



**MARINE RESERVE IMPLEMENTATION:
WA SOUTH COAST**

**ESTABLISHING A MARINE PROTECTED AREA IN
THE RECHERCHE ARCHIPELAGO REGION.
YEAR 1: PHYSICAL AND BIOLOGICAL
INFORMATION REQUIREMENTS**

Progress Report: MRI/WSC/RAR,SIN-58/2001

A collaborative project between the Department of Conservation and Land Management's
Marine Conservation Branch and South Coast Regional Office

A project partially funded through the Natural Heritage Trust's
Coast and Clean Seas Marine Protected Area Program

**Prepared by K P Bancroft
Marine Conservation Branch**

December 2001

Marine Conservation Branch
Department of Conservation and Land Management
47 Henry St
Fremantle, Western Australia, 6160

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Direction

- Dr Chris Simpson - Manager, Marine Conservation Branch (MCB), Nature Conservation Division, Department of Conservation and Land Management.

Funding

- The resource assessment processes for a marine protected area in the Recherche Archipelago/Stokes Inlet region is being partially funded by a grant of \$100,000 through the Natural Heritage Trust's Coast and Clean Seas Marine Protected Area Program.
- The Department of Conservation and Land Management supports the resource assessment processes for a marine protected area in the Recherche Archipelago/Stokes Inlet region with the provision of technical, logistical and human resources (\$126,000).

Review

- Thanks to Nick D'Adamo for his editorial comments.

Cover: New Zealand fur seals. *Photo courtesy of Eva Boogaard.*

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Figure 1. Study area. The Recherche Archipelago/Stokes Inlet region3

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1 BACKGROUND

The Recherche Archipelago/Stokes Inlet area was recommended in the *Report of the Marine Parks and Reserves Selection Working Group* (MPRSWG) (Department of Conservation and Land Management, 1994) as worthy of consideration for reservation as a marine conservation reserve under the *Conservation and Land Management Act (1984)*.

The *Conservation and Land Management Act (1984)* allows for the establishment of multiple-use marine conservation reserves for the purposes of conservation of marine flora and fauna and public recreation. Commercial activities, such as fishing, aquaculture and petroleum exploration and production, are also acceptable within specific zones of multiple-use marine conservation reserves. The Western Australian Fisheries Department manages commercial and recreational fisheries in marine conservation reserves.

The *Conservation and Land Management Act* specifies the statutory process for the reservation of marine conservation reserves, including a public planning process for the development of management zoning schemes that allow for the spatial separation of incompatible activities in a marine park. In anticipation of this process, the major marine resources and current uses of a number of the areas in the Recherche Archipelago region recommended in the MPRSWG report (Department of Conservation and Land Management, 1994), are being identified. As part of the statutory marine conservation reserve pre-declaration process, it is required that the biological, economic, social and cultural resources of a proposed marine conservation reserve be assessed before the Notice Of Intent (NOI) is issued. This process has been designed improve the community's awareness of the issues concerned with the creation of a marine conservation reserve prior the release of the NOI. The data layers provide the basic information required in the consultative process. That process results in the determination of preliminary boundaries and zonings, so that current users have a clear appreciation of how the proposed marine reserve will affect their current and future usage of the area.

The Marine Parks and Reserves Authority (MPRA) was created in 1997, in accordance with amendments to the CALM Act. One of the roles of the MPRA was to prioritise the 70 MPRSWG recommended areas. The Jurien Bay, Dampier Archipelago/Cape Preston, Montebello/Barrow Islands, Geographe Bay-Capes-Hardy Inlet and the Walpole-Nornalup inlet regions were identified as being of highest priority, with the Recherche Archipelago/Stokes Inlet region being identified in the "second tier" of high priorities.

Currently, there is no other marine conservation reserve in the "Western Australian South Coast" Interim Marine and Coastal Regionalisation for Australia (IMCRA) bioregion (IMCRA Technical Group, 1998).

The Marine Conservation Branch (MCB) of the Department of Conservation and Land Management is conducting this project as part of the MCB's Marine Reserve Implementation function in collaboration with the Department of Conservation and Land Management's Esperance District Office, South Coast Region.

2 AIMS

The aims of the project are:

1. to initiate planning processes for a marine conservation reserve in the Recherche Archipelago/Stokes Inlet region; and
2. to compile the ecological and socioeconomic information.

This report details progress achieved, as at September 2001, on the project “*Establishing a marine protected area in the Recherche Archipelago. Year 1: The physical and biological information requirements*”.

3 AREA OF INTEREST

The area of interest (Figure 1) referred to as the Recherche Archipelago/Stokes Inlet region, falls in the Western Australian South Coast IMCRA bioregion. This area is covered by AUSLIG Topographic Series 1:250,000:

- S151-05 Ravensthorpe;
- S151-06 Esperance, and;
- S151-07 Malcolm.

This area is covered by AUSLIG Topographic Series 1:100,000:

- 3130 Stokes Inlet;
- 3230 Esperance;
- 3229 Causeway;
- 3330 Merivale;
- 3329 Mondrain;
- 3430 Howick;
- 3429 Recherche;
- 3530 Sandy Bight;
- 3529 Cape Arid;
- 3630 Malcolm;
- 3629 Salisbury;
- 3731 Wattle Camp, and;
- 3731 Eastern Group.

The following latitudes and longitudes cover the extent of the area of interest.

Bearing	Latitude	Longitude
North	33° 51.1536' S	123° 01.3632' E
North west	33° 51.7782' S	121° 04.5648' E
West	33° 54.6282' S	121° 04.5648' E
South west	34° 13.0470' S	121° 37.0608' E
South	34° 31.5360' S	122° 00.0672' E
South east	34° 25.9758' S	123° 33.2952' E
East	33° 49.8786' S	124° 14.0064' E
North east	33° 31.8300' S	124° 02.7432' E

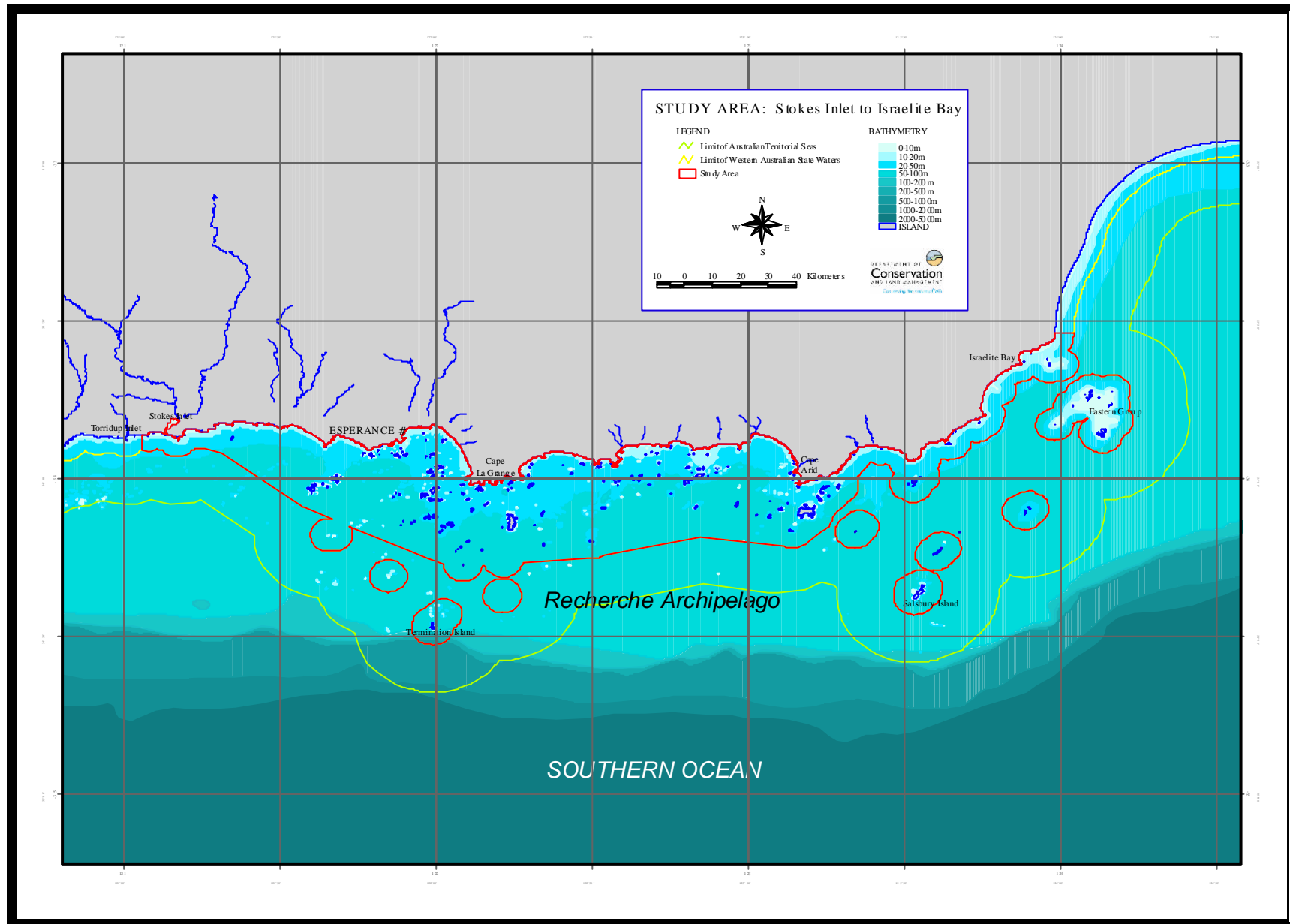


Figure 1. Study area. The Recherche Archipelago/Stokes Inlet region

4 PROGRESS AGAINST PROJECT SCOPE ITEMS

The progress against the scope items is as below.

Task	% Achieved	Details	Information attached
1. The review of existing ecological information	100%	<ul style="list-style-type: none"> An extensive review of the existing ecological information was undertaken. The report highlights areas lacking in information necessary for the planning process. 	Report attached (Appendix a)
2. The review of the climate and physical oceanography	100%	<ul style="list-style-type: none"> An extensive review of existing physical oceanographical information was undertaken. The report highlights that the oceanography of the region is yet to be studied in any great detail. 	Report attached (Appendix b)
3. Collation of existing GIS information layers	80%	<ul style="list-style-type: none"> Data necessary for this project is being identified. 	
	50%	<ul style="list-style-type: none"> Archived data that is relevant to the study area is being retrieved. 	
	50%	<ul style="list-style-type: none"> Data from appropriate government departments and agencies has been requested. 	
4. Develop a preliminary understanding of the broadscale water movements	60%	<ul style="list-style-type: none"> As a result of the oceanography review (Item 1) an honours project developing a broadscale hydrographic model (van Hazel, in press). The project due for completion in December 2001. 	
5. Preliminary habitat mapping and conceptual model development	20%	<ul style="list-style-type: none"> The preliminary habitat map has been developed from existing data. Some point data for the region has been acquired and is yet to be compared to the preliminary habitat map 	Preliminary maps attached (Appendix c)
6. Develop a map for the distributions of marine wildlife	25%	<ul style="list-style-type: none"> Marine wildlife data necessary for this project is being identified. 	<i>See attached Work Schedule</i>
	25%	<ul style="list-style-type: none"> Archived data that is relevant to the study area is being retrieved. 	
7. Verification of preliminary habitat map	0%	<ul style="list-style-type: none"> N/a 	<i>See attached Work Schedule</i>
8. Develop the broadscale map of marine ecological communities	0%	<ul style="list-style-type: none"> N/a 	<i>See attached Work Schedule</i>

5 EXPENDITURE TO DATE

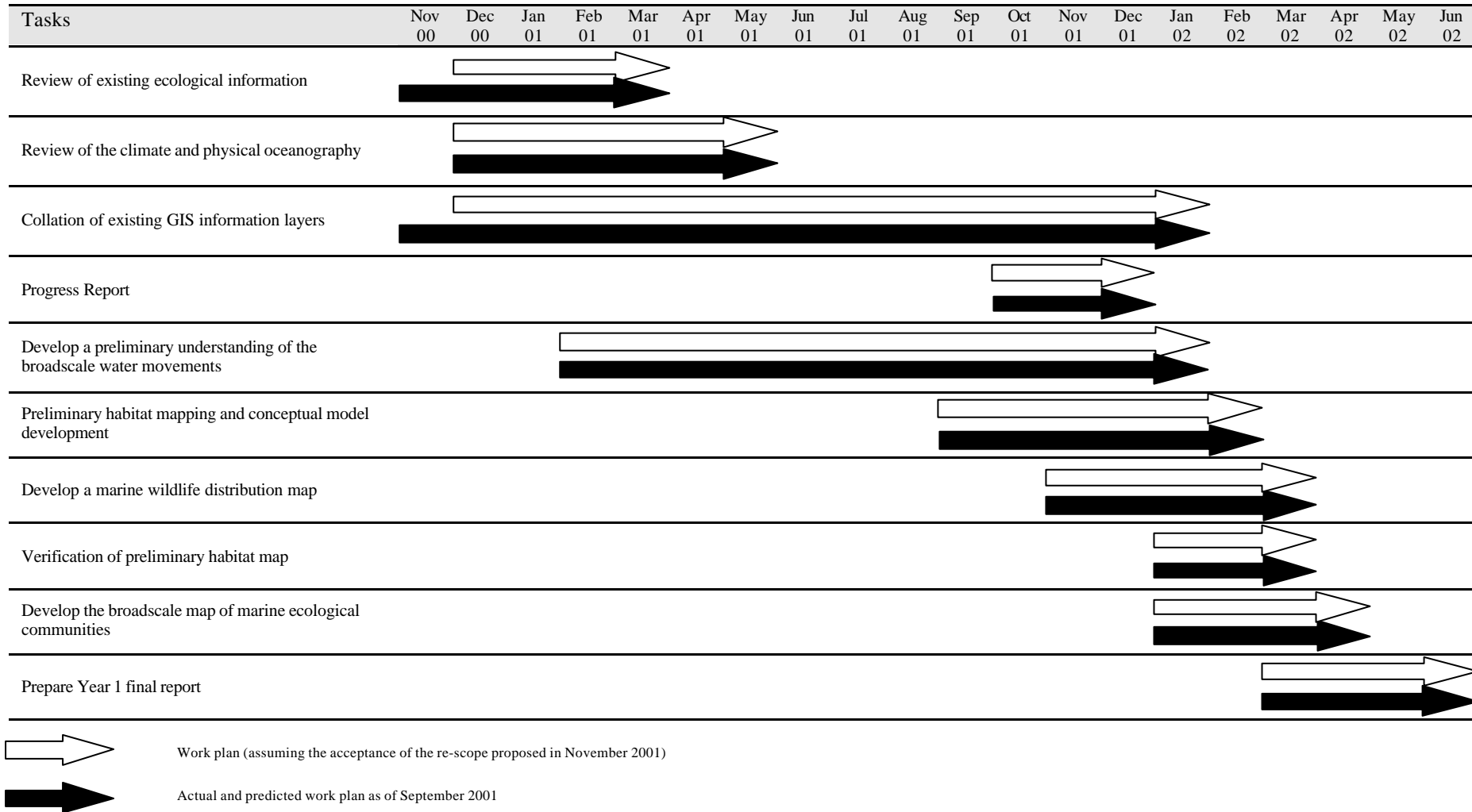
Expenditure of Natural Heritage funds for Year 1.

Item	Funding	Expenditure	Balance
NHT funds received for Year 1 of the project	\$80,000	-	\$80,000
NHT funds utilised up to September 2001	-	\$11,200	\$68,800
NHT funds due to be received after submission of Year 1 progress reporting (Dec 2001)	\$0	-	\$68,800
Predicted NHT funding expenditure up to 30 June 2002	-	\$88,800 *	(\$20,000)
NHT funds due to be received on the acceptance of the Year1 Final Report (30 June 2002)	\$20,000 ** (+\$60,000 for 2 nd year startup)	-	\$0
Totals	\$100,000	\$100,000	\$0

* Expenditure includes \$20,000 to be received on acceptance of the Year 1 Final Report**

6 REVISED WORK SCHEDULE

The original timelines were changed to take advantage of collaborative opportunities which arose with the success of a University of Western Australia/Fisheries Development and Research Corporation project in the Recherche Archipelago, and the Western Australian Government/CSIRO Strategic Research Fund for the Marine Environment (which has activities in strategic research planned for the south coast including the Recherche Archipelago).



7 REFERENCES

- Department of Conservation and Land Management (1994). A representative marine reserve system for Western Australia. Report of the Marine Parks and Reserves Selection Working Group. June 1994. Department of Conservation and Land Management, Perth, Western Australia.
- IMCRA Technical Group (1998). Interim Marine and Coastal Regionalisation for Australia: An ecosystem based classification for marine and coastal environments. Version 3.3. Interim Marine and Coastal Regionalisation for Australia Technical Group, Australian and New Zealand Environment and Conservation Council, Canberra, Australian Capital Territory.
- Lee, S. & Bancroft, K.P. (2001). Review of existing ecological information for the proposed Recherche Archipelago marine conservation reserve. Literature Review MRI/WSC,EUC/SIN,RAR-51/2001. Marine Conservation Branch, Department of Conservation and Land Management, Perth, Western Australia.
- Van Hazel, J (in press). The climate and physical oceanography of the Recherche Archipelago and adjacent waters. Honours thesis. Department of Environmental Engineering, University of Western Australia, Perth, Western Australia.
- van Hazel, J., Pattiaratchi, C. & D'Adamo, N. (2001). Review of the climate and physical oceanography of the Recherche Archipelago and adjacent waters. Reference WP 1614 CP. Centre for Water Research, University of Western Australia, Perth, Western Australia.

8 APPENDICES

Appendix a. Review of existing ecological information for the proposed Recherche Archipelago marine conservation reserve.

Lee, S. & Bancroft, K.P. (2001). Review of existing ecological information for the proposed Recherche Archipelago marine conservation reserve. Literature Review MRI/WSC,EUC/SIN,RAR-51/2001. Marine Conservation Branch, Department of Conservation and Land Management, Perth, Western Australia.

Appendix b. Review of the climate and physical oceanography of the Recherche Archipelago and adjacent waters.

van Hazel, J., Pattiaratchi, C. & D'Adamo, N. (2001). Review of the climate and physical oceanography of the Recherche Archipelago and adjacent waters. Reference WP 1614 CP. Centre for Water Research, University of Western Australia, Perth, Western Australia.

Appendix c. Preliminary broadscale map of the marine benthic habitats of the Recherche Archipelago/Stokes Inlet region.

