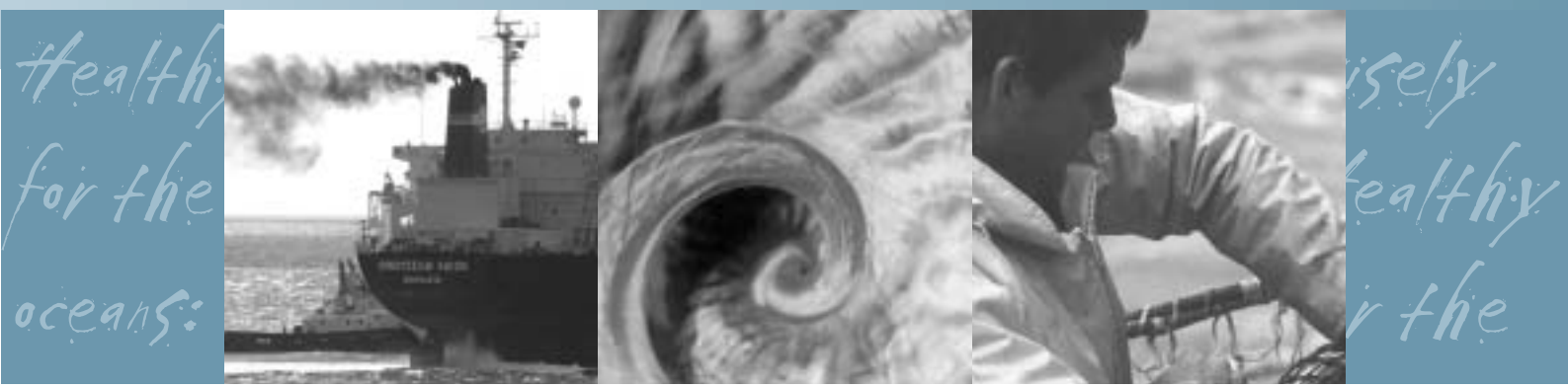
Discussion PAPER

A Discussion Paper

for advancing the South-east Regional Marine Plan



THE SOUTH-EAST REGIONAL MARINE PLAN

Title:
A Discussion Paper for Advancing
the South-east Regional Marine Plan

Disclaimer:
This paper was prepared by the National Oceans Office to assist with consultation on the development of the South-east Regional Marine Plan, as part of the Commonwealth Government's *Australia's Oceans Policy*. The views expressed in this report are not necessarily those of the Commonwealth. The Commonwealth does not accept responsibility for the contents of this report.

Sourcing:
Copies of this paper are available from:
The National Oceans Office
Level 1, 80 Elizabeth St, Hobart
GPO Box 2139
Hobart TAS 7001
Tel: +61 3 6221 5000
Fax: +61 3 6221 5050
www.oceans.gov.au

For further information about this paper, contact Ester Guerzoni, Public Affairs Officer, tel (03) 6221 5000.

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Foreword

This Paper has been released by the National Oceans Ministerial Board and the South-east Regional Marine Plan Steering Committee.

Recent participation by key non-government interest groups has helped shape the issues presented in this Paper. The National Oceans Office also worked with key Commonwealth Government agencies with a direct interest in the South-east Regional Marine Plan to develop the Discussion Paper. The National Oceans Ministerial Board agencies that contributed to the process are:

- Agriculture, Fisheries and Forestry – Australia
- Australian Fisheries Management Authority
- Education, Science and Technology
- Environment Australia
- Industry, Tourism and Resources
- Transport and Regional Services.

This Paper should be read in conjunction with the Summary Paper as it provides the major findings from an extensive assessment of the South-east Marine Region. More detail can be found in the South-east Regional Marine Plan assessment reports, available from the National Oceans Office:

Phone: (03) 6221 5000
Fax: (03) 62221 5050
Email: office@oceans.gov.au
Web: www.oceans.gov.au

This Discussion Paper is designed to raise questions and generate discussion on the planning objectives and issues that we may need to consider in developing the South-east Regional Marine Plan. It does not include a complete or finalised list of issues, or objectives – it is a starting point to help you get involved and provide us with your input.

The following list of questions provides some examples of the kind of input and feedback we need from you. Please keep these questions in mind as you read through the Discussion Paper:

1. Do you have any questions about, or comments on, the process which we will use to develop the draft South-east Regional Marine Plan (see pages 4, 22 and 23, and Figures 1, 2 and 3)?

2. Do the 'topics' listed under each shared value (see pages 6 and 8) cover the main issues that you'd like to see incorporated in the objectives for the South-east Regional Marine Plan? If not, what other topics need to be included?

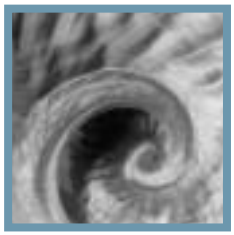
3. What are the important issues that you would like to see discussed and addressed under the South-east Regional Marine Plan? What other relevant issues haven't we included (see pages 9 – 21)?

You can submit your comments by:

- completing the enclosed 'Comments Form' and mailing or faxing it to the National Oceans Office
- accessing the form on the National Oceans Office website and directly submitting it via the web
- compiling your own comments and sending them direct to the National Oceans Office by post, fax or email.

While there is no closing date for comment on the Discussion Paper, we would encourage you to provide your input before 14 June 2002 to ensure your comments are adequately considered. Please forward your comments to:

Manager, South Team
National Oceans Office
Level 1/80 Elizabeth Street Hobart TAS 7000
GPO Box 2139 Hobart TAS 7001
Phone: (03) 6221 5000
Fax: (03) 6221 5050
Email: office@oceans.gov.au
Website: www.oceans.gov.au



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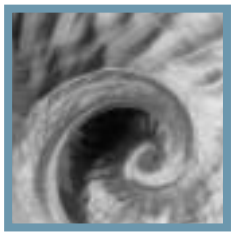


Purpose of this Discussion Paper

This Paper presents information to allow communities, industry and government to discuss:

- objectives for the South-east Regional Marine Plan
- major planning issues that will inform development of an effective draft South-east Regional Marine Plan.

We all have an important role to play in maintaining ocean health and that is why your involvement in this planning process is critical. Your comments will contribute to planning and management for the South-east Marine Region. The Paper also describes the future phases in developing the Plan, including how you can provide input throughout the process.

Introduction

Australia's Oceans Policy sets "the framework for integrated and ecosystem-based planning and management for all Australia's marine jurisdictions" (Vol 1, p2). At the core of the Policy is regional marine planning, and its vision is:

> *Healthy oceans; cared for, understood and used wisely for the benefit of all, now and in the future*

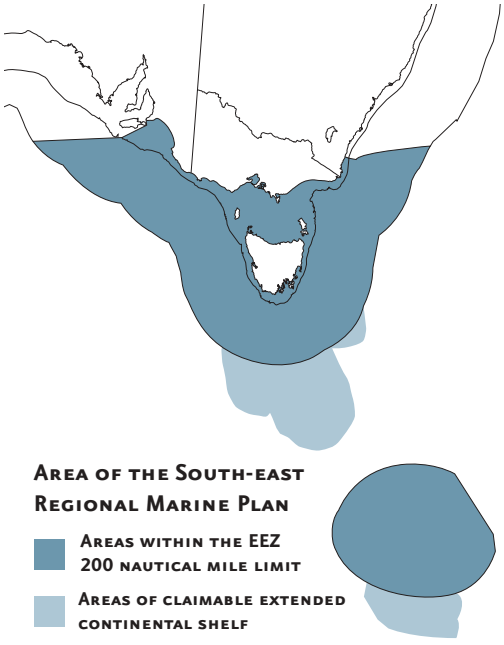
The South-east Marine Region is the first region identified for planning under *Australia's Oceans Policy* (refer to Map 1). This Paper marks an important milestone in the South-east regional marine planning process – shaping the planning objectives and identifying major planning issues. To date, the planning process has focussed on:

- describing in broad terms what the regional marine plan should do and how it will be developed (the scoping phase)
- collecting background information on the biological, physical, economic, community, Indigenous and management characteristics of the Region to promote a common understanding and basis for developing the Plan (the assessment phase).

Reports from the scoping and assessment phases are available at www.oceans.gov.au. Information from the assessments phase was used to identify the topics for regional marine planning objectives and compile the preliminary list of planning issues included in this Discussion Paper.

The information also highlights the reliance of the Region on the high economic values of marine-based industries, the social and cultural connections Australians have with the marine environment, and the unknown value – both conservation and resource – that is unfolding as new research takes place.

To help you focus your comments the next section outlines the context and principles for regional marine planning as provided by *Australia's Oceans Policy*.



Map 1: *The South-east Marine Region incorporates waters off Victoria, Tasmania (including Macquarie Island), southern New South Wales and eastern South Australia. The Region includes both inshore (State) waters (from the shore to three nautical miles outside the territorial sea baseline) and offshore (Commonwealth) waters (from three to 200 nautical miles outside the territorial sea baseline), as well as the claimable continental shelf beyond the Exclusive Economic Zone.*

Australia's Oceans Policy and regional marine planning

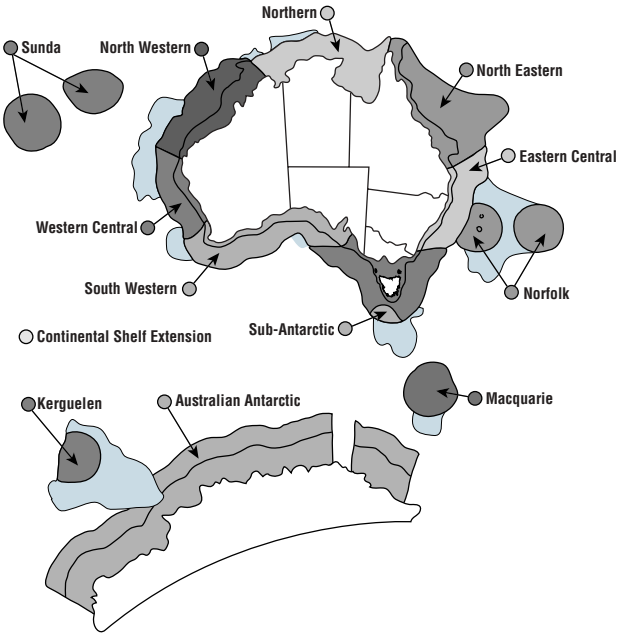
Australia's Oceans Policy establishes regional marine planning as the way forward in developing integrated and ecosystem-based oceans planning and management. "Our goals for regional marine plans are to determine the conservation requirements of each marine region, including the establishment of marine protected areas, prevention of potential conflict between sectors in relation to resource allocation and provision of long-term security to all ocean users" (Vol 1, p3).

The challenge we face in developing the South-east Regional Marine Plan, is to move from theory into practice – to design management strategies that practically implement integrated ecosystem-based management in the South-east Marine Region. *Oceans Policy* states that "ecosystem-based oceans planning and management aims to ensure the maintenance of:

- ecological processes in all ocean areas, including, for example, water and nutrient flows, community structures and food webs, and ecosystem links;
- marine biological diversity, including the capacity for evolutionary change; and
- viable populations of all native marine species in functioning biological diversity." (Vol 1, p10).

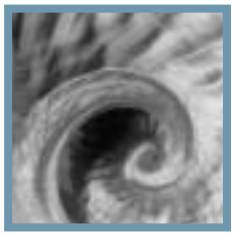
The Policy acknowledges that progress towards improved marine management has been made within separate sectors, but that management and decision-making have not been sufficiently integrated across the various sectoral interests. It also recognises that "management of our oceans purely on an industry-by-industry basis will not be sustainable in the long run. Activities such as fishing, tourism, shipping, aquaculture, coastal development and petroleum production must be collectively managed to be compatible with each other and with the ecological health of the oceans" (Vol 1, p11).

To provide an ecosystem basis for regional marine planning, the South-east Marine Region boundary has been designed to recognise ecological characteristics by using large marine domains (refer to Map 2). In addition, we are examining information and issues across the entire Region, under both State and Commonwealth jurisdiction. However, the Plan will focus on those activities and resources in the Region that are managed by the Commonwealth Government.



Map 2: *Australia's Oceans Policy uses large marine domains to define region boundaries. These domains are extensive areas of ocean that have relatively consistent internal characteristics, in terms of fish assemblages, geology and oceanography, relative to neighbouring areas.*

All of these concepts, and others included in *Australia's Oceans Policy*, are captured in the principles for regional marine planning.



Planning Principles

Eleven planning principles, drawn from the vision, goals and directions provided by *Australia's Oceans Policy*, inform the regional marine planning process. They embody recent developments in natural resource management and direct the way that management options will be developed and negotiated.

Regional marine plans will:

- implement ecosystem-based management as the basis for decision making and management and embed the principles of ecologically sustainable development, including precaution into all decision making processes
- promote ecologically sustainable marine-based industries that contribute to regional development
- develop integrated management of sectoral activities and achieve strong efficient cross-sector linkages
- work towards consistency in management across jurisdictional boundaries when impacting upon the same oceans resource or sector
- lead to clearly defined and agreed regional marine plan outcomes that are integrated across all sectors
- lead to fair decision-making and conflict resolution regarding access to oceans resources within and between generations
- increase involvement of resource users and the community at large in planning and decision making
- engender long term responsible use of oceans resources – stewardship
- provide flexible management arrangements that focus on measurable outcomes coordinated across sectors
- contribute to adaptive management based on monitoring and evaluation of outcomes of management against expected performance including providing for auditing and review processes
- establish clear and agreed definitions of issues and terminology.

The regional marine planning process

While the higher level goals of regional marine planning are provided through *Oceans Policy*, the specific objectives of each regional marine plan will vary depending on the characteristics of the Region. **Shared values** are derived through community, industry and government consultation; they focus on those attributes of the Region we wish to maintain. Using these shared values it is possible to define what we want to achieve through the Plan and this will be clearly stated in **objectives** for the regional marine plan.

Next we need to find out if the objectives for the regional marine plan are being met. If an objective is not being met, finding out why helps us to define a **planning issue.** Guidance provided by *Australia's Oceans Policy* will be used to determine whether an issue can be dealt with by the Plan. Also, each planning issue will be analysed so that the right **management options** can be developed (refer to Figure 4). Information from the assessment phase, for example the assessment on Impacts on the Natural System and ongoing work in this area, will be critical for these tasks.

The management options may include several **management strategies** designed to resolve planning issues. They will focus on setting outcomes for management and may range from policy initiatives to more specific measures. Management strategies will adopt existing **management tools,** and perhaps, develop additional tools specifically designed for regional marine planning. Examples of existing management tools that could be combined to form a management strategy include fishing quota systems, marine protected areas and codes of conduct.

To be outcomes-based, the Plan must also contain a system to monitor whether it is working – a **performance assessment system.** To assess performance, the objectives for the Plan should be further defined into measurable operational objectives that relate directly to the management strategies. By regularly monitoring these operational objectives we can then evaluate whether the management strategies are achieving the objectives of the Plan. Figure 1 outlines the timelines for the regional marine planning process, and Figure 2 describes how the Plan will be developed. More detail of the next phase of the planning process and the components of a regional marine plan is provided at pages 22 – 25.

Do you have any questions about, or comments on, the process which we will use to develop the draft South-east Regional Marine Plan?

Figure 1:
The South-east regional marine planning timeline.

Initial notice . . . . . .April 2000

↓

Scope the plan . . . .November 2000 – January 2001

↓

Assess the Region . . . . . .March 2001 – May 2002

↓

Develop objectives and define planning issues

↓

Develop and negotiate management options

March 2002 – November 2002

WE ARE HERE

↓

Draft Regional Marine Plan . . . . . .November – December 2002

↓

Public comment and consultation . . . . .January 2003 – March 2003

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South-east Regional Marine Plan . . . . . .April 2003

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Implementation and continuous performance assessment . . . . . .Ongoing

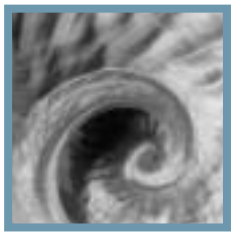
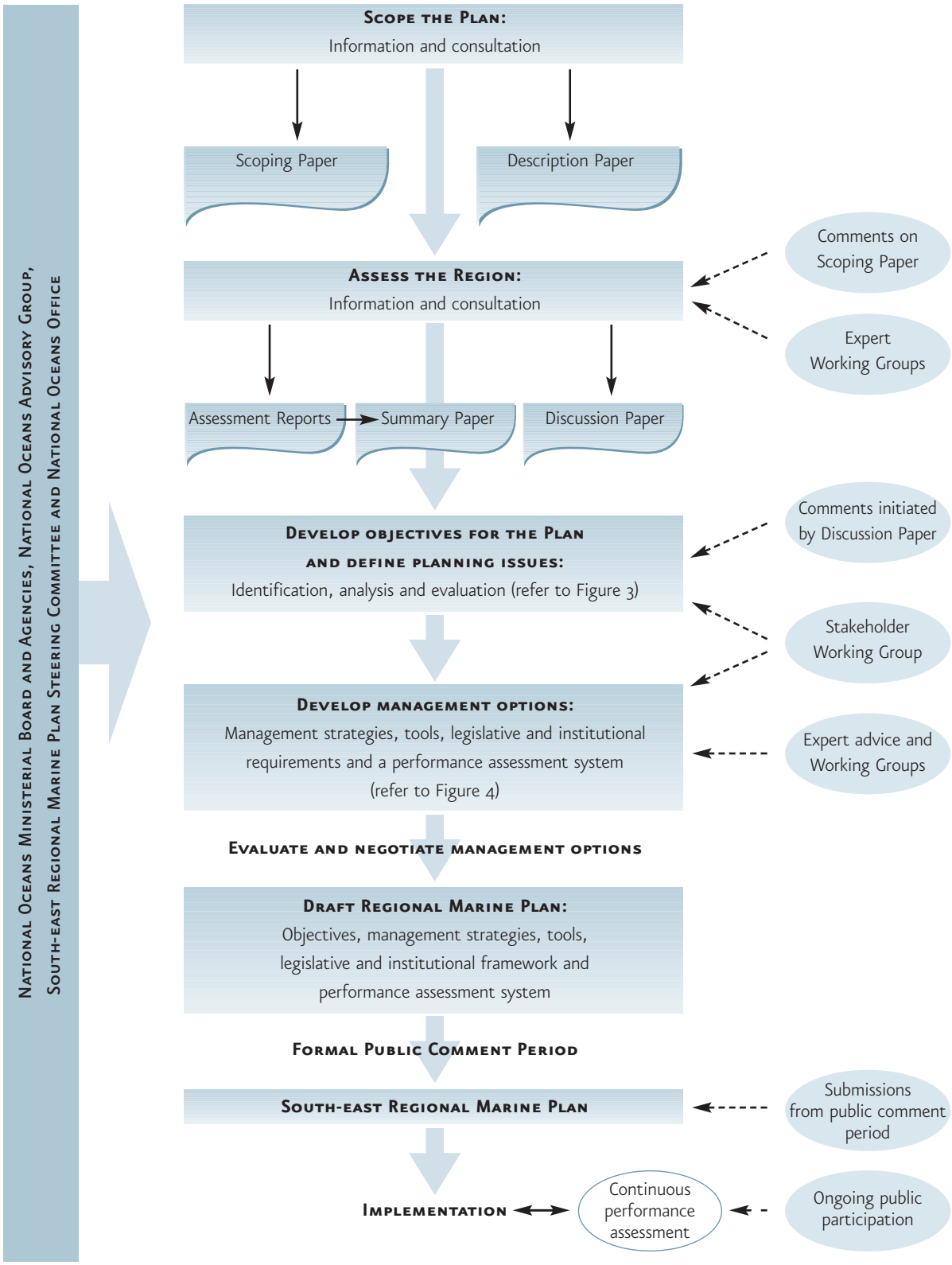


Figure 2:
How is the South-east Regional Marine Plan being developed?



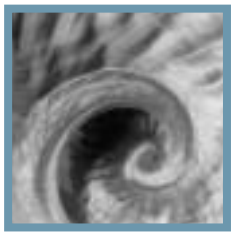
Identifying appropriate objectives for the South-east Regional Marine Plan

Around 3.5 million people live on the coast of the South-east Marine Region in communities ranging from tiny towns through to the huge urban area of Melbourne. The Region has distinct sectoral interests that are dependent on specific aspects of the marine environment. Understanding the common ground between these interests ensures that the planning process will be relevant to everyone. The shared values represent the common ground between people in the Region, providing a platform from which we can begin to define objectives for the Plan. The objectives are important because they represent the first steps in moving from the vision and goals of *Australia's Oceans Policy* towards specific outcomes for ocean's management within the South-east Marine Region.

As part of the assessment phase, the National Oceans Office approached various industries, non-government organisations, Indigenous communities and the general community to understand the interests that they represent, and how and why the Region is important to them. This consultation process used telephone and mail surveys, face-to-face consultation and representative working groups to develop a set of broad values from which the shared values were derived.

The following six shared values categorise the responses of the community and industry. Their role is to provide clear directions for identifying the Plan's objectives so that we can advance the South-east Regional Marine Plan. To initiate discussion we have included some topics for developing the objectives. As the regional marine planning process is dynamic, we will need to refine the objectives in response to emerging issues and additional information. Future reviews of the Plan will need to address changes in people's views on what they value.

Do the 'topics' listed under each shared value cover the main issues that you'd like to see incorporated in the 'objectives' for the South-east Regional Marine Plan? If not, what other topics need to be included?



Shared value 1: Healthy thriving ecosystems

Healthy thriving ecosystems that are diverse, possess unique characteristics and support ecological functions and links.

Draft regional marine plan objectives for this shared value will be developed around the following topics:

1a Maintain diversity of species, habitats and ecological communities in the Region

1b Conserve endemic species and support strategic programs for protecting threatened and vulnerable species and ecological communities within the Region

1c Maintain/rebuild ecosystems (abundance of species and diversity of ecological communities) and ecologically important processes within the Region, to ensure their long-term integrity

1d Promote scientific research that improves our capacity to manage human activities in the Region and to monitor South-east marine ecosystems.

Shared value 2: Strong regional communities

Strong regional communities that actively care for marine ecosystems and derive benefits and long-term employment from the sustainable use of the ocean's resources.

Draft regional marine plan objectives for this shared value will be developed around the following topics:

2a Promote and support ecologically sustainable marine based-activities that provide economic and social benefits and long-term employment for regional communities

2b Use the knowledge and expertise of regional communities in the management of the South-east Marine Region

2c Increase the understanding and knowledge of how regional communities rely on the sustainable use of marine resources

2d Promote stewardship for the marine environment in regional communities (participation in caring for the marine environment)

2e Recognise and promote the links between strong regional communities and the flow-on benefits to all Australians

2f Provide access for regional communities for recreation and enjoyment of the marine environment.

Shared value 3: Partnerships with Indigenous people

Indigenous people whose relationships to oceans are respected, cultural practices are supported, current rights are acknowledged and diversity and participation are valued.

Draft regional marine plan objectives for this shared value will be developed around the following topics:

3a Recognise Indigenous customary knowledge and expertise in marine management of the Region

3b Include effective Indigenous participation in developing integrated approaches to the planning, management and ecologically sustainable use of marine resources

3c Provide economic, social and cultural development opportunities for Indigenous people

3d Recognise current rights and custodial responsibilities of Indigenous people and their contribution to the Region.

Shared value 4: Competitive, diverse and innovative industries

Competitive, diverse and innovative industries that have an opportunity for economic growth and further contribution to the nation, through the sustainable use and management of marine resources and the marine environment.

Draft regional marine plan objectives for this shared value will be developed around the following topics:

4a Provide certainty and long-term, secure access to marine resources for marine-based industries, while protecting the environmental values of the South-east Marine Region

4b Promote and support new opportunities for the ecologically sustainable development of marine resources

4c Support development of economically viable marine-based industries that are based on ecologically sustainable development practices

4d Recognise the rights, responsibilities (duty of care) and the contributions of marine-based industries to Australia

4e Recognise and promote the competitiveness of Australian marine industries through the development of multiple-use management strategies that allow for continued access to marine resources while ensuring the protection of the marine environment.

Shared value 5: Responsive and responsible governance

Responsive and responsible governance that efficiently achieves collaborative and adaptive ecosystem-based management of human activities.

Draft regional marine plan objectives for this shared value will be developed around the following topics:

5a Implement ecosystem-based, multiple-use management as the basis for decision making and management, and embed the principles of sustainability and precaution in all decision making processes

5b Develop integrated management of sectoral activities and achieve strong, efficient cross-sector links

5c Use Commonwealth, State and Local Government partnerships to work towards consistency and efficiency across jurisdictional boundaries

5d Provide opportunities for regional communities to be involved in collaborative approaches for the management of marine resource use

5e Provide flexible management arrangements that focus on clearly defined, agreed and measurable outcomes coordinated across all sectors

5f Contribute to responsive management based on monitoring and evaluation of management outcomes against expected performance including auditing and review processes

5g Promote/contribute to the implementation of integrated research, monitoring and information management systems across jurisdictions.

Shared value 6: Fair, efficient and participatory decision making

Participatory management that leads to fair and efficient decision making regarding the allocation, access to, and use of marine resources across all sectors and the community.

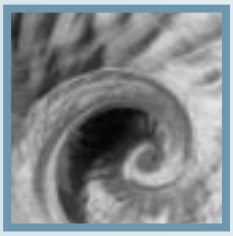
Draft regional marine plan objectives for this shared value will be developed around the following topics:

6a Promote effective and equitable engagement of all stakeholders in marine management

6b Promote equitable and transparent participation in the monitoring and review of decision-making processes relating to the allocation of marine resources

6c Support effective cross-sectoral communication strategies for informing and engaging communities during decision-making processes

6d Foster equitable allocation and access to marine resources through the development of partnership agreements and other management mechanisms.



Regional Marine Planning Issues

There are a large number of issues to consider under a regional marine plan. To help start discussions, but without limiting us to a list of specific issues, this section provides examples of issues and organises them under planning issue themes. While the themes do not neatly encompass all planning issues, they are intended to provide a practical and basic framework for identifying and analysing the constraints and opportunities that the South-east Regional Marine Plan needs to address.

The substantial information gained through the assessments of the South-east Marine Region is drawn on in this section. It you want to learn more about the Region and where the planning issues come from, refer to the Summary Paper and assessment reports.

For each of the planning issue themes we have provided information under the following headings:

- **description –** a brief description of the nature of the issues, threats or opportunities
- **examples of issues –** examples of the issues raised during consultations associated with the scoping and assessment phases
- **illustrations –** drawn from information on the South-east Marine Region gained through the assessment phase and included in the appropriate assessment report
- **discussion points –** some initial thoughts on whether the issues can be addressed by regional marine planning and points that require further discussion and resolution.

What are the important issues that you would like to see discussed and addressed under the South-east Regional Marine Plan? What other relevant issues haven't we included?

The Planning Issue Themes

Fair allocation and use of ocean resources – now and in the future

Description

The regional marine planning process should resolve inter-sectoral resource use conflicts by designing an effective allocation mechanism and other management measures. *Australia's Oceans Policy* states that "ocean resources should be allocated to the mix of uses within a planning area that offers the greatest long-term community benefits (taking economic, environmental, social and cultural values into account) compatible with maintaining ecosystem health" (Vol 1, p37). The assessment process has identified many of the uses and values with respect to the South-east Marine Region.

Examples of issues

- Cross sectoral allocation mechanisms
- Security of access for Indigenous use
- Security of access for each sector
- Cross jurisdictional allocation
- Different scales for allocation
- International obligations.

Illustrations

Some sectors have clear and established procedures in place for granting access rights to resources (eg commercial fisheries, petroleum, minerals). In some circumstances there is consultation between sectors before activities take place, but at the moment there is no formal mechanism with which to determine what is a sensible and fair allocation of marine resources across sectoral groups. This becomes important when numerous sectors target or impact upon the same resource or seek to occupy the same area of water.

DISCUSSION POINT

What is an agreed process by which cross-sectoral allocation decisions can be made that offer the greatest long-term community benefits?

This is complicated further by the fact that some sectors do not have clear or compatible rights of access. For instance, while commercial fisheries have statutory fishing rights or fishing permits (Commonwealth) or similar rights in State fisheries, no such rights have been defined for the recreational fishing sector. This sector is managed through a set of tools including size limits, area closures and gear controls applying across all recreational fishers. State Governments have a major role in the management of the recreational fishing sector.

DISCUSSION POINTS

How do we clearly specify and agree on the rights of each sector in order to reach allocation decisions?

How will the Plan deal with incompatible uses?

There are also instances where one sector may create pressures on (or conflict with) another, though not in the same proximity or not targeting the same resource. For example, land-based activities may impact upon important inshore nursery areas for species which may be important commercial or recreational species in offshore waters, such as tiger flathead and school and gummy sharks.

DISCUSSION POINT

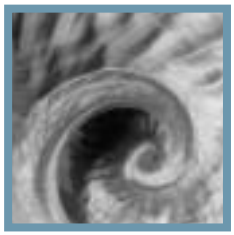
How can allocation decisions be made in one jurisdiction without adversely effecting activities in another?

In southwestern Victoria, a striking feature of the Gunditjmara people's economy was the building of elaborate and permanent systems for harvesting short-finned eels during their migratory runs in fresh-water. Aboriginal people gathered in large numbers for "eel-feasts", with attendances of up to 2500 people recorded. The eels spend most of their lives in the rivers of southern Australia but migrate into the Coral Sea and Pacific Ocean to breed once before dying. The cycle continues with juvenile eels being transported by ocean currents back to the east and south coasts of Australia where they enter the river systems for their migratory runs. Aboriginal people at Framlingham continue a long tradition of using eel traps and other fishing methods to catch eels, which are a prized resource.

DISCUSSION POINT

How can Indigenous people be involved in the allocation of marine resources?

In the South-east Marine Region, eight Native Title claims have been lodged covering a sea area of roughly 60 000 square kilometres. Six of these claims have satisfied the conditions of the registration test and are lodged on the Register of Native Title Claims. These claims are yet to be resolved.



Access to, and allocation of, marine species is complicated by the fact that some species undertake large-scale movements (oceanic sharks) or seasonal migrations (some tunas), making allocation through zoning or similar tools problematic. Allocation of these resources may be best achieved through rights to those resources (eg percentage of the overall catch). In other circumstances, it may be a particular area that is important for either conservation or commercial purposes. This is the case in the waters around Macquarie Island where a Marine Park has been declared over most waters to the east of the island. In the instance of the Tasmanian Seamounts Marine Reserve, the reserve has been vertically split to conserve the benthic habitat and species whilst allowing for pelagic longlining to continue in the upper water column to target highly-migratory tuna species.

DISCUSSION POINT

What pressures and resource use conflicts between different resource users need to be understood before seeking solutions through dispute resolution and allocation decisions?

Some activities cannot coexist, at least in the immediate area. For example, there is an exclusion zone for large vessels around areas containing petroleum production facilities. However, smaller vessels such as those operating in the Danish seine sector of the Commonwealth South East Fishery, may continue to operate in the productive tiger flathead and eastern school whiting fishing grounds within the petroleum production area, but outside the 500 m exclusion zones around each production facility.

DISCUSSION POINT

What management tools can be used to allocate resources within the South-east Marine Region without resulting in the total exclusion of an activity from an area?

Use conflicts can be resolved through allocating access across a broad range of scales, from individual offshore reefs to large regions. For example, where fishing gear types are incompatible, they may be separated through closures or agreements between industry groups. The latter was used to resolve conflicts between trawl and giant crab fishing gear off western Tasmania.

DISCUSSION POINT

At what range of scales should resources be allocated?

The innocent right of passage for international ships through Australia's Exclusive Economic Zone is one of Australia's international obligations. The Region is one of the busiest areas for shipping in Australian waters. In the period 1 July 1999 to 30 June 2000 there were 9248 vessel movements through the Region of which 1176 were vessels transiting to other ports.

DISCUSSION POINT

How should Australia's international obligations and responsibilities be incorporated into allocation decisions?

Some resources, such as offshore minerals (manganese nodules, diamonds), are known to occur in the Region but at this stage are not economically viable. In relation to access to petroleum reserves in the future, there are large offshore areas that have been subject to limited or no exploration to date but are considered prospective for petroleum – such as the Sorrell Basin off western Tasmania. The Sorrell Basin is subject to some initial exploration, and the South Tasman Rise is regarded as a new term frontier release area. Both the minerals and petroleum industries require recognition of their need for continued access to known and potential petroleum resources on a multiple-use basis. In addition, new technologies and management practices may mean that previously incompatible uses could coexist. At this stage there is no mechanism to reallocate resources as the expectations of society change, or new industries emerge.

DISCUSSION POINT

How can allocation decisions take into account the long-term industry needs to allow for improvements in technology and not unnecessarily restrict future opportunities?

Extractive industries and other commercial and recreational activities can be valued, and their relative worth to regional and national economies determined. However, environmental goods and services tend to have both market (as above) and non-market values. Non-market values of environmental goods and services include ecological function value (eg nutrient storage and cycling, atmospheric gas and climate regulation) and options value (eg guaranteeing the supply of something in the future which may otherwise become unavailable). For the Region there is very little information on the economic contribution made by environmental goods and services. Nevertheless, in order to maximise overall community benefit, both market and non-market values must be considered when making decisions.

DISCUSSION POINT

How should non-market values of environmental goods and services be incorporated in decision making?

Fostering current and future sustainable oceans uses

Description

The challenge is to ensure the development of ecologically sustainable marine uses both now and in the future. Growth in marine industries of 8% per annum has been recorded in recent years. The *Marine Industry Development Strategy 1997* estimated that Australia's marine industries may be valued annually at between $50 billion and $85 billion by the year 2020, a major increase from the estimated $30 billion in the mid 1990s. Although this growth is projected across the entire Australian marine area it is likely that a reasonable percentage of this growth will occur in the South-east Marine Region.

Examples of issues

- Provide for current and future uses
- Balance local, regional, national and international needs
- Provide long-term security for industry
- Realise the value of Indigenous customary knowledge
- Ensure the sustainable development of marine industries.

Illustrations

There are many uses in the South-east Marine Region that have the potential to develop further. These developments will come about through pressures regionally (eg population growth), domestically (eg government policy and market demand), and through international pressures (eg increased commercial shipping sizes).

DISCUSSION POINT

How can people access the reasons for allocation decisions?

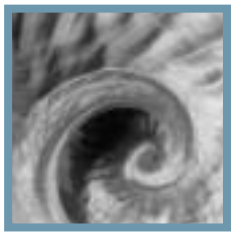
Some activities, such as petroleum exploration and production, will continue for many years to come and move into new areas as policy and institutional arrangements, technology, information and markets allow or require. Marine resources are likely to be important in the development of biotechnology industries. The marine environment may also become important for the generation of renewable energies, eg tidal and wind power. Commercial mining for offshore minerals, on the other hand, is not anticipated to be economically viable for many years to come due to the availability of mineral resources on land.

DISCUSSION POINT

How can the management for future use in the South-east Marine Region cater for both the expansion and rebuilding of current activities, and the emergence of new activities?

People are travelling further, staying longer and going to more exotic places. It is estimated that Australia has experienced a six-fold increase in international tourism in the last 15 years and the Tourism Forecasting Council forecasts that international visitors to Australia will increase from 4.5 million in 1999 to 10.2 million in 2010. In particular, nature-based tourism up to the mid-1990s increased by 30% each year over the previous 15 years and growth is likely to continue for some time, though not to the same extent. The growing tourism market has led to an increased number of tourism ventures that relate directly to the marine environment. These ventures have led to increased prosperity for coastal communities in the Region.

Some target species of many major commercial fisheries in the South-east Marine Region are under management arrangements to recover stocks to sustainable levels (eg eastern gemfish, orange roughy, school shark). In such cases, any growth of the industry may be over the longer rather than shorter term. There is a possibility that areas currently fished in the Region may extend into new deep water areas or to new species where newly discovered underwater features create a productive environment. Most of the major fisheries in the South-east Marine Region are at least 'fully fished' according to the most recent status report of the Commonwealth fisheries undertaken by the Bureau of Rural Sciences. There are some existing management strategies in place to control shifts in fishing effort if new species or areas are discovered.



DISCUSSION POINTS

What additional strategies need to be put in place to manage industry expansion and future allocations in order to provide for ongoing ecosystem health?

How can the expansion of activities into deeper waters be promoted and managed when we know little about the deep-sea ecosystems?

The question of whether or not an offshore resource can be commercially utilised depends on location (distance from shore / port, depth etc), quality of product or grade, price, environmental impact, extraction technology and Government policy. New Bass Strait discoveries (Otway Basin), and an earlier find off Tasmania, are expected to add to gas supplies in the eastern States markets in the near future. Long-term resources are also anticipated to be found in the Sorrell Basin off western Tasmania and on the South Tasman Rise. The long-term importance of these areas can be appreciated given that most of the petroleum production facilities currently operating in Bass Strait have a further 20 year lifespan.

DISCUSSION POINT

How can we transfer lessons from industries that are currently ecologically sustainable to other sectors to foster their long-term development?

The Australian Offshore Petroleum Strategy states that from 2001 there will be increasing emphasis on deep water areas and it is anticipated the controlled release of frontier or remote frontier areas with petroleum potential will include the South Tasman Rise between 2001-2005.

DISCUSSION POINT

What regulatory arrangements, information, monitoring and incentives are required to shift resource use and industry practice onto a more sustainable and secure footing?

The shipping industry is seeking continued access to ports, shipping channels and shipping lanes whilst seeking economies of scale through larger vessels. In many ports this will result in channel deepening and expansion of facilities, as is ongoing at the Port of Melbourne.

DISCUSSION POINT

How does planning cater for global trends (such as increasing vessel size) while considering future local and regional needs?

There is Indigenous customary knowledge of the marine environment across the South-east Marine Region. Indigenous people have a long history of marine resource use and retain an extensive knowledge of ecosystems – from land to sea. Drawing on Indigenous experience and knowledge can contribute to existing and future sustainable use in marine and coastal environments.

DISCUSSION POINT

How can Indigenous customary knowledge be applied to assist in the sustainability of marine resource use?

The Commonwealth and State Governments are committed to the establishment of the National Representative System of Marine Protected Areas (NRSMPA). Work is proceeding on the assessment of candidate sites for marine protected areas (MPAs), management of existing marine parks and other marine reserves, and proposals for additional MPAs. For example, Environment Australia is initiating conservation assessments for two areas that may have outstanding conservation significance – the Bass Strait sponge beds and the blue whale aggregation site. MPAs are an integral component of the suite of management tools available to achieve conservation requirements identified as part of the regional marine planning process.

DISCUSSION POINT

How can planning decisions be made for the future that balance conservation requirements and the needs of other oceans uses?

Areas that contribute to a comprehensive, adequate and representative system of MPAs in the Region may be identified during the South-east regional marine planning process. It is possible that other areas of high conservation significance may also be identified.

DISCUSSION POINT

How can the Plan contribute to a comprehensive, adequate and representative system of MPAs in the Region?

The effects of land-based activities on the ocean

Description

The South-east Marine Region includes some of the most densely populated coastal areas in Australia. A range of urban, industry and rural activities are known to have undesirable effects on the marine environment. Declining water quality and increased sedimentation have been identified as some of the most serious impacts of land-based activities. A range of interactions and activities occur at the ocean and land interface that pose a significant threat to the biodiversity, productivity, health and use (social and commercial) of the marine environment.

Examples of issues

- Degraded marine water quality due to the effects of urban, industry and rural activities
- Complex jurisdictional and regulatory arrangements in the coastal zone
- Habitat loss, modification and damage
- Identification of effective strategies to mitigate impacts in the coastal zone with a limited knowledge base
- Reduction of fresh water flows into the marine environment.

Illustrations

Organochlorines may cause direct mortality, reproductive impairment or greater susceptibility to disease in marine mammals. Research documents a number of marine mammals in the Region as containing levels of these toxic substances. This includes the Australian fur seal (*Arctocephalus pusillus*), common dolphin (*Delphinus delphins*) and the pygmy right whale (*Caperea marginata*).

DISCUSSION POINT

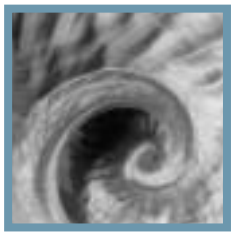
How do we address complex jurisdictional issues when land-based activities have a direct influence on the health of the marine ecosystem?

Bays and estuaries adjacent to major coastal cities are significantly modified by urban and industrial development (eg pollution and coastal engineering). Localities affected in and around the Region are Port Phillip Bay (incorporating Corio Bay and bordered by Melbourne and Geelong), the Port River Estuary and Gulf St Vincent coastline at Adelaide, and the Tamar and Derwent estuaries at Launceston and Hobart respectively.

DISCUSSION POINT

How do we address amenity and health issues associated with declining water quality?

One impact known to occur is the accumulation of heavy metals in the tissue of species that occupy the seabed or filter particles from the water column. The effects of this can be lethal, causing changes in the ecology, physiology and behaviour of species near sources of heavy metal emissions. However, many species experience sub-lethal or non-lethal effects at certain concentrations. The long-term consequences of non-lethal or sub-lethal effects are often unknown. These species are commonly used as bio-indicators to track heavy metal pollution.



Coastal activities cause chemical changes in the sediment and water column of the inshore environment in the Region. Sewage outfalls in the coastal zone also cause nutrient enrichment and eutrophication. A study commissioned by Melbourne Water on the impact of sewage effluent at Boags Rocks in Bass Strait found that the combination of freshwater and ammonia in effluent affects the diversity of flora and fauna on rocky platforms in the surrounding environment.

DISCUSSION POINT

How can the effects of inshore activites on offshore activities be identified and quantified?

After European settlement, Indigenous people were heavily involved in many aspects of coastal and marine industries, and continued to rely upon marine resources, mainly for diet. The harvest of the muttonbird (short-tailed shearwater) is an example of an ongoing Indigenous industry.

DISCUSSION POINT

How can Indigenous use be identified and monitored?

Key ecological characteristics of the Region include productivity to support inshore and, in some instances, offshore trophic webs; nursery areas for ecologically and commercially important species; a diversity of species, communities and habitats; high numbers of endemic species; and links to offshore systems via different life stages.

DISCUSSION POINT

How can impacts on marine ecosystems be factored into terrestrial decision making?

We have a very limited understanding of the links and interactions between inshore and offshore continental shelf communities and between pelagic communities and the diverse benthic habitats. The natural levels of spatial and temporal variability in the occurrence, distribution and abundance of species and species assemblages are also poorly defined. The specific response of different biota to changes in catchment and coastal zone uses is unknown as are the causal factors and dynamics related to some observed environmental patterns such as the decline in extent of kelp forests.

DISCUSSION POINT

How will a regional marine plan deal with the cumulative effects of land-based activities?

Urban and industrial centres often include a vast range of activities in a concentrated area. In these areas, there are often many activities that potentially impact on marine environments.

DISCUSSION POINT

How can the effects of one activity be separated from another in areas where numerous activities coexist?

The effects of marine-based activities on the ocean

Description

Multiple marine-based activities are carried out in the South-east Marine Region. These can have a variety of effects on the ocean, both in the direct vicinity of the activity and over wide areas. The risk of actual impacts from activities varies depending on management and mitigation strategies, location and knowledge of the surrounding environment. Physical damage to the seafloor can be caused by offshore construction, harvesting, direct impact from vessels (anchoring and grounding) and sea dumping. Contaminants are also released into the ocean by marine-based activities through spillage and discharges. The impacts of introduced marine species resulting from ballast water discharge and hull fouling is receiving international attention. Disturbance to wildlife also occurs due to marine-based activities with direct effects on target and non-target species from harvesting and collecting. Other activities can also have direct impacts on animals (eg boat strikes) and can alter behavioural patterns (eg disturbance at breeding grounds).

Examples of issues

- Physical damage to the seafloor
- Effects of harvesting target species
- Effects of harvesting activities on non-target species (bycatch and discards)
- Effects of contaminants and discharges
- Competition between fishers and animals for the same resource
- Disturbance to wildlife
- Limited knowledge of some marine species and offshore ecosystems (including links between pelagic and benthic communities).

Illustrations

More than 100 introduced marine species have become established in the Region, causing irreversible change in habitats and marine communities. Most introductions are associated with marine-based activities, including shipping and intentional introductions for aquaculture or harvesting. The introduction of marine pests is a key threat to native species of the Region.

DISCUSSION POINT

How can the management of marine ecosystems be integrated across State, Commonwealth and international jurisdictions?

Many species that live on or above the continental shelf and slope of the South-east Marine Region are unknown to science – one estimate is that only about a tenth of the fauna that live on the Australian continental slope have been described. For example, of the fish that live near seamounts in the Region possibly 15% to 25% would be either new to science or new records for Australian waters.

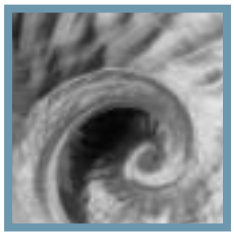
DISCUSSION POINTS

How much needs to be known about marine ecosystems in order to be able to manage them sustainably?

What does ecosystem-based management mean in practical terms?

The pelagic longline fishery operating in the South-east Marine Region historically caught significant numbers of seabirds, including albatross, as an incidental bycatch when targeting tuna. Recent efforts by industry and governments have sought to ensure that the fishery can operate without capturing seabirds. There is ongoing work to continuously improve performance of these avoidance measures.

The seafloor of the continental slope in the Region is trawled for the orange roughy and oreo dory fisheries. This results in the bycatch of, and physical damage to, benthic species. The seamounts located on the continental slope contain a diverse fauna characterised by a high proportion of endemic species, although the full extent of their distribution cannot be assessed



without further exploration. Some of the fauna is highly vulnerable to trawling and is likely to have limited resilience, as it is slow growing and adapted to an environment with little natural disturbance. We know little about the fauna that inhabits other topographical features of the slope, such as canyons, but they are likely to be equally susceptible to physical disturbance.

Non-target species, fish and other animals, are often caught incidentally during harvesting operations and are usually discarded. Apart from the direct impact on the species being caught, nutrients increase at the site of discarding, which often attracts predators such as seabirds, seals and other fish. This can affect the distribution and abundance of scavenging species.

DISCUSSION POINTS

What strategies might be used to ensure impacts on non-target species and the benthos are sustainable?

How can direct conflict between marine-based industry operations and marine mammals and other species be managed?

Seismic activities from marine-based activities may have impacts on various whale species and other marine fauna. For example, baleen whales communicate using low frequency sounds and as such are considered to be the most sensitive of the marine mammals to the low frequency output of seismic surveys. Observations of blue whales in the Otway Basin suggest that the whales avoid areas in which seismic operations are occurring. Recent studies have identified a principal aggregation site for blue whales in the area. The same area is also used by southern right whales and is under exploration by the petroleum industry.

DISCUSSION POINT

How can the needs for long-term ecological viability be built into the management arrangements for marine-based activities?

Seal numbers are recovering from extensive exploitation after European settlement. There are concerns regarding potential interactions between fisheries and seal populations. The frequency of these interactions is likely to increase as the seal population continues to recover from the previously low numbers.

Historically few large oil spills from shipping accidents have occurred in Australian waters, but there is potential for damage to marine ecosystems if spills occur in sensitive areas. Spills that have occurred in the Region include the Arthur Phillip spill off Cape Otway, Victoria (1990, 100 km slick); and the *Iron Baron* in the mouth of the Tamar River, Tasmania (1995, about 300 tonnes).

DISCUSSION POINTS

How can existing management regimes be recognised when determining the level of risk associated with marine-based activities?

How can the cumulative effects of individual events be addressed when developing management strategies?

Direct physical damage to marine life can occur due to marine-based activities through grounding or sinking of vessels and collisions with marine mammals. The impact of physical damage can include the loss of habitat, at least in the short term, depending on the location of the grounding. For example, when the *Iron Baron* grounded on Hebe Reef in the Tamar Estuary, the physical abrasion from the ship's hull caused the complete destruction of the subtidal reef community within a localised area of approximately 170 m by 20 m.

Maintaining marine biological diversity

Description

Our seas include a variety of plants and animals which all contribute towards Australia's rich marine biological diversity. Our relative isolation and the evolutionary history of the Australian continent mean that an unusually large proportion of our marine fauna and flora is unique to Australian waters, especially in our cooler temperate waters. Conservation of marine biological diversity requires the protection of critical habitat such as nursery areas, feeding and breeding locations. The maintenance of key processes such as migration and dispersal and protection of threatened, endangered and valued species is also critical.

Examples of issues

- Adapting management to improving knowledge
- Protecting areas of outstanding conservation significance (including habitat, species assemblages, or key processes)
- Maintaining / protecting critical habitat
- Protecting rare, threatened and endangered species
- Consistent cross-jurisdictional management
- Sustainable management of marine resources
- Incorporating the management expertise of Indigenous people
- Establishing a National Representative System of Marine Protected Areas.

Illustrations

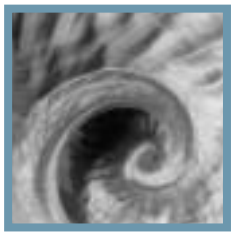
The historical exploitation by early European settlers of seabirds, seals and whales has influenced current distributions and populations. For example, following settlement in Tasmania and Victoria, the seal industry expanded rapidly because of the availability of both seals and cheap labour, as well as the profitable markets for seal products that existed at the time. For several decades in the eighteenth and nineteenth centuries there were no controls on the taking of these long-lived and slow-growing animals. The population of seals in the Region has increased significantly since strong controls and regulations have come into place to protect these animals. Current evidence indicates that seal numbers will continue to increase at a steady rate. With the re-establishment of seal populations, concern is being expressed about the potential for increased interactions between these species and commercial fisheries and aquaculture.

Discussion points

How can uncertainty about historical population levels of protected species be dealt with?

How can direct interactions between protected wildlife and fisheries be reduced while continuing the use of commercial fish species?

In the South-east Marine Region, seventeen marine protected areas (MPAs) have been declared by both State (15) and Commonwealth (2) governments. These are primarily areas protected for their outstanding conservation significance, and at present, deepwater and cooler temperate ecosystems are under-represented in MPAs. Commonwealth and State governments are committed to establishing a National Representative System of Marine Protected Areas (NRSMPA). The NRSMPA aims to establish and manage a comprehensive, adequate and representative system of MPAs. MPAs play an integral role in the multiple-use management of the Region, delivering outcomes relating to the conservation of species



and habitats, establishment of reference sites, opportunities for recreation, and cultural and economic benefits to regional communities.

DISCUSSION POINTS

How can representative areas for conservation be identified based on existing knowledge and given the variable nature of the marine ecosystem?

How can reference sites be established to monitor the effects of our resource use?

Our knowledge of the biological diversity of the Region is rapidly changing and improving. Recent surveys sponsored by the National Oceans Office have extended the coverage of seafloor maps of the Region and our understanding of the structural features of deep-sea habitats. These expeditions, named Austrea–1 and Austrea–2, have surveyed and mapped 260 000 km^2 of seafloor, unveiling details of spectacular features, such as canyons, seamounts and fractures. Recent investigations of seamounts in the Region indicate that the complex structure of the South Tasman Rise and the offshore seamounts are likely to be occupied by equally complex biological communities with many unidentified species.

DISCUSSION POINT

How can new knowledge be incorporated into future planning for sustainable development?

Many whales migrate through the Region each year to key habitats for feeding, mating and calving. Humpback whales feed in the Southern Ocean in summer and in autumn migrate north for winter breeding in the warmer waters off western and eastern Australia. Southern right whales visit the south coast of Australia in winter to breed, while blue whales and pygmy blue whales come in summer-autumn to feed in upwellings. Other species that enter and leave the Region annually during breeding and feeding migrations include: southern bluefin tuna, tropical yellowfin tuna, school shark, Australian fur seal, New Zealand fur seal, Australian sea lion, albatross and shearwaters (eg 'muttonbird').

DISCUSSION POINT

What is the best way to manage protected species such as whales and birds that travel vast distances on their migratory paths?

Many marine species move between inshore and offshore waters at different stages of their life cycles. One example is the commercially important southern rock lobster which has long lived (up to 24 months), widely dispersed pelagic larvae that occur in offshore waters and have been found right across the Tasman Sea to New Zealand. Larvae develop through a series of 11 stages before changing into a non-feeding stage (called a puerulus) which settles on coastal reefs. Early stage larvae occur in shelf waters; mid and late stage larvae are found almost exclusively offshore where they occur primarily in waters of the Subtropical Front.

DISCUSSION POINT

How does ecosystem-based management apply to species that cross jurisdictional boundaries?

There is high variability in the structure and size of marine populations between years and seasons. This natural variability in marine populations makes it difficult to predict future birth rates or numbers of juveniles in a particular year with precision or accuracy. Changes in ocean circulation can have major influences on species distribution and survival by influencing the growth of algae (primary production) and consequently the rest of the marine food chain. For example, the catch rate of yellowfin tuna from southeastern Australia in May 1996 was particularly high; this correlated with regional oceanography (the presence of a persistent warm-core eddy) which caused increased primary production.

DISCUSSION POINTS

How can management strategies be developed to cope with year-to-year variations?

How can the influence of global climate change be considered in planning and management?

Participating in oceans management

Description

People from coastal, rural, urban and Indigenous communities, industry, and governments all play important roles in managing oceans. Each group contributes expertise and experience to management decisions. We need to clearly define and integrate our management roles and responsibilities to ensure that oceans are managed sustainably and offer the greatest long-term community benefits.

Examples of issues

- Current management systems were not specifically developed to deliver:
  - regional marine plans
  - cross-sectoral integration
  - ecosystem-based, multiple-use management
- Capacity of existing cross-jurisdictional management arrangements to effectively implement regional marine planning
- Capacity of existing management systems to deliver outcomes-based management that is adaptive to current knowledge and information
- Participation of relevant non-government people (coastal, urban, rural, Indigenous and industry) in management processes
- Providing skills for coastal, urban, rural, Indigenous and industry people and marine resource managers to work in productive partnerships
- Recognition of Indigenous people as experienced managers of marine resources
- Development of innovative approaches to community-based management
- Fostering stewardship for the marine environment.

Illustrations

The Commonwealth Government's legal and institutional framework for regulating marine activities is fragmented and complex, with more than 100 pieces of legislation that currently manage ocean use, ecosystem health and cultural heritage in the South-east Marine Region.

The legislation is supplemented and supported by a myriad of administrative arrangements and operational procedures.

DISCUSSION POINTS

What is the capacity of the current legal and institutional framework for implementing regional marine plans?

Do existing legislation and institutional arrangements allow for integrated oceans management?

What lessons can be learnt from existing legislation and procedures for ecosystem-based management?

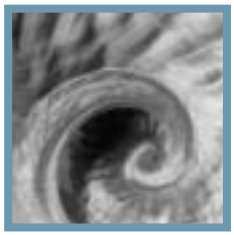
Indigenous people have an extensive cultural heritage and customary association with the Region. As such, it is undoubtedly important that they effectively participate in management of the Region. The following quotes taken from the South-east Regional Marine Plan Indigenous consultation process provide examples of current issues relating to their participation in oceans management:

"There needs to be places set aside for Indigenous people on all high level planning and policy committees."

"There needs to be cross cultural education of resource managers so that the few Indigenous people employed in cultural heritage do not have to explain everything all the time."

DISCUSSION POINT

How can Indigenous customary knowledge of marine management be used to its full extent?



Through peak body organisations, recreational fishers in Victoria provide information to Fisheries Victoria. This information assists in the management of fisheries and helps in updating the annual Victorian Recreational Fishing Guide.

DISCUSSION POINT

There are many examples of active non-government involvement in coastal management. How best can people contribute to off-shore marine management?

Before the survey of the Tasmanian Seamounts and the subsequent declaration of a marine reserve in the area, the South East Trawl Fishing Industry Association agreed to a voluntary closure of the area from trawling. The deeper Tasmanian Seamounts, peaking at depths of 1150 – 1700 m beneath the sea surface, had not previously been targeted by the trawl fleet partly due to the limitations of current gear technology. However, the voluntary closure helped to ensure that the seamounts were in a 'pristine' condition for the surveys, and now remain so through management of the marine reserve.

The National Heritage Trust Fisheries Action Program funded community-based projects that included input on identifying management objectives, actions and responsibilities in the marine environment including fisheries management and planning policies in Tasmania (both commercial and recreational). This program resulted in a better understanding in the community of the principles of managing marine ecosystems and a shared sense of responsibility for management.

Australia's Oceans Policy promotes broad participation of non-government people in regional marine planning. The National Oceans Advisory Group provides participation for representatives of non-government groups. The Steering Committee for the South-east Regional Marine Plan has non-government membership, their main role is to provide advice and guidance on the development of the plan. This Discussion Paper provides very broad participation opportunities to all Australians to contribute to identifying regional marine plan objectives.

DISCUSSION POINTS

How can community stewardship for off-shore marine areas be fostered?

What is the best way for your interests to be represented in marine planning and management in the Region?

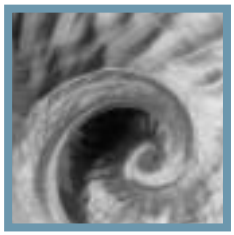
Moving forward

Analysing planning issue themes and moving towards management options

Feedback generated by this Paper will directly influence the development and finalisation of the regional marine plan objectives and help define planning issues. The process for identifying, analysing and evaluating the planning issues is described in Figure 3.

The Stakeholder Working Group (see Figure 2), supported by expert advice, will play a key role in finalising regional marine plan objectives and analysing planning issues. The Group will have membership from industry, government, special interest groups, Indigenous communities and community members.

The South-east Regional Marine Plan Steering Committee will continue to guide the development of the Plan, with clear links to the Stakeholder Working Group. To achieve this, the Chair of the Steering Committee will also be asked to chair the Stakeholder Working Group.



Finalising the Plan

The Stakeholder Working Group will focus on developing a range of management options designed to achieve the objectives for the South-east Regional Marine Plan. State government officials in the Region have indicated a willingness to participate in the options development phase. The mechanism for this is currently being discussed.

It is likely that management options will become apparent when the planning issues are being analysed, but they will need to be compared with each other in order to be specific about the details of each option.

Management options will consist of different combinations of management tools (management strategies) and implementation arrangements, including a system designed to assess the performance of each strategy (refer to Figure 4). Management tools are measures used to control or direct particular aspects of an activity, methods for reaching management decisions, or ways of influencing patterns of use. The management options will focus on integrating existing management tools (through the responsible agency) and addressing gaps where necessary. The management tools may range from very specific management tools such as minimum mesh size on fishing gear, to environmental impact statements for individual activities, large-scale spatial zoning of activities and/or market-based incentives.

The management options will be evaluated considering the cost (economic, social and environmental) of implementation against the benefit derived from the option. The practicality of the implementation requirements for the option will also need to be considered.

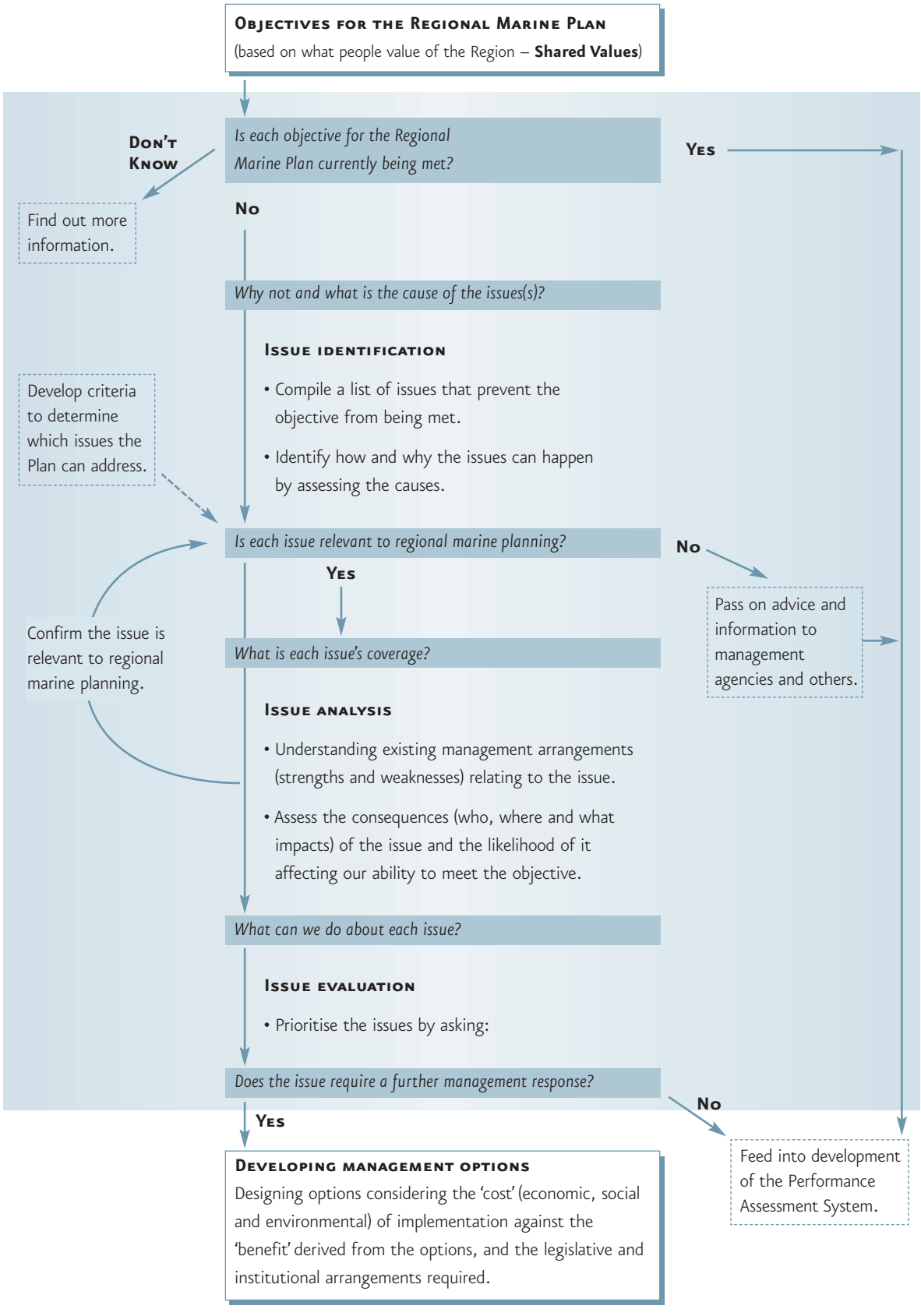
Stakeholder Working Group advice on management options will be used in negotiating which options to include in the Draft South-east Regional Marine Plan. After a formal public comment period and making amendments to the Draft Plan as necessary, the National Oceans Ministerial Board will be presented with a final South-east Regional Marine Plan for approval.

The design of the legislative and institutional framework is a major area of work still to be completed. We are currently working out how to implement a regional marine plan, including what institutional arrangements need to be established and what policy and/or legislative basis is appropriate. In addition, the development of a performance assessment system represents a major challenge. The National Oceans Office will work with National Oceans Ministerial Board agencies, technical experts and other key people to complete these tasks.

Australia's Oceans Policy clearly points out the need and value of community and industry participation in the regional marine planning process. The South-east regional marine planning process provides a series of further opportunities for public participation. Figure 2 illustrates how the Plan is being developed, and the specific opportunities to comment on National Oceans Office publications (eg Draft Regional Marine Plan). It also points out that public participation in oceans planning and management does not stop with the release of a regional marine plan. Rather, public participation will play an important role in the periodic assessment and review of regional marine plans.

A range of fact sheets, brochures and background information papers are available. Visit the National Oceans Office website at www.oceans.gov.au for details.

Figure 3:
An explanation of how the planning issues will be defined.



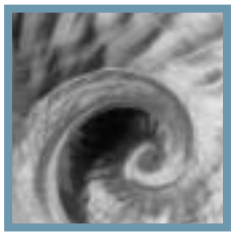
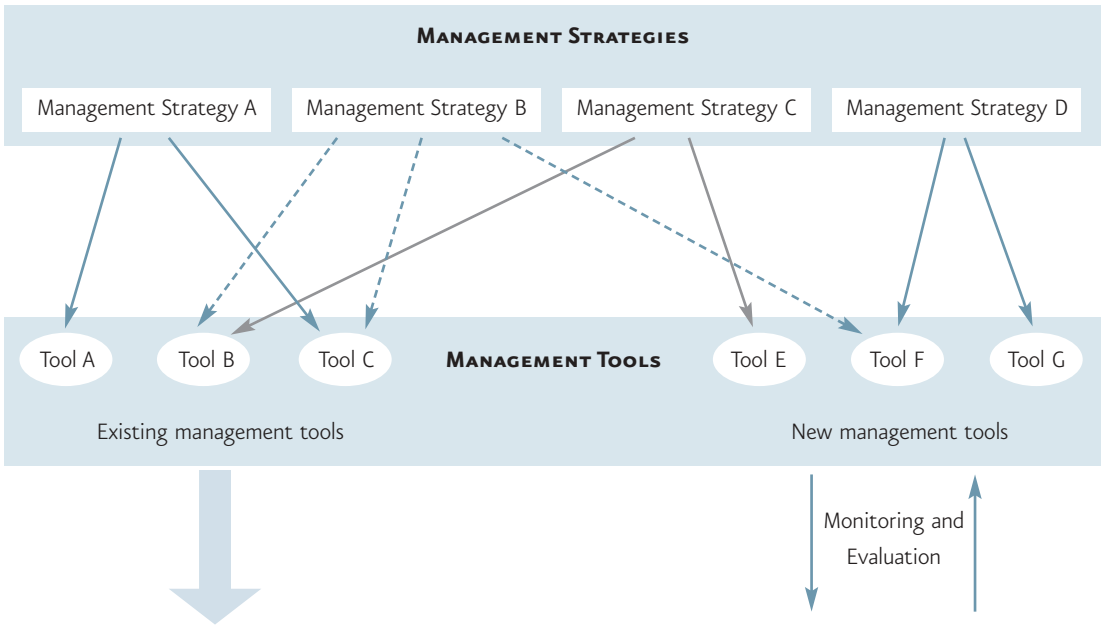


Figure 4:
The main components of a management option.



Legislation and Institutional Framework

Legislative requirements and institutional arrangements for implementing the Plan.

Performance Assessment System

Operational objectives, indicators, reference points and performance measures combined with feedback decision rules.

healthy oceans: cared for, understood and used wisely for the benefit of all, now and in the future healthy oceans: cared for, understood and used wisely for the

National Oceans Office

Level 1, 80 Elizabeth St, Hobart

GPO Box 2139, Hobart, Tas, Australia 7001

Tel: +61 3 6221 5000 Fax: +61 3 6221 5050

www.oceans.gov.au

The National Oceans Office is an Executive Agency of the Commonwealth Government of Australia