
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 up of 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 liaises 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

<i>Management plan</i>	<i>Exploitation consistent with ESD</i>	<i>Promote 'undeveloped' fisheries</i>	<i>Maximise economic efficiency</i>	<i>Exercise the precautionary principle</i>
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.

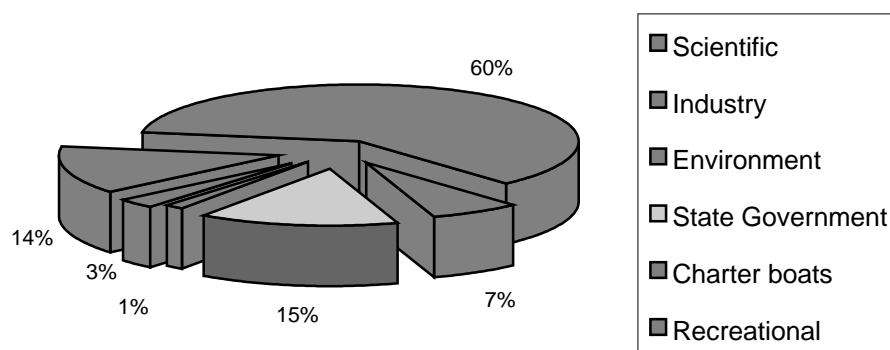
In some cases, AFMA cooperates with international governments and agencies because of the highly migratory nature of some fish stocks. This is necessary to ensure that good management in one nation is not compromised by lack of action in another. For instance, the Southern Bluefin Tuna fishery is covered 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

<i>Performance criteria</i>	<i>Fishery</i>			
	<i>Northern Prawn</i>	<i>Great Australian Bight Trawl</i>	<i>South East Trawl</i>	<i>Southern Bluefin Tuna</i>
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 NGRS 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

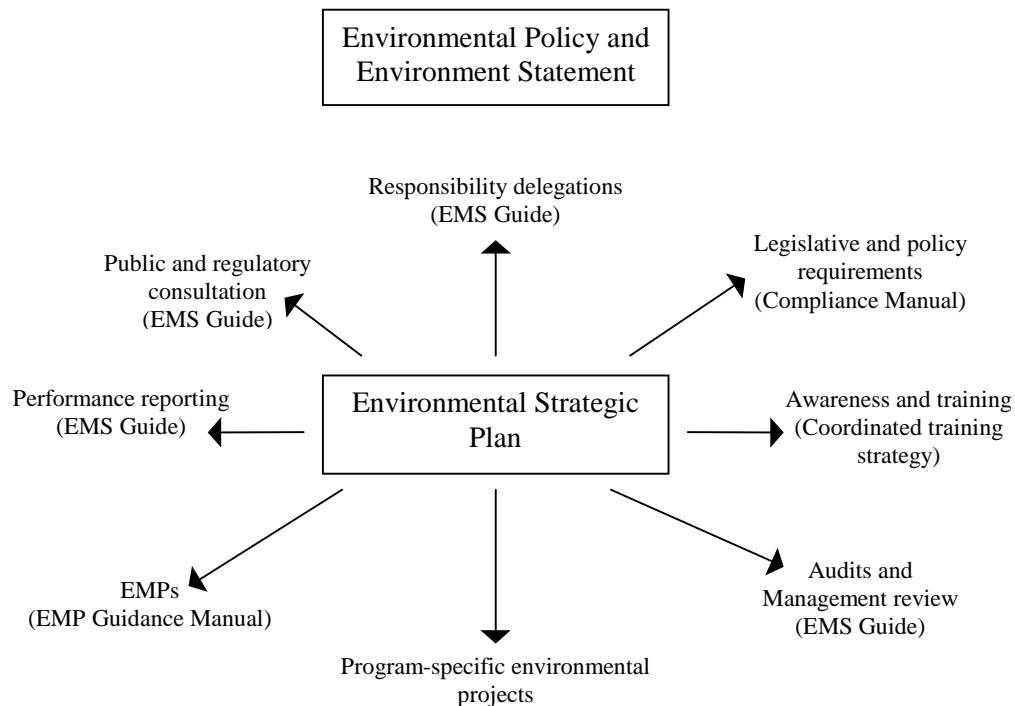
As mentioned previously, a number of reports examining environmental management in Defence concluded that environmental management was not being approached in a consistent, coordinated manner. To overcome this, development of a Defence EMS based on the ISO 14000 series of international standards was 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).