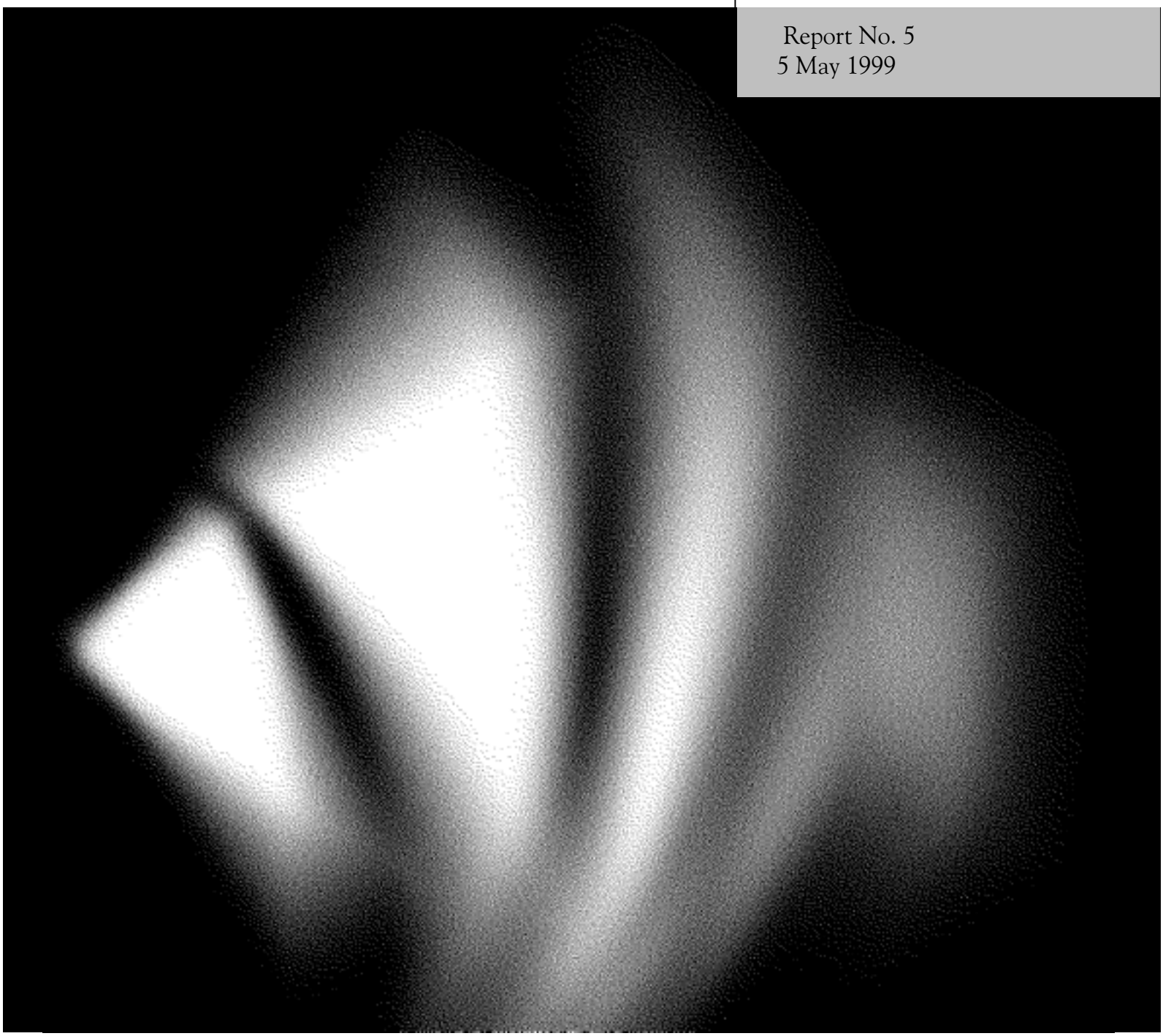
PRODUCTIVITY COMMISSION

Implementation of Ecologically Sustainable Development by Commonwealth Departments and Agencies

Inquiry Report

Report No. 5
5 May 1999



ISBN 0 646 33593 6

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An appropriate citation for this paper is:

Productivity Commission 1999, *Implementation of Ecologically Sustainable Development by Commonwealth Departments and Agencies*, Report No. 5, AusInfo, Canberra.

Acknowledgements

The Commission is grateful to all who participated in this inquiry.

The Commissioner would also like to express his appreciation to the members of the research team who assisted in preparation of this report.

Information about the Productivity Commission and its current work program can be found on the website: www.pc.gov.au

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PRODUCTIVITY COMMISSION

25 May 1999

The Honourable Peter Costello MP
Treasurer
Parliament House
CANBERRA ACT 2600

Dear Treasurer

In accordance with Section 11 of the *Productivity Commission Act 1998*, I have pleasure in submitting to you the Commission's final report on Implementation of Ecologically Sustainable Development by Commonwealth Departments and Agencies.

Yours sincerely

Dr Neil Byron
Presiding Commissioner

Terms of reference

I, PETER COSTELLO, Treasurer, under Parts 2 and 3 of the *Productivity Commission Act 1998*, hereby refer the implementation of Ecologically Sustainable Development (ESD) by Commonwealth departments and agencies to the Commission for inquiry and report within nine months of receipt of this reference.

Background

The Government is keen to ensure Commonwealth departments and agencies show leadership in the processes by which economic, social and environmental goals are integrated. This inquiry will assess ESD implementation by Commonwealth departments and agencies with major responsibility for ESD, or whose activities have significant consequences for its achievement, and make recommendations designed to further implement the objectives and principles of the National Strategy for Ecologically Sustainable Development.

Scope of the reference

In undertaking this inquiry, the Commission is to:

a) evaluate how those Commonwealth Government departments and agencies with significant policy or program management responsibilities related to ESD, or which undertake activities which directly impact on the achievement of ESD, have incorporated ESD into their policy formulation, decision-making processes and programs;

b) review existing mechanisms to monitor and evaluate ESD outcomes, and report on the effectiveness of Commonwealth policies and programs in changing community or corporate behaviours in ways which promote ESD outcomes;

c) analyse the policy and economic implications of these Commonwealth departments and agencies incorporating environmental considerations into their economic and social decision-making processes, and provide case studies in priority areas;

d) develop conceptual frameworks and evaluation mechanisms for incorporating ESD into government decision-making processes;

e) develop priorities among Commonwealth Government departments and agencies and their programs and activities for the further implementation of ESD; and

f) recommend improved frameworks and processes for reporting, monitoring and evaluating the implementation of ESD.

PETER COSTELLO
25 August 1998

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Abbreviations and explanations

Abbreviations

ABARE	Australian Bureau of Agricultural and Resource Economics
ABS	Australian Bureau of Statistics
ACA	Australian Communications Authority
ACF	Australian Conservation Foundation
AFFA	Department of Agriculture, Fisheries and Forestry — Australia
AFMA	Australian Fisheries Management Authority
AGO	Australian Greenhouse Office
AGSO	Australian Geological Survey Organisation
AHC	Australian Heritage Commission
ANAO	Australian National Audit Office
ANCA	Australian Nature Conservation Agency
ANZECC	Australian and New Zealand Environment and Conservation Council
ANZMEC	Australian and New Zealand Minerals and Energy Council
ARMCANZ	Agricultural and Resource Management Council of Australia and New Zealand
AusAID	Australian Agency for International Development
AUSLIG	Australian Surveying and Land Information Group
BRS	Bureau of Rural Sciences
BSP	Basin Sustainability Program
CAC	community advisory council
CAR	comprehensive, adequate and representative
CC	consultative committee
CMC	catchment management committee

CoA	Commonwealth of Australia
COAG	Council of Australian Governments
CRA	comprehensive regional assessments
CSDC	Commonwealth Spatial Data Committee
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DEH	Department of the Environment and Heritage
DEMC	Defence Environmental Management Committee
DEPS	Defence Environment Policy Statement
DoD	Department of Defence
DoTRS	Department of Transport and Regional Services
EA	Environment Australia
EIA	environmental impact assessment
EMP	Environment Management Plan
EMS	Environmental Management System
EPBC	Environment Protection and Biodiversity Conservation Bill
EP(IP) Act	*Environment Protection (Impact of Proposals) Act 1974*
ESD	ecologically sustainable development
ETS	emissions trading system
FAG	fisheries assessment group
FRDC	Fisheries Research and Development Corporation
GBRMPA	Great Barrier Reef Marine Park Authority
ICM	integrated catchment management
IGAE	Intergovernmental Agreement on the Environment
IGT	Inter-governmental Team
ISO	International Standards Organisation
ITQ	individual transferable quota
JANIS	Joint ANZECC/MCFFA National Forest Policy Statement Implementation Sub-committee
LWRRDC	Land and Water Resources Research and Development Corporation

MAC	management advisory committee
MCFFA	Ministerial Council on Forestry, Fisheries and Aquaculture
MDBC	Murray-Darling Basin Commission
MDBMC	Murray-Darling Basin Ministerial Council
MIG	Montreal Process Implementation Group
MOU	memorandum of understanding
NCSD	National Council for Sustainable Development
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
NFPS	National Forest Policy Statement
NGRS	National Greenhouse Response Strategy
NGS	National Greenhouse Strategy
NHT	Natural Heritage Trust
NIA	national impact analysis
NOI	notice of intention
NRMS	Natural Resource Management Strategy
NSESD	National Strategy for Ecologically Sustainable Development
OBM	output based management
OECD	Organisation for Economic Cooperation and Development
PM&C	Prime Minister and Cabinet
PMSEIC	Prime Minister's Science, Engineering and Innovation Council
R&D	research and development
resp.	response to the Commission's questionnaire
RFA	regional forest agreement
RIS	regulation impact statement
SCNPMGTE	Steering Committee on National Performance Monitoring of Government Trading Enterprises
SCRCSSP	Steering Committee for the Review of Commonwealth/State Service Provision
SI&E	Strategic Investigation and Education

TAC	total allowable catch
UNCED	United Nations Conference on Environment and Development

Explanations

Billion	The convention used for a billion is a thousand million (10^9).
Findings	*Findings in the body of the report are paragraphs highlighted using italics, as this is.*
Recommendations	***Recommendations in the body of the report are highlighted using bold italics with an outside border, as this is.***

Department names

During the course of the inquiry, the names and responsibilities of some Commonwealth departments and agencies changed after the 1998 federal elections. Listed below are changes to the names of departments and agencies referred to in this report:

Current name:	**Former name:**
Bureau of Rural Sciences	Bureau of Resource Sciences
Department of Agriculture, Fisheries and Forestry — Australia	Department of Primary Industries and Energy
Department of Communications, Information Technology and the Arts	Department of Communications and the Arts
Department of Industry, Science and Resources	Department of Industry, Science and Tourism
Department of Transport and Regional Services	Department of Transport and Regional Development

Overview

What is this inquiry about?

This inquiry is about progress in implementing ecologically sustainable development (ESD) by Commonwealth departments and agencies. The focus of the inquiry is on how departments and agencies apply ESD principles and objectives in policy making, and how they monitor, evaluate and report the implementation of ESD. As required under the terms of reference, and subject to the general policy guidelines that the Productivity Commission has under the *Productivity Commission Act 1998*, the inquiry has:

- reviewed existing mechanisms for incorporating ESD principles into government decision making, and for monitoring, evaluating and reporting the implementation of ESD by Commonwealth departments and agencies;
- evaluated how Commonwealth departments and agencies incorporate ESD principles into their policy development, by undertaking a number of case studies in priority areas;
- made recommendations to enhance integration of economic, environmental and social considerations in decision making; coordination; the information base; monitoring and feedback in ESD implementation; and commitment to ESD; and
- highlighted priorities for further implementing ESD.

This inquiry is mainly about processes in place in government to further the implementation of ESD.

What is 'ecologically sustainable development'?

The concept of 'ecologically sustainable development' was brought to the fore following growing concern throughout the 1970s and 1980s about the current and future

environmental impact of prevailing patterns of economic growth and development. Since that time, policies addressing sustainability have become widespread. The World Bank recently found that over 100 countries had national strategies for sustainable development in place (World Bank 1997a).

ESD is about meeting the needs of the present without compromising the ability of future generations to meet their needs.

While this inquiry is not about ecologically sustainable development per se, any assessment of how effectively Commonwealth departments and agencies have implemented ESD requires an understanding of the underlying concepts. A commonly used definition of 'sustainable development' emerged from the 1987 World Commission on Environment and Development (the Brundtland Commission):

> ... development that meets the needs of the present without compromising the ability of future generations to meet their own needs ... (WCED 1987, p. 8)

In Australia, the NSESD is the major ESD policy initiative.

In Australia, governments have adopted the term 'ecologically sustainable development' to address these considerations. The major relevant policy initiative is the National Strategy for Ecologically Sustainable Development (NSESD) (box 1).

The case for government programs or policies specifically related to ESD rests on a number of market failures that may be associated with some sustainable development issues — such as public goods, externalities, open access resources with undefined property rights, and high scientific uncertainty. Under these conditions, market forces are unlikely to lead to socially optimal or economically efficient outcomes.

For some, ESD is thought to relate only to environmental matters but ESD is broader than the environment.

An important finding of this inquiry is that there is a lack of clarity regarding what ESD means for government policy. ESD is often equated with the environment. This is reflected in the view of some agencies which considered their core business was not related to environmental issues and hence which reported that they had not undertaken any ESD related activities. In these cases, there is some ambiguity about how, and how much, ESD principles and strategies apply to these agencies or their activities.

Box 1 **National Strategy for Ecologically Sustainable Development**

The National Strategy for Ecologically Sustainable Development (NSESD) was endorsed by all Australian Governments in 1992. The Strategy (CoA 1992b, p. 6) states that ecologically sustainable development:

> ... aims to meet the needs of Australians today, while conserving our ecosystems for the benefit of future generations.

Three core objectives are articulated in the NSESD:

- enhance individual and community wellbeing and welfare by following a path of economic development that safeguards the welfare of future generations;
- provide for equity within, and between, generations; and
- protect biological diversity and maintain essential processes and life support systems.

The NSESD outlines a number of guiding principles. Important among them are:

- the need for decision making processes to effectively integrate long term and short term economic, environmental and social considerations; and
- that a lack of full scientific certainty should not be used as a reason for postponing action — known as the precautionary principle.

The NSESD also sets out the broad strategic and policy framework under which governments should pursue ESD. It acknowledges that governments need to change their institutional arrangements to ensure that ESD principles and objectives are taken into account in relevant policy making processes.

Source: CoA (1992b).

For the purpose of this inquiry, the Commission has used the definition of ecologically sustainable development as set out in the NSESD. This definition recognises that ESD is about short term and long term economic, social and environmental impacts. This implies an extremely broad policy agenda — one that is relevant to the activities of all Commonwealth departments and agencies.

ESD is about all short and long term costs and benefits — economic, social and environmental.

The broad scope of the policy agenda associated with ESD implementation means that both the significance for policy, and the complexity of the problem for policy makers, varies widely. For some departments and agencies, ESD is a core policy concern, and decision making is considerably more complex relative to many other areas of public policy. Decisions may involve scientific uncertainty, difficult tradeoffs between the short and long term, and between

objectives. However, ESD implementation will not always be this complex.

How well have departments incorporated ESD into their activities?

Governments are involved in different ways in ESD implementation.

The role of government in ESD implementation is multifaceted. Governments may be involved as participants, regulators and consumers. In all cases, government policy development processes need to be seen as leading to ESD consistent decisions.

At the departmental and agency level, the implementation of ESD may therefore be explicit (in the form of policies, programs or regulations with an ESD focus) or implied — taking account of ESD consequences as part of the regular policy making activities of departments and agencies.

Overall, progress on ESD implementation has been variable...

The extent to which departments and agencies have implemented programs and policies with an explicit ESD focus — as well as the extent to which ESD principles and objectives have been considered and applied in general policy development — varies widely across Commonwealth departments and agencies.

...with the best examples in the area of natural resource management.

In the area of natural resource management and environment protection, the integration of economic, environmental and social considerations has been seen as a core policy concern. These areas provide the best examples of ESD implementation. A common feature in these areas is the application of various forms of partnerships among key stakeholders to achieve mutually agreed, integrated ESD outcomes. However, in some cases (for example, development of the regional forest agreement process) action has been 'crisis driven' — only taken in response to a looming problem.

In other areas, sustainability objectives are contained in enabling legislation or high level operating guidelines (such as mission statements or corporate plans), and reflected in policies and programs. For other areas (for example industry, transport and health) sustainability objectives are sometimes seen as being too broad and are therefore not considered explicitly in the development of policies or programs.

In other areas, such as industry, transport and health, sustainability objectives are sometimes too broad or not explicit.

While the focus of this inquiry is not about ESD outcomes per se, processes for implementing ESD appear to have been most effective where the ESD problem or concern has been bounded in some way — either by issue, by sector in the economy, or by geographical area. In these cases (for example, the Natural Resource Management Strategy covering the Murray Darling Basin) the strategies adopted have involved meeting the multiple objectives of a number of stakeholders, using partnership arrangements between stakeholders and aiming for integrated (or ESD consistent) long term outcomes.

There is greater success where problems are bounded.

Models of successful ESD implementation in policy making tend to offer high degrees of stakeholder involvement. Successful partnership frameworks tend to have a number of common characteristics. Several of these reflect elements of the basic 'good practice' policy making framework.

Successful models feature partnerships.

How have community behaviours changed as a result of ESD policies?

The Commission was asked to report on how effectively Commonwealth policies had changed corporate and community behaviours. Governments have an important leadership role in promoting ESD. Some Commonwealth programs and policies include mechanisms designed to increase general awareness of ESD principles — ultimately with a view to changing community and corporate behaviours. Examples exist in the management of fishery ecosystems, and voluntary greenhouse gas emission reduction initiatives.

There has been some success in changing community behaviours...

...and the Commonwealth can also learn from other levels of government and the wider community.

There is also scope for some Commonwealth departments and agencies to learn from the manner in which other levels of government (State and Local) and others in the community have implemented ESD. Participants argued that local government in particular plays a critical role in 'on the ground' implementation of ESD. There are also examples where industry has taken a lead role in developing and implementing strategies designed to further ESD.

What factors influence ESD implementation by departments?

There are numerous impediments to better implementation of ESD...

This inquiry has identified a number of impediments or constraints which limit the extent and quality of ESD implementation by departments and agencies. These include factors within the control of departments and agencies, and some factors that are outside their control. For example, there is some uncertainty regarding what ESD means for policy, and this is related to a failure to follow 'good practice' policy making activities — a factor within the control of departments and agencies. In other cases, some ESD issues introduce greater complexity for policy makers.

...such as a lack of clarity regarding what constitutes ESD related policies.

There is a lack of clarity regarding what ESD actually means for government policy. An understanding that ESD relates to a wide range of issues is also important for accountability and improving incentives for implementation. The lack of clarity can mean that it is not apparent where the responsibility for ESD implementation lies.

A major impediment is a failure to follow 'good practice' policy making principles.

ESD implementation is largely about good practice policy making. To the extent that this involves consideration of the foreseeable costs and benefits — short term and long term, private and social — good practice policy making is consistent with achieving ESD objectives. Indeed, many of the observed shortcomings in the context of ESD implementation can be traced back to failures to follow general good practice policy making.

In some cases, existing tools for policy making are inadequate in integrating economic, environmental and social considerations in decision making. However, the issue is also related to departments' and agencies' degree of willingness to undertake even basic analysis of policy impacts. Departments and agencies do not always satisfactorily apply existing ex ante assessment mechanisms such as regulation impact statements and environmental impact assessments when they are formally required. The Commission has found previously that the level of compliance with these formal requirements is variable, and poor with respect to some policy instruments.

Sometimes, the existing tools are not helpful.

Performance monitoring is a critical element of any management system. It provides feedback to allow ongoing improvement, and offers a means of enhancing accountability which may also improve performance. Monitoring activities seem easy to forgo because the consequences of a failure to monitor are not immediately visible.

Monitoring is an important element of 'good practice' policy making...

Monitoring the effectiveness of policies and programs aimed at implementing ESD does not appear to be undertaken routinely by departments and agencies. Further, there appear to be even fewer examples where the results of monitoring activities are incorporated into policy or program revisions via feedback mechanisms.

...that does not appear to be done routinely.

A tendency to act on problems which are immediately visible, together with a shortage of required data and information on long term problems, means that departments and agencies can fail to give adequate consideration to issues likely to be a problem in the long term. This is related to, for example, a lack of commitment to gathering relevant information which is required for good practice policy making and evaluation.

There is also a lack of long term focus...

It is acknowledged that some aspects of ESD implementation are highly information and data intensive — particularly in relation to the environment. However, there appears to be little long term commitment to information gathering and reporting in relation to the environmental dimensions of ESD. Different agencies collect data and information, particularly in relation to the environment and natural

...and this shortcoming is exposed particularly with respect to the collection of data.

resource management, and there is limited coordination between these agencies.

However, some factors are outside the control of departments and agencies...

Some issues related to implementation of ESD are not under the direct control of departments and agencies. External factors can sometimes influence the extent to which good practice policy making processes are adopted. For example, policy initiatives are influenced by budgetary constraints and electoral considerations.

...and ESD issues are sometimes more complex than other areas of policy.

In addition, the implementation of ESD related policies and programs can be more complex than other areas of policy. For example, measurement and estimation difficulties attributable to inter- and intra-generational equity considerations — while not unique to ESD — tend to occur more frequently with respect to ESD than other areas of policy. Similarly, the multidisciplinary scope of ESD can complicate implementation due to the demands of coordination between different levels of government, and between agencies.

What are the implications of integrating economic, environmental and social considerations?

As discussed, integration of the three elements of ESD has not occurred in some cases due to difficulties in identifying or assessing (and ultimately measuring) all the potentially significant impacts of new policies, programs or legislation.

Reconciling multiple objectives can be an issue...

Many participants in the inquiry noted a tension inherent in all policy making (but of greater significance with respect to more complex ESD issues) — meeting multiple objectives. This can be particularly problematic with respect to tradeoffs between short term and long term issues.

...and there is limited guidance on how to deal with this.

Existing policy making mechanisms do not provide straight forward guidance on how these multiple objectives and concerns are to be reconciled. Similarly, the NSESD provides only limited guidance on how decision makers are to

integrate economic, environmental and social considerations in developing policies and programs.

It is related also to the traditional advocacy role implied by the portfolio structure of governments, where certain departments and agencies have taken a lead role in emphasising particular policy objectives — often economic *or* environmental — or representing particular interest groups.

The Commission's recommendations are aimed at improving policy development processes.

The Commission's recommendations focus on improving policy development processes at the departmental level, and between departments and jurisdictions. Transparency of the decision making process — including a clear statement of objectives, consideration of alternative policy options, assessment of the potential impacts of preferred options, and wide consultation — will help decision makers achieve integrated policy outcomes.

This necessarily involves the consideration of all costs and benefits (short term and long term economic, environmental and social) which may not always be consistent with an advocacy role.

Improving ESD implementation

The recommendations are an integrated package...

The Commission's recommendations seek to address the impediments to ESD implementation outlined above. Specifically, they are designed to:

- improve the practices of policy making within departments and agencies;
- improve coordination between Commonwealth agencies, and between Commonwealth agencies and other stakeholders;
- require regular monitoring and review of policy initiatives;
- encourage longer term strategic thinking; and

- develop a longer term commitment to monitoring environmental indicators (comparable to the existing commitment for economic and social trends).

These components represent an integrated package of improved frameworks and processes aimed at further enhancing the implementation of ESD by departments and agencies. The success of each component would depend on how effectively the other components are implemented. For example, effective monitoring of environmental factors is crucial for broad policy setting, and for evaluating and reporting the effectiveness of departments and agencies in implementing ESD.

...that seeks to improve policy development processes.

The key to improving ESD implementation by departments and agencies is improving policy development processes and explicitly accounting for the economic, environmental and social consequences of proposed policies and programs.

The elements of good practice policy making have already been formally recognised by governments in Australia and internationally. In Australia, these are reflected in a number of Commonwealth Government guidelines and requirements — such as the guidelines for regulation impact statements. The key elements of good practice policy making include:

- clear identification of the problem, including whether government action is warranted, and if so, why;
- specific and clear statement of objectives;
- consideration of alternative policy mechanisms;
- comprehensive identification and assessment of impacts — for ESD, these include short term and long term economic, environmental and social impacts;
- integrated decision making;
- consultation with stakeholders;
- monitoring and evaluation; and
- ongoing review.

The 'action of analysis' is critical...

The transparency associated with explicitly considering the impact of proposals will improve policy, program and

regulation making. While it will not always be possible to quantify the implications of every policy, program or regulatory proposal, it is the action of analysis that is important. The OECD (1995, p. 11) has noted:

> … experience makes it clear that the most important contribution to quality decisions is not the precision of calculations, but the action of analysis — questioning, understanding real world impacts, exploring assumptions …

FINDING 6.1

Evidence gained as part of this inquiry suggests that a significant impediment to improved ESD policy making practices is a failure to undertake the action of analysis — meaning that significant potential short and long term costs and benefits are not considered. To ensure consistency with ESD principles, as part of their policy development process, Commonwealth departments and agencies should take all reasonable and practical steps to consider explicitly the short term and long term economic, environmental and social implications of their program, policy and regulatory initiatives. Standard good practice policy making principles, such as those outlined in the regulation impact statement guidelines, should be followed routinely, regardless of whether a regulation impact statement is formally required. Adherence to good practice should be demonstrable and documented.

RECOMMENDATION 6.1

Guidelines of existing policy development and evaluation mechanisms (such as regulation impact statement guidelines and environmental impact assessment guidelines) should include specific reference to assessing the likely social, economic and environmental costs and benefits of proposals, in both the short term and long term.

The analysis of policy, program, and regulatory proposals would be improved by complementing existing policy development guidelines with supporting instruments.

...and would be assisted by supporting instruments.

FINDING 6.2

Where appropriate, the use of regulation impact statements and environmental impact assessments should be complemented by other tools such as social impact assessments and health impact analyses. This would assist in the identification of impacts and increase the transparency of decision making.

Output based management might improve the links between policy design and outcomes.

Failure to follow good practice policy making also distorts incentives to improve ESD outcomes by reducing accountability. Mechanisms such as output based management may define more clearly the links between policy design and outcomes, and therefore may improve accountability. Adoption of such mechanisms is consistent with the Commonwealth Government's plans to implement an accrual based outcomes and output framework for budget purposes.

FINDING 6.3

Consistent with current government policy, the principles of output based management should be used as an additional tool to assist departments and agencies develop, monitor and coordinate policies designed to achieve ESD objectives.

Improving coordination is also important, and...

Improving coordination between, and within, levels of government is desirable as a means of integrating viewpoints and information, and avoiding duplication. The requirements for effective coordination and stakeholder input are completely consistent with good practice policy making objectives.

FINDING 7.1

Good practice principles facilitating effective coordination and stakeholder input should be followed routinely as part of the decision making process for policies, programs and regulations likely to have significant ESD impacts. These principles include:

- *comprehensive identification of stakeholders;*
- *opportunity for input;*

- *opportunity for negotiation;*
- *feedback to participants on decisions taken;*
- *access to information; and*
- *institutionalised processes.*

Existing structures could be used more effectively to ensure that there is coordination between, and within, governments and that other stakeholders are involved, where relevant, in ESD implementation. Because any particular ESD related issue will almost invariably cross portfolio responsibilities, this should occur at a high level — for example, ministerial council level.

...relevant ministerial councils have an important role in this regard.

The five major ministerial councils relevant to this area — the Australian and New Zealand Environment and Conservation Council, the National Environment Protection Council, the Agricultural and Resource Management Council of Australia and New Zealand, the Australian and New Zealand Minerals and Energy Council and the Ministerial Council on Forestry, Fisheries and Aquaculture — have a crucial responsibility in this regard.

RECOMMENDATION 7.1

The relevant ministerial councils should routinely, and as a matter of course, inform each other of ESD issues likely to have relevance and implications for other councils.

RECOMMENDATION 7.2

Recognising that all levels of Government have responsibility for ESD outcomes, Commonwealth, State and Territory governments should seek to improve the efficiency and effectiveness of the processes of these ministerial councils with respect to ESD implementation. In particular, the individual councils might ensure they have clearly specified objectives with respect to ESD implementation, and that they are meeting them.

Improving the information base is also critical...

A key finding of the inquiry is that ESD implementation is constrained by inadequate information. There are two important aspects of this.

First, for the most part there is no regular long term monitoring and review of the performance of policies and programs with respect to the achievement of ESD objectives. Regular feedback can assist in addressing the uncertainties which can surround ESD related policies — uncertainties regarding environmental impacts and uncertainties related to the interactions between economic, environmental and social factors.

...in terms of monitoring program and policy performance...

Monitoring is important as a means of:

- providing feedback on policy or program performance;
- facilitating whole of government reviews of ESD performance;
- improving the accountability of policy makers, and therefore the incentives to implement appropriate policies;
- dealing with uncertainty by providing a regular opportunity to update and improve policies in light of experience; and
- increasing awareness of particular ESD issues.

RECOMMENDATION 7.4

Consistent with the principles of good practice policy making, departments and agencies should regularly, and as a matter of course, monitor the efficiency and effectiveness of their ESD related policies, programs and regulations. As such, the development of performance indicators against clearly stated objectives should occur early in the policy development phase.

In this regard the current processes and the framework of the National Land and Water Resources Audit should be used as a model. A similar framework should be developed to cover areas such as air quality, fisheries, chemicals in the environment, and marine systems. Funding arrangements should reflect the fact that these activities must occur over long timeframes.

Second, comprehensive datasets facilitating monitoring of the environment and sustainable development are lacking. In some cases, data are not collected for significant issues likely to affect ESD. In others, collection efforts are fragmented. For example, there is no statutory requirement to report on the state of the environment at the Commonwealth level, and it occurs only in an ad hoc way. In contrast, data collection activities facilitating the monitoring of social and economic trends are well established, regular and frequent. Submissions to the inquiry highlighted the fragmented nature of existing data collection efforts, the lack of performance indicators (in particular environmental performance indicators) and the lack of a long term focus in policy formulation.

...and the collection of data where this is not done currently or where it is fragmented.

However, there are some positive developments. For instance, the ABS is currently developing a system of environmental accounts for some natural resources and is considering indicators of sustainability. Spatial information produced by the Australian Surveying and Land Information Group includes base mapping of the whole continent, and the Commonwealth Spatial Data Committee is facilitating coordination of the collection and management of spatial data.

RECOMMENDATION 7.3

In recognition of the importance of establishing a consistent data series on key environmental attributes, the Commonwealth Government should commit to producing a state of the environment report on a regular basis (for example, every five years).

Through the appropriate ministerial council — such as the Australian and New Zealand Environment and Conservation Council — consideration should be given to involving the States and Territories in this activity drawing on the mechanisms already in place requiring the production of state of the environment reports in some States and Territories.

RECOMMENDATION 7.5

Data collection relating to ESD issues should be rationalised to avoid duplication of effort in some areas and gaps in coverage in others.

In the areas of the environment, natural resource management and sustainable development, primary responsibility for data collection and the development of environmental and sustainability indicators should remain with the custodian or lead agencies which have relevant expertise, such as Environment Australia, CSIRO, Bureau of Rural Sciences, Australian Geological Survey Organisation, Australian Surveying and Land Information Group, and relevant State and Territory agencies.

The ABS, should work with relevant custodian or lead agencies to develop standard classifications and consistent measurement protocols for the collection of data and information relating to the environment, natural resource management and sustainable development. The collection and dissemination of these data and information should be conducted on an ongoing basis.

The ABS should also have the major coordinating role among the custodian or lead agencies involved in data collection in these areas. In addition, the ABS should have key responsibility for dissemination of data and information collected by itself and other agencies. As such, it would provide a 'one-stop' access point for external users of such data and information.

The current work of the ABS in this area should be given higher priority which may require additional resources.

A related issue is performance measurement of ESD policies and programs...

An important finding in this inquiry is that performance measurement with respect to ESD related policies and programs — while not uniform across Commonwealth departments and agencies — is generally poor. There are two important implications of poor performance measurement:

- it is difficult to assess the efficiency and effectiveness of particular policies and programs against their objectives; and
- it is difficult to assess the relative efficiency and effectiveness of comparable policies and programs.

There is no systematic measurement of policies and programs in core ESD policy areas, unlike other areas of government activity and service provision. The Commission believes there is considerable potential for the systematic collection of data and development of indicators related to government — Commonwealth, State and Local — activities and expenditures in specific ESD related areas, such as the environment and natural resource management.

...similar to what occurs elsewhere in government.

Four steps should be followed when developing a comparative performance measurement exercise:

This would involve several steps.

- participating jurisdictions need to agree on a common set of objectives for the programs being assessed;
- a framework for performance measurement needs to be developed;
- an understanding of contextual factors likely to affect performance is required; and
- relevant data needs to be identified and collected for reporting against indicators to assess jurisdictions' performance in achieving program objectives.

RECOMMENDATION 8.1

The Commonwealth Government, in cooperation with State and Territory Governments, should develop a framework to facilitate performance measurement and enable comparisons of the effectiveness and efficiency of Commonwealth, State and Territory policies and programs in ESD related areas such as the environment and natural resource management. Development of this new process should take into account the experiences and institutional and analytical frameworks of the Steering Committee for the Review of Commonwealth/State Service Provision.

Having developed a framework, Commonwealth, State and Territory Governments should jointly determine priority areas for the performance measurement exercise.

Once priority areas are identified, performance measurement and comparison should be carried out on an ongoing basis, focussing on indicators of program efficiency (including resources used (inputs) and program

or policy results (outputs)) in the short to medium term, and indicators of effectiveness — program or policy impacts (outcomes) against the longer term environmental and sustainability objectives.

Expenditure is one criterion for establishing priority areas for measuring and comparing performance. However, there are others. For example, priority areas could be identified according to the likely impact of a particular activity on economic, environmental or social objectives.

Improving the framework for implementation of ESD

Participants argued for reforms to better institutionalise ESD into policy development.

The recommendations outlined above are designed to improve progress in implementing ESD. A number of participants argued for institutional reforms such as a voluntary code of conduct for ESD implementation by departments and agencies, an independent Commission for ESD, a duty of care for ESD, and a non-government council or expert advisory group on ESD. A common theme among submissions was the need to better institutionalise ESD as part of the policy mainstream.

The Commission's recommendations are consistent with the notion that ESD should be considered a mainstream policy issue. They are designed to improve the way departments and agencies implement policies and programs which shape the long term economic, social and environmental face of Australia. They address some of the shortcomings relating to the information base, and are designed to make existing structures and processes work more effectively. The Commission also considered the need for any changes to the current institutional framework, including those proposed by participants to the inquiry.

These options were examined according to their likely effectiveness in furthering ESD implementation. For example, the Commission considered the advantages and disadvantages of a duty of care for ESD in policy development. It concluded that key issues to be resolved

related to compliance and enforcement, and that these presented significant practical difficulties that were likely to inhibit this option's effectiveness.

The Commission considers this is best achieved by an existing body.

The Commission believes that an existing body — the Prime Minister's Science, Engineering and Innovation Council (PMSEIC) — is well placed within government to take a leadership role on ESD, and to better institutionalise ESD as part of the policy development process. PMSEIC is chaired by the Prime Minister, with membership including other key cabinet minsters.

Currently, PMSEIC's terms of reference requires PMSEIC to 'advise on important issues in science, technology, engineering and relevant aspects of education and training' including as they relate to factors such as 'economic growth and the sustainable development of resources'. In recent times, PMSEIC has considered issues such as the impact of dryland salinity on rural industry and the landscape, and aspects of greenhouse science in Australia.

RECOMMENDATION 9.1

The Prime Minister's Science, Engineering and Innovation Council (PMSEIC) has recently demonstrated leadership in such areas as dryland salinity and greenhouse science. PMSEIC could consider further emphasis of the ESD dimensions of issues before it. For example, PMSEIC could:

- ***provide advice on strategic matters relating to long term sustainable development;***
- ***facilitate interaction between leading experts and relevant ministers on ESD issues; and***
- ***report (on a triennial basis) on matters relating to further implementation of ESD with a longer term strategic focus.***

Priorities for the further implementation of ESD

There is an ongoing challenge for governments to translate the principles of ESD into specific actions and outcomes.

This inquiry has noted that there are examples where progress has been made in recent times — such as the natural resource management programs of the Department of Agriculture, Fisheries and Forestry and the draft sustainable transport policy of the Department of Transport and Regional Services.

Several priority areas are identified.

However, a key issue for the future is furthering ESD in other areas — such as ESD in the context of industry policy, and important sustainable development issues with significant economic and social implications, such as dryland salinity and water reforms.

Participants in this inquiry suggested several institutional frameworks for assisting in the development of future directions for ESD and for raising awareness of the issues. In considering priorities for the future, the Commission has drawn on factors that appear to have been successful in the past for identifying important ESD issues and for developing policy and program responses.

FINDING 9.1

The development of policies and programs — such as the National Natural Resources Management Policy Statement and the Australian Transport and Sustainable Development policy — which seek to further ESD considerations by developing specific policies should be encouraged. Other important and priority areas for the future include dryland salinity and water management more generally.

In the development of new priority areas for ESD implementation, good practice decision making processes should be followed by departments and agencies. These include considerations such as clearly defining ESD objectives, involving stakeholders; and developing appropriate institutional frameworks and mechanisms.

1 Introduction

The concept of 'sustainable development' arose from widespread concern about the current and future social and environmental impacts of economic growth and development. Governments around the world have implemented measures directed at achieving sustainable development, particularly around the time of the United Nations Conference on Environment and Development held in Rio de Janeiro in 1992 (referred to as the Rio Earth Summit). In Australia, the major policy initiative in this regard is the National Strategy for Ecologically Sustainable Development (NSESD), which was endorsed by Commonwealth, State and Territory Governments and representatives of Local Government in 1992.

The purpose of this inquiry is not to re-examine ecologically sustainable development (ESD) objectives, nor to directly assess environmental or ESD outcomes. It is about how Commonwealth agencies have gone about the pursuit of ESD and the implementation of the NSESD. However, in examining progress in implementing ESD, processes that appear to have been effective in furthering ESD have been analysed. Implicitly this involves some consideration of ESD outcomes.

The focus of the inquiry is on the processes that Commonwealth Government departments and agencies have applied to integrate economic, environmental and social considerations, how these have worked and how they might be improved. The whole of the policy process — including policy development, implementation, monitoring and feedback — is considered.

1.1 What is ESD?

The maximisation of human welfare is the main objective underpinning sustainable development. In 1987, the World Commission on Environment and Development (the Brundtland Commission) articulated what has become a commonly used definition of sustainable development:

> ... development that meets the needs of the present without compromising the ability of future generations to meet their own needs. (WCED 1987, p. 8)

The Agenda 21 agreement at the Rio Earth Summit in 1992 provided further guidance on the broad scope of policy issues surrounding sustainable development. This agreement classified sustainable development activities into six broad themes:

- quality of life;
- efficient use of natural resources;
- protection of the global commons;
- management of human settlements;
- waste management; and
- sustainable economic growth (World Bank 1997a).

In Australia, governments have adopted the term 'ecologically sustainable development' to address these considerations. In 1992, in releasing the NSESD, the Council of Australian Governments considered that ESD:

> ... aims to meet the needs of Australians today, while conserving our ecosystems for the benefit of future generations. (CoA 1992b, p. 6)

Three core objectives are articulated in the NSESD:

- enhance individual and community wellbeing and welfare by following a path of economic development that safeguards the welfare of future generations;
- provide for equity within, and between, generations; and
- protect biological diversity and maintain essential processes and life-support systems.

Embodied in these core objectives are the three dimensions of ESD — economic, environmental and social. While the concept of sustainability is based in science — and the management of natural resources in particular — ESD also has implications for the broader concerns of welfare and equity. There are tradeoffs between these elements, for example between present and future consumption, and between economic, environmental and social objectives.

ESD covers such a wide range of issues that it is relevant to decision making in most areas of government. ESD consistent decision making requires the integration of economic, environmental and social considerations. It is therefore relevant to the activities of all Commonwealth departments and agencies to varying degrees. ESD considerations are an integral part of policy making for some departments and agencies, such as those concerned with natural resource management. Some other departments and agencies need to consider ESD because their activities have significant consequences for its achievement. For others, ESD considerations may be more limited, comprising internal management policies such as energy conservation.

The NSESD outlines a number of guiding principles. Important among them are the need for decision making processes to effectively integrate long term and short term

economic, environmental and social considerations and that the lack of full scientific certainty should not be used as a reason for postponing action — known as the precautionary principle. These issues are discussed in greater detail in chapter 2. ESD represents a broad policy agenda, and it introduces a number of complexities for policy making. While these complexities (for example, scientific uncertainty) are not unique to ESD, they tend to occur more frequently and often in combination. For example, ESD consistent policy making is characterised by information and measurement difficulties, scientific uncertainty and long timeframes (particularly in the environmental area).

1.2 Why is ESD important?

Environmental concerns, such as those associated with resource management, feature prominently among major ESD issues. While management of the natural environment has been a concern of governments for some time now, significant environmental problems still exist. In Australia, the State of the Environment Advisory Council has identified a number of areas where the natural environment is under pressure, including:

- habitat loss and decline in biodiversity;
- land degradation;
- decline in urban air quality;
- global climate change;
- degradation of inland water resources;
- decline of renewable resources such as old growth forests and fish stocks; and
- degradation of marine ecosystems (SEAC 1996).

The present day monetary cost of these problems is significant. For example, the financial loss alone from land and water degradation has been estimated at $1.4 billion per year (ANAO 1997). The direct cost to government is also significant. The Commonwealth Government expects to spend around $1.6 billion between 1996-97 and 2000-01 on environmental protection and remediation (CoA 1998a).

According to a recent survey (ABS 1998), an estimated 71 per cent of Australians are concerned with at least one specific environmental problem. Air pollution was considered the environmental problem of greatest concern, followed closely by freshwater pollution and ocean or sea pollution. When the same survey was conducted in 1996, 68 per cent of participants indicated they had some

environmental concerns. In 1992, the proportion was 75 per cent. In addition, in the 1998 survey, 46 per cent of participants felt that the quality of the environment had declined during the past 10 years, compared with 44 per cent in the 1996 survey (ABS 1998).

Environmental concerns are an essential aspect of ESD, but they are not the only consideration. Sustainable development is bound to a number of other issues, reflecting the complex interactions between the three components of sustainability (see chapter 2 for a more detailed discussion of these interactions). The World Bank has identified five central challenges of sustainability at an international level which encompass the economic, environmental and social aspects:

- reducing poverty;
- doubling food production;
- addressing linkages between energy use and its impacts on the environment;
- conserving biodiversity and natural habitats; and
- addressing social disruption and dislocation (World Bank 1997a).

Policies addressing sustainability are clearly not unique to Australia. Internationally, around 100 countries have adopted national strategies for sustainable development (World Bank 1997b). Implementation of such strategies has taken diverse forms, ranging from policies requiring government departments to consider ESD principles in their internal operating procedures, to the implementation of comprehensive market based instruments applicable economywide, such as environmental taxes and tradeable emission permits. The World Bank has recognised four broad approaches to address ESD related issues through economywide policies. They are:

- using markets;
- creating markets;
- using environmental regulation; and
- engaging the public (World Bank 1997b).

1.3 What is this inquiry about?

The Commission has been asked to examine how Commonwealth departments and agencies have implemented ESD. The full terms of reference are reproduced on page v.

A key focus of the inquiry is on the integration of economic, social and environmental considerations by those Commonwealth departments and agencies

with significant responsibility for ESD implementation, or whose activities directly impact on its achievement. Another important focus of the inquiry is the scope for improving the incorporation of ESD into government policy formulation and decision making processes, and for monitoring, evaluating and reporting the implementation of ESD by departments and agencies, through the use of improved frameworks.

1.4 The inquiry process

In undertaking this inquiry, the Commission was guided by the terms of reference, and its general operating guidelines as outlined in the *Productivity Commission Act 1998*. The Commission's inquiry processes are designed to facilitate participation by all interested groups and individuals, and to permit a high degree of transparency and public scrutiny. In making recommendations, the Commission's Act requires it to consider the impact on the whole community rather than any particular group or activity.

For this inquiry:

- extensive consultations were held with a range of Commonwealth Government departments and agencies, as well as other bodies affected by Commonwealth Government actions in this area (see appendix A);
- an Issues Paper was sent out in September 1998 to assist those interested in participating in the inquiry. It was also available on the Commission's web page;
- submissions were sought from interested parties, and a questionnaire seeking information on ESD related policies, programs and activities of Commonwealth departments and agencies was prepared and distributed to government departments and agencies;
- a draft report was released in February 1999 and distributed widely;
- 42 submissions and 25 responses to the questionnaire were received prior to the release of draft report. After the release of the draft report, a further 42 submissions were received; and
- further consultations were held with State government representatives after the release of the draft report.

1.5 Outline of this report

The issues and principles underlying ESD, and the role of governments in implementing ESD, are explained in detail in chapter 2.

Australian governments' approaches to implementing ESD, including the Commonwealth's ESD responsibilities, are discussed in chapter 3. Chapter 4 details the relevant programs and policies in place and how Commonwealth departments and agencies have incorporated ESD principles into their decision making processes.

The terms of reference require case studies in priority areas to be undertaken. Five case studies were undertaken in the areas of:

- regional forest agreements;
- fisheries management plans;
- the Natural Resource Management Strategy of the Murray-Darling Basin Commission;
- the National Greenhouse Strategy; and
- environmental management by the Department of Defence.

An examination of these areas is contained in appendix D. Key observations raised by the case studies are presented in chapter 5.

On the basis of the information contained in chapters 2 to 5, chapter 6 explores specific areas where there is scope for improvement in ESD implementation by Commonwealth departments and agencies. The Commission's recommendations, designed to further implement ESD objectives and principles in government decision and policy making processes, are presented in chapters 6, 7, 8 and 9. These recommendations are canvassed within the context of adopting 'good practice' policy making processes and cover areas such as: better integration of economic, environmental and social considerations in decision making; improving coordination, the information base, and monitoring and feedback in policy formulation; and raising the commitment to ESD implementation by decision makers. Chapter 9 also includes a discussion on priority areas for further implementation of ESD.

2 Role of government in ESD implementation

Achievement of ESD is a broad policy goal which aims to balance economic, environmental and social considerations in decision making in the long term interest of society as a whole. It incorporates key elements of 'good practice' policy making such as analysis of the feasible alternatives for addressing particular policy issues or problems, identifying parties likely to be affected by particular policy decisions, and assessing the costs and benefits of decisions (including nonpecuniary costs and benefits such as environmental amenity and health and safety outcomes).

ESD policy making is more complex than many other areas. It frequently requires consideration of factors that are not easily measured (for example, costs and benefits far off in the future) and quantifying environmental and social costs and benefits can be difficult in some instances. Achievement of ESD requires a framework for explicit consideration of these issues. Such a framework does not, however, suggest the relative priorities or weights that should be given to economic, environmental and social considerations. These remain, and should remain, political judgements and not technical or analytical issues.

The main purpose of this chapter is to discuss the role played by governments in implementing ESD, and the reasons why government intervention can sometimes fail to meet its objectives, along with some suggestions for overcoming intervention failures. The chapter begins by spelling out a number of issues relevant to the implementation of ESD, including equity considerations and the conservation of biological diversity.

2.1 Issues in implementing ESD

The National Strategy for Ecologically Sustainable Development (NSESD) makes explicit the consideration of two important but difficult to measure objectives — inter- and intra-generational equity and conservation of biodiversity.

Inter- and intra-generational equity

The underlying objective of the NSESD is maintenance or improvement of welfare both within, and between, generations (see chapter 1). The concept of inter-generational equity requires that actions of the present generation should not compromise the ability of future generations to enjoy at least the same living standards and quality of life as the current generation. The principle of inter-generational equity is described in the Intergovernmental Agreement on the Environment (COAG 1992, p. 14) as follows:

> ... the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations.

Young (1993, p. 17) suggests inter-generational equity 'requires the present generation to live within and only off its income … It also requires us to provide future people with an endowment equivalent to that we received'.

However, this raises issues about tradeoffs between inter-generational and intra-generational equity, and the appropriate weights to be given to the needs of today's poor relative to the needs of future generations. Environment Australia (sub. 21, p. 5) suggests:

> These two objectives may conflict to the extent that economic growth which increases the scope for equity now, may reduce equity between generations, either through irreversible environmental or heritage impacts, or by impacts which can only be reversed at a high cost. There is considerable uncertainty about the direct impact of current economic activity on the future environment, and the feedback loops between economic growth, investment, poverty alleviation and pressure on the environment. There is also considerable debate about the value of environment and heritage assets.

While it may appear conceptually simple, defining inter- and intra-generational equity in practice is more difficult and raises a number of complex issues. These issues include substitutability between natural, human and man-made capital and the choice of an appropriate discount rate.

The concept of stock of capital is central to the idea of maintaining or improving welfare. The stock of capital inherited by a generation from the previous generation includes human capital (knowledge and understanding), man-made capital (economic and social infrastructure) and natural capital (biodiversity, renewable and nonrenewable resources, ecological integrity). ESD principles require that the total stock of assets passed onto future generations should be at least as great as that inherited, but the best mix of capital assets is undefined. Thus, a key issue for ESD is the degree of substitutability between these types of capital. There are differing views on the extent to which substitution is possible. For example, Hill (1997, quoted in IC 1998, p. 59) suggests:

> ... 'sustainable development is a situation where a country's per capita aggregate capital stock is non decreasing over time'. Aggregate capital stock is a function of natural, manufactured and human capital.

This approach assumes that substitution between human, man-made and natural capital is possible and that a decline in natural capital is acceptable providing this decline is balanced by an increase in human and man-made capital. For example, a society might decide to pass on to the next generation less oil or coal, but more schools or hospitals.

A less optimistic view is that there are limits to the extent that substitution of natural capital for human and man-made capital is possible without compromising the welfare of future generations. Pearce et al. (1989) argue that this is because:

- environmental damage can be irreversible, affecting all future generations;
- not all amenities and services provided by the natural environment can be substituted with human or man-made capital;
- uncertainty in our understanding of natural systems and future technological developments in substitutability suggests a risk averse approach to the use of natural capital is needed; and
- environmental degradation can lead to price differentials between polluted and non-polluted areas. This can disadvantage those on lower incomes, who are less able to respond to these price changes or choose an area with less pollution, and who might therefore bear a disproportionate share of the burden of environmental degradation.

Some natural resources which maintain essential life support services, such as the atmosphere and nutrient cycling processes, are non-substitutable. Other natural resources, such as coal and iron ore, may be much more substitutable, especially with increasing technological change.

Another issue in implementing ESD is the choice of an appropriate social discount rate. The discount rate is used to allow comparison of the benefits and costs of a proposal incurred at different times. Discounting recognises that, usually, costs and benefits incurred in the short term (by the current generation) are valued more highly than costs and benefits incurred much later (by future generations). Therefore, it has been argued that low discount rates should be used for projects with a significant environmental component to prevent unfair discrimination against future generations (Goodin 1986, quoted in IC 1996, p. C3). However, how the use of low discount rates will affect the use of natural resources or environment protection is ambiguous (Markandya and Pearce 1991). For example, application of a low discount rate to a dam, which has a high capital cost and low annual benefits

accruing over many years, can inflate the future benefits relative to the costs and result in a decision to construct the dam rather than conserve the original habitat (IC 1996).

Most economists reject the idea of using a special (low) discount rate for projects with major environmental impacts. Markandya and Pearce (1991) argue that environmental concerns might be better tackled by developing the concept of sustainability as a specific policy issue which recognises the constraints imposed by the need for sustainability, rather than attempting to adjust the discount rate. For example, one way to meet the condition of sustainability is to require that any environmental damage be balanced by projects designed specifically to improve the environment.

As mentioned previously, pervasive uncertainty surrounds most issues related to natural capital which suggests that a risk averse approach to its use should be adopted. The precautionary principle, adopted under the Intergovernmental Agreement on the Environment, provides such an approach. It (COAG 1992, p. 13) suggests:

> Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

It goes on to state:

> In the application of the precautionary principle, public and private decisions should be guided by:
>
> (i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment; and
>
> (ii) an assessment of the risk-weighted consequences of various options. (COAG 1992, p. 14)

While the full implications of the precautionary principle are open to debate, it does not mean that all developments with uncertain impacts on the environment should not proceed. Rather, all options should be explored when considering a development with uncertain future consequences (Young 1993).

Some participants discussed the potential impact of population growth on the achievement of ESD objectives. The Department of Immigration and Multicultural Affairs (sub. 39, p. 5) noted that this might be a factor but added:

> It should be noted, however, that achievement of ESD will depend on many other pivotal considerations such as, population distribution and mobility, consumption patterns, productivity, technology, public sector pricing policies, waste management and disposal, lifestyle choices and land management practices.

Conservation of biological diversity

The NSESD explicitly accounts for biological diversity, which is a component of natural capital. The related National Strategy for the Conservation of Australia's Biological Diversity defines biological diversity (or biodiversity) as:

> … the variety of all life forms — the different plants, animals and microorganisms, the genes they contain and the ecosystems of which they form a part. (CoA 1996, p. 1)

Three widely recognised levels of biodiversity exist. Ecosystem diversity refers to the diversity of entire ecosystems such as coral reefs or rainforests. Species diversity refers to the variety of different species which live within an ecosystem. Genetic diversity refers to genetic differences within a species (Young et al. 1996). Biodiversity also has a spatial dimension — some ecosystems or species are found in many areas while others are found in limited areas.

There is considerable debate and uncertainty about why, how, and the extent to which, biodiversity should be conserved. The State of the Environment Advisory Council (SEAC 1996) outlines four reasons for conserving biodiversity:

- ecosystem processes — biodiversity underpins the processes which support life, such as maintenance and regulation of water resources, soil formation, recycling of nutrients, atmospheric quality and climate;
- ethics — the belief that no species (and no generation) has the right to sequester the earth's resources solely for its own benefit;
- aesthetics and culture — biodiversity may contribute to cultural values, and its aesthetic and recreational values are highly valued by an increasing number of Australians; and
- economic — plants, animals and ecosystems are potential sources of food and medicines, are tourist attractions, and provide resources for industry, agriculture and forestry.

In some cases, damage caused by the current generation to the stock of human, man-made or natural capital may ultimately be reversible (at a cost to future generations). In other cases, however, losses of biodiversity and damage to the natural environment caused by the current generation can be irreversible and could have significant consequences for future generations.

2.2 Role of government in implementing ESD

The effective implementation of ESD requires participation by governments, business, industry and the community. Governments may be involved in the

implementation of ESD as a participant, that is, by taking account of ESD considerations in relevant government activities. The complexities involved in implementing ESD discussed above suggest there is also a role for government to address 'market failures' in the implementation of ESD.

Market failures occur when markets fail to account for the full benefits or costs to society of an activity, and therefore fail to send the correct price signals to decision makers. The failure of markets to get prices right can result in inefficient use of resources, lower economic growth than would otherwise be the case, and adverse environmental and social impacts (OECD 1992a).

In the case of ESD, market failures can occur as a result of:

- the presence of externalities;
- inadequate information (for example, about the needs of future generations, the degree of substitutability of natural capital, and why, how, and how much biodiversity should be conserved);
- the public good characteristics of some components of natural capital; and
- the existence of 'open access' resources.

The existence of market failures is one of the main reasons for government intervention (although not a sufficient condition because the costs involved in intervention may outweigh the benefits in some instances). The most appropriate form of government intervention depends on the underlying cause of the market failure.

Governments can address market failures using a number of approaches, including:

- encouraging the internalisation of externalities using existing markets and price signals by, for example, using environmental taxes and user fees, and removing subsidies on natural resource use;
- creating markets by establishing property rights (for example, property rights for land and water resources, and tradeable pollution permits);
- using legislation to regulate specific activities and to support market based approaches; and
- providing information in relation to ESD concerns or problems, including public education, funding R&D and developing performance indicators for monitoring, evaluating and reporting on the implementation of ESD.

The role of government in implementing ESD also includes:

- setting the strategic and policy framework for ESD implementation;

- taking ESD principles and objectives into consideration in relevant policy formulation, decision making processes and programs;
- coordinating ESD policy development and implementation between levels of government and between government departments and agencies; and
- developing partnerships between government, business and community groups to enhance ESD implementation.

2.3 Intervention failure

Although government has a role in ESD implementation, intervention sometimes fails to meet its objectives for a variety of reasons. This results in an inappropriate balance between economic, environmental and social objectives in policy and program formulation. Characteristics of ESD which increase the likelihood of intervention failure include the absence of an adequate information base, the long term nature of ESD issues, changing priorities over time, uncertainty, and the involvement of different levels of government and different divisions within governments. These can lead to regulatory capture, inadequate analytical tools, policy inertia or poor coordination by governments.

Regulatory capture

Government intervention is decided in the political process where groups, or different stakeholders, typically attempt to influence decisions in their favour. Regulatory capture occurs when the policy making process is 'captured' or heavily influenced by groups affected by the regulation.

Regulatory capture can have two effects:

- policies aimed at a particular market failure can result in adverse economic, environmental or social consequences; and
- interventions intended to have positive economic, environmental or social benefits can be influenced so that initial goals are altered.

Inadequate analytical tools

Environmental and social impacts are often not valued by markets. Current analytical tools for measuring nonpecuniary environmental impacts and certain social impacts are limited. Therefore, even when governments aim to incorporate environmental and social considerations in decision making, it can still be very

difficult to do so in practical terms. Furthermore, standard economic techniques tend to be biased against schemes with global environmental implications (such as those to reduce greenhouse gas emissions) as the analysis tends to be undertaken at the national level and ignores impacts affecting other countries. The process of discounting can also give lower weight to future environmental benefits and costs of alternative strategies and policy options (OECD 1992b).

Policy inertia

Intervention failures frequently stem from inertias in the policy making process. As community attitudes, available information and technologies change, the scale and form of government intervention may need to change. If these changes are not made, an appropriate government intervention in one period can become an intervention failure in a later period (OECD 1992b). An example is Commonwealth tax concessions for land clearing which were introduced to encourage agricultural development. However, these policies resulted in overclearing and subsequently contributed to degradation of natural resources (IC 1998).

Poor coordination by governments

The various levels of government, and divisions of responsibility within governments, can also create conflict in policy formulation. Even if environment protection is an agreed objective, it is quite possible for problems to arise if there is inadequate coordination of policies across levels of government or across government departments and agencies (OECD 1992b). A mismatch between the nature of environmental problems and the sectoral problem solving structure of governments can exacerbate this, as can a lack of rewards, or incentives, in bureaucracies for intersectoral approaches.

Failures of policy coordination are often due to the compartmentalisation of natural and social science disciplines. This can sometimes result in inadequate definition of ESD problems based on single discipline perceptions and solutions. A higher level of analysis is also needed to integrate scientific knowledge with the many sources of social, cultural and economic knowledge that are relevant to complex ESD issues. This can be compounded by the compartmentalisation of government into departments and agencies pursuing different, and often competing, objectives. The result can, in some instances, be failure of horizontal coordination (coordination between different departments and agencies within a given level of government) (Carley and Christie 1992).

Poor vertical coordination is the result of failure of understanding and information flows between levels of government, and between government and other stakeholders, such as resource users. In Australia, natural resource management and environment protection responsibilities are shared between the States and the Commonwealth. This can, in some instances, contribute to vertical coordination failure. Often incentives and constraints under which resource users operate are poorly understood by policy makers, and this can result in policies which appear reasonable but are difficult to implement.

Intervention failures can also take the form of inefficient policies aimed at addressing a particular problem or issue (including instances where there is no need for government intervention). Furthermore, varying definitions held by decision makers of what ESD is, inadequate knowledge of how to implement ESD, and what constitutes an appropriate balance between economic, environmental and social considerations, can also contribute to intervention failure.

2.4 Addressing intervention failures

As discussed in the previous section, intervention failure is associated with inadequate knowledge in many cases. Adequate information on which to base decisions and for monitoring, evaluation and reporting of ESD outcomes is essential for achieving effective and efficient government intervention in ESD related issues. To build an adequate information base, government may have a role in coordinating existing sources of information (or at least not impeding the flow of information and the linkages between relevant databases) and in developing, and implementing, a strategic approach to fill information gaps and minimise duplication of effort in data collection. Adequate long term funding of data collection (including research and development) is also necessary. Training and education programs to provide government officials with a better understanding of the underlying principles of ESD and how to achieve an appropriate balance between economic, environmental and social objectives may also be required, and may help reduce the occurrence of regulatory capture. Further development of appropriate analytical tools may also be useful.

To overcome policy inertia, measures are required to ensure that policies being developed to address ESD issues are efficient, and that policies directed at other issues take into account their impact on ESD. Mechanisms to review government interventions periodically to ensure that intervention is still required and is efficient are also needed.

Box 2.1 **Commonwealth Government measures used to minimise tension between departments**

The Commonwealth Government has used a number of measures to minimise the wasteful aspects of duplication and tension between departments, including:

- structuring departments to minimise overlapping responsibilities;
- carefully coordinating issues which need to be coordinated, but providing the maximum possible devolved responsibility (within clear objectives and accountability frameworks) for issues which do not;
- relying as much as possible on general rather than industry specific regulation;
- reviewing programs to minimise the areas of duplication or overlap; and
- promoting a whole of government ethic, at all levels, in the Commonwealth public service, but particularly at senior levels.

Source: Beale (1995).

A whole of government approach is needed to overcome intervention failures in implementing ESD due to poor government coordination. To overcome horizontal coordination failure, it is important to properly define the boundaries of responsibility between departments to reduce duplication and tensions. Tensions between departments with overlapping responsibilities, or with roles that bear on the same issues from different perspectives, can be minimised through a number of measures (box 2.1). Disputes between closely related areas may still occur but they are less likely to occur when they are intradepartmental than when they are interdepartmental (Beale 1995).

Overcoming vertical coordination failure requires improving mechanisms for coordination between levels of government and between government departments and agencies. Such mechanisms include interdepartmental committees, ministerial councils and intergovernmental agreements. Other measures, which may improve coordination between government and other ESD stakeholders, include working groups made up of community, industry and non-government organisations where appropriate.

Successful coordination requires introducing incentives for departments and agencies to coordinate their activities. One possibility is making departments and agencies more accountable for ESD outcomes through output based management (OBM) or other measures. OBM refers to a process of funding departments and agencies based on the outputs produced, rather than on the basis of their inputs. The primary purpose of OBM is to strengthen the clarity and accountability of both the government and its departments and agencies in providing goods and services to the community.

Some of the ways of addressing intervention failures discussed above are further expanded in subsequent chapters (for example, chapters 6 and 7), particularly within the context of better integrating economic, environmental and social considerations into policy and improving coordination among key stakeholders. Means to improve the information base, performance indicators, and the monitoring and evaluation of ESD policies and programs are also discussed.

3 Government approaches to ESD

This chapter describes Australian governments' roles and approaches in implementing ESD. It outlines the roles and responsibilities of the Commonwealth and its relationships to other governments. Further, it discusses whole of government approaches for incorporating ESD into decision making. The chapter concludes with the Commission's assessment of government approaches to ESD.

3.1 The Commonwealth's ESD responsibilities

The Commonwealth's responsibilities are to develop policies and programs that are ESD consistent and provide leadership to others in the application of ESD principles. The National Farmers' Federation (sub. 22, p. 3) argued that the Commonwealth's major roles are to:

> ... ensure that the principles of [ESD] ... are reflected in national policies and measures [and] ... coordinate development of and ... present consistent and strategic national policy. Implementation and delivery is the responsibility of State and Territory Governments.

Activities undertaken by governments are shared between the Commonwealth and the State, Territory and Local Governments. The Australian Constitution is the starting point for determining at which level of government different ESD responsibilities lie. Under the Constitution, the Commonwealth has powers over defence, foreign affairs, trade and commerce, taxation, customs and excise duties, pensions, immigration and postal services. Other powers are left to the States, but federal law prevails where there is a conflict over coexisting powers. Clearly, the Commonwealth has significant economic and social management responsibilities embodied in such areas as the federal budget, and tax and industry policy formulation.

The situation is less clear for the Commonwealth's ecological and environmental management responsibility. Currently, sustainable development and environmental responsibilities are derived indirectly from constitutional obligations. In addition, the Commonwealth has a duty, as have all governments, to act as a custodian of the environment for future generations. This duty is implicit in the activities undertaken by governments although it is not enshrined in legislation. It is also reflected in the inter-generational equity components of the National Strategy for Ecologically

Sustainable Development (NSESD) and the Intergovernmental Agreement on the Environment (IGAE).

At present the Commonwealth's sustainable development and environmental responsibilities are largely related to international commitments (box 3.1), nature protection and biological diversity, environmental impact assessment, marine issues, trade in hazardous wastes and Antarctic issues (OECD 1998). Even the existing legislative framework for Commonwealth environmental management does not make explicit reference to ESD principles (although this will change under the proposed Environmental Protection and Biodiversity Conservation Bill) (see below).

In some cases, the market mechanism is able to ensure that all economic, environmental and social values are included in the decision set. In these cases, government is not required to ensure that ESD issues are considered. An example was provided by the Department of Communications and the Arts (resp. 5) which suggested that, although not always required by legislation, it is in the best interests of telecommunication carriers to consult with land owners and affected communities in relation to environmental impact, as part of good business, when undertaking infrastructure projects.

Box 3.1 **Australia's commitment to international sustainable development efforts**

Australia is a member of several international organisations that promote sustainable development (for example, the United Nations and World Trade Organization) and participates in a number of significant multilateral environment agreements integral to sustainable development. Amongst these are the:

- UN Framework Convention on Climate Change, and Kyoto Protocol for greenhouse gas emission reductions;
- Convention on Biological Diversity and the Biosafety Protocol;
- Prior Informed Consent Convention governing trade in hazardous chemicals;
- Montreal Protocol on ozone depleting substances; and
- Basel Convention on transboundary movement of hazardous wastes.

In view of the increased profile of international environmental and sustainable development issues, Australia has also appointed an Ambassador for the Environment to represent Australian interests internationally.

Source: DFAT (sub. 37).

Environmental Protection and Biodiversity Conservation Bill

The Commonwealth Government has sought to incorporate ESD principles in the proposed Environmental Protection and Biodiversity Bill which is currently before Parliament. The proposed legislation is one of the Commonwealth's major attempts to address ESD issues. Arising from an in-principle agreement by the Council of Australian Governments on Commonwealth/State roles and responsibilities for the environment, the proposed Bill will replace five pieces of existing environmental legislation. Among other things, it seeks to define more clearly the Commonwealth's ecological management role. It focuses Commonwealth involvement on matters of national environmental significance and provides a mechanism to strengthen intergovernmental cooperation and minimise duplication (Hill 1998a) (box 3.2).

The Minerals Council of Australia (sub. 16, p. 2) welcomes the reforms associated with the proposed Bill. It stated that it is an:

> ... opportunity to implement the principles of sustainable development. There is significant potential within the framework proposed in the Environment Protection and Biodiversity Conservation Bill to reduce duplication between the Commonwealth and States and streamline project approvals. The proposed accreditation of State processes and the codification of matters of national environmental significance could be a substantial step forward in the implementation of the IGAE and move towards sustainable development.

However, the Council is also cautious. For example:

> ... a large range of actions and decisions, including the decision on final project approval, are taken by the Commonwealth Environment Minister, alone and without appeal. The Council considers that the focus of environmental assessment should be to assess the environmental implications of proposals, identify alternatives/options to minimise environmental impacts and provide the basis for setting environmental conditions. Accordingly, environmental assessment and decisions on environmental acceptability are but one of a large number of relevant impacts that require assessment in decisions relating to approval of development proposals. ... A whole-of-government approach to such decision making should be adopted to accommodate environmental, economic, social and other factors, and thereby contribute to implementation of the principles of sustainable development. (sub. 16, p. 3)

However, it is the case that under the Bill the Environment Minister is required to invite other relevant ministers to comment on a proposed action. The Bill also requires the Minister to consider social and economic factors, as well as environmental issues, and to take the principles of ESD into account.

Other participants also expressed some reservations with the proposed Bill in its current form. For example, the Australian Conservation Foundation (sub. 27, p. 2)

stated that the Bill, in terms of ESD, is regressive in many regards. It considers that this is because the Bill sets up:

Box 3.2 **Environment Protection and Biodiversity Conversation Bill**

The proposed Environment Protection and Biodiversity Conservation Bill 1998 (the Bill) is a significant attempt to incorporate ESD principles into all Commonwealth agency decision making processes. Once passed it will repeal five pieces of current legislation, better define the Commonwealth's role as an environmental manager, and improve coordination in management between the Commonwealth, States and Territories.

Specifically the Bill aims to:

- promote protection of the environment, especially those areas of national significance;
- promote ESD through the conservation and sustainable use of natural resources;
- promote the conservation of biodiversity;
- promote a cooperative approach to the protection and management of the environment; and
- assist in the cooperative implementation of Australia's international environmental responsibilities.

The Bill will limit the Commonwealth's involvement to situations when an action is likely to, or will, have a significant impact on a matter of national environmental significance. Matters of national environmental significance covered by the Bill are:

- world heritage properties;
- Ramsar wetlands of international importance;
- nationally threatened species and communities;
- migratory species protected under international agreements;
- nuclear actions;
- the Commonwealth marine environment; and
- and any additional matter specified by regulation.

Importantly, under the Bill, the Minister for Environment may enter into bilateral agreements with the States or Territories which allow the Commonwealth to accredit or rely on state or territory approval processes for actions impacting on matters of environmental significance.

Source: Hill (1998a).

> ... a framework for devolving environmental powers to the states, and even possibly to corporations and individuals, through bilateral agreements, conservation agreements and other mechanisms, without specifying standards and other than the broadest benchmarks and principles. It directly contradicts ESD by requiring the Environment Minister to take all social and economic factors into account in regards to decisions on environmental impact, but limits environmental factors to a narrow range of defined issues. This uses the guise of integration, but makes a mockery of it ...

However, Environment Australia (sub. DR68) submitted that the application of bilateral agreements is subject to a number of requirements in the Bill. For example, the Minister can enter into a bilateral agreement relating to listed threatened species and ecological communities only if satisfied that the agreement:

- accords with the objects of the Bill;
- is not inconsistent with Australia's international obligations (such as the Biodiversity Convention);
- will promote the survival and/or enhance the conservation status of each species or community to which it relates; and
- is not inconsistent with any recovery plan for the species or community or a threat abatement plan.

The Ministry of the Premier and Cabinet in Western Australia (sub. 20) argued that one consequence of the Bill was increased involvement by the Commonwealth in state environmental matters, which could potentially duplicate and override state government processes for assessment, approval, monitoring and enforcement.

However, Environment Australia (sub. DR68) noted that the trigger for Commonwealth assessment and approval was the matters that have national environmental significance. Environment Australia also noted that the Bill includes mechanisms for minimising duplication, such as accreditation of state systems and processes through bilateral agreements.

Commonwealth's role in ESD implementation by other governments

All governments are responsible for the implementation of ESD principles. As the national government, the Commonwealth has an added responsibility to provide leadership to other governments in the implementation of ESD principles by requiring its own agencies to adopt such principles. In doing so, the Commonwealth can demonstrate processes that work effectively, facilitate application and, in some cases, provide incentives for the adoption of ESD principles.

Box 3.3 **Difficulties in applying ESD principles — the case of Hurstville City Council**

Hurstville City Council considers that there are several factors hindering its incorporation of ESD principles, including:

- a lack of understanding of what ESD means;
- concern about economic impacts as 'development' is viewed as representing progress while 'lack of development' is viewed as stagnation;
- conflicting information and actions through state government policies, such as building motorways while extolling the virtues of public transport;
- town planning systems which are not outcome based and not holistic;
- focus on the natural environment and not the urban environment so that ESD is seen as a 'parks and gardens' exercise;
- absence of common performance indicators, set within an overall strategic plan, to enable timely and relevant feedback for comparison and evaluation; and
- division of the city into small uncoordinated units.

Source: Hurstville City Council (sub. 25)

The Commonwealth is responsible for national policy issues. Many of the activities requiring national coordination are implemented by State, Territory and, in some cases, Local Governments. Examples include aspects of environmental conservation, education, health and some aspects of transport. The Commonwealth and other levels of government have already developed mechanisms designed to deal with these issues which are discussed in chapter 7.

In terms of their roles and responsibilities, the State and Territory Governments currently administer just under 150 separate pieces of environmental legislation. These are broad ranging and cover areas such as:

- land, water and air pollution;
- waste disposal;
- environmental planning and protection; protection of endangered species;
- forestry, wildlife, water and catchment management;
- and natural resource usage (OECD 1998).

Furthermore, local governments have a considerable influence on environmental management - particularly with respect to implementation. They are responsible for many of the day to day government decisions affecting many aspects of the environment. Local governments undertake the majority of planning, land use and

development decisions, delivery of services such as waste management, pollution and noise control, and management of parks and gardens.

There are examples where institutional and policy frameworks for local government have changed to incorporate ESD principles. In New South Wales, for example, the *Local Government Amendment (Ecologically Sustainable Development) Act 1997* includes provisions relating to ESD principles. Among other things, it expressly requires local councils, councillors and council employees to have regard to ESD principles.

However, some city councils experience difficulties in implementing ESD principles. For example, the Hurstville City Council (box 3.3) listed several factors that hinder its incorporation of ESD principles (sub. 25, p. 1).

On the other hand, Greening Australia (sub. 6, p. 3) alluded to several examples, from a number of regional centres in different states, where considerable gains have been made in the practical application of sustainable development principles at the local or regional level:

> ... there are a couple of dozen efforts around Australia that we found (or were directed to) which to a greater or lesser extent fit the bill as SRD [sustainable regional development] initiatives ie. an explicit or evolving focus on 'sustainability' at the regional scale ...
>
> Noone is claiming that any of the above are perfect, however, collectively they represent a huge public/private/community/government investment in a 'sustainable quest' where the stakes are obviously high. Helping the players involved learn from their experiences and share their suggestions/challenges etc ... pays tribute to their efforts and makes economic, social and environmental sense!

This suggests that there could be significant potential gains from more collaboration or sharing of experience and expertise in ESD implementation between, as well as within, different levels of government.

3.2 Whole of government approaches for incorporating ESD

Implementing ESD is a shared responsibility. Implementing effective ESD consistent programs requires extensive consultation, information exchange and partnerships. Its application is undertaken through complex relationships between levels of government (as discussed above), industry and the community. It also requires explicit recognition of intertemporal impacts.

So far Australian governments have implemented several initiatives designed to improve the coordination of decision making processes within and between different levels of government. The Commonwealth is prominent in these initiatives. The effect of such initiatives is to reduce the possibility of duplicating policy decisions, promote consistent application of ESD principles (where relevant and appropriate) and eliminate inconsistent decision making processes. To date such initiatives include:

- the IGAE;
- the NSESD;
- ministerial councils;
- statutory authorities (with ESD objectives enshrined in their legislation);
- joint agency ventures; and
- regional organisations.

Although the Commonwealth has set in place a number of initiatives, further work may be required to develop relationships and links to improve the application of ESD principles. For example, environmental health is one area where the Department of Health and Aged Care (sub. 10, p. 3) believes that lack of cooperation is an impediment to producing better outcomes:

> ... environment protection legislation often offers a stronger and wider range of controls and penalties than does public health legislation. However, health's ability to access and use environment legislation is hampered by the lack of cooperation between the sectors and by the lack of explicit acknowledgment of health in environment legislation.

Further, the Ministry of the Premier and Cabinet in Western Australia (sub. 20, p. 2) stated:

> The Commonwealth's role in intergovernment co-ordination is not clearly defined and its role tends to vary depending on the nature of the intergovernmental committee or issue involved.

Finally, the Australian Industry Group considered (sub. 12, p. 2) that:

> One of the key areas of concern ... with respect to the implementation of ecologically sustainable development (ESD) is the range of Government Departments which have active ESD policies and the apparent lack of coordination between these entities and the lack of a clear set of priorities among the various programs and policies.
>
> There is also a lack of coordination between the Commonwealth and other levels of Government. This is of particular concern as a large proportion of environmental regulation which directly impacts on business is implemented at the State and local Government levels.

Coordination issues are discussed further in chapter 7.

Intergovernmental Agreement on the Environment

The IGAE was signed by the Commonwealth, States and Territories and a representative of local government in 1992. It aims to facilitate a coordinated approach to the environment. The agreement also provides a mechanism to:

- define the roles of each level of government;
- reduce intergovernmental environmental disputes;
- provide greater certainty in government and business decision making; and
- provide better environmental protection (COAG 1992).

To achieve its objective, the IGAE sets out four main principles to inform government policy making and program implementation:

- the precautionary principle - where the threat of environmental damage is serious or irreversible, a lack of scientific proof of damage is not a defence against action to prevent the degradation;
- inter-generational equity - the health of the environment should not be eroded for the benefit of the present generation at the expense of future generations;
- conservation of biological diversity and ecological integrity; and
- improved valuation, pricing and incentive mechanisms - such as including environmental factors in valuation of assets and services, introducing polluter pays principles, and introducing market mechanisms to maximise benefits (COAG 1992).

Further, the agreement outlines three ways that governments have agreed to incorporate environmental issues into their decision making processes. First, ensure that environmental issues are considered when formulating policies. Second, ensure that matters which significantly affect the environment are properly examined. Finally, ensure that measures adopted are cost effective and not disproportionate to the significance of the environmental problem.

However, the Ministry of Premier and Cabinet in Western Australia (sub. 20, p. 1) considered that the IGAE has failed to meet some of its objectives:

> Under the terms of the Intergovernmental Agreement on the Environment (IGAE) ratified in 1992, the States and Territories were to be accredited for environmental assessment and heritage matters. This has not happened.

As discussed earlier, accreditation of state/territory processes is an issue covered in the proposed Environmental Protection and Biodiversity Conservation Bill.

National Strategy for Ecologically Sustainable Development

The NSESD is a voluntary code which proposes a number of strategies for Commonwealth, State and Territory and Local Governments to address sustainable development issues. As discussed earlier, the goal of the strategy is to ensure that all development improves quality of life, both now and in the future, without compromising sustainable ecological processes.

The NSESD covers a number of key industry sectors that rely on natural resources including agriculture, manufacturing, mining, tourism, and energy. It also identifies strategies for a range of intersectoral issues such as biological diversity, environmental impact assessment, pricing and taxation, and changes to government institutions and machinery. These are relevant to actions in several of the key industry sectors (CoA 1992b).

The strategy is designed to apply not only to governments but also to business, community organisations and individuals. It also outlines a number of challenges for government. One particular challenge refers to institutional changes designed to alter government processes. A number of objectives to meet the challenge are listed subsequently (box 3.4). Specifically, governments are required to improve the efficiency and effectiveness of the development, implementation and integration of ESD related policies, clearly define the roles and responsibilities of each level of government, avoid duplication of functions, and establish effective processes for cooperation between governments.

Despite these objectives, some believe that the NSESD has failed to have a significant impact. For example, the Australian Conservation Foundation (sub. 27, p. 7) stated:

> There is little evidence that the National Strategy is reflected in the integration of a commitment to sustainability into all decision-making.

Until 1997, the Intergovernmental Committee for Ecologically Sustainable Development was responsible for reviewing progress in implementing the NSESD and reporting to the Council of Australian Governments. It reported once, in 1996, for the period 1993–95, but was disbanded in 1997. Currently, no organisation is filling this role.

Box 3.4 **Challenges for government institutions and machinery in the National Strategy for Ecologically Sustainable Development**

Challenge

To establish appropriate institutional arrangements for the inclusion of ESD principles in policy formulation and policy making processes.

Objective 16.1

To ensure Cabinet processes facilitate the integration of economic, environmental and social considerations into decision making.

Objective 16.2

To incorporate ESD principles as fundamental guidance for relevant government authorities involved in economic, environmental and social decision making.

Objective 16.3

To improve the efficiency and effectiveness of the development, implementation and integration of ESD related policies, clearly define the roles and responsibilities of each level of government, avoid duplication of functions and establish effective processes for cooperation between governments.

Objective 16.4

To improve the level of consideration given to ESD principles in government purchasing policies and practices.

Source: CoA (1992b, pp. 66–68).

Ministerial councils

Ministerial councils typically comprise ministers from similar areas across Commonwealth, State and Territory Governments. As such these councils are able to facilitate cooperative and integrated policy and program strategies in relation to various issues. A number of existing councils are required to apply ESD principles so that competing stakeholder values can be taken into account. These include the:

- Australian and New Zealand Environment and Conservation Council (ANZECC);
- National Environment Protection Council (NEPC);
- Agricultural and Resource Management Council of Australia and New Zealand (ARMCANZ);
- Australian and New Zealand Minerals and Energy Council (ANZMEC); and
- Ministerial Council on Forestry, Fisheries and Aquaculture.

ANZECC is the main ministerial coordination committee related to the environment. It consists of Commonwealth, State, Territory, New Zealand and Papua New Guinea ministers responsible for the environment and conservation. The Commonwealth provides the secretariat through Environment Australia. The ministerial council's aim is to provide a forum for the exchange of information and experience, and to develop coordinated policies on national and international environment and conservation issues (ANZECC 1997).

However, according to the Australian Industry Group (sub. 12, p. 2), ANZECC could be used far more effectively to:

> ... ensure coordination and consistency in the application of the principles of ESD. Instead this body generates its own approach, as evidenced by its recent deliberations on a National Strategy for Cleaner Production, a process which appeared to take little account of other Intergovernmental processes and appeared to repeat many of the efforts of State-based environmental agencies.

The NEPC was established under the IGAE and is a statutory body comprising ministers from each jurisdiction. It has the power to establish, monitor and report on national environmental protection measures (NEPMs) dealing with a number of specific environmental issues such as air quality, noise, hazardous wastes and vehicle emissions.

The Minerals Council of Australia (sub. 16, p. 2, italics in original) argued that while it supports NEPM goals to provide equivalent standards of environmental amenity for all Australians, to date the processes have not:

- integrated economic and environmental considerations in impact assessments;
- considered impacts on international competitiveness;
- provided sufficient technical analysis to constitute a "*proper examination of matters which significantly affect the environment*"; and
- used a risk-based approach to balance economic and environmental objectives in the most cost-effective way.

> These weaknesses are, in part, due to a failure to recognise the full breadth of environmental, economic and social considerations associated with NEPMs. To date, NEPM development has focussed strongly on environmental issues. This is reflected through the inclusion only of Ministers from environment portfolios on the NEPC which does not represent a sufficiently broad decision-making platform to ensure that principles of sustainable development are properly implemented in NEPMs.

The Australian Industry Group (sub. 12, p. 2) expressed similar concerns stating that:

> [although the] National Environment Protection Council is charged with the responsibility of implementing ESD in Australia, this is not happening.

ARMCANZ aims to develop integrated and sustainable agricultural and land and water management policies, strategies and practices for the benefit of the Australian community. Ministers from the Commonwealth, State and Territory Governments responsible for agriculture, soil, water (both rural and urban) and rural adjustment policy are members along with the relevant minister(s) from New Zealand.

ANZMEC aims to promote the general welfare and progressive development of the Australian minerals industry and to consult on the nation's energy needs, resources and policies. It consists of State and Territory, Commonwealth and New Zealand ministers with responsibilities for minerals and energy related matters. More specifically, ANZMEC's (sub. 11, p. 1) objectives include:

- suggesting constructive and compatible changes to the basic legislative and policy framework for the sustainable development of mineral and energy resources;
- improving coordination and, where appropriate, the consistency of policy regimes; and
- providing an opportunity for information and policy exchange.

The Ministerial Council on Forestry, Fisheries and Aquaculture aims to provide a forum for consultation and the development of policies which are consistent with the objectives of all represented governments on aspects of fisheries, aquaculture and forestry and, where appropriate, to develop integrated strategies and policies. Ministers from the Commonwealth, State and Territory Governments are members along with the relevant minister(s) from New Zealand.

Other ministerial councils which must apply ESD principles in considering competing stakeholder values include the Great Barrier Reef Ministerial Council, the New South Wales World Heritage Properties Ministerial Council, the Tasmanian Wilderness World Heritage Area Ministerial Council, the Wet Tropics Ministerial Council and the Murray-Darling Basin Ministerial Council.

Statutory authorities

The Commonwealth has helped create several organisations with responsibilities for providing integrated policy solutions for the efficient and sustainable use of particular natural resources. This approach tends to cover several portfolios in multiple jurisdictions, bringing together the key stakeholders to produce integrated

ESD outcomes. Examples of this approach include establishment of the Murray-Darling Basin Commission and the Great Barrier Reef Marine Park Authority.

The Murray-Darling Basin Commission helps promote and coordinate effective planning and management of natural resources in the whole Murray-Darling basin. It comprises representatives from environmental and natural resource use departments and agencies of the Commonwealth, Victoria, New South Wales, South Australia and Queensland (MDBC 1997).

The Great Barrier Reef Marine Park Authority aims to promote protection, wise use, understanding and enjoyment of the Great Barrier Reef in perpetuity. Activities managed by the authority cover wide ranging areas. Over 20 government agencies and other key stakeholders are listed as lead agencies in the authority's 25 year strategic plan (GBRMPA 1994).

Joint agency ventures

A number of initiatives undertaken by the Commonwealth combine the efforts of several agencies to produce ESD consistent policies or programs. Some major initiatives in this regard include the establishment of the Natural Heritage Trust (NHT), Australian Greenhouse Office, regional forest agreements (RFAs) and the National Environmental Health Strategy.

The NHT is a Commonwealth program established under the *Natural Heritage Trust of Australia Act 1997*. The Commonwealth Government is committed to spending $1.25 billion between 1996–97 and 2000–01 under the NHT. The overall aim of the NHT is to achieve the conservation, sustainable use and repair of Australia's natural environment. The program, to run for five years, is administered in partnership by the Minister for the Environment and Heritage and the Minister for Agriculture, Fisheries and Forestry.

The Australian Greenhouse Office is the Commonwealth Government's primary agency on greenhouse gas matters and is responsible for coordination of national climate change policy (see appendix D). The office was formed from representatives of the then Departments of the Environment; Industry, Science and Tourism; and Primary Industries and Energy.

The RFA process provides the framework for forest conservation and sustainable forest management for particular regions for a period of 20 years. Four RFAs have been finalised to date and a further eight are expected to be completed by the end of 1999. RFAs are developed and implemented jointly by the relevant State/Territory Government and Commonwealth agencies (including the Department

of Prime Minister and Cabinet, Department of Agriculture, Fisheries and Forestry and Environment Australia), following extensive consultation with local stakeholders.

Human health and environment are interdependent. Currently, responsibility in this area rests across the three levels of government. The Department of Health and Aged Care argued in its submission that the management of environmental health issues is fragmented. A National Environmental Health Strategy is being developed to address environmental health management issues. The Department of Health and Aged Care considers that an important objective of this approach will be to integrate the efforts of the Commonwealth, State/Territory and Local Government agencies, industries and business, the non government sector, the health and scientific communities and the general public (sub. 10).

Regional organisations

Several initiatives have been undertaken at the regional level to pursue sustainable development objectives and to further the community, economic or environmental aspirations of people in specific regions. According to Greening Australia (sub. 6, p. 5), examples of regional organisations include:

- Commonwealth &/or State/Territory &/or Local government supported Regional Development Boards;
- Regional natural resources management organisations. For example, SA Catchment Water Management Boards, Vic Catchment Management Authorities, NSW Catchment Management Trusts and Catchment Management Committees;
- Regional coalitions of Local governments;
- Regional employment and training organisations;
- Regional organisations created to assist Aboriginal and Torres Strait Islanders;

> [There are a number of] ... [h]ybrids of the previously mentioned organisations, or new organisations with a specific focus on multi-dimensional SRD [sustainable regional development]. For example, Cape York Regional Advisory Group (Qld), Dawson Valley Development Association (Qld), Shepparton Sustainable Regional Development Board (Vic), Lake Eyre Basin Coordinating Group (Qld/NT/SA/NSW), TeamWest Steering Group in Western Sydney (NSW).

The preceding discussion highlights a range of mechanisms available to facilitate ESD implementation at different levels of government and at community and industry level. These mechanisms have emerged largely in response to the recognition that ESD requires cooperation between all levels of government and with other key stakeholders, including industry and the broader community.

3.3 The Commission's assessment

ESD represents an extremely broad policy agenda, one which transcends portfolios and levels of government. Sound application of ESD principles in policy formulation involves sharing environmental and sustainable development responsibilities between Commonwealth agencies and all levels of government. However, in some instances markets create incentives that automatically account for ESD principles, particularly when economic activity will significantly impact on a community or the environment. In others government, through legislation, is required to consider the interests of different dimensions of ESD. One participant, Smart Futures Group (sub. 31, p. 1), described the ESD task as:

> ESD is not a major discrete policy area. Rather it is a fundamental platform on which all decisions are based. ESD has to be incorporated into our criteria for policy setting, planning, funding, and evaluating outcomes. It is a long term commitment and appropriate measures must be set up ...

The Commonwealth cannot achieve ESD goals and objectives alone. Partnerships with other levels of government, the private sector and the wider community are essential as the effective implementation of ESD is a shared responsibility. However, a prerequisite for effective and efficient consultation and cooperation in promoting ESD is to ensure that roles and responsibilities of the participants, including governments, are clearly defined.

To date the Commonwealth has accepted significant management responsibility for facilitating and implementing ESD. In addition, the Commonwealth has a responsibility to provide leadership to other governments in the implementation of ESD. In conjunction with other Australian governments the Commonwealth has implemented several initiatives. The NSESD is one such initiative. As discussed earlier, it is a voluntary code designed to address ESD implementation not only by governments but also by business and the wider community. Continuing gains can be made through more collaboration or sharing of experience and expertise in ESD implementation between, as well as within, different levels of government.

4 Current status of ESD implementation by the Commonwealth

This chapter examines how individual Commonwealth departments and agencies have incorporated ESD principles into policy formulation and decision making. A range of programs and policies adopted by Commonwealth agencies are discussed to highlight how they can impact on economic, environmental and social outcomes. Further, the chapter analyses how agencies monitor, evaluate and report on their implementation of ESD. It concludes with the Commission's assessment of progress by Commonwealth departments and agencies on their implementation of ESD.

Information used in this chapter was primarily obtained from department and agency responses to a questionnaire prepared by the Commission and from submissions to the inquiry (box 4.1).

Box 4.1 **About the information collected by the Commission**

Information on the decision making processes and monitoring activities of Commonwealth departments and agencies is not readily available on a consistent basis. Under the terms of reference, the Commission was asked to review how departments and agencies with significant policy or program responsibilities related to ESD have incorporated ESD into their policy formulation and decision making.

The Commission prepared a questionnaire (appendix B) to elicit this information. Copies were sent to a wide range of Commonwealth departments and agencies. Of 69 questionnaires distributed, 25 were returned. Several submissions were also received that provided information similar to that sought by the questionnaire.

Departments and agencies with significant ESD responsibilities featured strongly amongst those agencies that responded to the questionnaire (see appendix A). This was important given the focus of the terms of reference on departments and agencies with major responsibility for ESD. Respondents included: the Australian Greenhouse Office; CSIRO; Department of Defence; Department of Agriculture, Fisheries and Forestry, Department of Transport and Regional Services; Environment Australia; Department of Communications and the Arts; and Department of the Treasury.

4.1 Current mechanisms for incorporating ESD principles in decision making

The impetus for a policy, program or new regulation may come from any number of sources, such as the minister, the department or agency, other governments, industry, other interested parties or community opinion. Thus processes for policy formulation and development are not always explicit and clearly identifiable, nor do they necessarily follow a uniform process.

Whatever the initial stimulus for a new initiative, the task for policy makers is to ensure that decision making processes account for all foreseeable significant costs and benefits associated with the proposed policy, program or regulation. Typically, the financial costs and benefits are, for the most part, clearly identifiable. It is the environmental and social costs and benefits that are sometimes less clear and more difficult to take into account. These issues are discussed further in chapter 6.

The Commonwealth's commitment to ESD implementation means all departments and agencies are expected to incorporate ESD principles in their decision making processes. At a minimum, all agencies should abide by some general mechanisms to ensure decision making processes actually consider any economic, environmental and social impacts. Several agencies (for example, the Australian Fisheries Management Authority) are subject to specific legislation which requires them to explicitly address ESD principles.

General mechanisms

The general mechanisms that all agencies should adopt in decision making processes are included in government policy or legislation. These mechanisms can be considered in two groups — those applied when creating new regulation and those applied to other policies and programs.

The Commonwealth has in place a regulatory review system that assists officials working on the review and reform of regulation. It explains how best practice processes can lead to better regulation that is cognisant of ESD principles (IC 1997b).

All Commonwealth departments and agencies responsible for making regulatory proposals that are likely to impact on business, or restrict competition, are required to take part in the regulatory review process. Within this process, consideration of the costs and benefits of a regulatory proposal should be interpreted broadly, and

include environmental and social costs (that is costs to the community) where relevant.

Central to the review system is the regulation impact statement (RIS) (box **4.2**). The objective of the RIS process is to ensure that departments and agencies considering new regulation have regard to a range of best practice decision making criteria. As well as formalising and stating the steps that should be taken in policy formulation, the RIS process is intended to improve the regulation making culture.

The preparation of a RIS ensures that all relevant information is documented and that decision making processes are explicit and transparent (ORR 1997).

Box 4.3 **Elements of a regulation impact statement**

The main components of a RIS include:

- a statement of the problem or issue to be addressed by the regulation (for example market failure);
- a statement of the desired objectives;
- an analysis of feasible alternatives (regulatory and non regulatory) for achieving the desired objectives;
- an assessment of the costs and benefits of each option, including,
  - comprehensive identification of the groups likely to be affected by the proposal (eg. government, business, consumers, and the wider community as a whole),
  - an assessment of the costs and benefits to each of these groups,
  - where a particular option restricts competition, the RIS must address the additional issues contained in the Competition Principles Agreement,
  - other issues including the impacts on small business, and the effects on trade;
- an accompanying statement outlining who was consulted in development of the RIS and the regulatory proposal;
- a summary of the preferred option; and
- a statement of how the preferred option will be implemented, enforced, and monitored or reviewed.

It is important to recognise that the terms ‘benefits’ and ‘costs’ are intended to be interpreted broadly to include all impacts such as environmental and social benefits and costs where applicable.

Source: ORR (1997).

The Commonwealth also promotes ESD consistent decision making processes when departments and agencies are developing non regulatory policies and programs. While the Commonwealth does not prescribe best practice step by step processes that must be followed to ensure an ESD consistent policy or program, the legislative requirements in place are designed to ensure decision makers consider the full costs and benefits of policies and programs being developed. Legislation containing general requirements exists which, if fully applied by departments and agencies in policy development, would assist in the production of ESD consistent policies and programs. However, in some cases, these processes are only triggered if, in the minister's opinion, the impact of the activity is significant. Specific legislation in this regard includes the:

- *Environment Protection (Impact of Proposals) Act 1974* (EP(IP) Act);
- *Australian Heritage Commission Act 1975* (Heritage Act); and
- *Competition Policy Reform (Intergovernmental Agreements) Act 1995.*

The EP(IP) Act aims to ensure that actions affecting the environment are fully examined and taken into account in Commonwealth government processes. However, the Act only applies to actions that are likely to, or will, have an environmentally significant impact. Actions that may warrant the triggering of an examination may relate to the:

- formulation of proposals;
- carrying out of works and other projects;
- making of, or the participation in the making of, decisions and recommendations;
- negotiation, operation and enforcement of agreements and arrangements (including dealings with States and Territories); and
- incurring of expenditure.

Environmental impact assessment (EIA) is the method outlined under the EP(IP) Act to assist the process of assessing the likely environmental impacts of a policy, program or proposal and for identifying options to minimise environmental damage. The main purpose of an EIA is to inform decision makers, and other interested parties, of the likely environmental impacts of a proposal before a decision is made (Australian EIA Network 1998). Box **4.4** details the EIA process.

Box 4.5 **Environmental impact assessment (EIA) process**

The responsibility for triggering the EIA process rests with the minister or agency responsible for the proposed action (described here as the 'action minister'). If the action minister decides the proposed action is environmentally significant then he or she must designate a proponent for the proposed action and refer the matter to the Minister for the Environment. Where the proposal has already been submitted previously, and the environmental impacts are not significantly different, the action minister is not obliged to re-submit the proposal.

Once the proposal has been referred, the designated proponent must supply Environment Australia with a notice of intention (NOI). This is a brief summary of the proposal which outlines matters such as potential environmental impacts, current stage of development and feasible options.

On the basis of the NOI the Minister for the Environment decides on the appropriate level of assessment. The EP(IP) Act provides for four levels of assessment:

- assessment without the preparation of an environmental impact statement or public environment report;
- assessment following the preparation and public review of a public environment report;
- assessment following the preparation and public review of an environmental impact statement; and
- examination by a Commission of Inquiry.

The action minister is bound to take into account comments, suggestions or recommendations from the Minister for the Environment. However, the final decision on the proposed action rests with the action minister.

Many proposals require assessment under State/Territory legislation or planning processes as well as Commonwealth EIA legislation. To avoid duplication, arrangements are made with States and Territories to facilitate joint or cooperative assessment of proposals. These are in accordance with the EIA principles agreed under the Intergovernmental Agreement on the Environment.

Source: Australian EIA Network (1998).

Importantly, if the Environment Protection and Biodiversity Conservation Bill (see chapter 3) is passed, the power of the Environment Minister in the decision making process, particularly in relation to EIA, is likely to increase. The Environment Minister will effectively become the decision maker on the relevant issue (after inviting input from other relevant ministers).

The *Australian Heritage Commission Act 1975* establishes the Australian Heritage Commission as an independent statutory authority. The main responsibilities of the commission are to advise the Minister for the Environment and Heritage and the Government on national estate conservation issues, to encourage community

appreciation of, and concern for, the National Estate through information, education and training, and to compile an inventory of national estate places (the Register of the National Estate) using a number of criteria. The inventory includes places which:

- reveal the evolution and pattern of Australia's natural or cultural history;
- possess rare, endangered or uncommon aspects of Australia's natural or cultural history;
- demonstrate the principal characteristics of a class of Australia's natural or cultural places and environments;
- associate with the life or works of a person, or group of persons, of importance to Australia's natural and cultural history;
- exhibit particular aesthetic characteristics valued by a community or cultural group;
- demonstrate high creative or technical accomplishment or outstanding design or aesthetic qualities;
- possess a strong or special association with a community for social, cultural or spiritual reasons; and
- potentially could contribute to an understanding of Australia's natural and cultural history (DoD, resp. 22).

All places meeting the criteria above are entered on the Register for the National Estate. Once registered, or on the interim register, any Commonwealth action which affects these places is subject to the Heritage Act which states that the minister or agency must:

- not take any action that adversely affects a place in the national estate unless there is no alternative, in which case reasonable measures must be taken to reduce adverse effects; and
- inform the Australian Heritage Commission before taking steps that may significantly affect a place on the Register for the National Estate.

The National Competition Policy, embodied in the *Competition Policy Reform Act 1995*, also refers to ESD. National Competition Policy comprises three intergovernmental agreements. One of these, the Competition Principles Agreement, requires decision makers to consider all costs and benefits of any proposed policy or course of action that could impact on competition before that policy or course of action is implemented (s. 1(3)(a)). Further, s. 1(3)(d) of the Competition Principles Agreement specifically requires government legislation and policies relating to ESD

to be taken into account when assessing the costs and benefits of a proposed policy or action.

Department and agency approaches

For some departments and agencies, applying ESD principles in decision making is a relatively simple exercise. For others it is complex because of difficulties in assessing the full costs and benefits of policy options. Such difficulties arise when:

- institutional structures or poor decision making processes hinder 'good practice' policy making (consideration of all economic, environmental and social values);
- there is a lack of information;
- the impact of a policy will be felt by future generations; or
- a significant number of stakeholders are affected by policy or program options in quite different ways.

As expected, different agencies have different strategies to account for ESD principles and objectives in their decision making. This reflects the wide variety of activities undertaken by the Commonwealth. Approaches adopted by a number of Commonwealth departments and agencies are summarised in table 4.1. While not listed in table 4.1, the Productivity Commission is required to be cognisant of ESD principles under the *Productivity Commission Act 1998* (box **4.6**).

Box 4.7 **Productivity Commission and ESD**

The Productivity Commission was established in 1998 through the amalgamation of three separate bodies — the Industry Commission, the Bureau of Industry Economics, and the Economic Planning Advisory Commission.

The Productivity Commission Act requires the Commission to incorporate ESD objectives in its decision making. Specifically, part 2, s. 8 requires the Commission '… to ensure that industry develops in a way that is ecologically sustainable'. Other guidelines related to ESD include the need for the Commission:

- to encourage the development and growth of Australian industries that use resources efficiently;
- while facilitating adjustment to structural changes in the economy, aim to minimise the social and economic hardships arising from those changes; and
- to consider Australia's international obligations and commitments.

Furthermore, the Act requires that at least one Commissioner has extensive skills and experience in applying the principles of ESD, and in environmental conservation.

Table 4.1 **Selected department and agency approaches for incorporating ESD principles in decision making**

Agency	*Explicit, high level ESD related statement*[a]	*How ESD principles are included in decision making process*
Combined efforts to manage natural resource or environmental issues		
Australian Greenhouse Office	Mission statement	Major stakeholders (including economic, environmental and social representatives) are represented in the decision making process.
Environmental and natural resource management as core activities		
Department of Agriculture, Fisheries and Forestry	Vision statement in the corporate plan. Incorporated in legislation — PIERD Act 1989[b]	Natural resources are managed on a long term basis.
Environment Australia	Vision and charter in corporate plan. Incorporated in *Natural Heritage Trust Act 1998*	Programs must consider natural and cultural environment in harmony with the nation's social and economic goals.
Fisheries R&D Corporation	Mission statement. Incorporated in PIERD Act 1989[b]	Processes are based on the NSESD. Also planning to develop sustainability indicators for fisheries.
Sugar R&D Corporation	Incorporated in PIERD Act 1989[b]	Project proposals are required to consider environmental impacts and linkages to other activities. Several programs define long term sustainable development objectives.
Core activities are not related to environmental and natural resource management		
AusAid	Corporate plan[c]	Incorporates specific strategies to address environmental sustainability in all Australian aid activities.
Australian Communications Authority[d]		Where relevant applies the EP(IP) Act and, in some cases also applies other environmental tests as required by the relevant legislation. The regulatory framework must also be equitable to meet the social needs of the community.
Australian Nuclear Science Technology Organisation	Operating policies	Projects are designed to maximise socioeconomic value to the community. Economic, environmental and social considerations are built into project approval processes.
CSIRO	Environment policy statement	As a priority, the CSIRO board accounts for economic and environmental goals in a long term societal context.

(Continued on next page)

Table 4.2 **Selected department and agency approaches for incorporating ESD principles in decision making** (continued)

Agency	*Explicit, high level ESD related statement*[a]	*How ESD principles are included in decision making process*
Department of Communications and the Arts		Where relevant applies the EP(IP) Act and, in some cases, also applies other environmental tests as required by the relevant legislation.
Department of Defence	Charter	Guidelines are in place to assist decision makers assess environmental, cultural, and other special values for present and future generations.
Department of Industry, Science and Resources		Incorporated implicitly in department objectives. Department also ensures Commonwealth requirements, such as RIS are followed when introducing legislation.
Department of Transport and Regional Services	Corporate plan 1997	Department strives to provide a competitive framework for competition between and within transport modes, and promotes accessibility, sustainability and environmental responsibility.
– aviation		Airports must abide by specific airport environmental regulation. Forums are held by the Department to gauge community, industry and government opinion on noise levels.
– maritime transport		Regulations are established to limit ship sourced pollution and other environmental damage.
– roads		All projects are expected to abide by the EP(IP) and AHC Acts and respective state legislation.
– Federal Office of Road Safety	Mission statement	RIS, which account for such impacts as air and noise pollution, are carried out for all new Australian Design Rules.
– National Capital Authority	Corporate plan	Projects are selected using criteria which include the precautionary principle, inter-generational equity and conservation of cultural and heritage values.
– National Office of Local Government		Local Government program funds activities which address social, cultural and economic priorities and community wellbeing.
Department of the Treasury		Tax policy areas try to improve community wellbeing by promoting equity in the tax system. Foreign investment proposals are subject to the EP(IP) and AHC Acts.

(Continued on next page)

Table 4.3 **Selected department and agency approaches for incorporating ESD principles in decision making** (continued)

Agency	*Explicit, high level ESD related statement*[a]	*How ESD principles are included in decision making process*
National Registration Authority (NRA)	Incorporated in AVC Code Act 1994[e]	Program objectives include protecting the environment, public and occupational health and safety as well as accounting for economic considerations.

a May include references only to sustainable use and sustainable management of natural resources.

b *Primary Industries and Energy Research and Development Act 1989.*

c AusAID refers to 'environmental sustainability' of development assistance.

d A statutory body of the Commonwealth Department of Communications, Information Technology and the Arts which is responsible for applying relevant legislation to the telecommunications industry.

e *Agricultural and Veterinary Chemicals Code Act 1994.*

Sources: resp. 5, 9, 10, 12, 14–18, 22–25; sub. 14, 17, 28, 38.

As illustrated in table 4.1, at the broadest level those agencies which have accounted for ESD objectives have either done so explicitly (specific recognition of ESD principles and objectives or use of similar terms) or implicitly (no specific recognition of ESD principles and objectives or similar terms but ESD principles are incorporated in decision making processes). However, very few actually refer to ESD objectives specifically. In part, this may be due to the relatively recent recognition of ESD in the policy and program making process. Most Commonwealth legislation was drafted prior to the Commonwealth's major initiative on ESD, the 1992 National Strategy for Ecologically Sustainable Development (NSESD) (CoA 1992b). For example, most existing environmental legislation was in place prior to 1992 (EA, resp. 9, p. 3). However, adopting ESD principles in government activities is about good decision making. As such, some agencies adopt ESD principles implicitly in their decision making process as part of good practice policy making without explicitly referring to ESD principles.

Agencies with a natural resource and environmental focus

Generally, agencies with a focus on natural resource and environmental management explicitly recognise ESD principles through a high level statement such as legislation, the corporate plan or mission statement. Typically, these agencies have paid greater attention to ESD principles than other agencies (table 4.1). For example, Environment Australia stated that: 'ESD is an integral part of all the Department's activities' (resp. 9, p. 4).

Specifically, some agencies with a natural resource and environmental focus have ESD principles enshrined in their respective legislation. For example, concepts of ecologically sustainable development are embodied in the *Primary Industries and*

Energy Research and Development Act 1989 which enacts research and development corporations, such as the Fisheries Research and Development Corporation. The objectives of this legislation are to:

> … make provision for the funding and administration of research and development relating to primary industries with a view to:
>
> - increasing the economic, environmental and social benefits to members of primary industries and to the community in general …
> - achieving the sustainable use and sustainable management of natural resources;
> - making more effective use of the resources and skills of the community in general and the scientific community in particular; and
> - improving accountability for expenditure upon research and development activities in relation to primary industries. (AFFA, sub. 38, pp. 11–12)

Similarly, the *Fisheries Management Act 1991* (s. 3) incorporates a specific ESD objective to ensure that:

> … the exploitation of fisheries resources and the carrying on of any related activities are conducted in a manner consistent with the principles of ecologically sustainable development and the exercise of the precautionary principle, in particular the need to have regard to the impact of fishing activities on non-target species and the long term sustainability of the marine environment …

Some agencies that focus on natural resources and the environment state their commitment to ESD in their respective corporate plans or mission statements (table 4.1). For example, the Australian Greenhouse Office (AGO) was established (as a component of the Prime Minister's November 1997 Greenhouse Package) to provide a strategic approach to abatement of Australia's greenhouse gas emissions (see appendix D). The AGO's mission statement is: 'Leading Australia's greenhouse action to achieve effective and sustainable results' (AGO 1998b, p. 8).

Similarly the Department of Agriculture, Fisheries and Forestry (previously Department of Primary Industries and Energy) aims to raise:

> … national prosperity and quality of life through competitive and sustainable mining, agriculture, fisheries, forest, energy and processing industries. (DPIE 1997, p. 11)

The Department has incorporated the principles set out in its corporate plan in its portfolio activities. It stated in its submission (sub. 38, p. 3) that:

> Given the significance of the agriculture, forests and fisheries sectors to the national economy, the long-term sustainability of the agricultural, fisheries and forest industries and the resources upon which they are based, need to be assured … Towards this end, the Portfolio's activities focus on the following three key roles:

- understanding and maintaining the biological and physical resource base on which the agricultural, fisheries and forest sectors depend;
- ensuring domestic and world markets and economies operate efficiently and are unhindered by trade barriers, so that producers receive clear price signals and produce what is wanted by consumers; and
- addressing societal infrastructure issues, including the provision of a range of social and economic services and social welfare systems, arising from adverse economic/environmental conditions.

The Department of Agriculture, Fisheries and Forestry recognises the merits of ESD principles, and indicates that the challenge for its portfolio is to get the balance in values right. It considers (sub. 38, p. 15) that:

> The ESD process has been very effective in raising the profile of environmental issues into this portfolio's industry policy and decision making processes — environmental issues are now an integral part of the policy mainstream for this portfolio, and for the government at large … With the integration process almost completed, one of the challenges for this portfolio in implementing ESD in the future will be to maintain the dynamic balance between social, economic and environmental considerations, so that no one set of considerations dominates the policy process.

Other departments and agencies

Many agencies with core activities not directly related to natural resource or environmental management have also explicitly accounted for ESD principles and objectives (table 4.1). For example, programs of the National Registration Authority, the government's regulatory authority for the evaluation, registration, and regulation of agricultural and veterinary chemicals, are guided by the *Agricultural and Veterinary Chemicals Code Act 1994*. This Act recognises, among other things:

(a) that the protection of health and safety of human beings, animals and the environment is essential to the well being of society and can be enhanced by putting in place a system to regulate agricultural chemical products and veterinary chemical products; and

(b) that the principle of ecologically sustainable development requires a regulatory system that is designed to ensure that the use of such products at the present time will not impair the prospects of future generations … (NRA, resp. 12, p. 2)

Similarly, AusAID (sub. 14, p. 2) incorporates ESD principles in its decision making:

> It is AusAID's policy to ensure that the aid program makes a positive contribution to sustainable development. This includes the integration of economic, social and environmental considerations. AusAid's Infrastructure and Environment Group assesses all Australian aid projects in order to determine any potential environmental

impacts. The Group includes policy advisers, an environmental expert, and a social and community development expert.

A further example is the aviation program of the Department of Transport and Regional Services. In this case, regulation in place restricts levels of allowable noise pollution (DoTRS, resp. 23). Another case is the Commonwealth Department of Communications and the Arts (resp. 5) which is required to ensure that environmental and heritage values from telecommunications infrastructure cable rollout are incorporated in the decision making process through legislation (box 4.5). Although this represents a more formal recognition of several aspects of ESD, it may be incomplete if significant social or economic values are not taken into account.

Box 4.8 **Taking the environment into account — the legislative framework in the telecommunications industry**

The Minister for Communications and the Arts administers a legislative framework for telecommunications carriers that conduct specified network rollout activity. The legislation requires consideration of the environmental impacts of certain activities.

Primarily, the legislation provides that telecommunications carriers' rollout of infrastructure is generally subject to State and Territory planning and environment laws — typically through planning approvals. There are, however, some limited exceptions.

Under legislative requirements, any carrier wishing to install a facility must apply in writing to the Australian Communications Authority for a permit. Approval criteria take into account any environmental impact resulting from a facility installation.

In addition, the legislation requires carriers to take all reasonable steps to ensure that existing facilities are used when engaging in an activity, and that broad band cabling is not located aerially.

Further, there are special provisions relating to environmental matters. If an installation is likely to adversely impact on endangered species or a defined ecological community, a number of procedures must be undertaken to gain approval. Amongst other things, the Authority must consult with the secretary of the environment portfolio, the director of National Parks and Wildlife and the Australian Heritage Commission before issuing the permit.

Finally, carriers are allowed limited access rights to private property for installation and maintenance of certain facilities. Conditions of access require the carrier to have regard to community concerns about environmental issues and possible effects on heritage areas. Under the legislative framework, the carrier must notify the Nature Conservation Director, the relevant Heritage chairperson and the secretary of Environment Australia for significant areas.

Source: DoCA (resp. 5).

This is also true for the Department of Transport and Regional Services. Despite a recognition of ESD principles in its corporate plan, governing legislation for some sub-programs requires that decision makers only account for some elements of ESD. These sub programs include the:

- airport program and environmental impacts;
- aviation and noise level requirements; and
- maritime transport program and pollution (resp. 23, pp. 12, 15, 23).

Finally, some agencies account for ESD less formally through program goals and objectives. (Table 4.1 shows how some departments and agencies that do not have an explicit statement or legislation devoted to ESD still apply ESD principles in decision making processes.) The implicit manner in which this is done varies between agencies. For example, the Department of Industry, Science and Resources (sub. 28, p. 2) indicated that its objectives are ESD consistent. Objectives include:

- the development of a strong, growing and diversified economy … [which will underpin] Australia's capacity to enhance environmental protection
- the need to maintain and enhance international competitiveness in an environmentally sound manner [which] is consistent with business pursuing world best practice outcomes
- whole of government decision making processes, such as the requirement for Regulatory Impact Statements, [to] ensure an appropriate balance of economic, environment and social objectives in policy and program development processes related to industry, science and resources.

A further example is the Department of Defence which recognises the impact many of its activities have on the environment. Although its primary objective is to protect Australia, many Defence's activities (such as defence force exercises) have a significant impact on the environment. Consequently, Defence has incorporated in its charter an explicit commitment to undertake activities which will incorporate natural, built environment and heritage values in decision making processes. Social issues are also addressed in the charter. In particular, Defence aims to: '... be a "good neighbour" through close involvement and regular consultation with local residents' (DoD 1998c, p. 3).

While the implied application of ESD principles can be effective, decision making processes are less likely to continually produce ESD consistent outcomes relative to cases where ESD principles are explicitly stated. An implicit, rather than explicit, commitment to ESD principles makes that commitment less transparent in the decision making process. Accountability may then be blurred causing the omission

of potentially significant costs and benefits in the decision. Consequently, good practice policy making is compromised.

Restructuring departments and agencies

In recognition of the complexities of implementing ESD, and to better meet the challenges, some agencies have restructured the way they are organised. For example, Environment Australia (resp. 9, p. 1) has undertaken internal restructuring to better apply ESD principles in decision making by increasing the coordination and cooperation of activities to create improved results:

> … the Department was restructured to group responsibilities under broader environmental objectives. The new structure brought together areas that previously had separate identities and cultures, and a degree of independence. The new structure combined with weekly executive meetings, a collegiate style of corporate decision making, and an emphasis on providing integrated advice has helped to better apply ESD principles to policy advice and program administration.

AusAID (sub. 14, p. 2) has also restructured, by amalgamating its sectoral expertise, to improve its operations. The results have been significant in that:

> Under this new structure, policy and technical staff work together in support of country programs, to draft speeches, develop AusAID-wide policies and guidelines, prepare briefings, and conduct a host of other activities. Under the old structure this degree of cooperation rarely took place.

4.2 Policy and programs

As discussed previously, implementing ESD represents a broad policy agenda and it introduces a number of complexities for policy making. The range of policy responses that can be considered ESD related is similarly broad in terms of both impact and scope. This is reflected in responses to the Commission's questionnaire.

The weight of consideration given to all aspects of ESD (economic, environmental and social) will depend on the department's and agency's core activities. Some have a primary focus on business and economic activities while others focus mainly on social or environmental considerations. However, some economic policies may fail to take full account of relevant environmental and social issues. Conversely, some environmental policies may fail to take into account relevant economic and social considerations. For example, Kimberly-Clark (sub. 26) argued that recycling is not always beneficial and that these activities themselves are not costless.

Programs and policies undertaken by the Commonwealth are wide ranging. Appendix C highlights some Commonwealth policies and programs, relevant to

ESD. In addition, as part of good house keeping, some agencies have developed ESD consistent programs and policies relevant to their internal operations (box **4.9**).

Box 4.10 **Internal environmental management programs of Commonwealth departments and agencies**

Many Commonwealth departments and agencies are committed to applying ESD principles to their own internal operations. These policies are designed to reduce the environmental impact of the agencies' own activities and operations. Important among them is the Government's 'Measures for Improving Energy Efficiency in Commonwealth Operations' policy, announced in November 1997. The key objective of this policy is to reduce emissions and improve the energy efficiency of Commonwealth Government operations. Among other things, the policy requires departments and agencies to report annually on energy performance which forms the basis of a whole of government energy report. The first of these was tabled in Parliament in December 1998.

Departments and agencies have been assisted by various policies and guidelines such as the Commonwealth procurement guidelines of the Department of Finance and Administration.

A number of the strategies adopted by agencies include:

- recycling of paper and other wastes;
- energy/water saving;
- use of an environmental management plan and/or audits; and
- building design that takes into account impacts on the environment.

All of these strategies have significant economic benefits in addition to underlying environmental benefits. Hence a prudent manager would adopt these strategies as part of best practice. The Department of Finance and Administration considers that the benefits of such policies include:

- reduced operating costs through improved design, procurement of energy and increased staff awareness;
- opportunities for industry, from increased demand for innovative, ecologically sustainable products; and
- improved national environmental performance, through the promotion of international science and technology collaboration and the resulting attraction of leading edge technologies to Australian industry.

Sources: CoA (1998a); DISR (sub. DR75); DoFA (resp. 21).

Good practice decision making will attempt to recognise, and account for, all significant economic, environmental and social impacts. For some policies it is obvious that all three types of impacts need to be considered. For such policies and programs to be effective, sound consultation and cooperative efforts between

stakeholders are essential. Appendix D illustrates a number of cases which involve varying degrees of cooperation and consultation between stakeholders. One example is regional forest agreements which have primary economic, environmental and social goals. These agreements seek to address the diverse range of uses and priorities attached to the forest resource by the community as a whole (AFFA, sub. 38). Similarly the AGO, in developing a strategic framework for Australia's greenhouse response, is required to consider the ecological impact of greenhouse gas emissions, the economic impact of reductions in emissions, and the social impact on the community's wellbeing (AGO, resp. 18).

However, in most cases, programs and policies have their primary objectives in either economic, environmental or social areas but also have other direct or indirect economic, environmental or social impacts. For example, as outlined in appendix C, policies and programs of agencies with a primary focus on economic issues (such as the Department of the Treasury) could have important implications for sustainable development and social issues. Tax policy, for example, can affect equity within the community (Treasury, resp. 17). Another example is the regional tourism program of the Department of Industry, Science and Resources, which aims to promote the tourism industry. As popular tourist destinations often coincide with ecologically significant areas, tourism programs need to be cognisant of conserving the ecological balance while extracting economic benefits (sub. 28, p. 5).

Similarly, activities of those agencies with a focus on social policy can also have significant economic or environmental impacts. For example, the main objective of the Department of Defence is to serve and protect the Australian people and its interests (DoD 1998c). However, defence activities can have significant environmental implications. One example is major defence exercises like Tandem Thrust, a joint US and Australian land and sea military exercise (DoD, resp. 22).

Another example, is the Aboriginal and Torres Strait Islander Commission which encourages other agencies to take indigenous views into account. This includes promoting cultural, heritage, environmental and economic values in program development relating to indigenous Australians. In this way, the commission may influence economic and environmental activities undertaken by other government agencies and the wider community (ATSIC, resp. 25).

Finally, agencies with a primary focus on environmental issues can also have a significant economic or social impact. One example, outlined in appendix C, is Environment Australia's management of protected areas (such as Kakadu National Park). In addition to conserving part of Australia's biodiversity and natural heritage, economic values (such as tourism) and social values (such as cultural heritage) need to be considered in the management process. Another example is research undertaken by the Fisheries Research and Development Corporation on the

preservation of natural marine ecosystems. The aim of this research is to develop resource management practices that are sustainable and that preserve the ecosystems for continual use.

Some Commonwealth policies and programs aim to encourage industry and the wider community to adopt ESD principles. For example, the Fisheries Action Program (appendix C) aims to repair Australia's aquatic environment and promote sustainable use of fisheries by encouraging community involvement in activities to improve fisheries ecosystems. Similarly, regional forest agreements aim to involve stakeholders in the determination and implementation of policy. Another Commonwealth policy aimed at changing corporate behaviour is the Greenhouse Challenge Program administered by the Australian Greenhouse Office (box **4.11**).

Box 4.12 **Greenhouse Challenge and changes in corporate behaviour**

Announced in March 1995, the Greenhouse Challenge Program is a cooperative joint venture between the Commonwealth and industry. Through this program, government and industry cooperate to develop cost effective, flexible and voluntary measures to significantly reduce greenhouse gas emissions through improvements in energy efficiency and by enhancing greenhouse gas sinks. Industry is primarily responsible for developing greenhouse gas abatement plans, and for monitoring and reporting progress in implementing them (GCO 1995).

During the past few years, over 100 enterprises have signed cooperative agreements. Of the first 100 signatories, 46 are companies in the manufacturing, mining, electricity distribution, oil and gas, commercial transport, construction, and service sectors. Together they comprise about 45 per cent of greenhouse gas emissions attributable to Australian companies in these sectors (GCO 1997). According to AGO:

> … companies … have committed to savings off growth of more than 20 million tonnes of CO_2 equivalent by the year 2000. This reduction is equal to the emissions of more than one million Australian households, including their transport, household energy use and decay of wastes in landfills. (resp. 18, p. 13)

The projected reductions in emissions are greatest for four of Australia's largest companies. As at September 1997, BHP, Rio Tinto, Shell Australia and ICI Australia were expected to reduce their greenhouse gas emissions by 18 per cent (or 11 million tonnes of CO_2 equivalent) below year 2000 levels that would have otherwise occurred. This represents about 10 per cent of Australia's total greenhouse emissions.

Sources: GCO (1995, 1997); AGO (resp. 18).

4.3 Current mechanisms for monitoring, evaluating, and reporting effectiveness in implementing ESD

The challenge of monitoring and reviewing current practices is to ensure that the program or policy was, or continues to be, effective, focused and relevant (CoA 1992b). This is especially so in the government sector given the absence of a market to provide appropriate performance information.

A great deal of information is required to enable the effective monitoring and review of government activities. The comprehensive nature of information required to review ESD consistent decisions can be extremely difficult to obtain in cases where non pecuniary costs and benefits (typically environmental and social in nature) are involved.

A significant amount of the information required exhibits public good characteristics. As such, a number of Commonwealth agencies gather and make available information for other departments and agencies and the wider community to improve day to day ESD decision making processes.

CSIRO (sub. 17, preamble, italics in original) indicates that current efforts in monitoring and information gathering can still be improved:

> … there is scope for enhanced evaluation action and for better, more practical measures which give timely feedback on progress at all scales from local to global.
>
> *Despite worthwhile steps forward, it is not yet sufficiently clear whether many activities are becoming more or less sustainable. This knowledge is crucial to good management.*

The Department of Premier and Cabinet, Tasmania (sub. DR70, p. 4) noted another important issue in relation to monitoring:

> ... a major issue in monitoring ESD-related government activities is the identification of trends. This requires long-term baseline monitoring and better understanding of the basic ecological and physical processes of natural systems.

Commonwealth agency sources of information

Several Commonwealth agencies have core responsibilities for providing key information to assess ESD related activities, particularly for natural resource management and the environment. In some cases, it is not feasible to obtain complete information given the size of the task, the lag of environmental impacts or institutional constraints. For example, the Fisheries Research and Development Corporation (resp. 15, p. 2) stated:

> Compared with land-based resources, knowledge of fish resources is poor, and acquiring such knowledge is slow and expensive.

Similarly:

> Of 270 (mostly commercial) Australian Fisheries, it has been estimated that for only eight per cent is there adequate or good information for management to support ecologically sustainable development. (Dovers 1995, p. 145)

Environment Australia is the Commonwealth's primary caretaker of ecologically related information. It collects and documents data in the following areas: air; biodiversity; coasts and marine; geographic; heritage; industry; mining and protected areas. Information is collated in various forms including:

- registers which maintain lists of certain items such as important natural and heritage areas;
- directories that collate environmental and marine information sources;
- projects to gather information relating to issues such as biodiversity; and
- inventories which comprehensively document information on ecological sustainability issues (box **4.13**).

Box 4.14 **Managing information collection through inventories**

Environment Australia participates in three key inventories — the National Pollutant Inventory, National Wilderness Inventory and Australian National Greenhouse Gas Inventory.

- The National Pollutant Inventory is an internet database designed to provide information to the community on emissions to air, land, and water. It aims to promote waste minimisation and cleaner production by industry and government. Information on the National Pollutant Inventory should also help governments with environmental planning and management and is expected to become an integral part of policy and program formulation for government at all levels. The National Environment Protection Council has primary responsibility for this inventory.
- The National Wilderness Inventory is a database and set of geographical information systems modelling procedures designed to assist in planning and management of remote and natural lands in Australia.
- The Australian National Greenhouse Gas Inventory records estimates of greenhouse gas emissions and sinks. Only emissions from sources and removals by sinks resulting from human activities are estimated and included in the inventory. Emissions from natural processes lie outside its scope.

Sources: AGO (1998a,c); Australian and World Heritage Group (1999); National Pollutant Inventory (1998).

Other agencies with roles in collecting relevant information include:

- the ABS which collects data on environment protection expenditure, environment and transport, energy and agriculture, and the conservation of the environment, and also plans to develop an environmental accounting system;
- the Australian Bureau of Agricultural and Resource Economics which undertakes economic research and produces information on agriculture, minerals, energy, fisheries, forestry, global climate change, and land and water;
- the Bureau of Rural Sciences (formerly Bureau of Resource Sciences), which, amongst other things, collects data on sustainable use and development of Australia's natural resources, and on food safety, quarantine, and animal and plant health issues;
- CSIRO which, amongst other things, undertakes environment related research and development with a primary focus on biodiversity, climate and atmosphere, land and water, and marine matters;
- the Australian Geological Survey Organisation — Australia's national geological survey agency;
- the Bureau of Meteorology which collects climate statistics; and
- the Australian Surveying and Land Information Group which operates within the Department of Industry, Science and Resources, and is the Commonwealth Government's primary source of advice on spatial information matters.

Further, several major projects are currently under way to complete specific review tasks and improve the review capabilities of a number of areas in the Commonwealth government. Examples include a project to develop environmental indicators for state of the environment reporting and the National Land and Water Resources Audit program which is one of the Natural Heritage Trust's major programs (box **4.15**).

However despite the current efforts Dovers (1997, p. 79) argues that there is a:

Box 4.16 Environmental indicators and the National Land and Water Resources Audit

The environmental indicators project and National Land and Water Resources Audit are two major projects that aim to improve the review and monitoring capabilities of the Commonwealth.

Environmental indicators

Development of a set of indicators to monitor the condition of the environment and the human activities that affect it is the next step in state of the environment reporting. Environment Australia has commissioned experts to develop and recommend indicators for each of seven major themes around which state of the environment reporting is based — biodiversity, land, inland waters, estuaries and the sea, human settlements, the atmosphere, and natural and cultural heritage.

Derived from reports commissioned by Environment Australia, the Australian and New Zealand Environment and Conservation Council has produced 72 draft core environmental indicators for six of the seven themes. The set of indicators aims to provide nationally comparable data on major environmental trends. The indicators should also assist jurisdictions further develop environmental monitoring and help build a national picture of trends in the environment. It is anticipated that the core indicators may be supplemented in each jurisdiction by additional indicators to accommodate particular management, scale or environmental issues as necessary.

Indicators for the seven themes will be used in the 2001 national state of the environment report. An independent committee has been appointed to oversee its production.

National Land and Water Resources Audit

The National Land and Water Resources Audit is one of the Natural Heritage Trust's major programs. Over four years, the audit aims to improve decision making in land and water resources management. More specifically:

> The intention is to establish a more robust natural resource management environment for Australia in which decisions are made with the benefit of relevant and comprehensive data, with assessments of the likely costs and benefits from environmental, economic and social perspectives, and in the context of sustaining Australia's diverse and fragile natural resources. (NLWRA 1998, p. 5)

During the course of the audit, nationally comparable data sets will be collated to provide a measure of the status of land and water resources. As a result, improvement, or deterioration, of these resources will be identified over time.

In addition, the audit will work closely with key Commonwealth, State and Territory Governments to develop a framework for long term monitoring and assessment of land and water resources.

Sources: ANZECC (1998); NLWRA (1998); SEAC (1998).

Monitoring and review mechanisms

The Commonwealth has several agencies that are able to carry out external reviews of activities undertaken by other agencies. These include the Australian National Audit Office and the Productivity Commission (including the Office of Regulation Review). In addition, individual departments and agencies undertake their own internal monitoring and review. However, resources devoted to such activities vary significantly. The approaches adopted by departments and agencies for monitoring and review of their policies and programs (including in relation to ESD objectives) are summarised in table 4.2.

According to the responses to the questionnaire received by the Commission, monitoring and review of programs and policies across agencies tends to vary considerably. This ranges from those cases where no monitoring of programs or policies is undertaken, to a number where monitoring and feedback represents an important part of overall program evaluation activities.

Overall, however, monitoring activities do not appear to be widely undertaken on a routine bases by departments and agencies. Further, there appears to be even fewer examples where the results from monitoring activities are incorporated into the policy or program via feedback mechanisms. One exception, however, is Environment Australia (resp. 9, p. 3) which recognises the importance of feedback loops for efficient policy development:

> The Department's program evaluation strategy encourages the increased incorporation of ESD principles in program design by encouraging evaluations to look at the cross-portfolio implications of programs. The strategy also encourages cross-program evaluations eg. evaluations of all water related programs, or cross-program evaluation of community consultation approaches.

In cases where monitoring is an important part of departments' and agencies' program development and evaluation activities, this is often a general (rather than ESD related) activity. For some departments and agencies it is undertaken systematically, while for others it is more ad hoc (table 4.2).

Mechanisms for incorporating the results of monitoring into future activities also vary. For example, the:

- Department of Agriculture, Fisheries and Forestry (sub. 38) indicated that it reports regularly against key result areas (including sustainability criteria) and that it publishes the results in its annual report;
- Fisheries Research and Development Corporation (resp. 15) indicated that project and program achievements are reported systematically (six monthly and

at the end of each project) and that these are reviewed at the board level with results incorporated back into decision making processes;

- Grains Research and Development Corporation (resp. 13) indicated that monitoring of outcomes against established performance indicators is a key aspect of its programs; and
- Australian Communications Authority (resp. 10) indicated that 25 performance indicators are in place and that these are reviewed annually.

In several cases, agencies indicated that ESD related programs had been implemented relatively recently and that, when they are fully implemented, performance monitoring would be considered. For example, regional forest agreements contain commitments to establish sustainability indicators (EA, resp. 9).

In other cases, agencies have indicated that monitoring of particular indicators has been undertaken. For example, several agencies (CSIRO, resp. 16; DoTRS, resp. 23) gave examples of programs for which they were in the process of establishing environmental management systems based on ISO 14001 standards. Once in place, these would incorporate the results of monitoring of environmental performance and procedures to respective programs through feedback mechanisms.

Table 4.2 contains further examples.

Table 4.4 **Monitoring and review of ESD policies and programs — selected department and agency approaches[a]**

Agency	*Program/policy*	*Comment*
Combined efforts to manage natural resource or environmental issues		
Australian Greenhouse Office	Administers five key programs in its role as the agency providing a coordinated response on greenhouse matters.	Reports on implementation of the National Greenhouse Strategy are to be prepared biennially. Projections and implications will be assessed against a range of indicators (eg. impact on industry sectors) with performance measured against indicators. Performance indicators for the Greenhouse Challenge program were developed in consultation with government and industry stakeholders. Progress toward emission reduction targets is monitored and reported annually. A number of performance indicators have been developed as part of the Sustainable Energy Program. As the program is relatively recent, reviews have not been undertaken. Performance monitoring and review currently not undertaken for Renewable Energy Program.
Environmental and natural resource management as core activities		
Australian Institute of Marine Science	Research program has sustainability objectives.	Monitoring is a key aspect of programs.
Department of Agriculture, Fisheries and Forestry[b]	Administers programs relating to agriculture, fisheries, forest and processing industries. Program objectives include sustainability.	The corporate plan establishes key result areas (of which sustainability is one) and top priority projects. Department reports against the key result areas and top priorities in annual reports. Corporate performance is reviewed on quarterly or annual cycles against the key result areas.
	COAG Strategic Water Industry Reform Framework.	ARMCANZ, ANZECC and sometimes the MDBC are required to report annually to COAG on progress in implementation. Performance is also reviewed as part of the implementation of National Competition Policy.
	Sugar Industry Infrastructure Program.	Project operators are required to report regularly to State and Territory departments on their progress. In turn, State and Territory departments report to the Commonwealth. Evaluations of completed projects are undertaken one year later to assess whether objectives were met.

(Continued on next page)

Table 4.5 **Monitoring and review of ESD policies and programs — selected department and agency approaches** (continued)

Agency	*Program/policy*	*Comment*
Environment Australia[c]	Natural Heritage Trust (NHT).	Indicators have been prepared as part of a draft 'NHT Monitoring and Evaluation Framework' document. Specific projects might also contain indicators. To date, evaluations have not been carried out and there are no feedback mechanisms. However, these will be developed.
	Australian and World Heritage Program.	No monitoring and review related specifically to ESD objectives. Does occur on an ad hoc basis. A more systematic approach to monitoring is being investigated.
	Forest Program.	A framework for forest indicators has been developed, based on the Montreal process. A review of the RFA process to date has been completed. Five yearly reviews of individual RFA performance will be undertaken. Mechanisms for the results of evaluations to feed back into programs are still being developed.
	Environmental impact assessment (EIA).	There are no mechanisms for monitoring EIA (content or outcomes) other than monitoring of the number of EIA undertaken each year. EIA process has been reviewed. However, there is no formal mechanism for incorporating outcomes of the review into policy.
Fisheries Research and Development Corporation	Corporation objectives are set out in legislation and include sustainability. Specific projects relate to resource sustainability.	Project and program achievements are reported against performance indicators. Progress against indicators is assessed annually; six monthly for specific projects; and at the completion of specific projects. The board of the organisation reviews performance reports and incorporates feedback into decision making processes.
Grains Research and Development Corporation	Research and development strategy.	Outcomes monitored against performance indicators. Includes implementation, monitoring and evaluating policies and programs.
Sugar Research and Development Corporation (SRDC)	Objectives of the *Primary Industries and Energy Research and Development Act 1989*. Specific SRDC projects.	Assessments of overall (ie not ESD specific) program effectiveness are carried out periodically. General feedback evaluations are taken into account when preparing new plans, and reviewing the existing R&D plan.

(Continued on next page)

Table 4.6 **Monitoring and review of ESD policies and programs — selected department and agency approaches** (continued)

Agency	*Program/policy*	*Comment*
Core activities not related to environmental and natural resource management		
AusAID	Aid programs.	An environmental audit is undertaken every three years. In each intervening year, selected audits in sensitive areas are also undertaken. In the environmental area, a review process has been designed to allow continual improvements in environmental outcomes of all Australian aid activities.
Australian Communications Authority	Objectives of the *Telecommunications Act 1997* and the *Radiocommunications Act 1992*.	The Authority lists 25 general performance indicators, none related specifically to ESD issues. Performance indicators will be reviewed annually to ensure their continued relevance. No mechanisms for feedback.
Australian Nuclear Science and Technology Organisation (ANSTO)	Three of ANSTO's core areas of business have significant ESD implications.	Environmental monitoring is regularly undertaken. Results are reported in the annual report and in a separate Environmental Survey Report. Environmental outcomes are monitored by committees which provide recommendations to ANSTO on how performance can be improved.
CSIRO	Internal operations.	While not ESD specific, CSIRO has developed two programs with broad environmental objectives related to its operations. Environmental performance is assessed against objectives. While still in the implementation phase, evaluation will be carried out on an annual basis. Once established, an environmental management system based on ISO 14001 will have procedures in place for feedback mechanisms.
Department of the Attorney General	Internal management practices.	Monitoring of some initiatives undertaken. No formalised review procedures.
Department of Communications and the Arts	Administers telecommunications legislation which includes ESD objectives.	Monitoring undertaken by the Australian Communications Authority. Ad hoc evaluations of telecommunications carriers' performance are undertaken.
Department of Family and Community Services	Internal management policies.	No formal monitoring or feedback mechanisms.

(Continued on the next page)

Table 4.7 **Monitoring and review of ESD policies and programs — selected department and agency approaches** (continued)

Agency	*Program/policy*	*Comment*
Department of Defence[d]	Environmental Management Plans.	Plans usually incorporate monitoring and reporting mechanisms. Performance indicators and targets are not specified. Information gathered is not used in a systematic fashion. The Department is considering feeding information from individual plans into the corporate Environment Management System. Some feedback loops exist to monitor performance.
Department of Transport and Regional Services	Australian Transport and Sustainable Development (ATSD) policy under development. Different parts of the Department also have ESD objectives as part of programs.	Performance monitoring and review mechanisms are proposed as part of the ATSD. Funding under the Local Government Development Plan is linked to ESD management. Non ESD specific project outcomes are assessed against original objectives. No formal feedback mechanisms are involved. Regulation of the environmental performance of airports incorporates ESD principles. Environmental outcomes must be monitored. Airport lessees must implement an environmental management system based on ISO 14001. This includes procedures for feedback mechanisms. Roads funding decisions are subject to the EIA process.
Department of the Treasury	Corporate objectives include ESD principles. Also reflected in fiscal policies, and *Charter of Budget Honesty Act 1998*.	ESD and environmental considerations not reflected in formal performance monitoring and review processes.
National Registration Authority	Activities guided by the *Agricultural and Veterinary Chemicals Code Act 1994* which recognises ESD principles.	NRA activities focus on ex ante assessments of impacts. Responsibilities stop at point of sale. NRA can require monitoring procedures as part of registration conditions. However, environmental monitoring not usually undertaken.

a This table does not represent a complete list of department and agency policies and programs as it is based on responses to the Commission's questionnaire. Where departments and agencies administer a number of policies and programs relevant to an aspect of ESD, only a sample has been included in this table.

b Department has provided input to a number of programs such as the Natural Heritage Trust and regional forest agreements which are reported under Environment Australia.

c Environment Australia provided information on nine programs as being representative of its approach to ESD. In addition to policies related to resource management, it also has administrative responsibility for legislation relating to environmental impact assessments.

d The main response to the NSESD by the Department of Defence has been through specific environmental programs rather than through an integrated corporate response.

Sources: resp. 5, 7–10, 12–18, 20, 22–24; sub. 14, 38.

4.4 The Commission's assessment

A number of departments and agencies appear to have incorporated ESD principles in some form or another in their decision making processes. However, it is uncommon for ESD principles and objectives to have been fully taken into account from the initial policy development stages right through to the monitoring and review of the policies and programs developed. Consequently, there is still significant scope for many departments and agencies to better incorporate ESD principles in all phases of the decision making process. To date overall success of government efforts to implement ESD has been mixed and variable.

The Industry Commission stated in its report (IC 1998), *A Full Repairing Lease, Inquiry into Ecologically Sustainable Land Management* that ecological sustainability has been incorporated into policy in an ad hoc, incomplete and tentative manner. The National Farmers' Federation concur with this observation (sub. 22, p. 3) while the Smart Futures Group (sub. 31, p. 1) is concerned that the implementation of ESD is stagnating:

> ESD has become something of a mantra, in danger of remaining rhetoric rather than becoming practice.

The National Association of Forest Industries of Australia (sub. 4, p. 1) is also cautious on the uptake of ESD:

> While lip service seems to be paid to the concept [of ESD], there is not much sign of a strong commitment to putting the concept into practice. It seems … that the environment portfolio has interpreted its responsibility as being mainly to arbitrate on what is and is not ecologically sustainable. On the other hand, the environment portfolio seems to have very little interest in the development component of ESD.

The Australian Conservation Foundation (sub. 27, p. 1) went further and stated:

> ... ESD has never been seriously implemented in Australia. Indeed the prerequisites for its effective implementation are absent. These prerequisites include … information and accounting frameworks, institutions, departmental structures and functions …

However, governments have made several positive steps. Dovers (1997) states that the emerging array of ESD policies is an encouraging start by governments even though there is still a great deal left to do in terms of implementation and institutionalisation.

CSIRO (sub. 17, preamble) stated:

> Progress has been made in adopting ESD principles in a range of sectors (if, in some cases, rhetoric might outstrip reality). A challenge before Australia is to maintain momentum in all fields to achieve sustainability underpinned by adequate and evolving

knowledge. Overall (if not necessarily in every instance), ecological, economic, social and cultural factors must link as integrative approaches.

In terms of developing policies and programs, departments and agencies which have accounted for ESD or sustainable development have either done so explicitly or implicitly. Few refer to ESD objectives specifically. However this may be due to the fact that governments only relatively recently confirmed their commitment to ESD through the NSESD in 1992. Departments and agencies with a natural resource or environmental focus seem to have given greater explicit recognition to ESD principles than others. While the implied application of ESD principles can be effective, it is at risk of not consistently producing ESD outcomes because accountability may be blurred from a lack of transparency.

Some of the Commonwealth's current strategies to incorporate ESD principles adopt a whole of government approach, which involves a number of government departments and stakeholders, and could potentially have a wide impact (for example, greenhouse gas abatement). Others are initiated by individual agencies and might be focused only on sectoral or industry specific issues (for example, sustainable fisheries management). The flexibility in the way ESD principles are accounted for reflects the vast array of activities undertaken by government.

For some departments and agencies, applying ESD principles is a relatively simple exercise while for others it is complex. Such difficulties arise because there are institutional impediments to good practice policy making — reliable information is scarce, there are inter-generational impacts or there are a significant number of stakeholders.

A great deal of information is required to enable the effective monitoring and review of government activities particularly in relation to meeting ESD objectives. The comprehensive nature of information required to review ESD consistent decisions implies that monitoring and review of these policies can be extremely difficult especially in cases where nonpecuniary values (typically environmental and social in nature) need to be measured. Other obstacles to obtaining complete information include the size of the task, the lag of environmental impacts or institutional constraints, such as lack of funding.

Monitoring and review of programs and policies across agencies tends to vary considerably. On the whole, the monitoring of government activities does not appear to be widely undertaken routinely by departments and agencies. Further, there appear to be even fewer examples where the results from monitoring activities are incorporated into the policy or program via feedback mechanisms.

5 Case studies

The terms of reference for this inquiry require the Commission to undertake case studies in priority areas of how Commonwealth departments and agencies have incorporated environmental considerations into their decision making processes.

Five case studies of the Government's approach to selected resource management, environmental and sustainability issues have been undertaken. Four of these case studies focus on particular programs which seek to implement ESD and which incorporate Commonwealth involvement to some degree. The final case study considers the environmental program of a department that does not have a principal focus on ESD or environmental issues, but undertakes activities that could have significant implications for the environment and the achievement of ESD.

The case studies are:

- regional forest agreements (RFAs);
- fisheries management plans of the Australian Fisheries Management Authority (AFMA);
- the Natural Resource Management Strategy (NRMS) of the Murray-Darling Basin Commission (MDBC);
- the National Greenhouse Strategy (NGS); and
- environmental management by the Department of Defence.

This chapter provides details of the framework used to examine the case studies. It also presents a summary of some of the key issues the case studies highlight for implementation of ESD. The detail of the case studies themselves is presented in appendix D.

5.1 A framework for analysing the case studies

The case studies highlight processes adopted by different agencies in different contexts when dealing with ESD related issues. The purpose of examining the case studies is not to comment specifically on individual agencies' success or otherwise in implementing ESD, but rather to draw out general lessons or insights on approaches and mechanisms that appear to work well.

Three Commonwealth agencies — Department of Finance and Administration, Australian National Audit Office and Office of Regulation Review — have responsibility for (or have published guidelines on) conducting program evaluations or establishing mechanisms that encourage effective policy or program making.

In its publication, *Doing Evaluations, A Practical Guide* (1994), the Department of Finance (now Finance and Administration) provides guidance to departments and agencies conducting evaluations. It considers that analysis and understanding of program logic is a necessary first task for evaluating the appropriateness of a proposed program, or for evaluating an existing program. Analysis of program logic requires consideration of:

- the rationale and objectives of the program;
- its relationships with other programs;
- performance information or details of information collected to monitor the on going performance of the program;
- details of previous evaluations and reviews; and
- linkages between the program's major inputs, processes, outputs and outcomes (or, broadly, how the program operates).

In sections of the guide that deal with management of an evaluation (DoF 1994, pp. 30–35), the Department of Finance emphasises the need for agencies to identify and consult stakeholders in planning the evaluation; to publicly release results to improve accountability and address public interest concerns; and to use the findings of the evaluation to improve the program, thus maximising the benefits of the entire exercise.

The Australian National Audit Office (1997, p. 23) examines similar criteria when it assesses key performance elements of programs in its performance audits. These include:

- how the objectives are designed;
- respective roles and responsibilities of parties to the agreements;
- appropriateness of the performance information;
- quality of the needs assessment process;
- strategic focus on outcomes;
- program focus on the customer or client; and
- adequacy of the monitoring, review and performance reporting mechanisms.

The Office of Regulation Review's *A Guide to Regulation* outlines the requirements of regulation impact statements (a form of ex ante assessment). The regulation impact statement process (ORR 1997, pp. A1–A2) is designed to improve regulation making by formalising the steps that should be taken in policy formulation and ensuring that a systematic, objective and transparent process is applied. It requires agencies to identify:

- the problem that needs to be addressed;
- desired objectives;
- a range of alternative options that may be viable mechanisms for achieving the desired objectives;
- an assessment of the costs and benefits of the options;
- a consultation statement; and
- a strategy to implement and review the preferred option.

While these steps are described in the context of making regulations, similar requirements may be applied to the establishment or review of programs and policies to ensure best practice.

The Commission has drawn on the approaches adopted and/or promoted by these three agencies to develop a template for assessing policy formulation and program design in the case studies.

Box 5.1 outlines the aspects of policy/program design which are examined in each case study. Attention to these aspects by agencies is necessary for sound policy or program making processes. They represent 'minimum requirements', or a fundamental starting point, for 'good practice' policy or program making, although they will not necessarily guarantee good outcomes because of variability in the way they may be addressed. Sound processes underpinning policy or program formulation should maximise the likely effectiveness of the policy or program that results. If some of these elements are ignored or poorly addressed, then it is likely that the program will be less effective than it would otherwise have been.

Box 5.1 **Template for examining the case studies**

Background

This section will provide brief introductory remarks to place the specific program in context.

Objectives

This section will outline whether, and how, the program has specified its objectives, including any specific ESD objectives.

Strategies and actions

This section will summarise key features of how the program operates and the strategies and actions employed in pursuit of the program's objectives.

Ex ante assessment

This section will describe whether, and how, the agency assessed the environmental and other impacts of the program prior to implementing it. Examples of ex ante assessment processes include environmental impact assessments, social impact assessments, regulation impact statements and cost benefit analyses.

Coordination with other government agencies and programs

This section will discuss how the agency coordinates the development, operation and monitoring of this program with related programs administered by other Commonwealth departments and agencies or by State/Territory or Local Governments.

Involvement of other interested parties

This section will discuss the mechanisms in place to provide for the involvement of non-government stakeholders and other interested parties in the development, operation and monitoring of the program.

Monitoring, evaluating and reporting procedures

This section will discuss the arrangements established by the agency to monitor and evaluate the program's progress against its key objectives. It will consider issues such as whether performance indicators have been identified and are used to assess the program.

It will also consider how findings arising from monitoring or evaluation processes are used to improve the program over time.

Other supporting activities

This section will refer to supporting activities which are directly relevant for the effective operation of the program but which are not discussed in the other sections, for example, activities associated with research and development or structural adjustment.

5.2 Key issues in implementing ESD

The case studies highlight that implementation of ESD is very challenging and can take many forms. A considerable amount of time is also required to make significant progress. Having said that however, it would be disappointing if poorly designed institutional arrangements or policy making processes delay progress further. In the examples of the Commonwealth's implementation of ESD reflected in the case studies, agencies have, in general, considered and incorporated most of the elements of the template of good policy making outlined in box 5.1 to varying degrees.

The following key observations arise from examination of the case studies (box 5.2) and represent some of the issues that could be carefully considered and examined by agencies seeking to establish institutional arrangements that will support the implementation of ESD. While there is no 'one size fits all' method for implementing ESD, and the most appropriate institutional arrangements will vary depending on the context, the issues outlined below should offer some guidance to other agencies seeking to implement ESD consistent policies and programs.

Multidisciplinary approach

Four of the five case studies examined attempt to explicitly acknowledge and account for the three elements of ESD within the one framework. Each also attempts to incorporate principles of ESD such as the precautionary principle and inter-generational equity.

This is a significant step forward in program making which has traditionally tended to focus on one aspect — economic, environmental or social — as the dominant objective or concern. While the arrangements described in the case studies will not eliminate debate about the appropriate tradeoffs made between the various elements of ESD, which reflect different participants' preferences and views, this approach is nonetheless ambitious. As Said (1998, p. 349) notes in the RFA context:

> ... it is the first time that such a comprehensive assessment and planning process has been undertaken in Australia (and it appears there are few analogues elsewhere in the world) for forests or any other resource sector.

Programs developed under these multidisciplinary frameworks that explicitly seek to acknowledge and account for economic, environmental and social concerns and objectives are more likely to recognise and attempt to balance all values. Hence they should result in management that is more sustainable than would have otherwise been the case.

Box 5.2 **Key observations arising from the case studies**

Some key issues highlighted by the case studies are:

- significant attempts to move across disciplinary (economic, environmental and social) boundaries to accommodate various needs and objectives within the one planning and management framework;
- reflecting the multidisciplinary nature of ESD, a combination of instruments (for example, market based actions, information and education campaigns and forms of regulation) are likely to be required to achieve objectives;
- decisions and arrangements are made in the context of a long term planning and management framework with an expectation that arrangements will continue into the longer term;
- programs are underpinned by a statutory basis or other form of binding agreement or arrangement, which provides a greater likelihood of longevity and commitment;
- in most cases, action or implementation has been preceded by tighter specification or 'narrowing down' of broad ranging national policy statements or environmental problems by, for example, applying a program on a regional scale or by focusing on a sub part of a wider problem;
- informational demands must remain a priority area for further action despite varying attempts which have been made to provide sufficient resources in terms of funding, particularly for supporting research;
- to varying degrees, programs have been developed in an inclusive manner that involves consultation and cooperation with key stakeholders and the community at various stages;
- significant levels of consultation and cooperation between Commonwealth departments and between Commonwealth and State/Territory agencies is a key requirement; and
- monitoring and evaluation procedures have been established with varying degrees of commitment to updating and improvement of programs.

Choice of tools and strategies

The need to recognise the interrelationships between economic, environmental and social impacts in ESD policy making highlights that, in many cases, programs may need to employ more than one type of instrument or strategy to pursue ESD. This is because, for example, some instruments which may be preferable from the point of view of economic efficiency alone may not produce socially desirable outcomes overall. The fisheries and greenhouse case studies both note that market based instruments used or proposed in these policy areas may have social implications which should be examined in order for the overall policy response to be ESD

consistent. Other instruments, for example, prohibitions and prescriptive regulation, may be effective for achieving environmental outcomes for instance, but may do so at a high economic cost.

These examples illustrate that the various instruments or policy responses available to decision makers each have advantages and disadvantages. One instrument or action alone may be best suited to promoting one particular aspect of ESD rather than promoting the trio of elements that make up ESD. Hence, a combination of instruments or strategies is likely to allow agencies to take advantage of the positive features of each. This approach appears to have been followed in a number of the case studies. For instance, fisheries management plans combine a market based instrument (individual transferable quotas) with prohibitions and regulation (such as closed seasons). Similarly, the National Greenhouse Strategy combines voluntary measures such as the Greenhouse Challenge program with education strategies and a proposed market based system — emissions trading.

Long term horizon

Promotion of ESD outcomes requires a long term focus, hence planning and management arrangements must also adopt a long term view, certainly beyond the time frame imposed by the political cycle.

A number of the case studies illustrate that it is possible for agencies to incorporate a longer time frame in devising responses to ESD issues. These include Commonwealth and State Government commitments to 20 year terms in regional forest agreements and the very long history of the Murray-Darling Basin management arrangements (about 80 years) where numerous governments, representing diverse interests, have been able to maintain a long term relationship in recognition of the need to work together to deal with the problems of the basin.

A long term approach is also critical from the point of view of establishing research arrangements that support ESD programs and for developing monitoring and program evaluation arrangements. A long term approach or commitment should also incorporate mechanisms that ensure a degree of flexibility for program improvement over time (see ‘Continuous improvement’ section below for a discussion of these issues).

Commitment to ESD

Most case studies incorporate some mechanism to ensure that the commitment to ESD is maintained over the long term. In some cases, ESD is a binding requirement

imposed through legislation (for example, requirements contained in the *Fisheries Management Act 1991*) while in others (for example, Defence) a commitment to ESD issues is made at the most senior levels of the organisation and its importance is communicated throughout the department. In other cases involving joint implementation by a number of governments or departments, the parties involved have established mechanisms to help them maintain their commitment to implementation of ESD over time.

For example, decisions made by the Murray-Darling Basin Ministerial Council must be unanimous for progress to be made. This encourages all parties to focus on developing solutions and to negotiate on their respective positions so that some action will occur. While an independent arbitration mechanism exists, it has never had to be used in the council's long history.

While in the RFA context, the key Commonwealth departments — Environment Australia, and Agriculture, Fisheries and Forestry work together to promote ESD outcomes with the assistance of the Department of Prime Minister and Cabinet — which is independent and can assist the departments to arrive at a consensus position and ensure more balanced outcomes are achieved. Both Environment Australia and the Department of Agriculture, Fisheries and Forestry consider that this independent mechanism is critical for assisting progress in implementing the RFAs (AFFA, sub. 38, part B1, p. 5 and EA, sub. 21, p. 23).

Clearer specification of the problem and/or the objectives

While implementation of ESD requires a national or broad vision (which can be reflected in an overriding and coordinating framework, such as the National Forest Policy Statement or the Murray-Darling Basin Initiative), implementation of ESD 'on the ground' requires specific goals and a clearly defined task for meaningful action to occur.

A number of the case studies reflect attempts to more clearly specify the objectives of ESD within a narrower or more targeted area. For instance, RFAs apply the objectives and principles of the National Forest Policy Statement on a regional basis. Similarly, fisheries management plans translate broad objectives contained in legislation to specific fisheries.

Given the all-encompassing nature of ESD, clear and narrow specification of objectives at the individual program level is critical for making the ESD task more manageable. Clear and specific objectives also assist in the task of developing performance indicators or other methods to link outcomes to objectives. These indicators or other methods are necessary for assessing the program's effectiveness.

Distinguishing between objectives and strategies (that is, means to achieve objectives) is one element of clarifying a program's objectives. For instance, the Department of Defence has a list of fourteen goals for its environmental policy, some of which may be better described as strategies to meet an objective. An example is 'conduct environmental impact assessments' which may more usefully be considered one of a number of possible strategies for meeting an objective such as 'ensure that likely environmental impacts of a Defence exercise are identified and minimised'.

Often a large number of strategies or objectives can be distilled to a few key objectives. A narrower set of objectives can be more easily communicated to staff involved in the program and to external interested parties. Similarly, it can be easier to communicate priorities and to focus efforts for a narrower set of specified objectives.

Demanding research needs and informational requirements

Dovers (1995, p. 156) summarises the critical need for sound information in ESD policy making:

> Sustainability is an accepted and supremely important goal, but the information systems to support its achievement are in general myopic, under-resourced, unco-ordinated, and constantly buffeted by the winds of political fashion and expediency. If basic environmental information is not accorded the status and guarantees we give to basic social, demographic and economic information, the achievement of sustainability through well designed, implemented and monitored policies is unlikely.

At its most obvious level, data and information are required for sensible programs to be established. However, lack of reliable information can also exacerbate conflicts between stakeholders and other interested parties on the appropriate tradeoffs between economic, environmental and social needs and goals.

Examination of the case studies highlights a number of issues associated with the research or information aspect of ESD implementation:

- In some cases, there is a need to identify and better utilise existing information before embarking on the costly search for additional information.
- Prior to commissioning new research, the additional information required should be carefully identified and defined, bearing in mind program needs and priorities such as monitoring requirements.
- Coordination and cooperation in the collection and sharing of information between agencies is critical to avoid duplication, to lower costs and to coordinate research efforts with programs being implemented. Consistency in reporting

requirements can aid in this task. For example, the RFA process is developing sustainability indicators that will be consistent with international indicators.

- Data and information collected for one program or process should be made widely available and accessible to other agencies and key stakeholders to improve the foundations for decision making. Arrangements for the funding of research, ownership and maintenance, and access to data and information should not be overlooked in arrangements to implement ESD.
- Wherever possible, linkages and consistency between environmental data and social or economic data should be encouraged so that data can be more meaningfully compared within the multidisciplinary context of ESD decision making.
- From a monitoring or evaluation point of view, a commitment to continued collection of the same set of data over time to monitor changes, is required to derive the most benefit from an investment in the collection of this type of information.

A number of these aspects of information and research are being addressed by the programs described in the case studies. For instance, the RFA process commits significant funding to data and information collection through 'comprehensive regional assessments', although this process is not without criticism. The regional forest agreements themselves also detail research priorities. Similarly, the National Greenhouse Strategy specifies the development of a national or common set of models to promote research and assessment of climate change and its impacts.

Despite actions taken to improve the information base on which ESD programs rest, a commitment to continually improving the information base is so critical to successful implementation of ESD that its need cannot be over-emphasised.

Partnerships with stakeholders

The case studies demonstrate an array of approaches for incorporating stakeholder input in government decision making and program development. Not only do they demonstrate the scope to encourage involvement in various aspects of the program (for example, during ex ante assessment, on ground action or implementation, or in monitoring and review) but that involvement can take various forms.

These forms can range from making publications readily available to the public with the primary intention of informing stakeholders, to arrangements where stakeholders form part of an advisory group but decisions largely rest with the relevant agency, to cases where stakeholders are directly involved and responsible for identifying management options and strategies and implementing them. For instance, of the

case studies examined, it appears that grass root level involvement is most developed in the Natural Resource Management Strategy of the MDBC.

Various approaches, and combinations of them, are likely to be valuable in different circumstances. In summary, the case studies highlight five key elements which should be addressed to derive the most benefit from stakeholder input.

Firstly, representativeness of stakeholders — both across and within representative groups — is important. Consultation and negotiation processes should attempt to ensure that all interested and relevant groups are identified and involved in the process. This might require special cultural needs to be recognised and addressed to ensure that certain stakeholder groups are reached through the process. This can also be an issue within a representative group such as industry where both small and large firms' interests should be included. For instance, in fisheries management, the interests of trawler fishers in the industry may not coincide with those of dropline fishers.

Secondly, once stakeholders have been identified, an equal opportunity for them to access consultation processes and to influence outcomes is also important. This might require measures such as the use of culturally sensitive and appropriate consultation processes or providing funding assistance to certain groups to enable them to be effectively involved in the process. This point was supported by the Australian Conservation Foundation (sub. DR64, p. 14):

> Most community representatives are simply not capable of being represented in the same way as an industry representative in resourcing terms, and therefore if all 'stakeholders' are to make meaningful and worthwhile contributions resources must be provided for community involvement.

Thirdly, to promote consensus, stakeholder mechanisms should encourage negotiation and trade off of positions directly between stakeholders. This is in contrast to using stakeholder consultation mechanisms merely as a means for information exchange either from government to stakeholders or vice versa. While this latter type of consultation mechanism has value, direct interaction between stakeholders when negotiating solutions to common problems is likely to promote better identification with the complexities of balancing competing needs and greater commitment to finding an integrated outcome or solution.

In this context, the role of government may be that of facilitator to assist stakeholders in identifying issues and recognising areas of common ground while allowing stakeholders to negotiate on remaining outstanding issues to reduce the level of disagreement. The arrangements represented by the NRMS demonstrate one means through which a government agency may act as a facilitator, or in an integrating, coordinating or strategy setting role. The bulk of on ground work, from

identifying projects to implementing them, is done by local groups. The Australian Greenhouse Office is adopting a similar role in its involvement in programs such as Greenhouse Challenge which involves cooperative arrangements with industry to reduce greenhouse gas emissions, and Cities for Climate Protection where the office assists local governments identify strategies to reduce greenhouse gas emissions in their local area.

Fourthly, to ensure that stakeholders can participate as effectively as possible, participants must be provided ready access to key information and the best data available. This is particularly important where information about the state of the resource may be lacking or where it may be held by only one or two parties.

Lastly, consultation mechanisms need to be institutionalised in order for them to last into the longer term and be improved upon (Dovers 1998).

Coordination between government agencies

The multidisciplinary nature of ESD implementation emphasises and heightens the need for coordination between government agencies at both the Commonwealth level and between governments. All of the case studies demonstrate various means for coordinating activities with other agencies in implementing an ESD policy.

Government coordination is important for a number of reasons. These include incorporating the expertise and interests of the various portfolios that have a direct stake in ESD outcomes in a particular context and ensuring consistency or avoiding duplication between arrangements made. Similarly, coordination amongst research agencies and with agencies implementing programs is essential to ensure that research projects reflect and support developments in key policy areas.

Coordination arrangements must ensure that all relevant agencies are included. For instance, the Australian Greenhouse Office, established to coordinate Australia's greenhouse response (discussed in the case study dealing with the National Greenhouse Strategy), is a tripartite organisation formed through contributions from Commonwealth departments dealing with environment, industry and primary industries. The Department of Transport and Regional Services seems to be a significant omission from this arrangement given the contribution of the transport sector to greenhouse gas emissions.

Continuous improvement

Ecologically sustainable management of a natural resource (or ESD in another context) is a complex issue.

In light of this, it is appropriate for agencies to incorporate a process of continuous improvement in programs designed to implement ESD. This requires agencies to accept, and indeed expect, that programs will not necessarily operate as well as anticipated and that regular monitoring and adjustment or refinement is an inherent part of the program.

Dovers and Mobbs (1997, p. 40) describe this use of regular review for improving and refining programs as 'policy as [an] informing system' and as a practical means for dealing with the uncertainty that pervades ESD decision making. It requires agencies to establish institutional structures and feedback mechanisms that will inform policy making over the long term.

Continuous improvement of programs requires regular, ongoing monitoring to assist day-to-day management of a program, coupled with less frequent (say five yearly) more comprehensive evaluations or reviews of the program's overall appropriateness and effectiveness. A number of the case studies (for example, the NGS and RFAs) incorporate both of these aspects of monitoring.

The monitoring and evaluation aspect of good practice policy making appears to have received less attention than other elements in some of the case studies. This, in part, may be explained by the fact that some of the programs examined are relatively new and are at the initial stages of developing performance indicators or other performance measures. While some delay in this aspect of program making might be expected given its difficulty, it is important that some progress in monitoring should be made as soon as possible even if indicators and systems are still imperfect. It also suggests that attention should be given to assessment methods, such as performance measures, early in the process of developing the program. In fact, these elements should be considered and developed in tandem with setting the program's objectives as they represent the arrangements through which the program's success or otherwise will be determined.

Monitoring and assessment arrangements should be as transparent and public as possible. Some of the case studies intend to seek and incorporate public views (for example, the NGS and RFAs) in their comprehensive assessments of the program. Other measures to improve transparency and accountability should also be employed such as engaging independent parties to conduct assessment reviews.

Monitoring activities and regular assessments of the program's overall effectiveness are of little value if the results are not used in a feedback mechanism that ensures the results are used to improve the program over time. In some case studies, results of monitoring are being used in this way. For example, the Department of Defence is applying environmental lessons learnt from its review of a major defence exercise in 1997 to the planning of its subsequent exercise.

This frequent revision and refinement of programs is necessary to incorporate new information that has come to light and to adjust programs, if necessary, in light of their impacts. It is a key and necessary mechanism for incorporating flexibility in ESD policies that are set in place for the long term.

Another aspect of 'policy as learning' is the opportunity for agencies to learn from the experiences of other agencies grappling with similar issues and concerns. This form of review of other programs can also provide valuable insights into the implementation of ESD.

6 Improving policy development processes

The analysis and discussion in the previous chapters noted that the extent of integration of short term and long term economic, environmental and social goals in policies and programs by Commonwealth agencies and departments has been variable. Progress in effective implementation of ESD seems more advanced in portfolios directly related to the management of natural resources and ecosystems than in other areas.

The implementation of ESD occurs at many levels — local to global — and so is affected by many factors. In some cases, the integration of economic, environmental and social considerations introduces characteristics which make it more complex than other areas of policy. These include measurement difficulties attributable to inter- and intra-generational equity considerations, scientific uncertainty and long response time frames (particularly in environmental impact assessment). While these characteristics are not unique to policy development for sustainable development (for example, scientific uncertainty is not confined solely to ESD policies), they tend to occur more frequently and present greater challenges with respect to sustainable development. Thus achievement of ESD is inherently complex.

However, in other cases progress in implementing ESD has been limited by a failure to even attempt to use existing, standardised 'good practice' processes for policy design and implementation. In other words, it reflects poor policy making practices — something not necessarily related to the complexities of ESD.

6.1 The case for change

Previous chapters have detailed how Commonwealth departments and agencies have incorporated economic, environmental and social objectives into their policies and programs. The extent to which policy formulation, evaluation, and monitoring processes have facilitated the integration of these objectives has been variable. In some cases this relates to poor compliance with existing good practice policy making processes (see below). In others, it reflects some of the difficulties inherent

in integrating different (and in some cases potentially conflicting) objectives into policy, and also coordinating these across different parts, and levels, of government.

Several elements (summarised in figure 6.1) relate to the successful inclusion of ESD principles in policy development. These elements are interrelated. They incorporate good practice policy development processes, and highlight the need for coordination between and within governments and stakeholders, ongoing monitoring and review, a long term focus, and a focus on information gathering. The extent to which these elements are adequately accounted for in the decision making processes of departments and agencies varies significantly.

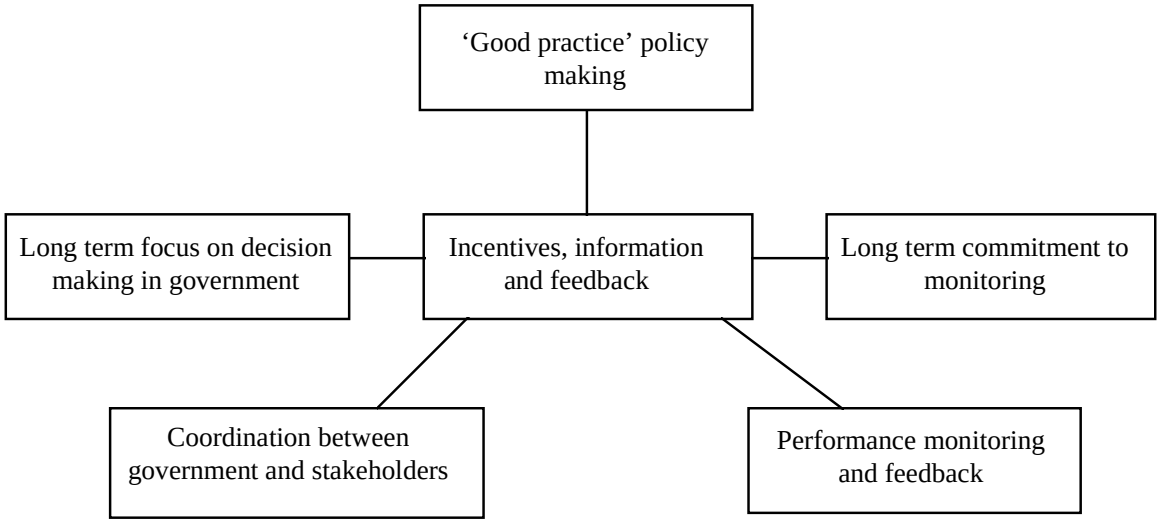
This chapter is about improving the design and assessment elements of the policy development process. Coordination, monitoring and feedback issues are discussed in chapters 7 and 8, while issues relating to the need for a long term focus are discussed in chapter 9.

Good practice policy making

The adoption of good practice policy making processes is not uniform across (or within) Commonwealth departments and agencies. As discussed in chapter 4, while there are examples where policy making processes have been effective in taking account of ESD considerations, there are also cases where this has not occurred. In the latter, this has often been due to a failure to comply with common good practice policy making processes and mechanisms (such as regulation impact statements (RIS) and environmental impact assessments (EIA)) — particularly in regard to identifying and integrating short term and long term economic, environmental and social considerations.

This issue is complicated by a lack of understanding in some areas of what constitutes ESD related issues. As discussed in chapter 4, certain departments indicated that they had not undertaken any ESD related activities, nor had they taken these issues into account in developing policies and programs, because they considered that ESD does not relate to their core activities.

Figure 6.1 **Elements of ESD implementation**



Coordination issues

The multidisciplinary scope of sustainable development complicates ESD implementation (compared with other areas of policy making) due to the demands of coordination between different levels of government and between agencies and other stakeholders. Poor coordination by governments was identified in chapter 2 as one of the main causes of intervention failure and illustrated in submissions cited in chapter 3.

However, for some ESD related policies, coordination between governments and stakeholders has been an important component of the policy development process. The development of regional forest agreements, for example, generally involves establishment of steering and technical committees which comprise Commonwealth and State and Territory representatives, and establishment of local stakeholder reference panels.

A related issue is accountability — the broad ESD policy agenda transcends the portfolio structure of government departments, in particular the traditional advocacy role of departments and agencies.

Monitoring and feedback

An aspect of good practice policy making concerns the monitoring of outcomes against established performance objectives. For ESD, this is complicated by data inadequacies with respect to natural resources, interactions within ecosystems, and the measurability of social and environmental effects, particularly as some of these

may occur only well into the future. The examples of ESD related policies implemented in the areas of, for example, climate change, fisheries and forestry highlight the need for a long term commitment to information gathering (see chapter 5).

Long term focus

Departments and agencies may fail to give adequate consideration to the long term impacts and responses which must be incorporated into ESD policies. This can result from deficiencies in the information required to implement good policy making practices. An important feature of ESD related policies in a number of the case studies summarised in chapter 5 is their recognition of the long term nature of the problems.

6.2 Improving the adoption of good policy making processes

It is axiomatic that incorporating ESD principles into government decision making is fundamentally about good practice policy making. Following the basic principles of good practice policy making will allow informed and transparent judgements to be made regarding the integration of economic, environmental and social considerations into policy, even in cases that might involve measurement difficulties.

At present ESD may not be adequately considered in policy development and implementation for several reasons. Certain agencies have not followed the basic principles of good practice policy making. This is reflected in a failure to satisfactorily apply existing mechanisms such as regulation, social and environmental impact assessments.

In addition, intervention failure (see chapter 2) may also be a significant issue. Factors such as measurement difficulties associated with certain social and environmental impacts may mean that information and data required to make integrative, balanced decisions in policy development are not available. Information might also be lacking on what priority should be given to each aspect of ESD, and how these should be reconciled where there is conflict.

Finally, it needs to be recognised that policy is driven by a range of factors, including influences such as budgetary constraints and electoral considerations. In other words, ‘poor policy’ can occur even if there are good policy development processes in place.

Principles of good practice policy making

The basic principles of good practice policy making have already been formally recognised by governments in Australia and internationally. For example, 18 OECD countries use regulatory impact analysis as a guide to regulatory decision making. As discussed in chapter 5, these principles are reflected in a number of Commonwealth Government guidelines and requirements for policy making (such as requirements for RIS) as well as the enabling legislation of a number of government agencies. For example, under the *National Environment Protection Council Act 1994*, the National Environment Protection Council (NEPC) is required to prepare an impact statement for any National Environment Protection Measure (NEPM). This impact statement must include, among other things, a statement of desired outcomes as well as identification and assessment of the economic and social impacts. Less formal mechanisms, such as departmental and agency procedures and manuals generally follow the principles of good practice policy making.

Internationally, in 1995 the OECD adopted a 'Recommendation on Improving the Quality of Government Regulation' — the first international standard on regulatory quality. This included a 10 point checklist reflecting principles of good practice government decision making (IC 1995). Many of these are reflected in the principles of good practice policy making outlined in box 6.1. Similar principles formed the basis of the template for consideration of the case studies in chapter 5.

While the standardised policy cycle and the steps expected of policy makers are widely known, in some cases poor compliance with some of these steps has been a constraint on ESD implementation. For example, it may not result in a full range of alternative policy instruments being considered. With respect to management of natural resources and the environment, the Industry Commission has found that policy development has been ad hoc and has resulted in inappropriate policies insofar as there has been a heavy reliance on command and control approaches in certain areas (IC 1998).

Failure to follow good practice principles means it is more likely that poor or unintended outcomes will occur. For example, in its inquiry into ecologically sustainable land management, the Industry Commission found that poor regulatory design had resulted in perverse outcomes from some government policies (IC 1998).

Box 6.1 **Principles of good practice policy making**

The standardised policy cycle model includes a number of stages, from ex ante assessment of proposed policies or programs to ex post evaluation of their impacts and outcomes.

Well identified problems

The size and significance of the problem being addressed should be considered, and the reasons for government action should be clear.

Clearly specified objectives

Objectives should be clear and relate specifically to the problem being addressed.

Consultation and coordination

Consultation should occur across and between governments, and with interested parties.

Effective policy options, instruments and institutional arrangements

Policy options should be commensurate with the identified problem — not every problem may warrant a high level of regulation, for example. A full range of policy instruments and institutional arrangements should be considered.

Comprehensive assessment of impacts

The costs and benefits of a policy proposal should be assessed. In the case of ESD implementation, this should involve the consideration of economic, environmental and social impacts.

Integrated decision making

Taking account of ESD considerations explicitly requires the integration of economic, environmental and social objectives and impacts. In some situations, this significantly adds to the complexity of policy making relative to some other areas.

Monitoring, evaluating and reporting

Monitoring and evaluation are key parts of the policy process. Performance indicators can be used to assess the success of the policy in meeting specified objectives. A feedback mechanism should allow for modifications and refinements of the policy to be made if necessary. Formal program evaluations should also be considered.

Sources: OECD (1995); ORR (1997).

Use of existing assessment instruments

As previously mentioned, there are formal mechanisms or instruments in place that policy makers should follow in the policy development process. However, in the context of ESD implementation, the effectiveness of existing formal mechanisms

(such as RIS and EIA) is limited by their intended scope and the lack of effort put into their preparation.

Existing formal mechanisms may only apply to a subset of government policy making activity (table 6.1). For example, departments and agencies must prepare RIS for any regulatory change which could potentially affect business or competition. In 1997, the Government decided that RIS would be tabled as part of explanatory documents when legislative proposals are put before parliament (IC 1997b). There may be policies which are ESD related that do not fall under this category and would not have to comply with the formal RIS requirements.

Across the whole of government, compliance with RIS requirements is mixed. For 1996-97, it was reported (IC 1997b, p. 44) that :

> The level and quality of adherence by departments to Commonwealth RIS requirements differed considerably and was generally much below what it should have been.

For 1997-98, the Productivity Commission (1998, pp. xvii–xviii) found:

> Compliance varied across the different forms of regulation ... Compliance was highest for Bills introduced into Parliament ... Compliance was poor for quasi-regulation.

The Commission also found that failure to comply with RIS requirements related to resource constraints and that incorporation of RIS requirements into regulation making represents something of a cultural change for departments (PC 1998).

Environment Australia (sub. 21, p. 13) questioned the effectiveness of the RIS process for assessing practical impacts, particularly with respect to the environment:

> RISs do not guarantee that the practical implications of new regulation have all been assessed before new legislation is brought forward ... [in addition] RISs also do not provide a comprehensive assessment of the environmental impacts of regulation.

However, if analysis as part of a RIS is undertaken rigorously, it should include both an assessment of the practical implications as well as the economic, environmental and social costs and benefits of a particular proposal. As such, the problem identified by Environment Australia appears to be an issue related to the application of the instrument by agencies rather than the nature of the instrument itself. In fact, on this latter point, Environment Australia itself (sub. 21, p. 13) noted:

> RISs are more likely to be useful if RIS principles are injected early in the policy process, rather than as a screening process.

Table 6.1 **Coverage of EIA and RIS**

Instrument	*Activities covered*	*Activities not likely to be covered*
EIA	Activities with significant environmental impacts.	Commonwealth actions with economic, environmental and social impacts but where environmental impacts are not considered significant.
RIS	Regulations which directly, or indirectly, significantly affect business or competition.	Any government decision which does not involve regulation, or if regulation is involved, does not affect business or competition (such as some social policies).

With respect to environmental matters, objectives under the *Environment Protection (Impact of Proposals) Act 1974* seek to ensure, to the greatest extent that is practicable, that matters affecting the environment to a significant extent are fully examined and taken into account in relation to Commonwealth actions and decisions (s. 5(1)). As noted in chapter 4, Commonwealth action ministers must consider the results of assessments such as environmental impact assessments or public environment reports and/or any recommendations made by the Minister for the Environment and Heritage (EA, sub. DR68).

However, EIA are only required for activities which have 'significant' environmental effects, and not for many other proposals or activities which may still affect ESD. This limitation with the formal EIA process was noted by Harding (1998, p. 141):

> Some projects or activities which do not legally require the preparation of an EIS [environmental impact statement] may be just as detrimental to the environment as those that do.

The short time periods involved for understanding problems, collecting data and considering impacts has also been cited as a problem with respect to the development of EIA — particularly where environmental impacts do not appear for some time and where it can be difficult to distinguish between the impact of proposals and normal cycles in the environment (Harding 1998).

Another limitation is the project focus of EIA. In considering particular projects or policies in isolation, the cumulative or synergistic effects (where two or more effects have more impact in combination than the sum of the separate effects) may not be taken into account. This was supported by a review of EIA undertaken by the Commonwealth Environment Protection Authority in 1994-95. It found that the project focus of EIA implied inadequate consideration of cumulative and regional impacts (CEPA 1994).

However, positive aspects of the EIA process were noted by the Department of Health and Aged Care (sub. 10, p. 4):

> Environmental impact assessment (EIA) has been a feature of the planning process in Australia for the last two decades and has been of benefit by allowing the prediction of potential damage to the environment (eg to the physical environment, the biological environment, the land use and transport systems, noise levels and health levels) by a proposed development.

In contrast, the National Public Health Partnership Group (1998, p. 39) argued that conventional EIA are not broad enough because they do not take account of factors such as:

> ... social structure and cohesion, eduction, employment, community structure and infrastructure, recreation opportunities, and spiritual factors ...

As a means of overcoming some of these perceived limitations of EIA, the Department of Health and Aged Care (sub. 10, p. 5) submitted that health impact assessments should be considered as a component of EIA. (Health Impact Assessments are currently in use in Tasmania):

> In order to achieve the goals of ESD it is important that health impact assessment (HIA) be used to provide a better appreciation of the human costs and benefits, which should lend both accounting and political power to the EIA process ... The incorporation of HIA in EIA would significantly enhance the validity of decision making.

Another issue concerns the focus of these formal instruments on ex ante assessment. Some participants argued that greater attention should be paid to monitoring and feedback, particularly as a means of testing predicted impacts. This point was made by the Australian Conservation Foundation in the context of the Government's proposed Environment Protection and Biodiversity Conservation Bill. The Australian Conservation Foundation (sub. 27, p. 24) linked this problem to the EIA process, arguing that current EIA are inadequate because they do not include provision for ongoing monitoring and review:

> One of the greatest failings of the current EIA process is the failure to monitor and keep matters under review. Predictions are regularly made in assessment documents about the impacts of a development. These are either quantified, with numerical values given to the impact, or expressed in unquantified terms such as "not significant".

A similar point was made by Harding (1998) in relation to projected impacts in EIA. Harding cited a study conducted in the United States which found that of impacts foreshadowed in environmental impact statements, only 30 per cent were similar to the ultimate outcomes. In an efficiency audit of Commonwealth EIA processes, the Australian National Audit Office (1992) was also concerned at the lack of monitoring as part of the EIA process.

However, including monitoring requirements as part of EIA or RIS processes would represent an expanded role for these mechanisms in that they would not only act as

an input to decision making ex ante, but also ex post as part of a monitoring and evaluation regime for a given policy proposal. Monitoring issues are discussed in detail in chapter 7.

The National Environment Protection Council is an example of an agency with its own guidelines relating to policy development. In its submission to this inquiry, Kimberly-Clark discussed an example concerning standard setting requirements under the NEPC. Kimberly-Clark submitted that these requirements (including a statement of costs and benefits) had not been followed with respect to a proposed national environment protection measure which formed part of a suite of policies related to waste management (sub. 26, p. 2).

Under its legislation, the NEPC is required to consider, among other things, 'environmental, economic and social' impacts of NEPMs. With respect to the Used Packaging Materials NEPM, the NEPC (1998, p. 5) considered that it was not feasible to undertake a conventional cost benefit analysis of the options proposed, because it represented only part of a suite of policies. The Australian Industry Group argued (sub. 12, p. 2) that this example highlights the tension inherent in dealing with multiple objectives:

> The concept of ESD encompasses environmental, economic and social components. The packaging NEPM does not reflect this approach placing undue emphasis on the social component of ESD at the expense of economic, and in our view, environmental considerations.

The Minerals Council of Australia (sub. 16, p. 2, italics in original), while supportive of NEPM objectives, was concerned about NEPM development processes:

> The Council strongly supports the goal of National Environmental Protection Measures to provide equivalent standards of environment for all Australians. However, NEPM development processes to date have not: integrated economic and environmental considerations in impact assessments ... [or] provided sufficient technical analysis to constitute a *proper examination of matters which significantly affect the environment ...*

The Commission recognises that in many cases, a comprehensive assessment and quantification of social, environmental, health, or economic impacts is a difficult proposition, due in part to information and data gaps (see chapter 7). Environmental impacts can be particularly difficult to assess due to a lack of data and information, uncertainties regarding impact, and long response time frames. The integration of all of these considerations in the context of ESD related policies amplifies many of these problems (see below).

In addition, the measurement of costs and benefits is also resource intensive. Participants were concerned that recognition be given to the costs of undertaking

impact assessment. For example, the Australian Fisheries Management Authority (sub. DR61, p. 5) submitted:

> ... formal analyses of the type proposed by the Commission are extremely complex, information demanding and resource intensive and run the risk of 'paralysing' the fisheries management process ...

However, this should not be seen as a reason for not attempting to estimate as many costs and benefits associated with a particular policy or program as is possible. A key part of the analysis is critical consideration of the problem at hand, and the 'action of analysis'. As noted by the OECD (1995, p. 11):

> ... experience makes clear that the most important contribution to quality decisions is not the precision of calculations, but the action of analysis — questioning, understanding real-world impacts, exploring assumptions.

Also, the principles endorsed by the Council of Australian Governments require standard setting bodies to undertake regulatory impact analyses (COAG 1995). Even if formal mechanisms (such as RIS) are not required under existing legislation, criteria for good practice policy development include the consideration of all costs and benefits of a particular policy or program proposal.

FINDING 6.1

Evidence gained as part of this inquiry suggests that a significant impediment to improved ESD policy making practices is a failure to undertake the action of analysis — meaning that significant potential short and long term costs and benefits are not considered. To ensure consistency with ESD principles, as part of their policy development process, Commonwealth departments and agencies should take all reasonable and practical steps to consider explicitly the short term and long term economic, environmental and social implications of their program, policy and regulatory initiatives. Standard good practice policy making principles, such as those outlined in the regulation impact statement guidelines, should be followed routinely, regardless of whether a regulation impact statement is formally required. Adherence to good practice should be demonstrable and documented.

RECOMMENDATION 6.1

Guidelines of existing policy development and evaluation mechanisms (such as regulation impact statement guidelines and environmental impact assessment guidelines) should include specific reference to assessing the likely social, economic and environmental costs and benefits of proposals, in both the short term and long term.

Integrating short term and long term economic, environmental and social issues

The extent to which departments and agencies follow good practice policy making processes can provide an indication of how well ESD principles are being taken into account. However, even when such processes are followed, intervention failure (discussed in chapter 2) can explain why departments and agencies may still fail to take account of all ESD related issues when making decisions. For example, one potential policy impact may be weighted higher than the others due to difficulties in identification or assessment (and ultimately measurement). This might occur in situations where visible short term economic benefits are recognised, but social or environmental costs are not because they are hidden and/or do not occur until well into the future.

In addition, in some areas formal requirements exist which require policy makers to focus primarily on one aspect of policy. Similarly, the traditional portfolio and departmental structure of government has meant that departments become advocates for particular types of policies. However, the likelihood of making fully informed decisions and hence delivering integrated (or ESD consistent) outcomes can generally be improved if departments and agencies comprehensively analyse all impacts (economic, environmental and social) of their policy proposals. In a sense such an approach involves internalising the various tradeoffs associated with particular policy proposals. This approach has at least two clear advantages. First, if there is a recognition that there are additional positive economic, environmental or social consequences of adopting a certain policy proposal, it could help build extra support for that particular policy proposal. Second, recognition of any negative economic, social or environmental consequences of a policy proposal at an early stage, and taking measures to address such consequences, could prevent any adverse implications of adopting that particular policy proposal.

A focus on one set of impacts can have negative side effects on others. This point was made by de Graaf et al. (1996, p. 206):

> Any activity, whether aimed at social, economic, cultural, or ecological goals, can have negative side effects and, at the same time, side-effects can be social, economic, cultural, or ecological problems.

The implications of this for policy makers is less clear. The World Bank has found that even where particular policy options result in adverse economic, environmental and social effects, the remedy may not require the reversal of the original policy measure, but rather the implementation of additional complementary measures to address the unintended adverse consequences. It is also the case though, that the side effects of policies aimed at one objective can be positive, and provided these

consequences are recognised, this can itself build additional support for such policies (World Bank 1995).

These considerations highlight a tension inherent in all policy making (but of greater significance with respect to ESD) — meeting multiple objectives. It is a point noted by CSIRO (sub. 17, p. 2):

> A major demand ... is that social, economic and ecological factors be harmonised for solutions that meet multiple objectives and can be sustained over a long period.

As highlighted in chapter 4, this can be illustrated with reference to areas with either economic, environmental or social policy focus. It was a point noted by several participants. For example:

- Decisions which focus on visible economic benefits may fail to take into account social and/or environmental considerations. One example may be in the case of a natural resource development proposal where the benefits are likely to be visible (such as jobs), whereas the costs may not be visible and may only be noticed in the long term (such as degradation of a particular natural resource).
- Decisions which focus on social welfare concerns may fail to take into account economic and/or environmental considerations. For example, a government policy designed to maintain jobs (such as government assistance to a particular industry or group) may not take account of the economic cost to the whole community of the assistance. In this example, the benefit is again visible and identifiable, but the costs are dispersed.
- Decisions designed to implement a particular environmental policy may fail to take account of the social and/or economic implications of the policy. For example, failing to proceed with a development project may have an identifiable environmental outcome, but this may be at the expense of higher living standards in the future which potentially could have been generated through economic benefits.

These tensions exist in many areas of government policy and decision making. Similarly, there are other areas of government policy where information needs are great and decisions must be made in the presence of scientific uncertainty. Information and data issues relating to ESD are discussed further in chapter 7.

Existing policy making mechanisms do not provide straight forward guidance on how these concerns are to be reconciled. Similarly, the National Strategy for Ecologically Sustainable Development provides limited guidance on how policy makers are to integrate economic, environmental and social considerations.

These concerns have lead to criticism from some quarters of the way in which ESD has been managed in Australia. For example, the Environmental Research and Information Consortium Pty Ltd (sub. 18, p. 1) argued:

> There is a Commonwealth (and State) culture in departments and agencies driven by a focus on ESD where there is little context or interest in the imperatives of economic development.

Similarly, the National Association of Forest Industries Ltd (sub. 4, p. 1, italics in original) said:

> ... the environment portfolio seems to have very little interest in the *development* component of ESD.

The Australian Seafood Industry Council (sub. 8, p. 3) indicated:

> With the Federal Government pushing forward with a major MPA [Marine Protected Areas] Strategy, it is disturbing that a firm commitment to conduct economic and social impact studies as part of the process has yet to be made, let alone a commitment to structural adjustment packages to affected industry and community parties.

Finally, the Hawkesbury-Nepean Catchment Management Trust (sub. 23, p. 1) stated:

> To continue to treat ESD and its implementation as principally environmental issues is at odds with the concept of ESD as it fails to recognise the need to integrate environmental, social and economic components. Implementation of ESD must use integrating processes aimed at integrated outcomes where all three sectors are considered in relation to each other.

In some areas, legislation directs departments or agencies to give greater weight to a particular consideration in the formulation and development of policy. For example, the Australian New Zealand Food Authority is required, by legislation, to give primary emphasis to human health and safety above other objectives specified in its legislation which include economic efficiency, consumer protection, and international competitiveness.

The Department of Agriculture, Fisheries and Forestry noted that implementation of ESD can involve difficult trade-offs between short term and long term economic, social and environmental objectives, and that the complexity associated with dealing with these issues varied significantly between departments and agencies (sub. DR78). Such integration in the face of uncertainty, scarcity and (sometimes) irreversibility represents complex problems for policy makers. As discussed in the previous section, transparency of the decision making process, including clear statements of objectives, consideration of alternatives and wide consultation — good practice policy making — will assist decision making under these conditions.

Other forms of impact assessment, such as health impact assessments and social impact assessments may also assist in making underlying assumptions and conflicts explicit. Models of social assessment, for example, emphasise a number of steps including the identification of all potentially affected groups and individuals, and an analysis of who will gain and lose. In Australia, as part of the regional forest agreement process, social impact assessment frameworks have been applied in several cases as a means of establishing the links between commercial resource use and impacts at the community level (Coakes 1998).

FINDING 6.2

Where appropriate, the use of regulation impact statements and environmental impact assessments should be complemented by other tools such as social impact assessments and health impact analyses. This would assist in the identification of impacts and increase the transparency of decision making.

Incentives

The lack of incentives for the consideration of ESD principles and objectives in policy development has also been cited as a reason for departments and agencies failing to adequately take account of these issues. Environment Australia (sub. 21, p. 9) argued that incentives are required to persuade departments to give appropriate weight to the environmental implications of their actions, but that:

> It is easier to apply performance incentives to departmental operations (matters such as building design, resource use and purchasing) than to the processes and outcomes of decisions.

The relationship between policy design and accountability is an important aspect affecting incentives for consideration of ESD objectives in policy making. Poorly specified program objectives and outcomes can obscure departmental or agency accountability and, therefore, ultimately incentives to ensure policies are consistent with ESD objectives.

This issue is also related to good practice policy making. The Australian National Audit Office (1997, p. 24) noted:

> Better practice within the Australian Public Service indicates that objectives should be concise, realistic, outcomes-oriented statements of what the program, sub-program or other element of the program structure is intended to achieve.

An important aspect of this is performance monitoring against objectives. With respect to programs administered by the then Department of Primary Industries and Energy and by Environment Australia, the Audit Office (1997, p. 24) found:

> ... program objectives are broad and difficult to measure ... There were few cases found where objectives were concise, realistic and measurable outcomes-oriented statements of what the program aimed to achieve.

Other mechanisms have the potential to improve incentives for better policy design by clarifying accountability, and explicitly requiring the measurement of performance against objectives. Elsewhere in government (both in Australia and overseas), approaches for achieving specified outcomes in policy have been tried — such as output based management (OBM). The primary purpose of OBM is to strengthen the clarity and accountability of both governments and their departments and agencies in providing goods and services to the community.

OBM focuses on:

- identification and specification of outcomes;
- identification, specification, measurement and pricing (full costing) of outputs;
- linkages between outcomes desired and outputs; and
- the purchase of only those outputs necessary to achieve government's desired outcomes, from the most cost efficient and effective producers (Western Australia Treasury Department 1996).

OBM was identified by the Department of Transport and Regional Services (sub. 36, p. 11) as being potentially useful in this area:

> In relation to increasing the focus on outcomes and outputs, there is a clear opportunity to use the Government's output-based management framework to provide an integrated approach to improving the focus on ESD (through planning, monitoring and evaluation) ...

In the context of financial management, the Government has committed itself to the introduction of an accrual based management framework focussed on outputs and outcomes.

A key element in the OBM process is performance measurement, which assists in assessing whether agreed outputs are being delivered and desired outcomes achieved. Performance monitoring regimes which support an assessment of outcomes against program or policy objectives would also be required for effective ESD implementation. Monitoring and feedback issues are discussed further in the next chapter.

FINDING 6.3

Consistent with current government policy, the principles of output based management should be used as an additional tool to assist departments and agencies develop, monitor and coordinate policies designed to achieve ESD objectives.

7 Improving coordination, monitoring and feedback

The previous chapter examined the issues which have impeded ESD implementation, particularly a failure to undertake 'good practice' policy making, and discussed ways of making improvements to its adoption. The ability of departments and agencies to apply good practice policy making also relies on coordination amongst, and within, different levels of government; analytical and policy formulation skills; and accurate and relevant information.

This chapter focuses on how coordination and data collection, monitoring and feedback might be improved to better facilitate implementation of ESD.

7.1 Improving coordination

Effective coordination within, and between, governments and stakeholders has been identified throughout this report as important for the successful implementation of ESD. The cross sectoral nature of integrating short term and long term economic, environmental and social issues; the multiple uses of natural resources; the division of responsibilities among various levels of government; and the judgements required for decision making mean that effective coordination across interested parties is critical to good policy outcomes. Coordination in this context is about the exchange of information and experience, not centralised control. Without effective coordination a number of difficulties can arise. Relevant expertise and viewpoints may not be appropriately integrated into decision making, problems may not be well defined, and priorities may not be well developed.

The task of coordinating is significant. It involves coordination within, and between, the different levels of government — Commonwealth, State and Local — as well as outside government, involving groups such as community organisations, unions, businesses, farmers, the scientific community and affected individuals.

Governments, in particular the Commonwealth, have important leadership roles in coordinating ESD policies. Participants in this inquiry were concerned that currently governments are failing to coordinate their ESD activities, with negative consequences. For example, the Australian Conservation Foundation said:

> … governments in Australia have failed to integrate environmental and economic planning. The pursuit of ecologically sustainable development requires coordination across Commonwealth departments and a centralised point of access for communication with and input from, the states. This coordination is absent at present, both within and between governments. (sub. 27, p. 64)

Similarly, the Ministry of Premier and Cabinet in Western Australia submitted:

> Currently, there is no effective Commonwealth/State co-ordination mechanism for ESD. (sub. 20, p. 1)

In a similar vein, the Deputy Premier and Minister for Primary Industries, Natural Resources and Regional Development in South Australia (sub. 41, p. 5) submitted:

> ... there is a feeling that the resources available to coordinating bodies limit their effectiveness and that the political framework is not adequately supportive of decision making and implementation of policy.

As discussed in chapter 6, consultation and coordination are important elements of the policy development process. Failure to consult can have a negative impact on the quality of decisions. The Commonwealth Department of Transport and Regional Services (sub. 36, attachment C, p. 1) argued that inadequate consultation with local government had contributed to poor decision making:

> … because of the involvement of Local Government (LG) in day to day decisions on the environment, it is essential that LG is included in policy development from the outset. In the past coordination with LG has been inadequate resulting in poor decisions being made at the implementation level which usually means at the LG level.

Poor coordination may also result in government activities being duplicated or incomplete in their coverage, and information collection and research may be poorly disseminated, duplicated or not undertaken at all.

Assessing coordination

As described in chapter 3, several arrangements have been designed to facilitate coordination between governments, such as the Intergovernmental Agreement on the Environment. There are also examples initiated by individual departments and agencies. However, the effectiveness of these initiatives has been mixed.

Coordination problems, both in terms of policy development and implementation, were raised frequently by participants in this inquiry. The Australian Industry Group (sub. 12, p. 2) stated:

> One of the key areas of concern to the Australian Industry Group with respect to the implementation of ecologically sustainable development (ESD) is the range of Government Departments which have active ESD policies and the apparent lack of

> coordination between these entities and the lack of a clear set of priorities among the various programs and policies.

The Australian Industry Group (sub. 12, p. 2) also highlighted the issue of coordination between different levels of government:

> There is also a lack of coordination between the Commonwealth and other levels of Government. This is of particular concern as a large proportion of environmental regulation which directly impacts on business is implemented at the State and local Government levels.

The Minerals Council of Australia (sub. 16, p. 4) emphasised the need for better coordination across government departments to ensure improved decision making:

> The implementation of ESD needs to be undertaken on a whole of government basis to ensure that the full breadth of portfolios with a responsibility for ESD issues have a role in the decision making process. Co-ordination of ESD issues across governments needs to be improved to maximise efficiency and to ensure that specific portfolios with specific responsibilities for ESD have the appropriate influence on decision making.

Within government, some of these limitations were also recognised. For example, the Australian and New Zealand Minerals and Energy Council (ANZMEC) commented that:

> … there is inadequate communication between ANZMEC and ANZECC [Australiana and New Zealand Environment and Conservation Council] on some matters and between environment and resource portfolios at both Commonwealth and State levels. ANZMEC has made several submissions in recent years to at least 14 different Commonwealth policy initiatives which did not receive any response from environmental portfolios which suggests that ANZMEC/ANZECC consultation is long overdue. (sub. 11, p. 3–4)

However, ANZMEC (sub. 11, p. 4) also noted a number of mechanisms that could enhance intergovernmental coordination, including:

> ... development of links with other Ministerial Councils. This process has commenced between ANZMEC and ANZECC through a commencement of joint meetings and gaining input on discussion papers.

The Commonwealth's consultation efforts were compared unfavourably to those of the States, with ANZMEC (sub. 11, p. 5) arguing that:

> The level of consultation across Commonwealth departments does not appear to be as well developed as it is for the States.

Several participants specifically identified the consultation processes adopted by the National Environment Protection Council as having problems, particularly regarding the time frames for responses to National Environment Protection Measures (NEPMs). For example, ANZMEC (sub. 11, p. 3) stated:

> … the National Environment Protection Council sets unrealistically short time frames for comment on the National Environmental Protection Measures.

The WA Ministry of the Premier and Cabinet (sub. 20, p. 2) made similar remarks '... the National Environmental Protection Council sets unrealistic time frames for comments on National Environment Protection Measures'.

However, in response to some of these criticisms, the National Environment Protection Council Service Corporation (the secretariat to the Council) noted:

> The NEPC is a young organisation ... NEPM development processes were being established simultaneously with the development of the NEPMs themselves, when NEPC was under considerable time pressure to produce outputs (sub. DR71, p. 2).

The NEPC Service Corporation also noted that, following a review of the NEPM development process, improvements have been made.

Other participants argued that communication at ministerial council level was satisfactory. Environment Australia submitted that the situation had improved in recent times as a result of a series of reforms announced by Australian and New Zealand Environment and Conservation Council (ANZECC). ANZECC ministers have agreed to promote more effective coordination by, among other things, exchanging agendas and relevant background papers, and seeking cross representation on appropriate existing advisory groups. However, Environment Australia (sub. DR68, p. 8) also noted that:

> While in-principle agreement was obtained to the actions proposed by ANZECC, some [ministerial council] secretariats saw limitations on their capacity to cooperate arising from confidentiality restrictions on the release of forward agendas and associated papers.

The Department of Agriculture, Fisheries and Forestry (sub. DR78, p. 3) also felt that communication between ministerial councils was already occurring :

> Ministerial Councils exchange agendas and records of meetings and there is cross-representation on committees/working groups. Many issues, particularly ESD related issues, have been and continue to be considered jointly by Ministerial Councils ...

Similarly, regarding communication between ministerial councils, ANZMEC (sub. DR76, p. 1) said 'We note that work has commenced in this direction'.

However, ANZMEC (sub. DR76, p. 1) also said:

> [since the workshop convened by ANZECC] the Standing Committee of Officials for ANZMEC has agreed to circulate agendas to other Ministerial Councils (including ANZECC) prior to its meetings, to ensure that they are aware of the issues being addressed by ANZMEC. We await a similar decision from other councils.

The NEPC Service Corporation (sub. DR71, p. 4) highlighted the links that exist between the NEPC and other ministerial councils, in particular:

> There are clear links between the National Environment Protection Council and the Australian and New Zealand Environment and Conservation Council ... Apart from the New Zealand minister, there is currently 100% overlap in membership between NEPC and ANZECC.

And further (sub. DR71, p. 4):

> NEPC has a Memorandum of Understanding with the National Health and Medical Research Council (NHMRC) ... [and] with the National Road Transport Commission.

Some participants also observed that coordination (with respect to particular problems) is sometimes driven by a response to crisis and therefore can suffer from a lack of overall strategy. For example, Environment Australia (sub. 21, p. 6) provided a list of circumstances when effective cooperation has been achieved, one of which included '… a sense of crisis with a real threat to community well being if no action was taken'.

There was also a concern that consultation occurs too late in the decision making process. For example, the Minerals Council of Australia (sub. 16, p. 3) said 'Too often consultation occurs too late in the process to allow issues raised by stakeholders to be incorporated in the policy processes.'

Some recent initiatives in specific areas have sought to ensure coordination between stakeholders. In several of the case study areas examined in appendix D, coordination and consultation structures and mechanisms are an important part of the policy development processes in place. For example:

- regional forest agreements are developed following formalised procedures which involve multiple departments of both Commonwealth and State Governments, and consultation with local stakeholders.
- The Murray-Darling Basin Ministerial Council comprises representatives from all relevant jurisdictions who reflect different portfolios — land, water and the environment. Mechanisms are designed to involve stakeholders in the management of the basin. These mechanisms provide varying levels of involvement for stakeholders — from keeping them informed of progress to allowing them to be more directly involved in decision making (see appendix D).

Effective coordination and stakeholder input

As noted in chapter 6, good practice policy making includes an emphasis on coordination and consultation. Such processes are effective when they meet the

objectives of integrating relevant viewpoints and information, and avoid unnecessary gaps and duplication.

Departments and agencies can benefit from incorporating stakeholder input into decision making, including at the implementation and monitoring stages. There are a number of approaches for doing so. However, as discussed in chapter 5, three broad categories reflecting various degrees of involvement may be identified:

- informing stakeholders — information is readily available to stakeholders with the primary intention of informing them of policy developments, using such means as circulars, mail outs and general advertising;
- consulting with stakeholders — forums are established for stakeholders to provide opinions and responses, including inquiries, meetings and surveys; and
- participation by stakeholders — stakeholders are actively involved in decision making processes, in areas such as identifying strategies and implementing them, through means such as workshops, steering committees and advisory panels.

Although consultation has often been considered the main mechanism for incorporating stakeholder input, some participants argued that it alone can be inadequate and that participation and collaboration might be more appropriate. For example, the Department of Health and Aged Care (sub. 10, p. 2) said:

> In order to be successful, ESD must have health involved early and collaboratively in the development of proposals, policies and interventions. All too often health is seen as just one of the stakeholders and is allowed only a limited role through consultation.

In discussing the need for improved coordination, the department (sub. 10, p. 1) also stressed that coordination can often require a number of approaches:

> A new and actively collaborative approach is needed to improve our environment and health capacity. A national environmental health strategy is one step in this process … However, this is only one step and a raft of approaches to increasing the collaborative efforts between health and environment are needed.

The case studies provide a number of examples of consultative mechanisms (see appendix D). In Commonwealth fisheries management, for example, consultative committees are established for each major fishery. These committees play an advisory role and are the main point of contact with each fishery for the Australian Fisheries Management Authority. In another example, regional forest agreements are developed by governments following consultation and negotiation with local stakeholders and other interested parties.

Examples exist also in other areas — such as the water reform framework endorsed by the Council of Australian Governments. In implementing this initiative, State

Governments have sought to involve the public and consult widely. The Department of Agriculture, Fisheries and Forestry (sub. 38, part B2, p. 1) submitted:

> In implementing [COAG water reforms] individual jurisdictions have undertaken significant public consultation and participation. For example, the NSW Government has established River Management Committees throughout the State comprised of community representatives ...

Two issues of particular significance in relation to effective stakeholder input (and coordination more generally) are those of developing partnerships with affected parties and promoting public participation more generally. In addition, coordination and consultation activities are not without cost, hence establishing the appropriate level of coordination and consultation is also an important consideration.

Partnerships involving affected parties

Successful models of ESD implementation have often included the establishment of formal partnerships. Partnerships can play an important role in formalising coordination efforts and creating effective channels of communication, not only for information to be exchanged but for ownership and acceptance of subsequent decisions. Examples of such partnerships include the Great Barrier Reef Marine Park Authority and arrangements to manage the Murray-Darling Basin. These partnerships have sought to establish lines of authority and communication, and to provide a framework to deal with issues and concerns. For example, the Natural Resource Management Strategy for the Murray-Darling Basin seeks to establish a framework for cooperation between Federal and State Governments, and other stakeholders including farmers and local governments to address important environmental issues in the basin (see appendix D).

Chapter 5 outlined some key issues associated with incorporating the input of various stakeholders and other interested parties in government decision making.

Other examples of partnership arrangements include the development of memoranda of understanding between key stakeholders. These memoranda can clarify respective roles and responsibilities and mechanisms for coordinating policy development, implementation and monitoring. The Department of Defence has established several of these as part of its environmental strategy (see appendix D).

Partnership arrangements need not be limited to government departments and agencies. Partnerships can also be developed between non-government groups, such as community groups. Such partnerships may aim to foster a greater understanding of relevant issues and viewpoints, and engender local responses to ESD related issues without direct government involvement.

Successful partnerships tend to have a number of common characteristics, which are consistent with the themes of good practice policy making. These include:

- a well defined management strategy;
- clear cut objectives;
- rolling plans which are set up for long time periods;
- an overriding concept of 'relationship' between the stakeholders, with equal weight accorded to each partner in the dialogue and decision making process;
- consensus decision making (with provision for an independent arbiter if needed);
- support from an independent office which provides technical advice (for example, the Murray-Darling Basin Commission);
- provision for assessing progress over time through audits or reviews; and
- use of performance targets and indicators.

Public participation

Public participation in explaining policy options, and in implementing and monitoring them, can assist effective coordination by bringing the public closer to the policy making process and gaining their active involvement.

This type of public involvement is generally best initiated as early as possible in the decision making process. As stated earlier, its form can range from public meetings and workshops to disseminate information to mechanisms which involve stakeholders in the decision making process.

There can be clear benefits from involving the public in the policy making process, particularly when complex economic, environmental and social issues are being addressed (box 7.1). Public participation can help policy makers obtain information as well as an appreciation of community expectations. Public participation (even in the form of consultation) is also more likely to result in greater acceptance of policy decisions and greater cooperation in implementation and monitoring:

> Public participation is the only way to go. There are so many skills in the public that do not exist in Government Departments or in the private company that is proposing a development … Public participation has to be an all pervasive thing, from the grass roots of our community structures, right through the whole of the planning and environmental legislation. (Dunphy, quoted in Harding 1998, p. 108)

Moreover, Dovers (1997, p. 86) has said '… the more inclusive the policy process, the wider the skills, insights, experiences and body of information brought to bear [on policy making]'.

Box 7.1 **Benefits of public participation in policy making**

Benefits of public participation include:

- promoting a better understanding of a project, its objectives and likely impacts;
- identifying and addressing concerns of all interested and affected parties;
- providing a means to identify and resolve issues before plans are finalised and development commences, thus avoiding community resentment and potentially costly delays;
- providing other (local and indigenous) sources of information and expertise;
- taking account of the cultural values of different groups of people;
- identifying alternatives to the plans considered for a proposal;
- identifying long term effects of a proposal which may have been overlooked by the proponent;
- focusing planning on issues of concern;
- empowering local communities by giving them some control over decisions that affect their lives — people who help prepare plans tend to support them;
- encouraging transparency and trust amongst stakeholders which promotes cooperation and partnership as suspicion is broken down;
- increasing the chances that the final decision will be acceptable to the general public (that is, reducing opposition);
- improving the credibility and accountability of proposals and decision makers;
- improving the quality of decision making as it ensures that final decisions have legitimacy and validity amongst prominent participants; and
- the public can serve as a 'watchdog' — through their close association with a local area or activity, members of the public may observe when detrimental activities are occurring and provide feedback to decision makers.

Source: Harding (1998).

The appropriate level of coordination

As well as providing benefits, coordination entails some costs. The most obvious of these are the resource costs of coordination, both the financial and opportunity costs of all those involved in the process. There may also be costs associated with delaying decision making while coordination processes are undertaken. The key requirement is to balance these costs and benefits and make judgements as to the approaches which are most appropriate in the circumstances.

It should also be noted that coordination does not imply necessarily that the same policy instruments should be applied for the same or similar problems regardless of particular circumstances. It may be appropriate to address similar problems in different ways for reasons related to the surrounding environment or other contextual factors. The use of a range of policy instruments may provide an opportunity for the sharing of experiences and information.

FINDING 7.1

Good practice principles facilitating effective coordination and stakeholder input should be followed routinely as part of the decision making process for policies, programs and regulations likely to have significant ESD impacts. These principles include:

- *comprehensive identification of stakeholders;*
- *opportunity for input;*
- *opportunity for negotiation;*
- *feedback to participants on decisions taken;*
- *access to information; and*
- *institutionalised processes.*

Other ways to improve coordination

Apart from improving the processes departments and agencies adopt to gain input from relevant stakeholders, participants proposed several ideas designed to improve coordination.

Several participants argued for some form of a central body with responsibility for ESD. For example, the WA Ministry of Premier and Cabinet (sub. 20, p. 2) argued:

> There is clearly a need to establish an inter governmental cross sectoral body to coordinate implementation of ESD. National coordination for the implementation of ESD used to be through the Inter governmental Committee on Ecological Sustainable Development (ICESD) but since its demise no single organisational structure nationally has the responsibility to coordinate and report on the implementation of ESD or provide cross sectorial [sic] views and a whole of government perspective.

Apart from establishing a new coordination body to undertake a lead role in coordinating ESD issues, existing bodies could be improved upon to undertake such a role. For example, the Australian Industry Group (sub. 12, p. 2) suggested:

> The Australian and New Zealand Environment and Conservation Council (ANZECC) could be used far more effectively to ensure coordination and consistency in the application of the principles of ESD.

The South Australian Deputy Premier and Minister for Primary Industries, Natural Resources and Regional Development (sub. 41, p. 5) said:

> The South Australian Government values the Ministerial Councils as playing an increasingly pivotal role in defining directions of policies affecting Australia ...

However, the Deputy Premier (sub. 41, p. 5) also noted that '... the need remains for the instruments and agencies to be better resourced and empowered'.

Clarifying and restructuring roles and responsibilities between, and across, governments is another possible reform to improve coordination. The importance of appropriately allocating roles and responsibilities was made in several submissions, including Greening Australia Ltd (sub. 6, p. 4):

> … the allocation of roles and responsibilities both between the different spheres of government and between government and ROs [regional organisations] is often unclear, leading to tension and conflict which undermine the potential for improved cooperation.

That said, the WA Ministry of Premier and Cabinet (sub. 20, p. 2) supported the existing structure of intergovernmental bodies, suggesting that it was the coordination between the bodies that needed improving:

> The current structure of inter governmental bodies is effective, but coordination between bodies could be enhanced, particularly at the Commonwealth officer support level.

Finally, improving the development of long term planning and strategies could also assist coordination, since coordination problems are in part a consequence of a lack of understanding of what departments and agencies are pursuing over time.

The five major ministerial councils relevant to this area — the Australian and New Zealand Environment and Conservation Council (ANZECC), the National Environment Protection Council (NEPC), the Agricultural and Resource Management Council of Australia and New Zealand (ARMCANZ), the Australian and New Zealand Minerals and Energy Council (ANZMEC) and the Ministerial Council on Forestry, Fisheries and Aquaculture — have a crucial responsibility in this regard. Ministerial councils are an important forum for discussion of inter-jurisdictional issues. The Commission acknowledges that recent changes have resulted, in some cases, in improved communication between councils. However, this should be commonplace for all the ministerial councils.

As noted by Department of Agriculture, Fisheries and Forestry (sub. DR78, p. 4):

> It is in the interest of all jurisdictions represented on Ministerial Councils that these bodies conduct their affairs as efficiently and effectively as possible. ... the Commonwealth is only one member of these joint State/Territory and Commonwealth

(and New Zealand) bodies but has, and will continue to play a leadership role in many areas, including ESD ...

RECOMMENDATION 7.1

The relevant ministerial councils should routinely, and as a matter of course, inform each other of ESD issues likely to have relevance and implications for other councils.

RECOMMENDATION 7.2

Recognising that all levels of Government have responsibility for ESD outcomes, Commonwealth, State and Territory governments should seek to improve the efficiency and effectiveness of the processes of these ministerial councils with respect to ESD implementation. In particular, the individual councils might ensure they have clearly specified objectives with respect to ESD implementation, and that they are meeting them.

7.2 Improving the information base

A key input to decision making is reliable information to enable both careful definition of problems that are to be addressed and to allow careful definition and assessment of the potential impacts of a particular policy proposal. This was an issue raised by a number of participants. The ABS (sub. 29, p. 1) emphasised the need for reliable information for decision making:

> The Australian Bureau of Statistics (ABS) recognises the ESD requirement for the integration of economic and environmental considerations and the consequential need for the integration of supporting information systems.

Collection, analysis and dissemination of data and information relating to performance monitoring is a critical element of good practice policy implementation, and is a part of almost any management system. It provides valuable feedback to decision makers to improve their activities and offers a means of accountability to engender improved performance. Effective monitoring activities will generally need to embrace a range of mechanisms, including performance indicators, audits, reviews and information collection systems, and be well embedded into the broader policy making system. Although the task of adopting effective monitoring systems has begun in several areas of ESD implementation, an assessment of progress so far reveals substantial scope for improvement.

The role of performance monitoring

The role and importance of performance monitoring for economic, environmental and social matters has been well documented. A formal performance monitoring system is considered essential for monitoring progress with economic reforms and for managing many aspects of social policy. For example, the Steering Committee for the Review of Commonwealth/State Service Provision (1998, p. 2) has said:

> Measuring the performance of government services is important for several reasons … assessments of whether the best services are being produced or purchased at the lowest cost, and whether those services are reaching the people who need them most, can be usefully informed by comparative performance information.

It has also been acknowledged that performance monitoring plays a critical role in the management of environmental matters. ISO 14001 notes that measuring, monitoring and evaluating are key activities of an environmental management system. As discussed in chapter 6, monitoring and feedback mechanisms are an integral part of good practice policy making.

Monitoring is important for several reasons, including that it offers governments, stakeholders and the community as a whole:

- Valuable feedback on various aspects of a policy's performance — including the success, or otherwise, of its implementation and outcomes; feedback on decision making and coordination processes and institutions; the continuing relevance of policy objectives; and the efficiency of policy implementation and ongoing activities.
- Enhanced incentives to achieve continuous improvement by encouraging agencies to develop clear and measurable objectives and by providing information on what performance is attainable.
- Public accountability for Commonwealth agencies and their staff which acts as an incentive for efficient and effective performance.

With particular reference to ESD related issues, performance monitoring regimes can also provide a means for:

- undertaking strategic whole of government reviews of ESD performance which can help identify broad policy directions at the regional and national levels; and
- increasing awareness of ESD issues which can help engender public support and participation.

Monitoring is particularly important for ESD implementation as regular feedback to decision makers can be an effective response to the uncertainties which surround ESD — both those regarding environmental impacts and those that can arise

because of complex interactions between economic, social and environmental matters. To deal with this, agencies can implement adaptive management (box 7.2). Adaptive management involves an incremental approach to implementing policy. It relies on continuous feedback of policy impacts to guide further implementation and is consistent with the precautionary principle (chapter 2).

Greening Australia (sub. 6, p. 4) supported greater reliance on adaptive management:

> Specific attention needs to be given to developing improved processes of adaptive management and ensuring people in ROs [Regional Organisations] and governments have the opportunity and the skill to learn from their experience.

The role of monitoring systems to help manage risk was highlighted in the report of the Australian National Audit Office (1996c) on environmental management of Commonwealth land:

Box 7.2 **Adaptive management**

Adaptive management refers to a management system in which monitoring activities are embraced to continually inform and adapt policies and activities. It is a system of continuous improvement where agencies accept, and expect, that policies and activities will not always operate as well as anticipated and that regular monitoring and refinement is an inherent part of the management of such polices or activities.

While adaptive management can be used in any area of management, it is particularly useful in relation to natural resources where scientific knowledge is often limited and is constantly evolving. Indeed, it can be dangerous to prescribe a rigid blueprint for the management of policies and activities where impacts are uncertain.

Noss and Cooperrider (1994, p. 300) provide an example of adaptive management:

> Assume that there was strong economic demand for salvaged timber [after a fire or insect breakout], but also a concern about the effects of such logging on the integrity of watersheds. One approach would be to simply forge ahead with massive salvage logging in many watersheds, confident there would be little risk. An alternative approach [following adaptive management] would be to conduct salvage logging in only one small watershed and monitor it carefully along with appropriate control watersheds to determine effects. If results of monitoring showed that there were no serious impacts from salvage operations, then managers could feel more secure in authorising such activities in the future. On the other hand, if damage was detected, only a small area would have been affected rather than entire watersheds. In summary, the risk to the ecosystem would have been minimised, and we would have learned from the experiment regardless of the outcome.

> MAB/MIAC [Management Advisory Board/Management Improvement Advisory Committee] also identified the monitoring and review phase as an essential and integral part of the process for managing risk. Few risks remain static monitoring risks and the effectiveness of the risk management strategies and systems that have been established is crucial to address the changing circumstances that might be involved.

This review (ANAO 1996c) also highlighted the important role played by monitoring systems, and their relationship to the overall environmental management system:

> … the measurement and monitoring of actual performance should be an integral part of the organisation's management processes.

The importance of monitoring as an element of the overall management of policy development and review was also identified in a number of submissions. For example, CSIRO (sub. 17, p. 12) considered that:

> Physical, chemical, biological or socio-economic measures which represent key elements of complex ecosystems or of environmental issues can be a powerful contributor to management processes, allowing description of environmental factors at some point, or as a trend. Better indicators for performance measurement at all levels of government and in the private sector are a continuing important need …

The current situation

The monitoring of policies, programs and agencies is perhaps the least well implemented element in the overall development and management of policies relating to ESD. In some cases there appears to be more recognition of the role of monitoring than there does implementation of it (see chapter 4). Moreover, the inadequacy of performance monitoring is generally recognised.

Gaps in monitoring and reporting

The general inadequacy of current monitoring and information collection systems was neatly summarised by the Centre for Resources and Environmental Studies (sub. 13, p. 56–57):

> There is little argument that, overall, we do not have adequate systems in place to monitor public opinion and understanding of NRM [natural resource management] issues, nor do we have anything like an adequate system of information and monitoring of environmental conditions, resource status and in many cases human interactions with these (esp. of non-traded resources and environmental assets).

Weaknesses in information collection

Another clear message from submissions to this inquiry has been the inadequacy of information, particularly environmental information, that is collected to enable performance of policies to be assessed. This point was made by the Australian Conservation Foundation (sub. 27, p. 6):

> For political or economic processes to work properly, the quantity and quality of information about the state of the environment and alternative options for the exploitation of natural resources needs to be greatly improved.

The need for improved social and economic data was also noted. For example, the Australian Seafood Industry Council (sub. 8, p. 8) stated that:

> The economic data on the seafood industry is generally poor. ABARE does an excellent job in presenting data on a range of variables but it is constrained by the quality of the data being collected at the State and Territory level.

There were also calls from some participants on the need to ensure that information that is collected is made widely available and is done so as inexpensively as possible. For example, the Environmental Research and Information Consortium Pty Ltd (sub. 18, p. 3) commented that:

> There is a tendency by some Departments and agencies (eg. ABS and AGSO) to impose significant data purchase costs and other restrictions (eg. data use licence constraints) on the use of public data. This is a major limitation to the use of public data, information and knowledge in the implementation of ESD.

Environment Australia (sub. 21, p. 10) also raised concerns about restrictions on accessibility to data:

> … access to data is often restricted either because of fears that they may be used for political purposes (eg. forests or contamination of seafood) or increasingly because of cost recovery policies. Even where data exist and are available freely it takes resources to extract them, put them into useable form, and analyse and interpret them.

The WA Ministry of Premier and Cabinet (sub. 20, p. 1) said:

> At a national level, [various] sectors (agriculture, fisheries, forestry etc) are developing measures of sustainability. These have been developed from different perspectives, starting points, using different frameworks and reporting to different Ministerial Councils. There is a lack of interaction either between sectors and/or the broader state of environment reporting.

Dovers (1999, p. 20) also identified a lack of long term research, as well as shortcomings in monitoring and access to information, as major gaps in the implementation of ESD:

> Despite the potential consolidation of existing information through new initiatives such as SoE [State of the Environment] reporting, the NL&WRA [National Land and Water Resources Audit], remote sensing and environmental modelling, and community monitoring, serious long term ecological research and monitoring is a major gap.

These comments from submissions are supported by previous assessments of the extent to which useful information is made available and is shared to assist the implementation of ESD. For example, it has been estimated that there is good or adequate knowledge to allow effective sustainable development of only 10 per cent of fisheries categorised as either 'over-fished' or 'fully fished' (Ecologically Sustainable Development Working Groups 1991a). Harding (1998, p. v) has also noted that:

> At present we are using only a fraction of the bank of environmental management "technology" that is available, principally because institutional, social and economic factors create barriers to greater usage.

The ABS (sub. 29, p. 1) submitted that, while there are data available, several factors limit its usefulness at the present time:

> … there is a considerable amount of data available but there are a number of factors affecting its ability to be compiled into an integrated information set suitable for informing sustainable development.

These factors include lack of information on data availability, data comparability, and even lack of knowledge of the existence of data:

> Access to data collected for purposes other than statistical ones are often difficult as they are not always maintained in such a way to facilitate access by other potential users. Meta data is not always available and even information on the existence of the data is not readily available. Compatibility between related data sets is often poor as the underlying classifications, concepts and methodologies are not comparable. (ABS, sub. 29, p. 1)

The collection of state of the environment data is a case in point. At the Commonwealth level, there is no formal requirement to produce a state of the environment report on a regular basis. At the State/Territory level, the requirements vary (table 7.1). Consequently, the collection of environmental data tends to be done in an ad hoc way. Environment Australia (sub. 21, p. 10) said:

> … environmental data tend to be scattered and decentralised, with every state and every agency tending to maintain its own systems for its own immediate purposes eg. fisheries, minerals, threatened species, air quality, water quality etc. There is little consistency among data to allow for aggregation into a national picture and even comparisons between states can be very difficult.

Table 7.1 **State of the environment reporting in Australia**

Jurisdiction	*Legislative requirement*	*Reporting frequency (where required)*	*Last reported*	*Next due*
Commonwealth	No		1996	2001
New South Wales	Yes	2 years	1997	1999
Victoria[a]	No			
Queensland	Yes	4 years	—	1999
South Australia	Yes	5 years (at least)	1998	2003
Western Australia	No		1998	—
Tasmania	Yes	5 years	1997	2002
Northern Territory	No		—	—
Australian Capital Territory	Yes	3 years	1997	2000

a Public Grants and Estimates Committee of Victoria is currently conducting an inquiry into environmental reporting.

Environment Australia (sub. DR68, p. 10) also emphasised the importance of regular environmental reporting:

> Regular SoE reports are an important tool for reporting on environmental trends and on sustainability. As a feedback mechanism over time, their value increases as information in trends is reported.

As a means of providing a regular assessment of environmental trends and sustainability, the Commission believes there may be merit in the production of state of the environment reports on an ongoing basis, and that this should be done for all States and Territories.

RECOMMENDATION 7.3

In recognition of the importance of establishing a consistent data series on key environmental attributes, the Commonwealth Government should commit to producing a state of the environment report on a regular basis (for example, every five years).

Through the appropriate ministerial council — such as the Australian and New Zealand Environment and Conservation Council — consideration should be given to involving the States and Territories in this activity drawing on the mechanisms already in place requiring the production of state of the environment reports in some States and Territories.

Box 7.3 **Environmental management plans**

The main purpose of an environmental management plan is to ensure that all relevant environmental requirements arising during environmental assessment are carried out and that provision is made for ongoing monitoring. In particular, it provides a framework to document the implementation and monitoring of all environmental requirements, including the establishment of baseline data, verification and corrective actions, mitigation and control measures.

The objectives of an EMP are to ensure that:

- negative impacts are eliminated, moderated or managed and that benefits are enhanced;
- necessary monitoring and reporting is conducted; and
- guidance is provided on how to best respond to the information arising from monitoring efforts.

Source: AusAID (1996).

Positive developments

Despite the shortcomings associated with monitoring and the information base discussed earlier, there are several examples where effective monitoring and information systems have been developed, and embraced, and are being further advanced.

One of these positive examples is provided by the Department of Defence (appendix D). It has adopted environmental management plans (EMPs) which generally involve monitoring and reporting, a feedback loop from monitoring to decision making, and a range of other reporting mechanisms (see box 7.3 for a general discussion on EMPs). The department has also committed itself to the development of environmental management systems to build on existing environmental management plans and ensure a global view of performance is attained. As the department (1998b, p. 6) stated:

> … both at the portfolio and program levels, management systems are to be in place, maintained and appropriately resourced, among other things, to assist in the dissemination of environmental policy guidance and procedures and undertake regular reviews — via monitoring, auditing and reporting — of Defence's performance against environmental objectives. The review will be conducted at all levels of the organisation and include establishments and operational elements. Independent auditors will conduct many of these reviews.

In recent times, the ABS has also devoted resources to the collection and collation of environmental and sustainability data and to considering sustainable development indicators. In 1995, the ABS commenced a four year program to develop a system of environmental accounts for some natural resources which will be linked to the national accounts. The proposed systems will account for the depletion of natural assets, expenditure for environmental protection and repair, and degradation of the environment. The ABS has stated that these will:

- provide estimates of environmental protection expenditures;
- develop resource, materials and wastes/emissions accounts;
- allow publication of monetary estimates of natural assets which provide economic benefits;
- link flow data from physical accounts to environmental pressure indicators; and
- assess valuation methodologies for environmental degradation (IC 1998).

With respect to sustainability indicators, the ABS is currently drafting a discussion paper which, among other things, will propose a set of indicators. The ABS intends to publish this on a regular basis. The ABS (sub. 29, p. 15) indicated that 'An exercise … could be pursued to bring into the public arena a wide range of indicators specifically related to the goals of sustainable development'.

Virtually all environmental and natural resource data are spatially referenced (location is known and can be mapped). The Commonwealth Spatial Data Committee was established in 1992 with the aim of:

- enabling the effective and efficient use and wide dissemination of spatial data through adoption of common procedures, standards and criteria; and
- avoiding duplication of effort and cost in the collection and management of spatial data.

The Commonwealth Spatial Data Committee (sub. DR60, p. 1) submitted that there are significant developments occurring in the field of spatial data collection:

> A major recent initiative of the CSDC ... is the development of the Australian Spatial Data Infrastructure (ASDI). The CSDC and the Australia New Zealand Land Information Council (ANZLIC) have been working closely together ... to provide fundamental spatial data needed to support sound decision making ...

Similarly, the Bureau of Rural Sciences (sub. DR74, p. 2–3) submitted:

> ... we believe that the present coordination mechanisms for biophysical data are working well ... a successful decentralised cooperative model has evolved through the Australian and New Zealand Land Information Council (ANZLIC) for

interjurisdictional matters and the Commonwealth Spatial Data Committee (CSDC) for intra-Commonwealth matters.

In addition to these initiatives, the National Land and Water Resources Audit is another major data-gathering program. It is designed to provide assessments of land, water and vegetation resources and to facilitate improved decision making for land and water resource management. The program is the responsibility of the Minister for Agriculture, Fisheries and Forestry. An Advisory Council is supported by a Technical Working Group, comprising representatives of Commonwealth and State agencies. Working Groups will be established on an ad hoc basis as issues arise. The intention is that activities will be undertaken in cooperation with the natural resource and data management agencies of the Commonwealth, States and Territories.

Regarding the National Land and Water Resources Audit, Environment Australia (sub. 21, p. 10) said:

> The Land and Water Resources Audit, in particular the current vegetation initiative being prepared by Environment Australia for the Audit, could provide a practical model for better integration …

Despite these developments, the overall picture on monitoring is poor with implementation patchy across policies and agencies. This may be due, in part, to the complexity of developing effective monitoring systems covering economic, environmental and social activities, particularly when environmental indicators are in their infancy. Even the relatively recent use of performance indicators across government more generally might explain some of the deficiencies.

Improving monitoring

Submissions to the inquiry have suggested a number of improvements to current monitoring processes.

Best practice systems

One of the recurring themes among suggestions made was the need for departments and agencies to adopt best practice in developing and implementing monitoring systems. While recognising that monitoring systems need to be tailored to particular tasks, there is a need to consider common characteristics of effective monitoring systems (box 7.4).

Box 7.4 **Key characteristics of effective monitoring systems**

The key characteristics of effective monitoring systems for ESD issues include:

- performance is measured against clearly defined objectives and outcomes in all relevant social, economic and environmental areas;
- indicators need to be measurable, representative and as cost effective and practical as possible (however, they should not only be developed for areas that are easy to measure);
- the monitoring system should be developed early in the decision making cycle and updated as appropriate in the light of experience;
- information should be shared with other agencies and stakeholders to provide an opportunity to learn from the experiences of others grappling with similar issues;
- regular reviews of the usefulness of performance information should occur;
- commitment by policy makers to the monitoring system is required to ensure its effective implementation;
- support for users of the system through provision of appropriate training;
- performance indicators should relate to outcomes and outputs as well as inputs or processes;
- the limitations of indicators should be well understood and reported;
- performance monitoring tasks should be separated from policy makers, wherever possible, to promote their use as a tool for improving accountability and incentives;
- stakeholders should be involved in both planning and conducting monitoring wherever practical;
- consideration of a complaints mechanism for stakeholders to provide feedback;
- consideration of sunset clauses in policies and programs to ensure comprehensive reviews of policy are conducted;
- monitoring of environmental issues based on ecosystems rather than geographical or sectoral boundaries;
- consideration of a full set of reporting options, including reporting in annual reports and agencies' web sites;
- participating in necessary research, and cooperating with others in these tasks;
- noting and recording useful lessons in a systematic and accessible manner; and
- institutionalisation of monitoring systems, including provision of adequate resources and support from upper management.

Source: Adapted from submissions and case studies.

Some agencies also identified that the environmental management system itself should be audited and complemented by audits of individual projects or policies. For example, AusAid (sub. 14, p. 3) commented that it has revised its environmental review process:

> An environmental audit is conducted every three years (one will be completed this financial year) and in each intervening year an evaluation of a small group of activities in an environmentally sensitive sector is undertaken.

Education and training

Submissions identified an important complement to the expansion of monitoring systems across government. This was the need to increase departments' and agencies' understanding of the role of monitoring. For example, CSIRO (sub. 17, p. 12) stated:

> Better understanding of the benefits, and shortcomings of indicators, and how to use them integrally with the management cycle, is essential.

Coordinating and expanding information collection

As discussed in chapter 5, the Commission has identified several critical issues in relation to research and information requirements. These include that:

- in some cases there is a need to identify and better utilise existing information before embarking on the costly search for additional information;
- additional information required should be carefully identified and defined, bearing in mind program needs and priorities;
- coordination and cooperation in the collection and sharing of information between agencies is critical;
- data collected should be in as standardised a form as practical to permit aggregation and comparisons (in its report on ecologically sustainable land management, the Industry Commission considered that the best way to achieve this is to assign collection to one central agency such as the ABS (IC 1998));
- data collected from one program or process should be made widely available and accessible to other agencies and stakeholders;
- wherever possible, linkages and consistency between environmental data and social or economic data should be encouraged; and
- a commitment to continued collection of the same set of data over time to monitor changes is required to derive most benefit from its collection.

RECOMMENDATION 7.4

Consistent with the principles of good practice policy making, departments and agencies should regularly, and as a matter of course, monitor the efficiency and effectiveness of their ESD related policies, programs and regulations. As such, the development of performance indicators against clearly stated objectives should occur early in the policy development phase.

In this regard the current processes and the framework of the National Land and Water Resources Audit should be used as a model. A similar framework should be developed to cover areas such as air quality, fisheries, chemicals in the environment, and marine systems. Funding arrangements should reflect the fact that these activities must occur over long timeframes.

The role of the ABS

The Commission considers that there is scope for improving the collection, collation, analysis and dissemination of data relating to ESD issues.

Several participants responded to the Commission's draft report recommendation that related to rationalisation of data collection activities, and an expanded role for the ABS. The Commonwealth Spatial Data Committee (sub. DR60, p. 3), while supportive of the need to ensure that data collection efforts are not duplicated, felt that the expertise of other agencies needed to be recognised:

> The ABS ... has an acknowledged role in the development of standard classifications for statistical reporting ... It must be acknowledged however that other Commonwealth agencies ... have expertise in practical scientific monitoring techniques.

The Business Council of Australia (sub. DR79, p. 3) considered that any change to data collection or related activities should not impose any additional reporting requirements on business:

> There are ... a plethora of micro reporting requirements and initiatives ... which companies undertake. Any classifications, measurement protocols and data collection approaches should draw on existing reporting processes without imposing additional data collection and reporting on industry.

The Department of Agriculture, Fisheries and Forestry (sub. DR78, p. 5) said:

> ... there may be a role for agencies such as the ABS in ensuring databases are compatible and other measures to facilitate information sharing. However, it is important to note that data collection should be user driven.

Environment Australia (sub. DR68, p. 9) noted that there are a number of options for the collection and analysis of environmental information:

> Broadly, they can be divided into three:
>
> - a decentralised model, with each Commonwealth agency arranging for its own collections of environmental data;
> - a centralised model where one central agency takes responsibility for the supply of environmental data to other agencies;
> - hybrid models where there is a mixture of centralisation and decentralisation.

There is likely to be a concern for ensuring that quality data are collected on the one hand and that, once collected, the data are made widely available. As noted elsewhere in this report, data collection efforts have been fragmented. Environment Australia (sub. DR68, p. 9) submitted:

> Environmental data tends to be scattered and decentralised with every State and agency maintaining systems for its own immediate purposes, such as fisheries, minerals, threatened species, air and water quality. A degree of central oversight is needed to establish strategic data collection priorities, and avoid duplication ... However, centralising environmental data management ... could endanger the quality of environmental data for decision-making.

The Commission's proposals seek to address these issues. It is envisaged that the ABS will have a role as the major coordinating point for data. Recognising that specific expertise lies elsewhere, custodian (or lead) data collection agencies (such as Environment Australia, CSIRO, the Bureau of Rural Sciences, the Australian Geological Survey Organisation, and the Australian Surveying and Land Information Group) would maintain ownership of the data and of data collection activities.

A coordinating role for the ABS is consistent with its charter. Enabling legislation requires the ABS to ensure coordination in the collection, compilation and dissemination of statistics and related information. With regard to its role, the ABS (sub. DR66, p. 2) submitted that it has particular regard to:

(i) the avoidance of duplication in the collection by official bodies of information for statistical purposes;

(ii) the attainment of compatibility between, and the integration of, statistics compiled by official bodies; and

(iii) the maximum possible utilisation, for statistical purposes, of information, and means of collection of information, available to official bodies.

The ABS (sub. DR66, p. 3) also highlighted its existing coordination role in economic and social statistics, noting that it could operate in a similar way for ESD data:

> [ABS role could be] ... 1. As a consultant, to advise on standard setting and support lead agencies developing standards, including advice on international standards.
>
> 2. Develop the standards for others to use. In particular, in fields where there is no clear lead agency or where stakeholders request ABS act as an independent agency to broker a solution between a range of stakeholders.
>
> 3. Take program responsibility for the development of the standards and the production/dissemination of public interest statistics and/or directories based on them.

RECOMMENDATION 7.5

Data collection relating to ESD issues should be rationalised to avoid duplication of effort in some areas and gaps in coverage in others.

In the areas of the environment, natural resource management and sustainable development, primary responsibility for data collection and the development of environmental and sustainability indicators should remain with the custodian or lead agencies which have relevant expertise, such as Environment Australia, CSIRO, Bureau of Rural Sciences, Australian Geological Survey Organisation, Australian Surveying and Land Information Group, and relevant State and Territory agencies.

The ABS, should work with relevant custodian or lead agencies to develop standard classifications and consistent measurement protocols for the collection of data and information relating to the environment, natural resource management and sustainable development. The collection and dissemination of these data and information should be conducted on an ongoing basis.

The ABS should also have the major coordinating role among the custodian or lead agencies involved in data collection in these areas. In addition, the ABS should have key responsibility for dissemination of data and information collected by itself and other agencies. As such, it would provide a one-stop access point for external users of such data and information.

The current work of the ABS in this area should be given higher priority which may require additional resources.

8 Improving performance measurement

Chapter 7 discussed mechanisms for improving two elements of good practice policy making namely, coordination between governments and stakeholders, and performance monitoring. This chapter discusses a comparative performance measurement framework as one means to further improve the performance monitoring aspect of ESD related policies and programs.

An important finding in this inquiry is that performance measurement with respect to ESD related activities — while not uniform across Commonwealth departments and agencies — is generally poor. There are two important implications of poor performance measurement:

- it is difficult to assess the efficiency and effectiveness of policies and programs against their objectives; and
- it is difficult to assess the relative efficiency and effectiveness of policies and programs with similar objectives.

In part, this stems from inadequacies in both the amount and quality of information collected with respect to ESD related policies and programs and, in certain cases, to a lack of clarity in the objectives of these programs. These issues have significant implications for the implementation and improvement of ESD related policies and programs.

8.1 Lessons from performance measurement in other areas

Across the whole of government, resources devoted to the collection of data and the development of performance indicators relating to government activities have increased in recent years. This reflects a desire on the part of governments to assess the performance of departments and agencies and to use this information to improve the effectiveness with which services are delivered to the community. It also allows the community to assess how well governments perform in meeting community needs in a cost effective way. Two key examples of this are projects under the auspices of the:

- Steering Committee on National Performance Monitoring of Government Trading Enterprises (SCNPMGTE) (recently disbanded) which collected data and developed indicators to enable inter- and intra-state comparisons of the performance of government trading enterprises in sectors such as electricity, water, gas and ports; and
- Steering Committee for the Review of Commonwealth/State Service Provision (SCRCSSP) which focuses on developing indicators, and providing data, for a range of social services provided by governments such as health, education and justice (box 8.1).

Both of these projects have focused on providing broadly comparable data on performance which allows governments, and the community, to assess how well departments and agencies (or government owned businesses) perform relative to each other in the provision of common services.

Both projects essentially evolved due to a lack of existing effective comparable performance data. They also both covered services, or areas, that absorb a significant level of government expenditure. For example, the services covered in the most recent SCRCSSP report (1999, p. 3) accounted for approximately $50 billion of government expenditure in 1997-98 — equivalent to around 26 per cent of government expenditure in that year and about 9 per cent of gross domestic product.

There is no systematic equivalent to the activities of either of these steering committee projects with respect to activities in core ESD policy areas — in particular areas of the natural environment and natural resource management. As concluded elsewhere in this report, a lack of performance measurement can be an impediment to improved policy making and implementation.

The Review of Commonwealth/State Service Provision project provides a useful example of data collection and performance measurement across jurisdictions. While the project currently publishes information, including performance indicators, for twelve key government services, the measurability of outputs and outcomes in these twelve areas varies significantly. In some cases identifying appropriate indicators of performance is relatively straight forward, as is the task of collecting data for measuring performance against them. For example, in the corrections area, it is relatively straight forward to measure levels of government expenditure per prisoner or prisoner escape rates.

Box 8.1 Steering Committee for the Review of Commonwealth/State Service Provision

The Review of Commonwealth/State Service Provision was a joint initiative of the Prime Minister, State Premiers and Territory Chief Ministers at the Premier's Conference of 1993.

The Review publishes performance data for a range of government funded, and largely government provided, services. One of its key tasks is to collect and publish data that will enable ongoing comparisons of the efficiency and effectiveness of Commonwealth, State and Territory Government services. Among other things, this involves the development of performance indicators for a range of government services that will allow such comparisons.

The steering committee has developed a general framework for the measurement of performance. It includes four major groups of effectiveness indicators: overall outcomes; access and equity; appropriateness; and quality. Efficiency is also measured (where possible) in terms of outputs per unit of input. Currently, data and indicators are published in twelve different service areas including education, health, housing and justice.

The Review has adopted a cooperative approach in developing indicators and in obtaining data to provide information on performance. Its structure comprises three key elements: a steering committee; a series of working groups; and an independent secretariat.

The steering committee which manages the Review comprises senior representatives of central agencies of the Commonwealth, all State and Territory Governments and Local Government. An ABS representative is also a participant. The steering committee meets approximately three times a year to discuss the future direction of the report, monitor progress and provide feedback on drafts of the report. While the steering committee makes final decisions on the report's content, it is supported by a number of working groups which provide advice.

Working groups have been established for each service area to develop and refine agreed performance indicators. There are 12 working groups. Each working group is convened by a steering committee member and includes representatives of the relevant line agency (eg. the health department) of each State/Territory and the Commonwealth. Often the working groups take advice from independent representatives of relevant statistical, research, or specialist groups or agencies.

The Productivity Commission (and formerly the Industry Commission) provides significant secretariat support to the steering committee and working groups.

Sources: SCRCSSP (1995) and (1998).

In other cases, the nature of the output means measurement is more difficult. An example is police services. Primary objectives in this area are to protect, help and reassure the community and to prevent crime. The effectiveness and efficiency with which police forces achieve these objectives are difficult to measure. For example, it is not possible to measure or account for crime that did not occur due to effective law enforcement. Despite these difficulties, performance indicators have been developed for assessing the delivery of police services and these are being continually refined.

The Commission believes there is considerable potential for the systematic collection of data and the development of indicators relevant to government activities in specific ESD related areas. Apart from being useful to individual governments, this should enable comparisons between programs with similar objectives — both within and between States.

Programs and policies directed primarily at environmental and natural resource management represent one area of ESD related activity that could be the focus of a comparative performance measurement exercise. As described in chapter 3, Governments' activities in ESD areas directed primarily at the natural environment are significant — the Commonwealth Government is committed to spending $1.25 billion between 1996-97 and 2000-01 under the Natural Heritage Trust alone. In this area of government activity, there is unlikely to be significant private sector involvement and, therefore, little private sector performance information that could be used by government to indirectly assess the performance of departments and agencies. This lack of opportunity to compare government performance indirectly against private sector activities implies a greater need for the use of performance indicators, and for a comparative performance measurement exercise, which will allow assessments of governments' performance relative to one another.

The Commission considers that a performance measurement exercise should be developed to cover ESD policies and that this exercise could initially cover the areas of environmental and natural resource management.

The Australian Conservation Foundation (sub. DR64, p. 17) commented that it:

> ... has no problem with [the recommendation for a performance measurement exercise] except in so far as it implies that the environment and natural resource management are more ESD related than other issues or areas. We believe that a vast array of policies and programs are, or should be, ESD related ...

Similarly, the Department of Premier and Cabinet, South Australia (DR80) expressed surprise that the proposed measurement exercise would focus on environmental and natural resource areas and exclude economic and social areas of policy. The Commission agrees with the view that a vast range of policies and

programs, beyond those relating primarily to environmental or natural resource management, are ESD related. The Commission's proposal to focus the exercise on these areas *initially* has been made from a practical point of view of making a start on comparative ESD performance management. In contrast to primarily social and economic policies and programs, environmental programs have received less attention to date in comparative performance measurement. Based on the experience gained, and the extent of success of the proposed performance measurement exercise, the Commission considers that the exercise could certainly be extended in future to include comparative performance assessment of a broader range of ESD related policies.

Through its experience as secretariat to both the SCRCSSP and SCNPMGTE projects, the Industry Commission has highlighted (1997a) the following four necessary steps which would need to be followed in developing performance indicators for comparative performance measurement of government programs:

- identification and clarification of a common set of objectives for similar programs across jurisdictions (while recognising that weightings given to various aspects of these objectives can differ between jurisdictions and programs);
- development of a framework for performance measurement, based on the program's objectives, that encompasses both effectiveness and efficiency indicators of performance;
- collection, analysis and publication of data on each jurisdictions' performance in relation to the indicators; and
- collection and publication of contextual information on the conditions in which the agency delivers the program — this information needs to be taken into account when interpreting and assessing reported performance.

The SCRCSSP was a joint initiative of the Prime Minister, State Premiers and Territory Chief Ministers at the Premier's Conference in 1993. The creation of a similar exercise for environmental and natural resource management activities would require a similar level of support across jurisdictions.

In its draft report for this inquiry, the Commission requested feedback from participants and members of the public on the desirability of establishing a national performance measurement exercise and sought participants' views on aspects of how the exercise should operate. In response to this request, Environment Australia submitted (sub. DR68, p. 12) that, in principle, it supported the draft recommendation to establish national performance measurement. It pointed out some of the advantages of such an exercise:

> Development of an integrated ESD performance management framework would:

- permit benchmarking;
- allow refinement of data collection methodologies;
- encourage rationalisation and coordination of existing performance measurement methodologies; and
- permit international comparisons with comprehensive Australian data.

And it also commented (sub. DR68, p. 12) that:

> The work of the Steering Committee for the Review of Commonwealth [State] Service Provision provides a good starting point in developing a framework.

The Australian Fisheries Management Authority (sub. DR61) also agreed with the Commission's draft recommendation that a performance measurement exercise should be established.

The Department of Premier and Cabinet, South Australia (sub. DR80, p. 6) commented that:

> Performance measurement is not a substitute for improved policy development processes which adequately implement ESD, however as a complement to such processes, it can serve to reinforce and inform these processes.

The Environmental Protection Agency, Queensland (sub. DR82, p. 1) emphasised the need for the exercise to coordinate well with existing mechanisms in ESD related areas:

> This [comparative performance measurement exercise] is useful but would need to be carefully negotiated to fit into systems already in place. For example, Section 4 of the Queensland *Environmental Protection Act 1994* provides that environmental protection is to be achieved through an integrated management program that is consistent with ESD. This cyclical program establishes the state of the environment, defines environmental objectives, develops and implements effective environmental strategies which are integrated into efficient resource management, evaluates the efficiency and effectiveness of those strategies, and reports publicly on the state of the environment.

The Department of Premier and Cabinet, Tasmania (sub. DR70, p. 1) considered that:

> ... it will be difficult to develop a suite of meaningful performance measures that can be usefully applied over the full range of actions used to address various resource management problems ... A national framework for performance measures against ESD objectives is therefore likely to result in generic indicators with very little real value.

The Department also pointed out (sub. DR70, pp.1–2) that the cost implications of the exercise would need to be considered and that:

> ... any new requirements placed on the State by the Commonwealth, in addition to current State measurements, would need to be funded by the Commonwealth.

The value of a performance measurement exercise is likely to be significantly reduced if jurisdictions do not participate on a voluntary basis. This is because the process of developing indicators is an iterative one which requires the support of the jurisdictions involved. Support from relevant agencies also reduces the need to double check or audit data used. In view of this, one option for initiating the performance measurement exercise is for key Commonwealth departments involved in the environmental and natural resource management area — Environment Australia, the Department of Agriculture, Fisheries and Forestry along with the Department of Prime Minister and Cabinet to jointly (in consultation with the States and Territories) establish a means to assess the involvement of State and Territories in a national performance measurement exercise.

It is important to recognise that the information compiled by a performance measurement exercise should be made as widely available as possible and should be available to all levels of government, environmental and conservation groups, industry groups, and the general public. As mentioned above, the task of developing and refining performance indicators is an iterative one which benefits from an open and transparent process. For this reason, and to ensure benefits over time, the exercise should also be ongoing and report regularly, rather than be a one-off event. This is supported by comments made in a number of submissions which referred to the need for the performance measurement exercise to be ongoing in nature. For example, the Australian Conservation Foundation (sub. DR64, p. 17) stated that 'such measures should be ongoing'. Similarly, Environment Australia (sub. DR68, p. 13) considered that 'ESD performance should be assessed on an ongoing, coordinated basis across Departments'.

Clearly, adoption of a national performance measurement exercise is not the only means for increasing the scope for jurisdictions to compare their performance to each other. For instance, Commonwealth efforts to foster cooperative approaches between a sub-set of State and Territory agencies interested in performance measurement is another means for improving comparative performance measurement. While there may be additional benefits from adoption of a national exercise, there are also likely to be additional costs. A key issue that needs to be addressed therefore is whether there are net benefits in developing a set of national performance indicators over and above those benefits that would be attainable through other, less comprehensive approaches to performance measurement. That is, achieving 'value for money' should be a key consideration in defining the scope of the performance measurement exercise. This also relates to the funding implications

of the scope of the exercise — an issue raised by the Department of Premier and Cabinet, Tasmania (see above).

The remainder of this chapter describes the four steps, outlined earlier, that should be followed when establishing any comparative performance measurement exercise. It also provides an example of a framework for performance measurement of environmental or natural resource programs. This is based on the framework used by the SCRCSSP project.

8.2 Establishing objectives and measurable outcomes

Achieving agreement, across jurisdictions, on a common set of core objectives for the program being examined is the first step for developing performance indicators. This does not imply that each jurisdiction will apply the same weighting or priority to each component of the agreed objectives. But that agreement on a common set is an essential first step for developing indicators that can be used to inform assessments of jurisdictions' relative performance.

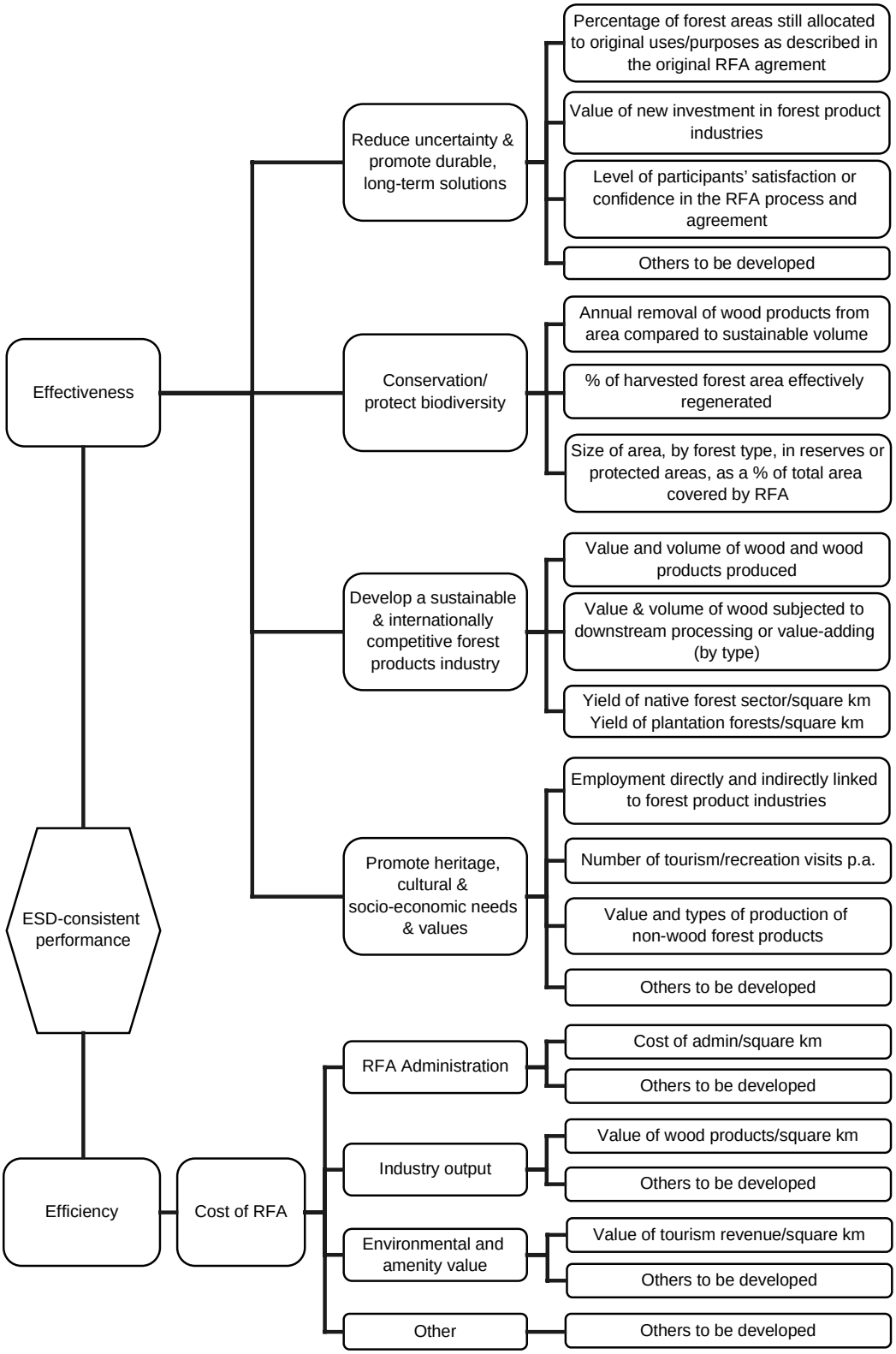
The task of developing indicators is made easier if the objectives are clearly specified and carefully defined in terms of outcomes to be achieved.

In some areas, objectives are already in place, and progress has been made on developing performance indicators. The regional forest agreement (RFA) process is one such example. RFAs have a range of objectives which may be summarised (based on the discussion in appendix D) as:

- reduce uncertainty in forest policy and thereby promote more durable, long term solutions;
- protect and conserve areas of forest so as to protect biodiversity and other environmental values;
- develop a sustainable and internationally competitive forest products industry; and
- promote heritage, cultural and socio-economic needs and values.

This statement of objectives is provided by way of example only and for the purposes of illustrating a performance measurement framework (figure 8.1). As stated earlier, agreement on a common set of objectives would need to be developed cooperatively by jurisdictions participating in the performance measurement exercise. Figure 8.1 illustrates a sample framework of indicators for monitoring the effectiveness and efficiency of the RFA process in achieving the objectives outlined above.

Figure 8.1 **Illustrative framework for performance measurement of ESD related policies — an example using the RFA process**



These indicators are preliminary, incomplete and require further refinement. Some are drawn from the internationally agreed national level Montreal Process criteria and sustainability indicators (see appendix D). Other indicators from that process are likely to be relevant and could be used in the performance measurement exercise.

8.3 Development of a framework for performance measurement

Performance measurement involves the development of indicators of effectiveness and efficiency. Effectiveness indicators are used to measure the extent to which a program or policy meets its objectives. They usually relate to aspects such as:

- overall outcomes;
- appropriateness of program delivery to client needs;
- quality, or extent to which required standards are met; and
- access and equity.

Efficiency measures relate to the objective of maximising outputs with a given set of inputs. They are usually related to some measure of cost per output.

Ideally, there should be a mixture of both short term and long term outcomes reflected in both the effectiveness and efficiency indicators. Environment Australia (sub. DR68, p. 12–13) has summarised this need:

> There is a heavy emphasis on the short and medium term measurement of government performance to provide feedback for decision makers and the electorate, and to allow policies and programs to be fine tuned. However, environment protection can only be achieved in the long term, through long term commitments and programs. The management of sustainable development performance requires a blend of short-term indicators of progress and long term measurement of outcomes. For example land management programs need to include short-term measures such as farm plans completed and fences erected, and long term measures such as areas of land suffering soil erosion or salinity.

This comment reflects a need, in the case of environmental and natural resource management programs which produce outcomes in the very long term, to include indicators that reflect various elements of the policy or program in a performance measurement exercise. Hence, indicators might relate to a mix of the inputs or the processes used to implement the program; to the program's short to medium term outputs; and to the program's (longer term) outcomes.

These policy or program elements are all interlinked. For instance, to achieve desired long term outcomes, an appropriate mix of the right inputs and outputs is required. As it is likely to be difficult, in practice, to focus and report solely on performance against outcomes in these very long term contexts, it may be more appropriate to initially focus on reporting on jurisdictions' comparative performance in providing a range of shorter term outputs and/or on the processes or inputs employed to achieve desired outcomes. However, the processes or inputs and outputs that are selected for the performance measurement exercise should be clearly linked to achieving desired long term outcomes.

Ensuring the comprehensiveness of performance indicators selected for reporting is a related issue. If all key aspects of the operation of a program are not covered, it may lead to a focus on activities that are measured to the exclusion of activities that are not (SCRCSSP 1995). Similarly, the performance management framework should include indicators that will provide information on performance as opposed to merely indicating relative levels of activity.

With respect to the RFA process, attempts have already been made to establish a set of sustainability indicators to apply to all forests. These are based on the internationally agreed national level Montreal Process criteria (see appendix D).

Indicators in other areas have also been developed, or are being developed, through a number of processes. One example is the range of performance indicators contained in the Commonwealth/State Partnership Agreements of the Natural Heritage Trust. While the Commonwealth and States and Territories have yet to refine and finalise these, they do have the potential advantage of being largely common across jurisdictions for many Natural Heritage Trust programs. The performance measurement exercise could draw on, and rationalise, indicators developed through this and other processes.

The Commission's experience as secretariat for two national performance measurement exercises has shown that it is preferable to initially develop and collect information on better and more comprehensive indicators for fewer services, or areas, than to be too ambitious with coverage (IC 1997a). Development and collection of information for robust indicators can be very costly. The benefits arising from the exercise will therefore be greatest if it focuses on those issues or areas that are most important to stakeholders and the community and for which a comparative performance measurement exercise is likely to be the most effective way to encourage improved performance.

Priorities for performance measurement can be assessed on the basis of a number of factors. One of the simplest would be to include those areas that command the highest expenditure. Another more difficult, but perhaps more useful, means to

identify priority areas is according to the likely effect of the program on the community.

A number of participants provided comments on priority areas for the performance measurement exercise. Environment Australia considered (sub. DR68, p. 13) that:

> Priority should be given to major areas of expenditure ... Further priority areas for the application of ESD performance management could include:
>
> - water policy;
> - greenhouse programs, including sustainable energy and transport;
> - oceans policy, including regional marine plans and sustainable fisheries;
> - native vegetation measurement; and
> - subsidies to natural resource use.

The Australian Conservation Foundation's view (sub. DR64, p. 17) was that 'Priority should be given to areas with greatest likely impact, which by and large, would be areas of greatest expenditure. If not impact should be the determining factor'.

Box 8.2 Desirable features of cooperative processes in performance measurement exercises

- Cooperation is promoted by keeping development of performance measures separate from any forum which has the primary role of allocating funding.
- Participation by each agency/jurisdiction is voluntary which helps foster a sense of commitment to, and ownership of, the project.
- A steering committee with influence to ensure participation by agencies or program areas allows challenges to be overcome.
- It is useful to have an independent chair to resolve differences in emphasis.
- Presenting performance indicators and contextual information in a publication that is separate from any comment, subjective analysis or judgement on relative performance reduces political concerns about the publication's release and increases the likelihood that the publication will receive the support of all jurisdictions involved.
- The process of developing agreed indicators is hastened by technical support from an organisation which the participants trust to provide rigorous advice.

Source: IC (1997a).

These are useful starting points or suggestions for priority areas for the performance measurement exercise. However final decisions about priorities should be jointly made by all levels of Government and the agencies involved in the exercise.

Performance measurement will provide the greatest benefits when indicators selected are relevant to users' needs. Similarly, there needs to be a commitment to refining the indicators over time. Cooperative processes are likely to promote both of these and the SCRCSSP exercise provides lessons in this area (box 8.2).

8.4 Contextual factors

Contextual factors become important when comparisons of performance are made across jurisdictions. Therefore, it is important for relevant factors to be identified and reported along with results against performance indicators. Relevant contextual factors would be those associated with local conditions or external constraints that affect an agency's ability to meet its objectives. These factors must be taken into account when judgements are made about a jurisdiction's performance relative to another, based on the selected performance indicators.

For example, some variation in jurisdictions' performance against the sample indicators related to RFAs (figure 8.1) could be expected for a number of reasons such as:

- differences in the nature of the forest (eg. extent of old growth or wilderness areas and vegetation and animal species represented within the forest) which may affect a jurisdiction's relative performance against the indicators relating to conservation;
- differences in the history of management and forest use in the area; and
- proximity to population centres and accessibility to the forest which may influence the number of visitors and hence affect performance against indicators relating to promotion of heritage, cultural and socio-economic factors.

8.5 Data collection

Data needs and appropriate methods of collection should be determined once a common core set of objectives have been identified, and in tandem with developing performance indicators.

Development of indicators for assessing performance across jurisdictions can be complicated and made more costly because of differences in data collected by

corresponding agencies in different jurisdictions or differences in definitions used. However, differences or imperfections in the comparability of data should not be used as the sole reason for not conducting, or for delaying, a comparative performance measurement exercise. The Industry Commission (1997a) has found that imperfect data can still be very useful if published with the appropriate caveats and, indeed, can provide an incentive to improve data collection over time.

As discussed in other chapters, data related to natural resource management is held by many diverse agencies in both the Commonwealth and State/Territory Governments. In many cases, there are variations in data collection standards and methods used and hence the compatibility of data sets.

To be cost effective and minimise duplication in data collection, a performance measurement exercise should rely, as much as possible, on readily available data that is already collected for other purposes and/or establish links with these other exercises. Sources of readily available data and advice might include: the ABS; Australian Geological Survey Organisation; Australian Surveying and Land Information Group; CSIRO; Bureau of Rural Sciences; Commonwealth Spatial Data Committee; National Land and Water Resources Audit; Environment Australia and the Department of Agriculture, Fisheries and Forestry, amongst others. In addition, State/Territory based agencies may also be custodians of the relevant and required data. The performance measurement exercise should draw on the resources and expertise, including practical scientific monitoring expertise, embodied by these other agencies and processes.

Some tasks associated with ensuring that data is compatible across jurisdictions, and for minimising the extent to which a performance measurement exercise requires collection of new data, will have been partly completed by some of these existing processes. For example, a key task of the National Land and Water Resources Audit is the collection and integration of existing data sets from Commonwealth and State/Territory natural resource management agencies, data management agencies and research institutions. As a part of this task the Audit will help identify data gaps and instances where additional information is crucial. Hence, some consolidation and identification of gaps in data sets will have been achieved through projects related to the Audit.

RECOMMENDATION 8.1

The Commonwealth Government, in cooperation with State and Territory Governments, should develop a framework to facilitate performance measurement and enable comparisons of the effectiveness and efficiency of Commonwealth, State and Territory policies and programs in ESD related areas such as the environment and natural resource management. Development of this

new process should take into account the experiences and institutional and analytical frameworks of the Steering Committee for the Review of Commonwealth/State Service Provision.

Having developed a framework, Commonwealth, State and Territory Governments should jointly determine priority areas for the performance measurement exercise.

Once priority areas are identified, performance measurement and comparison should be carried out on an ongoing basis, focussing on indicators of program efficiency (including resources used (inputs) and program or policy results (outputs)) in the short to medium term, and indicators of effectiveness — program or policy impacts (outcomes) against the longer term environmental and sustainability objectives.

9 Priorities in ESD implementation

Successive governments have endorsed the National Strategy for Ecologically Sustainable Development (NSESD) since its inception in 1992. Yet progress in effectively incorporating the guiding principles of the NSESD into departmental and agency decision making has been mixed. One reason for this could be the variable degree of commitment to ESD implementation by departments and agencies. Another could be the absence of an ongoing organisation or group to monitor and encourage implementation and to periodically report on progress. Other explanations include a lack of clarity of what ESD actually means for government policy in some instances, or an absence of clearly defined specific outcomes or outputs in others. Some of the details of the NSESD are no longer relevant or urgent while some of the immediate objectives set in 1992 have already been resolved. However, it is important to recognise that the principles and the core objectives of NSESD remain just as valid and necessary as ever. Indeed, because of opportunities missed and actions not taken since 1992, the task ahead has become more urgent and more difficult than it was then.

The terms of reference of this inquiry requires the Commission to develop priorities for further implementation of ESD. The focus of this chapter is on two priority areas for ESD implementation. The chapter raises relevant issues in developing future directions for ESD and provides some examples. It also discusses mechanisms that could be used to facilitate implementation in these areas.

9.1 Issues in developing future directions

The NSESD has provided the basis for Australian governments, farmers, industry, business and community groups to work together on sustainable development issues. Furthermore, it has provided impetus for integrating economic, environmental and social considerations in government decision making in some areas. While there is general agreement on the key principles and core objectives contained in the NSESD, discussion and analysis contained in this report show that there are, and probably always will be, differences of opinions as to what needs to be done to achieve those core objectives.

Learning from past experience

The continuing challenge is to translate the guiding principles and core objectives of the NSESD into specific actions and outcomes. Views on what specific policy and program actions should be adopted are likely to be influenced by what has been successful at promoting ESD in the recent past. Current approaches to sustainable development include:

- greater focus on sustainable management of ecosystems and biodiversity as a major goal, with implications for land, water and marine management;
- increased efforts to develop a partnership approach for managing natural resources for multiple uses (for example, in areas such as forestry and fisheries);
- further attempts to clarify roles and responsibilities, with regard to the environment, of different spheres of government (partly through the proposed Environment Protection and Biodiversity Conservation Bill);
- increased use of adaptive management approaches to natural resource management;
- moves towards outcome based management and accrual budgeting in the government sector;
- strengthened inter linkages between resource management issues and national competition policy reform issues (for example, in the Council of Australian Governments water reform process); and
- increased emphasis on accountability, efficiency and the cost effectiveness of policy.

In furthering the implementation of ESD, an important element is the involvement of stakeholders to ensure that their preferences are considered. This will have to be achieved through the wider political process (in some cases extending to all levels of government). An informed debate on the key relevant issues, with input from, and consultation with, major stakeholders and the public in general, is required for robust decisions. Previous chapters have focussed on policy making and program development issues, particularly from the perspective of the Commonwealth, which require attention to further implement the core objectives of the NSESD.

The process of promoting ESD is dynamic because environmental and sustainable development conditions change over time and new issues emerge. In some cases, future directions will require the development of policies in areas where previously there were none. In others, it may involve the modification of an existing policy or policy development framework. Greenhouse policy is an example of the latter. A new National Greenhouse Strategy was released in 1998 which replaced the 1992 National Greenhouse Response Strategy (see appendix D).

Future directions — some examples

The major process issues emerging from chapters 6, 7 and 8 are the need for better integration of economic, environmental and social considerations into policy; greater coordination among key stakeholders; improvement in the information base; more systematic development and use of performance indicators; and monitoring and evaluation of policy and program actions. These issues have considerable relevance not only to government decision making processes, but also to the activities and functions of other groups such as business, industry, farmers, conservation organisations and the general community. There is merit in clearly identifying the responsibilities and actions of all spheres of government as well as all sectors of the Australian community in addressing these ESD issues.

In developing future directions for ESD, the Commonwealth Government needs to take into account what has been achieved since 1992, including the lessons learnt during the interim period. This requires, for example, an understanding of progress since 1992 in areas identified by the State of Environment Advisory Council (SEAC 1996). It also requires an understanding of the extent of support for ESD by industry, business and community groups and their efforts in ESD implementation.

The Smart Futures Group (sub. DR62, p. 2) characterised the implementation of ESD over time in terms of several phases:

> ... documentation of phases of ESD ... could provide some benchmark about where ESD is up to now, a sense of continuous improvement over time based on performance areas.

Currently a number of Commonwealth departments and agencies are in the process of developing and implementing strategies which, when adopted, could further implement ESD. Two such strategies are in the areas of natural resource management and transport. The Department of Agriculture, Fisheries and Forestry, in conjunction with Environment Australia and other stakeholders, is considering a new, farmer-focused National Natural Resource Management Policy to come into place once the Decade of Landcare and Natural Heritage Trust programs cease operating (box 9.1).

Box 9.1 **National Natural Resource Management Policy**

The stated objective of this policy is to maintain the natural resource base and ecosystems through the development of a long term strategy for natural resource management and sustainable agriculture. Key elements of the policy are the integration of economic and social factors as well as environmental values.

The policy builds on previous programs — in particular Landcare — while recognising that significant sustainability issues (such as land degradation) remain and must be addressed.

The processes employed in the development of the policy, and those envisaged regarding implementation, include:

- clarification of the roles and responsibilities of different levels of government and of stakeholders;
- integration of issues relating to land, water and vegetation;
- integration of the policy with other national strategies, policies and programs — such as programs relating to drought, water reform, forests, rangelands, coastal zone management, agriculture, biodiversity and genetically modified organisms;
- involvement of Commonwealth, State, Territory, Local Governments and stakeholders, such as representatives from rural industry;
- greater reliance on incentives utilising tools such as benchmarking to achieve sustainable outcomes; and
- a focus on data management and access issues.

Source: Pearce (1999).

The Department of Transport and Regional Services is developing a national policy on Australian Transport and Sustainable Development (ATSD). The ATSD will aim:

> ... to provide a framework and direction to promote integrated transport solutions for goods, services and people. (resp. 23, p. 2)

Box 9.2 outlines the scope of the Australian Transport and Sustainable Development policy.

Other specific areas where there is recognition of the need for action include water management and dryland salinity — both of which represent significant issues with respect to ESD. For example, according to a recent study (Australian Academy of Technological Sciences and Engineering 1999, p. vii):

Box 9.2 **Australian Transport and Sustainable Development (ATSD)**

In countries such as Canada, the United Kingdom and the United States of America, national policies are being developed that link transport and sustainable development. In Australia, the Commonwealth Department of Transport and Regional Services is in the process of preparing a draft policy for Australian Transport and Sustainable Development.

The main objectives of the draft ATSD policy are to:

- take a strategic approach to the consideration of transport in the context of sustainable development;
- promote transport solutions that enhance economic progress, environmental conservation, equity and safety; and
- improve the efficiency and effectiveness of all transport modes.

In doing so, the policy also seeks to:

- incorporate the considerations of all levels of government, industry and the community at large;
- take a longer term view of transport issues;
- draw together economic, environmental, access and equity and safety considerations; and
- consider current as well as future needs.

Source: DoTRS (resp. 23).

> If recent trends continue, water requirements of the irrigation sector could increase by about 66% by 2020–21. On current growth rates, total national water use could be as much as 33,000 GL by 2020-21 in the absence of resource constraints. However, when water availability is considered in relation to the regional distribution of the intensive irrigation industries, it is clear this rate of growth in national water use is unsustainable.

Similarly, estimates of the costs associated with dryland salinity vary, but lost production alone has been estimated at around $130 million per year and rising. Currently, around 2.5 million hectares of land are affected, but this may increase to 15 million (PMSEIC 1998).

However, there are other areas where progress in furthering ESD implementation has been limited. TechSearch (sub. DR65, p. 1) argued that the industry portfolio could pay greater attention to ESD principles:

> The industry portfolio should play an important role in ESD. The activities of this Department impact on the environment industry — particularly in the waste and energy technology sectors.

It will not always be possible to predict where problems relating to ESD that require action are likely to occur, nor where changes in circumstances will require

modifications to existing policy settings. However, it is possible to describe the processes that should be followed in implementing new policies, or revising existing policies. As discussed elsewhere, this report has sought to set out broad principles regarding 'good practice' policy development and has also identified examples of programs exhibiting some elements of good practice in their processes. The development of a new strategic direction for further implementation of ESD requires decision makers to be cognisant of these principles. Specifically Commonwealth agencies should:

- recognise that not only governments (including State and Territory), but also business, industry, farmer groups, other stakeholders and the broader community need to be involved in the development and implementation of ESD related policies;
- adequately resource partnerships which are established to promote ESD outcomes;
- recognise the current policy context and the recent developments associated either directly or indirectly with government and other stakeholder approaches to sustainable development (see the discussion above);
- clearly define achievable ESD objectives and formulate specific proposals for action that will apply to governments, industry and the broader community in order to meet those objectives;
- establish institutional mechanisms to ensure that long term and strategic sustainable development and ESD performance are discussed and publicised, providing policy feedback; and
- provide leadership in the application of sound ESD principles.

Several participants have also identified some of these features as necessary for the development of ESD consistent policy. For example, the Deputy Premier of South Australia and Minister for Primary Industries, Natural Resources and Regional Development (sub. 41, pp. 2–3) said:

> There are opportunities and challenges for the Commonwealth to continue to show leadership by example in its policy setting and operational implementation ... Building effective partnerships is central to the implementation of ESD and means there will need to be a continuing emphasis on building partnerships.

FINDING 9.1

The development of policies and programs — such as the National Natural Resources Management Policy Statement and the Australian Transport and Sustainable Development policy — which seek to further ESD considerations by

developing specific policies should be encouraged. Other important and priority areas for the future include dryland salinity and water management more generally.

In the development of new priority areas for ESD implementation, good practice decision making processes should be followed by departments and agencies. These include considerations such as clearly defining ESD objectives, involving stakeholders; and developing appropriate institutional frameworks and mechanisms.

9.2 Facilitating the future direction of ESD

The success of the proposed ways and means for improving implementation of ESD depends on decision makers' commitment to the guiding principles and core objectives of the NSESD. A number of participants in this inquiry have argued that the ESD debate is largely rhetoric and that the Commonwealth Government needs to demonstrate its commitment to ESD through action (see chapter 4). A common theme among submissions was the need to better institutionalise ESD into the mainstream of policy development.

Until 1997, the Intergovernmental Committee for Ecologically Sustainable Development provided the institutional mechanism for reviewing progress in implementing the NSESD and for reporting to the Council of Australian Governments. According to Environment Australia (sub. 21, p. 15):

> Such [institutional] mechanisms may contribute to ESD implementation in one or more of the following ways:
>
> - engage stakeholders and gain their support;
> - improve ESD planning and coordination;
> - generate information and policy options for decision makers;
> - provide feedback on ESD performance;
> - educate the community about ESD.
>
> Such mechanisms need a clear mandate and authority in order to be effective. Authority can be achieved by the direct involvement of Ministers or clear links with the policy decision making process. Mechanisms also need to be perceived to engage key stakeholders while retaining independence ie not being dominated by any one group. Care would have to be taken that any new mechanism did not add an extra layer (and time) to decision making, or overlap with existing functions.

The NSESD itself recognises the crucial importance of continuing commitment to ESD and proposes a series of measures such as ministerial councils, roundtables and consultative committees for promoting this commitment (CoA 1992b, pp. 106–8).

However, many of these mechanisms have failed to meet expectations, some have been disbanded, a few were not tried. For example, as stated in chapter 3, the Intergovernmental Committee for Ecologically Sustainable Development was disbanded in 1997, after making just one report (in 1996) on implementation of ESD over the period 1993–1995.

Possible mechanisms for further implementation

Chapters 6, 7 and 8 described a number of ways to advance the implementation of ESD by departments and agencies. In particular they dealt with improving the application of good practice policy making, and monitoring and reviewing practices. They also described how incentive mechanisms (such as output based management) which require departments and agencies to clearly specify their objectives and proposed outputs, thus making them more accountable for their decisions and actions, could be used.

Suggestions made by participants for improving the commitment to ESD involve obliging departments and agencies to more fully consider the ESD implications of their policy proposals. Environment Australia (sub. 21) proposed three alternative mechanisms that could be used either separately or collectively to provide policy feedback and enhance support for further implementation of ESD. These included:

- consultative fora, at which key stakeholders offer views to the government;
- expert groups which provide advice to governments; and
- ESD performance assessment mechanisms.

Other specific suggestions made by Environment Australia and the Australian Conservation Foundation were:

- introducing a voluntary code of conduct for policy formulation;
- establishing a principle that public servants have a duty of care to consider ESD; and
- establishing an independent commission for sustainable development.

The choice between these suggested mechanisms is not mutually exclusive. It is possible to combine elements from several of these suggestions. The following discussion explores some salient features of each.

Consultative mechanisms

Chapters 5, 6, and 7 discussed the importance of consultation as a means of identifying and incorporating the views of stakeholders during the formulation of policy proposals. Relevant stakeholders can include the public, industry and farmer groups, government and non-government organisations. Consultation could also be used to set strategic ESD priorities of departments and agencies, such as determining long term objectives and associated sustainable development strategies.

Environment Australia (sub. 21, p. 15) identified some of the benefits of consultative mechanisms:

> Consultative mechanisms can clarify stakeholder views, and help to develop better understanding among stakeholders of differing views. They can also provide information to assist planning and coordination.

Several challenges need to be addressed in establishing membership of consultative committees. For example, decisions may need to be made about the likely tradeoff between breadth and in-depth coverage of issues that can be considered by the committee. According to Environment Australia (sub. 21, p. 15):

> Large membership and top heavy government representation limit the scope for regular meetings and can constrain agreement on new policy options or ESD performance assessment. Strong leadership would be needed to achieve results.

In fisheries management, the management advisory committee and consultative committee structure comprises members of industry and the scientific community, and may include environmental interests and other groups.

Similarly, consultative mechanisms are also proposed for the National Natural Resource Management Policy being developed by the Department of Agriculture, Fisheries and Forestry. The department is proposing a series of bilateral consultations with key stakeholders and multilateral consultation with other bodies. Similarly, the proposed national policy on Australian Transport and Sustainable Development being developed by the Department of Transport and Regional Services aims to involve extensive consultation with key stakeholders.

Expert advisory groups

Expert advisory groups (or reference groups) are another mechanism for obtaining advice on the development of strategic objectives. Such groups typically comprise a range of government, scientific and private sector representatives.

The main purpose of these groups is to provide independent advice, often technical, to policy makers. According to Environment Australia (sub. 21, p. 16):

Box 9.3 **Canadian round tables**

These forums are at the centre of Canada's consultation process and allow all stakeholders involved in specific issues to meet as equals to propose policy initiatives or directions to government. Following the Brundtland Commission's report in 1987, Canada began to convene round tables. By 1990, round tables had been established for the federal government, all provinces and territories, and for many communities. Unfortunately, broad based consultation in itself is not sufficient for effective government policy. Round tables at all levels have often been criticised for holding very lengthy discussions resulting in little concrete action.

Creation of the round tables was not mandated by the government, nor are there any fixed guidelines for their structure or authority. However, all are similar in their basic form and tasks. In 1993, the round tables endorsed a set of ten guiding principles for using the consensus process in sustainable development planning, including:

- Inclusive, not exclusive, participation — 'All parties with a significant interest in the issue should be involved in the consensus process'.
- Equal opportunity — 'All parties must have equal access to relevant information and the opportunity to participate effectively throughout the process'.
- Accountability — 'The parties are accountable both to their constituencies and to the process that they have agreed to establish'. Participants are expected to regularly consult with the groups they represent. However, there has been some criticism that the round tables are becoming an elite group.

The round tables operate through 13 separate program areas. Examples include:

- The Economic Instruments Collaborative, composed of environmental organisations and businesses, which focuses on developing economic instruments to deal with acid deposition, climate change, and ground level ozone.
- The Forest Round Table which has convened environmental groups, labor unions, industry representatives, and aboriginal groups to devise a set of 26 'common principles' and action plans for forest policy.
- Consensus Decision-Making which has developed ten common principles for decision-making through consultations among national, provincial, and territorial round tables.
- Sustainable Reporting which presented a list of proposed sustainability indicators to the Prime Minister in 1993.
- Sustainability and Prosperity which is concerned with the greening of industry and reforming harmful economic and trade policies.
- Task Force on Education which has developed a program called 'Learning for a Sustainable Future' and has collaborated with the sustainability initiative to develop a social marketing campaign.

Source: Resource Renewal Institute (1998).

> Expert advisory groups can be structured to develop information and policy options … Advisory mechanisms offer opportunities to push ESD in particular sectors or on specific cross sectoral issues but effective planning and coordination is needed to ensure policy integration.

However, as noted by Environment Australia (sub. 21, p. 16), expert advisory groups may be criticised 'as being insufficiently independent or consultative'.

A prominent overseas example of an expert advisory mechanism is the round table process used in Canada (box 9.3). At the round tables, Canadian government officials and representatives of sectoral groups meet to discuss issues regarding the environment and economy. The duties of these round tables include conducting studies, reporting on the state of the environment, and developing 'blueprints for sustainable economic development' to be integrated at provincial, national and international levels.

Performance assessment mechanisms

Another mechanism for improving the institutional framework is regular external performance monitoring and review of ESD programs. Lessons learnt from performance monitoring and review could provide valuable inputs into developing future directions for ESD implementation. A number of participants have suggested that an independent commission be used to monitor and review departments' and agencies' performance against their *long term* strategies. According to Environment Australia, an independent commissioner for sustainable development could (sub. 21, p. 16):

> … examine the longer term ESD outcomes of Commonwealth programs and processes, including accredited processes.

Some participants have argued that such a commission could take on additional functions. The Australian Conservation Foundation (sub. 27, p. 19) commenting on the proposed Environment Protection and Biodiversity Conservation Bill, said that a commission for the environment could be engaged in:

> (ii) reviewing bilateral agreements of the Commonwealth to assess their consistency with the accreditation criteria which are to be spelt out in the regulations, (iii) monitoring and reviewing State and Commonwealth compliance with bilateral agreements.

Voluntary code of conduct

Participants have suggested that departments and agencies should be subject to a voluntary code of conduct for implementing ESD.

Voluntary codes can be effective in changing the behaviour of organisations. Codes are often adopted by private companies as a precautionary measure to clarify their procedures and obligations, and to reduce the risk of environmental damage and thereby help avoid subsequent liability claims under common law.

Box 9.4 Australian Minerals Industry Code of Environmental Management

The Minerals Council of Australia launched the 'Australian Minerals Industry Code of Environmental Management' in December 1996. The object of the code is to improve the environmental management performance of minerals companies. The code is voluntary and does not set standards. It does require the commitment of signatories to continual improvement and public reporting of their implementation of the code, and of their environmental performance.

Key objectives of the code cover:

- sustainable development;
- environmentally responsible culture;
- community partnership;
- risk management;
- integrated environmental management;
- performance targets;
- continual improvement;
- rehabilitation and decommissioning; and
- reporting.

To achieve these objectives, the code provides general guidelines that signatory companies can use. Companies may also implement environmental management systems to meet parts of the code.

The code requires two forms of auditing. Code conformance auditing examines implementation of the code. It must be undertaken at least every three years by a qualified auditor from within the signatory company, or by an accredited external auditor appointed by the company. A less formal audit of the environmental management system is also employed on a more regular basis.

As at 1 November 1998, 48 mineral companies had registered with the code. This included two of Australia's largest — BHP Co. Ltd and Rio Tinto Australia.

Source: Minerals Council of Australia (1996).

Voluntary codes of conduct are also being increasingly used in a number of areas by private companies as a means of demonstrating good corporate citizenship. The recent Australian Minerals Industry Code of Environmental Management is an example of such a code (Minerals Council of Australia 1996) (box **9.5**).

A voluntary code for ESD could have a range of features, including:

- a statement of the objectives of ESD and of the code;
- the guidelines that departments and agencies should follow in order to comply with the code; and
- the key mechanism by which participating departments and agencies would be reviewed and audited for compliance with the code, and an agreement as to who would conduct such audits and reviews.

A voluntary code of ESD could be maintained by a central coordinating agency with responsibility for specifying objectives, guidelines and enforcement mechanisms. The objectives of the code could be similar to the goals and core objectives of the NSESD. While adherence to the code would be voluntary, once a signatory, departments and agencies could be subject to external review and auditing.

A voluntary code of ESD has some potential advantages. First, it is a useful way of assisting departments and agencies identify how, and where, they can improve their implementation of ESD. Implementation of ESD can be improved by encouraging departments and agencies to adopt good practice policy making and management practices, such as those identified in previous chapters. Second, in contrast to mandatory standards, a voluntary code is likely to be less costly to implement as it does not have a binding enforcement mechanism. Third, a voluntary code can be adopted by departments and agencies in a way that meets their particular circumstances and needs, and can more easily be integrated into existing practices. Fourth, voluntary codes can be adjusted fairly quickly and, therefore, remain responsive over time to the overarching goal of improving the implementation of ESD.

However, a voluntary code may not necessarily guarantee compliance with good practice policy making and management guidelines. Agencies may not comply with a code if they do not perceive any current or future benefit from doing so. Indeed, adoption of a code could become selective with only some departments and agencies — most likely those who are already committed to best practice — willing to commit to it. In fact, the failure of some Commonwealth departments and agencies to incorporate the guiding principles of the NSESD reflects its voluntary nature. The voluntary nature of the code may mean that it lacks ‘teeth’, especially in the areas of compliance and accountability, and that those most in need of adopting the guidelines could avoid doing so.

Duty of care

Other participants have suggested that Commonwealth departments and agencies should be subject to a duty of care that would oblige them to consider the consequences of their decision making. The National Farmers' Federation commented (sub. 22, p. 7).

> NFF [National Farmers' Federation] sees merit in … [the duty of care] approach as it could facilitate greater consistency and clarification of department roles and responsibilities in terms of what they must do in order to meet their duty of care in ESD.

Box 9.6 **Duty of care for the environment**

The concept of duty of care was explored by the Industry Commission (1995) in its inquiry into occupational health and safety. The Industry Commission (1998) subsequently proposed that a statutory duty of care for the environment be extended to cover all private land managers and users of natural resources.

In elaborating the duty of care for the environment, the Industry Commission (1998, pp. 134–35, 140) said that:

> The proposed duty would require everyone who influences the management of the risks to the environment to take all 'reasonable and practical' steps to prevent harm to the environment that could have been reasonably foreseeable.
>
> The duty would not be confined to landholders. It would also cover those who manage any other natural resources — such as water and vegetation — and others who indirectly influence the risks of environmental harm that resource managers confront.
>
> The Commission's proposal represents an extension and codification of the common law duty of care. The common law duty of care is concerned with minimising any harm that one person may cause another. The duty requires each person to take every practical and reasonable step to avoid causing foreseeable harm to another …
>
> The extension of the common law duty of care for the environment would make explicit that the duty not only applies to harm that might be caused to those who are living at the present, but also to those who are yet to be born. Doing so emphasises that land holders are 'stewards of the land' and that land is held in trust for subsequent generations ...
>
> The Commission proposes that the duty of care require the duty holder to take all 'reasonable and practical' steps to avoid harming the environment. The main effect of 'reasonable and practical' is that the requirements for a particular duty holder will vary with the circumstances of each case.

Source: IC (1998).

The Australian Conservation Foundation (sub. 27, p. 21) considered that the proposed Environment Protection and Biodiversity Conservation Bill should contain a duty of care provision:

> Amend the Bill to provide for a general duty of care for the environment, with subsidiary obligations to take all reasonable and practical steps to prevent harm to the

> environment when formulating policy, making decisions or taking action; to identify, assess and manage the risks of harming the environment; and to inform and consult with those at risk of foreseeable harm from an environmental hazard.

There are several examples of where duty of care provisions have been used or proposed. The Industry Commission (1995) recommended that a duty of care principle apply to the operation of occupational health and safety regulation. The Commission (1998) also recommended that a statutory duty of care be applied to land management obligations (box **9.7**). Duty of care principles are also implicit in product liability legislation (IC 1990).

Environment protection legislation in the ACT and Queensland also imposes a duty of care for the environment. Under Part III of the ACT's *Environment Protection Act 1997*:

> 22 (1) A person shall take such steps as are practicable and reasonable to prevent or minimise environmental harm or environmental nuisance caused, or likely to be caused, by an activity conducted by that person.

Similarly, section 199 of Queensland's *Land Act 1994* stipulates that lease holders of Crown land have a duty of care to that land.

And, in the Northern Territory, the *Waste Management and Pollution Control Bill 1998* contains significant duties towards environment protection.

A number of issues need to be resolved in considering the introduction of a duty of care to encourage Commonwealth departments and agencies to fully take into account the ESD implications of their policies. These include whether the duty of care should be expressed in terms of ESD outcomes or in terms of process. Environment Australia (sub. 21, p. 11) raised this issue:

> … would the duty be defined in terms of outcomes (indicators) or the quality of advice? The former approach is complicated because departments have only limited influence over the outcomes of their policies and activities, and because of gaps in information about the state of the environment and links between economic activity and the environment …

Under a duty of care for ESD, Commonwealth departments and agencies would be expected to take all reasonable and practicable steps to ensure that in preparing their policy proposals, all foreseeable and potentially significant adverse impacts on economic or social development or the environment, now or in the future, were minimised.

The terms 'reasonable', 'practicable', 'foreseeable' and 'potentially significant' are important features of the duty. They allow the strength of the obligation to vary with

the individual circumstances of departments and agencies and their proposed policies and programs.

The coverage of the duty of care would also need to be defined, both in terms of departments and agencies and their range of activities. The duty of care could cover all forms of decision making, including the ongoing management of policies, the collection, researching and reporting of ESD related data and information, and evaluating and reporting of the impacts of policies.

The effectiveness of a duty of care for ESD would depend on the enforcement and compliance mechanism used. If the duty of care for ESD were based on departmental and agency outputs then, for such a regime to be effective:

- enforcement would need to be made by designating an independent government body (such as an independent commission) to ensure that ESD considerations are adequately taken into account in policy formulations; and
- departments and agencies could be deemed to be complying with the duty of care if they adopt best practice policy making and management regimes, such as those described in chapters 6 and 7.

There are clear complementarities between the possible roles of the independent commission (described below) and the duty of care for ESD.

The duty of care approach possesses two advantages. First, a duty of care may be easily communicable and transparent to all Commonwealth departments and agencies. According to Environment Australia (sub. 21, p. 11):

> … further consideration of a duty of care for departments and agencies could be useful for a number of reasons. It would:
>
> - enable the Commonwealth to show leadership by making departments and agencies more accountable for ESD implementation;
> - encourage a general discussion and debate about the environmental responsibilities of departments and agencies;
> - lead to some clarification of the issues involved in accounting for ESD and possible approaches;
> - raise the profile of ESD in departments where it remains low.

Second, a number of Commonwealth agencies already have ESD objectives embodied in their enabling legislation and have adopted administrative procedures that are consistent with those objectives. Legislating a requirement for pursuing ESD objectives in decision making is not necessarily new for the Commonwealth. According to Dovers (1998, p. 6) there has been an increased use of statutory rights

to comment on, or object to, policies or development approvals that have been codified in planning, development and heritage since the 1970s.

That said, imposing a legally binding and enforceable duty of care on Commonwealth departments and agencies would, in a practical sense, be very difficult to achieve. The duty raises a number of complex practical problems such as: Who would be held responsible? How could action be taken against departments and agencies? What system of penalties would be used? How would influences on decision making processes outside the control of a particular agency be taken into account?

Independent commission

A number of participants suggested that an independent commission for the environment or sustainable development could be established to examine the progress of departments and agencies in meeting ESD objectives in their policy making. The Australian Conservation Foundation (sub. 27, p. 19), in commenting on the proposed Environment Protection and Biodiversity Conservation Bill, argued that:

> There is a need for an independent authority to publicly review and report on the environmental role and operations of the Commonwealth Government. We propose that the Bill provide for a Commissioner for the Environment.

The Queensland Government (sub. 3, p. 1) noted in its initial submission that it was considering establishment of a commission for sustainable development:

> … the Queensland government is currently developing proposals to establish … a Commission for Sustainable Development (CSD) … [The] CSD will function as an independent statutory authority with the capacity to investigate and report on significant issues relating to the protection and use of the environment. It is intended that … the CSD be operational in 1999.

There are a number of domestic and international examples of independent commissions for sustainable development or the environment. These are described in box **9.8**.

Box 9.9 **Examples of the independent Commission model**

Canadian Commissioner for Environment and Sustainable Development

Amendments to the Canadian Auditor General Act in 1995 created the commission, within the Office of the Auditor General. The amendments require the Commissioner to report directly to the Auditor General, and to assist the Auditor General in carrying out his duties relating to the environment and sustainable development. The Commissioner is required to:

- monitor, and report on, the extent to which departments are implementing their sustainable development strategies and meeting their sustainable development goals;
- report annually to the House of Commons on anything related to the environmental aspects of sustainable development that the Commissioner considers should be brought to its attention; and
- report annually to the House of Commons on the number, subject and status of petitions received by ministers.

New Zealand Parliamentary Commissioner for the Environment

The New Zealand Parliamentary Commissioner for the Environment was established in January 1987 under the *Environment Act 1986*. It is an independent oversight body which reviews the environmental impact of government activities at all levels. It investigates the effectiveness of public systems for resource management and environmental planning, launches inquiries into proposed activities that may cause significant environmental harm and carries out inquiries when requested by members of the House of Representatives. Criteria by which the commissioner judges potentially damaging activities are specified in the Environment Act.

ACT Commissioner for the Environment

The ACT Commissioner for the Environment was established under the *Commissioner for the Environment Act 1993*. The Commissioner is able to:

- investigate complaints regarding the management of the environment by the ACT or an ACT Government authority;
- conduct investigations at the request of the ACT Minister for Urban Services; and
- initiate investigations into a government department or agency where the actions of the department or agency would have a substantial impact on the ACT.

All inquiries undertaken by the Commissioner are submitted to the Minister to be tabled before the Legislative Assembly. The Commissioner is also responsible for submitting to the Minister a state of the environment report every three years.

Sources: Commissioner for the Environment (1998); Environment Canada (1995); OECD (1996).

The role of a commission for sustainable development is likely to differ to that of a commission for the environment. The former would be required to give consideration to a wider range of issues, including economic and social factors, not

just the environment. However, it is important to note that in the ACT the terms of reference for the Commissioner for the Environment cover social and economic issues affecting, or affected by, environmental considerations.

There are a number of possible roles for an independent commission. A commission for sustainable development could be engaged in:

- advising the Government and the public on matters relating to long term sustainable development;
- reviewing, as well as assisting and facilitating, departments and agencies to develop long term sustainable development strategies; and
- auditing and reporting on the implementation of ESD.

There are a number of advantages in establishing a commission for sustainable development or a similar office. First, the commission's ability to review or audit departmental and agency progress could result in greater promotion of ESD outcomes than would be achieved under a voluntary code of conduct.

Second, a commission may be able to provide advice on government policy and identify priorities. This could be provided through its role of assisting departments and agencies in developing and coordinating their sustainable development strategies.

Third, the commission would be able to focus on issues which transcend beyond the time frame of a normal electoral cycle. In doing so, a commission could provide a long term strategic focus on ESD issues — a lack of which has been identified in the inquiry as an impediment to ESD implementation. According to Environment Australia (sub. 21, p. 16):

> An independent Commissioner can operate outside the confines of the political cycle, and examine the longer term ESD outcomes of Commonwealth programs and processes, including accredited processes.

There is at least one disadvantage with this model. Many of the proposed functions of the commission associated with reviewing and auditing departments and agencies are already undertaken by existing bodies such as the Australian National Audit Office. As noted by Environment Australia (sub. 21, p. 16):

> There seems little point in a Commissioner restricted to a narrow role of auditing ESD performance by departments. This could (continue to) be undertaken by the Auditor General.

Non-governmental approaches

Apart from these models, which would exist entirely within the sphere of government, there are other options for remedying some of the deficiencies in ESD implementation recognised by this inquiry. These other options can be initiated outside of government. One example is establishment of a national council of sustainable development.

National councils are used extensively overseas. At the United Nations Conference on Environment and Development (UNCED) in 1992, most participating countries agreed to establish broad based national councils for sustainable development (NCSD) — comprising government, non-government organisations and business representatives. The NCSD were envisaged to oversee the drafting of national strategies, help in the implementation of Agenda 21, and subsequently report each year to the UN Commission on Sustainable Development. Over 150 such NCSD now exist, and over 100 national strategies have been adopted.

Australia's NSESD was prepared by a consultative process which had the broad support and participation envisaged by the UNCED and others. However, the working parties associated with the NSESD were disbanded following its endorsement by governments in 1992. In the absence of an NCSD, there has been no ongoing mechanism to monitor implementation of the NSESD, to assess progress or to consider revisions to, or a new, NSESD.

One contributing factor to the variable (and lower than expected) implementation of the NSESD has been the absence of a steering committee or organisation (whether government or non-government) committed to follow through on the strategy. This presents another option for improving ESD implementation in the future.

A national council for sustainable development could be established on a voluntary basis. It might be elected, appointed, or self appointed. For example, in Canada, the initial council was self selected but with a wide inclusive process for electing replacement members.

To ensure that future generations' interests are not overlooked, an important element of implementing ESD is the need to transcend departmental, sectoral and jurisdictional boundaries. A NCSD could advise governments, elicit public support for, and awareness of, ESD and promulgate a voluntary code of conduct for governments and the private sector. Indeed it could undertake many of the functions envisaged for a governmental commission for ESD.

Other mechanisms

Alternative strategies and mechanisms for further promoting ESD might also be gleaned from looking at developments in other areas. For example, a number of options designed to encourage the takeup of cleaner production methods — involving industry and government — are envisaged as part of a National Cleaner Production Strategy being developed by the Australian and New Zealand Environment and Conservation Council. Among other things, the strategy envisages an important leadership role for industry associations (working in conjunction with government) promoting schemes that encourage continuous improvement — and government being involved in the development of guidelines for public environmental reports.

In some quarters, the business community has taken a lead role in promoting the concept of 'eco-efficiency'. The World Business Council for Sustainable Development (a group of 125 international companies) has described eco-efficiency as being (WBCSD quoted in *Environmental Manager*, 1999):

> ... about making production processes more efficient and creating new and better products and services with less pollution along the entire value chain.

A key element of the eco-efficiency initiatives is partnerships between industry, government and the community, involving many sectors of the economy.

In Australia, initiatives relating to ESD have also been generated in other parts of the economy, not related directly to government. Examples include the Business Council of Australia's Sustainable Development Group, and the Business Leaders Forum on Sustainable Development.

Role of the Prime Minister's Science, Engineering and Innovation Council (PMSEIC)

A number of participants in this inquiry suggested other options for revising or setting a new strategic direction for ESD. Several participants argued that there was a need to implement mechanisms that better institutionalise ESD as a major policy issue. Dovers (1997) has presented a number of reasons why ESD has not been a priority issue for governments (box 9.7).

The Minerals Council of Australia (sub. 16, p. 4) suggested that successful implementation of ESD requires leadership from the highest level:

> The Cabinet could establish a committee under the chairmanship of the minister responsible for this department to oversee inter-departmental co-operation on government-wide issues of ESD, including greenhouse gas emissions abatement

measures, matters of national environmental significance under Commonwealth environmental legislation and NEPMs. As an alternative, a specific Cabinet Committee comprising the relevant ministers could review submissions put forward by Portfolio Ministers prior to the Cabinet making final decisions.

The Tourism Council of Australia (sub. 32, p. 4) also supported a role for a body to coordinate the future direction of ESD through:

> The establishment of a dedicated ESD Unit within Prime Minister and Cabinet to oversee implementation of ESD by all Commonwealth departments and agencies …

The Commission believes that an existing body — the Prime Minister's Science, Engineering and Innovation Council (PMSEIC) — is in a good position within government to take a leadership role on ESD and to better institutionalise ESD as part of the policy development process. PMSEIC is chaired by the Prime Minister, with membership including other key cabinet minsters.

Box 9.10 **Making ESD a part of the policy mainstream**

Dovers (1997) has argued that an important indicator of how seriously ESD is taken into account can be gleaned from looking at its expression in law. Dovers argues that, at the Commonwealth level, ESD has tended to not be accorded significant status and that it is not expressed widely in legislation.

Dovers identifies several reasons why this has occurred. Some of these relate to the difficulties inherent in dealing with complex issues while others are more pragmatic. These reasons include:

- ill advised expectations regarding what some evaluative tools (such as contingent valuation) can offer;
- lack of active support;
- tensions between environment and development;
- bureaucratic jealousies; and
- cost cutting.

Dovers argues a number of reforms are required to better institutionalise ESD. These include the need for:

- improved information bases to support policy development and implementation;
- improved coordination between sectors, problems, and governments;
- greater focus on the long term; and
- better processes for community participation.

Source: Dovers (1997).

Environment Australia (sub. DR68, p. 3) submitted that PMSEIC has:

> ... provided a valuable forum for discussing long run sustainability objectives and issues. PMSEIC discussions on salinity, biodiversity, biotechnology and climate change have provided compelling illustrations of the links between economic, environmental and social outcomes.

Currently, PMSEIC's terms of reference is directed mainly toward consideration of issues related to science, technology and engineering. The terms of reference requires that PMSEIC 'advise on important issues in science, technology, engineering and relevant aspects of education and training' including as they relate to factors such as 'economic growth and the sustainable development of resources'. In recent times, PMSEIC has considered issues such as the impact of dryland salinity on rural industry and the landscape, and aspects of greenhouse science in Australia.

RECOMMENDATION 9.1

The Prime Minister's Science, Engineering and Innovation Council (PMSEIC) has recently demonstrated leadership in such areas as dryland salinity and greenhouse science. PMSEIC could consider further emphasis of the ESD dimensions of issues before the Council. For example, PMSEIC could:

- ***provide advice on strategic matters relating to long term sustainable development;***
- ***facilitate interaction between leading experts and relevant ministers on ESD issues; and***
- ***report (on a triennial basis) on matters relating to further implementation of ESD with a longer term strategic focus.***

APPENDICES

A List of participants

Table A.1 **List of submissions**

Participant	*Submission number*
Agriculture and Environment Consulting Pty Ltd	5
Australian Agency for International Development (AusAID)	14
Australian and New Zealand Minerals and Energy Council	11, DR76
Australian Bureau of Statistics	29, DR66
Australian Conservation Foundation	27, DR64
Australian Fisheries Management Authority	DR61
Australian Geological Survey Organisation	34
Australian Industry Group	12
Australian Nuclear Science & Technology Organisation	15
Australian Seafood Industry Council	8
Australian Surveying and Land Information Group	DR47
Australians for an Ecologically Sustainable Population Inc (National Office)	DR52, DR63
Australians for an Ecologically Sustainable Population Inc (NSW Branch)	DR46
Austroads Inc	42
Beattie, The Hon Peter, MLA, Premier of Queensland	3
Bureau of Rural Sciences	DR74
Business Council of Australia	DR79
Centre for Resource and Environmental Studies (ANU)	13
Commonwealth Spatial Data Committee	DR60
Criddle, The Hon Murray, MP, Minister for Transport, WA	24
CSIRO	17
Curnow, J	DR55
Department of Agriculture, Fisheries and Forestry — Australia	38, DR78
Department of Defence	35
Department of Foreign Affairs and Trade	37, DR50
Department of Health and Aged Care	10
Department of Immigration and Multicultural Affairs	39
Department of Industry, Science and Resources	28, DR75
Department of Mines and Energy, Queensland	DR43
Department of Premier and Cabinet, South Australia	DR80
Department of Premier and Cabinet, Tasmania	DR70
Department of Transport and Regional Services	36

(Continued on next page)

Table A.1 **List of submissions** (continued)

Participant	*Submission number*
Dovers, S	DR48
Dracup, M	2
Energy and Environmental Services Team (Australian Greenhouse Office)	DR72
Environment Australia	21, DR68
Environment Management Industry Association	DR67
Environmental Protection Agency, Queensland	DR82
Environmental Research & Information Consortium Pty Ltd	18, DR69
Grace, G	9, DR45, DR81
Greening Australia Limited	6
Griffin, J	7, DR49, DR51
Hawkesbury-Nepean Catchment Management Trust	23
Herlihy, A	DR57
Hurstville City Council	25
Kerin, The Hon Rob, MP, Deputy Premier, SA, Minister for Primary Industries, Natural Resources and Regional Development	41
Kimberley-Clark Australia	26
Laird, P	33, DR54
Medical Association for Planetary Survival	DR53
Melville Conservation Group	DR56
Minerals Council of Australia	16
Ministry of the Premier and Cabinet, Western Australia	20
National Association of Forest Industries Ltd	4
National Council of Women of Australia	DR73
National Environmental Law Association Ltd	DR58
National Environment Protection Council Service Corporation	DR71
National Farmers' Federation	22
National Land and Water Resources Audit	DR59
New South Wales Cabinet Office	40
Northern Territory Fisheries Joint Authority	30
Queensland Commercial Fishermen's Organisation	DR77
Slatter, P	19
Smart Futures Group	31, DR62
Sutherland Shire Environment Centre Inc	DR44
TechSearch	DR65
TMT Pty Ltd	DR83
Tourism Council Australia	32
Weissman, G	1

Table A.2 **List of respondents to the Commission's questionnaire**[a]

Department/agency	*Response number*
Aboriginal and Torres Strait Islander Commission	25
Attorney-General's Department	8
Australian Communications Authority	10
Australian Greenhouse Office	18
Australian Institute of Marine Science	7
Australian Nuclear Science and Technology Organisation	24
Commonwealth Grants Commission	3
CSIRO	16
Department of Communications and the Arts	5
Department of Defence	22
Department of Employment, Workplace Relations and Small Business	19
Department of Family and Community Services	20
Department of Finance and Administration	21
Department of the Treasury	17
Department of Transport and Regional Services	23
Energy Research and Development Corporation[b]	2
Environment Australia	9
Fisheries Research and Development Corporation	15
Forestry Tasmania	11
Grains Research and Development Corporation	13
Meat and Livestock Australia	6
National Registration Authority	12
Nuclear Safety Bureau	1
Queensland Department of Primary Industries — Forestry	4
Sugar Research and Development Corporation	14

a Table includes those departments and agencies which responded only that they considered the questionnaire was not relevant to them.

b The Energy Research and Development Corporation ceased to exist at the end of 1997-98. The then Department of Primary Industries and Energy was responsible for residual management and administrative matters.

Table A.3 **List of visits**

Australian Capital Territory

ACT Environment Commissioner
Australian Academy for ESD — Australian Landcare Office
Australian Agency for International Development
Australian Bureau of Agricultural and Resource Economics
Australian Bureau of Statistics
Australian Chamber of Commerce and Industry
Australian Fisheries Management Authority
Australian Geological Survey Organisation
Australian Greenhouse Office
Australian Heritage Commission
Australian Local Government Association
Australian National Audit Office
Australian Seafood Industry Council
Bureau of Resource Sciences
Bureau of Transport Economics
Centre for Resource and Environmental Studies, ANU
CSIRO
Department of Communications and the Arts
Department of Defence
Department of Employment, Education, Training & Youth Affairs
Department of Finance and Administration
Department of Foreign Affairs and Trade
Department of Forestry, School of Resource Management and Environmental Science, ANU
Department of Health and Family Services
Department of Industry Science and Tourism/Department of Industry, Science and Resources
Department of Primary Industries and Energy/Department of Agriculture, Fisheries and Forestry — Australia
Department of Prime Minister and Cabinet
Department of the Treasury
Department of Transport and Regional Development
Environment Australia
Environment Resources Information Network
Great Barrier Reef Marine Park Authority
Land and Water Resources Research and Development Corporation
Minerals Council of Australia
Murray-Darling Basin Commission

(Continued next page)

Table A.3 **List of visits** (continued)

National Association of Forest Industries
National Farmers Federation
Office of Regulation Review
State of the Environment Group

New South Wales

New South Wales Cabinet Office
New South Wales Environment Protection Authority

Queensland

Department of Premier and Cabinet

Smart Futures Group

South Australia

Department of Environment, Heritage and Aboriginal Affairs
Department of Premier and Cabinet
International Centre for Economics, University of Adelaide
National Environment Protection Council Service Corporation
Primary Industries and Resources
Transport SA

Victoria

Australian Conservation Foundation
Australian Industry Group
Department of Premier and Cabinet

B Questionnaire

Inquiry into Implementation of Ecologically Sustainable Development by Commonwealth Departments and Agencies

The purpose of this questionnaire is to obtain information from Commonwealth departments and agencies about two key issues:

- how Commonwealth departments and agencies incorporate ESD principles in their decision making, policies, programs, and regulations; and
- how Commonwealth departments and agencies monitor and evaluate their effectiveness in implementing ESD principles in their decision making, policies, programs, and regulations and in promoting ESD outcomes.

Background

The National Strategy for Ecologically Sustainable Development (NSESD), adopted in 1992, is the Commonwealth's principal policy statement on ESD. The Strategy's core objectives are to:

- enhance individual and community well-being and welfare by following a path of economic development that safeguards the welfare of future generations;
- provide for equity within and between generations; and
- protect biological diversity and maintain essential ecological processes and life-support systems.

The Strategy contains a number of guiding principles:

- Decision making processes should effectively integrate both long and short-term economic, environmental, social and equity considerations.
- Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

- The global dimension of environmental impacts of actions and policy should be recognised and considered.
- The need to develop a strong, growing and diversified economy which can enhance the capacity for environmental protection should be recognised.
- The need to maintain and enhance international competitiveness in an environmentally sound manner should be recognised.
- Cost-effective and flexible policy instruments should be adopted.
- Decisions and actions should provide for broad community involvement on issues which affect the community.

Amongst other things, the Strategy requires governments to establish appropriate institutional arrangements to ensure the inclusion of ESD principles in policy making processes.

How to respond to this questionnaire

The Commission is seeking information about Commonwealth departments' and agencies' programs that:

- have a ***primary*** objective of promoting ESD outcomes; and/or
- ***could impact significantly*** on ESD even though they may not have ESD as their primary focus.

Examples of the first type of program include those relating to resource management, biodiversity protection and site rehabilitation. Examples of the second type of program include those that seek to encourage economic development where that development may have (often unintended) ESD or environmental implications.

For the purposes of this questionnaire, a reference to 'program' should be interpreted broadly as a reference to any, and all of the following: department/agency programs, policies, regulations (including primary legislation), procurement decisions and policies and other decision making processes.

In order to meet the Commission's reporting deadlines for this inquiry, all departments and agencies are urged to provide responses to this questionnaire by **no later than 23 October 1998**.

Departments and agencies may prepare specific replies to each question and/or forward existing publications that contain the information being sought. Examples and suggestions have been provided in *italics* after some questions to provide guidance to respondents on the type of information being sought. These examples

are merely intended to clarify questions and prompt responses but are not exhaustive.

The questionnaire is intended to provide a framework for considering ESD implementation consistently across departments/agencies. The Commission is planning to summarise the responses to the questionnaire and use these as inputs to the inquiry process. Departments and agencies will have an opportunity to provide feedback on responses that have been summarised for use in the inquiry report.

As this questionnaire may not address all issues that respondents wish to raise in relation to the inquiry, all departments and agencies are encouraged to also prepare a submission in response to the Issues Paper.

Queries about this questionnaire should be directed to Barbara Aretino on telephone (03) 9653 2201, fax (03) 9653 2305 or by e-mail baretino@pc.gov.au.

The Commission appreciates your assistance and looks forward to receiving your response.

Questionnaire

For all questions, if responses are already available in a specific publication please provide copies of the relevant pages in the place of compiling a specific reply.

General issues

a) What institutional changes has the department/agency made in response to the NSESD to ensure that ESD principles are taken into account in departmental programs and decision making?

eg.

The department/agency has incorporated ESD principles in its charter and corporate plan and reports ESD outcomes and issues in its annual report.

The department/agency has produced guidelines on how groups, branches and divisions are to incorporate ESD principles in decision making.

The department/agency has established strategies for implementing ESD in specific areas of its activities most likely to impact on ESD.

b) How has the department/agency generally accounted for ESD principles in its programs and decision making?

eg.

i) systematic/structured appraisal of every (or key) initiative(s) to determine whether/how it impacts on ESD. Please describe the process.

ii) systematic/structured appraisal only of initiatives expected to have a significant impact on the environment. Please describe the appraisal process and the threshold which determines whether the process will be applied.

iii) systematic/structured appraisal process is applied to initiatives on an ad hoc basis.

iv) appraisals are conducted on an ad hoc basis and do not need to follow a particular approach.

c) Does the department/agency have any discretion in determining ESD priorities across its activities and, if so, how does it do so?

d) Does the department/agency have resources devoted exclusively to coordinating the implementation of ESD principles in its programs? Please describe.
eg. A particular branch is responsible for ensuring co-ordinated implementation of ESD principles across the department/agency.

A Identifying key ESD programs

1) List the department/agency's key programs[1] that:

a) have a primary objective of promoting ESD outcomes; and/or

b) may impact significantly on achievement of ESD even though they may not have ESD or environmental concerns as their primary focus.

Prioritise these programs according to their importance from an ESD perspective.
For each program, please indicate the associated legislation or relevant agreement that is applicable.
Please include details of programs concerning the department/agency's internal environmental (eg. energy or waste) management.

B Background and objectives of key programs

For each program identified in **A**, *please provide responses to the following questions:*

2) Explain the rationale for the program.
ie. What problem or concern is the program designed to address?

3) Briefly describe the assessment process used by the department/agency to integrate economic, environmental and social considerations in developing the program and associated advice for consideration by government (ex

[1] Note that 'program' should be interpreted broadly to include any, and all, of the following: department/agency programs, policies, regulations (including primary legislation), procurement decisions and policies and other decision making processes.

ante assessment).

eg:

a) A cost-benefit analysis (such as a regulation impact statement) that took into account the full range of economic and social costs/benefits and which also included an environmental and social impact assessment specifically intended to account for the full range of environmental and social effects.

*b) A cost-benefit analysis (such as a regulation impact statement) that took into account the full range of economic, social and environmental costs and benefits but which **did not** explicitly include an environmental or social impact assessment.*

*c) An environmental impact assessment that explicitly took into account the full range of environmental effects, as well as other economic and social consequences as they arose, but **did not** include a formal cost-benefit analysis.*

d) A departmental or internal program evaluation process (not included in (a) to (c) above) with a focus on ESD that was specifically intended to assess the environmental impacts, costs and benefits. Please describe the process.

e) A departmental or internal program evaluation process (not included in (a) to (d) above) that was specifically intended to assess a broad range of economic and social costs and benefits. Please describe the process.

4) (a) Were stakeholders likely to be affected by the program consulted about its ESD implications during the program's development and implementation?

(b) Which stakeholders were consulted and how?

eg. Direct consultation with key stakeholders through mechanisms such as public hearings and meetings, consultation with representative groups.

5) How has the department/agency specifically incorporated some of the ESD principles and objectives, such as the precautionary principle and the need to provide for equity between generations, in this program?

6) (a) Specify the objectives and intended outcomes of the program.

(b) For programs not primarily concerned with ESD or the environment, are environmental issues incorporated to any extent in the objectives of the program, eg. in secondary or subsidiary objectives?

7) How does the department/agency (intend to) address any adverse environmental impacts of the program that were identified in the pre-implementation assessment?

C Operation of key programs

For each program identified in **A**, *please provide responses to the following questions:*

8) (a) Briefly summarise how the program operates.
(b) For programs that do not have a primary focus on ESD or the environment, only describe how this program impacts on the environment and/or achievement of ESD.

9) Describe how the department/agency co-ordinates the operation of this program with:
a) the operation of ESD or environmental programs administered by other Commonwealth departments/agencies; and
b) the operation of ESD and environmental programs administered by state/territory and local governments.
eg. Memoranda of understanding, consultation on a case by case basis, joint working parties or joint implementation of programs.

D Performance monitoring and reporting

For each program identified in **A**, *please provide responses to the following questions.*

10) (a) Is the program's ESD performance assessed against performance indicators, targets or benchmarks?
(b) Please specify the indicators or targets.
(c) How were these performance indicators developed?

11) How frequently does the department/agency produce assessment or progress reports on the program's performance in meeting its ESD performance indicators, targets or benchmarks?

12) (a) Has a more comprehensive evaluation of the program's *overall* success in achieving its ESD objectives been completed?
(b) How frequently are these effectiveness evaluations completed?
(c) Are they conducted by persons who are independent of the program managers?
Please provide details or a copy of an evaluation (if available).

13) (a) Does the department/agency report the results of performance monitoring or program evaluations concerning ESD aspects to external interested parties?
(b) Is there a mechanism for interested parties to have input to program evaluations or reviews?
(c) Describe how these mechanisms operate, who participates, and how often they occur.
eg. Evaluation reports released publicly and widely disseminated, regular consultations with interested parties, joint working groups.

E Program Review

For each program identified in **A***, please provide responses to the following questions:*

14) How have the results of performance monitoring or program evaluations been used by the department/agency to improve the program's effectiveness in implementing ESD?

15) What mechanisms exist to ensure that the results of performance monitoring or program evaluation continue to systematically feed back into decision making and improving the program's effectiveness in implementing ESD?

16) Are objectives, performance indicators, benchmarks and targets in relation to the program periodically reviewed to check their continued relevance and modified if necessary? Describe how this operates.

F Impact of programs

For each program identified in **A**, *please provide responses to the following questions:*

17) What has been the program's impact on promoting ESD outcomes? Please provide evidence.
eg. How has the program changed community or corporate behaviours in ways which promote ESD outcomes?

18) Given the long term nature of achieving ESD or environmental outcomes, how does the department/agency monitor progress *towards* achieving its intended outcomes?

19) For programs with a primary focus on ESD, has the department/agency assessed whether the same outcomes can be achieved more cost effectively? Please provide details.

20) For programs not primarily concerned with ESD, has the need for the department/agency to incorporate ESD principles in the program resulted in a trade-off in terms of the program's effectiveness? Please provide details.

Other comments

Please provide any other comments that the department/agency wishes to make in relation to implementing ESD principles, either in the programs outlined above or in general.

Thank you for completing the questionnaire.

C Commonwealth policies and programs relevant to ESD

Table C.1 **Selected Commonwealth policies/programs relevant to ESD**

Policy or program	*Nature of policy/program*	*Relevance to ESD*
Industry, science and economy		
Australian Nuclear Science and Technology Organisation		
Treatment and management of man-made and naturally occurring radioactive substances	New ways developed to immobilise and dispose of radioactive waste and to minimise environmental contamination.	The precautionary principle and intergenerational equity are adopted in best practice management.
Application of nuclear science and technology to the understanding of natural processes	Applies nuclear based techniques to research projects such as investigations of global climate change and environmental pathway analysis.	Furthers the understanding of natural processes.
Competitiveness and ecological sustainability of industry	Projects include minimising environmental impacts of mine wastes and removing contaminants from water.	Develops technology and methodologies for managing mine wastes to minimise their environmental impacts.
CSIRO		
Climate and atmosphere	Climate impact assessments eg. for spread of Queensland fruit fly.	Enhances knowledge of the impact of climate change on the economy.
Land and water	Investigates advantages of 'precision farming'	Uses satellites and associated techniques to improve paddock management to increase profits and reduce adverse environmental impacts such as over fertilisation.
Marine	Investigates how oceans absorb and cycle carbon dioxide	A CSIRO bio-geochemical model is being used to understand how oceans react to terrestrial sources of carbon dioxide which will aid future greenhouse gas emissions modelling.

(Continued on next page)

Table C.2 **Selected Commonwealth policies/programs relevant to ESD**
(continued)

Policy or program	*Nature of policy/program*	*Relevance to ESD*
Field crops	Developing seeds without sex to develop plants that bypass the normal pollination process which is very sensitive to weather processes.	Could dramatically increase crop size and production.
Forestry, wood and paper industries	Developing timber substitutes from waste to produce industrial-scale structural substitutes.	May offer a viable alternative to timber and relieve some demand on scarce timber resources.
Meat, diary and aquaculture	Biological control of worm parasites which have an adverse effect on sheep.	Biological control will help farmers keep animals healthy with less chemicals.
Built environment	Development of indoor air quality guidelines for the Sydney Olympics.	Improves environmental health.
Chemicals and plastics	Can enable crop plants to produce raw materials needed to make industrial chemicals and polymers.	Could operate as an alternative to petrochemicals or oils.
Integrated manufactured products	Has helped develop the world's most sensitive remote sensing equipment.	Remote sensing is of major importance for improving natural resource management.
Petroleum	Tracing pollution in coastal ecosystems using advanced biomarker techniques.	Improves information and monitoring of emissions.
Pharmaceuticals and human health	Insect bioprospecting to seek out biologically active compounds that benefit human health or crop and animal production.	Potentially benefits human health and the economy.
Department of Communications and the Arts (also includes the Australian Communications Authority)		
Administration of the Telecommunications Act 1997	Regulation of telecommunications in accordance with the Act.	Regulatory frameworks can determine the impact market participants have on the environment.
Administration of the Radiocommunications Act 1992	Regulation of radio frequency spectrum in accordance with the Act.	Regulatory frameworks can significantly determine the impact market participants have on the environment

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Table C.3 **Selected Commonwealth policies/programs relevant to ESD**
(continued)

Policy or program	*Nature of policy/program*	*Relevance to ESD*
Department of Industry, Science and Resources		
Regional Tourism Program	Aims to facilitate development of the tourism industry in regional Australia.	Will do so in a way that contributes to managing the resource base for future generations and adds to the protection of biological diversity in high-use natural tourism sites.
Gene technology	Oversees development and use of innovative genetic manipulation techniques without comprising biosafety risk factors.	Risks are associated with concerns related to public health, occupational health and safety, agricultural production or the quality of the environment.
Cooperative Research Centre Program	Includes research, education and training that is designed to establish internationally competitive industry sectors which are ESD consistent.	Balances economic, social and environmental values of development paying attention to issues such as the long term nature of some impacts.
Australian Surveying and Land Information Group	Commonwealth's primary source of topographic, remote sensing and geodetic products and services.	Reliable land and geographic information is important for promoting economic and social development while conserving the environment.
Department of Transport and Regional Services		
Australian Transport and Sustainable Development	Currently developing this policy to promote integrated transport solutions for goods, services and people.	Responsibility for transport lies with different levels of government. An integrated policy will promote ESD consistent outcomes by considering economic, access, environmental, equity and health and safety issues.
National Office of Local Government	Funds local government through the Local Government Development Program.	Assessment of project submissions includes how they address environmental issues and ESD management.
Airports environment	Responsible for approving development activities at Commonwealth airports.	Large developments require a Major Development Plan. This is required if there is a significant environmental or ecological impact.
Aviation environment	Various legislation establishes rules for aircraft emission levels.	Sets down standards for emissions (which contribute to greenhouse gas emissions and noise.
Federal Office of Road Safety — Australian Design Rules	Principal mechanism for minimising harmful social and environmental impacts of vehicles.	New vehicle emission standards can improve urban air quality.

(Continued on next page)

Table C.4 **Selected Commonwealth policies/programs relevant to ESD**
(continued)

Policy or program	*Nature of policy/program*	*Relevance to ESD*
Maritime transport	Policy matters relating to shipping.	Main function is to combat pollution and other environmental damage from ships.
Roads funding	Commonwealth provides grants to States for specific road projects.	Roads can dramatically alter land use. Better roads can lower fuel consumption and therefore reduce greenhouse gas emissions.
National Capital Authority	Responsible for developing and planning for Canberra's future.	Programs designed to promote sustainable planning frameworks, and conserve the character and value of national lands for current and future generations.
Department of the Treasury		
Fiscal policy	Derivation of federal budgets.	A balanced, or even surplus, budget is consistent with intergenerational equity and sustainable development.
Tax policy	Design of the tax system for funding of government activities, and use of specific tax measures.	Can be used to enhance equity within the community. Specific measures can be used to internalise previously unaccounted for costs.
Foreign investment policy — domestic	Treasurer has the power to reject foreign investment which is contrary to the national interest.	Any adverse environmental concerns will be subject to an environmental impact assessment.
Foreign investment policy — international	Treasury represents Australian foreign investment interests in the OECD.	Multilateral investment negotiations may involve recognition of conservation and sustainable development values.
National Registration Authority for Agricultural and Veterinary Chemicals		
Product registration	Before an agricultural or veterinary chemical product can be sold, it must be assessed and registered by the Authority.	Companies must prove that the product will be safe for humans and non-target species and that it will not pose unacceptable risks to the environment or to trade with other nations.
Quality assurance and compliance	Funds inspection and surveillance activities to ensure consistent compliance with conditions of registration.	Ensures information on chemicals is correct and meets the designated standards.

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Table C.5 **Selected Commonwealth policies/programs relevant to ESD** (continued)

Policy or program	*Nature of policy/program*	*Relevance to ESD*
Social and defence		
Aboriginal and Torres Strait Islander Commission		
Social and cultural program	Mainly involved in encouraging other agencies to ensure indigenous views are represented.	Allows indigenous views on matters, including the environment, to be expressed to governments and non-government agencies.
AusAID		
Australian aid program	Includes projects such as: sea level and climate monitoring (South Pacific), Hyderbad Waste Management (India), East Timor Water Supply and Sanitation (Indonesia), and sustainable forest utilisation (Vanuatu).	All projects aim to integrate economic, social and environmental goals to create a sustainable outcome.
Department of Defence		
Environment policy statement	Outlines an environmental vision and a series of environmental goals for the Department.	ESD principles were integral to development of this policy.
Defence Instruction (General) Administration 40-1 Environment and Heritage	Formal instrument for the issue of environmental policy directives and guidelines.	Provides guidance and procedures for environmental impact assessments and clearance processes for Defence activities and proposals.
Defence service charter	Covers the aspects of Defence that directly interact with the community .	Attempts to make ESD principles transparent and more visible to stakeholders.
Defence Environmental Management System	Framework for integrated environmental management in Defence.	Outcomes should include the integration of environmental objectives with Defence operational goals.
Maritime environmental management - clean ships	Developed sound environmental practices for Navy operations.	Preserves the marine environment by controlling discharge of waste and pollution at sea.

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Table C.6 **Selected Commonwealth policies/programs relevant to ESD**
(continued)

Policy or program	*Nature of policy/program*	*Relevance to ESD*
Environmental management in major defence exercises — Tandem Thrust	A joint US and Australian land and sea military exercise.	An environmental impact assessment was undertaken and the Environment Monitoring Group was established to monitor and review the impact of this exercise.
Defence environmental panel	A panel of environmental consultants who provide specific environmental expertise to Defence.	The panel has been used as an effective input into many projects to produce an ESD consistent outcome.
Resource management and environment related		
Australian Greenhouse Office		
National Greenhouse Strategy	A strategic framework for Australia's greenhouse response.	Allows all spheres of government, industry and the broader community to participate.
Greenhouse Challenge	A cooperative effort between industry and government to reduce greenhouse gas emissions.	Reducing emissions will help Australia achieve its Kyoto target once ratified.
Sustainable Energy — Energy markets	Three projects include: 2% mandatory targets for renewable energy sources; efficiency standards for power generation; and efficiency standards for energy production and distribution.	Aim is to integrate environmental and economic issues so as to reduce the greenhouse gas intensity of energy production and supply.
Cities for Climate Protection	Involves the local community to reduce greenhouse gas emissions through local government initiatives.	Initiative focuses on local government operations, households, waste disposal, land use change and transport.
Emissions trading	Researching the prospect of introducing an emissions trading system to help meet Australia's greenhouse gas emissions Kyoto commitments.	A trading system is one of a range of mechanisms proposed for reducing greenhouse gas emissions.
Department of Agriculture, Fisheries and Forestry		
Regional forest agreements (also involves Environment Australia)	Develop Commonwealth-State agreements in relation to designated forest regions.	Recognise the environmental heritage, social and economic issues associated with long term management of forests.

(Continued on next page)

Table C.7 **Selected Commonwealth policies/programs relevant to ESD**
(continued)

Policy or program	*Nature of policy/program*	*Relevance to ESD*
COAG strategic water industry reform framework	Developing a framework to manage quality and quantity of surface and groundwater resources by 2001.	Intended to generate an economically sustainable water industry which meets community needs and natural resource management objectives.
Fisheries action program	Aims to repair Australia's aquatic environment and assist in sustainable use of all fisheries.	Includes encouraging community participation in activities to improve fisheries ecosystems.
Criteria and indicators for sustainable forest management	Development of a framework of regional level criteria and indicators of sustainable forest management based on the internationally agreed Montreal process.	Provides a framework to develop sustainable forestry management indicators at the regional level.
Murray-Darling Basin Initiative[a]	Implements an integrated catchment management strategy that includes promoting the efficient, equitable and sustainable use of land and water resources.	Provides a mechanism to manage the Basin in an ESD consistent manner.
Sugar industry infrastructure program	Enhance the economic performance of the sugar industry by providing funding for infrastructure projects, including increased water availability, to promote investment.	Before being approved projects must satisfy the environmental and planning requirements of the States/Territories and the Commonwealth.
Environment Australia		
National Heritage Trust[b]	Five year legislated commitment to fund natural resource management projects.	Aims to repair and replenish Australia's natural capital.
Management of Commonwealth protected areas (eg. Kakadu)	Management of national parks and wildlife through legislation.	Assists in the conservation of Australia's biodiversity and associated natural and cultural heritage.
World Heritage Program	Provides policy advice to the Minister and helps meet Australia's obligations under the World Heritage Convention.	Allows nations to act cooperatively to protect natural and cultural heritage.
Regional forest agreements (see discussion above)		

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Table C.8 **Selected Commonwealth policies/programs relevant to ESD**
(continued)

Policy or program	*Nature of policy/program*	*Relevance to ESD*
Marine program - Coasts and Clean seas	Provides grants on an annual basis to increase on ground activities.	Program focuses on the conservation, sustainable use and repair of the coastal marine environment.
Environmental impact assessment	When triggered, the process requires all Commonwealth agencies to account for significant environmental impacts.	Accounting for significant environmental impacts will increase the likelihood of ESD outcomes being achieved.
National pollutant inventory	Establishes a database of information on emissions.	Information will help decision making at all levels of government and industry.
Fisheries Research and Development Corporation		
Resource sustainability	Aims to develop wild fish resources in an ESD consistent manner.	Management is approached from a total ecosystem perspective.
Ecosystems protection	Aims to protect ecosystems upon which fisheries and aquaculture depend.	Provides information that allows more competent ecosystem wide decisions to be made.
Industry development	Encourages sustainable resource utilisation by ensuring that wastage is minimised and that quality and value is maximised.	Aims to increase intergenerational equity.
Sugar Research and Development Corporation		
Plant improvement	Funds projects to produce improved varieties of plant.	Objectives include considering the environmental constraints.
Crop management	Funds projects to develop sustainable crop management practices.	Production systems need to be compatible with sound environmental and natural resource management practices.
Crop protection	Funds projects that combat the economic impact of pests and diseases on crops.	Objectives include developing pest management strategies that rely less on chemical products.
Cane harvesting and transport	Funds projects to improve the transport and harvesting of cane.	Objectives include minimising the adverse environmental impacts of harvesting and transport.
Sugar manufacture	Funds projects to reduce unit production costs and develop options for alternative uses of sugar products.	A focus has been on the reduction of the environmental impact of liquid effluent, wastes, noise and airborne particles.

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Table C.9 **Selected Commonwealth policies/programs relevant to ESD**
(continued)

Policy or program	*Nature of policy/program*	*Relevance to ESD*
Environment and natural resource management	Funds projects aimed at the long term maintenance of the natural resource base.	Environmentally sound practices are linked to the maintenance of profitability for the grower and miller.
Industry competitiveness	Funds projects which relate to the competitiveness of the sugar industry and its position in the economy.	Includes analysing the adverse impacts of urban encroachment and other competing resource uses on sugar production.

a This program is funded under the Natural Heritage Trust Program outlined under Environment Australia.

b This program is run jointly with the Department of Agriculture, Fisheries and Forestry. Program approval requires consent from both Ministers.

Sources: resp. 5, 9, 12, 14; 15, 17; 18, 22-25; sub. 14, 28, 38.

D Case studies

D.1 Regional Forest Agreements

Background

A National Forest Policy Statement (NFPS) was jointly developed and endorsed by the Commonwealth and State and Territory Governments in 1992 (Tasmania endorsed the statement in 1995).

The NFPS (CoA 1992a) identifies the roles and responsibilities of the Commonwealth, State and Local Governments and private landholders in the ecologically sustainable use of forests. The NFPS identifies eleven national goals for forests in Australia. However its overriding objectives may be summarised as the management of Australia's native forests to conserve biodiversity, heritage and cultural values while also allowing for the development of a sustainable and internationally competitive forest products industry.

To implement the national policy contained in the statement, governments have agreed to adopt a regionally based planning and management framework resulting in regional forest agreements (RFAs). These RFAs are negotiated between the Commonwealth and relevant State/Territory Government with input from interested stakeholders, and integrate both environmental and commercial objectives. RFAs provide the framework for forest conservation and sustainable forest management for particular regions for a period of 20 years.

Four RFAs have been finalised and signed within the last two years — Tasmania in November 1997 (CoA and the State of Tasmania 1997), East Gippsland in February 1997 (CoA and the State Government of Victoria 1997), Central Highlands in March 1998 (CoA and the State Government of Victoria 1998), and most recently, the South-west forest region of Western Australia (CoA and the State of Western Australia 1999). The Commonwealth Government is committed to finalising a further eight RFAs by the end of 1999.

Objectives

By signing RFAs, governments confirm their commitment to the objectives of the National Forest Policy Statement. Two main objectives are pursued through RFAs:

- conservation — through the protection and regeneration of key forest areas to protect forest biodiversity, cultural values, old growth forests and wilderness; and
- secure access, for the term of the agreement, to specified forest areas to facilitate investment and development of forest based industries on an ecologically sustainable basis.

ESD is an explicit and fundamental element of the National Forest Policy Statement and RFAs.

A full list of the Commonwealth's objectives for RFAs are reproduced in box D.1.

Box D.1 **RFA objectives**

The Commonwealth has five principal objectives for RFAs:

- to use an integrated cooperative assessment and planning process to reduce uncertainty about outcomes and to reduce duplication between government requirements and processes in land use decision making;
- to produce durable, long term decisions that meet the requirements of the governments involved, the community and industry and are consistent with the principles of ecologically sustainable development;
- to equitably balance competing sectoral objectives and coordinate policies and activities of governments;
- to maintain regional environmental, heritage and social values; and
- to provide secure access to resources for forest based industries.

Source: Kanowski (1997).

Strategies and actions

Establishment of an RFA involves four key stages.

Firstly, forest areas that may be needed for conservation reserves under the RFA are set aside and excluded from logging while the RFA is being developed. This is done through an interim arrangement called an Interim or Deferred Forest Agreement. This ensures that options for the reserve system remain open.

Secondly, a ‘comprehensive regional assessment’ (CRA) (see ‘Ex ante assessment’ section) of the environmental, heritage, economic and social values of the forests in the region is undertaken jointly by the Commonwealth and the State/Territory involved.

Thirdly, information collected through the CRA process is used to develop a number of draft RFA options. These reflect a range of different land allocations for reserves and timber production, forest management, and industry and community development options for the region. A consultation paper containing draft RFA options is released to stakeholders for consultation and negotiation. While options are likely to have varying social and economic implications, the RFA process requires each option identified to address the environmental, economic and social objectives of RFAs.

Finally, following discussion on draft options with stakeholders, the Commonwealth and relevant State/Territory Government negotiate a final RFA. The option most likely to meet environmental and heritage protection objectives, while also maximising industry opportunities and minimising social disruption, is viewed as the optimal option.

The final RFA which results from this process is a joint Commonwealth and relevant State/Territory agreement which commits governments to a term of 20 years. All RFAs contain three key features:

- establishment of a ‘comprehensive, adequate and representative’ (CAR) reserve system (box D.2);
- development and implementation of ecologically sustainable forest management for all forested areas in the region, both within and outside reserves; and
- encouragement of long term forest industry development.

Forest reserves established under the CAR reserve system consist of national parks and other reserves, and may include areas on private land if negotiated on a voluntary basis. Forest values are protected through codes of practice and other management standards.

Forests that are not allocated to a CAR reserve system are available for sustainable wood production, and other commercial and recreational uses, subject to codes of practice.

RFAs are designed to facilitate industry development by enhancing resource certainty. The main mechanism for doing so is not preventing industry from obtaining or using timber, woodchips or unprocessed wood products that have been sourced from regions covered by RFAs.

Box D.2 **Comprehensive, adequate and representative (CAR) reserve system**

The main function of the CAR national forest reserve system is to provide for the protection and conservation of environment and heritage values. This is achieved by safeguarding biodiversity, old growth, wilderness, and other natural and cultural values of forests. The principles that guide the protection of biodiversity in Australia's native forests are:

- 'comprehensiveness' — designed to ensure that diversity is maintained across the full range of forest communities;
- 'adequacy' — the need for reserved areas to be of sufficient size to maintain the viability of forest populations, species and communities; and
- 'representativeness' — the need for areas of forest selected for inclusion in reserves to reasonably reflect the biodiversity of the forest community across a range.

Levels of reservation are established according to a set of National Forest Reserve Criteria (JANIS criteria) agreed by governments under the National Forest Policy Statement. These criteria (JANIS 1997) are flexibly applied to take into account varying regional circumstances and require:

- reservation of 15 per cent of the distribution of each forest ecosystem that existed prior to European settlement (used as an indicator of biodiversity);
- at least 60 per cent reservation of the existing distribution of old growth forest if rare or depleted;
- where possible, at least 90 per cent reservation of high quality wilderness; and
- remaining occurrences of rare and endangered forest ecosystems including old growth.

Sources: DPIE (1998b); JANIS (1997).

Ex ante assessment

Governments have agreed to a framework and process for carrying out CRAs of the economic, social, environmental, cultural and heritage value of forest regions. These comprehensive assessments are intended to meet Commonwealth and State statutory obligations and are undertaken before each RFA is finalised.

CRAs are undertaken cooperatively by the Commonwealth and the relevant State/Territory Government as agreed in the National Forest Policy Statement. They also involve community and stakeholder input.

These ex ante assessments are intended to consider a broad range of issues such as:

- scientific assessments of the nature of the forest resource;
- ecologically sustainable forest management practices;
- environmental and heritage values of forests;
- possible forest use and industry development options; and
- the likely economic, social and community implications of the forest use and development options.

These assessments of forest values and uses provide the scientific and other information required for developing each RFA.

A key area of difficulty in implementing ESD policy is the lack of methods for consistently and reliably assessing market and nonmarket forest values. In the RFA context, the Joint ANZECC/MCFFA National Forest Policy Statement Implementation Subcommittee (JANIS) criteria provides a benchmark for protection of environmental values but there are, as yet, no equivalent criteria for social and economic outcomes (AFFA, sub. 38).

The CRA process is an information intensive one and has emphasised the collection and use of the best available data. According to the Department of Agriculture, Fisheries and Forestry (sub. 38, part B1, p. 4):

> The other aspect of the CRA/RFA process that has strengthened decision making in terms of ESD outcomes is the emphasis on using best available data. The Commonwealth and State agencies have made an enormous investment in the data collection phase of RFAs.

Clarke (1998, p. 32) has noted that a considerable investment of around $60 million has been made in collecting data and knowledge about forest values.

However, there has been controversy surrounding the CRA process. For instance, Dargavel (1998, p. 28) considers:

> Although no statement of the allocation of funds to the various components appears to have been published, it is clear that the bulk of the expenditure was directed to the biophysical components and comparatively minor expenditure was directed to the social components … The lesser funding and importance attached to social and cultural components mirrored the weak political position in the forest controversies of local communities and of those with an interest in social and cultural heritage.

In contrast, Coakes (1998, p. 53) notes that:

> It is evident that in a government process such as the RFA, social assessment is very new and thus further work is necessary for the social aspect to become fully integrated into the policy process.

In relation to the effectiveness of the CRA process, Dargavel (1998, p. 29) considers that:

> … the hurried nature of many of the assessments is a serious matter, particularly so in relation to social and cultural components … Anecdotal evidence suggests that some of the assessments were so rushed as to be meaningless. This is particularly so for consultation with indigenous groups which need their own time to build authoritative views and their concerns appear to have been virtually ignored because the agreements were signed before their views were available.

Similarly, the Australian Conservation Foundation (sub. DR64, p. 10) is critical of the information used in the RFA process:

> Certainly it is clear that state forestry agencies have insufficient information about their own forests. They have also restricted access by the community to important data.
>
> The Commonwealth in turn relies on the deficient information of state agencies on which to base its responses — a case of the blind leading the blind. This overall information deficient [sic] needs to be redressed if the RFA is to be seen as credible public policy.

Coordination with other government agencies and programs

Cooperation and coordination between levels of government, and within the Commonwealth Government, are important features of the RFA process. This has been achieved through the use of mechanisms such as intergovernmental ministerial councils, steering and technical committees established under RFA scoping agreements and ad hoc relations during RFA assessment activities.

For instance, JANIS was the body of Commonwealth and State/Territory officials initially given the task of implementing the NFPS. The Standing Committee on Forestry, which is an officials committee of the Ministerial Council on Forestry, Fisheries and Aquaculture (MCFFA), also contributes to the RFA process on an irregular basis (EA, sub. 21).

A CRA Implementation Forum comprising Commonwealth officials and State representatives involved in the RFA process has also been established as a forum for discussion of issues relevant to the CRA/RFA process (EA, sub. 21).

Similarly, a Commonwealth-State group of officials — the Montreal Process Implementation Group — was established to develop a framework of regional criteria and indicators to assess sustainable management of forests (see 'Monitoring, evaluating and reporting procedures' section).

Within an individual RFA context, arrangements between State and Commonwealth Governments vary slightly depending on the State involved. Scoping agreements set

out the formal mechanisms for Commonwealth/State coordination in relation to each RFA. Generally, representatives from various Commonwealth and State agencies participate in a steering committee responsible for approving assessment projects, resolving policy issues and developing and negotiating the RFA (AFFA, sub. 38). Technical committees concerning the various aspects of RFAs — environmental, economic, social, heritage and ecologically sustainable forest management — are generally also established for each RFA. Agencies represented reflect a range of interests including the environment, forests, minerals, and indigenous affairs. In some cases, the committees also include other stakeholder representatives.

In addition to cooperation and coordination between levels of government, three key portfolios within the Commonwealth Government have been jointly responsible for implementing the NFPS. These are the Department of Prime Minister and Cabinet, Environment Australia, and the Department of Primary Industries and Energy (now Department of Agriculture, Fisheries and Forestry).

The Forests Taskforce, established within the Department of the Prime Minister and Cabinet in 1995, has responsibility for overall coordination of the RFA process and for providing advice to the Prime Minister and relevant portfolio Ministers. This Department chairs an RFA Board of Management which is made of up representatives from all three portfolios. This Taskforce was established to provide a single point from which coordinated policy advice could be given to the Prime Minister and portfolio ministers.

Within the Environment portfolio, the Environment Forests Taskforce liases both formally and informally with areas of the portfolio responsible for other environmental programs which are, or could potentially be, linked to RFAs. An example is the activities of the Australian Greenhouse Office. Environment Australia also maintains links with other relevant departments such as those dealing with tourism and regional development issues. Similarly, a Forest Assessment Branch was specifically established within the former Department of Primary Industries and Energy to deal with RFAs and the related Forest Industry Structural Adjustment Program (see ‘Other supporting activities’ section) (EA, sub. 21).

While overall management of the RFA process rests with the Prime Minister and Cabinet Forests Taskforce, the Environment portfolio manages the environment and heritage components of the CRA process. The Department of Agriculture, Fisheries and Forestry (AFFA) manages the economic and social components. The ecologically sustainable forest management component is jointly managed by all three departments (EA, sub. 21).

This represents a significant change to portfolio responsibility for forest issues prior to the establishment of the RFA process. Previously the Primary Industries portfolio was the lead Commonwealth Government agency on most general forest policy issues with some advice from the Environment portfolio on certain aspects. Since the establishment of the RFA process at the end of 1994, the roles of the three portfolios in relation to forest policy have changed significantly. The bulk of advice is now provided to ministers and Cabinet on a joint basis following consultation between portfolios. Other portfolios such as Industry, Employment, Treasury and Finance are involved as required (EA, sub. 21, p. 23).

According to Environment Australia (sub. 21, p. 23):

> These arrangements have been critical in developing RFA outcomes which balance environment/heritage and economic/social considerations … The fact that the process has not become bogged down in resolving cross-portfolio disputes is largely due to the existence of a coordination structure which is one step removed from portfolios, and has been set the specific task of producing balanced outcomes.

States are responsible for on ground management and for implementing change under the RFA process. According to AFFA (sub. 38, part B1, p. 7):

> State forest management agencies often have commercial relationships with the wood and wood products industry and are quite sensitive to the potential impacts of RFA decisions on their clients. The prospect of removal of Commonwealth export controls has been a key to maintaining State involvement in the process, and the momentum of the process.

Involvement of other interested parties

As noted elsewhere, RFAs are developed jointly by governments following consultation and negotiation with stakeholders. This is required by Commonwealth and State legislation such as the *Native Title Act 1993* which requires formal public consultation with indigenous communities.

The key element of the consultation process is generally a stakeholder reference panel which includes representatives of key forest industries, conservation groups, the community, indigenous people and other organisations relevant to the RFA under development. The reference panel is the main representation and negotiation forum for developing forest use options and considering related issues such as industry development. This is supported by mechanisms such as public meetings in regional centres, the use of regional liaison officers, publication of various reports and information kits, and local electronic and print media to convey information. In some cases, substantial funding has been made available to representative stakeholder groups in each State to facilitate their involvement in the RFA process.

Local communities and other stakeholders are encouraged to be involved at various stages of the RFA process — from the CRA process which feeds into the development of options for an RFA, to providing comment, and negotiating on draft RFA options which are released publicly. The public consultation period provided in each region after development of draft RFA options meets the requirements of the *Environment Protection (Impact of Proposals) Act 1974* (EP(IP) Act). This consultation period generally involves public meetings in addition to publication of an options report. Each completed RFA also specifies the mechanisms that will be used to ensure on going public participation and consultation.

While stakeholder involvement is supposed to be a feature of the RFA process, this has not always been the case. For example, in East Gippsland, environmental stakeholders withdrew from the process at an early stage (AFFA, sub. 38).

In addition to stakeholder participation in these aspects of the process, stakeholders have been involved in developing a framework of regional indicators for monitoring progress in sustainable forest management (see following section).

The significance of stakeholder participation in processes such as RFAs has been summarised by Kanowski (1997, p. 233):

> The rise of more participatory modes of decision making about forest use and management, and the partnerships they can engender, offer our best prospects for sustainable solutions to legitimate differences over forest policy and management. The processes leading to and following from the RFAs deliberately seek to foster such participation and cooperation.

Monitoring, evaluating and reporting procedures

All completed RFAs contain two evaluation and reporting requirements.

Firstly, parties must report annually, using a public reporting mechanism, on their progress against a number of milestones for implementation of commitments contained in each agreement. Typical milestones include establishment of reserves; implementation of management plans for all national and state parks; joint development of sustainability indicators; and actions relating to management and sharing of data.

Secondly, each RFA provides for a review of the agreement's overall performance every five years. These reviews must be completed within a period of three months and outcomes are to be made public. The reviews are required to:

- report on the extent to which milestones and obligations have been met;
- report on the results of monitoring of sustainability indicators; and

- invite public comment on the performance of the agreement.

Apart from these guidelines, details of processes for completing these reviews are yet to be agreed between the relevant parties. Governments may agree to make minor modifications to an agreement as a result of these reviews, but the review process is not designed to open up the agreement to substantial renegotiation.

Sustainability indicators which must be reported against in these five yearly reviews are under development. These sustainability indicators for monitoring forest changes are to be developed (and reported against for those which can be readily implemented) in time for assessment at the first of the five yearly reviews of each agreement. The indicators used are to be consistent with the internationally agreed, national level Montreal Process criteria and indicators (box D.3).

In Australia, the Montreal Process Implementation Group (MIG) has produced *A framework of regional (sub-national) level criteria and indicators of sustainable forest management in Australia* (MIG 1998). This is the first attempt to establish a nationally agreed set of regional indicators, for application to all forests, that fit within the international structure. This framework will continue to be refined over time.

The MIG framework has in total accepted, some with modification, 57 of the 67 indicators developed through the Montreal Process as relevant at the regional level. In addition, twelve new and/or interim indicators have been developed. Criteria are expected to be relevant to all land tenures and all forest types although their applicability and relative importance will vary.

The indicators (MIG 1998) used to assess progress against the criteria cover environmental aspects of forest management through indicators relating to issues such as quality and quantity of the forest resource, diversity of flora and fauna located within forest areas, and regeneration of native forests. They also include socio-economic indicators such as those dealing with the value of wood production, recreation and tourism, investment in the forest sector, areas formally managed to protect indigenous peoples' values, and indicators relating to employment.

The MIG document contains a strategy for phased implementation of the indicators to facilitate a national approach to their implementation. Jurisdictions are not obliged to fully implement the framework developed through the MIG process and may choose the aspects, and extent to which, they will be implemented. However, as noted in the conclusion of the Intergovernmental Seminar on Criteria and Indicators for Sustainable Forest Management 1996 (quoted in MIG 1998, p. xii):

> It is important that an immediate start should be made in the practical implementation of criteria and indicators, even though they may still be imperfect and incomplete. This will lead to refinement and improvement based on experience.

As the efficiency and effectiveness of RFAs will be assessed during the five yearly reviews of each agreement, none has yet been completed. However, an interim evaluation of the RFA process to date is currently under way. This is a confidential evaluation, although it is intended that consultations with key stakeholders and State Governments will be a component (EA, sub. 21).

Box D.3 **Montreal Process criteria and indicators**

A Montreal Process Working Group was established in 1994 with the specific task of developing and implementing internationally agreed criteria and indicators for sustainable forest management. It comprises representatives from twelve countries including Australia.

The group has developed seven criteria and 67 indicators for the conservation and sustainable management of temperate and boreal forests. The criteria represent agreed broad forest values that should be conserved while the indicators provide measures for assessing progress in maintaining the values represented by the criteria.

The seven criteria that should be maintained through sustainable forest management are: biological diversity; productive capacity; ecosystem health and vitality; soil and water resources; global carbon cycles; socio-economic benefits; and an effective legal, institutional and economic framework.

The 67 indicators identified have been divided into three groups. Those for which adequate data is available and which may be implemented immediately, those which require more research and understanding before they may be implemented in the near future and lastly those that are not likely to be implemented in the foreseeable future due to methodological problems or problems with obtaining adequate data.

Monitoring and reporting against indicators in RFA regions will be consistent with this process.

Source: DPIE (1998b).

Other supporting activities

Research priorities

Each RFA contains an attachment that outlines research priorities. These have been identified through the CRA process used for developing each agreement. Governments agree to consult each other in developing future research projects that may affect each agreement and to make research reports available to the public

wherever possible. The priority area of research common to the agreements is the development of appropriate indicators to monitor the sustainability of forest management. The bulk of remaining research priorities relate to the environmental or natural resource aspects of forest management.

Structural adjustment

The pursuit of conservation objectives through the RFA process can result in adverse impacts on various stakeholders such as regional communities and forest based industries, particularly as forest industries often represent the primary industrial base for regional communities. In recognition of this, each RFA commits funds to assist industry and regional communities adjust to possible changes that may result from the process. The RFA process is also complemented by structural adjustment initiatives under the Forest Industry Structural Adjustment Program which is administered by AFFA.

Commonwealth legislation to complement RFAs

Legislation proposed by the Commonwealth is designed to reduce fragmentation and duplication in government processes that apply to the use and management of native forests. In combination with changes to environmental legislation contained in the proposed Environment Protection and Biodiversity Conservation (EPBC) Bill, the Commonwealth's involvement in forestry matters is expected to change significantly through enactment of the Regional Forests Agreements Bill. This proposed legislation will significantly limit the Commonwealth's involvement in forestry matters in areas covered by the RFAs to the terms of the agreements themselves, provided that the requirements of the existing EP(IP) Act and *Australian Heritage Commission Act 1975* have been satisfied by the RFA (AFFA, sub. 38). Beyond RFA regions, forestry activities would only trigger Commonwealth involvement if they are matters of 'national environmental significance' as defined by the proposed EPBC Bill (EA, sub. 21).

The proposed RFA legislation is designed to ensure that any future Commonwealth decisions will not result in reopening environmental assessment and approval requirements already satisfied under the RFA process. This is expected to increase certainty for all stakeholders.

However, both the RFA and EPBC Bills have been criticised by the Australian Conservation Foundation (*Australian Environment Review* 1998, p. 8):

> The environment is a national issue requiring a national response from our national government, we should not be leaving even more control in the hands of State Governments.

The Regional Forests Agreement Bill was referred to the Senate Rural and Regional Affairs and Transport Legislation Committee in December 1998 for consideration. The Senate Committee (1999) recommended passage of the Bill without amendment. It also recommended, amongst other things, that:

- annual reports of the operation of RFAs for the first five years of the period of an RFA be tabled in Parliament;
- after completion and signing by the Prime Minister and respective State Premier, each RFA be tabled in Commonwealth Parliament; and
- the Government should request the Australian Bureau of Statistics to compile comprehensive employment information for each RFA region.

D.2 Fisheries management plans

Background

Commonwealth fisheries are managed by the Australian Fisheries Management Authority (AFMA) under the *Fisheries Management Act 1991*. This Act requires AFMA to develop management plans for all commercial fisheries under its control and to manage them in accordance with ESD and other objectives.

The management of Australia's fisheries resources is a responsibility shared by the Commonwealth and State and Territory Governments. The Commonwealth is responsible for 10 major and 11 minor fisheries. To date AFMA has completed four management plans for fisheries under its control. These are the Great Australian Bight (1991), Northern Prawn (1995a), Southern Bluefin Tuna (1995b) and South East Trawl (1998) fishery management plans. All other Commonwealth fisheries are currently managed under policies based on AFMA's corporate plan and Act.

A number of factors are delaying completion of the remaining management plans. These include delays in the offshore constitutional settlement process, which attempts to rationalise management of fish stocks between States and the Commonwealth, and the time consuming nature of stakeholder consultation which is a key element of the development of management plans.

In addition to devising and implementing management plans, AFMA also licenses fishers, monitors fisheries, develops fishery adjustment and restructuring programs, and consults with the fishing industry and members of the public.

AFMA operates in an environment of significantly incomplete knowledge. For instance, even for Australia's best known commercial fish species, little is known about ecosystem processes and habitat requirements (FRDC 1998). Human effects also have a significant impact on the marine and coastal environments and returns to the fishing industry. Both of these factors imply that uncertainty and cross sectoral issues are key features of fisheries management.

Objectives

Management plans give effect to the legislative objectives contained in the Fisheries Management Act (box D.4) to particular fisheries. An important feature of the Act is that it explicitly incorporates, for the first time, the principles of ESD as a management requirement in Commonwealth fisheries. There are also a number of international conventions relating to the marine environment which AFMA takes into account, where to do so is consistent with the pursuit of AFMA's legislative objectives. Many of these conventions pre-date the NSESD yet incorporate ESD principles.

Table D.1 **Summary of objectives contained in management plans**

Management plan	*Exploitation consistent with ESD*	*Promote 'undeveloped' fisheries*	*Maximise economic efficiency*	*Exercise the precautionary principle*
Great Australian Bight	✓	✓	✓	✓
Northern Prawn	✓		✓	
South East Trawl	✓		✓	✓
Southern Bluefin Tuna	✓		✓	

Source: AFMA management plans.

Box D.4 **AFMA's legislative objectives**

The following objectives must be pursued by the Minister in the administration of the Fisheries Management Act and by AFMA in the performance of its functions:

- implementing efficient and cost-effective fisheries management on behalf of the Commonwealth;
- ensuring that the exploitation of fisheries resources, and the carrying on of any related activities, is conducted in a manner consistent with the principle of ecologically sustainable development and the exercise of the precautionary principle, in particular the need to have regard to the impact of fishing activities on non-target species and the long term sustainability of the marine environment;
- maximising economic efficiency in the exploitation of fisheries resources;
- ensuring accountability to the fishing industry and to the Australian community in AFMA's management of fisheries resources; and
- achieving government targets in relation to the recovery of the costs of AFMA.

In addition to these objectives, the Minister, AFMA and joint authorities are to have regard to the objectives of:

- ensuring, through proper conservation and management measures, that the living resources of the Australian Fishing Zone are not endangered by over-exploitation; and
- achieving the optimum utilisation of the living resources of the fishing zone; while ensuring as far as practicable, that measures adopted in pursuit of these objectives are not inconsistent with the preservation, conservation and protection of all species of whales.

Source: Fisheries Management Act 1991, s. 3.

Objectives contained in the four management plans are consistent with legislative objectives. Table D.1 summarises the objectives of the management plans. When considered as a whole, the objectives are consistent with promoting ESD principles. All management plans seek to promote economic efficiency and responsible management of each fishery and the ecosystem to which the fishery belongs.

Strategies and actions

AFMA develops management plans with the assistance of its Management Advisory Committees (see 'Involvement of other interested parties' section) and public input.

Key features of management plans include:

- the allocation of statutory fishing rights;

- specification of who can legally fish the resource and the rights of non-commercial fishers, such as scientists;
- the number of statutory fishing rights to be distributed; and
- obligations of holders of statutory fishing rights to provide information to AFMA.

Management plans also set out a full description of the fishing area, allowable fishing methods and contain a requirement that 'by-catch' (catch of non-target species) be kept to a minimum.

AFMA seeks to ensure that fishing is sustainable. To control growth in aggregate harvesting capacity, AFMA employs two management tools — output controls and input controls. Output controls seek to directly constrain the level of catch. Generally, output controls involve setting a total allowable catch (TAC) and apportioning this to individual fishers as individual transferable quotas (ITQs). AFMA develops TAC estimates after extensive consultation between fishery managers, the fishing industry, scientists and other interested parties.

ITQs represent a right to fish a certain amount of stock and thus give licence holders effective ownership over that amount. Fishers may buy and sell quota from other licence holders. Through this buying and selling process, ITQs in theory bring about a rationalisation of the fishing fleet which should result in the more efficient operators remaining in the industry. While the ITQ system is expected to result in a more efficient industry, there may be unintended social costs as fishers leave the industry (Crutchfield 1982). These types of social issues should be considered and accounted for to ensure that management plans are ESD consistent.

In certain fisheries however, an ITQ system is not possible at present, partly because there are not enough fishers operating in the industry to make a transferable quota market efficient. In such cases fishery managers use more traditional management methods, known as 'input controls'. These involve direct management interventions such as restricting vessel size, the type of harvesting gear that may be used, and the number and length of nets used. It may also involve 'closed seasons' or areas where no fishing is allowed during specified periods or within certain areas. Input controls are the most commonly used management tool in Australia and worldwide.

To ensure that fisheries are managed efficiently, AFMA's preferred management method, wherever possible, is to use an ITQ system to allocate a TAC between fishers. However, ITQs are not always the most appropriate management method for all fisheries, particularly those where the target species is short lived — such as prawns. In these cases, input controls continue to be the principal form of management of the fishery. Even in fisheries that are operating efficiently under a

quota system, managers often find they still have to regulate certain technologies and close fisheries at certain times.

Once management plans are gazetted there is no specified time limit to their operation. However, plans are monitored continuously and can be modified in line with new information about the state of a fishery. For example, within the Southern Bluefin Tuna Fishery Management Plan (AFMA 1995b) both the 'measures' and 'performance criteria' sections refer to continuous evaluation and data collection. There is currently a major amendment proposed with respect to the Northern Prawn Fishery management plan in response to concerns over sustainability of prawn stocks.

In 1991 the ESD Working Group for Fisheries reported on ways to make Australian fisheries ESD compliant. It made general recommendations on management arrangements and specific recommendations for the management plans. Many of the recommendations of the working group have been incorporated either within management plans, AFMA's enabling legislation, or through the established community consultation process.

Ex ante assessment

The development and implementation of fishery management plans is environmentally significant, hence an environmental impact assessment (EIA) is required under the EP(IP) Act.

According to the Australian National Audit Office (1996a), no environmental impact assessment or referrals to the Environment Protection Agency had occurred for management plans up to 1995. However, it is likely that environmental impacts were considered to some extent through public input in the development of management plans. Further, during 1995 the Southern Bluefin Tuna and Northern Prawn Fishery management plans were referred to the then EPA.

AFMA referred the South East Trawl management plan to Environment Australia for examination under the EP(IP) Act in June 1996. In its examination of the management plan, Environment Australia concluded that there were a number of significant issues associated with the South East Trawl fishery and achievement of ESD in the fishery, but that AFMA had generally established or proposed satisfactory management measures to address ESD issues over time (resp. 9, attachment 'ESD case studies', p. 1).

AFMA and the then Department of Environment, Sport and Territories developed guidelines to better integrate the formulation of AFMA management plans with the

EP(IP) Act (AFMA 1996). As part of this process, plans or actions are designated as environmentally significant. This is the first trigger in the Commonwealth EIA process. Plans are forwarded to Environment Australia which determines the level of assessment needed. Management plans and actions designated as environmentally significant under the EIA process include the East Coast Tuna and Billfish, South East Trawl, and Southern Shark Management Plans and the Macquarie Island Management Policy (AFMA 1996).

Coordination with other government agencies and programs

To monitor the effectiveness of fishery management plans and to minimise cross-sectoral impacts upon fish stocks, AFMA works closely with a number of Commonwealth agencies, including AFFA, Environment Australia, ABARE, the Bureau of Rural Sciences (BRS), and CSIRO. Examples of activities pursued with these other agencies are provided below.

AFMA, AFFA and Environment Australia have formed a liaison group which meets quarterly to develop strategic approaches to cross portfolio issues. In pursuit of its legislative requirement to minimise by-catch, AFMA also coordinates a taskforce consisting of representatives from Environment Australia, AFFA, BRS and CSIRO.

The Ministerial Council on Forestry, Fisheries and Aquaculture, which involves all States and Territories and the Commonwealth has a standing committee which recommends protocols, objectives, and criteria for a range of activities relating to fisheries such as jurisdictional arrangements, surveillance for compliance, research, management planning, and fisheries control.

As the majority of Commonwealth and industry funding contributions for marine research are directed to institutions and programs other than those coordinated by the Authority, AFMA has endeavoured to meet its research priorities indirectly by trying to influence the strategies of various institutions such as the Fisheries Research and Development Corporation (FRDC), CSIRO, BRS and ABARE (AFMA 1996).

AFMA also cooperates with other Commonwealth agencies and with State/Territory Governments in monitoring compliance with management strategies and identifying and undertaking research and educational activities. For instance, in relation to domestic compliance, AFMA uses the resources of State fisheries agencies, as well as private contractors, to undertake surveillance and monitoring functions. AFMA also works closely with the Australian Federal Police to investigate suspected breaches against the Fisheries Management Act (AFMA, sub. DR61).

Compliance programs directed towards foreign fishing vessels cover both authorised and unauthorised foreign fishing activities in the Australian Fishing Zone. These compliance activities are carried out by AFMA with the assistance of State fisheries authorities and in conjunction with agencies such as Coastwatch, the Royal Australian Navy and the Royal Australian Air Force (AFMA, sub. DR61).

AFMA has been playing an active role in preparation of the Oceans Policy. The Policy aims to provide a framework that will integrate management of activities throughout Australia's Exclusive Economic Zone. It is based on an understanding that sectoral management techniques of the past are not consistent with management from a whole of ecosystem perspective — a necessary prerequisite of ESD. This policy may have implications for AFMA's future role in managing fisheries.

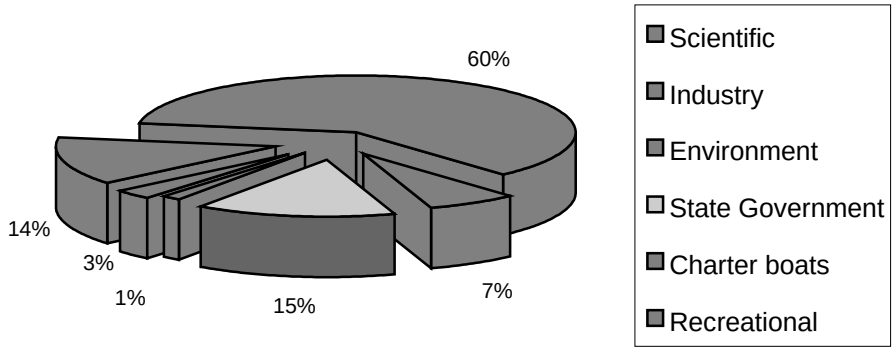
In some cases, AFMA cooperates with international governments and agencies because of the highly migratory nature of some fish stocks. This is necessary to ensure that good management in one nation is not compromised by lack of action in another. For instance, the Southern Bluefin Tuna fishery is covered by the *Convention for the Conservation of Southern Bluefin Tuna 1993*. Under this convention, Australia, Japan and New Zealand are signatories to an international agreement to manage the stock under an international quota arrangement (BRS 1997).

Involvement of other interested parties

In order to reduce uncertainty and foster a cooperative approach AFMA applies a partnership approach, involving key stakeholders, to the management of Australian fisheries. AFMA maintains close consultative links with stakeholders through the management advisory committee (MAC) and consultative committee (CC) processes established for each major fishery, and by encouraging input from other interested parties when developing management plans (AFMA, sub. DR61).

These MACs/CCs are advisory in nature and play a central role in the management of Commonwealth fisheries by providing the forum where issues relating to the fishery are discussed, problems are identified and possible solutions developed. The MACs/CCs are AFMA's main point of contact with each fishery and are the key mechanism for incorporating stakeholder input into fisheries management arrangements.

Figure D.1 Typical representation of AFMA MACs and CCs



Note: *AFMA is in the process of appointing conservation representatives to each MAC/CC. State government membership will increasingly be provided through permanent observer status rather than full membership as membership is restricted to nine persons.*

Sources: AFMA (1997) and AFMA (sub. DR61).

MACs/CCs comprise an AFMA member, representatives from the fishing industry, the research community and may include other stakeholders such as environmental organisations and charter boat operators (depending on the nature of the fishery or plan of management). The AFMA board has final responsibility for determining the actual membership of each MAC/CC based on the particular needs of the fishery. Figure D.1 provides a breakdown of typical MAC/CC representation by sector.

The functions of the MACs/CCs, determined under the Fisheries Management Act, may vary depending on the nature of the fishery. In broad terms, MACs/CCs are charged with providing advice and recommendations to the AFMA board on management and operational issues related to the management of a particular fishery. In addition to assisting in the development of management plans and surveillance-compliance budgets, MACs/CCs may also identify and make recommendations on research priorities. Research priorities identified at the individual MAC/CC level are reviewed and prioritised from an AFMA-wide point of view and forwarded to the FRDC for consideration.

While the MAC/CC process involves extensive, often lengthy consultation, AFMA considers it worthwhile as 'it is the key to gaining broader acceptance and ownership of management decisions' (AFMA 1996, p. 8). The industry consultation model used by AFMA is also recognised internationally. As quoted by the Australian Seafood Industry Council (sub. 8, p. 5), Dr Pamela Mace of the US National Marine Fisheries Service described it as an:

> ... innovation that empowers fishing communities and other stakeholders to play a more active role in decision making while also being accountable for their decisions.

Management plans, once enacted, require ongoing assessment to determine if the management plan is achieving its objectives and, if not, what changes to management plans may be necessary. As part of this process, data needs to be gathered and assessed and MACs/CCs consulted. For instance the South East Trawl Fishery Management Plan 1998 requires licence holders to provide samples/data of a biological, economic or technical nature to AFMA on request.

Monitoring, evaluating and reporting procedures

The Fisheries Management Act requires AFMA to include performance criteria in its management plans. In conjunction with its consultative committees and research partners, AFMA determines these criteria and monitors and reports against them in its annual report. The annual report also contains assessments of all other fisheries managed by AFMA which are assessed against guidelines contained in AFMA's corporate plan and the Fisheries Management Act. Table D.2 summarises performance criteria, directly relevant to ESD, that are contained in the existing four management plans.

The performance criteria outlined below recognise that other effects, not necessarily connected to the harvesting of a particular species, may impact on the viable population of a fish stock. Some of these effects include harvesting of species which are a food stock for another commercial species and by-catch. An example of the relevance of by-catch for ecologically sustainable management of fisheries is provided by the Northern Prawn Fishery. It has been estimated that only about 7 per cent of the total weight of catch in this fishery is actually prawn. In 1993, prawn catch totalled 7800 tonnes which implies by-catch, returned to the ocean often dead, of an estimated 100 000 tonnes (ANAO 1996b). Apart from having immediate environmental consequences, by-catch may also impact on the viability of other commercial fisheries through the reduction in fish stocks. The industry, scientific community and fishery managers have been developing ways to minimise the problems associated with by-catch through methods such as changes to net design.

Fisheries assessment groups (FAGs) also have an important role with respect to information and the provision of advice to AFMA. FAGs have been established for each major fishery group or individual species. They comprise representatives from different parts of the industry, including fisheries scientists, industry members, fishery economists, and other interest groups. They coordinate, evaluate and regularly undertake stock assessment activities for each fishery. Recommendations relating to stock assessments are reported to the AFMA board via the MACs/CCs. Stock assessment processes involve setting total allowable catch levels, stock

rebuilding targets if necessary, and setting 'biological reference points'. Biological reference points are used to set catch levels consistent with the precautionary principle. This requires AFMA to quantify minimum stock levels for each fishery below which the stock is likely to suffer irreversible damage. The work of these groups provides AFMA with the basic data necessary to judge if performance criteria are being satisfied within individual fisheries.

The scientific input of the FAGs is critical for setting maximum catch levels that are consistent with promoting ecologically sustainable management of the fisheries. Hence it is important for these groups to provide independent advice to AFMA on this issue.

AFMA also monitors fishing activity to determine compliance with management arrangements. For example, it maintains a comprehensive catch/landing reporting system for quota managed fisheries. Each fisher operating in a particular fishery must detail in a logbook the weight of total catch, time taken to catch, the spatial coordinates of the catch and details on the disposal of the catch. This is then forwarded to AFMA. This allows AFMA to keep track of progress towards set catch levels and also allows managers to build up a profile of the fishery. In the case of fishers in international waters and fishers of the orange roughy species, sophisticated technology that provides real time positioning of individual fishers is used to support formal documentation. AFMA uses aerial surveillance and some at-sea checking to monitor compliance with closures of fisheries and with regional fishing boundaries. Funding for compliance activities is split equally between industry and government.

Table D.2 **AFMA management plans — selected performance criteria**

	Fishery			
Performance criteria	*Northern Prawn*	*Great Australian Bight Trawl*	*South East Trawl*	*Southern Bluefin Tuna*
Increase parental biomass			✓	✓
Minimise by-catch			✓	
Economic status is improving		✓	✓	✓
Impact on ecologically related species minimised	✓		✓	✓
Rate of fishing sustainable	✓	✓	✓	✓
Catch not exceeded			✓	✓
Effects of fishing on local environment minimised	✓	✓	✓	
Implementation of a research program underway		✓	✓	

Source: AFMA management plans.

Contributions by Commonwealth and State agencies to ongoing monitoring of the state of the oceans and species also assist AFMA to monitor its progress against performance indicators and to develop new ones as needed. A significant example is the annual fisheries status reports produced by the BRS which specifically comment on the pursuit of ESD within Commonwealth fisheries. In addition, a number of studies are currently being undertaken to deal with some shortcomings of AFMA's performance criteria that were identified by the Australian National Audit Office in 1995-96 (ANAO 1996a). The most significant of these is a study by the BRS (1997) which has developed environmental, economic and social indicators for all Commonwealth fisheries.

Using the framework proposed in this report, the BRS considered that no progress towards ESD was made in the South East Trawl Fishery (the only fishery studied in depth) between 1993 and 1995. However, AFMA have argued that progress has been made in some component areas with respect to this fishery, for example sustainability of the stocks (sub. DR61).

Similarly, the Northern Territory Fisheries Joint Authority wrote in its submission (sub. 30, p. 1):

> Overall, the Northern Territory Fisheries Joint Authority (NTFJA) believes that the principles of ecologically sustainable development (ESD) are being successfully pursued by the Australian Fisheries Management Authority, the Fisheries and Aquaculture Branch of the Department of Primary Industry and Energy and Environment Australia …

and that (sub. 30, p. 2):

> In conclusion, the NTFJA is satisfied with the progress being made by the Commonwealth in pursuing the principles of ESD and that the initiatives currently under way in fisheries research and management will further enhance this.

Other supporting activities

As well as determining specific management plans, AFMA has completed strategic research plans for all major fisheries under its control. As part of the strategic plan process AFMA draws upon research priorities identified through the FAGs. Research proposals are forwarded to the FRDC for consideration and recommendations as to which proposals should be pursued. The FRDC is constrained through enabling legislation to only fund and administer research that contributes to the sustainable use and management of Australia's fishery resources. Hence, all research funded through the FRDC must support or contribute to ESD outcomes.

Strategic direction for fisheries research is also contained within individual management plans. All plans completed to date contain reference to developing and implementing a research strategy for each fishery that will enable AFMA to improve the way it undertakes its legislative responsibilities. However, as outlined in the 'Coordination with other government agencies and programs' section, AFMA can only influence the direction research takes. It is up to other agencies, chiefly the FRDC, to undertake specific research.

D.3 Natural Resource Management Strategy

Background

The Murray-Darling Basin Natural Resource Management Strategy (NRMS) provides a framework for integrated catchment management within the Murray-Darling Basin. The strategy, endorsed in 1990 by the Murray-Darling Basin Ministerial Council (the Ministerial Council), is part of the Murray-Darling Basin Initiative. The initiative is one of the largest integrated catchment management strategies in the world covering an area of over one million square kilometres in parts of Queensland, NSW, Victoria, South Australia and the ACT. It began operating in 1987 and was established under the Murray-Darling Basin Agreement.

The Murray-Darling Basin Agreement brings together the Commonwealth, New South Wales, Victoria, South Australia and Queensland governments, in equal partnership, to address issues of common concern within the catchment — the ACT has observer status. The agreement is the most recent form of a series of cooperative efforts between governments over basin resource use which began with the *River Murray Waters Agreement 1914*. Technical advice and coordination of the NRMS is the responsibility of the Murray-Darling Basin Commission (MDBC) under the direction of the Ministerial Council.

The NRMS aims to address some of the key environmental and resource allocation problems facing the Murray-Darling Basin which include (MDBMC 1990):

- rising saline water tables;
- dryland salinity;
- loss of riparian and riverine biodiversity;
- reduction in water quality; and
- excessive water diversion and over-allocation of water licences within the basin.

Objectives

The MDBC views the NRMS as a means to empower and inform local communities and encourage them to work in partnerships with governments across a range of resource management issues. This is entirely consistent with the Ministerial Council's stated aim for the NRMS and with legislative commitments.

> It will be the responsibility of individuals and communities who own and manage the land to implement sound resource management practices suited to their own localities. Government will however, support, encourage and coordinate Community activities. Government activity will be directed to issues requiring intergovernmental cooperation, Basin-wide policy and long term perspective. Government has neither the resources nor, in most cases, the authority to implement resource management programs on land managed by individuals. (MDBMC 1990, p. 11)

The NRMS aims to ensure that the utilisation of the basin's resources is consistent with the principles of ESD. Economic, environmental and social values are to be balanced so as to provide the greatest benefit to the basin as a whole. Within this context, the NRMS gives overall strategic direction to the coordination and integration of measures to improve natural resource management throughout the basin. The MDBC considers that the NRMS is the 'principal vehicle for change within the Basin' (MDBC 1998, p. 4).

The NRMS was initiated in response to environmental and resource concerns raised in an environmental resource study commissioned by the Ministerial Council in 1987. As a result of these concerns the Ministerial Council developed the NRMS to:

- ensure that resource utilisation within the basin is undertaken in an ecologically sustainable manner;
- maintain biodiversity;
- rehabilitate degraded ecosystems; and
- preserve the cultural heritage of the region.

Strategies and actions

To ensure that the overall strategic direction of the NRMS is followed consistently throughout the basin, the Ministerial Council utilises the Basin Sustainability Program (BSP). The BSP includes clearly defined objectives and performance indicators that allow outcomes of both government and community investment to be measured. It also oversees all planning and implementation of natural resource management within the basin and coordinates community and government

involvement. The BSP has been agreed to, in principle, by all represented parties within the Ministerial Council.

The BSP operates through two separate strategies — Strategic Investigation and Education (SI&E) and Integrated Catchment Management (ICM).

SI&E is the means by which priorities are identified and funding is directed to projects that will have significant environmental health and economic benefits. SI&E provides research and analysis to both direct and gauge outcomes of ICM investment. Amongst other things it allows reporting of environmental and resource use trends and environmental processes. It is also seen as central to fostering a partnership approach between the community and governments.

ICM is the mechanism for achieving the core, on ground environmental, social and cultural objectives of the BSP (and hence the NRMS). ICM funding is directed, with the help of SI&E output, towards projects that operate at the local, catchment and regional level. Funding is split evenly between the States and the Commonwealth with the Commonwealth component drawing upon Natural Heritage Trust funding.

ICM and SI&E operate through three key subprograms that encompass the main regions of the basin:

- the Irrigation Regions Management Subprogram which aims to achieve ESD within the irrigation sector by 2010 and to encourage strong, growing and diversified regional economies;
- the Riverine Environment Management Subprogram which aims to achieve ecological sustainability of the basin's riverine environment; and
- the Dryland Regions Subprogram which aims to foster ' … community and government partnerships to address serious problems of land, water and vegetation degradation in the dry-land regions of the Basin.' (MDBC 1998, p. 8).

In each of these subprograms, key result areas have been linked to performance indicators. In cases where action taken to achieve the aims of one subprogram have an effect on another subprogram, 'the outcomes and performance indicators for one Sub-Program are cross referenced to relevant outcomes and performance indicators in other Sub-Programs' (MDBC 1998, p. 4).

Each of these subprograms involves a dedicated working group responsible for determining SI&E priorities for funding consideration. The working groups also provide advice on policy and implementation of the BSP. A broader BSP working group coordinates all three subprograms and overall program delivery. Representatives on the groups and committees include government employees, academics and representatives from the community and private sector. They are

chosen by the MDBC because of their experience and expertise within all aspects of natural resource management.

While the MDBC coordinates all basin-wide strategies under the BSP banner it is the responsibility of the States to do most of the planning and on ground work for the BSP. This follows a three stage process involving State Governments, catchment management committees (CMCs) (see 'Involvement of other interested parties' section) and working groups.

Firstly, the States develop three year rolling plans which are updated yearly. Plans outline all proposed sources of investment funds including funds from community groups and state and federal programs. The States must detail, within their plans, the likely economic, social and environmental gains and losses from all proposed investments under the BSP. Plans are based upon local action plans developed by each catchment management committee and reflect BSP objectives and outcomes which have the core aims of sustainable productivity, water quality and nature conservation within the basin. At the same time as three year rolling plans are submitted to the MDBC, States submit ICM funding bids and action plans for the next financial year. ICM funding bids, linked to the States three year rolling plans, detail the areas where States consider that Natural Heritage Trust funding (with 50 per cent contribution coming from the State) should be directed.

Secondly, assessment panels in each catchment region assess the State funding bids and associated action plans against the BSP criteria and current three year rolling plans. This is facilitated by the MDBC which provides technical advice as required.

Thirdly, the agreed State bids are assessed by the working groups (Riverine, Irrigation and Dryland) and by an inter-governmental team established under the BSP working group. The role of the inter-governmental team is to assess if State bids address all the environmental and resource problems of current concern within the basin. To deal with any shortcomings, the inter-governmental team has the power to recommend additional funding if required.

The MDBC is currently undertaking a review of the BSP structure. This includes reviewing all key results areas, subprograms and objectives. It is being undertaken:

> … to improve the logic of the BSP and ensure that the objectives adequately address the areas of concern to the Commission. (AFFA, sub. 38, part B9. p. 3,)

Ex ante assessment

Some ex ante assessment of on ground work to be undertaken as part of the ICM strategy occurs at both the State level and through the MDBC.

As noted earlier, when developing their three year rolling plans, States must outline the likely economic, environmental and social gains and losses from all proposed ICM investments. This requires some form of ex ante assessment to be undertaken. In Victoria, for instance, multicriteria analysis is used to establish priorities and assess the impacts of proposed investments under the State ICM funding bids.

Once three year rolling plans are finalised at the State level, they are forwarded to the MDBC. The MDBC uses its expertise to assess both plans and bids to ascertain if all objectives of the BSP are likely to be met. Results of this process are then collated in a report which details whether States are, or are not, meeting the objectives of the NRMS.

Coordination with other government agencies and programs

Coordination and cooperation between governments is a fundamental element of the NRMS. The central institutional arrangements through which this occurs are the Ministerial Council and the MDBC (box D.5).

In addition to these arrangements, State and Local Governments perform a number of key roles to support the NRMS.

State Governments undertake most of the work priorities of the NRMS, from determining priority tasks to implementing them and reporting on progress. They are responsible for works which are State based and do not involve cooperation with other States. All are guided by the strategies and objectives of the BSP as it sets out how jurisdictions are to approach decision making through various standardised protocols. State Governments are further involved in the NRMS through the appointment of government officials and technical experts on various committees and working groups.

Local Governments may also contribute to the NRMS by identifying natural resource management problems, supporting individual land owners and community groups and integrating the concept of ESD into land use planning protocols. While there is no formal requirement for councils within the basin to cooperate with the NRMS, some jurisdictions are moving towards more integrated planning laws at the local government level. For instance the Victorian Government has recently undertaken an evaluation of local planning laws to achieve some uniformity in land use planning across regions. It is hoped this will allow further integration of policies across the basin, at least at the State and local level.

Box D.5 **Government cooperation in the Murray-Darling Basin**

The Murray-Darling Basin Ministerial Council

The Ministerial Council was established in 1985. It consists of three ministers from each signatory jurisdiction who together represent the portfolios of land, water and the environment. Decisions of the Council require unanimous support.

The Ministerial Council determines policy for the NRMS. Furthermore, it oversees the role of the Murray-Darling Basin Commission in implementing the NRMS and ensures that the Council is accessible to community action groups.

The Murray Darling Basin Commission

The commission's primary functions are to advise the Ministerial Council on natural resource planning and management issues throughout the basin and to assist the Ministerial Council in policy development.

The commission is made up of two commissioners from each of the contracting jurisdictions (Commonwealth, South Australia, Victoria, New South Wales and Queensland) and an independent president.

The commission's work requires close and ongoing cooperation with all relevant government departments and agencies across the basin. While the commission is concerned with all natural resource issues throughout the basin, areas requiring cooperation between two or more governments are given priority.

Source: MDBC (1998).

In its consideration of groundwater and salinisation issues in the Murray-Darling Basin, the Prime Minister's Science, Engineering and Innovation Council (PMSEIC 1996, p. 1) made the following statement about collaborative approaches between governments:

> … the implementation of a collaborative management arrangement between the States and Commonwealth — built on a knowledge-based approach and having a substantial community input — puts us in a position to progressively arrest the decline [in the environmental status of the Basin].

Involvement of other interested parties

Both the Ministerial Council and the MDBC recognise that community participation is the key to addressing natural resource degradation issues within the basin:

> ... [the] task is so large that it cannot be handled by Government alone. Government can provide leadership, research and technical advice and some financial assistance, and will address Basin-wide issues. It will be the role of regional and local Community groups to develop and manage action plans at regional and local levels. (MDBMC 1990, p. i)

The MDBC relies on a number of mechanisms (outlined below) to incorporate community input into the NRMS.

Community Advisory Council

The community advisory council (CAC) was established at the first meeting of the Ministerial Council in 1986. The role of the CAC is to allow the views and concerns of the basin community and other interested parties to be considered by the Ministerial Council. Explicit recognition of the need to involve the basin community in natural resource management issues is contained within the Murray-Darling Basin Agreement. The CAC reports directly to the Ministerial Council on management issues referred to it by the Council or the MDBC. In performing these duties, it is supported by a secretariat based within the MDBC's office.

The CAC is made up of the chair of each catchment management committee. The CAC meets three times a year to consider natural resource management issues. These may be issues referred to it by the Ministerial Council, raised at the catchment level or may be self-initiated through the CAC's involvement in every MDBC working group.

The main functions of the CAC are to:

- help basin communities and governments understand regional and basin-wide natural resource issues and the implications of management strategies;
- work with the community in partnership to develop and implement management strategies; and
- raise community awareness of the Murray-Darling Basin Initiative.

To facilitate wider community involvement with natural resource management issues the CAC, MDBC and the Ministerial Council all disseminate information widely. This includes promotional, educational and technical material. The CAC also produces a bi-annual newsletter as well as providing a comprehensive news gathering service primarily concentrating upon natural resource management issues within the basin.

Catchment Management Committees

At the State level, catchment management committees represent 14 management regions which have been identified by the MDBC as encompassing the major identifiable catchments throughout the basin. Each CMC operates under a regional strategy. These are developed from concerns raised at the individual farm level which are taken up by Landcare groups who pass this information onto CMCs to

develop local action plans. Local action plans are used by the States to develop land and water management plans and regional strategies. Regional strategies are aggregated on a State-wide basis to form each State's three year rolling plan.

CMCs bring together groups with diverse backgrounds to develop and implement projects and action plans with the support of government. The Ministerial Council (1990, p. 13) feels that encouraging such groups to address local issues with local knowledge produces solutions that are 'relevant and achievable, and their own responsibility'.

Local action plans are developed, at the regional level with the help of a coordinator who provides administrative support and also coordinates the activities of relevant government agencies. Technical advice is provided by the MDBC as required. On completion, the plan is presented to the respective State Government for review. After a further public consultation process, plans are implemented subject to government priorities and financial considerations.

The Prime Minister's Science, Engineering and Innovation Council (1996, ch. 4, p. 10) considers that the catchment based strategies, which incorporate the views and efforts of stakeholders, are successful in mitigating land and water salinity but that 'the operative term is mitigating, not alleviating or preventing'.

Monitoring, evaluating and reporting procedures

There are three main mechanisms in place for monitoring and evaluating the impacts and results of the NRMS.

Firstly, the MDBC has established performance indicators for each objective included in the BSP. These indicators seek to provide information relating to the physical condition of the natural resource base, actions taken to improve the natural resource base and opportunities available for further action. Indicators have also been developed to capture other implementation issues and the extent of community empowerment. At present there are over one hundred indicators in use.

However, in a recent field trial of the indicators, it was concluded that few indicators were useful in their original form and that work was needed to rationalise and refine them. As a result the MDBC, in partnership with the NSW Department of Land and Water Conservation, is refining performance indicators to:

- link the BSP indicators with Natural Heritage Trust indicators;
- refine and implement the BSP indicators so that they have clear meaning and measurability;

- reduce the number of indicators to produce a set that is comprehensive yet cost-efficient and consistent with other national/state indicator work;
- present a final set of indicators that have adequate data for reporting in subsequent years; and
- recommend a generic process for linking performance indicator reporting at regional strategy/action plan level and basin-wide reporting.

The Australian Conservation Foundation (sub. DR64, p. 12) commented that while:

> BSP does have objectives and performance indicators ... on most programs no performance monitoring against these performance indicators has ever been undertaken.

The Foundation (sub. DR64, pp. 12–14) also made a number of other criticisms of the BSP particularly in relation to how funding is allocated across sub-programs.

Secondly, each State produces annual reports which detail progress against three year rolling plans. The States have been using interim indicators of catchment condition, change in resource condition and are developing statewide monitoring networks. Progress reports are forwarded to the MDBC which assesses progress against the BSP. Monitoring at the MDBC level utilises working groups, technical staff, committees and the CAC which provides community input. The MDBC is currently undertaking a review of their reporting framework to ensure that it meets all of the BSP objectives (AFFA, sub. 38, part B9).

Thirdly, the Australian scientific community, represented by CSIRO and the BRS amongst others, plays an integral role in monitoring. Using on ground and satellite data, these research bodies are able to identify changes in the resource condition. This information is used by the MDBC as another check on whether local action plans are sufficiently comprehensive.

Apart from these key mechanisms, monitoring and transparency is facilitated by ensuring that stakeholders have access to all data used in deliberations. The MDBC facilitates this through its website and publications unit.

D.4 National Greenhouse Strategy

Background

Australia is a party to the United Nations Framework Convention on Climate Change. This convention seeks to stabilise greenhouse gas concentrations in the

atmosphere at a level that would prevent dangerous human induced interference with the climate system.

The Kyoto Protocol to this convention requires developed countries, as a group, to reduce their greenhouse gas emissions by at least 5 per cent from their 1990 levels by 2008–12. Within this arrangement, each developed country has agreed to a specific and differentiated target which is intended to reflect varying capabilities and cost burdens in making emissions reductions. Australia has committed to limiting its emissions in the target period to no more than an 8 per cent increase on 1990 levels. This target will become legally binding when the protocol enters into force and Australia has ratified it. The protocol will enter into force 90 days after at least 55 parties (of the parties included in Annex I), including parties which accounted for at least 55 per cent of the total carbon dioxide emissions for 1990, have ratified the protocol. Australia will consider ratification after a national interest analysis process (see 'Ex ante assessment' section). As a result, the protocol is unlikely to enter into force for several years (CoA 1998, pp. 101–102).

The National Greenhouse Strategy (NGS), launched by the Federal Government on 27 November 1998, is intended to provide the strategic framework for Australia's greenhouse response and for meeting current and future international commitments on this issue (CoA 1998b, p. 2). It is an extension of action launched by all Australian Governments in 1992 through the National Greenhouse Response Strategy.

The significance of the enhanced greenhouse effect is summarised in the NGS (CoA 1998b, p. 1):

> The world's climate scientists have provided us with a clear message — that the balance of evidence suggests a discernible human influence on global climate … Although Australia only contributes just over 1% of total greenhouse gas emissions, our per capita emissions are among the highest in the world … [and] Substantial growth in our emissions is projected.

Similarly, Dovers (1995, p. 145) notes that 'Human-induced climate change is potentially the most serious sustainability issue, the one most surrounded by uncertainty and debate'.

In the *Safeguarding the Future: Australia's Response to Climate Change* Statement (CoA 1997, p. 4), the Prime Minister committed $180 million over five years to measures designed to address the enhanced greenhouse effect.

Objectives

The three key goals of the NGS (CoA 1998b, p. 3) are to:

- limit net greenhouse gas emissions in accordance with Australia's international commitments (modules 3, 4, 5, 6 and 7);
- foster knowledge and understanding of greenhouse issues (modules 1 and 2); and
- develop adaptation responses to climate change (module 8).

The Government has identified (CoA 1998b, p. iii) the limitation of Australia's net greenhouse gas emissions, consistent with the Kyoto Protocol as the most important priority and, in particular, the NGS (CoA 1998b, p. iii) expects that:

> Implementation of the Strategy will forge major reductions in Australia's projected emissions growth, consistent with meeting our international commitments.

The NGS operates under the following set of principles (CoA 1998b, p. viii) which are to guide further development and implementation:

- the need for a strategic and comprehensive greenhouse response that addresses Australia's national interests and circumstances;
- the need to integrate greenhouse considerations with other government commitments;
- pursuit of greenhouse action, consistent with equity and cost-effectiveness, and with multiple benefits;
- partnerships between governments, industry and the community for delivering an effective greenhouse response; and
- action to be informed by research.

As part of the principle relating to integration with other government commitments, the strategy specifically states (CoA 1998b, p. 3) that it should be 'consistent with the principles of ecologically sustainable development' and that it should:

- seek the integration of greenhouse policy with broader economic, environmental and social policies:
  - to ensure the Strategy takes account of competing or complementary goals, policies and priorities; and
  - to promote the need for greenhouse goals and policies to be recognised in the development of other government policies.

Similarly, the third principle (CoA 1998b, p. 3) seeks to achieve a 'focus on approaches which have financial, social and environmental benefits to the community'.

Strategies and actions

The NGS seeks to address greenhouse issues in a comprehensive way by covering activities in the following key sectors — energy, transport, industry, waste, agriculture and vegetation, and households. It encompasses a broad range of actions to reflect the wide ranging contributors to greenhouse gas emissions, and the wide ranging implications of the potential impacts of climate change on the environment, community and the economy.

The NGS targets all aspects of society and includes a package of existing and additional greenhouse gas abatement measures to be implemented by all levels of government, business and the community (EA, sub. 21, p. 43). It includes measures announced in the Prime Minister's Statement (CoA 1997).

The strategy comprises eight interrelated modules.

1. **Profiling Australia's greenhouse gas emissions.** An accurate profile of greenhouse emissions is essential for an effective response to the greenhouse issue. This module involves identifying and quantifying emissions from different sources and quantifying absorption by 'sinks'. This information is already collected through preparation of National Greenhouse Gas Inventories which Australia does annually. The inventories are categorised into six sectors — energy, land use change and forestry, agriculture, industrial processes, solvent and other product use, and waste. Quantification methods for measuring greenhouse emissions, particularly for estimating sinks, are still being developed. The NGS outlines ways for improving greenhouse gas inventories, providing community access to inventory information by making it more 'user friendly' and continuing work on projecting future emissions.
2. **Understanding and communicating climate change and its impacts.** This involves undertaking and reviewing research to improve scientific understanding of the climate system, establishing a program to assess the impacts of climate changes in priority areas and developing a national or common set of models to promote research in this area. It also incorporates a Greenhouse Communications Strategy to raise community awareness and provide a coordinated approach to informing the public.
3. **Partnerships for Greenhouse Action** is about establishing partnerships between governments, industry, non-government organisations and the

community to further greenhouse action. A key element of this is the Greenhouse Challenge Program through which industry enters into cooperative agreements with government to reduce their greenhouse gas emissions by improving energy efficiency. Other initiatives are directed at fostering community involvement through means such as targeted information campaigns.

4. **Efficient and sustainable energy use and supply** is about limiting emissions from the energy sector. This is a major focus of the NGS because of Australia's heavy use of fossil fuels, reliance on energy intensive industries and export of energy. The NGS outlines actions in the areas of reducing the greenhouse intensity of energy supply, promoting the development of renewable energy sources, and improving end use energy efficiency. This includes an intention to mandate a requirement for electricity retailers and other large electricity buyers to source an additional 2 per cent of their electricity from renewable sources by 2010.
5. **Efficient transport and sustainable urban planning.** This module involves strategies aimed at integrating land use and transport planning to improve the long term potential for greenhouse gas emission reductions. It includes measures designed to improve traffic management; encourage greater use of alternative modes of transport such as public transport, cycling and walking; improve vehicle fuel efficiency and fuel technologies; and actions designed to address the projected growth in emissions from road freight.
6. **Greenhouse sinks and sustainable land management.** This module involves expanding and managing greenhouse sinks such as forests and other vegetation and reducing greenhouse gas emissions resulting from agricultural production.
7. **Greenhouse best practice in industrial processes and waste management.** This requires partnerships between industry and government to further reduce emissions arising from industrial processes and measures to minimise and improve the disposal of waste to reduce methane emissions from landfill and from waste water.
8. **Adaptation strategies for climate change.** This aspect of the NGS recognises that, despite efforts to limit greenhouse gas emissions, some degree of climate change may be inevitable as atmospheric levels of greenhouse gases are expected to increase. Adaptation strategies will be developed for key sectors that may experience significant impacts from climate change such as the coastal zone, agriculture, biodiversity, forestry and health.

Many modules in the NGS contain information on the jurisdictions responsible for implementing particular measures and an indicative time frame for action. However, jurisdictions are to prepare detailed implementation plans which will take the form of State/Territory greenhouse strategies (or action plans), or nationally coordinated

plans for specific measures will be developed (CoA 1998b, p. iii). Implementation of NGS measures in different geographical areas will take into account the varying environmental, social and economic conditions of each jurisdiction.

The NGS proposes numerous, multifaceted actions to deal with the greenhouse issue. It envisages that some will be implemented by governments acting alone, some by joint interdepartmental initiatives and some through partnerships between government, various stakeholders and the community. All governments are expected to participate in the strategy's implementation, monitoring and review.

This approach acknowledges that the Commonwealth can provide leadership and be involved in international negotiations on greenhouse issues, but that State/Territory and Local governments are responsible for many areas related to implementation of climate change policy.

A large number of actions outlined in the NGS are undertaken on a voluntary basis by participants. Examples include the Greenhouse Challenge and the Cities for Climate Protection programs. An emissions trading system (ETS) may be introduced as a future NGS strategy (see 'Other activities' section).

In its study, the Centre for International Economics (1998, p. 5) stated that:

> … should NGS measures, other than an ETS, be successfully implemented and achieve their expected emissions reduction targets, GHG [greenhouse gas] emissions (excluding those from land clearing) would still be 18 per cent above 1990 levels by 2010. Adding land clearing into the equation has big and uncertain effects. Depending on projected emissions from land clearing, *total* emissions could be as low as 4 per cent below 1990 levels or as high as 39 per cent above 1990 levels.

Ex ante assessment

The NGS builds upon the initiatives contained in the 1992 National Greenhouse Response Strategy (NGRS) and arose out of a review of the NGRS commenced in 1996. This ex post review of the NGRS might also be viewed as an ex ante assessment of the current strategy as far as it assessed the effectiveness of the previous strategy and considered whether it should be continued and in what form. In fact, the current NGS (CoA 1998b, p. viii) states that the review 'recognised that the efforts of the Commonwealth and State/Territory and Local Governments represented by the NGSR form a substantial part of Australia's overall effort to reduce emissions'.

The review also involved consultation with stakeholders which is generally a critical component of an ex ante assessment.

In May 1996, the Commonwealth Government announced changes to the treaty making process which now includes a requirement for national impact analyses (NIAs). These are to provide for more effective consultation and to improve public and Parliamentary scrutiny (PC 1998). As a result, the Commonwealth Government is required to undertake a NIA, prior to ratifying the Kyoto Protocol, which will examine the implications of the protocol for Australia. This should also involve extensive consultations with State and Territory Governments, industry, non-government organisations and the general public. NIAs are tabled before Parliament's Joint Standing Committee on Treaties (DFAT, sub. 37).

Coordination with other government agencies and programs

The NGS states (CoA 1998b, p. 2) that:

> The need to integrate greenhouse and other policy objectives has been a key consideration in developing the National Greenhouse Strategy … [and that] greenhouse policy must also be integrated with that addressing other community concerns, particularly economic and trade policies, micro-economic reform agendas, competition policy reforms and the review of Commonwealth/State environmental roles and responsibilities.

The NGS was jointly developed by the Commonwealth, and all State and Territory Governments, with the involvement of the Australian Local Government Association and industry and community consultations.

In April 1998, the Government established the Australian Greenhouse Office (AGO), within the Environment portfolio, to act as the lead agency on greenhouse issues, to coordinate domestic climate change policy and to manage the delivery of key greenhouse response programs (EA, sub. 21). The office has been established for an initial period of two years.

The office is a tripartite organisation formed through contributions from three key departments — Environment Australia; Industry, Science and Tourism (now Industry, Science and Resources); and Primary Industries and Energy (now Agriculture, Fisheries and Forestry) (AGO 1998a). The office reports to a ministerial council which reflects its whole of government nature (EA, sub. 21, p. 42).

Notably, the Department of Transport and Regional Services, which represents a sector of the economy that makes a significant contribution to greenhouse gas emissions, was not included amongst the departments that formed the AGO. This appears to be a significant oversight.

In acting as the lead agency on greenhouse matters, the office (EA, sub. 21, p. 43) has commented that :

> The AGO places great importance on effective consultation and partnership arrangements with other departments, stakeholders and interested parties
>
> [and] … uses a range of formal and informal mechanisms for consultation. Many of [which] … were set up some years before its establishment ...

Formal consultation occurs through a large number of bodies (EA, sub. 21, pp. 43–4) such as the :

- Council of Australian Governments High Level Group (comprising senior officers from Commonwealth, State and Territory Governments);
- Greenhouse Science Advisory Council (an expert group mainly comprising scientists);
- Expert Group on Emissions Trading (comprising representatives from government and industry); and
- Joint Consultative Committee on Greenhouse Challenge (comprising government and industry representatives).

The High Level Group is to facilitate coordination of measures contained in the NGS. It is responsible for managing the ongoing monitoring, review and further development of the NGS and it reports to the Council of Australian Governments.

Other coordination and consultation groups are currently being established (EA, sub. 21, p. 43) and will include a National Greenhouse Strategy Implementation Planning Group to develop and oversee detailed implementation plans for the NGS. This will comprise senior officers of the Commonwealth, State/Territory and Local Governments. A Greenhouse Advisory Council comprising key stakeholders across all sectors will also be established to provide an avenue for stakeholder participation in the implementation and further development of the NGS (Australian Greenhouse Office, resp. 18, p. 3).

On a more informal basis, AGO works in cooperation with Commonwealth departments and agencies such as Environment Australia, Department of Foreign Affairs and Trade, AFFA, Department of Industry, Science and Resources, Department of Transport and Regional Services, BRS, ABARE and CSIRO (EA, sub. 21).

Similarly, implementation of some AGO programs and NGS measures involves a range of ministerial councils and standing committees such as the Australian and New Zealand Environment and Conservation Council, the Australian and New Zealand Minerals and Energy Council, MCFFA, the Agricultural and Resource

Management Council of Australia and New Zealand and the Ministerial Council for Education, Employment, Training and Youth Affairs (EA, sub. 21).

Among the agencies involved in researching greenhouse issues are CSIRO, the Bureau of Meteorology, universities, Cooperative Research Centres and States and Territories. Scientific efforts are directed through the National Greenhouse Research Program.

Involvement of other interested parties

In addition to coordination at the governmental level, industry and other non-government organisations have provided input to the development of the NGS and are essential for its implementation. As outlined above, an advisory committee consisting of key scientific, forestry, rural, conservation and industrial interests will be established to provide advice on implementation of the NGS.

One of the key goals of the NGS is fostering knowledge and understanding of greenhouse issues. Elements of two of its eight modules reflect this goal and provide opportunities for stakeholder participation. An example of this is the Greenhouse Communications Strategy which is designed to raise community awareness of the NGS and to provide a coordinated national approach to ongoing community information programs on greenhouse issues. To complement this, a national greenhouse information service will also be established to provide up to date information via the internet on greenhouse gas emissions, scientific developments and developments in national and international policy issues and initiatives.

Examples of greenhouse programs that incorporate industry involvement are the Greenhouse Challenge and, more recent, Greenhouse Allies programs. Under these programs, industry enters into voluntary arrangements with government to reduce greenhouse emissions. According to the AGO (resp. 18, p. 13):

> The progress reports of Greenhouse Challenge participants also indicate that significant improvements are being made in corporate management processes and culture, to provide a lasting basis for examining opportunities for greenhouse gas reductions, consistent with competitiveness.

The Cities for Climate Protection program is an example of Local Government participation in greenhouse strategies. Local councils which are participating in this program receive assistance and support for assessing their current and likely future levels of greenhouse gas emissions and for developing and adopting action plans to reduce emission levels (AGO, resp. 18).

Monitoring, evaluating and reporting procedures

The NGS provides for reports on its implementation on a biennial basis with the first due in the latter half of 2000. These reports will be tabled in Commonwealth Parliament and will include assessments of Australia's progress towards its Kyoto target, progress in implementing measures contained in the strategy, and the effectiveness of measures in addressing the strategy's goals of limiting emissions and enhancing greenhouse sinks (CoA 1998b).

The strategy outlines some of the performance indicators (CoA 1998b, p. 103) that will be used to help assess the effectiveness of the measures contained in the NGS. A set of performance indicators initially developed to evaluate the 1992 National Greenhouse Response Strategy forms the basis of the current indicators. These have been divided into two groups — 'macro' indicators that provide a measurement of overall national performance and 'sectoral' indicators that reflect sectoral goals.

The NGS states that (CoA 1998b, p. 103):

> The final set of performance indicators, including secondary and diagnostic indicators, will be developed in 1998/99 to complement the macro and sectoral indicators.

In addition to these biennial assessments, the NGS will be subjected to periodic comprehensive reviews to ensure its continued relevance. The first of these will be conducted in 2002, or earlier if required as a result of developments relating to the Framework Convention on Climate Change and the Kyoto Protocol. The NGS does not state how often these periodic reviews will occur. Key factors (CoA 1998b, p. 5) that will be considered in these reviews include:

- analyses of trends in emissions and projections of future emissions;
- developments in relation to the Framework Convention on Climate Change and Kyoto Protocol;
- the biennial assessments of progress and effectiveness in implementing the strategy;
- findings from research of the costs and benefits of greenhouse policy response;
- developments in greenhouse science;
- advice from the stakeholder advisory committee; and
- community views as identified via a call for public submissions.

As a result of these reviews, the High Level Group will make recommendations to COAG for refining and further developing the NGS to ensure it remains relevant and effective.

Just as all governments are expected to participate in implementation of the NGS, they are also expected to be involved in monitoring and reporting its outcomes and in reviewing and further developing it.

The NGS states that it (CoA 1998b, p. 4) 'should focus on outcomes not processes and emphasise market based solutions, wherever possible to the identified problems'. Similarly, the AGO emphasises the monitoring and evaluation aspects of the strategy (EA, sub. 21, p. 46, bold in original text):

> **Monitoring of measures contained within the National Greenhouse Strategy, and its predecessor the National Greenhouse Response Strategy, is also an important part of the AGO's operation. At this stage it is difficult to measure the effectiveness of established measures in reducing emission levels due to:**
>
> - the long time lag between implementing measures and having a measurable effect;
> - establishing causal links; and
> - the difficulty in separating anthropogenic and non-anthropogenic sources of emissions.
>
> This is an area of priority for future reviews of the NGS.

Other supporting activities

Further development of the NGS will be underpinned by research into the benefits and costs of policy response and adaptation options. In particular the strategy notes (CoA 1998b, p. 5) that the Commonwealth, in consultation with States and Territories, will ensure that research is conducted into the:

- benefits, costs and tradeoffs of greenhouse mitigation strategies and policies; and
- potential for market based instruments to be part of the solution and how these might interface with possibly similar international approaches.

An example of the latter focus for research efforts is provided by AGO's current examination of the feasibility and desirability of using a national ETS as part of the greenhouse response. This issue is currently being examined by an Experts Group on Emissions Trading and a Commonwealth/State Government working group. The AGO also intends to consult a wide range of industry bodies and other interested parties on the issues associated with establishing a national ETS (Andrews 1998, p. 2). The first of a series of four discussion papers planned as part of the process of developing a national emissions trading system was released for public comment in March.

The AGO expects to submit a set of views on emissions trading to Government during 1999 (AGO, resp. 18).

There may be benefits in deciding quickly whether to establish a national ETS and its form. Uncertainty for industry on how permits are likely to be allocated could deter or delay firms' current efforts to reduce their greenhouse gas emissions. However, one constraint on an early decision regarding a national ETS is that any national emissions trading system — if pursued — would also need to be consistent with the international emissions trading system, the rules of which are yet to be negotiated.

The international emissions trading system is one of a number of mechanisms or features incorporated in the Kyoto Protocol which should enable signatories to use least cost methods for achieving their Kyoto targets. Others are:

- the multiyear commitment period (that is 2008–2012);
- the inclusion of all greenhouse gases so that reductions in emissions of one gas can be used to substitute for increases in emissions of others, and the inclusion of certain 'sinks';
- joint implementation among industrialised countries which allows them to share any emission reductions they may achieve through joint projects; and
- a 'clean development mechanism' which allows industrialised countries to earn credits for projects in underdeveloped countries that reduce emissions.

These mechanisms or features offer signatories greater scope to take into account the economic, and indirectly the social, consequences of meeting what might otherwise be viewed as essentially environmental goals.

D.5 Environmental management by the Department of Defence

Background

The Department of Defence is the largest holder of Commonwealth owned land, occupying approximately 3 million hectares in areas such as Shoalwater Bay in the Great Barrier Reef Marine Park and Garden Island in Western Australia. A significant proportion of this land comprises Defence training areas.

Continued access to training areas is essential for Defence to maintain its combat capabilities. Furthermore, the range of activities undertaken by Defence has the potential to do significant environmental damage. Responsible management of the environment in which Defence operates is therefore important to ensure continued availability of major training areas and preservation of the environmental

characteristics that contribute to their training value. Defence also has a responsibility as custodian of the land it uses to ensure that environmental values are maintained or even enhanced (DoD 1998b).

A number of recent reports (ANAO 1996c; Coopers and Lybrand 1995; DoD 1995) examining environmental management in Defence concluded that it was not being approached in a consistent, coordinated manner and that there was scope for significant improvement. As a result, the Defence environmental policy was promulgated in November 1997. The Defence Environment Policy Statement (DEPS) (DoD 1998b) outlines environmental goals and principles for the Department. The DEPS forms the cornerstone for Defence to further its commitment to the sound management of the environment in which it operates. The Defence Estate Organisation, which is the program responsible for management of all Defence land, buildings and infrastructure assets, has responsibility for development and implementation of the DEPS and for environmental management of the Defence estate.

This case study demonstrates how a department which pursues primarily social objectives (Australia's defence) can also incorporate environmental considerations into its activities and thereby have a major impact on promotion of ESD outcomes.

Objectives

Defence's overall environmental objective is reflected in the environmental vision statement communicated in the DEPS (DoD 1998b, p. 4) — 'Defence will be a leader in environmental stewardship as an integral part of its activities'.

This vision statement is designed to reflect Defence's commitment to the environment and to guide Defence personnel to actively and responsibly manage the environment. Achieving this vision requires environmental protection to be incorporated into 'planning and operational activities … by using a totally integrated day-to-day environmental management system' (DoD 1998b, p. 4).

Box D.6 **Department of Defence environmental goals**

The Defence Environment Policy Statement lists 14 environmental goals:

- manage the environment responsibly;
- conduct comprehensive environment impact assessments;
- comply with environment legislation and policy obligations;
- conserve and manage renewable and non-renewable resources;
- conserve Australia's natural and cultural heritage;
- conserve energy;
- minimise waste;
- control pollution;
- minimise and remediate contaminated sites;
- consult effectively with the community;
- incorporate environmental considerations into purchase and procurement procedures;
- minimise environmental impacts associated with military operations and training;
- incorporate environmental assessment into land disposal procedures; and
- conduct comprehensive environmental education and training for Defence personnel.

Source: DoD (1998b).

The DEPS lists 14 more specific environmental goals for Defence (box D.6). A number of these goals appear to be more appropriately described as strategies or actions for achieving Defence's environmental objectives, for example environmental impact assessment). Principles to achieve these goals are largely derived from Commonwealth policies and laws covering the environment and reflect the Department of Defence's position on key environmental issues.

Strategies and actions

Key strategies to achieve Defence's environmental objectives include:

- development of a Defence Environmental Management System (EMS) to provide a framework for coordinated environmental management across the Defence portfolio;
- development and implementation of environmental management plans (EMPs);
- development of Defence Instructions on environmental management;

- environment management in major Defence exercises;
- establishment of the Defence Environmental Management Committee;
- establishment of the Defence Environmental Panel; and
- management of acquisition and procurement processes.

Defence Environment Management System

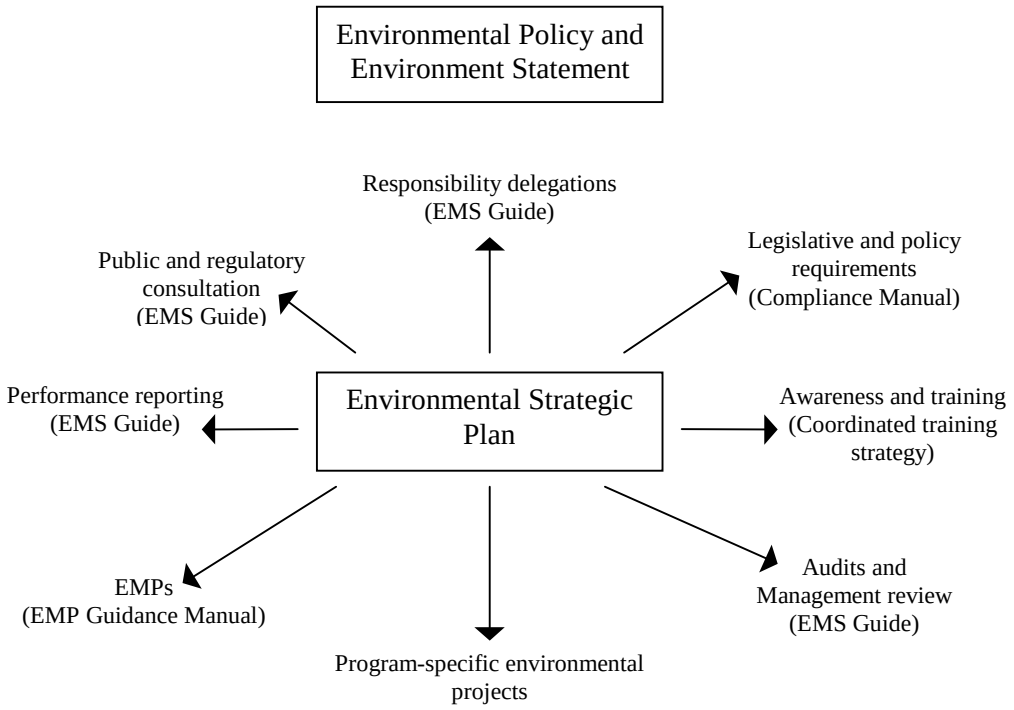
As mentioned previously, a number of reports examining environmental management in Defence concluded that environmental management was not being approached in a consistent, coordinated manner. To overcome this, development of a Defence EMS based on the ISO 14000 series of international standards was commenced in mid 1997. A development review was completed in December 1997. It recommended a framework for the EMS to provide a coordinated approach to environmental policy and the discharge of environmental obligations by Defence.

The EMS aims to achieve a number of operational benefits for Defence, including:

- achievement of the goals of the Defence Environment Policy Statement;
- improved sustainable management of Defence training areas;
- increased confidence in Defence environmental management leading to reduced intervention from regulatory authorities;
- better and more cost-effective utilisation of Defence resources in implementing environmental protection measures;
- integration of environmental objectives with Defence operational goals;
- improved public image for Defence; and
- a more strategic approach to environmental management with potential to reduce the need for expensive 'one-off' environmental impact assessments (EIAs) (DoD 1998a).

The Defence EMS is illustrated conceptually in figure D.2. The DEPS provides overarching guidance for Defence environmental management. The core element is the strategic plan. Management support is provided by measures such as EMPs, a legal and policy compliance manual, training and education, and review and reporting mechanisms.

Figure D.2 **The Defence environmental management system**



Source: DoD (1998a).

Development of key elements of the EMS is currently under way. The Defence Environment Policy Statement has been completed, guidance on compliance with legislative and policy requirements has been drafted, and standardised guidance for development of EMPs are being trialed. Elements yet to be developed are an environmental strategic plan, EMPs and a training and education program. An Environmental Management Information System which links the principles of the ISO 14000 series of standards with spatially referenced data in a business systems framework is also being developed (DoD, responsible. 22).

Environmental management plans

EMPs are an important mechanism for achieving Defence's environmental goals. They detail aspects of the environment which need to be actively managed, the best approaches for their management and the resources needed to complete the management process. EMPs are to be developed for Defence properties and assets, and any Defence activity for which detailed descriptive management tasks are required to manage negative environmental impacts and to promote sustainable use of resources (DoD 1998b). Development of EMPs is progressing, with an EMP Guidance Manual which aims to ensure consistency of approach across the

organisation being trialed. A risk survey has also been undertaken to identify priority areas for EMP development.

Defence Instructions

Defence Instructions are a formal instrument for the issue of policy directives and guidelines on administrative matters in Defence. Defence Instruction (General) Administration 40-1 Environment and Heritage was released in 1990 to provide guidance and procedures for environmental impact assessment and clearance processes for Defence activities and proposals, and to ensure statutory obligations for environment and heritage are met. An updated version is currently being developed which will more visibly reflect the principles of long term sustainability. Additional instructions are also being developed to deal specifically with contaminated sites, management of heritage responsibilities and inclusion of environmental issues in military exercise planning (DoD, resp. 22).

Environment management in major Defence exercises

Increasing emphasis on responsible management of the Defence estate has led to increased scrutiny of the way military exercises are conducted. Tandem Thrust 97, a combined land and sea exercise in the Shoalwater Bay Training Area of the Great Barrier Reef Marine Park, was subjected to an EIA. The exercise also saw the establishment of an Environmental Monitoring Group, whose responsibilities included: conduct of inspections of the training area before, during and after the exercise so that environmental impacts could be closely monitored; provision of expert environmental advice; and community and media liaison on environmental matters.

The planning and environmental assessment of the exercise involved close collaboration with the Great Barrier Reef Marine Park Authority and the Queensland Department of Environment and Heritage. Following the exercise, an *Environmental Lessons Learned Report* was produced. The findings are currently being applied in the environmental planning for Exercise Crocodile 99, a combined Defence Force exercise to be held in northern Australia in 1999.

Defence Environmental Management Committee

A Defence Environmental Management Committee (DEMC) is currently being established to coordinate the approach to environmental management across the Defence portfolio. The DEMC will meet approximately twice yearly, and be

supported by a working group which will meet more frequently. The roles of the DEMC will be:

- advising on resource requirements to meet the obligations of the DEPS;
- monitoring performance in meeting objectives of the DEPS, and institute corrective action as necessary;
- reporting on progress in implementing the DEPS;
- overseeing regular formal, independent reviews of the DEPS and EMS;
- reviewing the implications for Defence of changes in environmental legislation and Commonwealth Government policies;
- reviewing major environmental incidents and issues; and
- overseeing development of the Defence Environment Strategic Plan.

Defence Environmental Panel

The Defence Environmental Panel of consultants was established in 1997 to provide Defence with environmental support for its activities in the areas of professional advice, environmental training and the preparation of plans, reports and assessments. The arrangement ensures environmental services supplied to Defence across Australia are of a consistent standard. It also pools the expertise gained by companies working with Defence and shares that expertise across the Defence organisation (DEO 1998a). The arrangement allows consultants to develop the ability to respond quickly and effectively to Defence's specific requirements for environmental expertise, realising cost and time savings for Defence in selecting suitable consultants. The panel consists of three internationally recognised environmental consulting firms who offer their services to Defence under fixed terms and conditions.

Acquisition and procurement processes

Defence is a major Commonwealth purchaser hence environmental aspects of Defence acquisition and procurement processes are important. Relevant initiatives in this area include:

- a chapter on environmental management in the Defence Capital Equipment Manual guides project managers undertaking EIAs of new defence capabilities;
- the Defence Procurement Policy Manual, which provides directions on environmentally responsible procurement and requirements to consider energy efficiency in purchasing; and

- the recent move to life cycle costing in Defence capability decision making which identifies all costs of Defence equipment including purchase, operating, environmental and disposal costs.

Ex ante assessment

The main mechanism for ex ante assessment of potential environmental impacts of Defence activities is through comprehensive EIAs (box D.7).

Two forms of EIA are undertaken by Defence. The first considers impacts likely to occur from potential activities or decisions, and is driven by legislative requirements. The second identifies impacts resulting from past or current Defence activities and is generally driven by Defence environmental management practices (DoD 1998b).

Various levels of EIA operate within Defence, depending on the nature of the proposal in relation to the significance and sensitivity of the affected environment. Under a memorandum of understanding (MOU) with Environment Australia, an Environmental Certificate of Compliance can be issued by a specified Defence delegate for proposals without the potential for significant environmental impact. Those proposals that have potential environmental significance are referred to the Assistant Secretary, Resources and Policy, who then determines whether to issue an Environmental Certificate of Compliance or formally refer the proposal to Environment Australia. If the proposal is referred, Environment Australia determines whether the proposal requires informal assessment or a formal assessment such as a public environment report, an environmental impact statement or a commission of inquiry (DEO 1998b).

Defence is also in the process of adopting a risk assessment protocol. The protocol is based on the Australian/New Zealand Standard for Risk Management AS/NZS 4360:1995 and recognises that the level of risk is proportional to the consequences of the impact and the likelihood of the event causing an environmental impact. It will provide a semi-quantitative ranking of the risks of environmental harm resulting from activities on the Defence estate. Assessment and management of potential environmental impacts associated with Defence activities will be a key function of Defence EIAs, and the risk assessment protocol will be applied to development of all future EMPs and in the assessment processes for major exercises (DoD, sub. 35).

Box D.7 **Principles for undertaking environmental impact assessments**

The Defence Environment Policy Statement sets out six principles to be adopted by Defence personnel in undertaking EIAs:

- environmental impact and management considerations are to be integrated at an early stage in the decision making process and recognised as significant determinants in that process;
- the objectives of ESD and the application of the precautionary principle are to be key considerations in all EIAs;
- Defence personnel are to ensure full compliance with the requirements and intent of Commonwealth environmental impact legislation, and also with standards set down under relevant State/Territory environmental impact legislation where they do not conflict with Commonwealth legislation and policy;
- if an environmental clearance with conditions has been given to undertake an action, Defence personnel must ensure that these conditions are fully implemented;
- Defence instructions on EIA procedures are to be fully implemented; and
- professional opinion should be sought where there are limitations in assessing potential environmental impacts of a proposed, current or past activity.

Source: DoD (1998b).

Coordination with other government agencies and programs

Defence has entered memoranda of understanding related to environmental matters with a number of other Commonwealth departments and agencies, including Environment Australia, the Land and Water Resources Research and Development Corporation and CSIRO.

As mentioned earlier, in 1991 Defence and Environment Australia entered into an MOU to delegate a certain level of responsibility under the EP(IP) Act to authorised delegates within Defence. The terms of the MOU permit delegates to assess and give clearance to Defence projects or activities if the proposal is not considered environmentally significant enough to warrant referral to Environment Australia.

An MOU with CSIRO was signed in 1980 to ensure coordination of research tasks on environmental matters relevant to land management. Under the MOU, CSIRO allocates resources in response to Defence requests for research assistance and advises on measures for implementation of EMPs. Defence has undertaken to provide all necessary assistance with respect to information, priorities and other relevant issues.

Box D.8 **Consultative arrangements between Defence and other government agencies**

There are a number of arrangements for coordination between Defence and other agencies, including:

- an MOU between Defence and Environment Australia to ensure quality environmental management of the Beecroft Peninsula in NSW;
- an MOU with Environment ACT and Environment Australia for the protection and management of threatened species and ecological communities on Commonwealth land in the ACT;
- an MOU between Defence and the NT Parks and Wildlife Commission for sustainable use of the Bradshaw Field Training Areas by Defence; and
- consultative arrangements with the Great Barrier Reef Marine Park Authority and the Queensland Department of Environment and Heritage to encourage more open discussion of management of the environmental impact of Defence activities in the Great Barrier Reef World Heritage Area.

Source: DoD (resp. 22).

Defence has initiated an agreement with the Land and Water Resources Research and Development Corporation to jointly fund a research program to compare the impacts of military activity and grazing on the Townsville Field Training Area. The results will lead to development of an 'environmental management of military training lands' program, and will help refine the existing EMP for the training area.

Defence refers all proposals likely to significantly affect places listed in the Register of the National Estate to the Australian Heritage Commission in accordance with its obligations under the Australian Heritage Commission Act. In consultation with the commission, Defence attempts to minimise any adverse effects to the heritage values on its properties (DoD 1997).

A number of other consultative arrangements are in place for coordination between Defence and other government agencies (box D.8).

Involvement of other interested parties

Involvement of other stakeholders in Defence's environmental activities has been pursued in a number of ways. The DEPS recognises that the community holds extensive knowledge in aspects of environmental management and that State/Territory and Local Governments are sources of useful advice and assistance. It is Defence policy to meet State and Territory environmental standards, where

relevant Commonwealth policy and standards do not exist or are less stringent (DoD 1998b).

The Defence Service Charter (DoD 1998c) covers elements of Defence operations which involve direct community interaction, including environmental management. The charter outlines Defence's approach to environmental management and community consultation, and includes a feedback loop to monitor performance. Box D.9 presents the principles for community consultation and involvement outlined in the DEPS.

Stakeholder consultation is a key element of the EIA phase of major Defence projects. Defence also regularly consults with local indigenous communities, other users of training areas, the community and interest groups (DoD, resp. 22).

Defence is developing EMPs for all bases and training areas. For areas of environmental significance, these plans will include the formation of specific environmental advisory committees made up of local organisations and interested parties, as well as representatives of State and Commonwealth regulatory authorities. This is to ensure that the environmental and cultural impacts of Defence activities are visible and subject to public scrutiny, and that the community has a formal mechanism for providing advice to the department.

Monitoring, evaluating and reporting procedures

The DEPS (DoD 1998b, p. 6) states that Defence is to undertake regular reporting of environmental performance:

Box D.9 **Defence's principles for community involvement**

The following principles for community consultation and involvement are outlined in the Defence Environment Policy Statement:

- Defence will consult with the community using, where appropriate, formal participation mechanisms such as the establishment of environment advisory committees, being mindful at all times of Defence's security considerations;
- informative public awareness programs will be used to promote Defence's environmental management initiatives and activities; and
- Defence will respond actively, quickly and truthfully to public concerns on Defence related environmental issues.

Source:: DoD (1998b).

Both at the portfolio and program levels, management systems are to be in place, maintained and appropriately resourced for, among other things, to assist in the

dissemination of environmental policy guidance and procedures and undertake regular reviews — via monitoring, auditing and reporting — of Defence's performance against environmental objectives. The review process will be conducted at all levels of the organisation and include establishments and operational elements. Independent auditors will conduct many of these reviews.

As discussed in the 'Strategies and actions' section, the role of the Defence Environmental Management Committee will include: monitoring performance in meeting DEPS objectives; reporting on progress in implementing the DEPS; overseeing regular formal, independent reviews of the DEPS and EMS; and reviewing major environmental incidents and issues.

Other examples of Defence's environmental monitoring and reporting procedures include:

- the *Environmental Lessons Learned Report* produced following Tandem Thrust 97, the findings of which are being applied in the environmental planning for Exercise Crocodile 99;
- a summary of environmental projects which is included in the Defence annual report; and
- the inclusion of a feedback loop to monitor performance in the Defence Service Charter.

Monitoring and reporting procedures in Defence have not been centralised. EMPs typically have a built in monitoring and reporting mechanism, but this data is not currently retrieved to gain a global view of performance and to report to the Defence Executive. The development of the EMS will involve development of a system to monitor and report on performance (DoD, resp. 22). Recent discussions have been held with CSIRO under the MOU to examine projects to set up a monitoring and reporting framework. The introduction of Defence State of the Environment Reporting is also being investigated.

Other supporting activities

Defence has a cooperative arrangement with the United States and Canada under the Trilateral Agreement on Environmental Security, which provides a forum to share data, organisational, program and process information on a wide spectrum of defence related environmental issues. The agreement operates through expert consultation and workshops, site visits, conferences, biannual meetings, demonstrations and personnel exchange (DEO 1998c).

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