Specialist producer – Government.
(b) Includes Air and climate protection.
(c) Includes only specialist producers.
(d) Includes only the Government sector.
Note: Other EP & NRM services – Other Environmental Protection and Natural Resource Management services.
R&D – Research and Development.

TABLE 3.3: EXPERIMENTAL TOTAL OUTPUT OF ENVIRONMENTAL SERVICES, by type of Producer, 2010–11($m)

	SPECIALIST PRODUCERS		NON–SPECIALIST PRODUCERS	TOTAL
	Government	*Other*		
Total Output of environmental specific services	10 786	17 037	3 908	31 730
Intermediate consumption (IC)	5 317	12 108	2 874	20 298
Environmental specific goods and services	2 908	5 442	1 349	9 698
Other goods and services	2 408	6 666	1 525	10 600
Gross Value Added (GVA) Total = Output – IC	5 469	4 929	1 034	11 432
Compensation of employees (CE)(a)	4 189	2 959	na	. .
Taxes less subsidies on production (IT–SU)(a)	–904	93	na	. .
Consumption of fixed capital (CFC)(a)	1 147	1 659	na	. .
Net Operating Surplus = (GVA–(CE+(IT–SU)+CFC))	1 036	218	. .	. .

. . not applicable
na not available

(a) Only includes Solid waste management and Waste water management.

TABLE 3.4: EXPERIMENTAL TOTAL OUTPUT OF ENVIRONMENTAL SERVICES, by Domain, 2010–11($m)

	SPECIALIST AND NON–SPECIALIST PRODUCERS			
	Solid waste	*Wastewater*	*Other EP, NRM and R&D*(a)(b)	*Total*
Total Output of environmental specific services	10 345	6 038	15 347	31 730
Intermediate consumption (IC)	7 187	2 130	10 981	20 298
Environmental specific goods and services	3 830	0	5 868	9 698
Other goods and services	3 357	2 130	5 113	10 600
Gross Value Added (GVA) Total = Output – IC	3 158	3 908	4 366	11 432
Compensation of employees (CE)	(c)2 325	(c)1 281	(d)3 543	7 149
Taxes less subsidies on production (IT–SU)	(c)90	(c)35	(d)–936	–810
Consumption of fixed capital (CFC)	(c)639	(c)1 704	(d)462	2 806
Net Operating Surplus =(GVA–(CE+(IT–SU)+CFC))	104	887	1 297	2 288

(a) Other EP, NRM and R&D data on Compensation of employees, Taxes less subsidies on production and Consumption of fixed capital includes only Specialist producer – Government.
(b) Includes Air and climate protection.
(c) Includes only specialist producers.
(d) Includes only the Government sector.
Note: Other EP & NRM services – Other Environmental Protection and Natural Resource Management services.
R&D – Research and Development.

TABLE 4.1: EXPERIMENTAL TOTAL NATIONAL EXPENDITURE ON ENVIRONMENT PROTECTION AND NATURAL RESOURCE MANAGEMENT, 2009–10($m)

	INDUSTRY					
	Specialist producers of Environment related goods and services	*Non–specialist producers*	*Other industries*	*Households/ NPISH*	*General Government*	*Total*
Environment related Services						
Intermediate consumption	(a)	1 176	11 614	. .	. .	12 791
Final consumption	. .	. .	. .	5 239	1 352	6 590
Gross Fixed Capital Formation	(a)	0	3 080	. .	. .	3 080
Environment related Connected/adapted goods						
Intermediate consumption	(a)	308	3 900	. .	. .	4 208
Final consumption	. .	. .	. .	241	0	241
Gross Fixed Capital Formation	(a)	na	0	0	0	0
Capital formation for characteristic activities	6 684	20	0	. .	. .	6 704
Specific transfers for environmental protection not included above	na	na	na	0	365	365
Environmental protection transfers to and from the rest of the world (net)	49	0	0	(a)na	64	113
Total national expenditure on environmental protection	**6 733**	**1 505**	**18 594**	**5 479**	**1 780**	**34 092**

. . not applicable
na not available

(a) Not included in the derivation of total national expenditure on environmental protection.

Note: NPISH – Non–Profit Institutions Serving Households.

TABLE 4.2: EXPERIMENTAL TOTAL NATIONAL EXPENDITURE ON ENVIRONMENT PROTECTION AND NATURAL RESOURCE MANAGEMENT, 2010–11($m)

	INDUSTRY					
	Specialist producers of Environment related goods and services	*Non–specialist producers*	*Other industries*	*Households/ NPISH*	*General Government*	*Total*
Environment related Services						
Intermediate consumption	(a)	1 349	12 754	. .	. .	14 102
Final consumption	. .	. .	. .	6 009	1 080	7 089
Gross Fixed Capital Formation	(a)	0	3 364	. .	. .	3 364
Environment related Connected/adapted goods						
Intermediate consumption	(a)	363	4 438	. .	. .	4 801
Final consumption	. .	. .	. .	287	0	287
Gross Fixed Capital Formation	(a)	na	0	0	0	0
Capital formation for characteristic activities	5 578	21	na	. .	. .	5 598
Specific transfers for environmental protection not included above	na	na	na	na	152	152
Environmental protection transfers to and from the rest of the world (net)	65	0	0	(a)na	315	379
Total national expenditure on environmental protection	**5 642**	**1 732**	**20 556**	**6 297**	**1 546**	**35 773**

. . not applicable
na not available

(a) Not included in the derivation of total national expenditure on environmental protection.

Note: NPISH – Non–Profit Institutions Serving Households.

TABLE 5.1: EXPERIMENTAL FINANCING OF NATIONAL EXPENDITURE ON ENVIRONMENTAL PROTECTION AND NATURAL RESOURCE MANAGEMENT, 2009–10 ($m)

	USERS OF FINANCE						
	Specialist producers	*Non–specialist producers*	*Other Industries*	*Households/ NPISH*	*General Government*	*Rest of the World*	*Total*
Providers of Finance for EP & NRM							
Government	526	na	na	143	1 717	64	2 449
Industry							
Specialist producers	6 158	na	na	na	na	49	6 207
Other producers	na	1 505	18 594	na	na	na	20 099
Households	na	na	na	5 336	na	na	5 336
Total National Expenditure	6 684	1 505	18 594	5 479	1 717	113	34 092
Rest of the World	na	na	na	na	na	na	na
Total	**6 684**	**1 505**	**18 594**	**5 479**	**1 717**	**113**	**34 092**

na not available

Note: NPISH – Non–Profit Institutions Serving Households. EP & NRM – Environmental Protection Services and Natural Resource Management.

TABLE 5.2: EXPERIMENTAL FINANCING OF NATIONAL EXPENDITURE ON ENVIRONMENTAL PROTECTION AND NATURAL RESOURCE MANAGEMENT, 2010–11 ($m)

	USERS OF FINANCE						
	Specialist producers	*Non–specialist producers*	*Other Industries*	*Households/ NPISH*	*General Government*	*Rest of the World*	*Total*
Providers of Finance for EP & NRM							
Government	417	na	na	190	1 232	315	2 153
Industry							
Specialist producers	5 161	na	na	na	na	65	5 226
Other producers	na	1 732	20 556	na	na	na	22 288
Households	na	na	na	6 107	na	na	6 107
Total National Expenditure	5 578	1 732	20 556	6 297	1 232	379	35 773
Rest of the World	na	na	na	na	na	na	na
Total	**5 578**	**1 732**	**20 556**	**6 297**	**1 232**	**379**	**35 773**

na not available

Note: NPISH – Non–Profit Institutions Serving Households. EP & NRM – Environmental Protection Services and Natural Resource Management.

GLOSSARY

Adapted goods	They are goods that have been specifically modified to be more "environmentally friendly" or "cleaner" and whose use is therefore beneficial for environmental protection and resource management.
Ancillary activity	An ancillary activity is a supporting activity undertaken within an enterprise in order to create the conditions within which the principal or secondary activities can be carried out.
Australian and New Zealand Standard Industrial Classification (ANZSIC), 2006	The ANZSIC is the standard classification used in Australia and New Zealand for the collection, compilation, and publication of industry statistics.
Basic price	The amount receivable by the producer from the purchaser for a unit of a good or service produced as output, minus any tax payable plus any subsidy receivable, on that unit as a consequence of its production or sale; it excludes any transport charges invoiced separately by the producer.
Compensation of employees	Compensation of employees is defined as the total remuneration, in cash or in kind, payable by an enterprise to an employee in return for work done by the latter during the accounting period.
Consumption of fixed capital	This is the decline, during the course of accounting period, in the current value of the stock of fixed assets owned and used by a producer as a result of physical deterioration, normal obsolescence or normal accidental damage.
Environmental account	An information system and framework that links the economic activities and uses of a resource to changes in the natural resource base, thus linking resource use with the System of National Accounts. See also **SEEA**.
Environmental protection activities	They are those activities whose primary purpose is the prevention, reduction and elimination of pollution and other forms of degradation of the environment.
Environmental protection specific services	Environmental protection services are produced by economic units for sale or own use.
Environmental related connected products	Products whose use directly serves environmental protection/resource management purposes but which are not environmental protection/resource management specific services or inputs into characteristic activities.
Final consumption expenditure	Final consumption expenditure is the amount of expenditure on consumption of goods and services.
Final consumption expenditure by General governments	General government final consumption expenditure consists of expenditure, including expenditure whose value must be estimated indirectly, incurred by general government on both individual consumption goods and services and collective consumption services.
Final consumption expenditure by households	Net expenditure on goods and services by persons and expenditure of a current nature by private non–profit institutions serving households. This item includes expenditures by unincorporated businesses and expenditures on assets by non–profit institutions (included in gross fixed capital formation). Also excluded is expenditure on maintenance of dwellings (treated as intermediate expenses of private enterprises), but personal expenditure on motor vehicles and other durable goods and the imputed rent of owner–occupied dwellings are included. The value of 'backyard' production (including food produced and consumed on farms) is included in household final consumption expenditure and the payment of wages and salaries in kind (e.g. food and lodging supplied free to employees) is counted in both household income and household final consumption expenditure.
Final consumption expenditure by NPISHs	Final consumption expenditure of NPISHs consists of the expenditure, including expenditure whose value must be estimated indirectly, incurred by resident NPISHs on individual consumption goods and services and possibly on collective consumption services.

General Government The general government sector as used in this publication mainly comprises local government administration units (ANZSIC Division O, Class 7530) including regional councils which provide waste and other services on behalf of member councils.

Gross fixed capital formation Gross fixed capital formation in a particular category of fixed asset consists of the value of producers' acquisitions of new and existing products of this type less the value of their disposals of fixed assets of the same type. Gross fixed capital formation is measured by the total value of a producer's acquisitions, less disposals, of fixed assets during the accounting period plus certain specified expenditure on services that adds to the value of non–produced assets.

Gross value added The value of output at basic prices minus the value of intermediate consumption at purchasers' prices. The term is used to describe gross product by industry and by sector. Basic prices valuation of output removes the distortion caused by variations in the incidence of commodity taxes and subsidies across the output of individual industries.

Households A group of two or more related or unrelated people who usually reside in the same dwelling, who regard themselves as a household, and who make common provision for food or other essentials for living; or a person living in a dwelling who makes provision for his/her own food and other essentials for living, without combining with any other person.

Industry value added (IVA) IVA is an estimate of the difference between the market value of the output of an industry and the purchases of materials and expenses incurred in the production of that output.

The derivation of IVA for individual businesses depends on whether they are classified as market or non–market producers. Non–market producers are those institutions which provide goods or services either free or at prices that are not economically significant. In other words, their prices are not significantly influenced by the amounts that producers are willing to supply, nor the amounts that users are willing to pay to purchase the goods or services being provided. Conversely, market producers provide goods and services at prices that are economically significant.

For market producers, the derivation of IVA is as follows:

Sales and service income
plus Funding from federal, state and/or local government for operational costs
plus Capital work done for own use
plus Closing inventories
less Opening inventories
less Purchases of goods and materials
less Other intermediate input expenses
equals IVA

However, it should be noted that IVA is a measure of economic activity and is not equivalent to operating profit before tax (OPBT). Wage and salary expenses, and most other labour costs, are not taken into account in the calculation for market producers, neither are interest expenses, depreciation or a number of lesser expenses. On the income side, OPBT includes total income, whereas IVA only includes sales and service income and government funding for operational costs.

As a principle, the output of non–market production is valued at cost, including intermediate input expenses. As shown in the above derivation, purchases and other intermediate input expenses are deducted from output in order to arrive at IVA.

Accordingly, the derivation of IVA for non–market producers can be described as follows:

Selected labour costs
plus Depreciation and amortisation
equals IVA

Industry value added (IVA) *continued*

Estimates of industry value added are obtained by summing the contributions of businesses classified to that industry, both market and (if any) non–market producers. Market producers predominate in most industries.

Industry value added is related to, but different from, the national accounting variable gross value added. For national accounts purposes, gross value added is calculated by adjusting IVA to include General government units and also to account for some other effects.

Intermediate consumption

Intermediate consumption consists of the value of the goods and services consumed as inputs by a process of production, excluding the consumption of fixed capital.

Manufacturing

The process where units are engaged in the physical or chemical transformation of materials, substances or components into new products (except agriculture and construction). The materials, substances or components transformed by units in this division are raw materials that are products of agriculture, forestry, fishing and mining or products of other manufacturing units.

Market output

Market output consists of output intended for sale at economically significant prices.

Mining

The process where units extract naturally occurring mineral solids, such as coal and ores; liquid minerals, such as crude petroleum; and gases, such as natural gas from the earth, from an ore body, vein or (coal) seam. The term also includes the removal of soil. The term mining is used in the broad sense to include: underground or open cut mining; dredging; quarrying; well operations or evaporation pans; recovery from ore dumps or tailings as well as beneficiation activities (i.e. preparing, including crushing, screening, washing and flotation) and other preparation work customarily performed at the mine site, or as a part of mining activity.

Natural resources

Natural resources consist of naturally occurring resources such as land, water resources, uncultivated forests and deposits of minerals that have an economic value.

Non–market output

The non–market output produced by government units and NPISHs that is supplied free, or at prices that are not economically significant, to other institutional units or the community as a whole. The value of the non–market output is estimated as the sum of costs of production, as follows:

a. Intermediate consumption
b. Compensation of employees
c. Consumption of fixed capital
d. Other taxes (less subsidies) on production.

Non–profit institutions (NPIs)

Non–profit institutions are legal or social entities created for the purpose of producing goods and services but whose status does not permit them to be a source of income, profit or other financial gain for the units that establish, control or finance them.

Non–profit institutions serving households (NPISHs)

Non–profit institutions serving households (NPISHs) consist of non–market NPIs that are not controlled by government.

Non–specialist producers

The non–specialists producers produce environmental goods and services for sale but not as their primary activity.

Other industries

Industries other than those included in ANZSIC Division A Agriculture, Division B Mining, Division C Manufacturing, Division D Electricity, Gas, Water, Division E Construction, sub division 29 Waste Collection, Treatment and Disposal Services and Class 7530 Local Government Administration.

Other subsidies on production

Other subsidies on production consist of subsidies except subsidies on products that resident enterprises may receive as a consequence of engaging in production.

Other taxes on production

Consists of all taxes except taxes on products that enterprises incur as a result of engaging in production.

Output	Output is defined as the goods and services produced by an establishment, excluding the value of any goods and services used in an activity for which the establishment does not assume the risk of using the products in production and excluding the value of goods and services consumed by the same establishment except for goods and services used for capital formation (fixed capital or change in inventories) or own final consumption.
Own–account activity	It consists of the production and use of goods and services within an establishment or household.
Production	Production is an activity, carried out under the responsibility, control and management of an institutional unit, that uses inputs of labour, capital, and goods and services to produce outputs of goods and services.
Products	Products are goods and services (including knowledge–capturing products) that result from a process of production.
Purchasers' price	The amount paid by the purchaser, excluding any deductible tax, in order to take delivery of a unit of a good or service at the time and place required by the purchaser. The purchaser's price of a good includes any transport charges paid separately by the purchaser to take delivery at the required time and place.
Recyclable waste service	Services provided to treat or process waste materials so as to make suitable for reuse.
Recycling	A resource recovery method involving the collection and processing of waste for use as a raw material in the manufacture of the same or similar non–waste product.
Research and development	Research and development consists of the value of expenditures on creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and use of this stock of knowledge to devise new applications. This does not extend to including human capital as assets within the SNA.
Resource management activities	They are those activities whose primary purpose is preserving and maintaining the stock of natural resources and hence safeguarding against depletion.
Resource recovery	The process of extracting materials or energy from a waste stream through re–use (using the product for the same or a different purpose without further production), recycling or recovering energy from waste.
Rest of the world (ROW)	The rest of the world consists of all non–resident institutional units that enter into transactions with resident units, or have other economic links with resident units.
Secondary activity	A secondary activity is an activity carried out within a single producer unit in addition to the principal activity and whose output, like that of the principal activity, must be suitable for delivery outside the producer unit.
SEEA	The System of Environmental and Economic Accounting (SEEA) is a measurement framework that can provide a range of metrics that link information on the economy and the environment. This integration of information is achieved by the use of common frameworks, classifications and standards, providing an integrated database for policy analysis and decision making. In 2012 it was adopted as an international statistical standard by the United Nations Statistical Commission and applies the accounting concepts, structures, rules and principles of the System of National Accounts (SNA) to environmental information.
Solid waste	Waste materials ranging from municipal garbage to industrial waste, but excluding gaseous, liquid, hazardous, clinical and intractable wastes.
Specialist producers	Specialist producers are those producers whose primary activity is the production of environmental good and services.
Subsidy on product	A subsidy payable per unit of a good or service. The subsidy may be a specific amount of money per unit of quantity of a good or service, or it may be calculated ad valorem as a specified percentage of the price per unit. A subsidy may also be calculated as the difference between a specified target price and the market price paid actually paid by a

Subsidy on product *continued*	purchaser. A subsidy on a product usually becomes payable when the product is produced, sold or imported, but it may also become payable in other circumstances, such as when a product is exported, leased, transferred, delivered or used for own consumption or own capital formation.
Supply table	A supply table at purchasers' prices consists of a rectangular matrix with the rows corresponding to the same groups of products as the matching use tables and columns corresponding to the supply from domestic production valued at basic prices plus columns for imports and the valuation adjustments necessary to have total supply of each.
Taxes	Taxes are compulsory, unrequited payments, in cash or in kind, made by institutional units to government units.
Taxes less subsidies on production	Taxes less subsidies on production consist of taxes payable or subsidies receivable on goods or services produced as outputs and other taxes or subsidies on production, such as those payable on the labour, machinery, buildings or other assets used in production.
Taxes on products	Taxes payable per unit of some good or service. The tax may be a specific amount of money per unit of quantity of a good or service (quantity being measured either in terms of discrete units or continuous physical variables such as volume, weight, strength, distance, time, etc.), or it may be calculated ad valorem as a specified percentage of the price per unit or value of the goods or services transacted. A tax on a product usually becomes payable when the product is produced, sold or imported, but it may also become payable in other circumstances, such as when a good is exported, leased, transferred, delivered, or used for own consumption or own capital formation.
Total expenses	The sum of all expense components.
Total income	Comprises sales and service income, interest income, funding from government for operational costs and other income (for details, see the entries for these items).
Trade margin	Trade margin is the difference between the actual or imputed price realised on a good purchased for resale and the price that would have to be paid by the distributor to replace the good at the time it is sold or otherwise disposed of.
Transaction	A transaction is an economic flow that is an interaction between institutional units by mutual agreement or an action within an institutional unit that it is analytically useful to treat like a transaction, often because the unit is operating in two different capacities.
Transfer	A transfer is a transaction in which one institutional unit provides a good, service or asset to another unit without receiving from the latter any good, service or asset in return as a direct counterpart.
Use table	A use table at purchasers' prices consists of a set of product balances covering all products available in an economy arranged in the form of a rectangular matrix with the products, valued at purchasers' prices, appearing in the rows and the columns indicating the disposition of the products to various types of uses.
Wages and salaries	The gross wages and salaries (including capitalised wages and salaries) of all employees of the business. The item includes severance, termination and redundancy payments, salaries and fees of directors and executives, retainers and commissions of persons who received a retainer, bonuses, and annual and other types of leave. Provision expenses for employee entitlements (e.g. provisions for annual leave and leave bonus, long service leave, sick leave, and severance, termination and redundancy payments) are also included, as are salary sacrificed earnings and remuneration of employees in the form of share based payments and stock options. Payments related to self–employed persons such as consultants, contractors and persons paid solely by commission without a retainer are excluded. The drawings of working proprietors and partners are also excluded.

Waste

(a) any substance that is discarded, emitted or deposited in the environment in such volume, constituency or manner as to cause an alteration in the environment

(b) any discarded, rejected, unwanted, surplus or abandoned substance

(c) any otherwise discarded, rejected, unwanted, surplus or abandoned substance intended for sale or for recycling, reprocessing, recovery, or purification by a separate operation from that which produced the substance.

Waste Management Services Industry

Can include any combination of collection, transport, recycling, treatment, processing, disposal, managing and monitoring of waste materials (ANZSIC Division D, subdivision 29).

Waste water services

This covers the sewerage and drainage services (ANZSIC division D subdivision 28).

This class consists of units mainly engaged in operating sewerage or drainage systems or sewage treatment plants.

Primary activities

- Sewage pumping station operation
- Sewage treatment plant operation
- Sewerage system operation
- Stormwater drainage system operation
- Town drainage system operation.

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