

Introduction



Prepared by

Ian Lowe (Chair), State of the Environment Advisory Council

Contents

Why produce a state of the environment report?	1-4
What constitutes the environment?	1-5
Reporting framework	1-5
Purpose	1-5
Guiding principles	1-5
Aims	1-5
Users and products	1-6
Approach to state of the environment reporting	1-6
Structure and scope	1-6
Environmental indicators	1-7
Need for baseline information	1-8
The reporting process	1-9
State of the Environment Advisory Council	1-9
Reference groups	1-10
State of the Environment Reporting Unit	1-10
Referees	1-10
How to use this report	1-10
Improving the reporting process	1-11
References	1-12
Acknowledgments	1-12
 Boxes	
Australian refinements to the OECD pressure–state–response reporting model	1-7
Selection criteria for national environmental indicators	1-8
The OECD’s core environmental indicators	1-9
Australia’s international environmental reporting commitments	1-11

Why produce a state of the environment report?

In Australia the principle of ecologically sustainable development is now broadly supported in the community, by governments of the Commonwealth, States and Territories and by local government. This support arises from the recognition that all lifestyles depend critically on a range of natural assets: air, soils, water, mineral resources, forests and other biological systems.

The National Strategy for Ecologically Sustainable Development called for the introduction of regular national state of the environment reporting to enhance the quality, accessibility and relevance of data relating to ecologically sustainable development. In Australia, two parliamentary inquiries have called for state of the environment reporting at the national level.

In the past two decades the governments of many countries, including Australia, Bahrain, Canada, Hungary, Italy, Japan, Kuwait, the Philippines, the Scandinavian nations, Turkey and the United States, have published reports on national environmental conditions. All OECD members have agreed to produce regular state of the environment reports; most have done so. In several countries these reports are thoroughly integrated into national economic policy formulation. For instance, in the Netherlands an independent research institute, the RIVM (Rijksinstituut voor Volksgezondheid en Milieuhygiene) produces comprehensive environmental outlook reports that assess current conditions and trends against criteria for ecological sustainability. These public audits are presented to the Dutch Parliament. They monitor and influence the workings of the Dutch National Environment Policy Plan, which guides Dutch economic and environmental policy towards ecological sustainability by the year 2010.

The Canadian Government published state of the environment reports in 1986 and 1991; it has also published a preliminary set of environmental indicators for such reporting.

A number of non-government organisations, including the World Resources Institute (Washington) and the World Conservation Monitoring Centre (Cambridge), also produce state of the environment reports, as do international agencies like the United Nations Environment Programme and the OECD. The 1991 OECD report on the state of the environment had the following aims:

- to assist member countries in the definition, implementation and evaluation of environmental policies
- to help those countries incorporate environmental concerns in economic decision-making in order to progress towards ecologically sustainable development
- to provide environmental information to the public

In addition, the OECD reviews the environmental performance of individual member countries in meeting their domestic policy goals and international commitments. Australian state of the environment reports will be an important source of information for these international reviews.

Establishing a pattern of sustainable development is not possible without adequate and accessible information. There is widespread and understandable concern about some aspects of environmental quality, such as air pollution, degradation of waterways, loss of biological diversity and erosion of agricultural lands. Decision-makers need reliable data on these and other key indicators of the state of the environment. They also need to know how the environment is changing. Without adequate, accessible information, it is possible to make two sorts of errors: we may inadvertently do irreparable damage to the natural systems on which all life depends; and we may forgo opportunities for desirable developments through lack of detailed understanding of the potential impacts.

State of the environment reporting is one of the most powerful tools for informing the public about their environment. It describes the effects of human activities on the condition of the environment, as well as the implications of this for human health and economic well-being. It also provides an opportunity to monitor actively, directly and accountably the performance of government policies against actual environmental outcomes, which makes it, effectively, a 'report card' on the condition of our environment and natural resources. This allows discussions about future economic and social development, and consequent policy, to be based on accurate and commonly agreed perceptions of environmental conditions and trends. If these conditions and trends are identified as they develop, decision-makers in industry and government would be in a position to avoid policies that might be environmentally unsustainable. Such policies could otherwise be socially and economically inequitable and costly.

There is growing community concern about the environment. 'Friends of Merri Creek' replant the banks of the creek with native grasses.



What constitutes the environment?

Twenty years ago the Commonwealth Government defined the environment as including ‘... all aspects of the surroundings of human beings, whether affecting human beings as individuals or in social groupings’ (section 3 of the *Environment Protection (Impact of Proposals) Act 1974*). More recent definitions of the environment have taken a broader perspective. For example, the *Local Government (Planning and Environment) Act 1990* (Qld) defined environment in section 1.4 (1) as including:

- (a) ecosystems and their constituent parts including people and communities
- (b) all natural and physical resources
- (c) those qualities and characteristics of locations, places and areas, however large or small, which contribute to their biological diversity and integrity, intrinsic or attributed scientific value or interest, amenity, harmony, and sense of community
- (d) the social, economic, aesthetic and cultural conditions which affect the matters referred to in paragraphs (a), (b) and (c) or which are affected by those matters.

The New Zealand *Resource Management Act 1991* adopts a similar definition.

The broad range of environmental issues facing Australia today, and the need to assess progress towards ecological sustainability, has necessitated this report covering more than just people’s surroundings. A more comprehensive scope was required. The report therefore covers terrestrial, atmospheric, marine, inland aquatic, and human environments, and how we value them.

It is a major innovation in this report to include natural and cultural heritage aspects of our environment. The chapter on human settlements has adopted a similarly innovative approach. It combines environmental, social and economic data into measures of ‘livability’ to reflect the condition of human society as part of the Australian environment.

Reporting framework

Purpose

To meet the need for improved environmental information and to satisfy its international commitments, the Commonwealth Government has established a system for regular reporting. The State of the Environment Reporting Unit of the Department of the Environment, Sport and Territories has responsibility for this task. A framework for state of the environment reporting for Australia was articulated in 1994 (DEST, 1994). This report relies on the guiding principles and aims of that framework.

Guiding principles

This first report has been guided by the following principles:

- rigour — to use the best available scientific information, methods and advice, and to present accurate data and information in a balanced and accessible way
- objectivity — to present data and information without bias or modification
- cooperation — to prepare the report cooperatively, and to use a range of data sources including those of Commonwealth, State and Territory Government agencies as well as a number of non-government organisations
- openness — to ensure open access to information about Australia’s environment
- global perspective — wherever possible, to present information in a comparative manner, seeking to place local and regional information in national and international contexts
- ecological sustainability — to assess environmental information and issues against the principles of ecologically sustainable development

Aims

The report has the following broad aims:

- to provide the Australian public, its governments, and decision-makers with accurate, timely and accessible information about the condition of and prospects for the Australian environment
- to increase public understanding of the Australian environment, its condition and prospects
- to facilitate the development of an agreed set of national environmental indicators
- to provide an early warning of potential problems
- to report on the effectiveness of policies and programs designed to respond to environmental change, including progress towards achieving environmental standards and targets
- to contribute to the assessment of Australia’s progress in protecting biological diversity and maintaining ecological processes and systems
- to create a mechanism for integrating environmental information with social and economic information, thus providing a basis for incorporating environmental considerations in the development of long-term, ecologically sustainable economic and social policies
- to identify gaps in our knowledge of Australia’s environmental conditions and trends and recommend strategies for research and monitoring to fill these gaps
- to contribute to Australia’s international environmental reporting obligations (see the box on page 1-11)

- to help decision-makers to make informed judgments about the broad environmental consequences of social, economic and environmental policies and plans

Users and products

It is now widely accepted in other countries, and confirmed by public consultations in Australia, that a wide range of people use state of the environment information. The main user groups include: the general public and specific community interest groups and sectors; government decision-makers and policy analysts at Commonwealth, State, Territory and local levels; cultural and natural resource planners and managers; scientists; primary, secondary and tertiary educational institutions; industry groups; the print and electronic media; and international agencies.

Each group has different needs. For example, while scientists and environmental planners require very detailed information, the general public, secondary school students and community groups want broader assessments of the state of the environment. This hierarchy of information needs (see Fig. 1.1) applies at all scales from local to global.

All groups expect the information, in whatever form it is provided, to be up-to-date, accurate and accessible. Meeting these expectations was a fundamental goal of the present report.

Approach to state of the environment reporting

The approach adopted for state of the environment reporting for Australia has two major elements:

- the conceptual structure — essentially the OECD's 'pressure-state-response' model, which is broad in scope, but with significant local modifications that are now attracting international attention
- relevant techniques — development of environmental indicators, establishment of baseline information, development of a predictive capacity, selection of issues, information management and evaluation of the reporting system and its products.

Structure and scope

In recent years, groups around the world have made considerable progress in developing a consistent conceptual structure for reporting on the state of the environment. Australia has adapted the OECD's pressure-state-response model for its reporting system (see the box opposite). The model is based on the concept of causality: human activities exert pressures on the environment and change its state or condition. Society responds to this changed state by developing and implementing policies, which complete the cycle and influence those human activities that exert pressure on the environment.

The OECD model is not the only approach. Any structure will change as community values change and our understanding of environmental problems increases. Furthermore, the OECD model implies simple relationships in the interaction between human activity and the environment: this should obscure neither the complexity of ecological relationships nor the difficulties in taking into account the natural variability of ecological systems. The Australian refinement of the OECD model includes some additional interactions.

Responses are sometimes directed to changing the state rather than relieving pressures: instead of restricting vehicle use and economic activities that cause urban air pollution, for example, we tend to look for ways to clean up the air-shed. The state of the environment can itself affect the pressures, as when depletion of a fishery reduces the level of fishing or the littering of a beach by tourists reduces its appeal. Finally, the responses we develop are significantly shaped by our perception of the pressures causing the problem. This Australian refinement of the OECD model has been adopted by the international group set up by the United Nations Environment Programme (UNEP) to develop a report on the Global Environmental Outlook. Thus the more sophisticated model developed for this report has influenced environmental reporting at the global level.

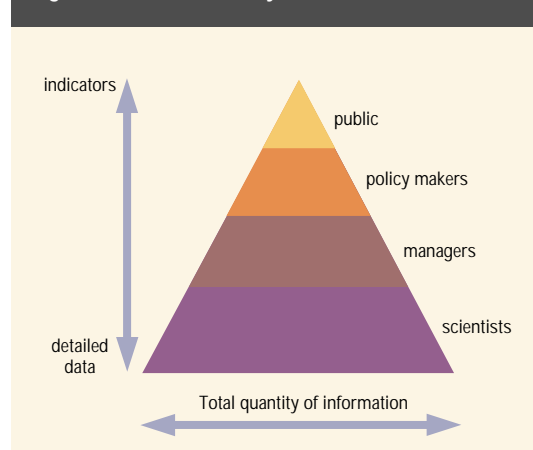
State of the environment reporting is guided by the principles of ecologically sustainable development, as outlined in the National Strategy for Ecologically Sustainable Development endorsed by the Council of Australian Governments in 1992.

The present report has a comprehensive coverage. It reviews significant environmental pressures and changes caused by human activities and broadly links socio-economic forces with changes in the environment.

The report covers all Australian States and mainland Territories, the continental shelf, the external territories (with the exception of the Australian Antarctic Territory and the Territory of Heard Island and McDonald Islands) and areas within the 200-nautical-mile Exclusive Economic Zone.

Where possible, the report uses biophysical and ecological rather than administrative boundaries to present information. This practice is now

Figure 1.1 The hierarchy of information needs



widespread among governments that report on the state of the environment. It is consistent with current approaches to natural resource management and integrated management of human settlements.

Approaches to regionalisation are complex. The authors have determined criteria for identifying regions and their spatial extent according to the purpose of the analysis concerned. Different regionalisations were found to be appropriate for different issues. Among the spatial units used are major groundwater basins, major airsheds, urban settlements and statistical and administrative regions used for national surveys and population censuses. The report also includes the distribution of selected plant and animal species and communities.

For each issue, the state of information relating to Australian environments is reviewed. In 1990 the Australian Science and Technology Council found that Australia lacks the following:

- an integrated national system for measurement of environmental quality
- a national data set of sufficient calibre to assess and manage environmental quality
- appropriate national baseline data to evaluate the effectiveness of strategies

It is not the function of the state of the environment reporting system to maintain national data of this kind. It is, however, part of its function to assess the adequacy of current environmental monitoring and data-management systems, in order to identify gaps in monitoring effort, coverage and knowledge of suitable indicators and their use. Chapter 10 of this report identifies needs for improving the knowledge base necessary for effective environmental assessment and national state of the environment reporting. This point cannot be over-emphasised. In many important areas, Australia just does not have the data, the analytical tools or the scientific understanding that would allow us to say whether current patterns of change to the natural environment are sustainable. We are effectively driving a car without an up-to-date map, so we cannot be sure where we are. Improving our view of the road ahead by enhancing the environmental data base is a very high priority. Our intended destination is a sustainable pattern of development, but it is not always clear which direction we need to take to get there.

Environmental indicators

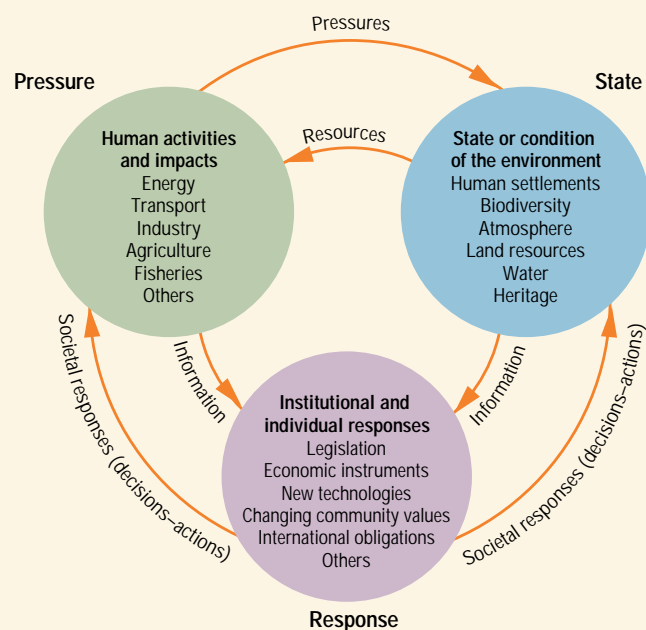
These are physical, chemical, biological or socio-economic measures that can be used to assess natural resources and environmental quality. The OECD notes two particular functions for environmental indicators.

- They reduce the number of measures that would normally be required to give an 'exact' representation of a situation.

Australian refinements to the OECD pressure–state–response reporting model

The authors of this report have adopted the following refinements and clarifications:

- pressures are defined as human-induced
- natural conditions are primary states (for example, soil salinity, climate variability, soil nutrients, topography and natural hazards)
- inappropriate human actions, including responses to such natural conditions as droughts, are pressures
- states reflect pressure and the effectiveness of responses
- responses can be aimed at both pressures and states
- appropriate responses reduce pressures
- lack of action can be a pressure



Source: adapted from OECD, 1994.

- They simplify the communication process by which information about the results of measurement is provided to the user.

Environmental indicators are usually developed for a specific purpose. They differ from other measures in providing meaning that extends beyond the attributes directly associated with them. In a well-developed system, each matter of environmental concern will have spawned its own specific indicator or indicators. Access to widely accepted, easily measured indicators of environmental quality is essential for informed decision-making, since these express the best available knowledge.

For Australian state of the environment reporting, indicators are being developed to specifically measure the pressures on the environment, the state of the Australian environment and the societal responses taken in the light of the pressures and state.

Indicators of environmental pressures describe the extent of human activities as they affect the environment. Indicators of environmental

conditions — the state of the environment — describe the quality of the environment. Measurement of those conditions can be extremely difficult and expensive, and the OECD notes that measurement of environmental pressures is often used as a substitute for measurement of the conditions.

Indicators of response show the extent and effectiveness of society's responses to environmental changes and concerns. Responses include individual and collective actions aimed at mitigating, adapting to or reversing negative impacts on the environment and reversing environmental damage already done. They also include actions to improve the preservation and conservation of the environment. Policy performance indicators are also relevant.

Monitoring environmental indicators over time can provide an effective early-warning system. Using them in monitoring programs to report on the condition of the environment can therefore serve a range of objectives, such as identifying where present social behaviour and economic policies could lead to future environmental degradation and associated economic and social costs.

Selection criteria for national environmental indicators

A number of criteria guide the choice of indicators for state of the environment reporting. An indicator should:

- serve as a robust indicator of environmental change
- be sensitive to environmental change
- reflect a fundamental or highly valued aspect of the environment
- be either national in scope or applicable to regional environmental issues of national significance
- provide an early warning of potential problems
- be capable of being monitored to provide statistically verifiable and reproducible data that show trends over time and, preferably, apply to a broad range of environmental regions
- be scientifically credible
- be easy to understand
- be monitored regularly with relative ease
- be cost-effective
- be as aggregative as possible (that is, amenable to combination with other indicators to produce more general information about environmental conditions)
- have relevance to policy and management needs
- contribute to monitoring of progress towards implementing commitments in nationally significant environmental policies
- where possible and appropriate, facilitate community involvement
- contribute to the fulfilment of reporting obligations under international agreements
- where possible and appropriate, use existing commercial and managerial indicators
- where possible and appropriate, be consistent and comparable with other countries and State and Territory indicators

Source: Department of the Environment, Sport and Territories, 1994

Procedures for choosing environmental indicators are discussed in many state of the environment reports and in the literature on ecologically sustainable development. The box on the left summarises the criteria that are considered most useful for selecting indicators.

Development of a nationally agreed set of environmental indicators for Australia is a high priority for state of the environment reporting. It is, however, a complex task that will take a number of years to complete. Major interested parties, including key community and industry sectors, Commonwealth, State, Territory and local governments, scientific communities and other research groups will need to be involved. It will be necessary to progressively identify a scientifically credible set of environmental indicators and associated monitoring requirements for state of the environment reporting, and to reach national agreement on a set of indicators.

The role of this first report under the new reporting framework has been to identify the key environmental issues at the national level, using the best available data sets, and thus it has not been based on a formal set of approved environmental indicators. However, it is an essential first step in the development process because it has led to an initial identification/characterisation of the 'first generation' of national environmental indicators. Only now is it possible to start identification and technical specification of environmental indicators appropriate to Australian conditions.

Some data sets used in this report suggest themselves as indicators, but they will need to be refined by an iterative checking and testing process. Other indicators will need to be developed from scratch because existing data sets that are directly or indirectly relevant were collected for other purposes and are inadequate to serve as the basis for specific environmental indicators.

Not all of the environmental indicators used overseas, for example by the OECD, are directly relevant to Australia. Many will have to be developed specifically for Australian conditions and issues. In addition, data sets may not exist for emerging environmental issues. The box above summarises part of the core set of environmental indicators developed by the OECD.

Need for baseline information

Evaluation of environmental change depends on the presence of a baseline to measure against. In general, baselines are established so we can measure significant change in a selected attribute. In that sense, baselines form part of the set of environmental indicators. They can reflect change over time or they can reflect the difference between spatial areas at a particular time. Such evaluation is hampered by the natural variability of Australian conditions and the limited availability of data from scientifically rigorous monitoring of environmental change.

The OECD's core environmental indicators

The OECD has identified the following list of issues to reflect current environmental challenges: climate change; ozone layer depletion; eutrophication; acidification; toxic contamination; urban environmental quality; biodiversity; landscape; waste; water resources; forest resources; fish resources; and soil degradation. The first nine issues can be considered 'sink-oriented', dealing with environmental quality, whereas the remaining four are 'source-oriented', focusing on the quantity aspect of natural resources.

Not all indicators can be directly associated with a specific environmental issue such as population growth or economy-wide environmental expenditure, so a category of general indicators has been added to their core set.

Using the pressure–state–response reporting framework, the OECD identified a number of specific indicators for these identified environmental issues. Below is an extract from its core set for three of its listed issues.

Issue	Pressure	State	Response
	Indicators of environmental pressure	Indicators of environmental condition	Indicators of societal response
Climate change	<ul style="list-style-type: none"> • Index of greenhouse gas emissions (M) • Carbon dioxide emissions (S) 	<ul style="list-style-type: none"> • Atmospheric concentrations of greenhouse gases (S) • Global mean temperature (S) 	<ul style="list-style-type: none"> • Energy efficiency (M) • Energy intensity (S) • Economic and fiscal measures (M)
Ozone layer depletion	<ul style="list-style-type: none"> • Index of apparent consumption of ozone-depleting substances (S) • Apparent consumption of CFCs and halons (S/M) 	<ul style="list-style-type: none"> • Atmospheric concentrations of ozone depleting substances (M) • Ground level UV-B radiation (M) 	<ul style="list-style-type: none"> • CFC recovery rate (M)
Eutrophication	<ul style="list-style-type: none"> • Emissions of nitrogen and phosphorus in water and soil (→ nutrient balance) (L) • Nitrogen from fertiliser use and from livestock (S) • Phosphorus from fertiliser use and from livestock (S) 	<ul style="list-style-type: none"> • Biological oxygen demand/dissolved oxygen (S/M) • Concentration of nitrogen and phosphorus in inland and marine waters (M/L) 	<ul style="list-style-type: none"> • Percentage of population serviced by biological and/or chemical sewage treatment plants (M/L) • Percentage of population connected to waste-water treatment plants (S) • User charges for waste-water treatment (M) • Market share of phosphate-free detergents (S/M)

Note: each indicator is followed by a character specifying its availability: S = data available in the short term; M = data expected to be available in the medium term; and L = data expected to be available in the long term.

Not all OECD indicators — for example, those dealing with acid rain — are relevant to Australian conditions. The OECD report acknowledges that the set of environmental indicators is dynamic and may change as knowledge and perception of environmental problems evolve.

Source: OECD, 1994.

Much of the significant environmental change to Australia — such as clearing of native vegetation, erosion of topsoil and pollution of waterways with heavy metals — occurred during the nineteenth and early twentieth centuries. The environment continues to change today in response to pressures from human activities but, to represent accurately the importance of current trends and conditions, state of the environment reporting must place impacts in a historical context whenever possible.

Long-term monitoring is required in order to screen out natural variability and establish reliable baselines. State of the environment reporting aims to use baselines that reflect the full extent of impacts of human uses of the environment.

The reporting process

State of the Environment Advisory Council

The State of the Environment Advisory Council, representing a broad range of expert and community interests, has shaped and overseen the production of this report. Membership of the Council is primarily drawn from outside government and includes eminent persons from the conservation movement, industry, the scientific community, academia, and Aboriginal and Torres Strait Islander communities. Members were appointed by the Minister for the Environment, Sport and Territories on the basis of merit and standing in community and professional circles.

The Council's role is as follows:

- to provide advice on national state of the environment policy and planning
- to assist in the identification of environmental information needs
- to evaluate national state of the environment reporting
- to review drafts of state of the environment publications to ensure their objectivity and credibility
- to assist in enhancing public awareness of the findings of reports

Reference groups

The credibility of this report depends on its accuracy, relevance and impartiality. Expert reference groups provided the mechanism for identifying important issues and the kinds of information needed to report on them. Chapters 3–9 were each prepared by an expert reference group, chosen to bring together a comprehensive knowledge base in those specific areas. Group members were drawn from the academic and research community, as well as government and non-government scientific, technical and professional groups. More than 50 experts were involved. The members of the relevant reference groups are listed in the chapters. The report could not have been produced without their professional contribution, which went well beyond the call of duty. Every reference group included a member from the State of the Environment Unit, acting as the point of contact between the reference group, the Advisory Council and the Department, as well as facilitating the group's operation.

State of the Environment Reporting Unit

The Unit is part of the Environmental Strategies Directorate of the Department of the Environment, Sport and Territories. It has three main areas of responsibility.

- It manages the production of regular state of the environment reports and associated products.
- It develops, in cooperation with State and Territory governments and non-government agencies, a national state of the environment reporting system. The development of nationally agreed environmental indicators is a high priority in bringing greater cohesion to the national reporting system.
- It deals with Australia's international responsibilities with respect to state of the environment reporting.

It also serves as secretariat to the Advisory Council, has contracted the reference groups and handled the administrative aspects of the report production. It has joint responsibility with the Public Relations and Education Unit of the Department for implementing the communication strategy for the report.

Referees

As part of the process of developing this report, each of Chapters 2–9 was reviewed by a panel of expert referees. The aim of this review process was to ensure the report's scientific accuracy and independence. About 40 independent experts were involved. The final report was improved considerably by the valuable comments of these referees, who are listed in the chapters concerned.

A draft of the report was also sent to all State and Territory governments through ANZECC SoE Reporting Taskforce members, to all Commonwealth departments and to the Australian Local Government Association for comment on its factual accuracy. Their comments were also valuable, and much appreciated.

How to use this report

The best way to get the 'big picture' of the state of the Australian environment is to read the Executive Summary. The entire report should be seen as a reference work rather than a narrative. Chapter 2 sets out a general description of the nature of Australia as a physical, biological, social and cultural landscape, describing how we have arrived at the present situation. Each of Chapters 3 to 9 describes in detail a particular facet of the contemporary environment. Each concludes with a summary table, listing the main points of the analysis. Chapter 10 draws together the key findings of the report to give an overall picture of our progress toward a pattern of development that would be ecologically sustainable.

While the Advisory Council has tried to give the complete report a style and approach that is as uniform as possible, the differences in the subject matter dictate different ways of reporting. In that sense, Chapters 3 to 9 resemble a collected set of reference works, each giving an expert view of one aspect of the contemporary environment. A number of technical reports, commissioned for the reference groups, are also being published. These provide more detailed information on aspects of Chapters 2 to 9 and are referred to in those chapters.

Please note that the report is only as comprehensive as is possible within the constraints of this volume and the limited time available to prepare it. Every one of the reference groups could easily have used two or three times as much space to give a more detailed picture. Finally, the report presents as accurately as possible a picture of the state of the environment in 1995, taking into account limitations of available data when the typescript was handed to the publishers. As it points out, the most obvious characteristic of the environment is change. Its findings will not remain an up-to-date picture for the complete period between the publication of this report and the next one in this series. The longer the period since its publication, the more one needs to take care in establishing what changes have occurred.

Australia's international environmental reporting commitments

The following are examples of Australia's international reporting commitments.

International conventions

The Convention of the World Meteorological Organization, ratified by Australia in 1948, commits Australia to international cooperation in monitoring, research and data exchange in respect of the atmosphere, oceans and inland waters.

The Framework Convention on Climate Change, ratified by Australia in 1992, focuses on research, data collection and monitoring. It commits countries to periodic reporting on their greenhouse gas emissions and sinks.

The Vienna Convention and subsequent Montreal Protocol for the Protection of the Ozone Layer, ratified by Australia in 1990, focus on research, data collection, monitoring and periodic reporting in their commitment to control ozone-depleting emissions of chlorofluorocarbons, halons, carbon tetrachloride and methyl chloroform.

The Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal was ratified by Australia in 1992. Under this convention, Australia is obliged to transmit information to the Secretariat of, among other things, all transboundary movements of hazardous wastes in which Australia has been involved.

The Convention on Biological Diversity, ratified by Australia in 1993, requires parties to provide periodic reporting on measures taken to implement the provisions and meet the objectives of the Convention, which aims to promote the conservation and sustainability of biological diversity and the equitable sharing of benefits from genetic resources.

The Convention Concerning the Protection of the World Cultural and Natural Heritage, ratified by Australia in 1974, requires annual monitoring reports on the management of Australia's World Heritage areas.

The Protocol on Environmental Protection to the Antarctic Treaty (Madrid Protocol) designates Antarctica as '... a natural reserve devoted to peace and science' and places an indefinite ban on mineral resource activity in Antarctica. When in force, it will entail environmental reporting obligations for Australia.

The London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, ratified by Australia in 1985, requires annual reports of approvals to dump or incinerate wastes and other matter at sea.

The International Convention for the Prevention of Pollution from Ships, ratified by Australia in 1987, requires annual reporting of incidents involving pollution from ships.

Australia signed the Convention to Combat Diversification in 1994 and is currently considering the question of ratification. The Convention will require reporting on the strategies established to combat diversification and mitigate the effects of drought. Development of and hence reporting on implementation of a national action program would be voluntary for Australia if the convention is ratified.

The Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property, ratified by Australia in 1989, requires periodic reporting to UNESCO of actions taken under the national protection provisions.

The Convention on Conservation of Migratory Species of Wild Animals (Bonn Convention), the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES Convention) and the Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention) also have reporting requirements.

Reporting requirements of international organisations

Australia's membership of the OECD, the United Nations Environment Programme (UNEP), the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) and the World Meteorological Organization (WMO) brings with it reporting obligations for various aspects of the condition of the Australian environment.

Agenda 21

The 1992 United Nations Conference on Environment and Development (UNCED) created a high-level Commission on Sustainable Development, which considers national reports on implementation of Agenda 21, the principal program arising from the Conference, and investigates ways to improve the collection and dissemination of environmental data at the global level.

Improving the reporting process

This document is a first attempt at an ambitious task; it will certainly need to be refined in the light of experience. The Commonwealth Government, the State of the Environment Advisory Council and the State of the Environment Reporting Unit are very keen to involve the whole community in refining the reporting framework. After all, it is our environment that is at stake. Any comments you may have, on the reporting task and on its approach, will be most welcome.

To contact the Council, write to:

The Secretary (State of the Environment
Advisory Council)
State of the Environment Reporting Unit
Department of the Environment, Sport and
Territories
GPO Box 787
Canberra ACT 2601

For more information about the report, please telephone the Community Information Unit of the Department of the Environment, Sport and Territories on 1800 803 772.

References

- Commonwealth Environment Protection Agency (1992). 'Development of a National State of the Environment Reporting System - Discussion Paper.' (CEPA: Canberra.)
- Council of Australian Governments (1992). 'National Strategy for Ecologically Sustainable Development.' (AGPS: Canberra.)
- Department of the Environment, Sport and Territories (1994). 'State of the Environment Reporting: framework for Australia.' (DEST: Canberra.)
- Organisation for Economic Co-operation and Development (1991). 'State of the Environment.' (OECD: Paris.)
- Organisation for Economic Co-operation and Development (1994). 'Environmental Indicators — OECD Core Set.' (OECD: Paris.)

Acknowledgments

Ian Robertson (Department of the Environment, Sport and Territories) assisted in the preparation of this chapter.

Photo credits

Page 1-1: The Photo Library of Australia

Page 1-4: Ray Radford, 'Friends of Merri Creek'.