



THE GREAT BARRIER REEF MARINE PARK AUTHORITY



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10 FEB 1980



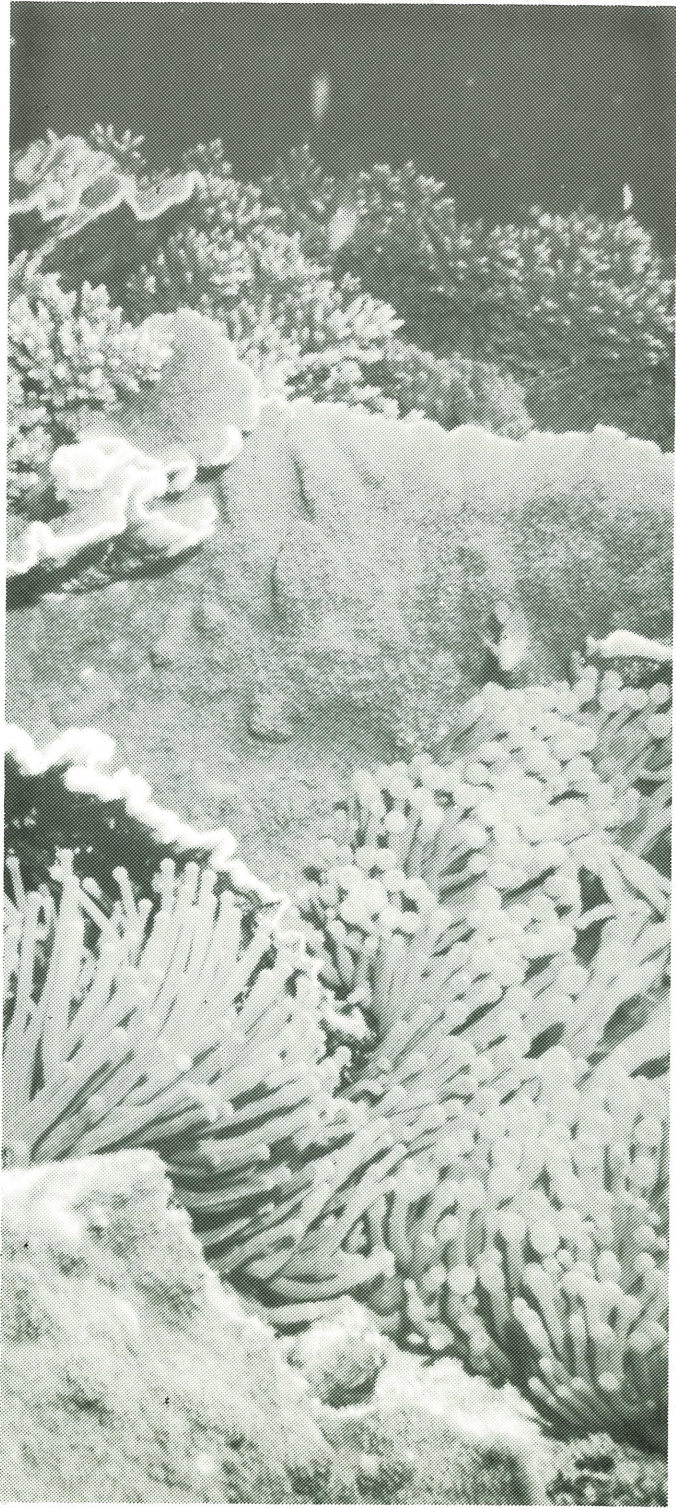
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ANNUAL REPORT 1980/81



ANNUAL REPORT
1980/81

THE GREAT BARRIER REEF
MARINE PARK AUTHORITY



Letter to the Minister

Great Barrier Reef
Marine Park Authority,
PO Box 1379,
TOWNSVILLE. QLD. 4810

27 August 1981

Dear Minister,

In accordance with Section 60 of the Great Barrier Reef Marine Park Act 1975, I submit the Fifth Annual Report of the Great Barrier Reef Marine Park Authority on the operations of the Authority for the year that ended 30 June 1981.

Yours sincerely,



Graeme Kelleher
Chairman

The Hon. Ian Wilson, M.P.,
Minister for Home Affairs
and Environment,
Parliament House,
CANBERRA. A.C.T. 2600

The Chairman's Review

Establishment, by democratic processes, of a management regime over the 12,000 square kilometres of the Capricornia Section of the Great Barrier Reef Marine Park is not a simple exercise.

Present and future interests of people have to be taken into account, effects of decisions on existing laws assessed and the most efficient method of achieving each management objective must be sought.

Co-operation of all levels of government must be obtained if an integrated, coherent management system is to be created.

Zoning Plans have to be supported by regulations, management guidelines and operational procedures, annual and rolling programs, budgets and ultimately, the practical day-to-day operations.

The users of the Marine Park have to become aware both of the objectives of Park development and how their activities may be affected, since the support of the public is crucial to the whole operation.

These were the major tasks of the Authority's staff in the past year. I am proud of the dedication and competence they have displayed in the process. The assistance and co-operation of the officers of the Queensland Fisheries Service and of the Queensland National Parks and Wildlife Service have also been invaluable.

The Zoning Plan and regulations for the Capricornia Section are to come into operation on 1 July 1981. This section is itself by far the largest marine park in the world.

The marine park concept that has been developed for the Great Barrier Reef Region has some novel features.

It provides for multiple uses of the marine environment to proceed with a minimum of conflict and in ways which ensure that the

natural qualities of the Reef and its environment are conserved. The concept is rapidly gathering acceptance in many other parts of the world, with the encouragement of the International Union for the Conservation of Nature and Natural Resources (IUCN).

During the year the Authority and its staff, with the assistance of Commonwealth and Queensland agencies, have been conducting a major study of an area off Cairns as a possible second section of the Great Barrier Reef Marine Park.

As sections of the Marine Park come into being and management regimes are established, the work load of the Authority naturally increases.

Planning future sections of the Park must continue, yet all the activities associated with running the Capricornia Section must also proceed. While day-to-day management of Capricornia is carried out by Queensland Government agencies, they are subject to the Authority in performing this function.

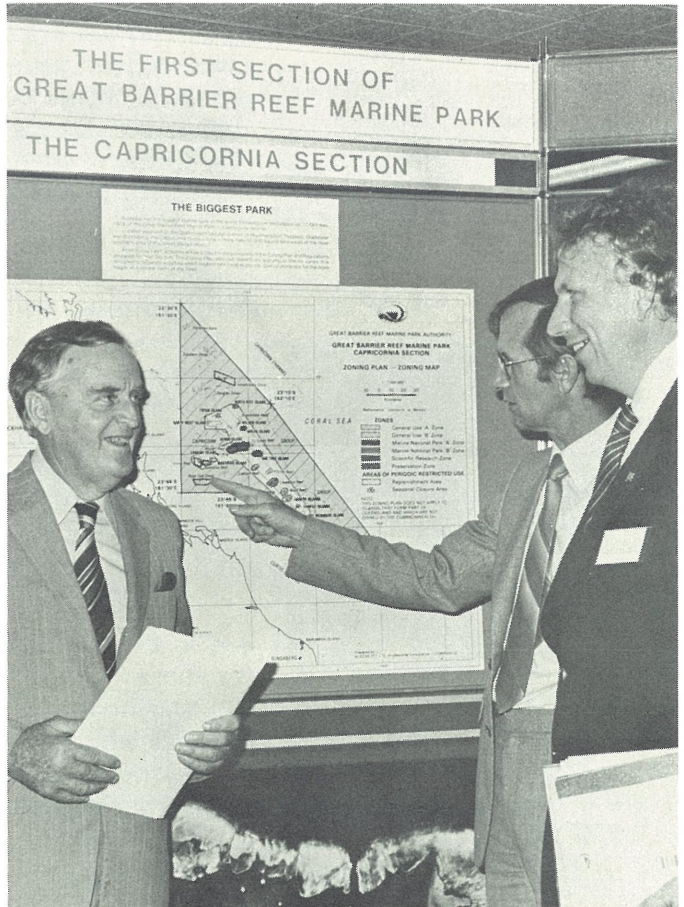
Many responsibilities relating to Capricornia require the continued attention of the Authority and activity on the part of its staff: co-ordination and performance of resource surveys; physical, biological and socio-economic research and monitoring; review of the Zoning Plan and regulations; consideration of proposals for new activities in the area; the development and dissemination of educational and information material; and the issuance of permits.

In this context of increasing workload, and in the light of continued public pressure for more rapid progress in the development of the Marine Park, the reductions in staff ceilings which have recently been placed on the Authority must increase the difficulty of the immense task we are given.

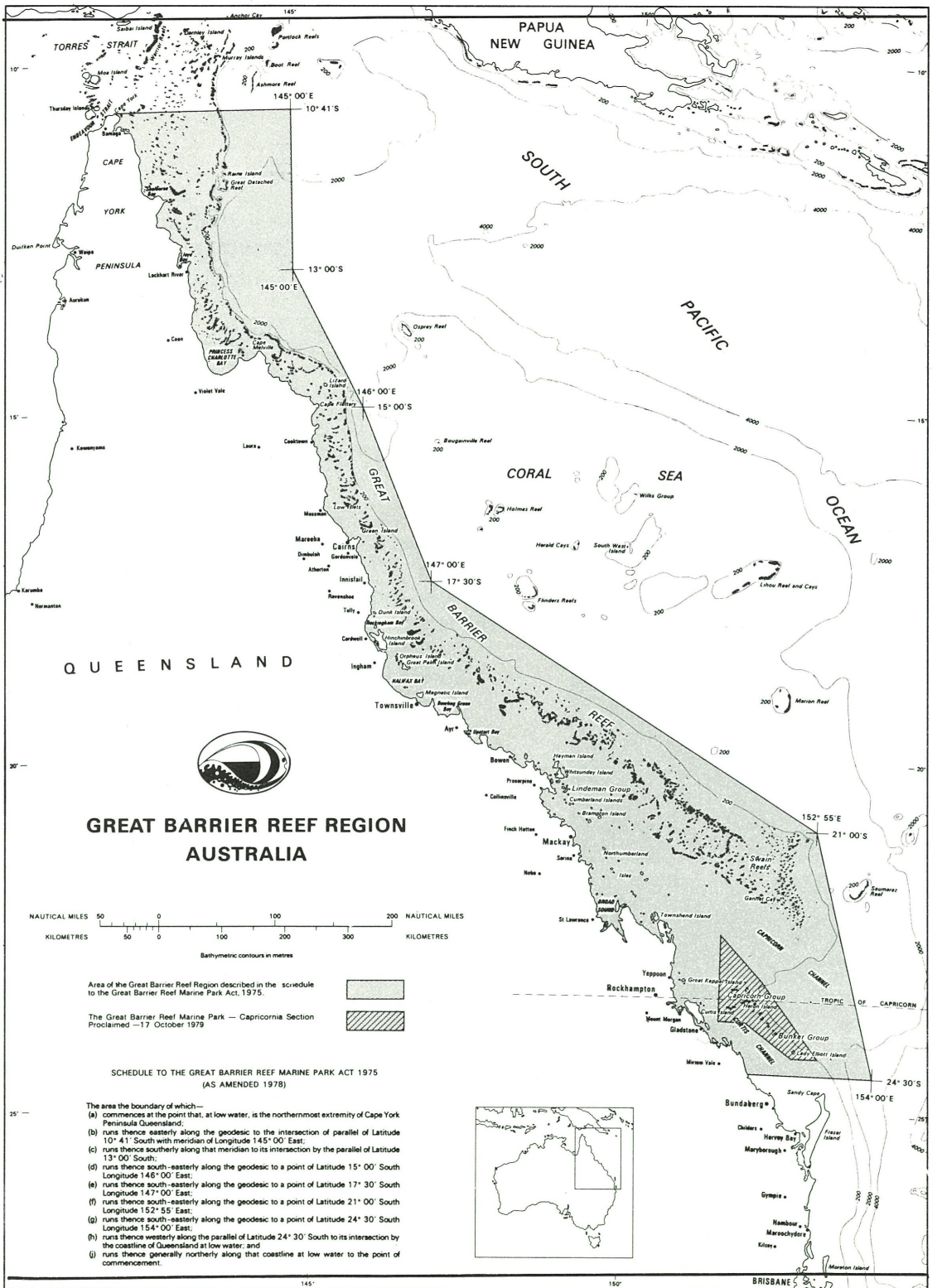
Chairman of the Great Barrier Reef Marine Park Authority, Mr. Graeme Kelleher.



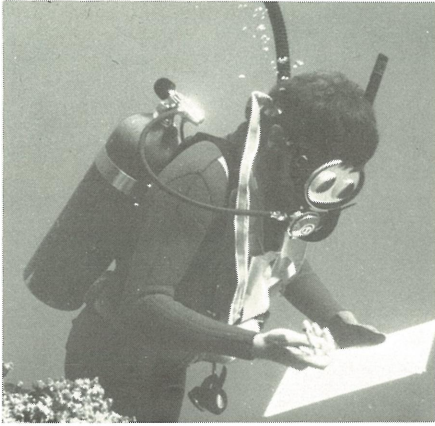

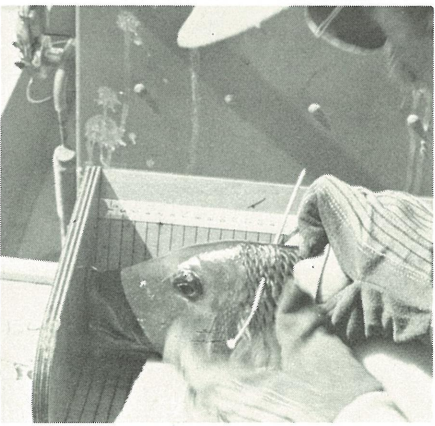
The Authority has, in the two years since the Agreement between the Prime Minister and the Premier of Queensland in Emerald, achieved a great deal. I am confident that, given adequate support, it will in the future achieve a great deal more in the conservation and management of Australia's unique natural asset - the Great Barrier Reef.



(Left to right): The Premier of Queensland, Chairman of the Great Barrier Reef Marine Park Authority, Minister for Home Affairs and Environment.
(Photo courtesy of the Gladstone Observer)



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The Year In Summary

This report, reviewing activities for the period 1 July 1980 to 30 June 1981, has been prepared on the eve of the coming into effect of the Zoning Plan and regulations for the first part of the Great Barrier Reef Marine Park, the Capricornia Section. These provisions come into force on 1 July 1981.

The Zoning Plan which has been developed out of a long process of research, information-gathering and review of public comment, is a very significant step in the long term conservation of the Great Barrier Reef. It provides the basis for managing human use and enjoyment of the Park so that activities do not conflict with each other, and the natural qualities of the Reef are conserved.

The statutory processes which brought zoning and regulation of the Capricornia Section to finality were expedited by the agreement between the Prime Minister and the Premier of Queensland on 14 June 1979 on the development of the Marine Park. That agreement provided for co-operation between the two Governments and for the establishment of the Great Barrier Reef Ministerial Council.

On 1 August 1980, the Ministerial Council endorsed the Zoning Plan and regulatory provisions proposed by the Authority for the Capricornia Section. The Plan was tabled in both houses of the Commonwealth Parliament on 19 August 1980 and in the Queensland Parliament on 20 August. The Minister announced on 3 April 1981 that the Plan would come into operation on 1 July 1981.

The Zoning Plan for the Capricornia Section is being introduced with a minimum of controls and regulations, and with the least possible disruption to established and potential user patterns, consistent with conserving the natural qualities of the area. It is hoped that by adopting this technique, and by informing people about their responsibilities and

obligations under the Plan, the Authority will receive their co-operation in conserving this part of the Reef for present and future generations.

As a result of the 1979 agreement, day-to-day management will be undertaken by Queensland Government agencies, subject to the Great Barrier Reef Marine Park Authority.

Guidelines and plans for day-to-day management of the Section required endorsement by the Ministerial Council and are expected to be considered shortly.

Another major planning effort of the year has been the development of an inventory of information on resources and usage of an area off Cairns which is being considered for declaration as the second section of the Great Barrier Reef Marine Park.

In addition to consultation at government level, the Authority maintained close links with other Commonwealth and Queensland organisations with interests in the Great Barrier Reef Region, co-operating in activities such as surveys into commercial and recreational fishing, fish-tagging programs, public displays concerned with the Reef and a tourist information facilities workshop.

The Authority's policy of consultation extended to local government, commercial interests, reef users and the general public.

Throughout the year, the Authority continued to foster liaison with major research organisations. Discussions on research programs, priorities and funding have been undertaken to maximise the effectiveness of the total research effort on the Great Barrier Reef while avoiding duplication.

Authority-supported research included oceanographic and reef fisheries research, socio-economic investigations and important information management projects. An Australia-wide, computer-based reporting

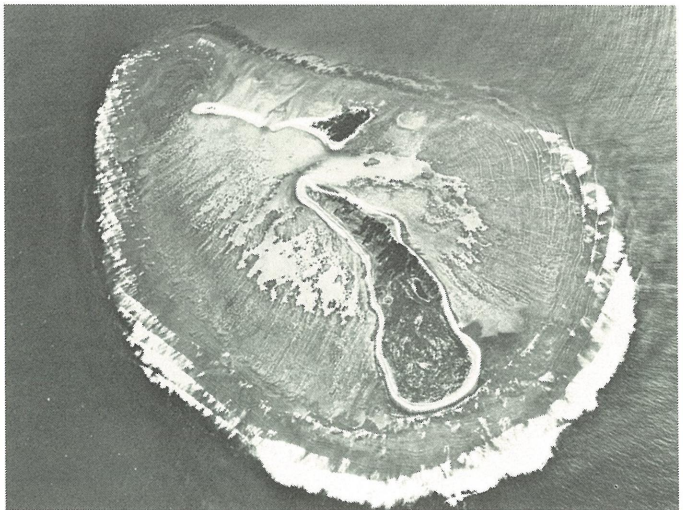
system is being developed to produce an inventory of all research on the Reef.

Joint investigations with the Queensland Fisheries Service were conducted into the locating of large populations of crown of thorns starfish on the Reef and possible techniques for their control.

The Authority believes that the long term conservation of the Great Barrier Reef will depend to a large degree on a more informed public. For this reason, it has increased the range and availability of information materials on the Reef for users, schools and the community generally.

One major project has been the development of school curriculum materials on the Reef, and consultation with state education departments on their adoption for general use.

The international importance of the Great Barrier Reef is underlined by its nomination for inclusion on the World Heritage List. The nomination, which was made by the Commonwealth Government with the agreement of the Queensland Government, was prepared by the Authority and will be considered by the World Heritage Committee when it meets in Australia in October, 1981.



Fairfax Islands and Reef, located in the Capricornia Section.

Significant Dates

1980

- 1 August The Ministerial Council endorsed the final Zoning Plan and regulatory provisions proposed by the Authority for the Capricornia Section.
- 19 August Zoning Plan was tabled in the Commonwealth Parliament for the statutory 20 sitting days.
- 20 August Zoning Plan was tabled in the Queensland Parliament.

1981

- 2 April Statutory 20 sitting days had elapsed with no motions to disallow the Plan being passed by Parliament.
- 3 April The Minister for Home Affairs and Environment, Hon. Ian Wilson, M.P., announced that the Zoning Plan of the Capricornia Section would come into effect on 1 July 1981.
- 14 May Regulations were made by the Administrator in Council.
- 20 May Regulations were published in the Commonwealth Gazette.
- 28 May Regulations were tabled in both Houses of the Commonwealth Parliament.

The Ministerial Council

The Great Barrier Reef Ministerial Council comprises two Ministers from each of the Commonwealth and Queensland Governments. The Council co-ordinates Commonwealth and Queensland Government policy on Great Barrier Reef matters, and is an important focal point for co-operation between the Commonwealth and Queensland in the proper management and conservation of the Great Barrier Reef.

Until the Commonwealth and Queensland elections in late 1980 the Ministers were:

- the late Hon. Eric Robinson, M.P., Commonwealth Minister for Finance - Convenor
- the Hon. David Thomson, M.C., M.P., Commonwealth Minister for Science and the Environment
- the Hon. Max D. Hooper, M.L.A., the Queensland Minister for Maritime Services and Tourism, and
- the Hon. Ivan Gibbs, M.L.A., the Queensland Minister for Culture, Parks and Recreation.

New Ministers have now been nominated by the Commonwealth and Queensland Governments. They are:

- the Hon. Ian Wilson, M.P., Commonwealth Minister for Home Affairs and Environment - Convenor
- the Hon. David Thomson, M.C., M.P., Commonwealth Minister for Science and Technology
- the Hon. M.J. Ahern, M.L.A., Queensland Minister for Primary Industries, and
- the Hon. J.A. Elliott, M.L.A., Queensland Minister for Tourism, National Parks, Sport and the Arts.

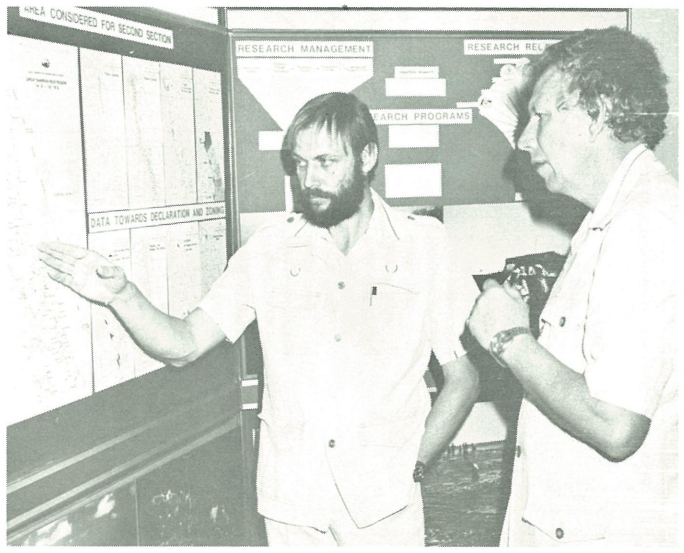
Capricornia Section — Zoning

The Ministerial Council met in Brisbane on 1 August 1980 to discuss the Zoning Plan for the Capricornia Section of the Great Barrier Reef Marine Park. After noting revisions made following public review, it endorsed the Plan for the Capricornia Section and the provisions for regulations which would implement the Plan. It supported action by the Authority and the then Minister for Science and the Environment to complete the statutory processes for the Zoning Plan to come into effect.

Day-to-Day Management

Ministers endorsed a Basis of Agreement between the two Governments, defining their respective responsibilities and outlining principles for the preparation of detailed management procedures. It also provides for cost-sharing arrangements between the two Governments for an initial capital works program and a recurrent program. Details are included in Appendix A.

These arrangements enable Queensland Government agencies to undertake the day-to-day management functions required to implement the Zoning Plan and regulations.



Richard Kenchington of the Great Barrier Reef Marine Park Authority and the Hon. Ian Wilson, M.P., Minister for Home Affairs and Environment



GREAT BARRIER REEF MARINE PARK AUTHORITY
GREAT BARRIER REEF MARINE PARK
CAPRICORNIA REEF SECTION

ZONING MAP



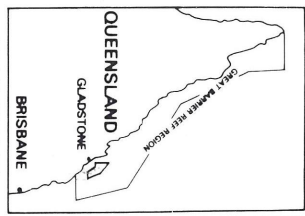
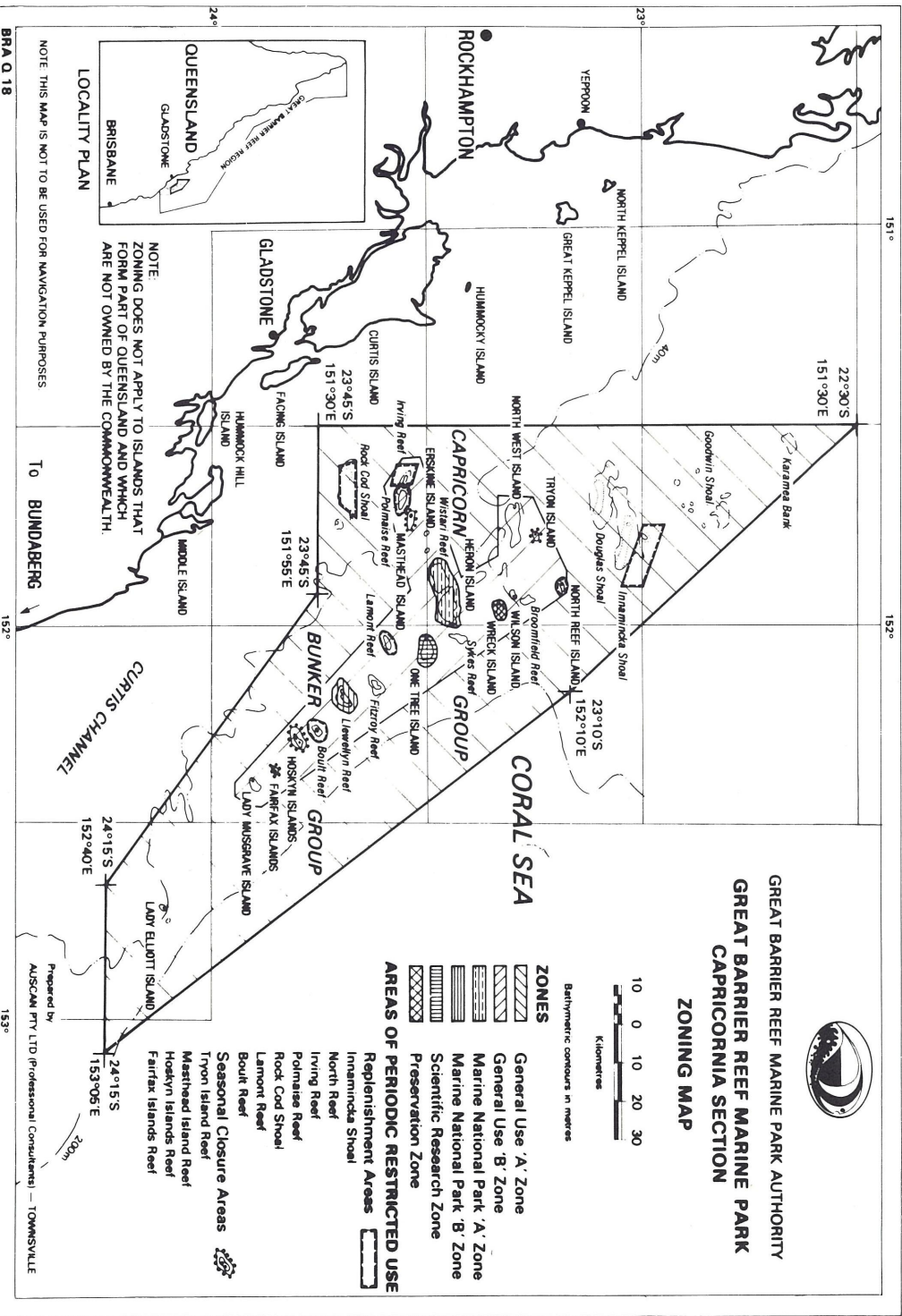
Bathymetric contours in metres

ZONES

- General Use 'A' Zone
- General Use 'B' Zone
- Marine National Park 'A' Zone
- Marine National Park 'B' Zone
- Scientific Research Zone
- Preservation Zone

AREAS OF PERIODIC RESTRICTED USE

- Replenishment Areas
- North Reef
- Innamnicka Shoal
- Irving Reef
- Polmarza Reef
- Rock Cod Shoal
- Lamont Reef
- Bout Reef
- Seasonal Closure Areas
- Tryon Island Reef
- Masthead Island Reef
- Hoskyn Islands Reef
- Fairfax Islands Reef



NOTE:
 ZONING DOES NOT APPLY TO ISLANDS THAT FORM PART OF QUEENSLAND AND WHICH ARE NOT OWNED BY THE COMMONWEALTH.

NOTE: THIS MAP IS NOT TO BE USED FOR NAVIGATION PURPOSES

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Prepared by
 AUSCANAL PVTY LTD (Professional Consultants) - TOWNSVILLE

Reef Research

Ministers endorsed an arrangement whereby the Authority provides annual reports to the Ministerial Council on both short and longer term Reef research.

It was agreed that individual Commonwealth and State bodies involved in research relevant to the Reef would provide presentations on their particular research programs at intermediate meetings of the Council.

Cairns Section

In March 1980, the Ministerial Council agreed that the Authority should continue with work in relation to a proposed section of the Marine Park off Cairns, and decided that additional public comment should be sought.

At the August meeting, the Council noted that considerable progress had been made by the Authority in assembling biological, physical and economic information and, in evaluating public comment on this proposed second section of the Marine Park. It agreed to invite the Authority to submit to the November* meeting of the Council, proposals for boundaries of the proposed Cairns Section, and their full implications .

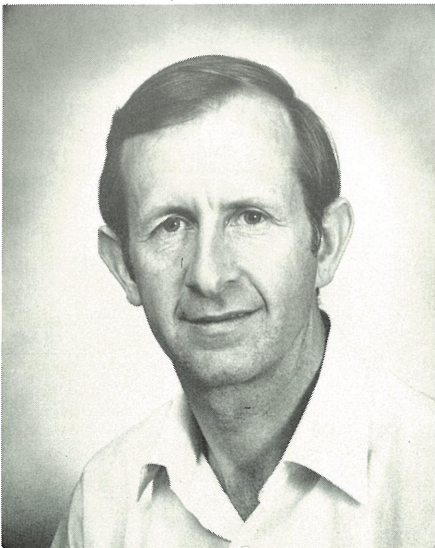
* The meeting of the Council planned for November 1980 was not held due to the Commonwealth and Queensland elections.

The Authority

The Authority is a Commonwealth-funded agency responsible to the Minister for Home Affairs and Environment. Its functions, as stated in the GREAT BARRIER REEF MARINE PARK ACT 1975 are:

- (a) to make recommendations to the Minister in relation to care and development of the Marine Park including recommendations, from time to time, as to -
 - (i) the areas that should be declared to be parts of the Marine Park; and
 - (ii) the regulations that should be made under this Act;
- (b) to carry out, by itself or in co-operation with other institutions and persons, and to arrange for any other institutions or persons to carry out, research and investigations relevant to the Marine Park;
- (c) to prepare zoning plans for the Marine Park;
- (d) such functions relating to the Marine Park as are provided for by the regulations; and
- (e) to do anything incidental or conducive to the performance of any of the foregoing functions.

Chairman of the Great Barrier Reef Marine Park Authority, Mr. Graeme Kelleher.

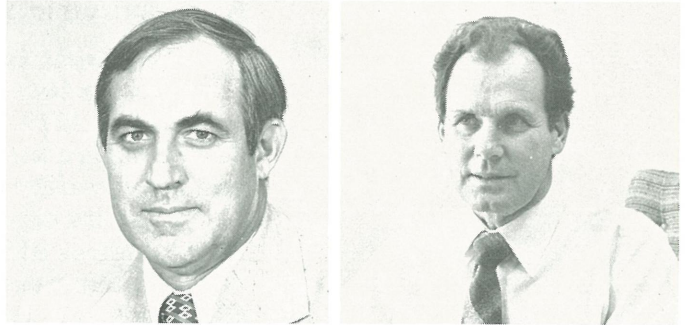


The Authority is required to perform its functions in accordance with any general directions given by the Minister not inconsistent with the Act. It has a full-time Chairman and two part-time Members, one of whom may be nominated by the Queensland Government.

Membership

The Chairman of the Authority is Mr Graeme Kelleher who was appointed on 21 December 1979 for a period of five years. He has wide experience in the development and implementation of resource and environmental management policies.

(Left to right) : Members of the Authority,
Mr. Syd Schubert and Dr. Joe Baker.



Mr Syd Schubert, the Co-ordinator General for Queensland, was nominated by the Queensland Government as one of the two part-time Members. Mr Schubert's three-year term expired on 30 June 1981.

The second part-time member of the Authority is Dr Joe Baker, Director of Research for Roche, Australia, Director of the Roche Research Institute of Marine Pharmacology in Australia and former Associate Professor of Chemistry at James Cook University of North Queensland. Dr Baker's second three-year term will expire on 4 July 1982.

Staff

The small staff includes officers with qualifications and skills in resource management, marine science, communications and administration.

Meetings

During 1980/81, the Authority held the following meetings:

1980	4 July	Townsville
	24 July	Brisbane
	12 August	Townsville
	26/27 October	Heron Island
	19 November	Canberra
1981	22 January	Brisbane
	23 February	Sydney
	25 March	Townsville
	26 May	Cairns
	25 June	Brisbane

Development of the Marine Park

A) Capricornia Section

The Great Barrier Reef Marine Park - Capricornia Section was declared on 17 October 1979. The Section covers about 12,000 square kilometres of the most southern and heavily-used area of the Great Barrier Reef. At its closest point it is approximately 20 kilometres off the Central Queensland coast, the closest cities being Rockhampton, Gladstone and Bundaberg.

Zoning

The draft Zoning Plan for the Capricornia Section was released for public review from 6 April 1980 to 6 June 1980. Following this intensive public scrutiny, the Plan was revised, taking account of the submissions received.

The major change was the inclusion of a new zone, which had been requested in many submissions, namely, a Marine National Park 'B' Zone, which provides for unrestricted public access to an area protected from fishing and collecting. It may be likened to a terrestrial national park, in that visitors will be able to appreciate reef areas and marine life which are relatively undisturbed by human activity.

Approximately eighty percent of the entire Capricornia Section remains unrestricted, apart from excluding operations for the recovery of minerals except for research purposes, and commercial spearfishing.

Zoning provides for large General Use Zones to allow for a wide range of activities including commercial fishing; Marine National Park Zones allowing recreational and scientific activities; a Scientific Research Zone where approved research can be carried out protected from the influences of recreational activities, fishing and collecting, and a Preservation Zone to keep some areas undisturbed by man apart from special research.

Replenishment Areas are an important feature of the Zoning Plan. Both recent research and traditional management techniques elsewhere in the Pacific suggest that temporary closure of a small proportion of reefs for a period of 2 to 5 years leads to an overall increase in the catch of fishes.

Seasonal Closure Areas are intended to protect the breeding of rare or endangered species of birds or turtles during nesting seasons. Zoning also provides for small Reef Appreciation Areas in heavily used areas to allow the public to observe and appreciate relatively undisturbed marine life.

The Zoning Plan will come into effect on 1 July 1981.

Regulations

The Great Barrier Reef Marine Park (Capricornia Section) Regulations, issued under Section 66 of the GREAT BARRIER REEF MARINE PARK ACT 1975, will give effect to the Zoning Plan and will also come into operation from 1 July 1981.

Certain provisions in the Zoning Plan are outlined in more detail by the regulations which cover such matters as permit requirements, lists of declared species of plants, animals and marine products which may not be collected without a permit in the Marine Park, potential offences and penalties, and Authority procedures for declaring areas of periodic restricted use in the Park.

The final draft regulations were approved by the Authority on 25 March 1981. The Great Barrier Reef Marine Park (Capricornia Section) Regulations were made by the Administrator in Council on 14 May 1981, gazetted on 20 May 1981, and tabled in both Houses of Federal Parliament on 28 May 1981 for the statutory 15 sitting days.

Management

On 1 August 1980, a Basis of Agreement between the Commonwealth and Queensland Governments for the day-to-day management of the Great Barrier Reef Marine Park - Capricornia Section was endorsed by the Ministerial Council. This basis of agreement defines the relative responsibilities of the Authority, the Queensland Fisheries Service and the Queensland National Parks and Wildlife Service for day-to-day management of the Section and for preparation of guidelines, programs and procedures needed for day-to-day management operations.

In accordance with the recommendation of the Ministerial Council, a committee has been set up to co-ordinate management arrangements. It comprises the Executive Officer of the Authority as Chairman, the Director of the Queensland Fisheries Service, the Director of the Queensland National Parks and Wildlife Service and a nominee of the Queensland Co-ordinator-General. The Committee has met regularly to discuss and co-ordinate management matters.

As the Marine Park does not include islands which are part of Queensland and are not owned by the Commonwealth, the Ministerial Council decided that Commonwealth and Queensland officials should examine ways of establishing complementary management regimes for all the islands, reefs and waters within the outer boundaries of the Section. Provision for a complementary management plan has been made in the following documents prepared in accordance with the Basis of Agreement:

- *Management Guidelines*

The Management Guidelines delineate principles for the preparation of detailed procedures for the day-to-day management of the Capricornia Section.

These were developed by the Authority in consultation with agencies of the Queensland Government, and outline the aims, principles and levels of management activities such as education and interpretation, surveillance, enforcement, monitoring and resource management. These guidelines have been submitted to the Ministerial Council for endorsement.

- *Operational Procedures*

Operational Procedures are being developed by agencies of the Queensland Government in consultation with the Authority. These will be incorporated in a Manual.

- *Three-Year Rolling Program*

This is a program of activities and costs developed for planning purposes covering administrative, operational and capital items that have been proposed for implementation in the initial three-year period of operations of the Marine Park, that is, from 1981/82 to 1983/84.

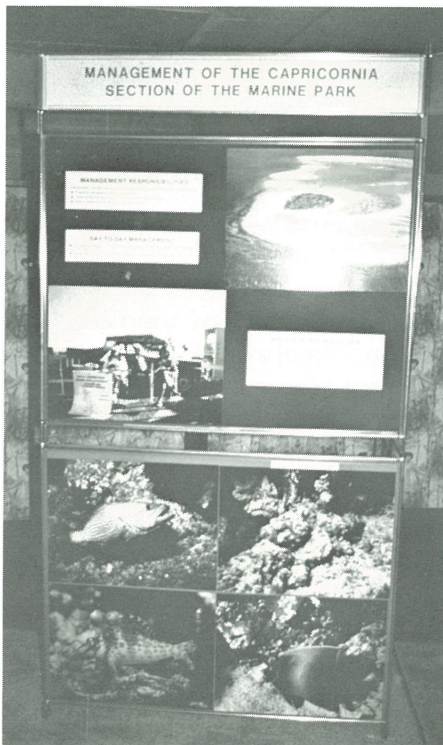
This program was developed jointly by the Authority and agencies of the Queensland Government in accordance with the Management Guidelines. It is to be submitted to the Ministerial Council for its endorsement as required in the Basis of Agreement.

- *Annual Program 1981/82*

This program of activities and expenditure for day-to-day management has been developed from the first year of the Three-Year Rolling Program. It provides a detailed breakdown of items of expenditure for the coming financial year.

The program was developed by agencies of the Queensland Government in consultation with the Authority, and has been submitted to the two

Park management—part of the Authority's display on the Capricornia Section.



Governments for consideration in the context of their Budgets.

The Three-Year Rolling Program and the Annual Program will both operate under cost-sharing arrangements set out in the Basis of Agreement between the two Governments.

The management arrangements between the two Governments, which cover responsibilities, programs and procedures, will enable the Queensland agencies to undertake the day-to-day management operations required to implement the Zoning Plan and regulations.

B) Proposed Cairns Section

Following agreement by the Ministerial Council for the Authority to continue to work towards possible declaration of a Section of the Marine Park off Cairns, the Authority sought the views of the public on the proposal by means of advertisements requesting public comment in national and Queensland local newspapers. Displays, manned by Authority staff, were organised in Tully, Innisfail, Cairns, Port Douglas, Mossman, Cooktown and Brisbane.

Most written comments were strongly in favour of a Section of the Marine Park being declared off Cairns. These attitudes were confirmed by the oral comments of members of the public at manned displays. Fifty-one of the 59 written representations received supported or implicitly supported a western boundary along the coastline. More details are included in Appendix B.

At the same time, the Authority sought public representations which would assist in the developing of an inventory of information and resources for the proposed section. It sought information on qualities that make all or part of the area between Dunk and Lizard

Islands suitable for inclusion in the Marine Park; current usage patterns including intensity of use and areas of conflict between users; present and potential commercial activities; and statistical information, especially any indicating recent changes.

This resources inventory has been used in discussion on boundaries for the proposed Section. After the Section has been declared, the Authority will publish notice of its intention to prepare a zoning plan, and the inventory will then be available for further use in developing information materials on the resources and uses of the Section.



A variety of coral growth; in the background a coral bommie.

Information and Education

Since the Authority believes that the long term conservation of the Great Barrier Reef for multiple use and enjoyment depends to a large degree on public awareness and responsible use, it has continued to emphasise its education and information activities.

Major information materials were prepared for the introduction of the Capricornia Zoning Plan and regulations. Other general publications, such as the newsletter "Reeflections", the Bulletin, posters, leaflets and maps, were distributed widely through private tourist organisations and resorts.

Public education activities included public meetings and conferences; presentation of audio-visuals and displays; talks to schools, clubs and organisations; and the establishment of public information centres.

With increasing public interest in the Great Barrier Reef, the Authority continues each year to respond to a large number of public inquiries about the Reef and the Marine Park. These included 45 requests for speakers, 100 requests for photography and audio-visual materials, 850 requests for information and more than 1,000 requests for mailing.



Snorkelling is one of the ways visitors can enjoy the reef—the Workshop recommended programs to improve and enhance visitor satisfaction.



Tourism Workshop

The Authority sponsored a workshop entitled "Research and Planning of Information Facilities on the Great Barrier Reef" at Lindeman Island from 5 to 9 August 1980. Twenty delegates attended, drawn from public resource management agencies, the tourist industry, and education and management organisations.

The aim of the workshop was to explore the best ways of providing tourists to the Great Barrier Reef with information about the Reef and its environment. The workshop examined themes such as market segments and demand, the planning process, opportunities for interpretation and a research program.

The workshop concluded that:

- target audiences for each program should be identified;
- the Authority should take a prominent role in educating people about the Reef and encourage wise use of the Reef's resources;
- a variety of Reef experiences should be made available, aimed at different market segments to be defined by further study;
- to achieve visitor satisfaction, facilities and programs must convey accurate information;
- differences in scale and cost of facilities will correspond to differences in function and location of facilities.

Reef walkers.



Curriculum Materials Project

A joint project with the Townsville College of Advanced Education to develop school curriculum materials about the Great Barrier Reef concluded on 30 June 1981.

The project, which is designed for 11 to 14 year-old students, is aimed at increasing their awareness of the Great Barrier Reef as a valuable resource, and of the benefits of management in conserving it.

At the moment there is very little material available in Australia or overseas which deals with reef ecosystems. The materials developed in the present project challenge children to assess their existing knowledge and attitudes.

They include planning exercises for field trips and audio-visual productions which present basic facts about the Reef and its inhabitants, emphasising the conditions necessary for their survival. They also introduce the students to zoning and management problems through case studies and reports dealing with the effects of human activities.



Students of Townsville College of Advanced Education on a reef trip to develop curriculum materials.

Research

The Commonwealth Government has accorded the highest priority in Marine Research programs to the Great Barrier Reef and has made arrangements for its co-ordination. The program of short and longer term research, announced by the Prime Minister on 14 June 1979, is monitored by the Great Barrier Reef Ministerial Council and closely supervised by the Authority.

The Authority is not primarily a research organisation. It commissions research from other agencies and establishes its priorities by defining areas of information required for planning and management of the Marine Park. Wherever feasible it seeks to obtain that information through projects within the research programs of those institutions.

Only where this is not practicable does the Authority use its powers under Section 7(1)(b) of the Great Barrier Reef Marine Park Act 1975 to arrange for research and investigations relevant to the Marine Park and its management to be carried out.

Co-ordination

Throughout the year, the Authority continued to foster liaison with the Commonwealth Scientific and Industrial Research Organisation, (C.S.I.R.O.) the Australian Marine Science and Technology Advisory Committee and its Funding Advisory Panel, (AMSTAC-FAP) the Australian Institute of Marine Science (A.I.M.S.) and other marine research bodies. Discussions on research programs, priorities and funding have been developed to maximise the effectiveness of the total research effort on the Great Barrier Reef while avoiding duplication. The funds provided by AMSTAC-FAP are additional to those provided to C.S.I.R.O., A.I.M.S. and the Authority for their respective research programs.

Research Areas

As part of the task of identifying priorities, the Authority has developed a series of documents on the responsibilities, functions, needs, programs and objectives for research projects undertaken by and for the Authority. Ten research areas have been identified relating to the management of multiple uses consistent with conservation of the Great Barrier Reef. These are:



Coral trout monitoring at Escape Reef.

1. Oceanography of the Great Barrier Reef
2. Marine geosciences and geomorphology
3. Marine chemistry
4. Bathymetry and survey
5. Marine biology
6. Analysis of use
7. Management strategies
8. Environmental design
9. Great Barrier Reef data bank
10. Mechanisms of information transfer.

In co-operation with A.I.M.S. and C.S.I.R.O., the Authority has developed a major paper detailing research needs for physical oceanography of the Great Barrier Reef.

As part of its requirement to report to the Great Barrier Reef Ministerial Council on research relevant to the Reef, the Authority is developing a reporting system for research in progress relevant to the Reef Region, in consultation with the Department of Science and Technology, the Victorian Institute of Marine Science and C.S.I.R.O..

Projects relating to the Reef being undertaken by universities, State and Commonwealth organisations, private research foundations, and other groups and individuals will be included in the Australia-wide, computer-based reporting system.

A preliminary list of projects relevant to the Great Barrier Reef Region is being circulated to relevant institutions for comment and additions. A summary of the number of current projects and estimated funding for these is shown in Appendix C.

Authority-supported Research

A complete list of the research projects being supported directly by the Authority are listed in Appendix D.

Some of these include:

- *Oceanographic Research*

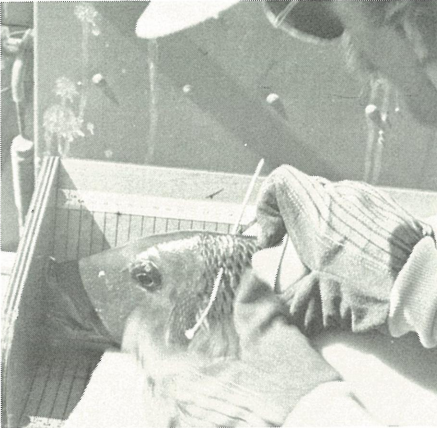
A twelve-month study of surface current patterns funded by the Authority, based on the release and recapture of drift cards at various locations in the Great Barrier Reef Region, has commenced. The project will provide an understanding of surface water movements in the Great Barrier Reef Region, allow production of predictive models, for example, for possible oil slick dispersal and movement of larvae, and will provide a set of hypotheses for more detailed studies of water movement.

- *Fisheries Research*

Following the investigation into economic characteristics of recreational and commercial fishing in the Capricornia Section of the Marine Park, the Institute of Applied Social Research (I.A.S.R.) Griffith University began a similar project commissioned by the Authority for the remaining portion of the Great Barrier Reef Region. To obtain maximum benefit from the investigation of economic aspects of commercial fishing, the Commonwealth Department of Primary Industry and the Queensland Fisheries Service are co-operating with I.A.S.R. in designing, administering and analysing the results of the survey. In addition, a 3-week survey of recreational fishing at boat ramps between Tully and Port Douglas has been conducted.

Boat Ramp Survey Program.





Fish tagging program at Heron and Wistari Reefs.

- *Reef Fish Tagging Program*

The Authority and the Queensland Fisheries Service initiated a joint program to investigate the movement of reef fishes, particularly coral trout, in the Capricornia Section of the Great Barrier Reef Marine Park. Using lock-on tags, teams from these organisations, with the assistance of deep sea club anglers from Gladstone, have tagged 2500 reef fishes at six reefs in the Section. The Queensland Fisheries Service pays a \$5 reward for tags returned with the date and place of recapture of the fish.

- *Taxonomic Research*

Part of the Authority's research program assists in the production of handbooks and guides for management, research and education.

Three projects were funded for commencement in this year.

- compiling information for an annotated checklist of fishes of the Capricornia Section;
- producing a handbook of the algal flora of Heron Island; and
- documenting the systematics and ecology of the phytobenthos of the Swain Reefs area.

- *Socio-economic Research*

The Authority has commissioned a review of existing Great Barrier Reef socio-economic research with a view to identifying management research priorities in this area. This review will enable the Authority to develop a program of socio-economic research which is integrated with the work of other agencies, such as the Queensland Tourist and Travel Corporation and the Department of Industry and Commerce.

Three socio-economic research consultancies initiated last year were completed. It is anticipated that these reports will be published in the near future.

The consultancies were:

- a review of reef tourism data from 1946 to the present;
- an attitudinal and socio-economic assessment of Great Barrier Reef holidays; and
- an investigation of information/ education facilities for the Great Barrier Reef.

- *Information Management*

To fulfil its role of co-ordinating Great Barrier Reef research and to make information about the Great Barrier Reef readily available for management, research and education, two major projects have been developed:

- preparing specifications for a bibliography of published materials relating to the Great Barrier Reef; and
- investigating ways of reporting on research in progress in the Region.

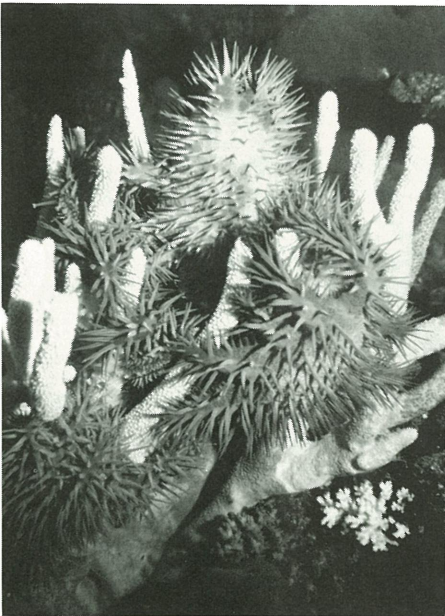
- *Augmentative Research Projects*

The Authority continued its program of assisting in the financing of recent graduates undertaking research projects relevant to Reef management. Applicants are required to have basic support from their own organisations in terms of equipment expenses, library and computing facilities. Details are listed in Appendix F.

Crown of Thorns Starfish Research

Investigations were made by the Authority and the Queensland Fisheries Service of populations of crown of thorns starfish on reefs between Innisfail and Cooktown.

Crown of thorns starfish on staghorn coral.



In brief, the survey found major populations of these starfish on four reefs and large populations on six other reefs. In all, 22 of the 53 reefs surveyed showed evidence of recently killed corals, probably caused by the crown of thorns starfish.

The Authority also established an advisory committee to report on possible crown of thorns research. In accepting the committee's report, the Authority decided that a further survey should be conducted to gain a comprehensive view of the starfish populations over the entire Great Barrier Reef.

Further investigations being developed include a detailed historical study of previous crown of thorns populations and their relationship, if any, to human use of the Reef.

The Authority's representatives at the Fourth International Coral Reef Symposium in Manila during May 1981 presented papers on the crown of thorns starfish and other items relating to the Great Barrier Reef.

Mooring Competition

The Authority launched a competition among engineering students seeking designs for permanent mooring facilities to be used by small and larger boats visiting the Great Barrier Reef.

The aim of the competition was to encourage maritime engineering studies and to produce a design which could provide safe anchorages on the Reef, reducing the damage to coral reefs from anchors and anchor chains.

Several entries were received and were scrutinised by a special panel of judges. The prize was shared by Mr Wayne Land of James Cook University and Mr Graham Scott of the Capricornia Institute of Advanced Education.

World Heritage Nomination

The Authority prepared the papers nominating the Great Barrier Reef for inclusion on the World Heritage List. The nomination was made by the Commonwealth Government with the concurrence of the Queensland Government, and was lodged with the Committee in Paris in December 1980.

The World Heritage Committee was established under the convention of the United Nations Educational, Scientific and Cultural Organisation (UNESCO) concerning the protection of the World Cultural and National Heritage.

The Committee, which considers nominations by member countries, has announced that it will be meeting in Australia in October 1981, and will consider the Great Barrier Reef nomination at that meeting.

Administration

Demands on the administration of the Authority during 1980/81 reflected the high level of activity in the planning, research, park management, information, secretariat and executive areas.

Recruitment of additional permanent and temporary staff enabled accommodation, finance, property, personnel, establishment, travel, registry and keyboard services to be provided. Further progress was also made in establishing, refining and formally documenting internal systems and procedures.

Accounting services provided by the Department of Science and the Environment ceased on 30 June 1980 and became the responsibility of the Authority. A Townsville firm was engaged to develop and supply a computerised accounting service. During the year the program was progressively introduced to replace manual systems in the payment, recording and reporting functions.

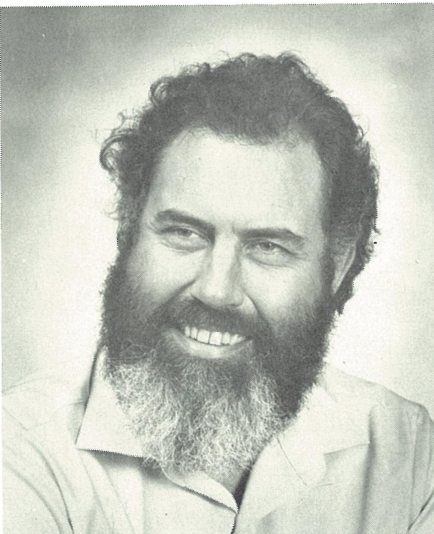
Staffing

The organisation of the Authority has been established with its main office in Townsville and a very small office in Canberra. This arrangement is based on the need for the Authority to have its principal technical resources close to the Reef and an administrative presence in Canberra to serve the Minister, consult with the many Commonwealth Departments with responsibilities affected by the Authority's programs and to provide the secretariat for the Great Barrier Reef Ministerial Council.

On 11 April 1980 the Authority was granted a provisional staff level increase of 15 for 1980/81 over the approved level for 1979/80 of 29.

This increase and later approval for a commensurate increase in the number of positions recognised the need for more staff to develop effectively the research, monitoring

Executive Officer of the Authority,
Dr. Alistair J. Gilmour.





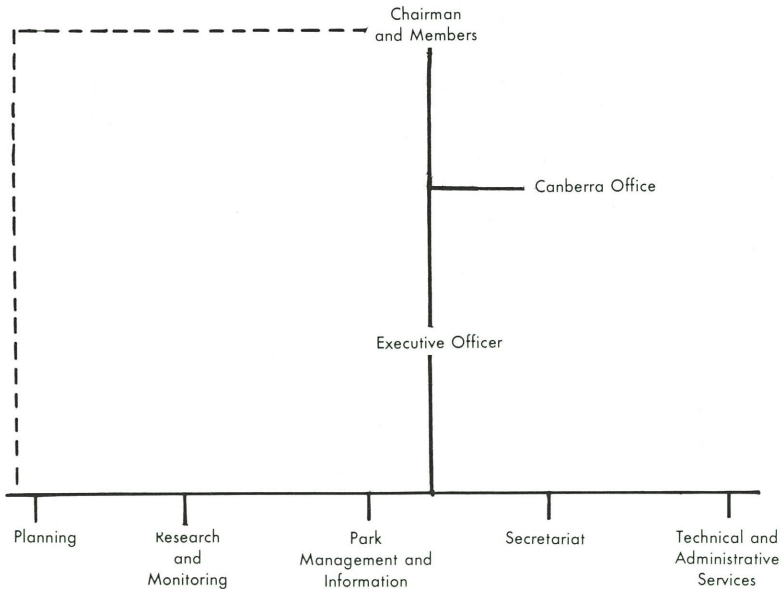
Authority staff members involved with mapping research.

and management programs necessary for the conservation of the Reef.

Following further consideration of staff levels to apply for 1980/81 the Authority was advised, in November 1980, that its full-time staffing level had been reduced by four. Subsequently, there was a further reduction of one, leaving provisional levels to be achieved in 1981/82 at 33 full-time and 6 part-time.

Early in 1981 action began to appoint permanent staff to a number of vacancies in priority areas.

The staff structure of the Authority has been organised into five sections in the main office in Townsville and the small Canberra Office as detailed below.



Due to delays and difficulties in recruitment, permanent staff were supplemented as far as possible by the appointment of temporary and part-time staff; by the secondment of officers from other departments and agencies; and by participation in training schemes such as the Special Youth Employment Training Program. Staff of the Authority at 30 June 1981 is shown below.

Staff of the Authority at 30 June 1981

SECTION	PERMANENT	TEMPORARY		SECONDED	TOTAL
		Full-time	Part-time		
Executive	2				2
Research & Monitoring	1	1			2
Planning	3	1		1	5
Park Management & Information	4	3	1		8
Secretariat	1				1
Technical & Administrative Services	10	3	2		15
Townsville	21	8	3	1	33
Canberra	4	-	-	-	4
Seconded to Dept. of Home Affairs and Environment	1	-	-	-	1
TOTAL	26	8	3	1	38



Authority staff members operating word processing equipment.

Accommodation

In September 1980, the Canberra Office was relocated to Gas Industry House, Cnr. Moore and Rudd Streets, Canberra City.

Faced with overcrowding and storage problems in the present Townsville office it was decided to seek temporary accommodation in larger leased premises that would satisfy the Authority's particular requirements. These include an identifiable presence in a publicly accessible area with office, storage and workshop facilities. It is hoped that suitable accommodation will become available within the next 12 months. The acquisition of permanent accommodation in Townsville is a longer-term project.

Finance

In the 1980/81 Budget, Parliament appropriated \$1,850,000 for the Authority's on-going activities. Further funds totalling \$108,200 for commitments carried forward from 1979/80 were also available.

The total available funds for 1980/81 were \$1,958,200. Expenditure for this year was \$1,566,609.

The under-expenditure was due mainly to delays in recruitment and in the establishment of the proposed second Section of the Marine Park.

A small amount of revenue was raised by the Authority, mainly through sales of posters. An increase in revenue from these and other information materials is expected in 1981/82.

Details of expenditure are shown at Appendix F.

Great Barrier Reef Consultative Committee

The Great Barrier Reef Consultative Committee was established under the Great Barrier Reef Marine Park Act 1975. Its functions are to advise the Commonwealth Minister for Home Affairs and Environment on matters relating to the operation of the Act and, on request, to advise the Authority on Marine Park matters.

The Committee represents a wide and varied cross-section of interests in the Great Barrier Reef, including tourism, fishing, science and conservation. Of the 15 members, seven were nominated by the Commonwealth and seven by the Queensland Government. The 15th member is the Authority's appointee, its Chairman, Mr Kelleher.

Members

Professor K.P. Stark (Chairman)
James Cook University of North
Queensland

Mr J.D. Ballingall
Queensland Commercial Fishermen's
State Council

Dr J.S. Bunt
Australian Institute of Marine
Science

Dr D.W. Connell
Australian Conservation Foundation

Mr P.B. Eccles
Commonwealth Department of Transport

Mr D.J. Fraser
Commonwealth Department of Industry
and Commerce

Chairman of the Consultative Committee,
Professor K. P. Stark.



Mr E.J. Hegerl
Queensland Conservation Council and
Australian Littoral Society

Mr J.H. Izatt
Queensland Game Fishing Association

Mr G.G. Kelleher
Great Barrier Reef Marine Park
Authority

Dr P. Mather
Great Barrier Reef Committee

Mr G. McKauge
Reef Region Tourism Task Force

Dr P. Saenger
Queensland Amateur Fishing Council

Dr G.W. Saunders
Queensland National Parks and
Wildlife Service

Mr K.E. Thompson
Commonwealth Department of Home
Affairs and Environment

Mr J.T. Woods
Queensland Department of Mines

Appointments for all members except
Dr Bunt expire on 3 October 1982. Dr Bunt's
appointment expires on 11 September 1981.

The Committee met three times during
1980/81. It examined possible boundaries for a
Marine Park Section adjacent to Cairns and
made recommendations to the Authority and
to the Minister. The Committee has also
reviewed arrangements for day-to-day
management of the Capricornia Section of the
Marine Park. Members inspected both areas.

Members have also considered research
matters, including augmentative support,

crown of thorns starfish and developments in information programs concerning the Marine Park.

Members assisted in distributing information about the Marine Park to reef users, local industry representatives and community organisations.

Administrative and secretariat support for the Committee was provided by staff of the Authority.

Appendix A

Basis of Agreement

The Basis of Agreement provides for an agreed initial capital works program and an agreed recurrent program. The cost-sharing arrangement* between the two Governments provides that:

- "The Commonwealth will identify and finance an initial capital works program for the day-to-day management of the Capricornia Section of the Great Barrier Reef Marine Park. This program would be accomplished in the first three years or so. Queensland concurrence to the program will be obtained. This will also ensure that the operational costs resulting from these works are acceptable."
- "Concurrently, an agreed recurrent program of management is to be implemented."
- "All capital costs for the Capricornia Section of the Marine Park after the initial capital works program and all recurrent costs are to be shared 50:50. The recurrent costs would include those costs incurred by the Queensland Government in managing the Queensland National Parks and Marine Parks lying within the boundaries of the Capricornia Section, in accordance with an annually-agreed program. All the costs under this point would be for activities included in the agreed programs."
- "All capital costs, incurred by Queensland in Queensland National Parks and Marine Parks lying within the Section, which are not for the Marine Park and not part of the initial agreed program, are to be met by Queensland."
- "Nothing in these arrangements prevents either Government from undertaking work, at its own cost, that is additional to the agreed programs."

-
- "The initial capital program would represent that required to place the day-to-day management operation on a sound footing - later capital expenditure would be treated as replacement expenditure."
 - "Where large capital works projects (e.g. underwater observatories) are proposed in the Section, and they are neither part of day-to-day management nor are constructed and operated by the private sector, special management and financing arrangements will be negotiated between the Governments."*
- * Ministerial Communique, 1 August 1980.

Appendix B

Analysis of Public Representations :

Cairns Section

Up to 30 June 1981 the Marine Park Authority had received:

- (1) 59 written representations, including one from an environmental group who designed a questionnaire, distributed it and submitted 19 completed papers to the Authority;
- (2) approximately 80 verbal submissions during a public participation program in the area.

Specific points raised included:

(a) Fishing

- limit or ban spearfishing (4)
- restrict trawling near reefs (9)
- license or limit shell collecting (4)
- ban commercial collecting of coral shells, etc. (1)
- ban shell collecting (1)
- do not distinguish between spear and line fishing (1)
- opposition to bag limits (amateur fishermen) (2)
- conditional approval of bag limits (3)
- opposition to limits on commercial fishing (1)
- opposition to limits on amateur fishing (1)
- concerned for commercial fishermen's livelihood (4)
- opposition to anchorage restrictions (2)
- desires greater representation on Great Barrier Reef Consultative Committee for commercial fishermen (1)
- concerned at harsh penalties and sweeping powers of Authority (1)
- favour commercial fishing on a sustainable yield basis only (1).

PUBLIC NOTICE

GREAT BARRIER REEF MARINE PARK AUTHORITY

Proposed Second Section of the Marine Park

At its most recent meeting in March this year, the Great Barrier Reef Ministerial Council agreed that the Great Barrier Reef Marine Park Authority should seek public comment on an area of the Great Barrier Reef Region from Cooks Passage in the north to just south of Dunk Island, with a view to its possible declaration as the second section of the Great Barrier Reef Marine Park.

The Authority is currently gathering biological, physical and economic information on this area.

How You The Public Can Help

The best way to ensure that your interests are fully considered in the planning for the second section of the Great Barrier Reef Marine Park is to provide the Authority with any relevant information you may have. Information on any or all of the following points is required:

- information on the qualities which make all or part of the area suitable for inclusion in the Marine Park, i.e. why do you think particular areas or reefs should be included?
- usage details — what activities you use the area for
— what area or reefs or parts of reefs you use
— how often
— for how long
— is there any conflict with other users?
- commercial and economic activities and potential.

Statistical information, especially any data which indicates recent changes, would be particularly helpful.

This type of information is needed to complement the biological, physical and economic information the Authority has gathered so that a detailed picture of the area can be obtained for a report on its suitability for declaration as the second section of the Marine Park.

Please send your information to:



Planning Officer,
Great Barrier Reef Marine Park Authority,
P.O. Box 1379,
TOWNSVILLE, Qld 4810

Should you require further information and assistance this can be obtained from the above address or by telephone (077-712191).

Graeme Kelleher
Chairman.

GBR 301

(b) Tourism

- acceptance provided tourists not excluded from the Reef (9)
- favours education and use of information programs (8)
- oppose environmental impact statements on hovercraft (1)
- in favour of reasonable controls on most activities (26)
- desire to discuss with Great Barrier Reef Marine Park Authority during zoning plan development (2)
- favours Reef Appreciation Areas (1).

(c) Research and Education

- need for research and information (8)
- need for specific research areas (6)
- need to research the effect of land-based activities on the reef (3).

(d) Boundaries

- whole Reef Region be declared a Marine Park (11)

(i) Western

- low water mark (LWM) specified as western boundary (7)*
- low water mark implied but not specified as western boundary (7)
- low water mark at specified locations as western boundary (7)
- opposed or implied opposition to low water mark as western boundary (8).

- * One representation which specified the western boundary came from a conservation group supplying the results of a questionnaire to which 19 people (comprising members and non-members of the group) responded.

Of these, 16 favoured low water, one favoured low water at specific locations, and two favoured offshore western boundaries.

(ii) Eastern

- eastern Great Barrier Reef Region as E boundary (2)
- 1km east of Great Barrier Reef edge (1).

(iii) Northern

- extend to include Princess Charlotte Bay (2)
- between Jewell and Hilder Reefs (latitude 14°51'S).

(iv) Southern

- from southern entrance of Hinchinbrook Channel (2)
- to include Dunk Island (1)
- to coincide with Johnstone/Cardwell Shire boundaries (2).

(v) Other

- no boundaries to be drawn across navigable waters (1)
- favours reef edges as boundaries (1)
- depth boundaries would be more practical than straight line boundaries (1).

(e) Other Issues

- no mining of limestone or oil drilling (7)
- no oil or mineral extraction may be necessary in the future (2).

ANALYSIS OF PUBLIC REPRESENTATIONS:
CAIRNS SECTION WESTERN BOUNDARY

SUMMARY OF MATTERS RELATING TO THE
WESTERN BOUNDARY OF THE PROPOSED
CAIRNS SECTION OF THE GREAT BARRIER
REEF MARINE PARK CONTAINED IN
REPRESENTATIONS RECEIVED BY THE
AUTHORITY

Declare entire Region or all of area specified in advertisement	11
Low water mark specified as western boundary	7
Low water mark implied but not specified as western boundary	7
Low water mark at specified locations as western boundary	7
No comment relating to western boundary	19
Opposed to or implied opposition to low water as western boundary	<u>8</u>
	<u>59</u>

Appendix C

Research Projects In Progress in the Great Barrier Reef Region

PROGRAM	NO. PROJECTS	TOTAL FUNDING (NO. PROJECTS) ^a \$	MEAN PROJECT VALUE \$
Oceanography	18 ^b	276 636 (11)	25 100
Marine Geosciences	18	389 187 (13)	29 900
Marine Chemistry	13	274 961 (7)	39 000
Bathymetry & Survey	13	83 858 (6)	14 000
Marine Biology	93 ^c	688 290 (47)	14 600
Analysis of Use	16	199 805 (16)	12 000
Management Strategies	0	0	
Environmental Design	1	5 400 (1)	5 000
Reef Data Bank	1	26 000 (1)	26 000
Information Transfer	3	37 920 (3)	12 600

a Funding refers to projects for which financial information is available

b Two projects refer to Australian coastline; not included in funding

c One project refers to entire Australian fauna; not included in funding.

Appendix D

Research and Studies Funded 1980/81

by the Great Barrier Reef Marine Park Authority

PROJECT	RESEARCHER	OBJECTIVE
OCEANOGRAPHY		
Drift Card Study of Great Barrier Reef Surface Currents	Dr J. Collins and Mr T. Walker (James Cook University of North Queensland)	<ol style="list-style-type: none"> 1. To produce an integrated picture of drift over the Great Barrier Reef Lagoon. 2. To establish correlation between drift and wind patterns.
Sedimentation between the Herbert Delta and the Herbert Island.	Dr D. Johnson (James Cook University of North Queensland) Dr M. Risk (Australian Institute of Marine Science)	<ol style="list-style-type: none"> 1. To detail terrigenous carbonate transition and Orpheus between the Herbert Delta and fringing reefs at Orpheus Island. 2. To quantify sediment inputs to reef. 3. To investigate the geochemical record in coral skeletons.
BATHYMETRY AND SURVEY		
BRIAN (Barrier Reef Image Analysis) and Experienced Reef Interpreters.	Dr D. Jupp (Commonwealth Scientific and Industrial Research Organisation)	BRIAN (Barrier Reef Image Analysis) interaction by a group of marine experts with knowledge of the Great Barrier Reef to create and refine calibration sets generated by such analysis.
BRIAN Extension Exercise on the Great Barrier Reef.	Dr D. Jupp (Commonwealth Scientific and Industrial Research Organisation)	Application of BRIAN to: <ol style="list-style-type: none"> 1. The northern reefs between Lizard Island and Cairns. 2. The Capricorn/Bunker group and produce colour-write products for both areas showing LANDSAT classes map over raw data.
Aerial and LANDSAT Imagery for Coral Reef Monitoring	Ms D. Kuchler (James Cook University of North Queensland)	To develop and present a remote sensing classification system for the Great Barrier Reef.

MARINE BIOLOGY

The Compilation and Provision of Information for an Annotated Checklist of the Fishes of the Great Barrier Reef Marine Park.	Dr B. Russell (Australian Museum)	To compile information on fishes of the Capricornia Section, in the form of an historical account of research done in the area, an annotated checklist of the fishes, a discussion of the ecological and zoogeographic relationships of the fishes, and a bibliography.
Handbook: Algal Flora of Heron Island and Adjacent Reefs.	Dr A. Cribb (University of Queensland)	To produce a handbook of the algal flora of Heron Island.
Systematics and Ecology of Phyto-benthos of the Swain Reefs.	Dr P. Saenger	1. To document the phyto-benthos of the Swain Reefs. 2. To observe the functional role of the phytobenthos in a southern reef ecosystem.
Manta Tow Analysis	Mr J. Robertson and Mr M. Hayward (James Cook University of North Queensland)	To complete the analysis and presentation of manta tow survey data of coral resources and crown of thorns starfish between 14 ⁰ S and 18 ⁰ S.
Reef Fishes Tagging: Capricornia	Great Barrier Reef Marine Park Authority and Queensland Fisheries Service	To determine the distribution and migration patterns of reef fish, particularly coral trout in the Capricornia Section to aid in stock assessment and general management of the Marine Park.
Coral Trout Monitoring at Escape Reef.	Dr A. Ayling (Marine Research Foundation)	To determine degree of natural variation in coral trout length frequency distributions of populations in different habitats over one year at a reef in the northern area of the Great Barrier Reef Region.

Seabird Colonies of the Capricorn and Bunker Groups.	Dr K. Hulsman (Griffith University)	To survey breeding colonies of seabirds in the Capricorn and Bunker Groups by analysing aerial photographs.
Crown of Thorns Starfish Clearance from Green Island Reef	Queensland Fisheries Service	To assess the effectiveness of control of the <u>Acanthaster planci</u> populations on Green Island Reef by eradication achieved by injecting the starfish with copper sulphate, and other substances.

ANALYSIS OF USE

Boat Ramp Surveys: Cairns	Great Barrier Reef Marine Park Authority, Queensland Fisheries Service, (I.A.S.R.) Griffith University	To obtain information on reef fish catches and to determine the economic importance of recreational fishing.
Reef Region Tourism Data Base Review 1946-1980	Mr R. Claringbould (Australian Travel Industry Association)	To review and analyse the growth of the tourism industry sector servicing the Great Barrier Reef Region from 1946-1980.
Review of Socio-economic Research Program Requirements of the Great Barrier Reef Marine Park Authority.	Dr G. McColl (Unisearch - University of New South Wales)	Review and assess in the light of recent socio-economic research, the future research program needs of the Great Barrier Reef Marine Park Authority.
Fisheries Economics of the Great Barrier Reef except Capricornia.	Dr G. McDonald (Griffith University)	To determine the economic importance and value of commercial and recreational fishing activities of the Great Barrier Reef Region except Capricornia.

Fisheries Economics of the Capricornia Section of the Great Barrier Reef.	Dr G. McDonald (Griffith University)	To determine the economic importance and value of commercial and recreational fishing activities of the Capricornia Section of the Great Barrier Reef Marine Park.
Economic Impacts of the Tourist/Recreational and Fishing Industries in the proposed Cairns Section of the Great Barrier Reef Region.	Dr G. McDonald (Griffith University)	To assess the ultimate location of the beneficiaries of each dollar spent on the tourist/recreational and fishing activities of the proposed Cairns Section. The extent of increased income and employment, arising from the current usage pattern of this area can thus be evaluated.
Research and Planning of Information Facilities on the Great Barrier Reef.	Cameron McNamara and Partners	To conduct an evaluation of the demand, supply and opportunities for reef information and educational facilities based on relevant local and overseas examples.
Reef Tourism Attitudinal and Socio-economic Assessment Survey.	Unisearch - University of New South Wales	To determine the vacation histories, vacation preferences and expectations, expenditure patterns, socio-economic backgrounds and attitudes to reef management, of visitors to the Great Barrier Reef Region.
Man-made noise in the Ocean	Dr G. Allen (James Cook University of North Queensland)	<ol style="list-style-type: none"> 1. To measure noise spectra of vessels. 2. To relate ship noise to ambient levels in the sea at various frequencies.

Preparation of a Complementary Management Plan - Capricornia Section.	Queensland National Parks and Wildlife Service	<ol style="list-style-type: none"> 1. To design and specify the contents and scope of a complementary management plan for the Capricornia Section. 2. To identify and assign priorities to studies and research that are a necessary prerequisite to the preparation of a management plan.
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GREAT BARRIER REEF DATA BASES

Great Barrier Reef Bibliographic Data Base: System Specification.	Ms H. Penridge (James Cook University of North Queensland)	<ol style="list-style-type: none"> 1. To specify a system for a Great Barrier Reef bibliographic data base in machine-readable form within a standard data base management system. 2. Construction of a thesaurus of indexing terms. 3. Prediction of costs for establishment and maintenance of data base.
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MECHANICS FOR INFORMATION TRANSFER

Development of a Communication Program and Materials.	Mr R. Ingpen	To develop a communications plan and develop and supervise communications packages for Capricornia management and proposed Cairns Section statutory public participation.
Educational Resource Material.	Mr B. Armour (Townsville College of Advanced Education)	To develop and prepare to publication standard, seven kits of education resource material of the Great Barrier Reef.

Appendix E

Augmentative Research

PROGRAM AND TITLE	INVESTIGATOR	INSTITUTION	AMOUNT \$
MARINE GEOSCIENCES			
Study of the Fringing Reef at Orpheus Island.	Ms A. Slocombe	James Cook University of North Queensland	640
Study of Reef Top Sediments on Wreck Reef.	Mr G. Brown	University of New England	600
Lagoonal Sedimentation: One Tree Reef	Mr W. Kiene	Sydney University	600
MARINE CHEMISTRY			
Hydrocarbons in Heron Island Boat Harbour.	Mr P. Bishop	Griffith University	683
MARINE BIOLOGY			
Assessment of the role of Large Transient Fishes in Shaping Shallow Water Communities of Small Resident Reef Fishes.	Mr B. Lassig	Macquarie University	731
Genetic Variability in Crown of Thorns Starfish <u>Acanthaster planci</u> .	Mr W. Nash	James Cook University of North Queensland	500
Ecology of the Sharp Nosed Puffer <u>Canthigaster valentini</u> .	Mr W. Gladstone	Macquarie University	731
Survey of Arginine Decarboxylase amongst Reef-building Scleractinians.	Dr M. Streamer	James Cook University of North Queensland	511

Seasonality of Ichthyoplankton, Biology of Baitfish <u>Hypoatherina tropicalis.</u>	Ms P. Schmitt	Sydney University	615
Interactive biology of plate and encrusting <u>Montipora</u> species	Mr J. Robertson	James Cook University of North Queensland	255
Population biology of <u>Montipora ramosa</u>	Mr M. Hayward	James Cook University of North Queensland	255
ANALYSIS OF USE			
Analysis of Present and Predicted Uses of the Natural Environment: National Parks and the Proposed Cairns Section of the Great Barrier Reef Marine Park.	Mr D. Hudson	Griffith University	600
The Social and Economic Elements of a Strategic Plan for the Whitsunday Area.	Mr P. McGinnity	Griffith University	600

Appendix F

Financial Statements

Great Barrier Reef Marine Park Authority Statement of Receipts and Payments for the period 1 July 1980 to 30 June 1981

	1980-1981	1979-80
	\$	\$
Cash at bank and on hand 1 July	108 200	69 692
RECEIPTS		
Appropriation from the Commonwealth Government	1 632 500	1 098 819
Sale of promotional material	1 944	747
Other receipts (a)	207	-
	1 742 851	1 169 258
PAYMENTS		
<u>Operational</u>		
Chairman and part-time Members - remuneration, allowances and expenses (b)	82 919	62 174
Great Barrier Reef Consultative Committee - fees and expenses	16 279	11 252
Salaries and payments in the nature of salaries	650 026	389 489
Travel and subsistence	93 883	127 821
Office requisites and stationery	42 545	48 306
Postage, telephone and telegrams	104 378	52 683
Office rental and cleaning	68 033	36 905
Library services	31 995	4 264
Publicity and information	84 879	57 764
Research and investigation	219 163	116 528
Other expenses		
- Advertising	16 379	23 352
- Removal expenses	13 796	4 670
- Incidentals (c)	43 942	40 663
- Reimbursement to Department of Science and Technology for administrative costs	1 474	-
	1 469 691	975 871
<u>Capital</u>		
Furniture and Fittings	40 565	37 548
Plant, vehicles and equipment	56 353	47 639
	96 918	85 187
Cash at bank and on hand 30 June	176 242	108 200
	1 742 851	1 169 258

(Footnotes (a),(b),(c) identified on the following page)

(a) Includes \$96 from sale of assets.

(b) This item is a composite of a number of distinct expenditures as follows:

	1980-81	1979-80
	\$	\$
Remuneration and Allowances	49 686	40 485
Travel and Subsistence	31 787	20 155
Other Expenses	1 446	1 174
	<u>82 919</u>	<u>62 174</u>

(c) Includes \$257 petty cash stolen when the Authority office in Townsville was broken into in May 1981.

STATEMENT OF CAPITAL ASSETS (AT COST) AS AT 30 JUNE 1981

	1980-81	1979-80
	\$	\$
Plant and motor vehicles	17 564	12 877
Furniture, fittings and office equipment	178 517(a)	113 293
Field equipment	84 385	59 512
	<u>280 466(b)(c)</u>	<u>185 682</u>

(a) Includes \$194 for kitchen chairs reclassified as office equipment and brought to charge in 1980-81.

(b) Assets to the value of \$6278 were disposed of during 1980-81.

(c) Cost of capital assets includes \$3950 being value of assets traded in.

In our opinion, the above Statement of Receipts and Payments and Statement of Capital Assets (At Cost) have been properly drawn up so as to show fairly the financial transactions of the Great Barrier Reef Marine Park Authority for the year ended 30 June 1981

GRAEME KELLEHER
Chairman

ALISTAIR J. GILMOUR
Executive Officer

Appendix G

Auditor-General's Report

27 August 1981

The Honourable the Minister for
Home Affairs and Environment
Parliament House
CANBERRA ACT 2600

Dear Sir

GREAT BARRIER REEF MARINE PARK AUTHORITY

In accordance with sub-section 60(2) of the Great Barrier Reef Marine Park Act 1975 the Authority has submitted for my report, financial statements for the year ended 30 June 1981, comprising a Statement of Receipts and Payments and a Statement of Capital Assets (At Cost).

Copies of the statements, which are in the form approved pursuant to sub-section 60(1) of the Act, are enclosed for your information.

I now report in terms of sub-section 60(2) of the Act that the statements are in agreement with the accounts and records and in my opinion:

- the statements are based on proper accounts and records, and
- the receipt and expenditure of moneys and the acquisition and disposal of assets by the Authority during the year have been in accordance with the Act.

Yours faithfully

O. Fenwick
For and on behalf
of the Auditor-General.



GREAT BARRIER REEF MARINE PARK AUTHORITY
P.O. BOX 1379
TOWNSVILLE, QLD. 4810
Telephone : (077) 71 2191

LADY MUSGRAVE ISLAND REEF

A large platform reef enclosing a deep lagoon surrounds beautiful Lady Musgrave Island in the Capricornia Section of the Great Barrier Reef Marine Park.

The deep channel which connects the lagoon with the outside sea is believed to have been blasted by Japanese fishermen early this century. Today, divers and fishermen are attracted by the safe anchorage, and the island itself, a Queensland National Park, is a popular camping site. It supports a large bird population including mutton birds, noddy, roseate, black-naped and crested terns, silver gulls and reef herons.

cover photo credit : Australian Survey Office.

