

A REPRESENTATIVE MARINE RESERVE SYSTEM FOR WESTERN AUSTRALIA

**REPORT OF THE MARINE PARKS AND RESERVES SELECTION
WORKING GROUP**

ANALYSIS OF PUBLIC SUBMISSIONS

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FOREWORD

The report of the Marine Parks and Reserves Selection Working Group, *A Representative Marine Reserve System for Western Australia*, was the culmination of a seven-year investigation of the State's 12 500 kilometres of coastline from the Kimberley to the Great Australian Bight.

The Working Group identified about 70 areas, representing a range of marine ecosystems, as candidates for reservation. These areas will be further assessed for their biological, recreational and commercial values as part of the process of considering their establishment as marine conservation reserves.

In line with its policy for conservation of the environment and ecologically sustainable development, the Government sought public comment on the report when it was released in June 1994 and held a series of public briefings to receive feedback from local communities and a range of user, interest and industry groups. This document summarises and assesses public comments on the report of the Working Group.

A draft of this document was prepared by Murex Consultants Pty Ltd and it was finalised by the Department of Conservation and Land Management. Information in this document is accurate at September 1997.



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PART I

INTRODUCTION

1. BACKGROUND

A report on *A Representative Marine Reserve System for Western Australia*, prepared by the Marine Parks and Reserves Selection Working Group (CALM, 1994), was submitted to the Minister for the Environment in May 1994, and subsequently released in June of that year for public comment. Because of public interest in the subject the period for submissions was extended until the end of January 1995. During the public comment period the Department of Conservation and Land Management (CALM) conducted a series of public briefings in Western Australian coastal towns and provided specific briefings to Local Government, the fishing, mining and petroleum industries, aboriginal groups and other community groups.

In November 1994, the Government released a policy document entitled *New Horizons in Marine Management* (Government of Western Australia, 1994) which outlined a number of important policy initiatives, including proposed changes to the *Conservation and Land Management Act 1984*, in relation to the conservation of biodiversity and the management of human usage in the marine environment of Western Australia.

This document summarises the submissions received during the public comment period and provides a response to the issues that were raised.

In both written submissions and during public briefings, many people commented on policy issues in the *New Horizons* strategy. These policy issues have been addressed through the development and passage of the *Acts Amendments (Marine Reserves) Act 1997*. This document only deals with those submissions that relate directly to the Working Group report.

The Working Group report was not a draft but a final report to the Minister. It was not intended to produce an amended version taking account of public comment. Instead, the Working Group report, together with the public comments summarised in this report, will be used by the Government, the Marine Parks and Reserves Authority, and CALM as a source of information and views when considering areas for inclusion in the marine conservation reserve system.

2. METHOD OF ANALYSIS

The key points in each of the 203 written submissions were identified and sorted into generic groupings. Some of the points related to general issues while others related to specific recommendations about particular areas that the Working Group had identified as worthy of consideration for reservation.

A list of general issues was constructed, including issues raised during public briefings. An assessment was made of the views on each issue including the frequency with which a particular view was expressed. The results of this analysis are discussed in Part II. The comments concerning specific areas are analysed in Part III.

No distinction was made in the analysis between comments from individuals and those contained in group submissions. This was because the analysis did not attempt to *measure* public opinion by assigning numerical weight to points of view. Many factors influence individuals and sectional

interest groups to make formal submissions to government reports, therefore the numerical response on an issue is not necessarily an appropriate measure of public opinion. Nevertheless, the number of submissions that deal with a particular topic, or a particular place, can be indicative of public interest and this is recorded in the discussion of key issues. Where there are submissions representing the views of community groups or industry these are noted in the discussion.

A list of individuals and organisations who made submissions is given in Part IV. However, in keeping with common practice, particular comments are not attributed to their source.

3. FUNCTIONS OF A MARINE CONSERVATION RESERVE SYSTEM

A range of legislative powers may be applied to protect environmental values and manage environmental resources for long-term ecological sustainability. Marine areas given legislative protection are called *Marine Protected Areas* (MPAs). *Marine conservation reserves* are MPAs with clearly defined purposes and a high level of statutory protection.

Marine conservation reserves are acknowledged internationally, nationally and by the Western Australian Government as an important tool both for marine conservation and for equitable management of human usage of the marine environment.

Reservation means the setting aside (by legislative and administrative processes) of an area of State territorial waters for specified uses and purposes. Reservation enables application of legal and management regimes that facilitate those purposes. Constraints then apply to revocation or changes of purpose. Reserves are usually vested in a public body charged with the responsibility of ensuring that the specified management objectives are met.

There are graded levels of protection and intensity of management. Reserves classified at the highest level of protection, that is Class 'A', may only have their purpose, boundaries or existence changed or revoked by Parliament (all existing Western Australian marine conservation reserves are Class 'A'). The purposes of marine conservation reserves range from strict preservation areas solely for protection of marine flora and fauna, to multiple use areas catering for conservation, recreation and commercial uses in a planned, integrated management context.

Protection is intended to maintain biological diversity and to sustain populations of plants and animals, natural features and ecosystems which are valuable natural heritage or economic resources (e.g. for nature-based tourism and fisheries).

Where there are multiple uses of a marine area, including for example, recreation, tourism, fishing, aquaculture, pearling, and oil/gas or mining activities, reservation enables application of a management structure within which the various uses can be balanced and their management integrated in the overall public interest.

A representative marine reserve system in Western Australia, in the sense of the Working Group report, means a mosaic of reserved areas which, in total, is representative of the State's natural marine environment.

4. THE LEGISLATIVE FRAMEWORK

4.1 Marine conservation reserve categories

In Western Australia, multiple-use marine conservation reserves may be established under the *Conservation and Land Management Act 1984* and under special legislation, such as the Rottne Island Reserve, created under the *Rottne Island Authority Act 1987*. Fish Habitat Protection Areas can be created under the *Fish Resources Management Act 1994*. However, as outlined in *New Horizons in Marine Management*, "the principal thrust of the marine conservation effort will be to have one comprehensive system under the *Conservation and Land Management Act*". The Working Group report and this analysis of public submissions deal with CALM Act marine conservation reserves. These reserves are vested in the Marine Parks and Reserves Authority (MPRA).

With the commencement of the *Acts Amendment (Marine Reserves) Act 1997*, the previous two reserve category system changed to a three-tiered marine conservation reserve system through the introduction of a third category called Marine Management Area. A broad guide to the three categories follows:

Marine Nature Reserves

These reserves are created for conservation and scientific research. Although low-impact tourism may be permitted, no recreational or commercial fishing, aquaculture, pearling, petroleum drilling or production is allowed in these areas.

Marine Parks

Marine parks are created to protect natural features and aesthetic values while at the same time enabling recreational and commercial uses where these activities do not compromise conservation values.

Marine Management Areas

Marine management areas will provide a formal integrated management framework over areas that have high conservation value and intensive multiple use. These areas will be selected primarily on the basis of their biological and recreational values and their existing or future commercial activities such as petroleum production and commercial fishing.

In addition to establishing the new Marine Parks and Reserves Authority as the vesting body, establishing a Marine Parks and Reserves Scientific Advisory Committee and creating a third category of marine conservation reserve, the *Acts Amendment (Marine Reserves) Act 1997* provides for a more comprehensive statutory public consultation process.

The following process for establishing a new marine conservation reserve includes the new statutory consultation requirements:

- The area is identified and its proposed boundaries determined.
- A comprehensive assessment of the area's biological and economic resources and social values is carried out.
- Community liaison and advisory committees are normally set up to assist in the process, including preparation of the management plan and determining the various management zones proposed.

- A report on a reservation proposal is prepared for the Minister for the Environment by the Marine Parks and Reserves Authority.
- An indicative management plan outlining the reserve's proposed management objectives and zones is prepared.
- The Ministers for Mines and Fisheries are provided with a reservation proposal for their consideration and agreement before a notice of intent to reserve the area is published.
- When these steps have been completed, the Minister for the Environment formally publishes a notice of intent to declare a marine conservation reserve and releases the indicative management plan for public comment. (All marine conservation reserve proposals will be subject to a minimum three-months public comment period before a final decision by Government.)
- The Marine Parks and Reserves Authority provides the Minister for the Environment with a report on the public submissions received in response to the reservation proposal and the indicative management plan for the proposed marine conservation reserve.
- The concurrence of the Ministers for Fisheries and Mines is obtained.
- The reserve is then created by an Order of the Governor.
- The Minister for the Environment also tables in each House of Parliament the order to reserve the new marine reserve. Either House can resolve to disallow a reservation order.

For established marine conservation reserves, public consultation is required in the development of management plans and zoning schemes.

4.2 Management zoning provisions

Development of management zoning schemes is a fundamental aspect of reserve planning that allows spatial and temporal separation of incompatible activities, provided the permitted activities are consistent with the purpose of reservation. The marine reserves legislation establishes a management zoning scheme that provides for exclusion and permissible zones in marine parks in respect of exploratory drilling and production of oil and gas, aquaculture, commercial and recreational fishing and pearling and hatchery activity. Amendments to the Mining Act also take into account the standing of exclusion zones in marine parks. This management zoning scheme clarifies the extent of access to marine parks for important commercial and recreational interests while at the same time providing a management framework complementary to the conservation purposes of these reserves.

There are four management zones that can be established in a marine park:

- **Sanctuary zones** are 'look but don't take' areas managed solely for nature conservation and low impact recreation and tourism.
- **Recreation zones** provide for conservation and recreation including recreational fishing (subject to bag limits and other conservation measures).
- **General Use zones** are areas of marine parks not included in sanctuary, recreation or special purpose zones. Conservation of natural resources in general use zones is the priority but activities such as sustainable commercial fishing, aquaculture, pearling and petroleum exploration and production are permissible provided they do not compromise conservation values.

- **Special Purpose zones** are managed for a particular priority use or issue. This could be protection of habitat, a seasonal event such as wildlife breeding or whale watching or a particular type of commercial fishing. Uses compatible with the priority use or seasonal event are allowed in these zones.

Application of zones requires that the management goals for the reserve are well defined. This is achieved through a rigorous, public management planning process. Unlike reserve boundaries, zone boundaries may be amended as management requirements change and in that respect zoning is a flexible management tool.

Previously zoning was addressed as a component of management planning after establishment of a reserve. However, it has become evident that people find it difficult to endorse a marine conservation reserve proposal in the absence of details about the intended zoning. This has been overcome by enactment of a statutory requirement to provide details of a proposed reserve's management zoning and an indicative management plan in conjunction with the publication of a notice of intent to reserve.

In marine park sanctuary zones, recreation zones and certain special purpose zones, drilling for exploration and production of oil and gas, commercial fishing, aquaculture and pearling and hatchery activities will not be permitted, whereas in general use zones and other special purpose zones they may occur subject to the Acts under which these activities are administered. The special purpose zones where these activities will not be permitted are those where it has been declared by notice that the activity is not compatible with the zone's conservation purpose.

Recreational fishing will only be precluded from marine park sanctuary zones, such special purpose zones where it has been declared by notice that this activity is not compatible with the zone's conservation purpose and where recreational fishing and another recreational activity are determined to be incompatible.

PART II

MARINE CONSERVATION RESERVE ISSUES

Many submissions and comments dealt with issues that relate generally to the establishment and management of marine conservation reserves. Many of the comments relating to particular areas raised the same general issues. To minimise repetition, the most frequently discussed subjects are summarised in this section.

1. SUPPORT FOR THE PROPOSED MARINE CONSERVATION RESERVES PROGRAM

Strong public support for a statewide marine conservation reserve system was evident in both the written submissions and in the briefing sessions. Seventy-two written submissions specifically indicated support (though sometimes qualified - see below) for marine conservation reserves. Support was based on three common grounds.

1.1 Grounds for support

1.1.1 Need for increased management of the marine environment

Many submissions noted the need for increased management of Western Australia's coastal waters, especially in relation to recreational use and pollution. The poor condition of some coastal areas and the increasing pressures on much of the presently pristine coastal environment were widely acknowledged.

Although much of the Western Australian marine environment remains pristine, some nearshore areas, especially bays and estuaries, are already degraded through human impact and there is clear evidence that better management is needed to sustain these environments.

A perceived lack of coordination between marine management agencies and a lack of clear management policies were raised as concerns in several submissions.

Pollution (e.g. ballast water discharge and catchment runoff) may originate beyond reserve boundaries and may not be subject to decisions of the reserve's vested authority and management agency. Nevertheless, it is recognised that reserve status lends weight to arguments that controls should be implemented, even if the source is external and under the control of other agencies.

Reservation, with vesting in a public statutory authority and a public management planning obligation, is intended to achieve effective policy development and coordinated management planning.

1.1.2 Preservation of natural values

Related to the above, many submissions identified specific and general natural values in the marine environment and expressed the need for permanent preservation. Commonly, preservation of marine wildlife was perceived as intrinsically worthwhile but preservation for continuing human enjoyment, utilisation and study was also a common theme of submissions supporting a reserve system.

1.1.3 Economic impact

The social and economic benefits of reserve status were acknowledged in several submissions. The positive impact of the Ningaloo Marine Park on the regional economy was cited as an example several times.

There was considerable support from the tourism industry for marine conservation reserves, reflecting the positive economic value that reserves may have (although the issue of access fees is a common concern with the tourism industry - see Part II - 4.9, 8.3).

Recognition of an area as sufficiently "special" to warrant reservation is a significant attraction for visitors, an advantage already exploited by many tourist operators and agencies in their marketing.

1.2 Qualifications of support

1.2.1 Public participation

A common qualification was that there should be extensive public consultation prior to declaration of marine conservation reserves and public participation in management planning and ongoing management once reserves are declared.

Amendments to the CALM Act made by the *Acts Amendment (Marine Reserves) Act 1997* provide for a more comprehensive public consultation process (Part I - 4.1, 4.2).

1.2.2 Status of the report in the ongoing program

A common qualification was that the report is only a first step in the process of reserve selection and that detailed survey is needed of specific areas before declaration proceeds. This view was expressed strongly by the oil and gas industry which described the methodologies employed by the Working Group as inadequate.

Some of the objections to the marine conservation reserves program stemmed from a perception that the recommendations of the report would be adopted without further consideration, resulting in an excessive reserve system.

The preliminary nature of the report is acknowledged in its own introduction. For some areas (e.g. Dampier Archipelago, Abrolhos Islands) extensive survey data already exist and there have been prior proposals for reservation. But for the majority of the State's coastal waters environmental data are scanty. The Government has resolved that comprehensive assessments of an area's biological and economic resources and social values are required prior to reservation.

The Working Group adopted the principle of *representativeness*, classifying the coast into distinctive types on the basis of mainly geomorphological characteristics. In some cases this approach clearly identified significant areas in terms of conservation and recreation values. In others, much more detailed study is needed before representative areas can be selected.

There are also the issues of manageability, resource requirements, cost effectiveness and the impact of reservation on other public values, to be considered.

For all these reasons the task of the Working Group was limited to identifying areas worthy of consideration for reservation and its recommendations are generally cast in those terms. For many identified areas further detailed survey work will be needed and for all areas there will be further public consultation about potential social and economic impacts before reservation proceeds (the process of implementation is discussed in Part II - 3.13, 3.14).

2. OBJECTIONS TO THE PROPOSED MARINE CONSERVATION RESERVES PROGRAM

Although Western Australia has had marine conservation reserves legislation since 1984 and there are seven existing reserves established under the CALM Act (and a marine component of the Rottnest Island Reserve), a number of submissions (31) objected to the establishment of a marine conservation reserve system. The majority of the objections came from the fishing industry. The main grounds for these objections, and responses to them, are as follows.

2.1 Grounds for objection

2.1.1 Marine conservation reserves are not necessary

Submissions from the fishing industry tended to put the view that marine conservation reserves are unnecessary because fishing and protection of the marine environment are already adequately managed under fisheries legislation.

Legislation for marine conservation reserves was passed by the Parliament in 1984. Establishment of a statewide, representative system of marine conservation reserves has been Government policy since that time. Reservation of marine areas is intended to provide integrated management of a variety of values and of recreational and commercial activities.

One submission noted that a range of controls are available which can achieve adequate marine area management without reservation or zoning and believed that a greater degree of flexibility of management may be possible if strictly defined zoning is avoided.

The first part of this point is acknowledged. It should be a consideration when decisions are made on the most appropriate means of introducing protection and management for specific areas. However, it does not negate the importance of reservation as an option and the concomitant management planning processes involving public input.

Several south coast fishermen argued that the marine environment is not under any threat or that acknowledged threats (e.g. discharge of ship ballast water) could not be managed any better by reservation.

It is true that most of Western Australia's marine environment is considered to be in a healthy condition, although in heavily used areas there is an obvious and urgent need for better management. Reservation of particularly significant, pristine areas can be justified on the grounds that introduction of appropriate management is desirable before problems emerge rather than after the event. But, in any case, the "if it ain't bust don't fix it" argument is based solely on the perception that reservation is about threats and environmental protection and ignores the positive social, economic and conservation impacts it can have (Part I - 3.; Part II - 8.).

Some south coast fishermen specifically identified the recovery of once threatened marine mammals (fur-seals, sea-lions, whales) as evidence of the healthy state of the marine environment.

The recovery of these species is acknowledged, however their abundance can create problems, where the interests of the fishing industry, wildlife conservation and nature-based tourism conflict. This issue alone is reason for better management, and perhaps, for reservation, with a public management planning process which will minimise conflict.

2.1.2 Restricted access

A number of submissions objected to marine conservation reserves (usually to specific area proposals) on the grounds that access, particularly for recreational fishing, would be restricted. This was a common perception on the south coast.

There were two misconceptions underlying this view. First, access through land reserves (mainly national parks) was commonly aligned with access to the adjacent waters. There has been a long history of dispute between local people on the south coast and the national park management agency (CALM and its predecessor) about closure of fishing tracks to the coast in some areas. This has coloured the perception of many people about potential restrictions on access to adjacent marine conservation reserves. Nevertheless, land access is not a marine conservation reserve issue. Reservation of coastal waters will neither increase nor limit access through adjacent land reserves.

Secondly, many people assumed that "marine reserve" in the title of the report equated with the reserve category of marine nature reserve (see Part I - 4.1) and concluded that recreational fishing would be excluded from reserved areas. This assumption is based on a mis-reading of the report and is incorrect. Although the report rarely specifies reserve category in its recommendations, in many cases marine nature reserve or sanctuary zone in a marine park would not be appropriate categories. This misunderstanding could be eliminated by a clearer presentation of what is proposed, and many of the current objections to the marine conservation reserves program may be withdrawn when the true nature of the proposals is more widely understood.

2.1.3 Marine conservation reserves "lock away" or "quarantine" natural resources

Another common objection to a marine conservation reserve system was the perception that reserves "lock away" resources. This perception was held particularly by the fishing, oil/gas and mining industries. There was reference in submissions to "singleton" or "single-use" reserves.

Some submissions calculated the total area encompassed by the recommendations in the report (i.e. the shaded areas in the maps) and objected that, if fully implemented, this would "quarantine" a large proportion of the natural resources of the Western Australian coastal environment.

The perception that an excessive area of State coastal waters is recommended for single-purpose reservation is based on a misunderstanding of the proposals and of the marine reserve legislation.

First, the report identifies areas that are *worthy of consideration* for reservation and includes large areas recommended for survey and further study before areas within them are selected.

Secondly, the "lock away" objection ignores the fact that marine parks and marine management areas are multiple use reserve categories, open to commercial fishing, aquaculture, pearling and oil/gas and mining activities subject to the provisions of legislation, except for the case of Ningaloo Marine Park where the Government has banned oil/gas drilling and production. Mining or oil and gas development proposals in other marine parks would be considered on their merits, with management plans and management zones subject to public consultation and the standard assessment processes of the Environmental Protection Act.

Thirdly, the "lock away" objection ignores the fact that far from excluding human use, a designated purpose of marine parks is compatible recreation and commercial activity. Management plans for existing marine parks seek to facilitate public use of their resources in a sustainable way. An objective of multiple-purpose reserve management is that issues relating to compatible and incompatible uses are resolved, publicly, during management planning procedures (Part II - 3.11).

It is made clear in the report that a marine conservation reserve system comprising single-purpose reserves is not what is being proposed. Marine nature reserve is the only category that could be described as single-purpose (i.e. conservation).

2.1.4 Adverse effects on the economy

A common emphasis in submissions from the mining, oil/gas, fishing, aquaculture and pearling industries is that reservation results in "lock away" of natural resources with adverse effects on the economy associated with more stringent environmental protection regulations.

The first of these arguments is discussed above. The marine nature reserve category necessarily excludes extractive commercial activities while marine parks and marine management areas allow for multiple use. The balance of the "public interest", weighing positive and negative economic factors and other public values, such as recreation amenity and conservation, is considered when individual proposals, whatever the category, are ultimately put before Parliament after statutory consultation requirements are fulfilled.

The second aspect of this objection, i.e. the cost of meeting the requirements of more stringent environmental regulations, is a significant issue. There is no doubt that there is a cost associated with detailed survey, reporting and public review processes for obtaining project approvals, and that the standard required once an area is reserved may be higher than otherwise incurred. A stringent public review process may also cause delays in obtaining approvals. These costs would be added to the cost of any development in a multiple-use marine conservation reserve. This issue relates to current community expectations for high standards of environmental management and user responsibility, particularly in areas of special conservation value.

2.1.5 View that reservation is an outdated management concept

Several oil and gas industry submissions claimed that reservation is an outdated approach to marine environmental management based on terrestrial reserve models and that multiple-use is a more advanced concept.

Publications cited by submissions promoting this view (e.g. Ottesen & Kenchington, 1995) promote the concept of multiple-use management of reserved marine areas but they do not argue against reservation. Multiple-use management and reservation are not mutually exclusive. Far from being an outdated marine management concept, reservation is an increasingly accepted, essential element of international and national integrated marine management programs.

Multiple-use management is central to the Western Australian marine conservation reserves program. The concept applied in the Working Group report is not based solely on single-use reserves. Although some areas of particularly high conservation or recreational value warrant reservation (or zonation) for specific purposes, most existing marine conservation reserves promote a range of recreational and commercial activities as well as conservation and this is likely to be the usual circumstance with future reserves.

3. ADMINISTRATION

Issues that relate to the categories of marine conservation reserves and how and by whom they are established and managed are grouped under this heading.

3.1 Public consultation

One submission emphasised the importance of the vested authority maintaining close consultation with local communities.

Processes for public consultation during development of marine conservation reserve proposals and management plans are prescribed in the legislation and are strictly followed (Part II - 3.11, 3.13, 5.). In the past the vested authority for marine parks and marine nature reserves (i.e. the National Parks and Nature Conservation Authority) and CALM have made strong endeavours to ensure that adequate public consultation takes place. In addition to statutory requirements, local community advisory committees have generally been established to provide input to planning and ongoing management.

3.2 Integration of responsible authorities

Two submissions raised concern about the role of the vested authority and the possibility that it might duplicate the role of other authorities and complicate procedures for obtaining development approvals.

The National Parks and Nature Conservation Authority (the former vested authority for marine conservation reserves) has been involved in consideration of development proposals, and the Marine Parks and Reserves Authority will now do so. One of its most important functions, as a public body, is to ensure that adequate liaison takes place between regulating agencies, with affected industries and community groups involved in the process (see Part II - 3.7).

3.3 Status of the Working Group's report

One submission expressed the view that the report could be seen as pre-empting policy initiatives of the (then) proposed Marine Parks and Reserves Authority.

The report is not the "final word" on a marine conservation reserve system for Western Australia but is a source document for use by the Marine Parks and Reserves Authority, CALM and the Government as the marine conservation reserves program is progressed.

3.4 Resourcing

Three submissions expressed concern that the operations of the vested authority must be adequately funded.

The operation of the vested authority is funded through CALM as part of the normal Government budgetary processes.

3.5 CALM as the principal management agency

There were 23 submissions (all from the fishing industry or fisheries management interests) that objected to CALM being the management agency for marine conservation reserves. Most commented that the Fisheries Department would be a better alternative, claiming that CALM has no (or little) marine research or management expertise, that the Fisheries Department has the necessary expertise and infrastructure and that duplication is unnecessary.

This matter has been addressed in *New Horizons in Marine Management* and through the *Acts Amendment (Marine Reserves) Act 1997*. The Government and Parliament have affirmed that the State's marine conservation reserve system will be established under the CALM Act and that CALM has overall management responsibility.

Several submissions expressed the opinion that marine conservation reserves should be under the control of a single management agency and that management by multiple authorities is ineffective.

Given the variety of activities within marine parks, management by a single agency would necessitate massive duplication of resources, e.g. for the management of tourism, water sports, fishing, wildlife conservation, boating and research.

In the present model of marine conservation reserve management there is a vested authority and a management agency (CALM) and integration is achieved through collaboration with other Government agencies that have statutory authority, thereby minimising duplication of effort.

One submission (from the fishing industry) expressed the view that the current CALM Act places emphasis on recreational use of marine parks and suggested that this is unsatisfactory and a different institutional structure needed to be created ensuring that the (wider range of) objectives of reservation can be carried out.

The Government recognises that aquatic recreational pursuits are a highly valued aspect of the Western Australian life-style and that reservation and management of coastal areas of particular merit for those purposes is a widespread community expectation. Similarly, the Government recognises the commercial values that are inherent in marine conservation reserves (Part I - 4.). Amendments to the CALM Act made by the *Acts Amendment (Marine Reserves) Act 1997* specifically recognise compatible commercial uses in the purposes of, and in the management zoning scheme established for, marine parks.

One submission objected to CALM as the lead management agency by asserting that the Department was seeking responsibility for marine park management, with a recreational emphasis, so that fees could be charged to the benefit of the Department. It cited the toll-gate at Monkey Mia as an example.

CALM was assigned responsibility for management of marine parks by virtue of legislation passed by the Parliament in 1984.

It is Government policy that a fee generally should be charged where a service is provided. This is independent of which Government department is the management agency (Part II - 4.9). The Monkey Mia toll-gate was established in collaboration with the Shire of Shark Bay. Revenue from gate takings there is used to support the dolphin management and education programs at the Monkey Mia reserve and in the Shark Bay Marine Park.

3.6 Management of fishing, pearling and aquaculture in marine conservation reserves

Objections to CALM as the marine conservation reserve management agency (Part II - 3.5) tended to propose that the Fisheries Department would be a better alternative. Inherent in these objections was concern that CALM may become responsible for the management of fisheries.

Under present legislation, and in practice, fishing in marine conservation reserves (where it occurs) does not operate under the CALM Act, nor is it regulated and managed under that Act. Commercial and recreational fishing in existing marine parks are managed by the Fisheries Department under the Fish Resources Management Act.

The CALM Act now provides that, in permissible zones in a marine park, the activities of commercial and recreational fishing, and aquaculture are subject to the Fish Resources Management Act and that pearling and hatchery activity are subject to the Pearling Act. In permissible zones these Acts prevail over the CALM Act should any conflicts or inconsistencies arise with respect to the prescribed marine park purpose.

Management plans are prepared under the direction of the Marine Parks and Reserves Authority. Management plans are approved by the Minister for the Environment with the concurrence of the Minister for Fisheries. Once approved, management objectives that relate to fishing and aquaculture are subject to the Fish Resources Management Act, and those that relate to pearling are subject to the Pearling Act, and are controlled by the Fisheries Department.

Thus, although CALM has a lead agency role for overall marine conservation reserve management, the Fisheries Department has, and will retain, the authority to manage fishing activities, both recreational and commercial, and aquaculture and pearling and CALM's role in this function is participatory and supportive.

At the time of release of the Working Group report, the CALM Act specifically stated that the powers of the Fish Resources Management Act prevailed in respect of fishing in marine parks and there was no specific reference to the Pearling Act. This was seen as a discrepancy in one submission.

This discrepancy has been addressed in the amendments to the CALM Act. Pearl farming operates effectively in one of the existing marine parks (Shark Bay) and is managed by the Fisheries Department in collaboration with CALM.

3.7 Management responsibilities of other State Authorities and Local Government

One submission noted that responsibility for activities within marine conservation reserves falls among several management agencies and stressed that all should play their respective roles. Another thought that there needs to be a more holistic view of the coast, its habitats and fish stocks and closer collaboration between Departments to achieve cohesive and effective management.

Management of marine conservation reserves addresses a range of conservation, recreational and commercial activities (Part I - 3., 4.; Part II - 3.9, 4.8). Although CALM is the lead agency and has specific responsibility for management of conservation and recreation programs, the Fisheries Department, the Water and Rivers Commission, the Department of Transport and the Department of Minerals and Energy also have statutory responsibility for other activities. Management of marine parks necessitates that the operations of Government agencies have to be taken into account and it is an important function of the authority in which the reserves are vested to ensure this happens.

One submission opposed the marine conservation reserves program on the grounds that the Waterways Commission (now the Water and Rivers Commission) is currently preparing a draft integrated management plan for inlets on the south coast, and the Coastal Management Review Committee (CMRC) established by the Ministry for Planning (MFP), is preparing a plan for integrated coastal zone management.

Another believed that there should be a State coastal zone strategy to focus limited resources and integrate regional planning and development programs.

Another believed that management plans for marine conservation reserves should be complementary to MFP regional plans and that planning implications should be taken into account in designating reserves and management zones.

These submissions raise the important issue of the place of the marine conservation reserves program in the State's coastal zone planning strategy. The marine conservation reserves program is complementary to both Water and Rivers Commission and coastal management projects. The Marine Parks and Reserves Selection Working Group included a member of the CMRC and there was close liaison with the Water and Rivers Commission.

The final report of the CMRC concluded that networked management systems may be more effective in coastal management than fixed, legislated programs. It recommended the establishment of a Coastal Zone Council (CZC) under the aegis of the Western Australian Planning Commission, a State coastal zone management strategy, and a Statewide coastal zone resource appraisal. The Council would be representative of coastal zone management agencies (including CALM and the Fisheries Department) and serve to coordinate their diverse programs. Thus, reserve management programs would be integrated with planning for the whole coastal zone.

Integration of the recommendations in this report with the proposed coastal zone management strategy and MFP regional plans would be achieved through liaison between the CZC, the Marine Parks and Reserves Authority, the MFP and CALM.

One submission noted that the landward boundaries of marine conservation reserves will need to be considered carefully with some including land areas above high water mark while others exclude beach or intertidal areas that may be better managed by other authorities.

This is an important point. The most appropriate landward boundaries for each reserve would be considered, in collaboration with Local Government and other relevant management agencies, during preparation of the notice of intent to establish a marine conservation reserve and would be subject to public comment prior to establishment.

3.8 Interaction/collaboration with the Commonwealth

Several submissions noted that there are no ecological barriers between Commonwealth and State waters and that integrated management by Commonwealth and State authorities will be necessary to protect the inter-connectedness of marine ecosystems in some areas considered worthy of reservation.

The Commonwealth agency responsible for marine conservation reserves in Commonwealth waters off the Western Australian coast, Environment Australia (formerly the Australian Nature Conservation Agency - ANCA), submitted that it would seek collaboration and complementary action in such cases. Collaboration already exists between Environment Australia and CALM in the case of the Ningaloo and Rowley Shoals Marine Parks.

One submission (from the mining industry) expressed concern that the Commonwealth is seeking greater control over the marine environment and believed that State authorities must remain responsible for implementation of any marine reserve strategy.

The State has clear authority for reserve management within State waters where the State marine reserves legislation applies.

3.9 Existing categories of CALM Act marine conservation reserve - their purposes and titles

It was clear from the submissions and the regional briefing meetings that the differences between marine nature reserve and marine park are not clearly understood. This was compounded by use in the report of the generic term "*marine reserve*" as applying to both reserve categories. This resulted in a common misunderstanding that fishing is not permitted in any marine reserves. It also fueled opposition to the marine reserves program generally.

This confusion could be ameliorated by the use of a different generic term for any category of marine reserve but there is none that is precisely relevant. The term "*marine protected area*", which has some national and international currency and could be useful, embraces areas protected by a variety of

means, not only by reservation, and is broader in scope than the report. It is preferable to retain "marine reserve" to include marine nature reserve, marine park and marine management area and to endeavour to ensure that the categories are better understood. "Marine reserve" is now a defined term in the CALM Act and has this meaning.

One submission said that the lack of explicit inclusion of commercial fishing as a purpose of marine parks is of great concern to the fishing industry.

The Government and the Parliament have recognised that compatible commercial activities have a place in multiple-use marine reserves. Amendments made to the CALM Act explicitly provide for commercial fishing within designated general use and special purpose zones in marine parks where it is shown to be compatible with the purposes of those zones. Commercial purposes are also expressly included as a purpose of the new category of multiple-use marine reserve (marine management area).

One submission (from the fishing industry) believed that the report shows a bias in favour of recreational use and the exclusion of commercial fishing. Another (from the conservation movement) noted that there is currently only one marine nature reserve and that there are many areas of high conservation value that warrant full protection (i.e. marine nature reserve status).

While these divergent views both see a bias for recreational use, the former seeks a lesser level of environmental protection and the latter a greater level. They represent the breadth of public opinion on the need for management of the marine environment. What is needed is a marine conservation reserve system with an appropriate balance between full protection and multiple use areas, in terms of reserve categories and zoning schemes.

3.10 Fish Habitat Protection Areas

There were two submissions commenting on this issue which has arisen since release of the Working Group report. (Provisions for establishing Fish Habitat Protection Areas were included in the *Fish Resources Management Act 1994*).

One submission believed that the Fisheries Department should retain the power to declare aquatic reserves.

Provisions for declaration of aquatic reserves were included in the repealed Fisheries Act. They have been replaced by the Fish Habitat Protection Area provisions of the *Fish Resources Management Act 1994*.

One submission expressed reservations about the creation of Fish Habitat Protection Areas as it will create a duplicate vesting and management system.

In the *New Horizons in Marine Management* policy the Government referred to the creation of Fish Habitat Protection Areas under fisheries legislation to protect fish in specific areas but stressed that the principal thrust of the State's marine conservation program relates to the development of a statewide, representative marine reserve system established under the CALM Act. Responses to recommendations in the Working Group report were considered in that context.

3.11 The management planning process

Only one written submission commented on this issue (although several did in the context of public participation). That submission considered the time between reserve declaration and release of a draft management plan to be excessive as it resulted in denial of access in the interim.

Similar concerns were commonly expressed during public briefings but they usually related to past experience with construction of access tracks to the shore rather than to marine conservation reserves themselves. When the Working Group compiled its report, the CALM Act did not provide for approval of management plans before the establishment of marine reserves and management plans were prepared under the direction of the vested authority after reserve establishment. The intention of this process was to ensure that all management actions which may impact on the environment and related human uses are given thorough consideration and ensure there is adequate public consultation prior to approval.

Given that management planning is a lengthy process involving extensive public consultation, it was inevitable that there would be a time lag between the declaration of a reserve and approval of the management plan.

The time lag may have meant that construction of facilities, such as boat ramps, and the adoption of zoning schemes (Part II - 4.7) were deferred until a management plan was approved, although the CALM Act does make provision for compatible operations prior to a management plan in certain circumstances.

These processes have since been superseded under the amendments to the marine reserves legislation which provide that indicative management plans will be prepared prior to the publication of a notice of intent to reserve, and these management plans will be subject to public submissions prior to reservation. Management in accordance with an indicative management plan will be commenced on establishment of a reserve.

3.12 Effect of recommendations in the report on development proposals

One written submission and several statements at briefing sessions expressed concern that the existence of the report and its recommendations specifying areas worthy of consideration for reservation, may cause Government approval authorities to regard those areas as *de facto* reserves prior to declaration.

The report does not have the status of an approved document. The recommendations reflect the views of the Working Group and do not have any formal Government endorsement.

Following consideration of public comment, the Government may consider the recommended areas and any chosen for reservation will be subject to public consultation, preparation of indicative management plans, published notices of intent to reserve and the opportunity for public submissions (Part II - 3.13). Until that time the identified areas will have no special status when development proposals are considered unless the Government signals that it intends to progress examination of a particular recommendation.

3.13 Implementation - process and schedule

Nine submissions queried the process and schedule of implementation.

The recommendations of the Working Group report do not constitute the notices of intent to reserve required by the legislation.

Implementation of the Working Group recommendations will require that each area identified as being worthy of reservation shall be considered on its own merits and, after further public consultation, will proceed independently through the reserve establishment process.

Detailed assessment will take place during preparation of the indicative management plans and public notices for those reserve proposals selected for consideration (see Part II - 3.14).

One submission advocated the issuance by Government of a further policy statement to both identify priority areas for declaration from those identified as being worthy of consideration and to establish a schedule for their implementation. These points were also raised in other submissions and several advocated the development of a priority list of areas for declaration, selected from those identified in the report as being worthy of consideration and a schedule of implementation.

In the light of the submissions, the Government will progressively consider the recommendations of the report and select those for examination in further detail, based on the contribution they are likely to make to the State marine conservation reserve system, the level of public support for them, and the capacity of the management and planning authorities to administer the process. The relevant Local Government, community groups and other principal stakeholders will be advised and invited to participate in the assessment process (Part II - 3.14).

Implementation schedules for the proposals will vary according to the assessment detail and the complexity of the public participation program that is required. Surveys will be commissioned for those areas identified in the report as needing more information before specific areas can be selected.

(N.B. Areas identified in the report as worthy of consideration but not selected for early implementation will not have the status of *quasi* or *de facto* reserves. The Environmental Protection Authority has indicated that it will treat those recommendations as sources of information and will not use them to set levels of assessment of industry proposals. See also Part II - 3.12.)

A number of submissions stressed the need to involve stakeholders, that is, people and organisations with interests in the economic, social and environmental impacts, either positive or negative in the assessment process.

The importance of this is acknowledged. Prior to preparation of the notice of intent to reserve an area, it is normal practice to consult with the relevant Local Government as well as organisations and any individuals believed likely to be affected. This practice will be emphasised in future because of the new requirement for indicative management plans to be prepared before a notice of intent to reserve is published.

3.14 Assessment procedure prior to establishment of marine conservation reserves

A large number of submissions (35) commented specifically on this issue. Most of them noted that more detailed studies will be necessary before decisions are made and individual recommendations implemented.

Several submissions, notably those from the oil/gas and mining industries, criticised the adequacy of the scientific data upon which the recommendations of the report were based.

The report identified many areas believed by the Working Group to be "worthy of consideration" for reservation. In some cases, further studies are needed to confirm the values of the selected areas. In others, having identified distinctive coastal types needing to be represented in the reserve system, the report recommended further surveys before specific areas are selected.

The level of detail sought and the methodology applied will vary according to individual circumstances. For some areas (e.g. the Dampier Archipelago, the Abrolhos Islands and south coast estuaries) extensive data are already available. Each proposal will be considered on its merits and additional study will be undertaken where it is necessary before individual proposals are pursued.

Several submissions, notably from the oil/gas, mining and fishing industries, believed that assessment should be based on analysis of "threat", that is, threat to the environmental values of the area proposed to be reserved.

Threat analysis is a highly useful tool of environmental management and is an important element in the reserve assessment process. Implicit (often explicit) in these submissions, however, is the assumption that if there is no threat there is no reason for reservation. This view sees reservation solely as a means of environmental protection and does not recognise the economic, social and scientific benefits that may accrue from reservation (Part I - 3.; Part II - 8.).

Several submissions stressed the need to take economic and social considerations into account, as well as conservation values, when assessing individual reserve proposals.

Economic and social impacts of reservation may be substantial and must be considered closely during assessment. Impacts may be positive or negative, or both in different contexts. For example, exclusion of mining may have a negative economic impact while enhancement of tourism may have a positive one. Assessment of the merits of reservation will consider all impacts and seek to balance them in the public interest.

Such considerations need not result in *to reserve* or *not-to-reserve* decisions. An appropriate balance of diverse economic, social and environmental interests may be achieved by selecting an appropriate reserve category and by management planning (especially zoning) to accommodate them (see Part II - 4.8).

One submission noted that the assessment criteria should be considerably more rigorous for marine nature reserves given the restricted range of uses permitted in reserves of this category.

This point is acknowledged and will be taken into account during further consideration of proposals where conservation is the sole purpose of reservation.

Two submissions suggested that any "exclusive" reserve proposal should be subject to the same rigorous impact assessment as a development proposal.

All marine conservation reserve proposals (made under the CALM Act) are subject to rigorous public notice and public comment processes, including scrutiny by Parliament, which is a higher and more open level of assessment than most development proposals. The marine reserves legislation has added to the scope of these processes and provided additional protection to the interests of specific portfolios in Government (Fisheries and Mines) and their respective constituencies.

One submission (from the fishing industry) noted that decisions to formally gazette areas for specific purposes, such as recreation, are political and criticised the Working Group for adopting that approach.

Any decision that involves public participation and scrutiny (and potential debate) by Parliament is reached, by definition, through a political process.

Recreation is an activity which, under the legislation, is permissible in marine parks (Part I - 4.1; Part II - 3.9) and it is essential that it be given due consideration when areas are selected for that use. Similarly, due consideration has to be given with regard to commercial activities.

One submission suggested that the vested authority should develop clear criteria for assessing, classifying and prioritising areas for reservation prior to beginning the implementation process. Another noted that the report does not indicate where coastal types are replicated.

The omission of information in the report on replication of coastal types and the need for criteria for prioritising recommended areas prior to beginning implementation are acknowledged.

4. RESERVE MANAGEMENT ISSUES

This section addresses issues that relate to management of marine conservation reserves once they are established.

4.1 Protection of marine habitats, flora and fauna

The function of marine conservation reserves for protection of flora and fauna seems to have been assumed by most submissions and few specifically referred to it.

A common view expressed by the fishing industry was that marine fauna is already adequately protected by fisheries legislation and that there is no advantage in reservation.

This view is discussed elsewhere (Part II - 2.1).

Mining and oil/gas industry submissions commonly acknowledged the need for reserves to protect unique or highly sensitive marine areas but thought that the areas should be small. In contrast, a submission representing the views of the marine science community emphasised that a marine conservation reserve system comprising small and patchy reserves would fail to protect marine and coastal wildlife and that whole ecosystems should be considered.

Optimal size of marine conservation reserves and the special problems for marine management resulting from the inter-connectedness of marine ecosystems are discussed in the report. This has also been a subject of exhaustive debate in national and international literature. The common current scientific view is that, to be effective, marine conservation reserves should be large and encompass whole ecosystems. It assumes that the large reserves should be for multiple use with high conservation zones nested within them. The Great Barrier Reef Marine Park Authority promotes this view. Similarly, this approach is reflected in the establishment of the Ningaloo Marine Park and its management zones.

Several submissions from south coast fishermen noted the current recovery of marine mammal populations and believed that reservation is unwarranted. One claimed that most fishes and whales are migratory and questioned the relevance of reserved areas to migratory species. In contrast, a submission from a marine mammalogist claimed that the report was remiss in overlooking the significance of certain areas of coastal waters to whales and dolphins.

Breeding and haul-out sites for fur-seals and sea-lions on the south and west coasts have been identified in the report and treated as supportive evidence for reserve recommendations. So too have known inshore resting and nursery areas of southern right whales and significant feeding areas of dolphins and dugong.

For the most part, migratory routes and important feeding and calving areas of the migratory humpback and other whales lie beyond the limit of State waters and are outside the scope of this report. Consideration will be given to measures to protect areas important to whales within State waters that have been drawn to the attention of CALM during the implementation of the marine conservation reserves program.

4.2 Relative values of remote, little-used, "pristine" areas *versus* heavily-used, already degraded areas

Although there were no written submissions on this subject, it arose several times during the regional briefing meetings. Two opposite views were expressed.

In one view, an area that is heavily-used (e.g. for recreation) and already degraded (e.g. pollution or diminished fish stocks) has less value for reservation than an area in good condition. Conversely, it was commonly argued that pristine areas (most of which are remote and little-used) do not need management and there is no point in reserving them.

Where the sole purpose of reservation is conservation, an area that is not degraded is preferable to one that is, assuming that they represent the same types of habitat and community. However, degraded areas that were originally of exceptionally high conservation value and are capable of restoration, may well be worthy of intensive management and reservation may be a means of putting that management in place.

Also, where maintenance of recreational use is important, such as in areas adjacent to major centres of human population (e.g. Marmion Marine Park) and the recreational resource is becoming degraded from excessive or inappropriate uses, then increased management may be necessary. Reservation, with the consequential requirement for a public management planning process, is an effective tool for resolving issues and putting appropriate management in place.

Remote pristine areas may not need management since, by definition, they are not being subjected to damaging human influences at present. In that situation, reservation may be a means of providing permanent protection to ensure that damage does not occur in future.

Each area and its particular circumstances, values and management objectives, should be considered on its merits. Public participation in the process of designating areas for reservation is intended to ensure that this occurs (Part II - 3.13, 3.14; Part II - 5.)

4.3 Preference to areas adjacent to land reserves

Five submissions commented specifically on this issue, four of them agreeing with the principle. The fifth asserted that the report mistakenly assumes that much of the coast adjacent to terrestrial reserves should be preserved automatically, ignoring the need to demonstrate conservation values.

From management perspectives, including effectiveness of protection measures and economy of effort, there are clear advantages in coastal marine conservation reserves being contiguous with terrestrial reserves. The Working Group applied this principle as a secondary criterion in those situations where there was a choice between areas of similar conservation and recreational value. It has particular importance where the coastal zone, both land and marine waters, is highly valued and used for its scenic, recreational and tourism values.

4.4 Catchment and adjacent land management

One submission commented on this issue, noting that management of the marine/terrestrial interface has not been well integrated so far.

This issue has particular importance in enclosed waters such as bays and estuaries where polluted runoff from adjacent or "upstream" catchments enters the sea. Reservation and management of an estuary may be fruitless if management of the catchment is not compatible with reserve objectives. A well documented example is the Peel-Harvey Estuary where restoration of the estuarine ecosystem

depends as much on changes to management practices in the catchment as it does on management of activities in the estuary itself.

Reservation of coastal marine and estuarine areas must be seen as only one component of an effective coastal management program. Other environmental legislation also applies. An urgent need for integrated management of the whole coastal zone was identified by the Coastal Management Review Committee in its final report to the Minister for Planning (Donaldson *et al.*, 1995).

4.5 Impact of reservation of special areas on usage of other areas

This issue was raised in two written submissions and by several participants at public meetings. It was claimed that the closure of areas to fishing may put more pressure on adjacent non-reserved areas causing detrimental impacts. Although it was not raised in submissions, this concern is also relevant to other recreational activities such as coral viewing and specimen collecting.

Where the overall intensity of human activity has reached a level where it is of concern, then this in itself is clear evidence that the intensity of the activity is unsustainable and increased management measures are needed.

An effective management strategy in these circumstances is to close selected areas to the activity, apply more stringent management to others, and monitor relevant environmental parameters in closed and open areas. This is the principle of zoning as a management tool (Part I - 4.2).

The closed areas serve as reference areas for monitoring the environmental impact and the effectiveness of management. They also serve as replenishment areas where natural breeding may take place, for example, for restocking fished zones. Because of the capacity of most fishes (and other marine animals) to re-populate distant suitable habitats by means of planktonic larvae, closure of strategically selected sanctuary zones can sometimes sustain fish stocks on a regional basis.

4.6 Management goals and strategies

Besides submissions commenting on the general principles of this issue, there were several that argued for particular recreational activities to be included within the goals of marine parks, such as tourism, education, tournament fishing, spear fishing and shell collecting. These activities are discussed in their respective sections.

One submission, from a conservation group, believed that management plans are essential for maintaining marine ecosystems and biological diversity.

Where management is necessary it is essential that the goals are clearly defined and that strategies are employed which address them directly. The goals will vary from one reserve to another.

For example, where one reserve may be established to protect a representative community with its entire assemblage of species, another may be intended to protect a particular threatened species, and another to sustain an ecosystem utilised for recreational or commercial purposes. The prime objective of management planning is to identify the issues pertaining to a particular reserve and to set appropriate goals and management strategies for it.

A submission from the oil/gas industry, noting that clear strategies for satisfying management objectives should be specified in management plans, maintained that the strategies should be based on scientifically determined impact and risk assessment.

The importance of risk analysis was discussed in Part II - 3.14, in the context of initial assessment of areas as candidates for reservation. It is also a fundamental aspect of management planning for reserved areas. Nevertheless, it is not the only approach. Impact and risk assessment relate to protection strategies. Management plans must also consider opportunities for fulfilling the defined purposes of the reservation, such as restoring habitat, public enjoyment, education and scientific research. Some of these activities have no detrimental environmental impact but may have social and economic benefits.

A criticism of the report leveled by a fishing industry submission was that the purpose and objective of reservation was not clarified for many of the recommended areas.

This is acknowledged as a shortcoming of many of the recommendations for which purpose of reservation is given in only general terms. It will be addressed for those recommended areas when they are selected for further, detailed consideration.

4.7 Zoning plans

The principles of area zoning as a management tool and the zoning provisions that are applied to marine conservation reserves in Western Australia are discussed elsewhere (Part I - 4.2).

A large number of submissions commented on this issue in the context of particular area recommendations. These are discussed in the relevant sections.

Eight submissions commented on the general principles involved in developing zoning schemes. It is apparent that there is a need for public dissemination of more information about zoning schemes and how they are determined for marine conservation reserves.

4.8 Multiple use in marine conservation reserves (as a principle)

There were 19 submissions and many comments at public meetings which addressed this issue. It is apparent that there are diverse views within the community about the merits of multiple use.

Several submissions from conservation groups argued that conservation should be the sole objective of marine conservation reserves and objected to the multiple-use concept. Submissions from the fishing industry tended to believe that the report is biased against multiple-use. Oil/gas and mining industry submissions commonly saw the report recommendations as promoting single-purpose use (i.e. conservation) and promoted the merits of multiple-use management for coastal waters.

Multiple-use may be defined as *"the management of an area to provide for different activities which may be separated from one another in space/time by the enforcement of a zoning plan for the area"* (ACIUCN, 1994).

The multiple-use concept has wide currency among marine management agencies and non-government organisations. It is essentially linked to the concepts of sustainable use and publicly accountable management planning.

Multiple-use management may be achieved without reservation. However, reservation for multiple-use brings with it an obligation for the integration of diverse management through a public planning process resulting in a formal zoning scheme (Part I - 4.2).

Reservation as a step in effecting multiple-use management may be applied through the establishment of either a range of small areas, each with a prescribed purpose or a large, diverse area, which is zoned for the required range of activities.

Activities which are separated include those which compete directly for the same resource and those which interfere with each other to the disadvantage of one or both. The objectives are to ensure sustainability of the resource and equity of access among the users.

Theoretically, it would be possible to divide the coastal zone into a mosaic of single-purpose reserves and to regard the overall pattern as an application of multiple-use planning. However, many activities may be compatible with each other and nothing would be gained (in terms of sustainability or user equity) by separating them.

The Great Barrier Reef Marine Park is an example of a very large and diverse marine area that is reserved and zoned for multiple use. It contains within it high-level protection zones equivalent in function and management to Western Australian marine nature reserves and similar to sanctuary zones in marine parks, as well as a range of recreational, special purpose and general use zones which are subject to different management prescriptions.

Until now the Western Australian approach has been to reserve areas either for species and habitat protection, scientific research and education (marine nature reserve) or for the above activities plus as much public recreation as is compatible with them (marine park), while recognizing that certain commercial activities may also be compatible. Marine parks now provide for conservation and compatible recreation and commercial activities; therefore it can be said to be a multiple-use category.

Objections to the application of the multiple-use concept in marine management are based on the view that conservation, in the narrow sense of habitat and species protection, is the sole reason for reservation. Conservation in that sense is just one of several reasons for reserving areas, although in the broader sense of sustainability of habitat, natural ecological processes and biodiversity, conservation of the resource is fundamental to the management of reserves declared for any of the wide range of activities.

Basic to the Western Australian marine conservation reserves program is the principle that reservation is a management technique by which a variety of community uses of natural resources are defined, balanced and sustained in the best public interest through a public management planning process.

The perception of representatives of fishing industries (expressed in some submissions) that the report is biased against multiple use, is rooted in the way marine park was defined in the legislation that existed when the report was released. At that time commercial fishing in existing marine parks was accommodated (in general use zones) by the standing of fisheries legislation in the CALM Act (Part II - 3.6) rather than explicitly by inclusion of commercial fishing as a purpose of reservation. Acknowledging this limitation, the amendments to the marine park provisions of the CALM Act make explicit reference to both exclusion zones and permissible zones for commercial fishing (including aquaculture and pearling and hatchery activities). Also, marine management areas, the new explicitly multiple-use marine reserve category, will be available as an option for areas with a variety of fishing, mining and oil/gas exploration and production uses (Part I - 4.1).

4.9 Access

Both in written submissions and during discussions at public meetings, the issue of access to marine conservation reserves was frequently related to, and confused with, access through adjacent land reserves to the shore. This was especially so on the south coast.

Access to nearshore marine conservation reserves will be most commonly via the adjacent land. Reserve category, zoning schemes and management plans for adjacent land and marine conservation reserves must be integrated to ensure that there are no inconsistencies.

In the event that new marine conservation reserves are declared adjacent to land reserves, management plans for the latter may need to be reviewed.

One submission proposed the principle that where access (for commercial or recreational fishers) is closed for conservation purposes, alternative access should be provided.

In the context of a public management planning process where access to a commercial or recreational resource within a marine conservation reserve was deemed desirable, every effort would be made to facilitate it.

One south coast submission and many participants in public meetings at south coast centres, vigorously opposed the marine conservation reserve proposals on the grounds that CALM would have the power to close coastal waters without consultation with local people.

This perception misrepresents the legislation and current practice. Where closure of reserve areas occurs, it is effected through a management planning process which, by statute, must involve public participation (Part II - 3.11). Management plans, which may include closure provisions, have to be approved by the Minister for the Environment on advice from the Marine Parks and Reserves Authority, once he or she is satisfied that the process has been properly carried out and the Minister for Fisheries has agreed in respect of fishing, aquaculture and pearling matters.

Several submissions from the fishing industry raised the issue of access through marine conservation reserves to approved commercial fishing grounds and aquaculture lease areas.

Passage of vessels through a marine conservation reserve is not ordinarily restricted. In unusual circumstances where exceptionally sensitive environmental features might be endangered, regulations restricting access would only be made subject to a management plan zoning scheme prepared after public consultation with those agencies and individuals affected by the decisions. Matters that may affect the passage of vessels are also subject to the jurisdiction of the Department of Transport.

Several submissions from commercial and recreational fishers raised the issue of enforcement of possession regulations when vessels carrying a legitimate catch taken in approved grounds outside a marine conservation reserve must pass through the reserve in order to reach the shore.

This is a fisheries management issue. This circumstance already arises in existing marine parks and is being managed by the Fisheries Department.

A common criticism, especially on the south coast, was that entrance fees to coastal national parks would inevitably mean that people would have to pay for the use of recreational resources of adjacent marine conservation reserves.

Government policy is generally that the user-pays principle should apply wherever a service is provided and where otherwise a cost would be borne by the taxpayer. This currently applies to some recreational reserves. Public access to a marine conservation reserve would be unlikely to incur a cost except, possibly, for the use of boat ramps and associated facilities.

Access to the (publicly owned) resources of a marine conservation reserve by a commercial tourism venture will normally require a permit from the management agency and payment of a fee. This is already established practice for land and marine conservation reserves.

Leases for special activities, such as aquaculture, over sections of a marine conservation reserve (within a general use or special purpose zone) also currently require payment of a fee to the relevant management agency (the Fisheries Department).

4.10 Resources for management

Many submissions commented on the cost of implementing the marine conservation reserves program on the scale proposed in the report. There were 16 submissions that commented on this issue generally and a further eight that commented on it in respect of specific site recommendations.

Some submissions believed that the cost of the marine conservation reserves program was unwarranted and opposed it for that reason. Others supported the program and urged the Government to provide the necessary resources.

Resources are made available for implementation of the marine conservation reserves program through the normal budgetary process. Supplementary Commonwealth funds are sometimes available. The marine conservation reserves program will be prioritised and implemented within the capacity of available resources.

One submission (from industry) noted that reservation of an area without provision of funds for its management could cause uncertainty for economic planning and deter investment. Another noted that public support for the marine conservation reserves program would be eroded if there were insufficient resources for effective management.

Development and implementation of management plans, enforcement of regulations, provision of interpretive materials and conduct of monitoring and research programs all involve ongoing costs. The necessary resources required for management will be assessed for future marine conservation reserve proposals prior to establishment of the reserves.

4.11 Policing

Three submissions commented specifically on the need for effective policing. This issue was raised also by several participants at public briefings.

One submission claimed that present policing of recreational and charter fishing is ineffective. Another believed that reservation of a remote coastal area (e.g. adjacent to the Fitzgerald River National Park) would create an unmanageable situation because effective policing would not be possible.

Experience has shown (e.g. Ningaloo Marine Park) that the provision of interpretive programs associated with the establishment of a reserve, bring about a beneficial change in attitude which reduces the need for enforcement (see Part II - 4.12). Emphasis directed towards education, as well as policing, is necessary for achieving reserve management objectives. Nevertheless, the need for an effective enforcement capacity in marine conservation reserves is acknowledged.

4.12 Education-interpretive programs

There were four submissions dealing with this issue.

All the submissions commented on the need for interpretive materials and programs in marine conservation reserves.

Education, in the broad sense, is an implicit function of marine nature reserves, marine parks and marine management areas. It is current practice to provide interpretive materials and activity programs which describe the natural environment of such reserves and explain the ecological

processes that are operating. The objective is to increase public knowledge and understanding of the environment, to facilitate public use of the reserves, and add to visitors' enjoyment.

One written submission and several speakers at public meetings noted the importance of marine conservation reserves to the nature-based tourism industry and stressed the need for and the economic impact of good quality interpretive material.

Provision of good quality interpretive material for use by the nature-based tourism industry is an acknowledged function of marine conservation reserve management agencies. It is also a source of revenue for defraying management costs.

4.13 Research

There were 24 submissions that commented on marine management research, 13 of them relating to specific areas recommended for reservation.

An inadequate knowledge base for reserve selection and ongoing management was identified by all the submissions.

The fact that the marine flora and fauna and marine ecology of Western Australian coastal waters are poorly known was acknowledged in the report. Marine research has been under-resourced. Basic survey data are lacking for most parts of the coast and there is little information on systems ecology relevant to ecosystem management. Declaration of marine conservation reserves can both stimulate research and increase the need for it.

An early priority of the marine conservation reserves program will be to develop marine research policies and programs.

A Marine Parks and Reserves Scientific Advisory Committee has been established as a statutory committee under the CALM Act. A Marine Conservation Branch has been established within CALM to give effect to the Government's intention that there be adequate research to provide support to the marine conservation reserves program.

Two submissions noted that the area selection methodology used in the report relied heavily on coastal geomorphology as a surrogate for detailed knowledge of flora and fauna and that the underlying assumptions of this need to be verified by research.

The need for more research in this area is acknowledged. However, research carried out in the Marmion Marine Park established a strong positive relationship between geomorphological variability/habitat diversity and macroepibenthic diversity (Simpson & Ottaway, 1987), providing evidence to support the geomorphological surrogate approach used by the Working Group as an indirect way of assessing the biological 'value' of areas. Although this approach is valid in a general sense, biological surveys will be needed, and therefore were recommended, in many areas prior to selection of specific areas for reservation.

Two submissions noted that a number of State and Commonwealth agencies and tertiary institutions possess research capabilities that could be harnessed for reserve management research through collaborative programs and that CALM should not attempt to duplicate those capabilities.

This point is acknowledged. Development of collaborative inter-agency research programs must be a central plank of reserve management policy. CALM's Marine Conservation Branch is developing strategic marine research plans for existing and future marine conservation reserves and collaborating with other State agencies, the Australian Institute of Marine Science, CSIRO and local and interstate

universities to integrate research programs to improve the scientific basis for managing existing and future marine conservation reserves in Western Australia.

One submission suggested that there should be a natural resource database for coastal zone management.

A similar recommendation was made in the final report of the Coastal Management Review Committee (Donaldson *et al.*, 1995). Research data relating to marine conservation reserves would be an important element in a coastal zone database. CALM has already taken steps to initiate such a program and is developing a Marine Geographic Information System within its Marine Conservation Branch.

4.14 Pollution

Six written submissions expressed concern about marine pollution, all of them in the context of specific areas that are recommended as worthy of consideration for reservation. This was a common concern expressed also during public meetings.

Oil spills, dumping of ballast water by ships, sewage disposal and discharge of bitterns from salt works were nominated as sources of pollution that might affect marine conservation reserves.

The importance of pollution as a reserve management issue is acknowledged. Of particular concern is the impact of excessive nutrients introduced into coastal bays and estuaries from agricultural lands in their catchments (Part II - 4.4).

One submission (from the fishing industry) believed that pollutants from the shipping industry are the only major threat to the marine environment on the south coast and suggested that the reserve management agency would have no control over this so there is no point in reservation.

The difficulty in preventing or controlling pollution impacts on marine conservation reserves when the pollutants originate outside the reserves is discussed elsewhere (Part II - 4.4). However, this is not a valid objection to reservation. There is a range of legislative powers that may be applied when pollution threatens the special values of a reserved area, apart from those of the reserve management agency itself. Also, protection of the environment is only one of several reasons for reservation.

4.15 Specimen collecting

One submission expressed concern about the impact of a substantive marine conservation reserve system on amateur shell collecting.

Specimen collecting, including shell collecting, has long been a popular amateur pursuit, at levels ranging from simple curiosity to serious scientific interest. Much of the current knowledge of Australian marine fauna has derived from this source.

Excessive collecting can damage local populations, however, subject to controls, it may be a sustainable activity that gives great satisfaction and enhances the study and understanding of the marine environment.

Collecting shells and other specimens cannot be permitted in marine nature reserves or in sanctuary zones of marine parks. However, subject to the prescriptions of a management plan, it may be permitted as a regulated activity in other management zones. It is an activity permitted in marine management areas.

5. PUBLIC PARTICIPATION

5.1 Public participation in the reserve selection and declaration process

A large number of submissions commented on this issue (28 on the general principles and 28 in relation to particular area recommendations).

Most submissions supported the proposals in the report subject to adequate consultation with local people prior to implementation.

Preparation of an indicative management plan and publication of a notice of intent to reserve, with a period for public comment, are obligatory prior to establishment of each reserve. Reservation orders cannot be submitted without the concurrence of the Minister for Fisheries and the Minister for Mines and are also subject to scrutiny by both Houses of Parliament.

In practice, the indicative management plans and notice of intent are prepared following intensive consultation with local government, local community and other interested community groups, industry groups and individuals thought likely to be affected. In this way the range of public views is taken into account before any firm proposal is published. Inevitably, additional information and opinions come forward after publication of the notice during the public comment period. This may result in amendments to the indicative management plan or to the originally proposed boundaries or reserve purposes being presented in the final reservation order that is tabled in Parliament.

It has been noted elsewhere (Part II - 3.13) that publication of the Working Group's report and the public consultation program that followed do not meet the criteria for the marine conservation reserve notice of intent process and that each recommendation will be dealt with individually before implementation.

Having made the point that further public consultation is necessary, many submissions from individuals and local organisations sought direct involvement in the process of preparing reserve proposals.

This level of interest and support is very welcome. The individuals and organisations who have offered assistance will be contacted when further consideration is given to the relevant areas.

Several submissions objected to public meetings to discuss such important issues being held during day-time working hours.

The validity of this objection is acknowledged. However, given the complexity of the statewide program of public briefing sessions and the need to complete the program within a reasonable period, it was not always possible to schedule meetings in the evenings. That some people were thereby prevented from participating is regretted.

5.2 Provision of information on proposed zoning prior to reservation

A common view expressed in both the written submissions and at public meetings was that acceptance of a reserve proposal without details of zoning and management prescriptions requires an unacceptable act of faith. Opportunity to comment on zoning is needed before reservation.

This problem has been noted elsewhere (Part I - 4.2; Part II - 3.11).

In response to this difficulty, the new marine reserves legislation improves the notice of intent provisions so that more information, including an indicative management plan with proposed management zones, will be available at the time a notice of intent to reserve is published. When this issue was encountered during the establishment process for some of the existing marine parks, it was dealt with by the preparation of provisional management plans which were referred to in discussions with key stakeholders (e.g. the relevant local government and affected fishermen) prior to the issuance of a public notice announcing the Government's intention to declare a reserve.

5.3 Public participation in the reserve management planning process

There were 20 submissions that commented on aspects of public participation in management planning. The statutory requirements for marine conservation reserve management planning are described in Part II - 3.11.

Most submissions insisted that detailed involvement of local people and key stakeholders is essential.

In addition to the preparation of indicative management plans prior to reservation, the marine reserves legislation includes specific provisions for public participation in the planning process once the term of an indicative management plan has expired (Part II - 3.11). In addition, it is general practice for local advisory committees to be established so that local issues are thoroughly canvassed during the development of reserve management plans. The advisory committees typically include representatives of the relevant local government, appropriate State Government agencies, local conservation, business and industry organisations and individuals with appropriate interests or expertise.

When the relevant management issues have been identified, local workshops are held. Once there is a satisfactory level of agreement about management proposals, a draft management plan is submitted to the vested authority for discussion and approval. Commonly, the vested authority circulates the draft to local government and other interested parties for comment before adoption. It is then published for public comment.

5.4 Public participation in ongoing management

Seventeen written submissions and many participants at public meetings commented on ongoing public participation in management of marine conservation reserves. Nine of them related to particular areas identified in the report as worthy of consideration for reservation.

All of the submissions on this issue were from individuals or community groups seeking to be involved.

It is general practice currently to establish ongoing, local advisory committees for the management of marine conservation reserves (Part II - 5.3).

A view commonly expressed in these submissions and also during public meetings was that local management advisory committees are just a token and have no "real authority".

Authority for policy, planning and management policy of marine conservation reserves rests with the vested authority (the Marine Parks and Reserves Authority) which in turn is responsible to the Minister for the Environment. Day-to-day management is the statutory responsibility of CALM. Nevertheless, advisory committees make a significant contribution towards management decisions and are an effective channel for expressing local opinions.

6. ABORIGINAL ISSUES

6.1 Participation of Aboriginal people in reserve management

Five submissions, representing Aboriginal organisations, advocated consultation with Aboriginal communities and the involvement of Aboriginal people in marine conservation reserve management.

The cultural and economic interests of Aboriginal communities in the marine environment of many sections of the Western Australian coast are acknowledged. Aboriginal people may have much to contribute to marine conservation reserve management, in area selection, planning and ongoing operations, and their participation will be actively sought.

6.2 Impact of reservation on Native Title claims

Four submissions raised the issue of Aboriginal Native Title claims over coastal areas (including coastal waters) identified as worthy of consideration for reservation. Three of these submissions related to specific areas.

The statutory basis for Native Title claims was established and claims to a number of marine areas were lodged during and after the period that the report was prepared.

Two of the submissions from Aboriginal communities supported in principle the notion of reservation but declined to consider particular proposals until there has been a ruling on relevant claims. In fact, they would not support reservation at this time because they considered it might extinguish Native Title and interfere with claims currently lodged.

Notwithstanding that Native Title claims have been or may be made, two points need consideration. First, the fact that a Native Title claim has been made over an area recommended as worthy of reservation would be clear evidence that Aboriginal people have a vital interest in its management and must be involved in a substantive way whatever the legal ramifications might be.

Secondly, the Working Group recommendations in the report identify areas that are worthy of consideration for reservation. They do not pre-empt any decision on reservation, or impairment or extinguishment of Native Title as addressed under the Commonwealth *Native Title Act 1993*.

6.3 Aboriginal cultural activities, hunting and fishing in marine conservation reserves

Two submissions from Aboriginal community groups expressed concern about the potential impact of reservation on traditional activities. One of them was worried about possible restrictions (especially on hunting and fishing). Both were concerned at the potential impact of increased tourism and recreational use of the areas in question.

In keeping with the principles of public participation (Part II - 5.), Aboriginal communities with traditional interests in a reserve or proposed reserve would be significant stakeholders and participants in area selection, planning and ongoing management processes.

Continuance of traditional activities and the potential impact of increased public access and recreational use of areas would be important considerations in the determination of reserve category, zoning and management planning decisions and the views of appropriate Aboriginal communities would be sought.

7. OIL/GAS AND MINING

7.1 Impact on the marine environment

Eighteen submissions expressed views about the impact of oil/gas and mining exploration and development on the marine environment and the acceptability of these industries within or near to marine conservation reserves.

Submissions from conservation organisations and private individuals tended to see these industries as damaging and not acceptable within reserves.

Submissions representing the oil/gas and mining industries argued that their environmental record is good and less damaging than the fishing and tourism industries. Several cited a recent report (Swan *et al.*, 1994) which found that the oil and gas industry has little impact on the marine environment.

State Government policy permits oil and gas exploration and development in marine parks, subject to normal environmental assessment procedures and determination of appropriate zoning (the ban on drilling and oil/gas production in Ningaloo Marine Park is an exception). Proposals for oil/gas industry activities in marine parks and marine management areas that may be established in future will be judged on their merits.

Current evidence suggests that seismic survey activities have only limited detrimental impacts on the environment (Swan *et al.*, 1994) and research is being conducted in Western Australia to further study the environmental consequences of offshore seismic survey techniques. Exploration activities therefore, that do not involve drilling, will be permitted in most circumstances.

Oil spills on the other hand have significant aesthetic and biological impacts. The frequency of oil spills from production fields, however, is very low and the risk to the environment is minimal. The majority of serious oil spills in Australian waters comes from shipping. Monitoring programs following oil spills in recent years have shown that, with some exceptions, the toxic effects are not long-lasting and that most marine ecosystems recover quickly after initial damage. Nevertheless, short-term impacts of oil spills may be severe and populations of some marine animals (e.g. penguins) and plants (e.g. seagrasses) may take years to recover.

One submission (from an oil/gas industry source) believed it would be inappropriate to declare a marine conservation reserve over a specified area because it was covered by an exploration permit and there would be potential for oil and gas exploration and production to be excluded. The same submission believed reservation of the area in question would add substantially to exploration costs.

Oil and gas exploration and development are not necessarily incompatible with reservation and management for other purposes. In the situation referred to, it would be likely that an appropriate reserve or zone category and management plan could be negotiated in the context of a public management planning process.

It is true that reservation may result in more stringent environmental management measures and, consequently, greater costs to the developer. However, if the area in question was worthy of reservation, closer attention to its management would be warranted.

Several submissions from the oil/gas and mining industries expressed the view that prospectivity may change in time and that marine conservation reserve management should be sufficiently flexible to accommodate change (meaning change of reserve category or zoning).

The logic in this view is recognised. Even Class 'A' reserves may be changed by Parliament if there are sufficiently strong reasons for doing so. Zones within marine parks may be changed by the Minister for the Environment in the context of a public review of the management zones, the reserve management plan or if the plan provides for changes to be made during its period of operation.

By the same token, information on environmental values or community requirements for recreational facilities may change in time and there may be demands for the creation of additional marine conservation reserves or for an increased level of protection within existing reserves.

One submission (from a conservation organisation) proposed that guidelines for oil/gas exploration and development in marine conservation reserves should be available for public comment.

This is a worthy idea and will be referred to the Environmental Protection Authority for consideration.

7.2 Oil spill management

There was only one submission on this important matter.

The submission urged that consideration be given to the Commonwealth Auditor General's report of 1994-5 which found that Australian management agencies do not have the capability to deal with a major oil spill.

Western Australia has an oil spill contingency plan which is under regular review.

8. RECREATION AND TOURISM

A total of 20 submissions commented on aspects of recreation and tourism in marine conservation reserves, many of them relating to specific areas. The latter are considered in the relevant sections.

Though fishing may be an important recreational activity in marine parks, submissions on that aspect are dealt with in the next section.

Note also that although "tourism" is a form of recreation, a distinction is sometimes drawn to emphasise the associated economic implications, especially where there are commercial operations subject to licensing and fees.

8.1 Impact of recreation and tourism on the marine environment

One submission (from the tourism industry) noted that degradation of the marine environment is a serious threat to the tourism industry and considered that sound management of these resources is extremely important.

Recreation (including tourism) is generally identified as an important environmental value of a marine park, subject to the capacity of the environment to sustain that activity (Part I - 3; Part II - 3.9). An objective of reservation is to introduce a requirement for public management planning which seeks to balance uses in order to ensure both user equity and long-term sustainability of the resource.

One submission (from a regional development commission) noted that increased recreational activity incurs additional management costs and suggested that this should be funded by the tourism industry and the general public through appropriate rates and taxes.

Basic infrastructure for marine conservation reserve management is funded through normal rates and taxes. Government policy is that these should be supplemented by application of the user-pays principle (see Part II - 4.9).

Several written submissions and participants in public meetings expressed concern about detrimental effects of tourism on sensitive marine ecosystems. Several submissions from the oil/gas, mining and fishing industries noted that recreational activity may be more detrimental to the environment than their own operations.

All of these activities have some types of operation that may be environmentally damaging and in need of careful management. Some of them are not compatible with each other (in the same place) or with protection of the environment.

The point of having a range of marine conservation reserve categories and management zones is that areas with different levels of sensitivity and environmental value can be provided different levels of protection and intensity of management. Also, different types of activity can be accommodated in a balanced, multiple use context (Part II - 4.8) with long-term sustainability of the resource and user equity being the fundamental principles.

8.2 Impact of reservation on recreation and tourism development

Several written submissions and many speakers at public meetings expressed concern that recreational activities might be restricted in marine conservation reserves and therefore were hesitant to support the report proposals.

Marine parks are established, at least in part, to facilitate public recreation and enjoyment. That purpose is constrained by the principles of long-term sustainability and user equity (Part II - 3.9).

One submission (from a regional development commission) urged the Government to ensure that the potential of marine nature-based tourism is fully realised.

Designation of marine areas with high scenic, biological and recreational values as marine parks focuses public attention on these values. This, in turn, can result in greater demand for access and a positive effect on tourism. Ningaloo Marine Park and other existing marine parks clearly demonstrate this sequence. Tourism can be further enhanced by the provision of interpretive materials and facilities. These considerations are part of the motivation for establishing a statewide marine conservation reserve system.

One submission considered that the establishment of marine conservation reserves would "quarantine" the coastline and inhibit development of high quality infrastructure for international tourism.

The concept that reserves "quarantine" areas is frequently expressed. It is the result of a misinterpretation or misrepresentation of reserve legislation, policy and management practice and takes no account of the range of reserve categories or zoning provisions. The only reserve areas which are "quarantined" are those of very high conservation value and environmental sensitivity. As noted above, marine park may be applied, at least in part, to facilitate recreational and other uses, including international tourism. The economic impact of Ningaloo Marine Park is an example of the significant economic benefit reserve status may bring.

One submission questioned the effects of reservation on the provision of facilities such as jetties and boat ramps necessary to support tourism and recreational use.

Jetties and boat ramps in marine parks could be considered as equivalent to such public facilities as roads, parking areas and lookouts in national parks. An effect of reservation is that the merits and environmental impacts of such facilities must be carefully considered in a public management planning context. The first consideration would be reserve category and zone classification. If part of a marine park was zoned for public recreation or general purpose, provision of access facilities would be an objective of management planning, subject to any detrimental impacts being managed within acceptable limits.

8.3 Licensing of commercial tourism (fees)

Two submissions (from marine nature-based tourism operators) could not support the marine conservation reserves program because it would require a new bureaucratic department that would require funding and as a result of the user-pays principle high charges would be forced upon the marine tourism industry.

The views expressed in these submissions do not acknowledge the positive benefits that reservation can bring to the tourism industry. But whether or not an area valued as a tourist resource is reserved, increased tourist use of those resources brings an increased need for management to ensure sustainability and user equity. In those circumstances there must be a management agency and costs are inevitable. A new department is not being established.

It is general Government policy that the user-pays principle is applied where a service is provided (Part II - 4.9).

8.4 Meaning of "low impact" tourism and related management strategies

This term was used in the report. One written submission and several speakers at public meetings questioned its meaning.

"Low impact" tourism means activities that do not destroy or damage the natural resource upon which it depends.

For example, swimming with a mask and snorkel to view fishes in their natural habitat has a low impact, if any, while spear fishing has an immediate impact not only on the individual fish speared but on the behaviour of others and thereby on users wishing simply to observe them. Groups of people walking regularly over the same patch of coral reef during periods of low tide will have a severe impact whereas viewing from a glass-bottomed boat has none.

Low impact activities may be acceptable in areas of high sensitivity or high conservation value (such as marine nature reserves or sanctuary zones in marine parks). Higher impact activities may be permitted in less sensitive areas, subject to management that ensures long-term sustainability and user equity.

9. FISHING AND RELATED ACTIVITIES

A total of 40 separate submissions commented on various aspects of fishing including recreational and commercial fishing and aquaculture. Many of them related to specific areas and are discussed in the relevant sections.

9.1 Recreational fishing

Recreational fishing is managed, within as well as outside marine parks and marine management areas, by the Fisheries Department under the powers of the Fish Resources Management Act (Part II - 3.6). Regional advisory committees are established that provide information and advice to that Department on local management issues.

9.1.1 Impact on the marine environment

Whereas one submission claimed that recreational fishing does no harm, others believed that current levels of recreational fishing within certain existing marine parks (and some of the recommended areas) are unsustainable and two argued for additional measures to ensure that the ecological integrity of marine conservation reserve ecosystems is not compromised by certain types of fishing activity.

Recreational fishing, like commercial fishing, must be managed on a sustainable basis. This is especially important in an area reserved for conservation and public recreation.

Management controls on fishing in existing marine parks are usually more stringent than elsewhere. A common policy adopted internationally, nationally and in existing Western Australian marine parks is that bag limits for recreational fishing should be set at about the quantity a fisher, with a family, can consume on a day-to-day basis. The practice of catching large numbers of fish, filleting and freezing them to be taken away for storage and later consumption is generally discouraged.

Regular review of marine park management plans is intended to ensure, in part, that fishing practices are sustainable and that there are no secondary detrimental ecosystem effects. Review is carried out in consultation with the Fisheries Department, the agency responsible for regulating fishing activity. There will be an ongoing need for monitoring of fish stocks in selected marine park areas.

One submission proposed that recreational fishing should be excluded from at least 50% of future marine parks.

Marine park sanctuary zones, where all fishing is excluded, are determined through a management planning process. Fishing can also be excluded from other types of zones. The area so protected will vary according to a range of circumstances.

There were contradictory submissions concerning certain kinds of recreational fishing, e.g. netting, spear fishing and tournament fishing. Some argued that they are excessively damaging and should not be permitted in reserved areas. Others argued that they are no better or worse than other forms of fishing ("the fish is dead whichever way").

These remain controversial matters without any apparent consensus. In practice they are dealt with on their merits during management planning. In marine parks they are commonly resolved by zoning without total exclusion.

In determining the impact of fishing methods, depletion of fish stocks is not the only issue that must be considered. There is also the question of fisher equity. Some forms of fishing (e.g. netting and angling) may be incompatible at the same location in terms of human enjoyment. Other forms of fishing (e.g. spear fishing) may be incompatible with other types of recreational activity such as viewing fish communities at an undisturbed site. Impact on fish behaviour may be as important as depletion of stocks.

Submissions from Aboriginal people, mainly by speakers at public meetings, drew distinction between recreational fishing and subsistence fishing in traditional Aboriginal areas.

The interests of Aboriginal people would be taken into consideration (by the Fisheries Department).

9.1.2 Impact of reservation on recreational fishing

There was a high level of concern, expressed both in written submissions and by speakers at public meetings, that recreational fishing would be prohibited in marine conservation reserves.

This concern was amplified by confusion about the different reserve categories (Part I - 4.1; Part II - 3.9). All fishing is prohibited in marine nature reserves and in sanctuary zones of marine parks but fishing is regarded as a legitimate recreational activity in general use and some special purpose zones and most recreation zones (where conflict with other recreational users does not occur) of marine parks, subject to the principles of long-term sustainability and user equity. Determination of reserve zoning and fisheries management is addressed by the public management planning process and the Fisheries Department remains the primary management agency for recreational fishing throughout this process (Part II - 3.6).

One submission believed that "what comes over in the body of the report is that recreational fishing is not permitted". The same submission believed that the value and significance of recreational fishing was not given sufficient weighting in the report and that insufficient acknowledgment was given to the role of the Fisheries Department in recreational fishery management.

The relevant section in the introduction of the report clearly states that recreational fishing is permissible in marine parks in accordance with the Fisheries Act (now the Fish Resources Management Act) and is administered by the Fisheries Department.

The introductions to each of the regional sections of the report have a section on fisheries, with reference to recreational fisheries. These were drafted by Fisheries Department officers.

Within the site descriptions in the body of the report, some level of recreational fishing is assumed and is specifically noted in those cases where it is believed to be a major activity.

Several submissions noted that recreational fishing, including commercial fishing charters, is an important element in the marine tourism industry and that these activities should be taken into account when reserve zones and management plans are determined.

The importance of recreational fishing as an economic factor is acknowledged and is virtually a permanent feature on the agenda when marine conservation reserves are planned and managed. Nevertheless it is essential that the resources be sustained and used equitably and to ensure this the levels and methods of fishing need constant monitoring by the relevant agencies.

9.2 Commercial fishing

9.2.1 Impact on the marine environment

There were eight submissions that commented directly or indirectly on this issue.

One submission proposed that seine netting has little environmental impact. Another, in relation to a south coast estuary, believed that the timing of opening of the entrance bar was the factor influencing fish stocks, not the activities of the fishermen. Another believed that commercial fishing should not be permitted in marine conservation reserves.

There can be no argument that commercial fishing has an impact on fish stocks and that it must be managed within sustainable levels. Whether it affects the ecosystem generally depends on the nature of the environment and the fishing method and level. What level of impact is acceptable within a

reserve depends on the reserve category or zone and its potential to affect other users. These matters are considered by all stakeholders during the management planning process.

Two submissions recommended that, like mining, oil/gas and other industries, commercial fisheries should be subject to formal environmental impact assessment.

Commercial fisheries are subject to review by the Fisheries Department.

9.2.2 Impact of reservation on commercial fishing

There were 16 submissions commenting on this matter, half of them relating to specific areas:

Submissions from professional fishermen and the commercial fishing industry tended to oppose the marine conservation reserves program, and specific area recommendations, on the ground that traditional usage should be retained. One asserted that experience has shown that marine nature reserves and marine parks are often closed to commercial fishing.

These submissions tended to ignore the range of reserve categories and zones and to regard reservation as a threat to the livelihoods of commercial fishermen.

The existence of commercial fishing activities within an area would always be a factor influencing the merits of reservation. Should reservation proceed, the most appropriate category of reserve or zone would be selected with due consideration of existing commercial fishing interests.

All fishing is prohibited in marine nature reserves (presently there is only one such reserve in Western Australia).

Commercial fishing is acceptable in general use zones and some special purpose zones of marine parks (Part I - 4.2; Part II - 3.6) and a range of commercial fisheries operate in the existing marine parks. Through negotiation, some existing commercial fisheries have been excluded from areas to enable the subsequent zoning for sanctuary and recreational uses, when it was agreed that they would impact upon conservation values or recreational users. The impact on the fisheries and on the livelihoods of individual fishermen are believed to have been minimal.

One submission argued that the areas proposed for reservation are excessive and threaten the viability of fishermen and fishing companies.

The report identified areas considered worthy of reservation for dual conservation and recreational uses. The location, number and total area of those ultimately selected for reservation are yet to be determined and will depend on a range of biological, social and economic considerations.

One submission believed that the report makes social judgments (on areas suitable for reservation) without consideration of the welfare of fishing people who have customarily used those areas.

The brief of the Working Group was confined to the identification of areas worthy of consideration as conservation or recreation areas. Social and economic consequences of reservation will be considered when specific areas are selected for further consideration (Part II - 3.13) and during the public consultation process that will precede publication of a notice of intent.

Two submissions raised the matter of compensation for commercial fishermen whose activities are adversely affected by reservation.

The possible effect of any marine conservation reserve proposal on commercial fishing would be given due consideration during the reservation process. Fishing interests are provided a substantial measure of protection because the concurrence of the Minister for Fisheries is required before reservation can proceed. At the time of compilation of this analysis the *Fishing and Related Industries Compensation (Marine Reserves) Bill* was before Parliament. The Bill provides for the possibility that compensation may be payable where the value of commercial fishing, aquaculture or pearling interests may be affected by the establishment of a marine nature reserve, marine park or marine management area.

One submission asked what negotiation systems would be put in place to resolve any disputes between professional fishermen's associations and CALM.

The vested authority (the Marine Parks and Reserves Authority) develops marine reserve policy and is responsible for overseeing development and implementation of reserve management plans. The management agency for fishing operations within marine conservation reserves will remain the Fisheries Department, not CALM.

One submission believed that any restrictions on access to marine conservation reserve areas by professional fishermen should also apply to amateurs. Another expressed concern that recreational uses are given a higher status than commercial operations. Conversely, two written submissions and many speakers at public meetings expressed the view that commercial fishing should not take precedence over recreational fishing.

Emphasis given to recreational uses was derived from the legislation in force at the time, which prescribed that marine parks should have the function of public recreation (to the extent that is consistent with protection of the environment, i.e. sustainability). This has now changed and, in this respect, recreational and commercial activities have equal standing.

One submission noted that the report is not consistent in respect of compatible activities within identified areas, selectively recommending continuance of commercial fishing in some and not others.

The inconsistency is acknowledged. It was intended that important commercial fisheries should be noted where they were known to occur in areas identified as worthy of consideration for reservation but the implication inherent in lack of reference to an existing fishery was overlooked. However, the issue will be dealt with during further public consultation processes when the report's recommendations are given further consideration.

Two submissions objected to inclusion of existing Proclaimed Fishing Areas within marine conservation reserves.

The Fish Resources Management Act provides that Designated Fishing Zones (DFZ) cannot be prescribed in a marine nature reserve or a marine park and that if one of these marine reserves is established over a pre-existing DFZ then that part of the DFZ ceases to exist. Any proposal to establish a marine conservation reserve under the CALM Act, including one that covered an area of an existing DFZ, would require the concurrence of the Minister for Fisheries.

9.3 Aquaculture and pearling in marine conservation reserves

There were nine submissions that commented on issues relating to aquaculture, mainly pearl culture, in marine conservation reserves.

9.3.1 Impact on marine environment

One written submission believed that pearl farming is compatible with conservation as it also requires a pristine environment. A speaker at a public meeting made the same comment in respect of aquaculture for seafood products.

While noting that some aquaculture practices, such as artificial feeding, may change the nutrient levels in local waters, it is agreed that pearl farming and aquaculture operations generally do not have significant or unmanageable environmental impacts.

Of greater concern is the impact of aquaculture and pearling installations and activities in marine areas recognised as having recreational or cultural significance. This would be an issue for discussion, on a case-by-case basis, during consideration of reserve category, zoning and management.

Several submissions raised the question of the acceptability of pearling and aquaculture in different reserve categories and zones.

These industries are not compatible with the purpose of marine nature reserve or marine park sanctuary, recreation or certain special purpose zones but they could be compatible with general use zone or special purpose zone classifications in marine parks (Part I - 4.). Additionally, these activities are compatible with the purposes of marine management areas.

9.3.2 Impact of reserves on industry

One submission noted that there are limited sites suitable for pearling and aquaculture along the Western Australian coast and that this should be a consideration in selecting areas for reservation for other purposes.

This fact is acknowledged however, suitable sites for aquaculture are often also suitable for public recreation and conservation. Allocation of areas for a range of uses must be equitable and made in the broad public interest. Reservation and management for multiple use provides a planning framework to resolve such issues.

One submission believed that marine conservation reserves may increase uncertainty and stifle investment in the pearling industry. Several others believed that pearling and aquaculture should be specifically catered for in reserve management plans.

In the context of multiple use planning, reservation as marine park or marine management area may actually provide greater certainty for the pearling and aquaculture industries. Once the interests of these industries were considered, along with those of other potential users, and documented in a published management plan their operations would be recognised and they would have security of tenure that comes with their presence in a reserved area. They have a level of common interest with recreation and conservation uses in that they are all concerned with the maintenance of environmental values. The reservation and management planning processes are intended to ensure that these values are maintained and used equitably.

Several submissions queried the administration of pearling and aquaculture leases.

Existing pearling and aquaculture licences, leases and permits in waters that are subsequently established as a marine conservation reserve will continue until expiry. They may be renewed upon expiry provided they are not in a marine nature reserve or, if in a marine park or marine management area, provided they are consistent with an approved management plan. Administration of aquaculture and pearling remains the responsibility of the Fisheries Department.

10. SHIPPING AND PORT FACILITIES

Several submissions commented on the impact of recommendations in the report on proposed port developments. Most of these were in the context of specific area recommendations and are dealt with in the relevant sections.

One submission was concerned that a new marine conservation reserve system might impact upon the Department of Transport's responsibilities for the provision of marine services, especially safety and the provision of shipping and boating facilities.

Policies and management plans for the existing marine conservation reserve system provide for continuance of the Department of Transport's authority under its legislation and programs. Equally satisfactory arrangements can be made for any new reserves added to the existing system.

11. URBAN AND INDUSTRIAL DEVELOPMENT

Several submissions commented on the impact of recommendations in the report on urban or industrial development. Most of these were in the context of specific area recommendations and are dealt with in the relevant sections.

One submission proposed that the existing system of development planning and approval should not be pre-empted by the report.

The report has identified areas which the Working Group believed to be worthy of consideration for reservation for their conservation and recreational values. It will not pre-empt normal planning and approval processes but may provide additional information for them. Recommendations relating to those areas selected for further consideration will be subject to the detailed public consultation processes described in Part II - 3.11 and 5.

PART III

SUMMARY OF SUBMISSIONS RELATING TO AREA RECOMMENDATIONS

Many submissions commented on specific aspects of the Working Group report relating to areas recommended as worthy of consideration as marine conservation reserves. It should be noted that the report does not constitute the published notice of intent to reserve required before reservation of a marine area. A notice of intent to reserve must be published specifically for each reserve proposal, with a period for public comment. The submissions are however indicative of public attitudes and concerns relating to the reservation of those areas and therefore will be useful information for consultation and planning purposes. These submissions are summarised here.

Many of the comments made in these submissions on area recommendations relate to issues that were discussed, in general terms, in earlier parts of this analysis. Rather than duplicate that discussion, in most cases the response here is simply to note the relevant section numbers where the issue has been addressed. Where the submissions raise matters that are locality specific, or express views or raise details that were not considered in the earlier general discussions, supplementary notes are given.

A. KIMBERLEY

Recommendation II.3.1 - Cambridge Gulf

Three submissions; two supportive, one non-committal.

One submission supported the proposal and, noting the current development of tourism in the area, considered that marine park would be the appropriate reserve category (Part II - 8.).

One submission made no comment on reservation of the area but noted its prospectivity for diamonds (Part II - 7.).

Recommendation II.3.2 - Londonderry

One submission, which indicated unqualified support for the recommendation.

Recommendation II.3.3 - Vansittart Bay-Admiralty Gulf

Two submissions; both supportive.

One submission indicated unqualified support for the recommendation. The other noted current development of tourism products in the area and considered that marine park would be the appropriate reserve category (Part II - 8.).

Recommendation II.3.4 - Prince Frederick Harbour-Saint George Basin

Three submissions; all supportive.

One submission gave the recommendations unqualified support.

Another noted that both areas contain pearl farm leases and queried whether this was compatible with the recommended marine park category.

Pearl farming is compatible with general use and some special purpose zones of marine parks but not with recreation or sanctuary zones. Pearl farming is permitted in marine management areas (Part II - 3.6; Part II - 9.3).

A third submission considered that any declared reserve should accommodate tourist charter operations and recreational fishing as these activities are already established and important to the area.

In accordance with both legislation and policy, charter boat operations (Part II - 8) and recreational fishing (Part II - 9.1) would be compatible with general use zones, recreation zones and some special purpose zones of marine parks and with marine management areas.

Recommendation II.3.5 - Montgomery Islands

Two submissions; both supportive.

One submission indicated unqualified support for the recommendation.

The other supported the recommendation, noting that the area is included within calving grounds for the Group IV humpback whale population, bounded by Adele Island, Cape Leveque and Camden Sound (Part II - 4.1).

Recommendation II.3.6 - Walcott Inlet and Secure Bay

One submission.

The submission recommended that there be consultation with the relevant Aboriginal people and that reservation should proceed only if they are supportive (Part II - 6.1).

Recommendation II.3.7 - Buccaneer Archipelago

Four submissions; all providing conditional support.

One submission, from an Aboriginal community with traditional interest in the area, indicated support for the recommendation pending resolution of a Native Title claim (Part II - 6.2).

The Working Group recommendations are based on natural values of the areas and remain relevant whether Native Title claims are successful or not.

A second submission gave support, noting that inclusion of Cygnet Bay and Talbot Bay may be contentious (Part II - 6.2, 6.3).

A third implied support if the reserve category was for multiple use so that pearl farming could be accommodated and expressed concern that the only group consulted was the Aboriginal community.

Pearl farming is compatible with general use zones and some special purpose zones of marine parks and with marine management areas (Part II - 3.6; Part II - 9.3).

The initial public consultation relating to this proposal pre-dated the Working Group and was conducted jointly by CALM, the Environmental Protection Authority and the Fisheries Department. The Shires of Broome and Derby and representatives of the pearl farming industry, as well as Aboriginal communities, were consulted during that process.

The fourth submission noted that the area is included within calving grounds for the Group IV humpback whale population (Part II - 4.1).

Recommendation II.3.8 - Oceanic coral banks and islands

Four submissions; two supportive, two non-committal.

Two submissions supported the recommendations and supported consultation with Commonwealth authorities on collaborative management (Part II - 3.8).

Two submissions represented the interests of the oil and gas industry, noting that the outer shelf areas are prospective for oil and gas and that there is the possibility of developing floating facilities in the area. One submission proposed that a priority schedule be developed to reduce uncertainty in the industry and that the offshore banks and islands be considered as a priority.

Oil and gas exploration and production may be permitted subject to the category of reservation, the zoning of marine parks and assessment under the Environmental Protection Act.

B. CANNING AND PILBARA COASTS

Recommendation III.3.1 - West coast of Dampierland

3.1.1 Pender Bay

Two submissions; both expressing concern but not explicit opposition to the recommendation.

One submission expressed concern because of possible impact of public recreation on Aboriginal interests and advocated consultation with the Pender Bay and Beagle Bay communities.

The report recommended that there be a survey to identify an area representative of the v-shaped bay systems typical of the region for reservation for public recreation and protection of flora and fauna. Such a survey would certainly involve the local Aboriginal people and there would be in-depth consultation with them on both area selection and management proposals (Part II - 5.1, 6.1).

The second submission noted that Pender Bay contains pearl farms which may be incompatible with public recreation.

Pearl farming is compatible with general use zones and some special purpose zones of marine parks and with marine management areas (Part II - 3.6, 9.3), and any potential conflict between pearl farming and recreation could be resolved by zoning (Part I - 4.2).

3.1.2 Lacepede Islands

Two submissions; one supporting the recommendation and the other non-committal.

The non-committal submission noted that the area is an important source of pearl shell and that reservation and pearl farming may not be compatible.

Pearling is compatible with general use zones and some special purpose zones of marine parks and with marine management areas (Part II - 3.6, 9.3).

Recommendation III.3.2 - Roebuck Bay-Lagrange Bay

Three submissions; one supportive, two non-committal.

One supported the recommendations and offered assistance in management planning.

Another sought advice on whether CALM had registered with the Native Title Tribunal as a party with an interest in the matter.

CALM has registered with the Native Title Tribunal as a party with an interest in the area (Part II - 6.2).

The third submission expressed concern at the lack of consultation with the Yawaru Aboriginal community. There was also concern over possible restrictions on traditional activities and adverse impacts associated with increased tourism in the area.

There will be detailed consultation with the community before the matter is taken any further (Part II - 5.; Part II - 6.1).

Recommendation III.3.3 - Eighty Mile Beach

Three submissions; one supportive, two non-committal.

One supported the recommendation and offered assistance with management planning.

Another provided additional information on recreational use of the area.

The third noted that the adjacent waters contain pearl farm leases and questioned the compatibility of pearl farming with the proposed reservation for protection of flora and fauna.

The Working Group recommended that the area be reserved for "*protection of marine flora and fauna and the habitat of migratory shorebirds*". Marine nature reserve would be the reserve category that most meets the intent of that recommendation. Pearl farming or collection of pearl shell would not be compatible with marine nature reserve status (Part II - 3.6, 9.3). Alternatively, a marine park or marine management area could be declared, with a zoning arrangement that provides for both conservation and pearling (Part I - 4.4; Part II - 4.7).

Recommendation III.3.4 - Keraudren (North Turtle and Bedout Islands)

One submission providing additional information on recreational use and Aboriginal interests.

Recommendation III.3.5 - Depuch

No submissions.

Recommendation III.3.6 - Dampier Archipelago

Thirteen submissions; all supportive, though some qualified.

As might be expected with such a populated and important area, there were a number of submissions about the Dampier Archipelago recommendations, some of them lengthy and complex. A wide range of management issues was raised. These are best dealt with through the management planning process with appropriate public consultation if the recommendations are implemented.

A common comment was that there must be further public consultation on management issues. Two community group submissions offered assistance in developing the recommendations.

Given the degree of public interest in this area, and the complexity of the management issues involved, further extensive public consultation will be essential during consideration of proceeding with reservation (Part II - 5.1). The participation of local community groups in developing the proposal will be sought.

Several submissions proposed different boundaries to those suggested in the report. One argued that nature and industry can successfully co-exist and that the Port of Dampier should be included in the marine park. Other areas suggested for inclusion were Nickol Bay (4 submissions), the waters around Dixon Island (2 submissions), and reefs west of the islands (1 submission). One submission noted the proposed "heavy industry estate" at the mouth of the Maitland River and questioned whether that area should be excluded from the area to be considered as a future marine park.

There are many important management issues relating to boundaries of this proposed marine conservation reserve and further extensive public consultation will be necessary on this aspect (Part II - 5.1).

Six submissions commented on the high level of recreational use, especially recreational fishing, and stated that these activities should be accommodated, not prohibited, within any reserve in the archipelago.

Recreational fishing is an important activity in the area and, with public participation, a zoning scheme can be devised to accommodate it (in general use, recreation and some special purpose zones), except where conservation values are so high and sensitive that full protection is warranted (in sanctuary zones) (Part I - 4.2; Part II - 9.1).

One submission declared that commercial fishing should be excluded from any reserve established; two claimed that commercial as well as recreational fishing in the area needs to be tightly regulated. Two submissions noted the existence of pearl farm leases in the area and questioned the impact of reservation on their operations.

Commercial fishing, aquaculture and pearl farming are compatible with general use and some special purpose zones in marine parks and with marine management areas (Part II - 3.6, 9.2, 9.3). They are acknowledged as important activities in the Dampier Archipelago and detailed consultations with key stakeholders will be necessary prior to selection of reserve and management zone boundaries (Part II - 5.1).

Existing pearl farm leases would continue to operate under the Pearling Act (Part II - 9.3.2).

Four submissions expressed concern at the potential for pollution of the archipelago waters, notably from discharge of ships' ballast water and release of bitterns from the salt works. One was concerned about damage caused by ships anchoring.

These are legitimate concerns in an area such as Dampier where there are both industrial activities and high environmental values (Part II - 4.14). They are best resolved through public consultation processes and reservation would provide a context to ensure that this takes place (Part II - 5.3).

One submission noted the Aboriginal interest in the area and commented on the need to include Aboriginal communities in further consultation processes.

Further consultation with the local Aboriginal community on this matter would be undertaken as part of taking the proposal further (Part II - 6.1).

One submission expressed concern that there has been too little research in the area.

The marine geology, hydrology and biology of the Dampier Archipelago have been more intensively studied than most areas of State coastal waters (Part II - 4.13).

Recommendation III.3.7 - Cape Preston

One submission; conditionally supportive.

The submission supported the recommendation for reservation but believed that the boundaries need careful consideration and that all commercial fishing should be excluded from the area.

If the proposal were to proceed, boundaries and management zones would be considered during preparation of an indicative management plan prior to the publication of a notice of intent to reserve. Commercial fishing interests would be considered at that stage (Part II - 3.14).

Recommendation III.3.8 - Robe

One submission.

The submission sought assurance that, prior to allocation of reserve status, there would be sufficient time for public discussion.

Reserve status (category) would be a key issue at the notice of intent to reserve stage, prior to reservation and subject to public comment (Part II - 3.13, 5.1).

Recommendation III.3.9 - Exmouth Gulf

Eighteen submissions; fifteen supportive, three opposed.

Thirteen of the supportive submissions were from a local community group and included a plea for early implementation.

Two submissions gave qualified support.

One noted the presence in the Gulf of pearl farm leases but believed that pearl farming would be a compatible activity, depending on reserve category.

Pearl farming is compatible with general use and some special purpose zones of marine parks and with marine management areas (Part II - 3.6, 9.3).

Two submissions from commercial fishermen opposed the recommendation. One of them believed that seine netting has little environmental impact, preferred to remain under Fisheries Department control, and raised the matter of compensation if his right to fish the area was removed.

Commercial fishing is compatible with general use zones and some special purpose zones of marine parks and with marine management areas (Part II - 3.6, 9.2). The recommendation for this area includes reference to "*such commercial fishing and aquaculture as may be consistent with the former purpose*" (i.e. protection of mangal habitat, prawn and fish nursery areas, conservation of marine flora

and fauna and recreational fishing). Commercial fishing would continue to be under the control of the Fisheries Department (Part II - 3.6).

One submission from the oil and gas industry opposed the recommendation. It acknowledged the biological richness of the Gulf but believed that reservation would be inappropriate because there are no threats to the ecosystem, current controls on stakeholders are adequate and there would be a potential for oil and gas exploration and production to be excluded. It added that reservation would add substantially to industry costs. This submission also believed that the mangal flora of the Gulf is represented elsewhere.

While the Gulf ecosystem appears to be near pristine at present, there is increasing demand for access to its natural resources. Reservation for multiple use would bring with it a means of ensuring balanced management with all stakeholders involved in decision-making. Higher costs must be expected in environmentally sensitive areas (Part II - 7.1).

The Working Group's expert opinion was that the mangals of Exmouth Gulf are unlike others on the coast in terms of floristics and structure and that reservation was warranted to represent the diversity of mangal systems of the State. Subject to environmental impact assessment, drilling for oil and gas exploration and development may be permitted in general use zones and some special purpose zones in marine parks and in marine management areas (Part I - 4.2).

Recommendation III.3.10 - West Pilbara offshore islands

One submission.

The submission gave implicit support to the recommendations but sought assurance that there would be sufficient time for public discussion prior to decisions on reserve status.

Reserve status (category) would be a key issue prior to reservation and would be subject to public comment (Part I - 4.; Part II - 3.9, 3.13).

Recommendation III.3.11 - Barrow-Monte Bello complex

Five submissions; one general, three referring to the Monte Bello recommendations, one to the Barrow Island recommendations.

One submission contended that it is crucial to effective resource management that there be a schedule whereby priority areas are given early attention and that the Monte Bello-Exmouth area should be considered first to reduce uncertainty in the oil and gas industry.

The Barrow-Monte Bello complex has been identified as a priority area and negotiations with stakeholders have already begun.

Two submissions supported the recommendation for a marine conservation reserve at the Monte Bellos. One noted that it is an important area for recreational fishing and considered that the reserve category should be consistent with that use. The other supported reservation of the area as a multiple-use marine management area.

Reserve category and management zoning will be a principal issue for further public (Part II - 5.1). Recreational fishing is compatible with recreation, general use and some special purpose zones of marine parks and with marine management areas (Part II - 3.6, 9.1).

One submission noted that there are pearl farm leases at the Monte Bellos and concluded that this would be incompatible with the recommended reservation.

Pearl farming is compatible with general use and some special purpose zones of marine parks and with marine management areas (Part II - 3.6, 9.3).

A submission from the operator of the Barrow Island oil production field noted that there are additional relevant data available on the marine habitats of Barrow Island and expressed concern that the report proposed reserve categories for the Biggada and Bandicoot Bay areas.

The recommendations were based on data gathered during a Western Australian Museum survey in 1966 and a later company report on marine habitats. The Working Group believed that the available information was adequate to support the recommendations. More detailed data would be most helpful during consideration of the recommendations.

The report recommendations for this area do not specify reserve category for either Biggada or Bandicoot Bay, but the report recommends that reservation should be considered for the protection of flora and fauna. This could be achieved by reservation as marine nature reserve or appropriate zoning within a marine park or marine management area (Part I - 4.2).

C. WEST COAST

Recommendation IV.3.1 - Ningaloo Reef-southern extension

Three submissions; all conditionally supportive.

Two submissions sought consultation with the local fishing industry on boundaries.

The other noted the increasing importance of Gnarraloo Bay and Cape Farquar for recreational fishing and recommended consultation with the tourism industry prior to deciding on reserve category.

If this recommendation were to be implemented consultation with stakeholders would be conducted during the preparation of an indicative management plan prior to publication of a notice of intent to reserve, and reserve category would be a key issue (Part I - 4.1; Part II - 3.9, 5.1).

Recommendation IV.3.2 - Red Bluff to Point Quobba

Two submissions; both conditionally supportive.

Support for the recommendation was subject to consultation with the local fishing and tourism industries prior to deciding on reserve category.

If this recommendation were to be implemented consultation with stakeholders would be conducted during the preparation of an indicative management plan prior to publication of a notice of intent to reserve, and reserve category would be a key issue (Part I - 4.1; Part II - 3.9, 5.1).

Recommendation IV.3.3 - Shark Bay Marine Park-Bernier, Dorre and Dirk Hartog Islands extensions

One submission. These recommendations have been widely discussed previously in other forums and have a wide level of support.

The submission supported the recommendations, noting the high conservation values of seagrass beds east of Bernier and Dorre Islands and the spectacular scenery along the west coasts of the islands. It

education program and expressed the view that larger reserves can better nurture development of mature public attitudes towards the marine environment.

A biological survey of the shores of Bernier and Dorre Islands was conducted in 1995 (Hutchins *et al.*, 1995). Addition of these areas to the marine park will greatly increase its habitat and scenic diversity.

Recommendation IV.3.4 - Kalbarri

One submission; opposed.

The submission opposed the recommendation on the grounds that the marine and estuarine habitats are not species-rich and that the main feature of the area is the geology which is already represented (above low water mark) within the Kalbarri National Park.

These points are acknowledged.

Recommendation IV.3.5 - Port Gregory to Port Denison

3.5.1 Port Gregory

Three submissions; all opposed.

One opposed the recommendation on the following grounds: the coral area is already reserved under fisheries legislation and additional controls are unnecessary; the lagoon is an important mooring area for commercial fishermen; and weather conditions year round make the area unsuitable as a viewing area.

Another submission noted that while the local community is opposed to the recommendation, reservation might be considered more favourably if the level of public visits increases. If a reserve was declared the local community would want a direct role in management.

The corals of the Port Gregory lagoon are protected under fisheries legislation although the area is not a marine reserve. Further consideration will be given to whether this may be sufficient to meet the spirit of the recommendation. If ultimately a reserve is declared, the local community would certainly be directly involved in management decisions (Part II - 5).

3.5.2 Seven Mile Beach

No submissions.

Recommendation IV.3.6 - Houtman Abrolhos

Three submissions; one supportive, two opposed.

The Working Group supported the earlier recommendations of the Abrolhos Islands Planning Strategy (AIPS), including reservation of the majority of the marine area under fisheries legislation, but with some amendments to the areas suggested for reservation under the CALM Act for conservation and recreation purposes, that is, as a marine park. The Working Group acknowledged the great importance of the fisheries at the Abrolhos but stressed that the waters and islands also have exceptionally high conservation and recreational values so there is a clear need for multiple-use management.

The AIPS Steering Committee (comprising senior officers of the Fisheries Department, CALM and the (then) Department of Planning and Urban Development) which oversaw production of the AIPS, had commissioned a survey that identified several relatively small areas within the Abrolhos as having particularly high conservation and recreational values and recommended them as marine parks. Neither of the opposing submissions acknowledged the AIPS or the research and public participation programs that preceded that report.

One submission noted that the area would become a Fish Habitat Protection Area (FHPA).

Since release of the Working Group report the Government has approved the establishment of a FHPA over the waters of the Abrolhos.

The establishment of marine parks as enclaves within the FHPA, as recommended in the AIPS, is still to be considered. Should CALM Act marine conservation reserves be established, the FHPA would cease to exist in those areas when a marine park management plan became operative.

Both objecting submissions noted the roles of the Abrolhos Islands Consultative Council (AICC) and the Fisheries Department and took the position that a second management agency (i.e. CALM) would create an unworkable situation. One argued that the Fisheries Department is the Western Australian agency with the most skills in aquatic management and it should be the lead agency at the Abrolhos.

Given the high fisheries, conservation and tourism values of the islands and waters of the Abrolhos, the earlier study (AIPS) proposed a joint Fisheries Department/CALM management role, with CALM responsible for management of selected areas designated as marine park. As with other marine parks, the Fisheries Department would remain responsible for fishing activities within those reserves. The AICC would fulfill a community advisory role. This model of management operates successfully in other large Western Australian marine parks and is the basis of the Government's marine management policy (Part II - 3.2, 3.7).

One of the opposing submissions expressed the view that the Abrolhos should remain solely under the control of fishermen and the Fisheries Department.

The matter of multiple use of the waters of the Abrolhos is discussed above. The present gazetted purposes of the island reserves include support for the fishing industry, conservation and tourism and they have never been solely for the purposes of the fishing industry. The original AIPS, the Working Group report and the AICC all proposed multiple-use management at the Abrolhos.

One submission proposed that a cooperative approach would be best developed through a memorandum of understanding between Ministers.

This is a proven procedure where there are multiple management agencies. However, it does not negate the advantages of vesting a reserve in a statutory authority and bringing into play the public management planning process.

One submission asserted that neither terms of reference nor criteria for reserve selection are given in the report and that there has been no methodical consideration of the reserve selection process (in respect of the Abrolhos).

Terms of reference are given in the form of an *Aims and Scope* statement at the beginning of the Working Group report. The methodology applied is briefly outlined in section 1.3 of the report.

In the case of the Abrolhos, the Working Group drew heavily upon the extensive information already published on the marine environment of the area, including the comprehensive report by consultants

includes a detailed account of reserve selection methodology, is referenced in the Working Group report.

One submission asserted that the report pre-empted a planning process (initiated by the AICC) without community consultation or consideration of the AICC research data.

The Working Group relied on results of the earlier AIPS which involved a review of existing data and production of a detailed resources map of the area. In addition, several Working Group members had had extensive personal research experience at the Abrolhos and the Working Group considered that this, taken together with the consultant's report, was adequate to make a realistic assessment of the habitats for the purpose of reserve or zone selection.

The earlier AIPS had included an extensive public participation program with public meetings and workshops and the work of the consultative committee (which later gave rise to the AICC). As all the issues had been widely canvassed during that process, and a level of consensus achieved, the Working Group did not consider that it was necessary to repeat this process.

One submission believed that lack of consistent terminology with respect to the recommendations was confusing.

The report recommendations for the Abrolhos avoid use of reserve category terms except as they were proposed in the earlier AIPS. However, the categories are clearly defined in the introduction. They are described in the terms used in the legislation.

One submission stated that the present CALM Act does not accommodate true multiple use in marine conservation reserves.

Marine park is a multiple-use reserve category and compatible recreation and commercial activity are included in the prescribed purpose of marine parks (Part I - 4.1; Part II - 4.8). The new multiple-use CALM Act marine conservation reserve category of marine management area will be specifically reserved for the purpose of managing and protecting the marine environment so that it may be used for conservation, recreational, scientific and commercial purposes.

Recommendation IV.3.7 - Beagle Islands

Two submissions; both conditionally supportive.

The submissions supported the recommendation subject to amendments and extensive local consultation to determine boundaries and reserve category.

One noted that day charters occasionally visit the islands (Part II - 8).

The other suggested that the purpose of the reserve should include recreation with special consideration given to protection of flora and fauna in the waters surrounding the islands.

The Working Group recommended that the area should be reserved for protection of flora and fauna. Reserve category and management zones would be decided after public consultation (Part II - 5.1). Other purposes, including recreation, but with special protection zones, could be considered during preparation of an indicative management plan prior to the notice of intent to reserve stage (Part II - 3.13, 3.14).

One submission proposed that the seaward boundary should be the 30 metre isobath and that Commonwealth waters should be included. It also proposed that there should be a detailed assessment of the biological and physical attributes (prior to reservation).

Boundary definition would be a matter for public discussion during the preparation of the notice of intent to reserve (Part II - 5.1). Reservation of Commonwealth waters would require a separate declaration under Commonwealth legislation (Part II - 3.8).

One submission noted that coral communities in the waters off Beagle Islands are "under threat" from the carnivorous marine snail *Drupella*.

Drupella is a natural predator of corals and its presence is normal. Whether periodic, abnormally large aggregations of *Drupella* occur at the Beagle Islands is not known. Whether or not periodic aggregations of the snail are part of the normal predator-prey cycle is not understood. This matter is being monitored in the Ningaloo Marine Park.

Recommendation IV.3.8 - Jurien

Four submissions; two supportive; one with implicit support, one non-committal.

The non-committal submission was concerned about the impact of the recommendation on the rock lobster, aquaculture and tourism industries. Three of the submissions noted the presence of the aquaculture industry in the area and sought assurances that its interests would be protected. One noted that the aquaculture industry itself has environmental protection as an objective and would welcome reservation and management planning.

Commercial fishing and aquaculture are compatible with general use and some special purpose zones of marine parks and with marine management areas (Part II - 3.6, 9.2, 9.3). Tourism is compatible with recreation, general use and some special purpose zones (Part II - 8.). Reservation would bring with it a requirement for public management planning which would ensure equity of uses and sustainability of resources (Part II - 5.).

Three of the submissions noted the importance and potential of nature-based tourism in the area, one of them expressing the view that marine park status would be a benefit.

The Working Group noted the recreational/tourism values of the area. Declaration of marine parks elsewhere has resulted in benefits to the nature-based tourism industry (Part II - 8).

One submission believed that the outer boundary should be set at 24 nautical miles and that there would be benefits in a coordinated approach between the State and Commonwealth governments.

Boundary definition would be a matter for public discussion during the preparation of an indicative management plan prior to the publication of a notice of intent to reserve (Part II - 5.1). Reservation of Commonwealth waters would require a separate declaration under Commonwealth legislation (Part II - 3.8).

Recommendation IV.3.9 - Shoalwater Islands Marine Park-Garden and Carnac Islands extensions

Two submissions; both conditionally supportive.

Submissions were from community groups and were supportive provided that existing arrangements for moorings and access are maintained and recreational fishing is permitted to continue.

Recreational fishing and mooring areas are subject to management planning decisions reached through consultation with key stakeholders (Part II - 3.14, 5.1).

One submission suggested extension of the marine park down the eastern side of Garden Island as far south as Buchanan Bay and that reservation of the waters on both eastern and western shores of the island would provide ideal opportunities for research on seagrasses.

Should the recommendations be implemented (Part II - 3.13, 5.1) this suggestion will be considered, in consultation with interested parties, during the preparation of an indicative management plan prior to publication of a notice of intent to reserve.

One submission noted that the western shore is presently under the control of the Department of Defence.

This will be taken into account should the recommendations be implemented and the Department of Defence will be consulted (Part II - 3.2, 3.8).

Recommendation IV.3.10 - Peel-Harvey Inlet

Three submissions; all supportive.

One submission suggested reservation of the waters adjacent to the Sticks.

The suggestion would be considered during preparation of an indicative management plan prior to publication of a notice of intent to reserve when the recommendation is given further consideration (Part II - 3.14).

One submission noted a Waterways (Water and Rivers) Commission policy that conservation reserves within areas under its jurisdiction should be managed by CALM and recreation reserves by Local Government, and that CALM had resisted responsibility for management of areas of the estuary without additional resources.

The areas identified by the Working Group as worthy of consideration for reservation are all conservation areas. When deciding on whether the recommendation should be implemented, and on the most appropriate vested authority and management agency, the Government will consider the question of resources for management (Part II - 3.4, 4.10).

Recommendation IV.3.11 - Leschenault Inlet and Estuary

Six submissions; three conditionally supportive, three non-committal.

The three supporting submissions suggested amendments. Two of the non-committal submissions commented on aspects of the recommendations but neither supported nor opposed them. The other merely expressed an interest and wished to be kept informed. One suggested that the recommendations for a marine nature reserve need to be streamlined and made more specific.

Two submissions supported reservation of the Leschenault Inlet but noted the extensive recreational use of that area and suggested marine park as the appropriate category, thereby permitting recreational fishing. One submission noted that the Waterways (Water and Rivers) Commission management plan proposed vesting of this area in the City of Bunbury.

Two submissions specifically supported the reservation of the Northern Estuary above Waterloo Head as a marine nature reserve.

Two submissions supported the reservation of Vittoria Bay but noted the extensive recreational use of that area and suggested marine park as the appropriate category, thereby permitting recreational fishing, although one submission suggested that the shallows on the eastern side could be designated as marine nature reserve.

Although these submissions provide qualified support for the recommendations, it is clear that public interest in the area is high and that many issues remain to be resolved before reserves are established. Further consultation with the City of Bunbury, the Waters and River Commission, the Leschenault Inlet Management Authority and other key stakeholders is required (Part II - 3.14, 5.1).

Recommendation IV.3.12 - Geographe Bay-Cape Leeuwin

Twelve submissions; six supportive; two opposed; four non-committal.

One submission believed the proposal was timely in view of unprecedented growth in the region. Another supported the concept of nature-based tourism in the area.

The "Capes" area is indeed subject to unprecedented growth of population and economic activity, much of it related to its abundant natural attractions. Planning and environmental management are essential if those attractions are to be sustained and reservation of coastal waters, with the associated public management planning programs, would facilitate equitable and sustainable access to natural resources.

Three submissions suggested eastward extension of the reserve in Geographe Bay to include a larger area of seagrass meadows.

Boundaries would be subject to further consideration and public comment during the preparation of an indicative management plan prior to publication of a notice of intent to reserve, if the recommendation is implemented (Part II - 5.1).

Five submissions commented on zoning, one believing it would have been preferable if a zoning scheme had been proposed in the report, the others seeking adequate consultation on zoning prior to declaration. Zoning is a part of the management planning process and involves public participation.

One submission objected to general use and special purpose zones allowing mining and oil/gas extraction and believed that the Capes area should be given special status as a recreation zone. Another was concerned at the principle of multiple use in marine parks, believing that oil/gas and mineral sand extraction are inappropriate in this area and that the superiority of the mining legislation over the CALM Act is inappropriate.

The importance of recreation and nature-based tourism in the area are recognised. The matter of zoning for that or any other purpose would be a central aspect of a management plan and subject to public comment. Any proposals for oil/gas or mining activity would be subject to assessment under the Environmental Protection Act. These activities, other than seismic exploration where approved under the Environmental Protection Act, are not permitted in sanctuary, recreation and certain special purpose zones in marine parks.

One submission was concerned about the effects of pollutants from Toby Inlet and the possibility of sewage impact on seagrasses, suggesting special legislation to prevent it.

Potential impact of sewage disposal and other pollutants on natural features of high value are subject to the Environmental Protection Act which has the power to prohibit or control it if that is warranted (Part II - 4.4, 4.14).

One submission opposed the recommendations because of the impact reservation would have on the abalone, lobster and shell fisheries.

Commercial fishing is compatible with general use and some special purpose zones of marine parks and with marine management areas, subject to a public planning process to ensure equitable and sustainable management and protection of special natural features (Part II -3.6, 9.2).

One submission opposed the recommendation because of the effect of reservation on developments that might have an environmental impact.

Developments are already subject to impact assessment under the Environmental Protection Act. Reservation would put in place a statutory requirement for public management planning that would ensure an appropriate balance between development and the purposes of reservation.

D. SOUTH COAST

Two issues emerged from both the written submissions and the public meetings as of prime concern to the people of the south coast, that is, access to the shore and continuance of fishing.

Access to the shore has been a contentious issue on the south coast for many years. It is not an issue that relates to establishment of marine conservation reserves. Rather, it relates mainly to management of the adjacent land much of which, on the south coast, is reserved as national park or nature reserve (Part II - 2.1.2, 4.9). Questions of access to coastal waters, be they marine conservation reserves or not, are governed by management plans of the land reserve management authority which, in the case of national parks and nature reserves is the National Parks and Nature Conservation Authority. Local Government and other landholders are responsible elsewhere. Access across land to marine conservation reserves will continue to be a policy matter for the vested authority of the land reserves, whether marine conservation reserves are established or not.

As discussed in Part II - 2.1.2, 9.1.2 in regard to fishing in marine conservation reserves, there has been a serious misunderstanding in south coast communities about the marine conservation reserve categories. A widely promoted but erroneous view was that recreational fishing would be prohibited in marine reserves. The recommendations of the report were commonly opposed on that ground, however, most south coast recommendations in the report acknowledged the extent of fishing in the recommended areas and proposed reservation so as to accommodate recreational fishing.

In the introduction to the report it is made clear that recreational fishing would be a legitimate activity in recreation and general purpose zones of marine parks. For those areas where recreational (or commercial) fishing is an important activity, marine park would be the appropriate reserve category. Only three remote areas (at Black Point, Warren Beach and Twilight Cove) were recommended for reservation solely for conservation of marine flora and fauna. The high level of opposition to marine conservation reserves on the south coast may lessen when the management criteria for the different reserve categories are better understood. There is now the possibility that some of the areas recommended would be better suited as marine management areas, the new marine reserve category. This will be addressed, with public consultation, during preparation of the relevant indicative management plans prior to publication of a notice of intent to reserve.

Recommendation V.3.1 - Hardy Inlet

No submissions.

Recommendation V.3.2 - D'Entrecasteaux

3.2.1 Black Point

One submission; supportive.

The submission was supported but as a marine park, thereby allowing for recreational fishing.

Reserve category would be a central issue in public discussion prior to reservation should the recommendation proceed to implementation (Part II - 3.9, 9.1).

3.2.2 Warren Beach

Two submissions; both conditionally supportive.

The submissions supported the proposed reservation but as a marine park, thereby allowing for recreational fishing.

Reserve category would be a central issue in public discussion prior to reservation should the recommendation proceed to implementation (Part II - 3.9, 9.1).

3.2.3 Broke Inlet

Ten submissions; eight supportive, two implicitly opposed.

All the submissions supporting reservation noted that the inlet has been used for many years for commercial and recreational fishing and sought assurance that this would continue. Both the submissions expressing concern at the recommendation were based on the assumption that it might mean the closure of fishing operations.

Given the intent of the recommendation, marine park would be the appropriate reserve category, within which commercial and recreational fishing could continue though subject to a public management planning process that might result in zoning areas for particular purposes (Part I - 4.2; Part II - 5.3).

One submission noted the existence of Aboriginal fish traps in the inlet and expressed anxiety that the Aboriginal community has a co-management role.

Aboriginal communities with a traditional interest in coastal areas reserved for public purposes will have opportunities to participate in management planning and operations (Part II - 6.1).

Two submissions noted that fish stocks are determined by seasonal conditions and opening of the sand bar at the mouth of the inlet. One other submission expressed concern at artificial opening of the bar when the full consequences are not understood.

The merits of opening the bar, and the timing of that opening, are the subject of widely divergent views. This would be a central issue in the public management planning process should establishment of the reserve proceed (Part II - 5.3).

One submission, while supporting the recommendation, expressed concern that the term "passive recreation" used in the report was not defined. Another suggested that all types of recreational activity should be permitted in the reserve but that wildlife areas should be made out-of-bounds at sensitive times.

The term "passive recreation" refers to activities that do not disturb the environment. For example, sailing may not disturb the environment but water-skiing may. Recreational activities that are equitable and sustainable as well as other environmental values are balanced through a public management planning process (Part II - 5.3).

3.2.4 Donnelly and Gardner Rivers

One submission; supportive.

The submission supported the recommendation providing the reserve category was marine park, allowing recreational and commercial fishing and there was adequate community representation on management committees, including a representative of the Local Government.

Marine park status would be consistent with the recommendation. Most existing marine parks have local management advisory committees and, as a general rule, so will marine conservation reserves declared in the future (Part II - 5.4).

Recommendation V.3.3 - Walpole-Nornalup Inlets

Five submissions; three supportive, two with implicit support subject to further community consultation.

One submission noted that current local controversy about development on the coast of this area will make reservation a sensitive issue.

Reservation of coastal or estuarine waters does not of itself impact on development approvals on adjacent land but is likely to result in closer public consideration of potential environmental impacts of development on natural values (Part II - 3.12, 3.14).

Recommendation V.3.4 - William Bay

Eleven submissions; one supportive, nine opposed, one non-committal.

Three submissions opposed reservation because of a belief that entry fees would be charged.

This concern relates to entry fees for access through the William Bay National Park. This is not a marine reserve issue (see Part II - 4.9).

Three submissions opposed the recommendation because of concern about the impact of reservation on commercial fishing. The significance of the area as a Proclaimed Fishing Zone was noted.

Commercial fishing is compatible with general use and some special purpose zones of marine parks and with marine management areas (Part II - 3.6, 9.2).

Four opposing submissions believed that additional management was unnecessary, one claiming that the area is not rich in marine fauna. One supported additional management but opposed reservation.

The Working Group identified the area as having diverse marine habitats representative of the south coast and very high scenic and recreational values. These are both criteria making an area worthy of special protection. Reservation, bringing with it public management planning, is a proven means of achieving that aim (Part I - 3.).

One of the opposing submissions was concerned that commercial developments ("resorts and the like") might deny public access to the shore.

The adjacent land is already national park and resort development is unlikely. In any case, this has no bearing on protection of the waters as a marine conservation reserve.

The sole supporting submission was qualified by a suggestion that declaration of the marine conservation reserve should be deferred until management plans are considered for the adjacent national park.

A similar suggestion was made in relation to Stokes Inlet. This proposal would allow the issues of local concern to be considered through an appropriate consultative process.

Recommendation V.3.5 - West Cape Howe

Three submissions; two supportive, one opposed.

One of the supporting submissions suggested extension of the reserve eastwards to Mutton Bird Island due to the use of that area by southern right whales. The other suggested that further assessment of the area should be done at the same time as assessment of the V.3.6 and V.3.7 recommendations as these areas have much in common.

These suggestions will be taken into account when the recommendation is given further consideration.

The opposing submission was concerned at the lack of reference to commercial fishing in the area.

The information about commercial fishing in the area has been noted. Commercial fishing is compatible with general use and some special purpose zones of marine parks and with marine management areas (Part II - 3.6, 9.2).

Recommendation V.3.6 - King George Sound-Princess Royal Harbour

Nine submissions; five supportive (at least in part), three opposed, one non-committal.

Two of the supportive submissions drew attention to the vesting of control of the area in the Albany Port Authority and to planned port developments. One stressed the need for unrestricted use of the anchorage areas and the three shipping channels but, notwithstanding the current vesting of control, suggested that areas of Princess Royal Harbour, not infringing on port operations, could be reserved as a marine park. The other expressed concern at proposed port development and pollution.

The role of the Albany Port Authority was acknowledged in the report. Obviously, reservation of any part of the area for conservation, recreation or other purposes would require detailed prior consultation with the Albany Port Authority (and local government and community groups as well) to resolve issues relating to environmental protection, boundary and zoning and appropriate management arrangements, taking account of existing and planned port operations (Part II - 5.1, 10.).

While supporting the recommendation, one submission noted that consideration should be given to aquaculture leases granted by the Albany Port Authority.

Aquaculture is compatible with general use and some special purpose zones of marine parks and with marine management areas and is accommodated in two existing marine parks (Shark Bay and Shoalwater Islands) (Part II - 3.6, 9.3). Questions about public access to lease areas do arise and are dealt with through the public management planning processes and zoning arrangements.

Two submissions objected to the recommendation because the area includes important fishing grounds, one arguing that reservation is unnecessary as most marine fauna there are on the increase. However, one of these submissions acknowledged that a marine conservation reserve might not interfere with fishing operations if managed in consultation with professional fishermen and suggested an alternative area further east (Haul Out Rock to Cape Riche) where there is little fishing.

Commercial fishing is compatible with general use zones of marine parks and with marine management areas (Part II - 3.6, 9.2). If the recommendation was implemented, local users of the area, including professional fishermen, would be key stakeholders with direct participation in management planning and operational decisions through standard consultative procedures and provisions for management advisory committees (Part II - 5.4).

The observation that marine fauna are on the increase relates to sea-lions, fur-seals and whales. (There are inadequate data on other elements of the marine fauna.) This circumstance is regarded by the tourism industry as welcome although, in the case of sea-lions and fur-seals, it may adversely affect some fishermen. These animals are already protected under the *Wildlife Conservation Act 1950*, but marine park status would add to protection of their habitat.

One submission supported reservation of the area around Michaelmas and Breaksea Islands but not the area around Cape Vancouver.

Boundaries and zoning would be central issues for public consideration during preparation of an indicative management plan prior to publication of a notice of intent to reserve, should the recommendation proceed (Part II - 3.13, 3.14).

One of the submissions opposing the recommendation noted that consideration is given in the report to recreational use which can have significant impact on flora and fauna, while consideration was not given to commercial users.

The impact on environmental values of recreational activities is acknowledged and is a reason for introducing appropriate management seeking to balance recreational and commercial activities in an equitable and sustainable way by means of public management planning (Part II - 8.).

Several of the supportive submissions were conditional on continuance of recreational fishing and there being adequate public consultation prior to reservation.

Recreational fishing, managed under fisheries legislation, is an accepted activity in general purpose, recreation and some special purpose zones of marine parks and in marine management areas (Part II - 3.6, 9.1). Prior public consultation is essential and required practice (Part II - 5.).

One submission that supported the recommendation suggested that further assessment relating to boundary definition could be undertaken at the same time as assessment of recommendation V.3.7.

The suggestion will be taken into account when the recommendation is given further consideration.

Recommendation V.3.7 - Cape Vancouver-Bald Island

Five submissions; three opposed (at least in part) and two supportive (at least in part) of the recommendation.

The opposing submissions objected to the recommendation because the area includes important fishing grounds, one arguing that reservation is unnecessary as the numbers of most marine fauna in the area are increasing. One of these objected specifically to inclusion of the south Cheyne Beach area but made no comment on other areas. One acknowledged that a marine conservation reserve might not interfere with fishing operations if managed in consultation with professional fishermen and suggested an alternative area further east (Haul Out Rock to Cape Riche) where there is little fishing.

Commercial fishing is compatible with general use and some special purpose zones of marine parks and with marine management areas (Part II - 3.6, 9.2). Professional fishermen would be key stakeholders with direct participation in management planning and operational decisions through standard consultative procedures and provisions for management advisory committees (Part II - 5.4).

One of the submissions opposing the recommendation noted that consideration is given in the report to recreational use which can have significant impact on flora and fauna, while consideration was not given to commercial users.

The impact on environmental values by recreational activities is acknowledged and is a reason for introducing appropriate management seeking to balance recreational and commercial activities in an equitable and sustainable way by means of public management planning processes (Part II - 8.).

One of the submissions specifically supported reservation of waters adjacent to Waychinicup but made no reference to the other areas. The other suggested that further assessment of the area should be conducted during a forthcoming management planning project for the adjacent terrestrial reserves.

The latter suggestion will be taken into account when the recommendation is given further consideration (Part II - 3.13).

Recommendation V.3.8 - Fitzgerald Biosphere Reserve

Sixteen submissions; seven supportive (at least in part), nine opposed to the recommendation (4 of the latter were identical pro-forma submissions).

Five submissions specifically supported proposed reservation of the inlets, although one of these objected to inclusion of the south bank of Gordon Inlet and two argued that Culham Inlet should be included. One submission suggested that Hamersley Inlet should be zoned exclusively for amateur fishing with no closed season. Another argued that current commercial bream fishing in Culham Inlet decimates the stocks months before hyper-salinity would have done so and that close monitoring of inlet fish stocks is essential.

The south bank of Gordon Inlet is within a local government reserve and there is no proposal that it should be included in a future marine conservation reserve but, as noted in the report, the location of the boundary is ambiguous because of difficulty in defining the low water mark.

The inclusion of Culham Inlet could be considered if it can be demonstrated that the public recreational facility and security of purpose there would be improved by reservation and more intensive management of the waters as well as the shores.

Zoning (Part I - 4.2) and management of fish stocks would be central issues of a public management planning process if the recommendation were to be implemented.

Two submissions noted the international importance of the area in terms of the Biosphere Reserve status of the adjacent land. Both suggested that the western and eastern boundaries of a marine park should be located at the boundaries of the Biosphere Reserve area. One submission supported reservation of the waters around the Doubtful Islands but objected to reservation of Doubtful Bay while another supported reservation of the Bay provided that it is not made inaccessible to the public.

If the recommendation were to be implemented, boundaries of the marine conservation reserve would be a central issue in further public consultation prior to reservation (Part II - 3.13).

Objections were mainly from the fishing industry and were based on a perception that additional marine management is not necessary and that reservation would threaten continued commercial fishing operations. This included a view that, once an area is reserved, Government may classify the entire area as an exclusion zone and thus prohibit commercial and recreational fishing.

Commercial fishing is compatible with general use and some special purpose zones of marine parks and with marine management areas (Part II - 3.6, 9.2). If the recommendation was implemented, zoning would be subject to formal public management planning and local users of the area, including recreational and professional fishermen, would be key stakeholders with direct involvement (Part II - 5.).

One of the opposing submissions noted that there is no mention in the report of how marine conservation reserves would be funded and was concerned that funds would end up coming from commercial fishermen and other users.

As marine conservation reserves are public property, most management costs are funded from public funds. Government policy is that the user-pays principle is applied where a particular service is provided (Part II - 4.10). A fee may be charged to commercial operators because the environmental resources of marine conservation reserves are regarded as public assets and there are management costs in ensuring that the asset is not diminished by a commercial activity. Licence fees for commercial fishing in marine parks are, and will continue to be, paid under fisheries legislation.

Recommendation V.3.9 - Stokes Inlet

Five submissions; one supportive, four opposed.

The supportive submission suggested that consideration of the recommendation should be deferred until a management plan for the adjacent national park is prepared.

A similar suggestion was made in relation to William Bay. This proposal would allow the issues of local concern to be considered through an appropriate consultative process.

The opposing submissions were based mainly on the following grounds.

It was claimed that reservation is unnecessary as the area is remote and the weather conditions provide protection (against excessive use), and that reservation would result in restrictions on access.

Reservation would ensure that, as the inevitable increase in use of the area occurs, appropriate management would be in place, rather than have to put it in place after the pressure had reached critical levels (Part II - 4.2). Marine park reservation is not aimed at restricting access but at facilitating and managing it through the statutory public management planning processes (Part I - 3.).

It was claimed that marine fauna is already adequately protected under fisheries legislation administered by the Fisheries Department and that marine conservation reserve management by CALM would be a duplication.

Protection of marine fauna is but one purpose of reservation. The Government's marine reserves policy provides for a dual role for the Fisheries Department and CALM, the former responsible for fishing, aquaculture and pearling and the latter for overall management including conservation, recreation and commercial activities other than fishing, aquaculture and pearling (Part II - 3.5, 3.6).

It was claimed that entry fees might be introduced which would have a detrimental effect on local people and the tourism industry, and that reservation would result in licensing restrictions and restrictions on access.

Government policy is that the user-pays principle is applied wherever a particular service is provided (Part II - 4.10). A fee may be charged to commercial operators in marine conservation reserves because there are management costs in ensuring that the public asset is not diminished by a commercial activity. Licences for fishing in marine conservation reserves are issued under fisheries legislation, with appropriate license fees.

Recommendation V.3.10 - Recherche Archipelago

Fourteen submissions; one supportive, eleven opposed, two non-committal pending further information.

The supportive submission believed that the recommendation should be given urgent attention.

The opposing submissions were based mainly on the ground that reservation is unnecessary as there is no evidence of any threat to wildlife or any need for additional management. One submission argued that the main threats to the south coast are from oil spills and discharge of ship ballast, neither of which would be within the jurisdiction of the reserve management authority.

Reservation would ensure that, as the inevitable increase in use of the area occurs, appropriate management would be in place, rather than have to put it in place after the pressure had reached critical levels.

Marine park status increases the onus on shipping operators to act responsibly.

It was claimed that reservation would give CALM the power to close areas without consultation with local people.

This claim is incorrect. The legislation stipulates comprehensive public consultation processes (Part II - 3.13, 5.).

It was claimed that fish stocks are already adequately protected under fisheries legislation administered by the Fisheries Department.

Management of recreational and commercial fisheries would continue to be the responsibility of the Fisheries Department under fisheries legislation (Part II - 3.6, 9.).

It was claimed that CALM might be forced to introduce entry fees which would have a detrimental effect on local people and the tourism industry.

Government policy is that the user-pays principle is applied wherever a particular service is provided (Part II - 4.10). Recreational use of marine parks may involve provision of services such as boat ramps. A fee may be charged to commercial operators in marine conservation reserves because there are management costs in ensuring that the public asset is not diminished by a commercial activity.

One submission asserted that the recommendation for reservation was made without adequate information and that a survey should have been conducted first.

The lack of adequate information about this area was acknowledged in the report. The recommendation for a multiple-use reserve was made on the basis of the agreed high environmental and recreational values of the area, with a commitment to survey the natural resources prior to declaration of management zones (Part II - 3.14).

One submission opposed the recommendation because areas might be lost to the aquaculture industry.

Aquaculture is compatible with general use and some special purpose zones in marine parks and with marine management areas (Part II - 3.6, 9.3).

Two submissions opposed the recommendation because the islands are already declared nature reserves.

Reservation of the islands does not protect or provide a management framework for the surrounding waters, which are the subject of the recommendation.

Recommendation V.3.11 - Twilight Cove

Three submissions; one supportive, one opposed, one opposed if reservation prohibited fishing.

The opposing submission was based on a view that there is no demonstrated need for reservation, that the threats to the environment are from shipping and oil spills, and that funding for management would end up coming from fishermen.

Reservation was recommended for this area because it was identified as being representative of an unusual habitat type and as having high conservation values. Reservation is preferable prior to appearance of threats rather than after that event (Part II - 4.2). Fishermen presently pay fees through fisheries legislation and no change to that arrangement is contemplated.

PART IV

LIST OF SUBMITTORS

INDIVIDUALS

Ager BG & PS	Evans D	Mackenzie M	Rouphael T
Alcorn W	Evans V	Martin MJ	Schoppe K
Allen W	Fardella S	Matthews DH & AP	Semeniuk V
Alman D	Forest N	McHayle M	Sharp A
Armstrong T	Francis WA & RK	Melvin JW	Sharp B
Aven SM	Harner G	Morgan A	Sharp T
Beale D	Harris GJ	Moss K	Shepherd M
Biglin R	Heberle RG	Mottram D	Smith B
Borland K	Hick C	North B	Smith JA
Bottomby P	Hildred S	North F	Smith S
Bradshaw G	Hill AK	North J	Starr S & A
Brown G	House M	North M	Taylor D
Charlton E	House R	Oatway C & B	Tysoe DH & PG
Clark J	Howard C	Piggott T	Webster IS & CE
Constable E	Hughes K	Pinniger L	Wheatcroft D
Conway J	Ingham G	Prince K	Wheatcroft T
Cooper R	James D	Pumphrey A	Wills S
Dallas S	Kefalenis M	Pybus J	Wilson W
Dittmer J	Kennedy C	Richards B	
English R	Kolo J	Roenie M	

ASSOCIATIONS/CLUBS

Albany Community Environment Centre
Bardi Aborigines Association
Bunbury Angling Club
Busselton - Dunsborough Environment Centre
Busselton Peace and Environment Group, FAWNA, Friends of the Tuart Forest
Central West Coast Tourist Promotion Committee
Denmark Boating and Angling Club
Denmark Conservation Society
Dunsborough Progress Association
Esperance Deep Sea Angling Club
Esperance Professional Fishers Association
Esperance Surfcasters Club
Esperance Tourism Forum
Friends of Shoalwater Islands Marine Park
Friends of the Burrup Peninsula and Dampier Archipelago
Garden Island Fishing and Aquatic Association
Garden Island Preservation Society
Geraldton Professional Fisherman's Association
Geographe Bay Advisory Committee
Gracetown Progress Association
Jurien Ratepayers and Progress Association
Kalbarri Professional Fisherman's Association

Kimberley Conservation Group
King Bay Game Fishing Club
Leaf of Hedland
Leeuwin Conservation Group
Leeuwin Professional Fisherman's Association
Nickol Bay Sportfishing Club
Ningaloo Preservation Association
Northampton District Angling Club
Parry Beach Voluntary Management Group
Pearl Producers Association
Port Gregory Progress Association
Royal Australasian Ornithologists Union
Rural Action Movement
South Coast Divers Club
South Coast Licensed Fisherman's Association
South West Licensed Fisherman's Association
Surfrider Foundation
Walpole-Nornalup National Parks Association
Western Australian Professional Shell Fisherman's Association
Western Australian Shell Club
Western Australian Southern Processors Association

ORGANISATIONS

Abrolhos Islands Consultative Council (AICC)
Albany Chamber of Commerce
Aquaculture Council of Western Australia
Australian Conservation Foundation (ACF)
Australian Marine Sciences Association (AMSA)
Centre for Whale Research
Conservation Council of Western Australia
Kimberley Land Council
Manjimup Aboriginal Corporation
National Association of Scuba Diving Schools (NASDS)
National Threatened Species Network
Western Australian Fishing Industry Council (WAFIC)

OIL/GAS AND MINING INDUSTRIES

Ampolex
Apache Energy
Association of Mining and Exploration Companies (AMEC)
Australian Petroleum Production and Exploration Association (APPEA)
BHP
Minora Resources
West Australian Petroleum (WAPET)
Western Mining Corporation (WMC)
Woodside Offshore Petroleum

GOVERNMENT - LOCAL

City of Mandurah
City of Stirling
Esperance Shire Council
Shire of Ashburton
Shire of Broome
Shire of Bunbury
Shire of Busselton
Shire of Capel
Shire of Carnamah
Shire of Carnarvon
Shire of Denmark
Shire of Dundas
Shire of Harvey
Shire of Jerramungup
Shire of Manjimup
Shire of Ravensthorpe
Town of Albany

GOVERNMENT - STATE

Albany Port Authority
Dampier Port Authority
Department of Commerce and Trade
Department of Conservation and Land Management, South Coast Region
Department of Minerals and Energy (DME)
Department of Resources Development (DRD)
Environmental Protection Authority (EPA)
Fisheries Department
Goldfields Esperance Development Commission
Great Southern Development Commission
Leschenault Inlet Management Authority
Ministry for Planning (MFP)
National Parks and Nature Conservation Authority (NPNCA)
Pilbara Development Commission
Office of the Attorney General
South West Development Commission
Water and Rivers Commission (WRC)
Western Australian Tourism Commission (WATC)
Western Australian Museum
Wheatbelt Development Commission

GOVERNMENT - FEDERAL

Australian Institute of Marine Science (AIMS)
Australian National Commission for UNESCO
Commonwealth Scientific and Industry Research Organisation (CSIRO)
Environment Australia

OTHER

Bellview Shell Museum

Department of Conservation, New Zealand

Esperance Tourist Bureau and Travel Centre

James Scheerer Research Charter

Kailis MG Exports Pty Ltd.

Karratha and Districts Tourist Information Centre (Inc.)

National Parks and Wildlife Service, NSW

Westralian Shells

REFERENCES

- ACIUCN (1994). Towards a strategy for the conservation of Australia's marine environment. Australian Committee for IUCN, Occasional Paper No. 5, Sydney.
- CALM (1994). *A Representative Marine Reserve System for Western Australia. Report of the Marine Parks and Reserves Selection Working Group.* Department of Conservation and Land Management, Perth.
- Donaldson, B., Eliot, I.G. & Kay, R.C. (1995). *Review of Coastal Management in Western Australia: A Report to the Minister for Planning.* Coastal Management Review Committee, Perth.
- Government of Western Australia (1994). *New Horizons in Marine Management.* November, 1994, Perth.
- Hatcher Research Associates (1988). A preliminary report on the interaction between the major human activities and the marine environments at the Houtman Abrolhos Islands of Western Australia. Unpublished report to the Abrolhos Islands Task Force, Perth.
- Hutchins, J.B., Slack-Smith, S.M., Marsh, L.M., Jones, D.S., Bryce, C.W., Hewitt, M.A. & Hill, A. (1995). Marine biological survey of Bernier and Dorre Islands, Shark Bay. Western Australian Museum, Perth.
- Ottesen, P. & Kenchington, R. (1995). Marine conservation and protected areas in Australia: what is the future? In: *Proceedings of the Second International Conference on Science and Management of Protected Areas*, Dalhousie University, Halifax, Nova Scotia, Canada, 16-20 May 1994.
- Simpson, C.J. & Ottaway, J.R. (1987). Description and numerical classification of marine macroepibenthic communities in the proposed Marmion Marine Park near Perth, Western Australia. In: *Collected Technical Reports of the Marmion Marine Park, Perth, Western Australia* (Ed. E. Moore), Technical Series No. 19, Environmental Protection Authority, Perth.
- Swan, J.M., Neff, J.M. & Young, P.C. (Eds.) (1994). *Environmental implications of offshore oil and gas development in Australia - the findings of an independent scientific review*, Australian Petroleum Exploration Association, Sydney.