

**MARINE RESERVE IMPLEMENTATION
PILBARA**

**AN ANALYSIS OF ISSUES
RELATING TO THE PROPOSED
MONTEBELLO/BARROW ISLANDS MARINE
CONSERVATION RESERVE**

REPORT: MRI/PI/MBI – 46/2000

A collaborative project between CALM Marine Conservation Branch and CALM Karratha Regional Office

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EXECUTIVE SUMMARY

The Western Australian Government is committed to full and open consultation before areas are declared as marine conservation reserves and there is a statutory requirement for public participation in the planning process. An issue analysis is undertaken at the commencement of the public participation process (PPP). An issue analysis is the term used to describe the task of undertaking and analysing discussions between CALM staff and representatives from the wide range of interest and user groups within the community. The information obtained from the discussions is used to: identify community visions and aspirations; assess community attitude; estimate levels of knowledge and understanding; and identify the issues and concerns within the community in regard to marine conservation reserves.

An analysis of issues relating to the proposed Montebello/Barrow islands marine conservation reserve was undertaken during April and May 2000. Face-to-face and telephone discussions were conducted with 43 people from a wide range of interest and user groups and the results of these discussions can be summarised as follows:

- The remoteness of the Montebello/Barrow islands region has prevented many people from visiting the area and because of this, only a small sample of community members were located who have much knowledge or interest in the region.
- The majority of people surveyed have a positive attitude towards the commencement of a marine reserve planning process and there is no need to implement strategies to specifically address negative attitudes within the community.
- Surveyed members of the conservation, science, education and recreational fishing sectors have reasonable knowledge and understanding of the marine reserve concept and planning process. Survey results indicate that other sectors of the community have inadequate knowledge and understanding to participate effectively in the planning process and a broadly based education program is required.
- A significant percentage of people surveyed (64%) identified issues which concerned them about the planning process. These included the perceived potential for decisions to be made by the more powerful sectors of the community without equal input from less powerful sectors. This issue together with an apparent community apathy and cynicism following previous unsuccessful public consultation programs identifies the need for the public participation process to be easily accessible to members of the community who have low levels of ownership for the region. The planning process must be open, with clear and active communication pathways between decision makers and community members at grass roots level and rationales for decisions need to be broadly distributed and explained.
- Some of the most frequently identified issues which concern members of the community, related to environmental degradation (60% of those surveyed). Some existing degradation is evident, and the potential for more degradation was of concern to members of the community and they would like to see this degradation arrested and repaired.
- Community hopes and aspirations for the proposed reserve varied but perhaps the most broadly supported vision was one in which the natural resources are sustainably managed and available for enjoyment and use. Many people felt that the islands should remain much as they are now but that there is room for some tourist facilities. Many people also wanted to see additional educational material made available.

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INTRODUCTION

The Western Australian Government is committed to the conservation of our marine environment and the sustainable use of our natural resources. A major component of the State's marine conservation and management strategy is the establishment of a statewide system of marine conservation reserves.

Most Western Australian marine conservation reserves cater for a range of recreational and commercial activities. They reflect a balanced approach by preserving representative and special ecosystems, while providing a management framework to ensure that human usage is managed in an equitable, integrated and sustainable manner.

In 1994, the Marine Parks and Reserves Selection Working Group published a report entitled *A Representative Marine Reserve System for Western Australia*. This report identified about 70 areas around the Western Australian coast as being worthy of further consideration for reserve status under the CALM Act. In December 1997, the Western Australian Government announced that the Montebello/Barrow islands region was a priority candidate area (figure 1). Since that date an assessment has been undertaken to determine the area's marine resources and commercial and recreational uses. Details of this assessment are outlined in the *Montebello/Barrow Islands Regional Perspective Paper*.

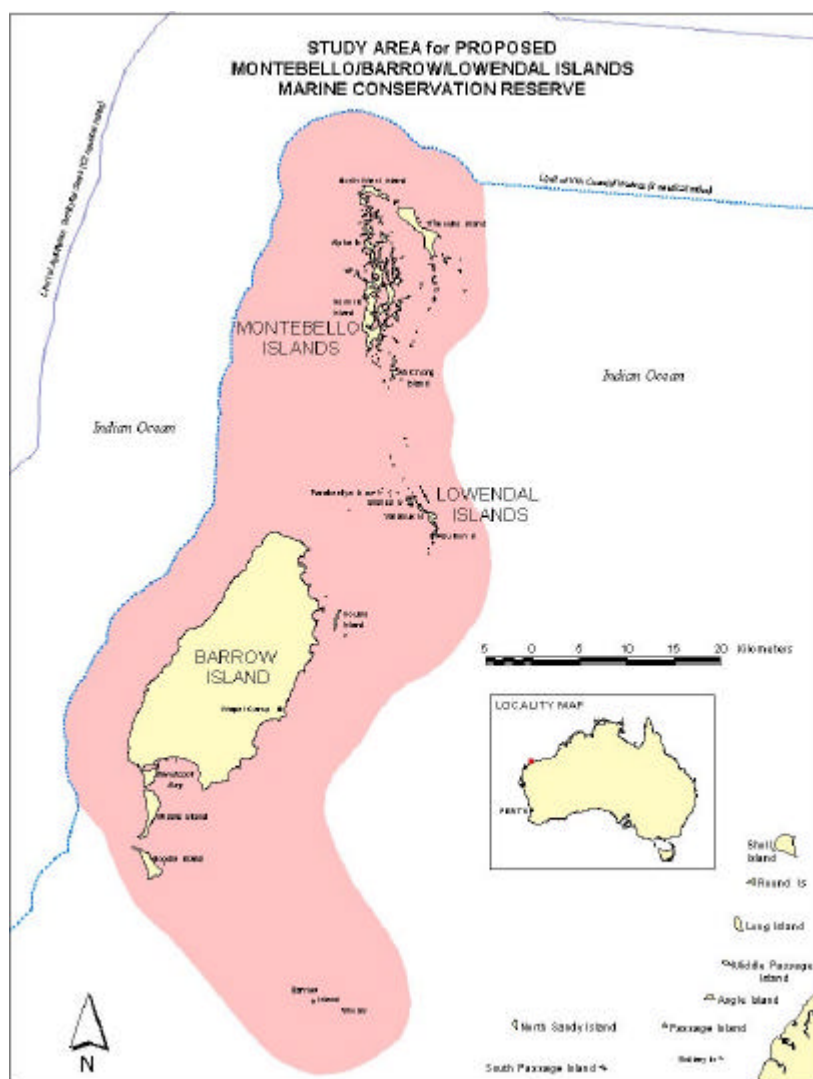


Figure 1. Study area of the proposed Montebello/Barrow islands marine conservation reserve.

The Western Australian Government is committed to full and open consultation before areas are declared as marine conservation reserves and there is a statutory requirement for public participation in the planning process. The **goal** of the public participation program (PPP), in the planning and management of Western Australian marine conservation reserves is to develop community ownership, stewardship, and understanding of marine conservation reserves. The **objective** of the PPP is to encourage and facilitate effective public involvement in the planning process and in day-to-day management of the reserve once it is established.

An overview of the stages and strategies associated with the PPP in marine reserve planning and management is provided in the document *Draft Operational Procedures for Public Participation in Marine Conservation Reserves* and is summarised in Table 1 below.

Table 1. Summary of public participation process for Western Australian marine conservation reserves.

PPP Phase	PPP Task
1. Initial public consultation	<ul style="list-style-type: none"> • Establish community contacts data base • Provide information about the reserve concept and planning process to key individuals, organisations and groups • Facilitate planning advisory committee process • Undertake an analysis of issues • Prepare public consultation plan (based on results of the issue analysis)
2. Pre –notice of intent to declare reserve	<ul style="list-style-type: none"> • Facilitate the development of guidelines for the community planning advisory committee • Formulate consultation partnerships with key interest and user groups • Develop and distribute information and educational material • Facilitate broad community input into the reserve planning process
3. Post –notice of intent to declare reserve	<ul style="list-style-type: none"> • Produce and distribute the draft plan plus summaries and explanatory information • Facilitate the preparation of public submissions • <u>Prepare a report summarising public submissions</u>
4. Gazetted marine conservation reserve	<ul style="list-style-type: none"> • Establish community management advisory committee • Facilitate the establishment of friends group • <u>Support on-going community extension program</u>

Phase 1 of the PPP includes an *issue analysis*, which is the subject of this report. The term ‘issue analysis’ is used to describe the task of undertaking and analysing discussions between CALM staff and representatives from the wide range of interest and user groups within the community. The objective of the issue analysis is to develop a community profile by:

- **Identifying community visions and aspirations in relation to marine conservation and management;**
- **Assessing community attitudes towards the marine reserve proposal** - Before members of the community can have effective input into the reserve planning process they need to be receptive to the general aims of the proposal. People who are not receptive will generally not consider other points of view or accept new information readily. Encouraging and promoting positive attitudes is therefore an essential step towards facilitating effective public input into the planning process;
- **Estimating levels of knowledge and understanding of the marine reserve concept, planning process and roles of both Government and the community** - People who do not have an adequate understanding of the marine reserve concept and planning process are unlikely to be able to participate effectively in the planning process;
- **Identifying issues of concern to stakeholder and interest groups** – An identification of key

issues will facilitate a more targeted planning process by providing a focus for education and negotiation; and

- **Identifying relationships between and within sectors of the community** – Tensions between groups with conflicting goals in relation to the marine reserve proposal need to be addressed during the planning process in an attempt to reach a resolution which is satisfactory to all parties.

A comprehensive community profile provides the basis for sector communication and liaison planning with each of the interest and stakeholder groups. The issues identified also provide a focus for negotiation during the reserve planning process.

METHODS

To determine the community profile, discussions were conducted with key community representatives from relevant user and interest groups both within the local Pilbara community and within the peak bodies and Statewide interest groups based in the Perth metropolitan area. Discussions were conducted during April and May of 2000. Contact was primarily face to face with individuals or small groups, and a small number of discussions were conducted by telephone. Interviewing staff used active listening and open questions (ie. they did not ask direct questions that required just a “yes” or “no” answer but instead the conversation was steered towards a free discuss) to identify issues, aspirations, concerns and alliances and assess attitude, levels of knowledge and understanding of marine conservation reserve concepts. Assessments were recorded on the standard forms (see Appendix I), which were filled in immediately after the discussion or as soon as possible.

Attitude was recorded as *receptive*, *cautious* or *negative* towards the proposal of a marine conservation reserve and assessments were made at the beginning and at the end of the discussion.

An assessment was made during each interview to determine the level of knowledge and understanding displayed by the interviewee. The following knowledge areas and marine management concepts were assessed:

- the range of values of the proposed marine conservation reserve;
- representativeness;
- sustainability;
- multiple-use;
- zoning;
- no-take zones;
- integrated management;
- the reserve planning process; and
- the roles of Government and the community in the planning process

To maintain the flow of the discussion and avoid it appearing like an interrogation, it was not always appropriate to assess knowledge and understanding of all of the above concepts in every interview. A more detailed definition of adequate levels of knowledge and understanding is available in *Issue Analysis: Notes for Participating Staff* (Appendix II).

The interviewees concerns and issues were recorded on the standard forms in Appendix I and later grouped under the following headings: environmental degradation, planning outcomes, planning process and resource issues. Community aspirations, sector alliances and conflicts were similarly identified and grouped together where appropriate.

Some people who were interviewed represented more than one user or interest group. For example, a local recreational fisherman may also be a local government councillor or be a member of a recreational diving club. In these cases, the discussion results were used just once to determine the

overall community profile, but the same discussion results were included in all relevant community sector analyses when determining separate profiles for each community sector.

RESULTS AND DISCUSSION

A total of 33 interviews were conducted, and because some interviews involved more than one person, a total of 43 people were sampled. The number of interviews undertaken and people sampled within each community sector are illustrated in Table 2. While the sample sizes for most sectors are unavoidably small they at least provide a quantitative basis for a preliminary analysis. The Montebello and Barrow islands are located between 50 and 90 kilometres from the mainland coast, and are therefore beyond the reach of most recreational boat owners. Apart from petroleum and pearling industry staff, visitation to the islands is currently low. As a consequence, there are relatively few members of the community with a high level of interest in the area.

Table 2: Numbers of interviews conducted and people sampled within each community sector with interests in the Montebello/Barrow islands marine reserve proposal.

User Group	Number of discussions	Number of people
COMMUNITY MEMBERS		
Local Residents & Ratepayers	6	6
RECREATIONAL ACTIVITY GROUPS		
Boating	3	3
Diving	1	1
Fishing	3	5
INTEREST GROUPS		
Conservation	2	6
Science	4	4
Education	2	3
GOVERNMENT		
Local	1	1
State	4	6
Federal	1	1
COMMERCIAL ACTIVITY GROUPS		
Fishing	2	2
Aquaculture/Pearling	3	4
Tourism	9	10
Industry	4	4
PRESS	1	1

About 30% of the people who were interviewed represented more than one interest or user group and the multiplicity of user group representation within the sample is shown in Figure 2.

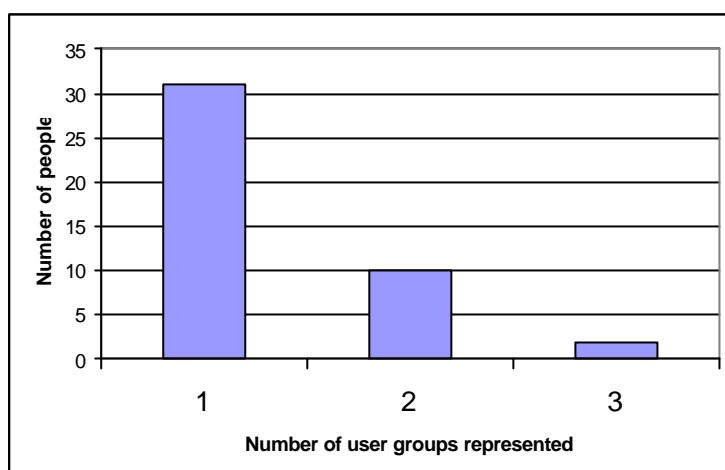


Figure 2: Frequency distribution of sector representation among the 43 people interviewed.

ATTITUDE

A summary of attitudes across the whole community is presented in Figure 3.

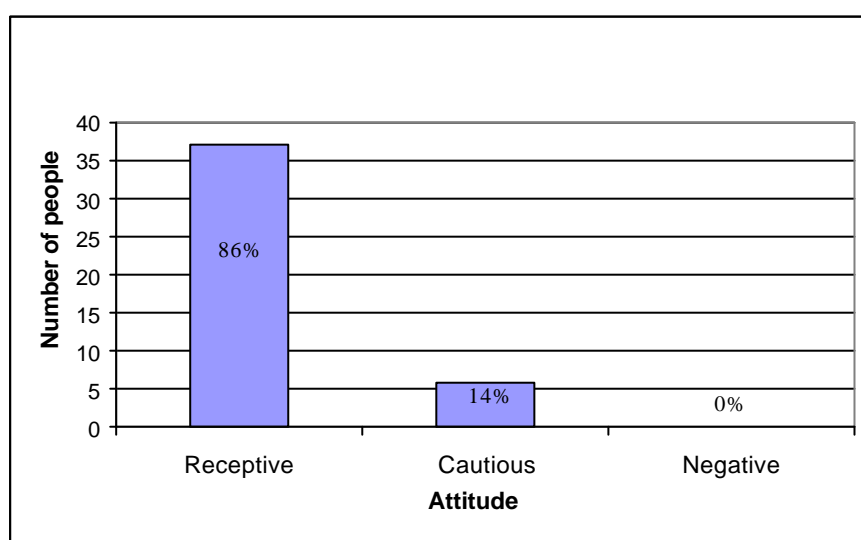


Figure 3: The numbers and percentages of people who were 'receptive', 'cautious' or 'negative' to the marine reserve proposal.

These results represent the attitudes of interviewees at the commencement of discussions, and therefore, are more likely to be a better reflection of the attitudes of the broader community. Thirty-seven of the forty-three people interviewed had a *receptive* attitude and no one was *negative* to the proposal of a marine conservation reserve in the Montebello/Barrow islands region.

The attitudes of people within each of the community sectors are summarised in Table 3.

Table 3. Summary of attitudes recorded at the beginning of discussions with each sector of the community.

User Group	Receptive	Cautious	Negative	Total
COMMUNITY MEMBERS				
Local residents & ratepayers	6	0	0	6
Community Service Groups	0	0	0	0
RECREATIONAL ACTIVITIES				
Boating	3	0	0	3
Diving	1	0	0	1
Fishing	5	0	0	5
INTEREST GROUPS				
Conservation	1	5	0	6
Science	4	0	0	4
Education	3	0	0	3
GOVERNMENT				
Local	1	0	0	1
State	6	0	0	6
Federal	1	0	0	1
COMMERCIAL ACTIVITIES				
Fishing	2	0	0	2
Aquaculture/Pearling	3	1	0	4
Tourism	10	0	0	10
Industry	4	0	0	4
PRESS	1	0	0	1

The five people representing the conservation sector who were *cautious* at the commencement of the interview were *receptive* at the end of the discussion.

One of the four people interviewed representing the aquaculture/pearling sector was *cautious* at the beginning of the discussion. He remained *cautious* throughout the discussion.

LEVELS OF KNOWLEDGE AND UNDERSTANDING

An overall summary of the adequacy of community levels of knowledge and understanding is presented in Figure 4.

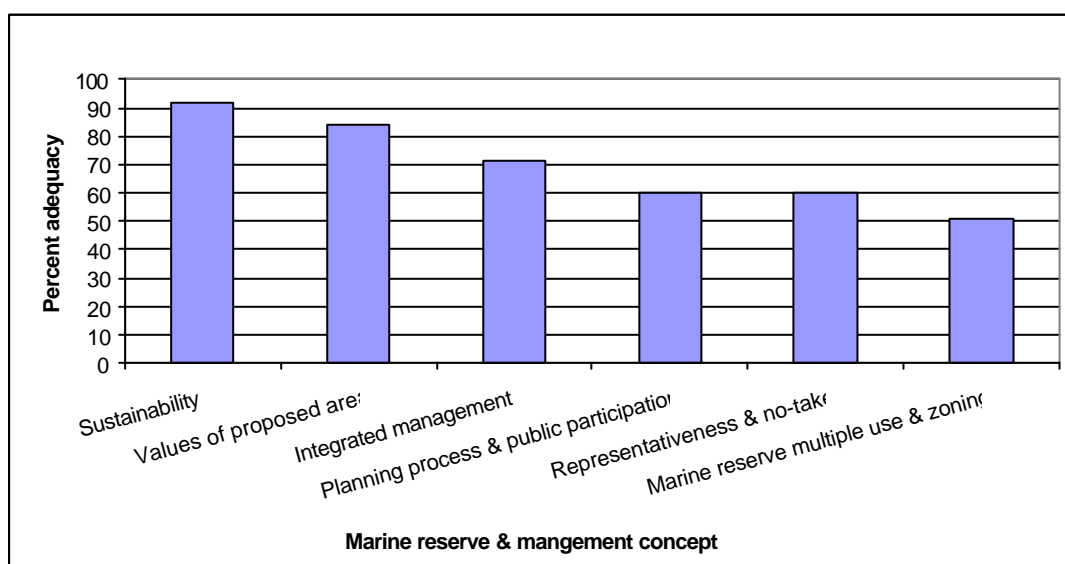


Figure 4. The percentages of the community with adequate levels of knowledge and understanding of marine conservation reserve concepts.

Levels of community knowledge and understanding of the six marine reserve and management concepts surveyed were high, with greater than 50% adequacy for all concepts. Over 90% of interviewees had an adequate understanding of environmental sustainability and over 80% of those interviewed knew of the multiplicity of values (environmental, commercial and recreational) within the proposed reserve area. The concept least well understood was that of the marine reserve multiple use and zoning framework, where 48% of people were recorded with inadequate levels of knowledge and understanding.

The levels of knowledge and understanding of representatives in the separate community sectors are recorded for all marine reserve concepts in Appendix III. They are summarized as an average of the percentages of people with adequate knowledge over all of the marine reserve concepts in Figure 5. Sectors represented by only one or two people have been omitted from this summary.

Representatives from the interest groups of science, conservation and education were very well informed. The six conservation representatives had an average level of knowledge of 97% across all reserve concepts and a lowest level of understanding of 83% in relation to integrated management. Only three education representatives were interviewed, but their average level of knowledge across all reserve concepts was 95%, with the lowest level of understanding of 67% in relation to integrated management. The four scientists had an average level of knowledge of 89% across all reserve concepts, but only 33% of those scientists interviewed had an adequate understanding of integrated management. Apart from the concept of integrated management, these results indicate there is little need for a basic education program targeting members of the conservation, science and education sectors. Instead, education material can focus on the progress of the planning process and specific issues under negotiation.

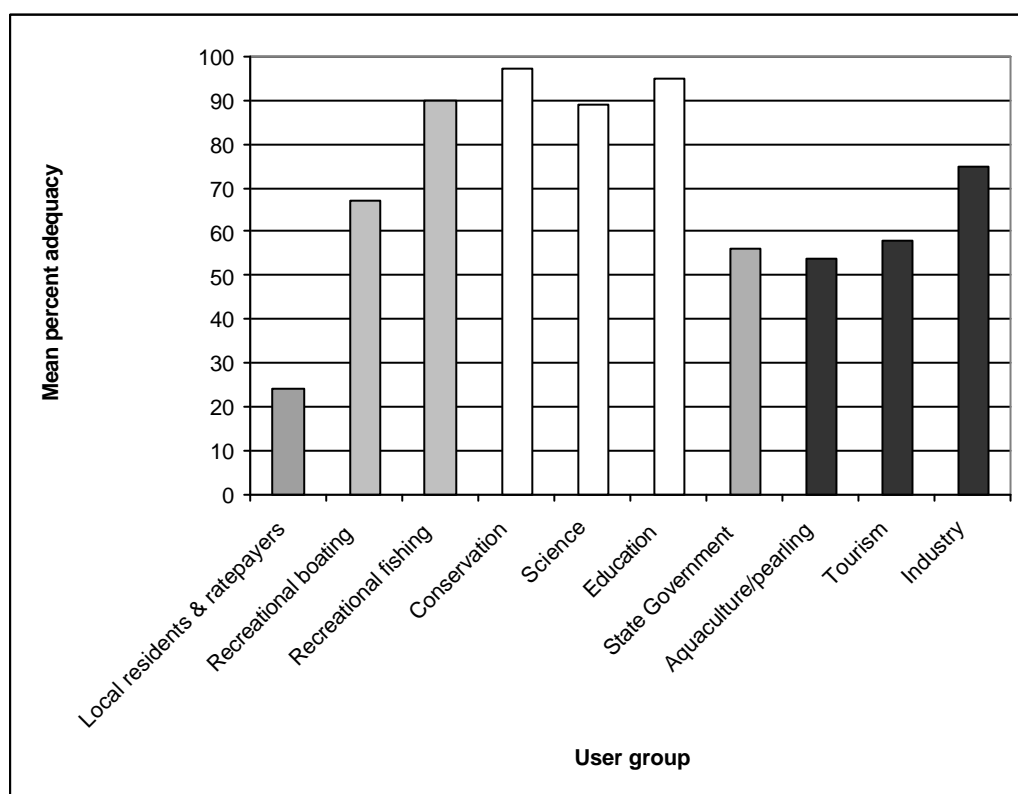


Figure 5. Mean percentages of levels of adequate knowledge and understanding of marine conservation reserve and management concepts. (General community groups are shaded with diagonal stripes, recreational groups are grey, interest groups are white, Government is shaded with checks and commercial groups are black).

Of the recreational sectors, the five recreational fishing representatives had an average level of knowledge of 90% and the levels of understanding were no lower than 80% for any of the six reserve and management concepts. The high level of knowledge and understanding among the recreational fishing representatives is perhaps due in part to who those representatives were. Four of the five representatives were members of key statewide recreational fishing peak bodies and would therefore have been involved in the planning processes for other proposed marine conservation reserves. As such, despite the apparently high levels of knowledge and understanding within the recreational fishing sector, a broad understanding at grass roots level cannot be assumed.

Only one representative from the recreational diving sector was interviewed. This does not provide an adequate sample size to estimate levels of knowledge and understanding within the sector.

Three of the four petroleum industry representatives were very well informed, but one member did not have an adequate level of knowledge and understanding. As a result, the average percent level of knowledge for the sector was 75%, which appears high. Despite the high average level of knowledge recorded for industry, the small sample size conceals the fact that some members of the sector know very little.

Lower average levels of knowledge were recorded for other commercial sectors. The ten tourism representatives had an average level of knowledge of 58% but only 40% of the representatives had an adequate understanding of multiple use and zoning. Similarly the four aquaculture and pearling representatives had an average level of knowledge of 54%, but only one understood the concepts of representativeness and no-take, and the concept of integrated management. Only two commercial fishing representatives were interviewed. Although their average level of knowledge was 83%, the sample size is too small to estimate levels of knowledge and understanding throughout the sector with interest in the Montebello/Barrow islands proposal. These results indicate that the levels of knowledge and understanding within commercial sectors is currently not high enough to allow effective participation in reserve planning.

Interested State Government officers and politicians were represented by six people and there were also six representatives of local mainland residents. In both of these groups, none of the representatives had an adequate level of understanding of the zoning framework and in the case of local mainland residents there was no understanding of integrated management or the planning process and public participation either. Clearly, a broadly based education program is required for members of these sectors before they can have effective input into the planning process.

HOPES AND ASPIRATIONS

The isolation of the Montebello and Barrow islands prevents the region from being part of the everyday lifestyles of many people. However, those who are able to get to the area, or feel strongly about the region, expressed a range of hopes and aspirations which are summarised in Appendix IV. Five people expressed their desire to see the development of statewide community ownership of the proposed reserve area, and three people were hoping that some no take areas would be established. Of the islands themselves, seven people would like them to remain undeveloped, while five saw a future with increased tourism facilities. A surprisingly high number of people hoped to see an extensive education program during the planning phase and on-going management of a marine reserve

ISSUES AND CONCERNS

A wide range of issues and concerns were identified by members of the community. The most frequently identified issues are grouped and presented in Appendix V. A summary of all comments is

presented in Table 4.

Table 4. Issues and concerns most frequently identified by interviewees with the percentages of people who identified concerns within each subject area.

Issues and concerns	Percent
Planning process: its capacity for equitable involvement of all sectors in a climate of some of the sectors are powerful and a significant number of the general community are cynical and apathetic.	64%
Environmental impacts and degradation: including fish stock depletion, ballast water, sediment loading, TBT antifouling paint impacts and changes to water circulation patterns.	60%
Planning outcomes: the fear of changes, which could limit recreational access, or industrial operations, might seem inequitable or not focused on protecting the environment	58%
Resources: the equitable allocation of resources among management agencies for day-to-day management and the source of management resources with the perceived potential for associated fees.	22%

Planning process and outcomes

Concerns and issues relating to the marine reserve proposal and planning process covered a wide range of topics. Of the people interviewed, 21% were concerned about the fly-in, fly-out lifestyle of the resident work force which doesn't allow for the development of community ownership or even interest in the long term conservation of the proposed reserve area.

There was some concern (19% of interviewees) that the design of a reserve might reflect socio-economic pressures in the area to the detriment of the need for conservation. These comments came from members of the conservation and recreational fishing sectors. The relative influence of the various community sectors and the perceived potential for inequity with powerful sectors having more influence during the planning process was of concern to 14% of interviewees representing the local mainland residents, local government and tourism industry. They expressed the need for a balanced or equitable planning outcome which is also practical for day-to-day operations. These concerns identify the need for clearly defined rationales to support all decisions and for an open decision making process to which all sectors have equal access.

Environmental impacts and degradation

Clearly the community is concerned about the health of the marine environment with 44% identifying concern over fin fish stock depletion, 26% expressing concern over by-catch and other impacts on benthos resulting from trawling and 23% of those interviewed identified ballast water discharge from big ships as a serious environmental issue in the area. It is also of interest that representatives from a wide range of community sectors expressed these concerns. It is not only members of the conservation and science sectors who see the need for sound environmental management.

Resources

Some members of the community (26%) expressed concern over the need for resources to fund the establishment and on-going management of a marine conservation reserve within the study area. Concern centred on both the source of funding and the perceived potential for fees and on the amount of funding. The issue of funding is likely to come up again during the planning process and strategies

to involve the community in addressing these concerns need to be considered.

One discussion involved five representatives from the conservation sector. The high level of agreement among these representatives during the same discussion to some extent biased the analysis of issues for a relatively small sample size. However, their criticisms and concerns identified a level of cynicism and disillusionment with the multiple-use reserve concept, the planning process and with Government. Clearly there is the need to work cooperatively with this sector to seek common ground and build trust and understanding.

RELATIONSHIPS AND ALLIANCES

Although some alliances and conflicts were identified among sectors of the community, few were mentioned more than once. Of the conflicting groups recorded all involved aquaculture/pearling, recreational or commercial fishers. A summary is presented in Appendix VI.

The conflicts were based on issues of resource sharing. The pearling industry requires very clean water and there are some concerns relating to pollution from petroleum industry operations. Recreational, commercial and tourist charter fishing vessels all use the same fish resource and a low level of competition exists for access to this resource.

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APPENDICES

Appendix I: DISCUSSION RECORD FORM

Contact

.....	face to face	· telephone	· written
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No. of People.....

Attitudes towards marine reserve proposal

	Receptive	Cautious	Negative
Beginning of discussion			
End of discussion			

Level of knowledge & understanding	adequate
------------------------------------	----------

	low	excellent
values of proposed area	←	→
marine reserve multiple-use & zoning	←	→
representativeness & no-take	←	→
sustainability	←	→
integrated management	←	→
planning process & public participation	←	→

Interviewer Date/....../.....

Community alliances & conflicts

[illegible]

Appendix II: ISSUE ANALYSIS NOTES FOR PARTICIPATING STAFF

Issue analysis: Notes for Participating Staff

Introduction

Public Participation is an interactive process by which interested and affected individuals, organisations, departments and government entities are consulted and involved in decision making. This process both informs and seeks a response from the public.

The overall goal of the public participation program (PPP) in the planning and management of Western Australian marine conservation reserves is:

To develop community ownership, stewardship, and understanding of marine conservation reserves.

The reserve planning process incorporates two phases for public involvement, and issue analyses are undertaken at the beginning of the first phase, either before, or just after the first meeting of a community advisory committee.

Stage 1 of public involvement takes place before the Notice of Intent, primarily through the advisory committee process.

Stage 2 of public involvement takes place after publication of the Notice of Intent primarily through written submission.



The objective of the issue analysis stage of the PPP is:

To develop a community profile on which to base the development of a communication strategy to encourage and facilitate community involvement in planning marine conservation reserves.

Issue analyses provide an opportunity to;

- gain an understanding of community attitudes towards, and levels of understanding of, the local marine reserve proposal,
- gain an understanding of alliances and conflicts within and among community groups,
- open channels of communication and develop rapport with key community members,
- provide information to key members of the community,
- identify appropriate liaison pathways to facilitate effective participation in the reserve planning process.

The following method will be adopted;

1. Gather data by contacting key community representatives from all relevant user and interest groups. Contact will consist primarily of face-to-face discussions.
2. Summarise the data to determine the attitudes and aspirations, levels of understanding, and community relationships for all relevant user and interest groups.
3. Define key messages and appropriate communication techniques together with a program of actions for each group in order to develop appropriate attitudes, minimum levels of understanding and to assist with development of a shared vision both within and among community groups.

The discussion data sheets are designed to record;

- attitude,
- levels of knowledge,
- the existence of conflicts and alliances, and
- commonly used methods of communication.

These forms should not be completed in the presence of a member of the public, but instead should be completed from memory as soon as possible after each discussion. Relevant notes taken during the discussion should be recorded in the note book provided.

Before members of the community can have effective input into the reserve planning process, they need to have a cooperative attitude and a minimum level of understanding. People who are strongly negative or hostile will not consider other points of view or accept new information. People who do not have a minimum level of understanding of the marine reserve concept and planning process will not be able to participate effectively in the planning process. The achievement of an appropriate attitude is therefore the first essential step towards the facilitation of effective input into the planning process.

Attitude

When recording attitude, an effort should be made to try and distinguish between attitude towards the marine reserve proposal, and attitude towards the interviewer.

If you consider that the person is displaying an attitude which is not provided in the choices on the forms (e.g. indifference) please record this adjacent to the boxes.

You may also like to ask a question about the attitudes of other members of the community group which the person represents, and note this on the form.

Hostility is not an uncommon response. Hostility however, is rarely meant personally. Although sometimes expressed passionately, hostility is usually directed either at the agency which you represent or is a result of a misunderstanding of the marine reserve concept. People in this frame of mind will usually not hear counter arguments if they are presented too quickly. They will instead filter out information which you provide and take on board only what supports their entrenched ideas. Staff will need to be both tolerant and patient in these circumstances and remember that one of the main

reasons for undertaking a thorough PPP is to ensure that these opinions are brought into the open at an early stage of planning and dealt with well before a reserve is declared.

If hostility is based on a negative perception of the agency, the interviewer will need to work towards developing their own identity with the person, i.e. transferring the interaction to a more personal level and developing a relationship. Relationships are built on **trust** and there is a need to be both **reliable** and **consistent** in dealings with the person in order to develop a relationship.

Hostility which is based on misinformation, will also require manipulation of the situation. Again, it is only after the development of individual identity and personal trust, that the person will become receptive to new and accurate information. The development of relationships is therefore central to the PPP process and ongoing resources will be needed to undertake this task.

Initially, the emphasis will need to be on **listening**. Active listening will not only help to identify the source of the problem, it will also show the person that you are interested in him/her. It is a good idea to concentrate on common ground and experiences and build on these e.g. a love of the sea. Whatever the mood of the discussion, people should always be thanked for their time and if appropriate, for their frankness. The promise of further information and a follow up by mail is important in hostile cases because it reinforces your trustworthiness. Subsequent meetings, phone discussions etc will gradually build the necessary relationship.

Occasionally, people become embarrassed by their own behaviour and are reluctant to contact you in the future. You may need to be persistent.

Staff should try to identify genuine distress relating to a perception that livelihood or some other basic need is under threat. These cases may require urgent reassurance from senior staff.

Level of knowledge

Level of knowledge should be determined by asking open questions and levels should be recorded as a line along the sliding scale for each topic. A minimum level of understanding required for each topic is defined as having an understanding of the following;

Values of proposed area: At least three value attributes from the following list in relation to the proposed area;

commercial fishing	scientific
tourism	educational
recreation	scenic / amenity
wildlife	conservation
petroleum	pearling & aquaculture

Multiple-use & zoning: Western Australian marine reserves allow for many uses, both commercial and recreational.

Different activities are separated into geographically distinct areas.

The types of marine reserve and zoning options in Western Australian.

Representativeness & no-take: Diversity of ecosystem types around the State and the concept of samples of each being represented within a State wide reserve system.

Diversity of habitat types within the proposed reserve area and the concept of samples of each being represented within no-take zones.

Reasons for no-take areas and issues of zone scales for the different reasons.

Sustainability: Cumulative impacts of multiple use.

Integrated management: Many agencies have management jurisdiction in the marine environment. Marine reserves provide a management framework to coordinate the activities of all these agencies.

Planning process & public participation: Advisory committee has community based membership. Advisory committee substantially develops the indicative management plan. Public input into the initial stages of planning is primarily through Advisory committee members. After the publication of the draft management plan there is a statutory public submission period for written submissions direct to CALM.

It may not be appropriate to investigate the level of knowledge in all areas listed on the form in detail. However, we will need to know whether there is an adequate level of knowledge in the areas of multiple-use and zoning plus the planning process and participation as a minimum.

Having assessed the level of knowledge of the user/interest group which the contact person represents, information should be distributed to increase the level of knowledge and understanding of the contact person. It is often useful to arrange to forward additional information by mail because this reminds the person of your visit a few days later and also demonstrates that you do what you say you will do.

We need to know how best to communicate with each user/interest group. Information relating to methods of communication which are used by members of the user group will assist in later stages of the PPP process.

It is wise not to assume that all contacts can read and write. Some sensitivity may be necessary in these cases.

Questions / concerns / knowledge gaps + community conflicts and alliances

This information will become evident by asking open questions.

Conflicts within the community which relate directly to the marine reserve proposal need to be addressed during the planning process in an attempt to reach a resolution which is satisfactory to all parties. Any information which will assist in determining the most appropriate course of action to resolve conflict will be useful.

Rumours

These will come out naturally during the discussion. There is no need to address this issue directly through questioning.

Some possible questions:

What is Integrated Management?

Historically, human activities in marine and coastal environments have been managed by a number of separate agencies often in isolation from each other and with little involvement from the general community. Integrated management provides a framework for government and the community to consider the total impact of all human activities on each other and on the natural environment.

What is Sustainability?

Sustainability means ensuring that current human usage does not overload the environment and reduce the options for present and future generations.

Energy from sunlight, primary production limits productivity of ecosystem. Sustainability means maintaining impacts below a level which natural community can replace/repair.

Why is the planning process so involved?

The planning process provides for input from all interest groups, whether your interest is conservation, fishing, tourism, mining or as a member of an indigenous community. A commitment to community involvement in reserve planning ensures local knowledge is included and an appropriate zoning plan is developed. A sense of community ownership and overall support is essential for effective long-term marine reserve management.

Can I fish in marine reserves?

Recreational fishing is permitted in **Marine Management Areas** and in General Use zones, most Recreation and some Special Purpose zones of **Marine Parks**. Fishing is not permitted in **Marine Nature Reserves** or in Sanctuary zones of **Marine Parks**.

Why are marine parks zoned?

Zoning provides for conservation while allowing sustainable recreational and commercial activities. While a wide range of activities are permitted in multiple-use marine reserves, the zoning system minimises conflict by establishing some zones for extractive or intrusive activities and other zones for undisturbed nature study and passive enjoyment of the natural environment.

Why declare reserves when so much of our coast appears healthy?

While marine reserves have a role to play in repairing environmental damage, their primary objective is to conserve the environment in a healthy condition for all users both present and future. So what better time than now to establish marine reserves while our environment is in relatively good condition.

How do I get involved in marine reserve planning and management?

During the planning process, discuss your concerns with advisory committee members and make a written submission to CALM when the draft management plan has been released. Membership of the marine reserve management advisory committee, a local friends group or other volunteer association provide avenues for involvement in management after the reserve is declared.

Why are you lot doing this not Fisheries?

It is Government policy - refer to New Horizons. Fisheries will maintain responsibility for managing fishing within marine reserves. The reserves provide an integrated management framework for all agencies to work together and complement one another.

How can you call this a reserve when you can drill for oil in it?

All activities will be permitted within marine reserves provided they do not significantly impact on the environment and do not significantly impact on other users. Assessment of petroleum activities will be undertaken under the *Environmental Protection Act* through the environmental impact assessment

process. All activities within a multiple use marine park will be reviewed in terms of the environmental impacts and potential for conflict with other users so that the cumulative impacts remain below the sustainable limit.

The concept of reserves in the marine environment are different to that on land because the marine environment is untenured and far more interconnected. Marine reserves embrace the concept of multiple-use and are equivalent to the integrated management of large tracts of land e.g. whole shires, for all of the purposes within that area. These might include agricultural use, town sites, national parks and mining.

What's the difference between no reserve, General Use Zones and Marine Management Areas?

Integrated management provides a management framework to maintain impacts below the sustainable limit for the environment rather than considering the sustainability of each use on an individual basis. Management agencies share a vision for marine reserve areas.

Marine management areas are usually large and there is similar emphasis on the three sectors of conservation, recreation and commercial activities. Marine Parks can be declared within the outer boundaries of Marine Management Areas - a nested approach.

What's the point of having reserves with tiny sanctuary zones?

It's true that the potential functions of no-take areas depend on the scale of the area. Small areas still provide scientific reference points. However, they are unlikely to provide any benefits in terms of stock refugia or replenishment.

The small marine reserves in the Metropolitan area are primarily to manage high levels of recreation. The sanctuary zones within these parks function primarily as scientific reference areas.

What do you need no-take areas for? We're used to bag limits and other restrictions which prevent overfishing?

While Western Australia has a good record of fisheries management, catch effort data is gathered on a different scale to that required to protect small areas of coast. Data areas translate into blocks of 100km x 100km or 10,000 square kms. Therefore there could be significant depletion in small high usage areas which would be undetected or indicate just slight decline.

There are also several areas where anecdotal evidence suggests that stocks are well below those experienced by fishers 20 or so years ago - refer to Marmion study and Ningaloo and South coast studies under way.

Management through monitoring is very expensive and it is more expensive if the pressure on the resource approaches the critical limit. i.e. intensity of research must be equivalent to the risk factor - refer to critical health situations for comparison. No-take areas provide insurance against lack of information or the collection of the wrong information - it's like having something in the bank, how many people live hand to mouth with no security in the bank? No-take areas are cheaper to manage and protect the whole habitat, not just the few species which are prized by fishers.

Where can I use my boat?

No activity will be effected by a marine reserve unless it damages the environment or unfairly impacts on other users. Boating is unlikely to be restricted other than for safety reasons or if pressure builds to an unsustainable level. The more users in an area, the greater the need for limiting impacts so that the cumulative impact does not exceed the sustainable level. All activities which cause significant impacts may be pressured by other users into adopting minimal impact practices. In the case of boating this may mean a review of mooring designs, antifouling procedures, waste disposal and refuelling techniques.

Is this likely to improve my business or are you going to stop people using the area?

There are many examples where tourist businesses have benefited by increased visitation to marine reserve areas. Business will also benefit from the assurance that integrated management will maintain usage at or below the sustainable limit. The vital resource of your business - i.e. the environment will therefore have greater assurance for the future.

If the limit of sustainable use is not to be exceeded, areas with high usage or large cumulative impacts will need to review the impacts of all activities. A review of your business to adopt best minimal impact practices will benefit all users.

It's all very well declaring parks, but there's never any money to manage them. What are you going to do about that?

There is a specific step in the statutory planning process which requires that advice be provided to cabinet regarding the costs associated with managing each marine reserve.

CALM cannot manage marine reserves alone. There is a need to consider the development of partnerships with local government and communities for funding day-to-day management. In the same way that parks and gardens are funded, the community will need to consider the costs of developing and the costs of not developing marine reserves.

This is just the thin end of the wedge, are you lot going to want to charge for moorings and ramp fees etc?

The Government has a user pays policy. If users make high demands on Government, these demands will need to be funded somehow.

Appendix III: KNOWLEDGE AND UNDERSTANDING OF MARINE CONSERVATION RESERVE CONCEPTS WITHIN COMMUNITY SECTORS

Numbers and percentages of adequate levels of knowledge and understanding of marine conservation reserve concepts within each community sector.

Contact Group	Level of knowledge & Understanding	Number of people	Number with adequate understanding	% with adequate understanding
COMMUNITY MEMBERS				
Local residents & rate payers	Values of proposed area	6	2	33%
	Marine reserve multiple-use & zoning	6	0	0%
	Representativeness and no-take	6	2	33%
	Sustainability	4	3	75%
	Integrated management	2	0	0%
	Planning process & Public Participation	5	0	0%

RECREATIONAL ACTIVITY GROUPS				
Boating	Values of proposed area	3	3	100%
	Marine reserve multiple-use & zoning	3	0	0%
	Representativeness and no-take	3	2	67%
	Sustainability	2	2	100%
	Integrated management	1	1	100%
	Planning process & Public Participation	3	1	33%
Diving	Values of proposed area	1	1	100%
	Marine reserve multiple-use & zoning	1	0	0%
	Representativeness and no-take	1	1	100%
	Sustainability	0	0	-
	Integrated management	1	0	0%
	Planning process & Public Participation	1	0	0%
Fishing	Values of proposed area	5	5	100%
	Marine reserve multiple-use & zoning	5	4	80%
	Representativeness and no-take	5	4	80%
	Sustainability	4	4	100%
	Integrated management	4	4	100%
	Planning process & Public Participation	5	4	80%

INTEREST GROUPS				
Conservation	Values of proposed area	6	6	100%
	Marine reserve multiple-use & zoning	6	6	100%
	Representativeness and no-take	6	6	100%
	Sustainability	6	6	100%
	Integrated management	6	5	83%
	Planning process & Public Participation	6	6	100%
Science	Values of proposed area	3	3	100%
	Marine reserve multiple-use & zoning	3	3	100%

	Representativeness and no-take	3	3	100%
	Sustainability	3	3	100%
	Integrated management	3	1	33%
	Planning process & Public Participation	3	3	100%
Education	Values of proposed area	3	3	100%
	Marine reserve multiple-use & zoning	3	3	100%
	Representativeness and no-take	3	3	100%
	Sustainability	3	3	100%
	Integrated management	3	2	67%
	Planning process & Public Participation	3	3	100%

GOVERNMENT				
Local Government	Values of proposed area	1	0	0%
	Marine reserve multiple-use & zoning	1	0	0%
	Representativeness and no-take	1	0	0%
	Sustainability	1	0	0%
	Integrated management	1	0	0%
	Planning process & Public Participation	1	0	0%
State Government	Values of proposed area	6	6	100%
	Marine reserve multiple-use & zoning	6	0	0%
	Representativeness and no-take	6	1	17%
	Sustainability	3	3	100%
	Integrated management	4	4	100%
	Planning process & Public Participation	6	1	17%
Federal Government	Values of proposed area	1	1	100%
	Marine reserve multiple-use & zoning	1	0	0%
	Representativeness and no-take	1	1	100%
	Sustainability	1	1	100%
	Integrated management	0	0	-
	Planning process & Public Participation	1	0	0%

COMMERCIAL ACTIVITY GROUPS				
Commercial Fishing	Values of proposed area	2	2	100%
	Marine reserve multiple-use & zoning	2	1	50%
	Representativeness and no-take	2	1	50%
	Sustainability	2	2	100%
	Integrated management	2	2	100%
	Planning process & Public Participation	2	2	100%
Aquaculture & Pearling	Values of proposed area	4	3	75%
	Marine reserve multiple-use & zoning	4	2	50%
	Representativeness and no-take	4	1	25%
	Sustainability	4	4	100%
	Integrated management	4	1	25%

	Planning process & Public Participation	4	2	50%
Tourism	Values of proposed area	10	6	60%
	Marine reserve multiple-use & zoning	10	4	40%
	Representativeness and no-take	10	6	60%
	Sustainability	8	6	75%
	Integrated management	6	4	67%
	Planning process & Public Participation	9	4	44%
Industry	Values of proposed area	4	3	75%
	Marine reserve multiple-use & zoning	4	3	75%
	Representativeness and no-take	4	3	75%
	Sustainability	4	3	75%
	Integrated management	4	3	75%
	Planning process & Public Participation	4	3	75%

PRESS				
Press	Values of proposed area	1	1	100%
	Marine reserve multiple-use & zoning	1	0	0%
	Representativeness and no-take	1	0	0%
	Sustainability	1	1	100%
	Integrated management	1	0	0%
	Planning process & Public Participation	1	0	0%

Appendix IV: THE HOPES AND ASPIRATIONS OF COMMUNITY MEMBERS

The hopes and aspirations of community members.

Management	Number of people
That more educational material will be produced and made available	11
Statewide community ownership developed	5
That some no-take areas be established	3
Equitable out come for everyone is achieved	1
Restrictions are placed on fishing and the numbers of visitors to the Montebello Islands	1
More policing of the area	1
More effective integrated management	1
All sectors of the community working together	1
Development	Number of people
That the islands are not developed but are kept pristine	7
Greater tourism to the islands	5
No expansion of oil and gas leases in the area	2

P - Press

Appendix VI: CONFLICTS AMONG SECTORS OF THE COMMUNITY

Conflicting Groups	Number of times this was recorded
Aquaculture/Pearling & Recreational Fishing	2
Recreational Fishers & Commercial Fishers	2
Tourism & Commercial Fishing	2
Aquaculture/Pearling & Industry	1
Aquaculture/Pearling & Tourism	1
Tourism & Recreational Fishers	1