AUSTRALIA

1992/93 ANNUAL REPORT



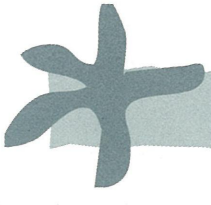
Great Barrier Reef
Marine Park Authority

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Great Barrier Reef
Marine Park Authority



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6 November 1993

The Hon Ros Kelly
Minister for the Environment, Sport
and Territories
Parliament House
Canberra ACT 2600

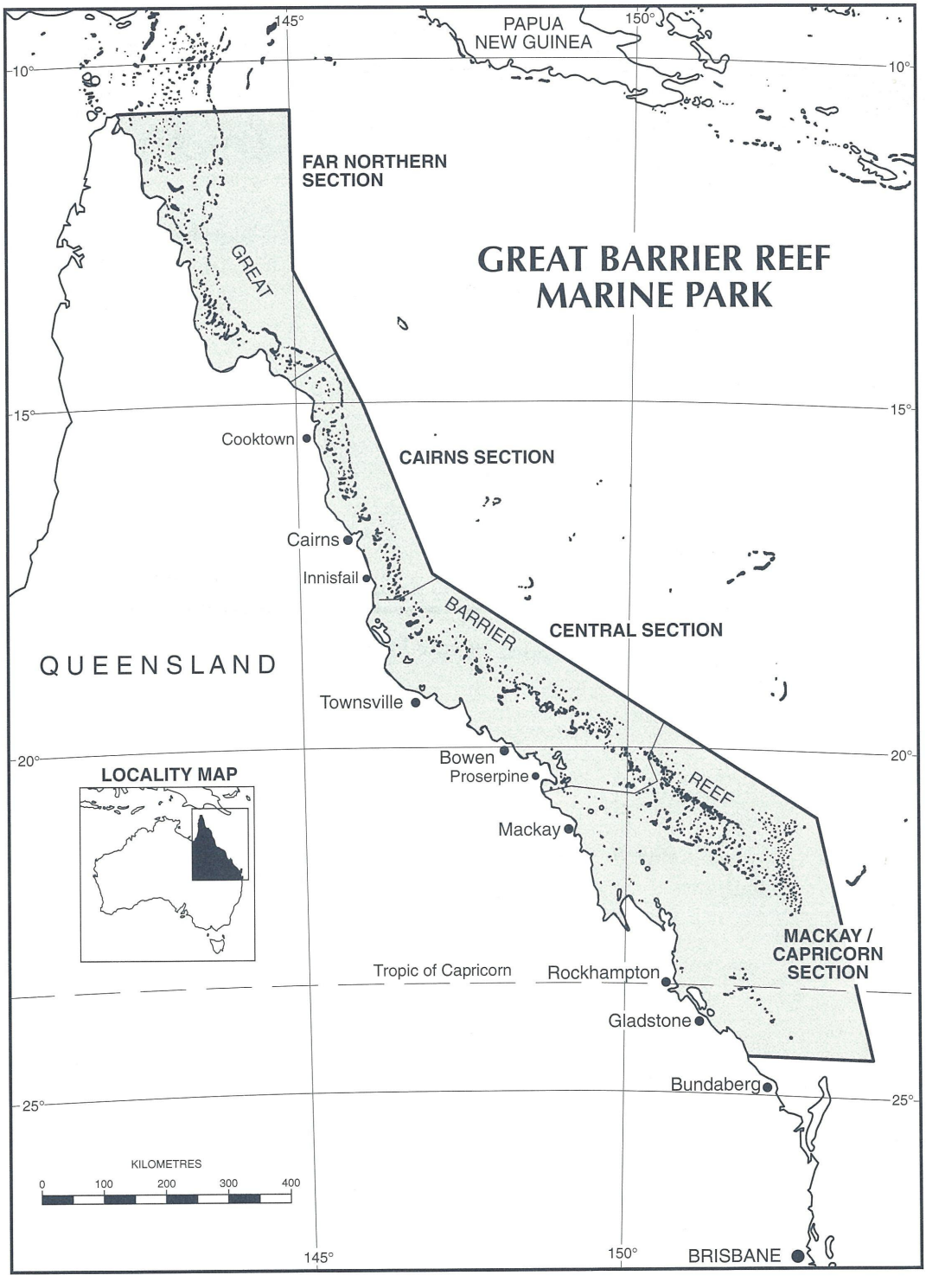
Dear Minister

In accordance with section 63 of the *Audit Act 1901*, I submit the seventeenth Annual Report of the Great Barrier Reef Marine Park Authority for the year ended 30 June 1993.

Yours sincerely

Graeme Kelleher

Graeme Kelleher
Chairman


145°
150°
PAPUA
NEW GUINEA
10°
FAR NORTHERN
SECTION
GREAT
GREAT BARRIER REEF
MARINE PARK
15°
Cooktown
CAIRNS SECTION
Cairns
Innisfail
BARRIER
CENTRAL SECTION
QUEENSLAND
Townsville
20°
LOCALITY MAP
Bowen
Proserpine
REEF
Mackay
MACKAY /
CAPRICORN
SECTION
Tropic of Capricorn
Rockhampton
Gladstone
Bundaberg
25°
KILOMETRES
0
100
200
300
400
BRISBANE



CONTENTS

FROM THE CHAIRMAN 1
GREAT BARRIER REEF MARINE PARK AUTHORITY 6
GREAT BARRIER REEF CONSULTATIVE COMMITTEE 12
GREAT BARRIER REEF MINISTERIAL COUNCIL 14
25-YEAR STRATEGIC PLAN 17
CORPORATE PLANNING 19
PLANNING AND MANAGEMENT 20
ENVIRONMENTAL IMPACT MANAGEMENT 32
RESEARCH AND MONITORING 46
EDUCATION AND INFORMATION 60
AQUARIUM 70
ADMINISTRATION 78
CANBERRA OFFICE 89
EXTERNAL SERVICES 92
CORPORATE AND STRATEGIC PROJECTS 96
APPENDIXES
A Authority Functions 97
B Consultative Committee Functions 100
C Authority Senior Officers 100
D Publications 101
E Staff papers published/presented in 1992-93 114
F Research in progress 1992-93 119
G Abbreviations 130
H Members of Advisory Committees 131
I Representation on External Committees 134
J Summary of Compliance with Reporting Guidelines 136
K Index 138
L Financial Statements 139
M Auditor-General's Report 162
Offshore Developments Map ..... (inside back cover)



EDITORS' NOTE:

During the course of the 1992-93 reporting year, the Australian National Parks and Wildlife Service (ANPWS) changed its name to the Australian Nature Conservation Agency (ANCA). This change became official on 1 June 1993, but for ease of reading, those references to this body throughout this annual report will be by its new title and acronym, notwithstanding the time reference involved.



FROM THE CHAIRMAN

'The world is in a constant state of flux.'

Heracleitus, (540-475 BC) Greek philosopher

Heracleitus was lucky to have been able to make that statement. Today, the world is in an increasing state of flux and this is reflected in the Great Barrier Reef. The rate of use of the Great Barrier Reef is increasing everyday. Meanwhile, mainly as a result of the economic circumstances in which most of the world's western nations now find themselves, the resources available to governments are steadily diminishing in real terms. Like most other government agencies, the Authority and its day-to-day management agencies, particularly the Queensland Department of Environment and Heritage, are having to make do with resources which are not keeping pace with increasing rates of use of the Marine Park. (People may be surprised to learn that the Authority's annual budget is equivalent to about two and a half times the cost of a wing assembly of an FA-18 fighter aircraft.)

In this report, you will find descriptions of the various actions which the Authority has taken in the past year aimed at ensuring that the Great Barrier Reef is not degraded by human activity, that its contribution to the Australian and world communities continues, and that this Authority is, and is seen to be, a competent, caring, frugal organisation which treats people who use the Marine Park and others who care about it as valued clients.

DAY-TO-DAY MANAGEMENT

Relations between the Authority and its Queensland partners, particularly the Department of Environment and Heritage, continue to be seen as a model for intergovernmental cooperation. We work together to ensure that the Great Barrier Reef is not over-regulated and that activities are held within ecologically and socially sustainable limits.

We have always depended on the voluntary compliance of most of the users of the Marine Park with zoning plans and regulations. In most cases, such compliance has been adequate. However, over the last part of the year, there have been many reports of repeated commercial fishing in zones in which such activities are prohibited. The extent of these illegal activities has reached the stage where it is clear that the disincentives to such activities must be increased.

At present, it is extremely difficult to secure convictions in the courts for illegal fishing. Where convictions are achieved, the penalties imposed are usually far below the level of the benefits which accrue to the commercial operators engaged in the illegal activity. It is clear that we must move to increase the penalties and to change the legislation so that convictions for illegal activity can not be so easily evaded. We are cooperating strenuously with Queensland management agencies in this endeavour.

CHANGE WITHIN THE AUTHORITY

Despite the increasing pressure on the Authority in relation to ongoing activities, many initiatives have been taken this year to improve its operations and efficiency. These changes reflect the recognition within the agency that change and improvement must be relentlessly pursued. Amongst the initiatives which were commenced or pursued during the year was the finalisation, in direct cooperation with 60 other organisations and indirectly with many more organisations and individuals, of a Strategic Plan for the Great Barrier Reef World Heritage Area. This is the first time that a comprehensive strategic plan for such a large area has been produced cooperatively anywhere in the world. We hope it will be the foundation for further cooperation between agencies in the future management of this, Australia's first World Heritage Area.

Linked with the Strategic Plan has been the development within the Authority of a Corporate Plan which interprets the objectives of the Strategic Plan in detailed one-year targets and integrated work programs. In other words, we have a hierarchy of objectives leading from the long-term 25 year vision for the World Heritage Area down through progressively more detailed objectives to individual work plans. We hope that other agencies with responsibilities in the Great Barrier Reef World Heritage Area will use the Strategic Plan similarly.

ABORIGINAL/ISLANDER INVOLVEMENT

1993 is the International Year for the World's Indigenous People. We have always tried to involve Aboriginals and Islanders to the maximum extent practicable in the work of the Authority. This year we have made special efforts. Aboriginals and Islanders have been deeply involved in the development of the Strategic Plan for the World Heritage Area and we have established local consultation groups in centres along the Queensland coast. This effort will continue and will be limited only by the availability of human resources within the Authority. It must be recognised that effective involvement of Aboriginal and Islander people in-decision making and management is, at least initially, very demanding in terms of time and human resources.

GBRMPA COMMUNICATIONS STRATEGY

In early 1993, the Authority undertook a communications program with the assistance of an external consultant, Burson-Marsteller (Canberra), to further develop GBRMPA's standing as a recognised regional, national and international leader in the environmental field. The program is intended to target the Authority's short-term and long-term public communication needs to ensure that the Authority's programs and objectives are recognised and supported by governments and by the Australian community.

The program has also initiated a process of long-term organisational change within the Authority with the aim of improving internal and external communication and ensuring that everyone in the agency regards and treats the people who use the Marine Park as valued clients.

The Authority is under continual pressures from two opposing directions. On the one hand there is strong pressure on the Authority to minimise regulations. The commitment to this objective is expressed in our goal and aims. Nevertheless this commitment is subject to the attainment of the primary objective of protecting the ecology of the Great Barrier Reef. The opposing pressure therefore comes from people concerned that human use of the Great Barrier Reef and of the land areas adjacent to it may cause irreparable or serious harm to the ecological qualities of this World Heritage Area.

Balancing the response to these conflicting pressures, within the context of what is Australia's most comprehensive public participation program, is a tremendous challenge.

During the year we carried out an internal review of the regulatory system with the objective of reducing regulation of individual tourism development projects. The means to achieve this is through the development of management plans which set general guidelines and limits to usage, consistent with the provisions of the general zoning plans, in heavily used areas. These management plans are being developed in close consultation with users of the Marine Park.

EXTERNAL REVIEW OF THE AUTHORITY

At the end of the year the report from the external reviewer of the Authority, Mr John Whitehouse, was received by the Department of the Environment, Sport and Territories. This review concluded that the Authority is operating efficiently, that it should continue to be a regionally focused organisation but with the ability to provide consultancy services outside the Great Barrier Reef Marine Park. The report made various detailed recommendations in relation

to the operation of the Authority, some of which have already been undertaken. The Government has not yet made any decisions in relation to the Report.

THE ENVIRONMENTAL MANAGEMENT CHARGE (USER PAYS)

During the year staff of the Authority worked very closely with representatives of the tourism industry to develop an equitable, simple system of charging commercial tourism operators as a means of supplementing government funding for research, education and management of the Great Barrier Reef Marine Park. It is probably true to say that no system of charging has ever before been developed with such a high degree of consultation and cooperation between the government and the people who will contribute.

While the charges are on commercial operators, not on tourists, the level of the charges has been set so that for most operators they will translate to about $1 per passenger per day.

Some of these funds will be used to contribute to the Cooperative Research Centre for Ecologically Sustainable Development of the Great Barrier Reef. This successful proposal brings together the tourism industry, GBRMPA, the Australian Institute of Marine Science, James Cook University of North Queensland, and the Queensland Department of Primary Industries in an integrated research program aimed at ensuring that human use of the Great Barrier Reef is ecologically sustainable. Funding is provided by the participants with generous supplementation by the Commonwealth Government. The Minister has stated that the funds from the user charges will not displace existing government funding, but will be additional to it.

I must make special note of the dedication of the staff who developed this system. There can scarcely be a more difficult task than developing a system of charges in consultation with the target user group. Staff carried out their work with enormous diligence, patience, skill and commitment to equity.

AWARD FOR DON KINSEY

Dr Don Kinsey, AM, the former Executive Officer of the Authority, was made a member of the Order of Australia in the Queens Birthday Honours List in 1993, in recognition of his services to reef ecology and to the conservation and management of marine environments. His latest full-time contribution to marine science and management was the preparation of the detailed proposal for the Cooperative Research Centre for Ecologically Sustainable Development of the Great Barrier Reef.

EXTERNAL SERVICES

The Authority continued to develop its consultancy services to other organisations, both within Australia and overseas. During the year we recruited Mr Richard Kenchington from the Resource Assessment Commission to head the External Services Section. Richard was originally the chief planning officer for the Authority.

The demand for the Authority's services continues to escalate. These services are provided both directly by the Authority and through other organisations such as INTROMARC (International Tropical Marine Resource Centre), which is a consortium of the Authority, the Australian Institute of Marine Science and James Cook University of North Queensland, and AMSAT (the Australian Marine Science and Technology organisation), which is a consortium of Commonwealth Government agencies, expert in marine science and management.

One of the major projects that the Authority has been carrying out for some years on behalf of the World Bank and IUCN, the World Conservation Union, is the development of a database which lists the location and descriptions of all of the world's existing marine protected areas. It identifies the biogeographical zones within each of the world's 18 marine regions which are not adequately represented in marine protected areas. The project identifies priorities for establishing new marine protected areas, or for improved management in existing ones. Potential contribution to marine biodiversity is a principal criterion in defining priority areas. This work is being carried out by 18 working groups which have been established through the world. It is intended that the final list of priorities will be a foundation for decisions by the World Bank and other funding institutions for funding under the Global Environment Facility.

All of the activities of the Authority in this section were carried out at no cost to the Government.

CONCLUSION

We finish each year conscious of the ever increasing challenges which we have faced in managing the Great Barrier Reef Marine Park. Again this year, I feel a very strong sense of gratitude to, and pride in, the staff of the Authority and the staff of our day-to-day management agencies.



GREAT BARRIER REEF MARINE PARK AUTHORITY

The Great Barrier Reef Marine Park Authority, which was established under the *Great Barrier Reef Marine Park Act 1975*, is a Commonwealth statutory body consisting of a full-time Chairman and two part-time members, one of whom is nominated by the Queensland Government. The first appointments to the Authority were made in July 1976 and the Authority's first meeting was held in August of that year.

ROLE

The Authority is the principal adviser to the Commonwealth Government on the care and development of the Great Barrier Reef Marine Park. Specific functions defined in sections 7 and 7A of the Act are listed in appendix A.

Below is the statement of the Authority's goal and aims. The statement has been derived from, and is consistent with, the object of the Act and the functions and powers set out in the Act.

GOAL

Our goal is to provide for the protection, wise use, understanding and enjoyment of the Great Barrier Reef in perpetuity through the care and development of the Great Barrier Reef Marine Park.

AIMS

These aims are subordinate to the primary goal and must be read in conjunction with it and with each other.

- To protect the natural qualities of the Great Barrier Reef, while providing for reasonable use of the Reef Region
- To involve the community meaningfully in the care and development of the Marine Park
- To achieve competence and fairness in the care and development of the

Marine Park through the conduct of research, and the deliberate acquisition, use and dissemination of relevant information from research and other sources

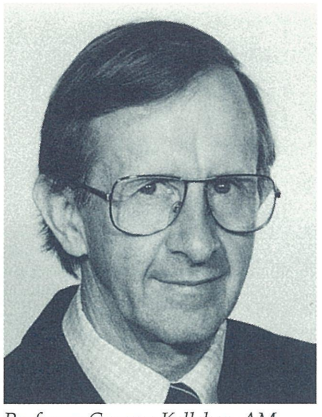
- To provide for economic development consistent with meeting the goal and other aims of the Authority
- To achieve management of the Marine Park primarily through the community's commitment to the protection of the Great Barrier Reef and its understanding and acceptance of the provisions of zoning, regulations and management practices
- To minimise costs of caring for and developing the Marine Park consistent with meeting the goal and other aims of the Authority
- To minimise regulation of, and interference in, human activities, consistent with meeting the goal and other aims of the Authority
- To achieve its goal and other aims by employing people of high calibre, assisting them to reach their full potential, providing a rewarding, useful and caring work environment, and encouraging them to pursue relevant training and development opportunities
- To make the Authority's expertise available nationally and internationally
- To adapt actively the Marine Park and the operations of the Authority to changing circumstances.

SUBSIDIARIES

The Great Barrier Reef Marine Park Authority has no subsidiaries. However, certain functions are carried out in conjunction with other State and Commonwealth organisations including the Queensland Department of Environment and Heritage which has responsibility for day-to-day management of the Marine Park, subject to the Authority. Certain powers of the Authority have been delegated to positions in other organisations.

MEMBERSHIP AS AT 30 JUNE 1993

The full-time Chairman (and chief executive) of the Authority is **Professor Graeme Kelleher, AM,** who was reappointed for his third five-year term on 20 December 1989. Professor Kelleher has had extensive experience in activities concerned with the environment. He was one of the three commissioners on the Ranger Uranium Environmental Inquiry and served as an examiner of New Zealand's environment policies for the international Organisation for Economic Cooperation and Development (OECD). He is Vice-Chairman, Marine, of the Commission on National Parks and Protected Areas



Professor Graeme Kelleher, AM



Professor Rhondda Jones



Dr Craig Emerson

(CNPPA) of IUCN, the World Conservation Union. Through a conjoint appointment with James Cook University of North Queensland, Professor Kelleher holds the Kevin Stark Chair in Systems Engineering at the University.

Dr Craig Emerson, Director-General of the Queensland Department of Environment and Heritage, was appointed by the Governor-General on 10 September 1991 as part-time member for a period of three years. Dr Emerson, who was a policy adviser to the former Prime Minister, the Honourable R J L Hawke, has a Doctorate in Economics.

Professor Rhondda Jones, an ecologist with research interests in population dynamics, is Professor of Zoology in the School of Biological Sciences at the James Cook University of North Queensland. She was appointed as part-time member, for a second three-year term, on 27 February 1992. Professor Jones has worked previously as an experimental officer with the CSIRO, and has held positions with Canadian and American universities.

ACTING CHAIRMAN APPOINTMENTS

In January and February 1993, Professor Kelleher attended the Second Asia Pacific Regional Consultative Meeting on Biodiversity Conservation. The meeting, held in Bangkok, Thailand, was organised by the World Bank and by Australian Marine Science and Technology Limited. He also attended a workshop on marine park management in Penang, Malaysia, for the United Nations Environment Program. The Minister appointed the Authority's Executive Officer, Dr Wendy Craik, to act as Chairman from 31 January to 13 February and, during a later period of absence, from 10 to 17 March 1993.

In June 1993, Mr Kelleher attended the 40th Working Session of the World Conservation Union Commission on National Parks and Protected Areas and the Baltic Sea Regional Seminar, in Sweden. The Minister appointed Mr Richard Kenchington, Senior Director of the Authority's External Services Section, to act as Chairman from 4 to 16 June 1993.

MEETINGS

During 1992-93, the Authority met on eight occasions:

1992		1993	
DATE	LOCATION	DATE	LOCATION
8 July	Townsville	25 February	Brisbane
13 August	Townsville	28 April	Cairns
7 October	Heron Island	3 June	Cairns
16 December	Brisbane	23 and 24 June	Mackay

Marine Parks management is focused on the three operational Regions of the Queensland Department of Environment and Heritage adjacent to the Great Barrier Reef Marine Park. The Authority's meetings on Heron Island, in Cairns (April) and in Mackay, involved the respective Regional Directors.

Items of meeting business in 1992-93 concerned:

- the Strategic Plan for the Great Barrier Reef World Heritage Area
- the Corporate Plan of the Authority
- proposed review of the Far Northern Section Zoning Plan
- management planning for the Goold, Brooks and Family Islands in the Central Section, for Florence Bay (Magnetic Island) in the Central Section and for Low Isles and Green Island in the Cairns Section
- designation of a Special Management Area at Manta Ray Bay (Hook Island), Central Section
- development of a five-year funding strategy for day-to-day management
- guidelines for permit assessment for pontoon-based operations, and for allocation of sites for tourist program operators in high demand areas
- a system for charging in the Great Barrier Reef Marine Park
- the Cooperative Research Centre for Ecologically Sustainable Development of the Great Barrier Reef
- policies on the disposal of dredge spoil, and on the use of dispersants for oil spills
- recent enforcement action in the area between Cairns and the Whitsundays
- shipping and oil spill matters for the area recognised by the International Maritime Organisation as the Great Barrier Reef Particularly Sensitive Area
- the appeal recently before the Administrative Appeals Tribunal concerning a proposed ore off-loading terminal in Halifax Bay

- a proposal for further development of the Magnetic Quay marina site,
- Aboriginal and Torres Strait Islander liaison.

A database on decisions of the Authority has been established.

In 1992-93, the Authority remade its delegations of the powers under the Great Barrier Reef Marine Park Regulations generally relating to permits, and under the Great Barrier Reef Marine Park Act relating to:

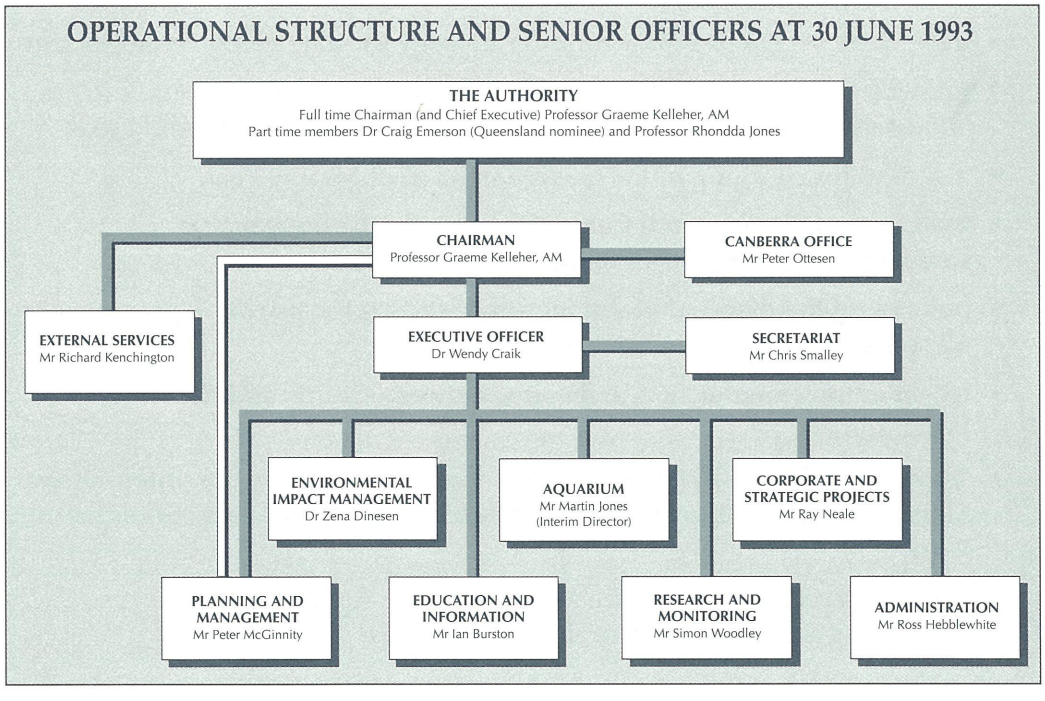
- general and financial operations of the Authority,
- the disposal of vessels, aircraft or articles seized by or forfeited to the Authority.

THE MINISTER

The Honourable Ros Kelly, MP, was the Minister with portfolio responsibilities for Great Barrier Reef matters both before and after the federal election on 9 March 1993. The Minister convened one meeting of the Great Barrier Reef Ministerial Council, held in Cairns on 3 June 1993.

The Act provides that the Authority *'. . . shall perform its functions in accordance with any general directions given by the Minister not inconsistent with this Act'*. No such directions were given to the Authority during the year.

FIGURE 1



OFFICE OF THE AUTHORITY

The Authority has an office in Townsville and a small office in Canberra. This arrangement enables the Authority to have its principal technical resources close to the Reef and also to carry out important liaison functions in Canberra.

The Townsville office, which includes the Great Barrier Reef Aquarium, had a staffing level at 30 June 1993 equivalent to 136 full-time positions. The Townsville office is located in the Great Barrier Reef Wonderland complex.

The Canberra office provides administrative support to the Chairman and the secretariat for the Great Barrier Reef Ministerial Council. It also advises the Minister, liaises with the Department of the Environment, Sport and Territories, Parliamentary Committees, other Canberra-based Departments and organisations with interests in the Marine Park, and assists in the development and communication of policy advice. The Canberra office had six full-time staff at 30 June 1993.

EXECUTIVE OFFICER

Dr Wendy Craik is the Executive Officer of the Authority. She is responsible to the Chairman for the efficient operation of the Townsville office. She is also Secretary to the three-member Great Barrier Reef Marine Park Authority. Staff of the Executive and the Secretariat in Townsville support her in these roles.



GREAT BARRIER REEF CONSULTATIVE COMMITTEE

The Great Barrier Reef Consultative Committee was established by the *Great Barrier Reef Marine Park Act 1975* as an independent advisory body for both the Minister and the Authority. Specific functions defined in section 21 of the Act (including amendments contained in legislation which received Royal assent on 9 June 1993, and will be in force from 1 July 1993) are listed in appendix B.

The Consultative Committee represents a wide cross-section of interests in the Great Barrier Reef, from both the public and private sectors, including tourism, fishing, science, conservation local government and the Aboriginal communities. It consists of members appointed by the Minister for a three-year term and a member of the Authority appointed by the Authority. The term of the Committee ceased in July 1992 for all members except Professor Graeme Kelleher, who as the Authority's appointee, has an indefinite term. No new appointments were made during 1992-93.

MEMBERSHIP OF COMMITTEE UNTIL JULY 1992

Chairman:	
Professor Helene Marsh	James Cook University of North Queensland
Committee:	
Mr Tony Fontes	Barrier Reef Diving Services
Mr Denis Griffith	Queensland Sport and Recreational Fishing Council
Mr Eddie Hegerl	Australian Littoral Society and Queensland Conservation Council
Dr Tor Hundloe	Industry Commission
Mr Adrian Jeffreys	Wildlife Preservation Society of Queensland Inc.
Dr Harley Juffs	Queensland Department of Primary Industries

Mr Bill Kehoe	Queensland Commercial Fishermen's Organisation
Professor Graeme Kelleher, AM	Great Barrier Reef Marine Park Authority
Mr Gordon McKauge	Far North Queensland Promotions Bureau Tourism Task Force
Mr Andre Maestracci, MBE	Ansett Transport Industries Limited
Mr David Mazitelli	Commonwealth Department of Tourism
Mr Dave Perkins	Queensland Department of Environment and Heritage
Mr Jim Wallace	Association of Marine Park Tourism Operators and Quicksilver Connections
Mr Wally Ziegelbauer	Aboriginal and Torres Strait Islander interests

The Queensland Government established a Queensland Marine Parks Consultative Committee in 1991. The Committee's functions are to:

- enhance communication between parties involved in Queensland marine park issues
- provide advice to the Queensland Minister for Environment and Heritage and to the Queensland Department of Environment and Heritage on Queensland marine parks.

Membership has been the same as that of the Great Barrier Reef Consultative Committee, except that Mr Ted Loveday was the member on the Queensland Committee representing the Queensland Commercial Fishermen's Organisation. Unlike the Commonwealth's Committee, the Queensland Committee is not established under legislation. The Great Barrier Reef Ministerial Council has agreed to this arrangement.

In practice, the Great Barrier Reef Consultative Committee has been functioning generally as a joint body, with separate consideration of matters occurring only when those matters relate only to the Great Barrier Reef Marine Park or to Queensland marine parks. A comprehensive set of procedures has been developed to assist the operation of the two Committees.

The full additional costs of operating the combined Consultative Committees to allow the consideration of Queensland-only matters (including administrative support) have been met by the Queensland Government through an arrangement under the external assistance and advice function of the Authority. The Committees have been served by the secretariat in the Townsville office of the Authority. Mr Chris Smalley is Secretary to both.

No meetings of either Committee were held during 1992-93.

GREAT BARRIER REEF MINISTERIAL COUNCIL

The Great Barrier Reef Ministerial Council was established in 1979 to coordinate policy on the Reef between the Commonwealth and Queensland Governments at the Ministerial level. The Council comprises four Ministers, two from each government.

The Canberra Office of the Authority provides the secretariat for the Council. Costs are shared by each government.

19th Meeting Cairns, 3 June 1993

The meeting was attended by:

The Hon. Ros Kelly, MP Minister for the Environment, Sport and Territories (Convenor)

The Hon. Michael Lee, MP Minister for Tourism and Minister for Resources

The Hon. Molly Robson, MLA Queensland Minister for Environment and Heritage

The Hon. Ed Casey, MLA Queensland Minister for Primary Industries.

The following business was considered:

COOPERATIVE RESEARCH CENTRE

Ministers were pleased with progress in establishing the Cooperative Research Centre for Ecologically Sustainable Development of the Great Barrier Reef, announced by the Prime Minister in December. It was to begin operation on 1 July 1993 and will be based in Townsville.

AUTHORITY MANAGEMENT EXPERTISE

Ministers noted progress of the Authority's External Services program which allows the Authority to provide its unique planning and management expertise to other governments and countries on a commercial basis.

ENVIRONMENTAL MANAGEMENT CHARGES

Mrs Ros Kelly provided details to the Council of the new Commonwealth system of environmental management charges on commercial operators which will begin on 1 July 1993 after four years of consultation with affected industry groups. The charges will recover some of the Commonwealth Government's costs of managing commercial activities in the Marine Park and will be used for research, education and management.

OIL SPILL PREVENTION

Ministers agreed the governments must continue to work cooperatively to reduce the risks of shipping accidents and more effectively respond to spills of oil and other toxic substances.

Ministers agreed that the introduction of compulsory pilotage in 1991 has been a significant step forward in reducing the risk of shipping accidents.

Ministers endorsed the new training and licensing arrangements for ship's pilots working in the Reef Region which are being introduced from 1 July 1993 by the Australian Maritime Safety Authority (AMSA).

Ministers also endorsed the recommendation of a shipping and oil expert group which was convened in Canberra in April by the Authority and AMSA to examine ways of reducing the risks of spills. This group recommended updating conventional charts and accelerating the development of new navigation technology, including electronic charts and satellite navigation and declaring a 200 nautical mile Exclusive Economic Zone around the entire Australian coastline. The workshop participants also concluded that closing the Great Barrier Reef to shipping is not a feasible option.

MARINE PARKS MANAGEMENT

Ministers considered the proposed activities and resources needed to implement the day-to-day management program for the next three years. They agreed to investigate methods of funding to reflect increasing demands on the Marine Park.

Ministers also noted with concern reports that some fishing boats have been targeting areas closed to fishing. The Ministers said they were determined to ensure that such illegal activities do not continue. They noted the recent purchase of large patrol vessels by the Queensland Boating and Fisheries Patrol and agreed that legislation should be changed to increase penalties for illegal fishing on the Great Barrier Reef.

MONITORING THE GBR

Ministers commended the efforts of GBRMPA, QDEH and AIMS to establish a joint reef-wide monitoring program.

RESEARCH

Ministers were informed of progress with the Water Quality, Effects of Fishing, Crown-of-thorns starfish and Torres Strait Baseline Study research programs.

OCEAN RESCUE 2000

Ministers were advised of the progress of Ocean Rescue 2000, an important initiative of the Commonwealth Government being developed by the Department of the Environment, Sport and Territories. This program seeks to involve the Commonwealth and State governments as well as industry and other interest groups, working together to promote conservation and better management of coastal and marine resources. The planning and management expertise of the GBRMPA, especially as it relates to the multiple-use of large ecosystems, is being made available to the States and Territories through this program.

25-YEAR STRATEGIC PLAN

The development of the 25-Year Strategic Plan for the Great Barrier Reef World Heritage Area continued during 1992-93. The Strategic Plan, which has created a 25-year vision for the World Heritage Area, and long- and short-term objectives to achieve that vision, has directly involved over 60 organisations including user groups (e.g. tourist operators, fishing interests, scientists), interest groups (conservationists, canegrowers), Aboriginal and Torres Strait Islanders and federal, state and local government agencies. Many more individuals and organisations have been involved throughout the process. It is intended that the final agreed Plan will be incorporated in the activities of all involved organisations. The Plan development has been guided and facilitated by an independent consultant, Kayt Raymond, of Kayt Raymond and Associates, to ensure expert advice on the process and joint ownership of the Plan; it is not a GBRMPA plan - it belongs to all participants.

The development of the Plan started in July 1991 and involved a series of workshops, initially with non-government interests and followed by one of government interests. Subsequently, a Planning Team representing all interested parties met periodically to develop and refine the Plan, based on the feedback received between workshops. A wider period of public participation was held from May to July 1992 and a series of communication strategies for specific groups was carried out to obtain a wide range of views. The Plan was then further refined over a series of Planning Team workshops which took into account the comments from the public, from a series of focus groups, from government agencies and from other organisations and individuals participating in the development of the Plan.

The Plan's target completion date of November 1992 has been delayed by the implications for the Plan of the Mabo High Court decision, as well as intergovernmental, jurisdictional, funding, ports and shipping and the World Heritage Area mining issues. These issues are believed to have been largely resolved and it is anticipated that final endorsements or confirmation of previous endorsements will be sought early in 1993-94.



More than sixty different interest groups have been involved in scores of consultative meetings over the past two years.

The Plan is believed to be a world first, both in the style of complex joint decision making and in the scale and scope of the Plan itself. Although it has not yet been finalised, it has been used as a basis for several other projects, including the development of the successful application for funds for the Cooperative Research Centre for Ecologically Sustainable Development of the Great Barrier Reef. The essence of the 25-Year Strategic Plan has also helped shape the National Coastal Conservation Strategy, the Australian Committee of the International Union for the Conservation of Nature and Natural Resources (AC IUCN) Marine Subcommittee Marine Conservation Strategy, and the Great Barrier Reef Marine Park Authority Corporate Plan.

CORPORATE PLANNING

The intention of corporate planning is to establish clear strategic direction for the Authority, to involve staff in the process of setting realistic goals and strategies for the organisation, and to establish a clear link between the Authority's operational plans and the outcomes the organisation wishes to achieve.

During 1992-93, the Authority finalised its first five-year corporate plan for the period of 1992 to 1997.

The corporate planning process involved all staff in the identification of the critical issues facing the Authority and the ways in which those critical issues would be addressed. Providing the opportunity for all staff to participate in the corporate planning process is vital to ensuring the plan belongs to the organisation as a whole, and that objectives are not developed by the Executive of the organisation in isolation from project managers and staff, all of whom play a role in implementing the plan.

The Authority is relatively new at corporate planning, and steps have been taken over the past year to improve the corporate planning process, linking it to annual program planning and individual work program development. The corporate planning process has also been linked to budget development, as a step to ensure that the objectives of the Corporate Plan are not simply 'wish lists', but are based on a realistic assessment of financial and human resources of the organisation.

The Corporate Plan is also an important tool in monitoring the performance of the organisation. The Authority's performance in working to meet the one-year objectives of the 1992-93 Corporate Plan is outlined in this Annual Report.

PLANNING AND MANAGEMENT

This section aims to conserve the Great Barrier Reef while allowing reasonable use by recommending the declaration of sections of the Marine Park; developing and reviewing zoning plans, regulations, and other management strategies; providing policy advice on management of the Marine Park; achieving cost-effective implementation of zoning plans, regulations, and other management strategies in conjunction with Queensland government agencies and others; and by involving the community in these processes.

Critical to the achievement of the Planning and Management objective is the gathering and analysis of information on the character, resources, use and amenity of the Great Barrier Reef Region.

The Planning and Management Section's major achievements for 1992-93 were:

- the establishment of a program to involve Aboriginal and Torres Strait Islander communities in Marine Park management
- management planning for heavily used areas of the Park, with particular focus on the Whitsunday region and the development of community co-management proposals for Low Isles
- the establishment of a cooperative program with the Queensland Department of Environment and Heritage (QDEH) and the Wet Tropics Management Agency (WTMA) to develop volunteer groups in communities within and adjacent to the Wet Tropics and Great Barrier Reef World Heritage Areas
- the successful completion of a staff exchange program with the National Oceanic and Atmospheric Administration (NOAA) in Florida, USA
- assessment, with QDEH, of the resources necessary for effective day-to-day management of the Park as a follow-up to the review of management undertaken by Professor A Gilmour and other staff at Macquarie University
- further development of a public moorings strategy.

ABORIGINAL LIAISON

The Authority has appointed an Aboriginal liaison officer to assist in developing communications with Aboriginal communities and urban groups. Management issues in the Marine Park include concern over the level of turtle and dugong hunting, balanced against the consideration for the traditional and cultural values held by Aboriginal people. This consideration is a requirement of the Marine Park Regulations when considering an application for permission for traditional hunting.

COMMUNITY RANGER PROGRAM

In February 1993 GBRMPA was funded by the Australian Nature Conservation Agency (ANCA) to contract Aboriginal and Torres Strait Islander community councils to employ part-time rangers to carry out work and receive training in marine activities in the Great Barrier Reef Region.

During the project's five-year establishment phase, eight community-based rangers will have joint responsibility for the conservation and management of marine park areas adjacent to their communities.

By the end of 1993, Aboriginal and Torres Strait Islander people employed on this project will be graduates of the Cairns TAFE Ranger Course and are therefore ideal contract employees for this project.

The project will be closely monitored by a working group consisting of representatives from the Authority, other management and representative agencies, and with the communities and the rangers themselves.

The Authority and QDEH staff have completed preliminary consultations, and contracts are being negotiated with Aboriginal and Torres Strait Islander community councils to start and manage the project.

VOLUNTEER PROGRAM

The value of effectively established volunteer programs as an aid to management was recognised by the Authority, QDEH and the Wet Tropics Management Authority (WTMA). This resulted in an Authority staff member being seconded to the WTMA to set up volunteer groups in communities within and adjacent to the Wet Tropics and Great Barrier Reef World Heritage Areas. The majority of the groups to be established by this program will be aligned to the Wet Tropics area but, by arrangement between the Authority and QDEH, volunteer groups set up in centres adjacent to the Great Barrier Reef Marine Park will have a joint terrestrial and marine focus to their work.

The first volunteer group was set up in the Whitsunday region.

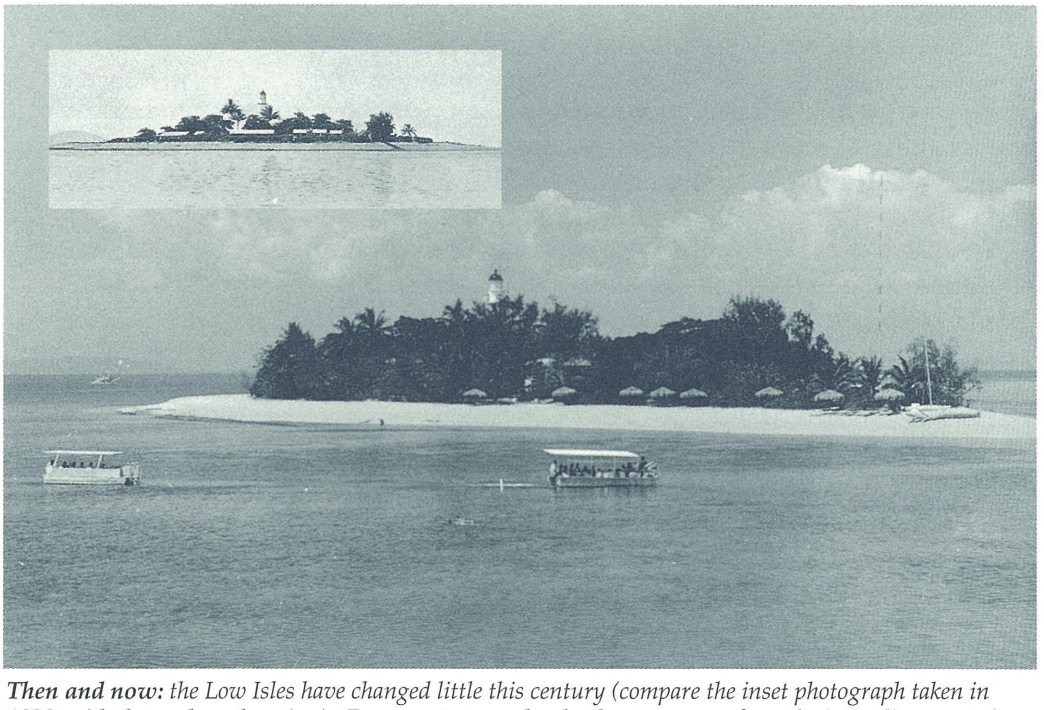
TURTLE AND DUGONG MANAGEMENT STRATEGY

Internationally, dugong have been declared vulnerable to extinction, while many species of marine turtles are endangered. In Australia, the green, hawks bill, olive ridley and leatherback turtles are listed as vulnerable while the loggerhead turtle is endangered. The Authority has therefore decided there is a need for a turtle and dugong management strategy in the Great Barrier Reef Marine Park, which is home to significant numbers of these species.

In July 1992 the Authority began developing management strategies for the protection of turtles and dugongs, which will help maintain these populations at ecologically sustainable levels. This is to be achieved while giving all consideration and respect to the traditional and cultural values of Aborigines and Torres Strait Islanders in coastal regions of the Marine Park.

During the 1992-93 year, there has been consultation with Aboriginal and Torres Strait Islander communities, researchers and management agencies to talk through problems relating to day-to-day management. The development of this management strategy has required coordination with, and the cooperation of, QDEH and ANCA in relation to their conservation management and recovery plans.

LOW ISLES



Then and now: *the Low Isles have changed little this century (compare the inset photograph taken in 1929, with the modern-day view). From next year, a local volunteer group from the immediate coastal community centred on Port Douglas will work closely with the Authority in maintaining the historic lighthouse and the ecology of the islands.*

Main photo courtesy of Quicksilver. Inset - Photo by J.M. Yonge. Published in British Museum (Natural History) GBR Expedition 1928-29 Vol 1 Number 1 (1930)

A Low Isles Management Plan was developed during 1992-93 and adopted by the Authority. Endorsement by QDEH as a joint plan is still awaited.

During the development of the Low Isles Management Plan, staff of the Authority and QDEH had extensive contact with local interests, including tourism operators, conservationists, recreational users and Aboriginal groups, concerning the future management of Low Isles when the light station staff are withdrawn by the Australian Maritime Safety Authority (AMSA). The Low Isles Preservation Society, a widely supported community group representative of most interests in the area, was formed as a result of these discussions. The Society has proposed an innovative cooperative arrangement for Low Isles, in which Marine Parks management would supply a ranger and base funding, with the Society arranging support services to keep costs down significantly.

LIGHT STATIONS

Negotiations took place during the year on the proposed transfer of a number of former light station reserves from AMSA to this Authority. As Commonwealth lands, these reserves already form part of the Great Barrier Reef Marine Park. AMSA has decided to dispose of light station properties that have become surplus to its requirements as a result of a program to automate navigation aids. Another Commonwealth Government agency, Australian Estate Management, is also negotiating with the Authority on the possible transfer of some of its former light station properties in the Great Barrier Reef Region.

The properties vary greatly and include parts of islands, complete islands and cays in all Sections of the Marine Park. Many have outstanding natural conservation and historical values. Negotiations are expected to be completed during 1993-94.

WHITSUNDAY MANAGEMENT PLAN

The Whitsunday region of the Central Section has experienced considerable tourist and residential growth over the past decade, resulting in increased use of, and effect upon, the Marine Park. This is projected to continue and 3.6 million visitor nights are expected to be spent in the region by the year 2000, a three-fold increase over 1990-91. Following considerable public consultation to identify park management issues, a draft plan of management for the island and marine parks has been prepared by a GBRMPA and QDEH planning team. Strategies in the draft plan reflect extensive discussion with staff of both agencies, other government departments, representatives of interest groups and the general public. On 28 April 1993, the Authority approved the draft plan for release for formal public comment.



During the year, the Authority worked closely with the Queensland Department of Environment and Heritage to formulate the first draft Management Plan for the Whitsunday Island Region. Close cooperation between Commonwealth and State Government agencies has been a hallmark of this project.

PROPOSED MANTA RAY BAY SPECIAL MANAGEMENT AREA

Manta Ray Bay is a small bay in the Whitsunday Group which has become a popular dive destination with the expansion of tourism in the region. However most vessels anchor on or near the Bay's inshore coral reef for protection from strong currents near the headland. This results in damage to the coral. In August 1992, the Authority decided to designate a Special Management Area at the Bay to prohibit anchoring and the entry of vessels longer than 5.5 metres, except by permit. The decision was made with widespread public support following extensive public consultation. Designation of the Area will occur following mooring installation.

BRAMBLE REEF REPLENISHMENT AREA

Following public consultation and evident concern about a decline in the number of bottom-dwelling fish at Bramble Reef off Palm Island in the Central Section, the Reef was closed to fishing for three years from January 1992, except for trolling operations between May and January. Pre- and post-closure surveys of fish stocks at Bramble and at equivalent nearby reefs that remain open to fishing, indicate that there has been a greater increase in the fish population at Bramble. A group of community, fishing industry and management agency representatives met three times during the year to advise

the Authority on matters related to the closure. Issues considered included the effectiveness of closure, surveillance and enforcement, interpretation of the 'float-line' fishing method, and possible re-opening strategies.

REGIONAL AND SHIRE PLAN LIAISON

Activities and developments on mainland areas and islands bordering the Marine Park can have significant direct and indirect effects upon the Park. Conversely, management activity in the Park may affect adjacent land. It is therefore important to maintain close liaison on regional and local planning issues with other agencies. The Planning Section of the Authority has commented during the year upon strategic plans being prepared by the Whitsunday, Townsville, Miriam Vale, Cardwell and Johnstone River shire councils, and a Whitsunday Tourism Strategy being prepared by the Queensland Department of the Premier, Economic and Trade Development.

PUBLIC MOORINGS

Damage from anchoring on corals is causing concern at a number of sites in the Park. Installation of appropriately designed moorings is one possible solution to this problem. Wherever appropriate, regular commercial users of a site are required to install their own moorings. However, at sites with very limited mooring space and a wide range of users it may be necessary to install public moorings. Following the expert design of a moorings system in 1992, tenders were called during the year for installation and maintenance of a limited number of moorings. Those tenders are now being assessed. As a parallel project, plans are under lay to bring experts from the USA with wide experience in mooring design and installation to test different designs and methodologies.

DAY-TO-DAY MANAGEMENT

In accordance with agreements between Queensland and the Commonwealth, day-to-day management of the Great Barrier Reef Marine Park is carried out principally by agencies of the Queensland Government, subject to the Great Barrier Reef Marine Park Authority.

Several other organisations are involved in some aspects of the day-to-day management of the Great Barrier Reef Marine Park, including the Queensland Boating and Fisheries Patrol, the Queensland Water Police, the Australian Maritime Safety Authority, Coastwatch and the Australian Federal Police.

It is anticipated that total funding levels for 1993-94 will not be significantly different from last year. Expenditure on day-to-day management activities for 1992-93 is detailed in table 1 and cost sharing arrangements for the State and the Commonwealth for the same periods are outlined in table 2.

TABLE 1

PAYMENTS TO QUEENSLAND DEPARTMENT OF ENVIRONMENT AND HERITAGE FOR DAY-TO-DAY MANAGEMENT, BY REGIONS

	1992-93 $	1993-94 (estimated) $
Head Office		
Salaries & Operating	617 691	647 000
Capital (Inc. Post Initial)	101 309	100 000
Central Coast Region		
Salaries & Operating	1 423 189	1 561 000
Capital (Inc. Post Initial)	583 312	361 000
Northern Region		
Salaries & Operating	2 122 679	2 037 000
Capital (Inc. Post Initial)	494 321	204 000
Far Northern Region		
Salaries & Operating	1 551 918	1 812 000
Capital (Inc. Post Initial)	177 082	814 000
All Regions		
Salaries & Operating	5 715 477	6 057 000
Capital (Inc. Post Initial)	1 356 024	1 479 000
TOTAL	**7 071 501**	**7 536 000**

TABLE 2

COST SHARING FOR DAY-TO-DAY MANAGEMENT

	1992-93 $	1993-94 (estimated) $
Queensland		
Salaries, Wages & Operating	2 857 738.50	3 028 500
Post Initial Capital	281 261 50	279 500
Total	3 139 000	3 308 000
Commonwealth		
Salaries, Wages & Operating	2 857 738.50	3 028 500
Post Initial Capital	281 261.50	279 500
Initial Capital	793 501	920 000
Total	3 932 501	4 228 000
TOTAL	**7 071 501**	**7 536 000**

PARK MANAGEMENT REVIEW

The review of day-to-day management conducted by Gilmour et al. in 1991 highlighted the need for extra staffing throughout the Park but failed to identify what level of resources was necessary and how those resources could be applied. As a follow up, Ms Judy Barnes, on secondment from the Australian Audit Office, conducted an assessment of resources which identified that resource needs for day-to-day management over the next five years totalled $58 million. Of this, $15 million would be required for capital equipment to provide a meaningful field presence in the Marine Park, particularly in the Far Northern Section as a pro-active initiative to address escalating use of the Park. An additional 49 staff would also be required.

STAFF EXCHANGE PROGRAMS

During the year a Director of the section participated in a staff exchange program with the National Oceanic and Atmospheric Administration (NOAA) in the USA. A senior NOAA officer, Mr Bill Harrigan, with wide experience in the United States' National Marine Sanctuary program, undertook duties as Director of the section for six months from November 1993. Concurrently, the Director of the Authority's Planning and Management Section, Peter McGinnity, worked with field staff in the Florida Keys. This exchange provided a number of positive outcomes for both agencies and the possibility of similar exchanges in the future will be explored.

TRAINING

The Authority has continued its commitment to staff training and education as a means to achieving a high level of professionalism amongst day-to-day management staff. This has been accomplished through training programs for Marine Park inspectors from the Queensland Department of Environment and Heritage, the Queensland Boating and Fisheries Patrol and the Australian Maritime Safety Authority.

This year two one-week courses, 'An Introduction to Marine Park Management', were conducted to provide basic education to staff on Marine Park management. Staff from both GBRMPA and QDEH attended.

SURVEILLANCE AND ENFORCEMENT

The purchase of two fast, offshore vessels by the Queensland Boating and Fisheries Patrol (QB&FP) this year added a new dimension to surveillance of remote areas of the Marine Park this year. Building upon the successes of Operation *Barrier Protection* in 1991-92, these vessels conduct multi-agency surveillance and enforcement patrols, often with a mixture of QDEH and QB&FP staff. Coordinating closely with QDEH and Coastwatch aerial surveillance patrols, these vessels have enabled the apprehension of a number

of commercial fishing operators for illegal fishing in the Marine Park.

Enforcement issues continued to focus heavily on commercial extractive activities in closed areas. In April the Authority received additional information about illegal fishing in areas offshore from Townsville. Day-to-day management agencies countered these infringements with a coordinated patrol schedule involving aircraft, vessels and onshore intelligence gathering. The operation resulted in early successes with the apprehension of four persons allegedly fishing illegally in Marine National Park 'B' zones.

A Greek vessel was prosecuted by its own government for discharging oil in the Marine Park during the year. The vessel and the discharge were sighted by a routine QDEH surveillance flight and the matter investigated by AMSA. In accordance with procedures laid down by the International Maritime Organisation, the details of the incident were handed to the Greek Government where a successful prosecution was subsequently undertaken.

A review of the way statistical data is collected by Coastwatch and QDEH during aerial surveillance flights was started. The use of aerial surveillance to detect and deter offences was also improved through the combination of forward air support for surface patrols and regular data collection flights.

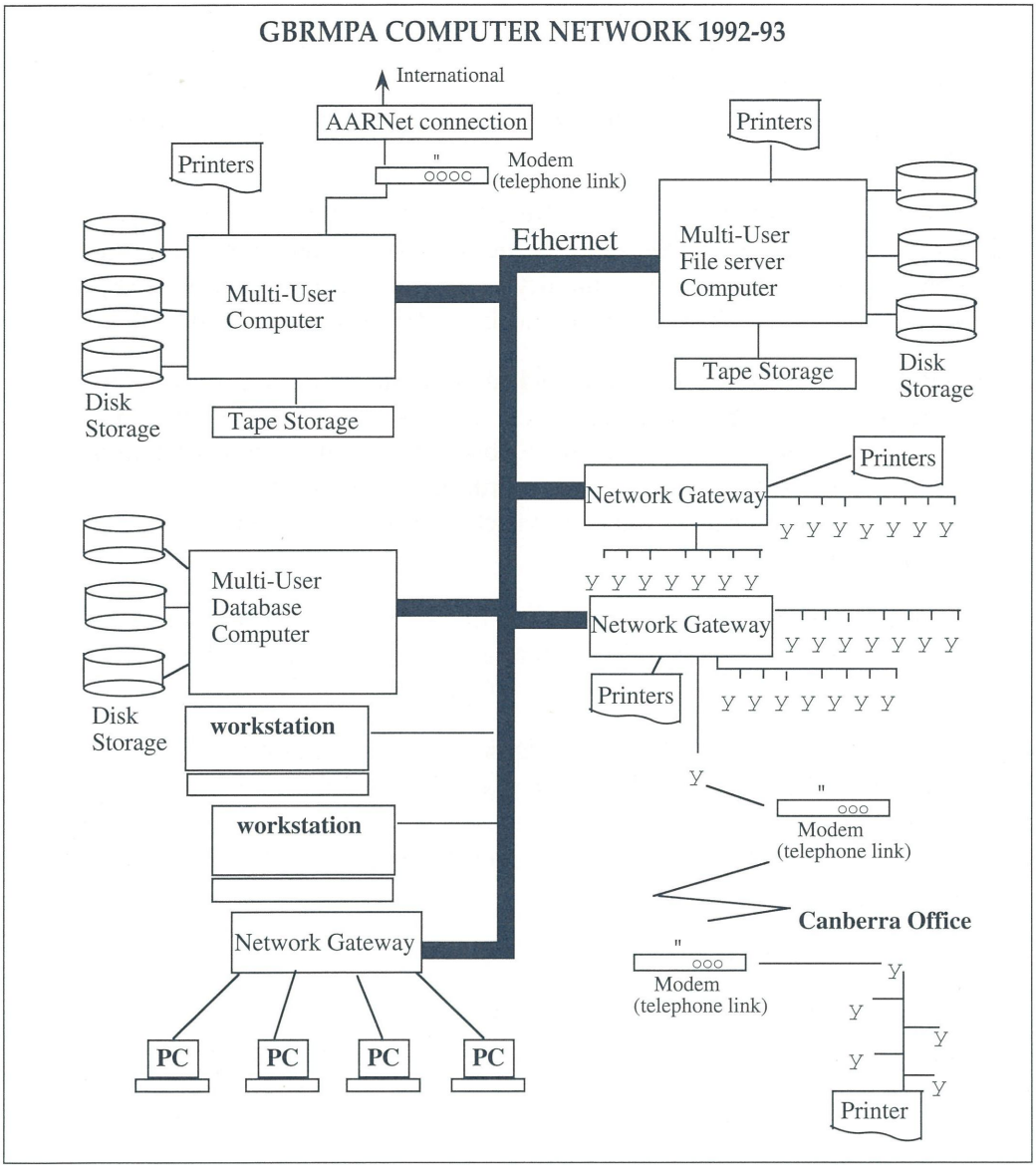
COMPULSORY PILOTAGE

The master of the Russian registered vessel the *Sokofal Star* was prosecuted and fined $1000 for navigating through a compulsory pilotage area without a pilot. This was the second such prosecution since the introduction of compulsory pilotage in October 1991. Both State and Commonwealth Parliamentarians and members of the public expressed great concern over the apparently low level of the fine. The magistrate had taken into account extenuating circumstances which he felt dictated the need for a low penalty.

In response to this GBRMPA and AMSA produced a briefing paper for all Public Prosecutors and Australian Federal Police Prosecutors to enable them to impress upon the courts the importance of the need for pilots. The briefing paper makes particular note of the potential dangers that exist to the Great Barrier Reef and coastal areas from groundings and other navigational incidents involving merchant ships, especially tankers.

Some exemptions from the compulsory pilotage requirements were granted by AMSA following a comprehensive individual assessment of the vessel, its operation and the qualifications and experience of the crew, as well as an assessment of the potential environmental dangers by GBRMPA. A number of requests for exemption have been refused because carriage of a pilot was deemed to be in the best interests of protecting the Reef in these instances.

FIGURE 2



COMPUTING

The rearrangement and increase in office space during the year made expansion of the computer network necessary. With the relocation of administration to another building, it was decided to make use of fibre optic cable to extend the network to them, and simultaneously to include network access to the offices of the Great Barrier Reef Aquarium. The opportunity was also taken to simplify and upgrade the network cabling. Microcomputer hardware has been upgraded to a revised minimum standard to cope with the increased demands of the most recent software packages.

Considerable work has taken place on upgrading the interface for existing GBRMPA databases to maximise accessibility and use at remote locations. They now make better use of the enhanced capabilities provided by recent software versions on both microcomputers and UNIX minicomputers and are designed to facilitate access from QDEH when wide area network links become available.

The new version of the Great Barrier Reef Permits database which was redeveloped last year has been fully implemented and use of the old version has been discontinued. The new facility is simple to use, provides ready access to more relevant information, and is contributing to productivity.

New databases developed this year include a 'meta' database, which will contain details of all GBRMPA databases, reports and raw data, and an observations database to record routine observations of Marine Park areas. Guidelines for the establishment and maintenance of databases have been developed and sections have agreed to include data management in appropriate duty statements.

The changing computing needs of staff in all sections of the Authority are now being more closely monitored through a user survey. A manual outlining the use of information technology has been prepared.

A Financial Management Information System was purchased and installed during the year. The network has been extended to include this system. Work is in progress to ensure suitable security and back-up are in place, and to provide access to the System for staff in other sections who have financial reporting responsibility.

GEOGRAPHICAL INFORMATION SYSTEM

Staff working with the Geographical Information System this year have been making use of the GIS for specific projects including a prototype digital elevation model of Heron Island, maps of Green Island, Low Isles and other key sites, digitising of seagrass beds and dive sites, and representation of data collected for the Whitsunday Management Plan.

The GIS has been used to relate physical, biological and socioeconomic information from a variety of sources to geographical areas in the Marine Park. Linking all GBRMPA databases and the zoning maps with the GIS will provide a basis for detailed analysis and spatial representation of data.

CONSULTANTS

External consultants were used on projects where it was efficient to use expertise in another agency or where there were benefits in having discrete parts of a project undertaken by a consultant. The consultancy services used in 1992-93 are listed in table 3.

TABLE 3

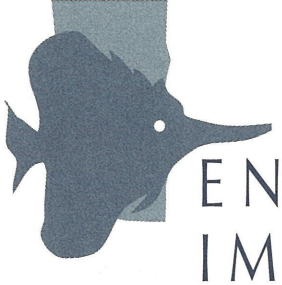
CONSULTANCY SERVICES

Consultant/Organisation	Project	Expenditure $
Australian Land Information Group	Aerial Photography	42 879 .00
G A Glanville and Coy	Design of Public Moorings	1 000.00
Environmental Mooring Inter.	Moorings	26 315.00
Mapping & Monitoring Technology Pty Ltd	Digitising Zoning Plan Maps	20 000.00
Queensland Dept Environment and Heritage	Whitsundays Management Plan	2 149.00
Queensland University of Technology	Review of Aerial Surveillance	13 740.00
S Williams	Preparation of Volunteer Manual for Whitsunday Inform. Guides	700.00
K Dwyer	Database development	31 551.67
A Walker	Database development	26 128.46
M Crowd	User support	14 605.68
P Claussen	User support	8 342.88
I Bohm	User support	2 264.00
J Shearin	GIS support	4 791.60
G Trinidad	Database development	3 500.00

1993-94 PROSPECTS

The specific priority areas for 1993-94 are:

- the commencement of the review of the Far Northern Section Zoning Plan including the investigation of more efficient methods of regional planning that can be applied to both existing and future projects
- the continuation of the program to involve Aboriginal and Torres Strait Islander communities in Marine Park management including the establishment of a community ranger program
- further development of the GIS
- continuation of the program to build a better relationship with day-to-day management agencies including the refinement of the aerial surveillance program.



ENVIRONMENTAL IMPACT MANAGEMENT

The aims of the Environmental Impact Management Section are to protect the natural and cultural qualities of the Great Barrier Reef Region while allowing for reasonable use by achieving efficient assessment of environmental impacts of proposed activities and effective monitoring and management of permitted activities at ecologically sustainable rates. Equitable allocation of the use of Marine Park resources must also be achieved, along with provision of timely legal advice to staff concerning permitted activities and other aspects of the Authority's responsibilities.

PERFORMANCE DURING 1992-93

During the past year:

- 619 permits were assessed and issued for tourism, research, traditional hunting and other activities
- permit assessments for 40 major projects were finalised, with over 60 projects in the process of assessments as of June 1993
- cross-cultural processes were developed for the management of traditional hunting by Aboriginal and Torres Strait Islander people, focusing on the Mackay area
- a new permits database was introduced which substantially reduced the backlog in permit applications
- a system of Marine Park charges for commercial permit holders was developed after extensive consultation and negotiation with relevant industries
- legislation was reviewed, and new legislation developed and enacted, primarily to allow introduction of Marine Park fees
- policies were developed particularly in relation to fees, longer-term permits, and fish feeding
- resources were provided for an Administrative Appeals Tribunal appeal, as well as several requests to the Authority for reconsideration of permit decisions

- advice and expertise was provided for the development of management plans particularly for the Whitsunday parks.

IMPACT ASSESSMENT AND COMPLEMENTARY MANAGEMENT

The Great Barrier Reef Marine Park is managed as a multiple-use World Heritage Area. The Zoning Plans for each Section of the Marine Park specify which activities require formal permission from the Authority.

A major tool of the Authority in the management of human activities is the use of a permits system which allows for assessment, regulation and control of environmental impacts associated with activities such as tourism, mariculture, construction, research and traditional hunting.

Most assessments are done in consultation with day-to-day management officers from the Queensland Department of Environment and Heritage (QDEH). Many assessments require the involvement of officers from other sections of the Authority and from other government agencies, while on some occasions the Authority also sought external expert advice for an independent review of proposals.

Activities for which assessments are conducted by the Environmental Impact Management Section include:

- dredging
- fuel barge operations
- mariculture
- research programs
- tourism
- traditional hunting, and
- the establishment and operation of structures such as jetties, marinas and navigational aids.

The assessment of applications to conduct commercial activities is done on a cost recovery basis using a permit application assessment fee schedule. Particular care is taken to ensure that there is no duplication of charges for commercial operators whose activities are managed by more than one government agency.

Certain permits (aircraft operations, collecting and moorings) are assessed and granted under powers delegated to officers of QDEH. During the year the Authority delegated the power to assess and grant permits for educational programs to QDEH.

The section's work is divided into four programs:

- Major Projects
- Tourism, Research and Traditional Hunting Permits
- Marine Park Charging
- Legal Program

MAJOR PROJECTS PROGRAM

The Major Projects Program assesses those applications that need careful consideration because of their complexity and potential for substantial environmental impacts. This is done by working closely with each applicant. Officers from other sections of the Authority are involved in a coordinated approach which calls for close cooperation with other government agencies.

The agency which takes prime responsibility for a project depends whether the proposal is inside or outside the Commonwealth waters of the Great Barrier Reef Marine Park. During the past year, the Authority was the lead agency for 31 of the projects for which Marine Parks permits were issued, while the QDEH took the lead for 9 projects located in the Great Barrier Reef Marine Park. Eight project applications were cancelled by applicants during the year.

A list and map of all major project developments in the Great Barrier Reef Marine Park is presented as an appendix to the annual report (see inside back cover). Several examples of major project assessments undertaken during the year stand out.

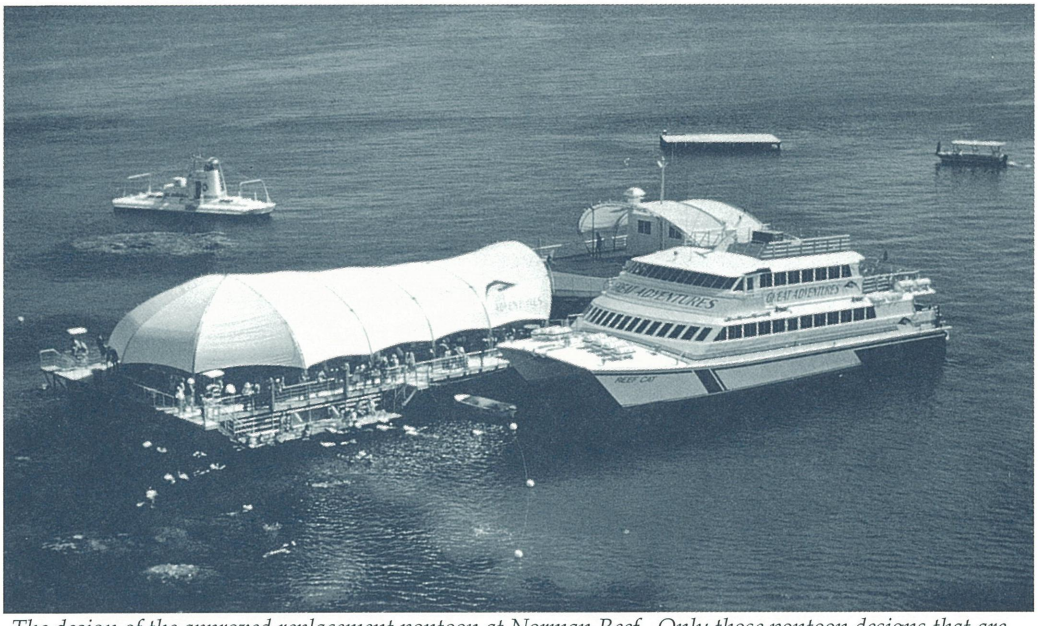
Heron Island - foreshore and harbour works

On 14 August, P&O Resorts applied to the Authority for permission to repair erosion damage to the foreshore and harbour areas caused by Cyclone Fran, and to correct previous harbour works which were accelerating reef flat drainage and loss of beach sediment.

The project was originally designated under the Commonwealth's *Environment Protection (Impact of Proposals) Act 1974* on 29 September 1992. The Minister decreed that the assessment could be undertaken through the Regulations to the *Great Barrier Reef Marine Park Act 1975.* A technical advisory group was established to recommend the most appropriate solutions to harbour filling and erosion problems. This project is a good example of cooperation between management agencies, the tourism industry and scientific experts in developing environmentally friendly solutions that are acceptable to all parties involved.

Norman Reef and Moore Reef - upgrading of tourist pontoons

Great Adventures (a major tourist operator from Cairns) sought approval to replace its two existing pontoons at Norman Reef and Moore Reef with new ones. The pontoon design and model approved by the Authority includes a number of additional features which met the needs of both parties. These features included a wider range of activities for tourists and the installation of a mooring system which can weather a category 4 cyclone.



The design of the approved replacement pontoon at Norman Reef. Only those pontoon designs that are approved by a naval architect will be assessed by the Authority for permit approval.
Photo courtesy of Great Adventures

Arlington Reef - mariculture operation

Reefarm Pty Ltd was granted a one-year permit to establish a mariculture operation at Arlington Reef. The permit was approved after a detailed assessment by officers from the Authority and the QDEH in consultation with officers from the Queensland Department of Primary Industries.

Reefarm has an established clam hatchery and nursery facility at Fitzroy Island. The company's major interest lies in producing *Tridacna crocea* (burrowing clam) for sale to domestic markets, Japanese sushi markets and to the European aquarium trade.

Island Resorts - the upgrading of sewage treatment facilities

Sewage contains high levels of nitrogen and phosphorous compounds which have been shown to cause damage to coral reef systems overseas.

The Authority, working with the the Water Quality Advisory Committee, developed a policy in 1991 to address the concerns of long-term degradation to the quality of water in the Great Barrier Reef Marine Park.

The Authority's policy requires that all existing tourist resorts upgrade sewage treatment facilities to either secondary or tertiary treatment levels by 1996. The treatment in primary systems removes solids, while secondary treatment also removes the majority of disease-producing organisms. Any new resorts must install appropriate facilities during construction. As a condition of their permits, the resort owners have to submit quarterly reports to the Authority assessing the outfall.

Tertiary treatment plants remove solids, most pathogens and more than 80% of nutrients including nitrogen and phosphorous, from the effluent, before discharge into the Marine Park.

Since the introduction of this policy, several resorts have taken steps to comply. Existing resorts such as those on Hamilton Island, Bedarra Island and Daydream Island have extended their offshore outfalls into deeper water and use a large proportion of the secondary treated sewage to irrigate the gardens surrounding the resorts. *Club Med* at Lindeman Island has converted totally to treatment of sewage to tertiary level.

Sea Installations - exemption certificates

There were three projects that required the installation of a structure and associated moorings in the Marine Park, but were granted exemption certificates to the *Sea Installations Act 1987.*

Each project was assessed in detail under the Sea Installations Act as well as the Great Barrier Reef Marine Park legislation. The three projects were:

- Hamilton Island Enterprises Pty Ltd - tourist pontoon at Hardy Reef
- Rabjali Pty Ltd - tourist pontoon at Lady Musgrave lagoon
- Arlington Pearls Pty Ltd - mariculture operation at Arlington Reef.

Management plans - project team involvement

Staff in the Major Projects Program were involved in seven working teams developing plans, jointly with QDEH and others, for:

- Lizard Island and Reef
- Low Isles and Reef
- Green Island and Reef

- Offshore Cairns Strategy
- Franklands Islands Group
- Beaver Cay and Reef
- Whitsunday Management Area.

Policy development

Policy development was started on fifteen issues relating to impact management and permits; five were completed, including guidelines for applicants and permit holders. These were:

- caretaker accommodation on approved structures
- fish feeding guidelines in association with approved tourist programs
- guidelines for researchers
- the establishment and maintenance of pontoon facilities
- the use of touch tanks as part of approved tourist programs.

Tourist programs - new Marine Park fish feeding guidelines

The guidelines address issues such as the types of food and feeding quantities suitable for the welfare of marine fish species.

Guidelines were developed after a process of investigation and consultation involving representatives of QDEH, tourist operators and industry groups, with technical support provided by officers of the Great Barrier Reef Aquarium.

The new guidelines came into effect from February 1993 and are available through all QDEH Marine Park offices and the Authority.

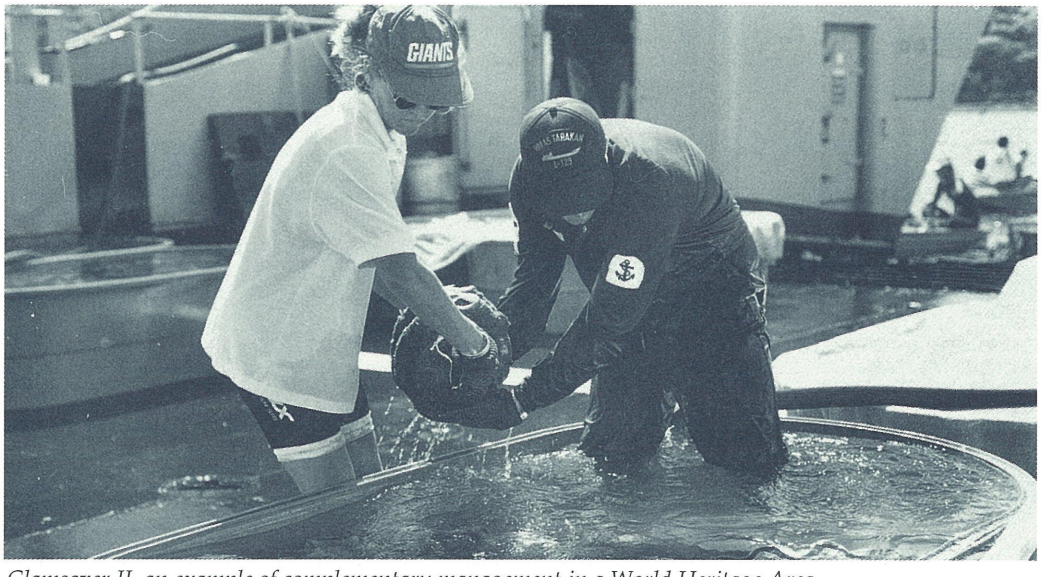
Orpheus Island - Operation Clamsaver II

In May 1992 more than 5000 giant clams Tridacna *gigas* were successfully relocated from Orpheus Island's reef flat to a research site on the Great Barrier Reef during Operation Clamsaver I. In light of the success of this joint effort involving the Royal Australian Navy, GBRMPA, QDEH and James Cook University, Operation Clamsaver II was carried out during March and April 1993. A further 2500 clams were shipped to a second research site in the Marine Park.

The clams were originally produced during a successful culture research

program run by James Cook University at its Orpheus Island Research Station.

The relocation sites out on the Reef proper will be surveyed regularly to monitor clam survival and to assess the distribution of the larvae spawning at each of the relocation sites. These findings will measure the success of relocating clams within the Marine Park, and the physical relationships reefs.



Clamsaver II, an example of complementary management in a World Heritage Area.

The number of major projects in progress has increased by over 20%, from 49 at the end of 1991-92 to 62 at the end of 1992-93. More than 50 new applications for major projects will be received for assessment in the coming financial year.

TOURISM, RESEARCH AND TRADITIONAL HUNTING PERMITS

Routine permits

The primary role of this program is to manage the processing of applications for the majority of permitted activities associated with tourism, research and traditional hunting. A close association with officers from QDEH has been established to assess and issue permits.

During 1992-93, the Environmental Impact Management Section issued 490 new permits and 67 variations to existing permits for activities in the Great Barrier Reef Marine Park. The Queensland Department of Environment and Heritage Regional offices issued 129 permits for activities in the Marine Park during the same period.

The 619 permits issued during 1992-93 was a 23% increase over the 505 issued in the previous 12 months.

This trend is expected to continue, particularly as numerous renewal applications have been received following the introduction of three-year permits in 1990.

TABLE 4

PERMITS ISSUED FOR ACTIVITIES IN THE GREAT BARRIER REEF MARINE PARK DURING 1992-93

Permit type	Number issued 1992-93
Research Programs	206
Tourist Programs	156
Collecting	111
Traditional hunting	84
Education	33
Farming of Marine Resources	7
Aircraft operations	3
Sea dumping	3
Moorings	2
Offshore Structure	1
*Any other purpose	13
Total permits issued	**619**

**Permits issued under 'any other purpose' included navigation aids, underwater observatories and fuel barge operations.*

Permits Systems Management

The permits system is designed to achieve effective environmental impact management by consistent policy decisions and an efficient processing procedure. To help achieve this, a new permits database has been established, and officers can now call on this information bank for any data on current tourism, research and traditional hunting permits.

The associated reports system is presently being refined and is producing more efficient data than the previous system. The section has installed new computer hardware to increase the speed and efficiency of the system. The ready availability of this information is proving to be a valuable tool for planning and managing activities in the Marine Park.

There were two permit workshops coordinated by Environmental Impact Management during the year, each run over two days. The more recent one

covered a wide range of topics from more effective administration of permits to developing strategies to deal with the introduction of long-term, transferable permits on 1 July 1993.

Traditional Hunting

A Council of Aboriginal Elders has been formed in Mackay to work with Marine Park managing agencies on the development of new approaches to issuing traditional hunting permits. This council will also advise on cultural and heritage values of traditional users and others in the region to help assess permit applications. This significant step has received favourable comment from Aboriginal and Islander communities in Bowen and Townsville, who want to develop a similar process in their regions.

There has been a sharp increase in the number of traditional hunting permits in recent years. In 1990-91, only three permits were issued, but this jumped to 32 the following year, and 84 were issued during 1992-93. This is seen as a clear indication that Aboriginal and Islander people are becoming more aware that, by law, they must have a permit for traditional hunting, and they are seeking to 'do the right thing'.

MARINE PARK CHARGING

Environmental Management Charge

In June 1992 Mrs Ros Kelly, (then Commonwealth Minister for the Arts, Sport, the Environment and Territories) announced that from 1 July 1993 the Commonwealth Government would introduce fees for commercial use of the Marine Park. In May 1993 legislation was passed by the Commonwealth Government to allow for the introduction of the Marine Park Environmental Management Charge. Regulations to implement the charge came into force on 1 July 1993.

Extensive consultation has taken place with all commercial Marine Park permit holders. Two series of meetings (in September 1992 and in May 1993) were held in regional centres along the Queensland coast from Brisbane to Port Douglas which led to a number of follow-up meetings with specific industry sectors and individual operators. The level of the charge has been discussed with all affected groups and has generally been accepted as reasonable.

The system to be implemented is based on three criteria outlined in Mrs Kelly's June 1992 announcement:

- the charge is for commercial operators

- the charge for most operators will be equivalent to about $1/passenger/day (or part thereof)
- the fees will be levied according to the size and nature of an operation.

It was originally proposed to introduce the fee on a formula basis, however, tourist operators felt the number of passengers carried would be a fairer measure of an operator's use of the Marine Park. This system has been adopted and is accompanied by new logbooks to provide data on use and passenger numbers to the Authority. Payment of the charge will be on a quarterly basis, in arrears. Log books will be issued annually to operators in June each year.

The main types of operation exempt from the fee are private navigational aids and direct transfer operations from one part of Queensland to another. The latter have been exempted on the basis that such operations are transiting the Marine Park, not conducting tourist excursions within it. Consideration has also been given to exempting operators from paying for certain classes of Free of Charge passengers. (Commercial fishing operations do not pay the charge; they already pay a fee to fisheries management agencies.)

Benefits offered to the industry in relation to the payment of the charge include improved research, management and education programs within the Great Barrier Reef Marine Park and longer-term (six years has been recommended), transferable permits.

The revenue, estimated at approximately $1.3 million during 1993-94, will be set aside in a special fund and will go back into the Marine Park where it will be used for research, education and management.

A proportion of the funds will be directed to the recently created Cooperative Research Centre for Ecologically Sustainable Development of the Great Barrier Reef (CRC), to be located in Townsville. The tourism industry, through the Association of Marine Parks Tourism Operators (AMPTO), will be well represented on the board of the CRC which will direct research. Priorities for spending the balance of the funds will be set after consultation with the industry and the Great Barrier Reef Consultative Committee.

Changes to the Permits System

In conjunction with the introduction of the Environmental Management Charge, a number of changes have been made in relation to the current permit system. These changes, which will make permits transferable (subject to Authority approval) and granted for a longer period, have been negotiated by the tourism industry during consultation over the new charge. The new permit rules are in effect from 1 July 1993, but will only apply to those

permitted commercial operations for which the Environmental Management Charge is paid.

Review of management of impacts of commercial tourism and private recreation

A review of strategies and procedures for managing the effects of tourism and private recreation in the GBRMP is nearing completion. The object of the review is to ensure the Authority has an efficient and consistent system for such management, and in particular:

- to determine the benefits and shortcomings of the current approach, particularly in terms of the permit system for commercial tourism, and
- to explore and recommend options for management of impacts of commercial tourism and private recreation, including ways to provide a more consistent approach to management of permitted activities, and of activities not requiring permits.

To enable consultation with the major user groups regarding impacts and issues, eight regional workshops were held with tourism operators (August-September 1992) and eight with private recreational users (February 1993). Discussions to identify management options took place with regional staff of the Queensland Department of Environment and Heritage and officers of GBRMPA.

Industry codes of practice

The development of a Code of Practice for Marine Park tour operators was first raised in relation to the establishment of an Approved Operators system as a management option in the Association of Marine Park Tourism Operators (AMPTO) Tourism Strategy paper in 1990. The concept of Approved Operators was agreed to in principle by the Authority in December 1990.

The main objectives of the Code of Practice are:

- To encourage industry self management and regulation
- To increase awareness of how to conduct activities in an environmentally sensitive manner
- To promote the image of Marine Park tourism as a professional industry
- To create a sense of ownership between the industry and the environment.

The Code of Practice will continue to be developed by industry, in consultation with GBRMPA and QDEH. It is proposed that relevant parts of

the Code then become endorsed by the management agencies but the Approved Operator status will be granted by the industry when requirements laid down in the Code have been met.

LEGAL PROGRAM

Program Coordination

Section staff coordinated the provision of legal advice on a wide range of issues relevant to the operations of the Authority. This was the first year of the implementation of the 'user-pays' principle by the Attorney-General's Department which provides formal legal advice to Commonwealth government departments.

The legislative changes necessary to introduce fees for commercial operators using the Marine Park to the Great Barrier Reef Marine Park Act and Regulations were developed and enacted. Various minor amendments to the Regulations were also made.

Magnetic Quay Review

The Minister commissioned an independent review of the role of the Authority concerning the Magnetic Quay Marina development on Magnetic Island, off Townsville. The review was conducted by Mr John Whitehouse, a solicitor and consultant in local government planning and environmental law, and a former director of the NSW National Parks and Wildlife Service.

The terms of reference for the review were to investigate the procedures followed by the Great Barrier Reef Marine Park Authority in arriving at a decision to issue a permit and the Authority's management of the project.

This review concluded that the Authority acted properly within its jurisdiction and within its authority, recognising that the greater part of the proposed development was not within the Authority's jurisdiction.

Permit reconsiderations

An application to review an Authority decision was lodged with the Administrative Appeals Tribunal (AAT) by a tourist operator. The operator was appealing a decision by the Authority to allow another tourist operator further access to a location which was part of an existing permit. The matter was listed for hearing before the AAT however it was adjourned and moves were made to try to resolve the matter through the mediation process.

The Authority has received three appeals for reconsideration by applicants relating to the payment of permit application assessment fees and two

applications for reconsideration in association with the refusal of the issue of permits.

The application by Queensland Nickel Management to the AAT which was a large drain on Authority resources last year was finally resolved. The Tribunal refused an application by the Authority (supported by other parties) inviting the Tribunal not to allow the applicant company to withdraw whilst the Tribunal was considering its decision and to proceed with its consideration of the merits of the case. Therefore, a decision either confirming or modifying the principles and processes used was not forthcoming.

In-service training

Section staff continued to provide significant contribution to various courses including permits workshops, and to investigator courses run by the Queensland Department of Environment and Heritage.

CONSULTANTS

External consultants were used on projects where it was efficient to use expertise in another agency or where there were benefits in having discrete parts of a project undertaken by a consultant. The consultancy services used in 1992-93 are listed in table 5.

TABLE 5

CONSULTANCY SERVICES 1992-93

Consultant/Organisation	Project	Expenditure $
Australian Institute of Marine Science	Report on wave conditions at Hardy Reef	3 000
Commonwealth Dept of Administrative Services	Engineering advice	637
A E Gibson	Tourism Industry Liaison	23 753
Marine Biologic	Marinas Manual	1 500
Dr J Wilkes	Dive Tourism report	800
Total expenditure		**29 690**

OUTLOOK FOR 1993-94

The main emphasis for 1993-94 will be on the introduction of Marine Park charges and longer-term, transferable permits; continuing implementation of cross-cultural processes with Aboriginal and Torres Strait Islander people in relation to traditional hunting and other permit matters; and on devising ways to deal with an anticipated increase in permit applications without additional resources.

Priorities for the 1993-94 year will be to:

- introduce Marine Park charges and longer-term, transferable permits for permitted commercial operations
- further develop appropriate cross-cultural processes regarding permit matters with Aboriginal and Torres Strait Islander communities in the Marine Park
- improve the rate at which permit policies are developed and implemented
- introduce effective social impact assessment guidelines
- maintain assessment standards and improve permit processing procedures in the context of an expected increase in permit applications
- develop and distribute information packages for permit applicants (marina guidelines, tourism)
- make appropriate changes to strategies for managing tourism and recreational use
- upgrade and refine permits database and complete permits database manual.

RESEARCH AND MONITORING

The Research and Monitoring Section has the aim of achieving competence and fairness in the care and development of the Marine Park by obtaining and interpreting information relevant to the understanding of the Great Barrier Reef and to the implementation of the Authority's programs.

In order to gather, interpret and distribute often complex information to help understand the Great Barrier Reef, studies over as many as four or five years are generally necessary to get useful results.

Information is collected from research into key areas and about management issues. This is conducted primarily by private, university, industry and government researchers under contract to the Authority. The role of staff is primarily to manage such contracts for the acquisition, interpretation, dissemination and application of research results for other sections of the Authority.

PRINCIPLES

The following guiding principles are followed as far as possible in the development and conduct of programs.

1. They will be directed towards key issues of relevance to planning and managing the Great Barrier Reef Marine Park.
2. They will primarily be carried out by the best available research institutions, government agencies or individual researchers under contract to the Authority.
3. Projects and programs will be subject to independent expert peer review prior to commissioning and on completion.
4. Projects which involve sampling to test predictions will be designed to allow for statistically rigorous analysis.
5. They will be coordinated with other research agencies, government agencies and industry to address issues of mutual concern, maximise efficient use of resources and to ensure the use of appropriate design and methodology.

6. Results will be published or otherwise disseminated and applied as widely as possible.
7. The extent of monitoring required to comply with permit conditions should be related to the predicted degree of environmental risk and potential impacts from the permitted activity, and monitoring programs of permitted activities should be designed to trigger a management response in time to prevent significant impacts occurring.
8. Monitoring of the effects of specific permitted operations will be managed by the Authority through the use of consultants at the expense of the permitee.

PROGRAM EVALUATION

The program effectiveness and efficiency will be evaluated by the degree to which:

- individual program objectives are met
- projects are completed and information disseminated to relevant users
- staff development needs are met
- the program is integrated with the programs of other sections and agencies.

GENERAL OUTCOME

At the start of the year, all research programs were scaled down because the extra funding which had been made available the previous year was discontinued. However, the Commonwealth Government provided new funding for research into ecologically sustainable development which allowed some programs to be restarted by the end of the calendar year. Further funds were made available as a result of the Prime Minister's Statement on the Environment. Both funding packages are for three years which will enable effective and efficient programs to be put in place.

Major achievements during the year include:

- The Cooperative Research Centre for the Ecologically Sustainable Development of the Great Barrier Reef (CRC), a consortium comprising AIMS, JCU, QDPI, AMPTO and GBRMPA, has been set up with the aim of researching ecologically sustainable development within the Marine Park. All parties will support the Centre with either financial or in-kind contributions, or both. The Commonwealth has committed funding of nearly $13 million to be provided over the next seven years. All revenue raised from CRC research will be returned to the Centre.

- The structuring of a plan of immediate action in the event of another crown-of-thorns starfish outbreak.
- The Torres Strait Baseline Study field work was completed and the report of the earlier pilot study prepared. The report of the main study is presently in preparation and due for completion in 1993-94.
- The State of the Marine Environment Report, a key component of Ocean Rescue 2000, has been substantially completed and should be published during the 1993-94 financial year.
- The Effects of Fishing, Water Quality and Monitoring programs are now firmly established and are guided by management committees of relevant experts and interest groups.
- Reef Research, the GBRMPA research newsletter, has continued to expand, and is now received by about 1700 individuals and institutions.

The major difficulties during the year stemmed from uncertain funding at the beginning of the year, and, indeed, during the lead-up to the elections before the anticipated funding from the Prime Minister's statement was ratified by Parliament. This has now been largely resolved.

SUB-PROGRAMS

Socioeconomic

The 1992-93 Socioeconomic Research Program has been doing basic research into recreational management, developing guidelines for the assessment of social impacts and starting a database of social information.

Outcomes

- A report on visitor experiences at Lady Musgrave Island and Reef was submitted. The report investigates how different visitors ranked the various activities available at this destination. It also gained information on just how aware visitors are of the issues facing management, and how far development and management services should go.

- A James Cook University (Department of Geography) Honours thesis, partly funded by GBRMPA, was submitted. The study investigated the social carrying capacity of Green island and perceptions of crowding by different user groups, including Japanese tourists

- A database summarising all human use of the Reef has been set up. Authority reports, studies and already-existing database information have been fed into the indexed, geo-referenced database, which was then linked with other GBRMPA information systems. This information bank will be valuable in studying the spread of recreational activities, and

developing suitable management strategies to respond to varying situations.

- A study of traditional marine conservation practices in the Far Northern Section aimed at identifying key marine sites was completed. A review was also conducted of political attitudes in Australia and overseas to the rights of indigenous people to marine resources and the effect on the interests of Aboriginals and Torres Strait Islanders in the Great Barrier Reef Marine Park. Both those reports include recommendations for the integration of those interests in the management of the Great Barrier Reef Marine Park.

- A number of projects started in 1992-93 are still in progress and should be completed in 1993-94. These include the development of social impact assessment guidelines following a review of existing information, and the update of the economic evaluation of the Great Barrier Reef Marine Park.

Effects of Shipping and Ports

In 1992-93 the Research and Monitoring program for oil spills and sea dumping was reorganised to become the Effects of Shipping and Ports Program; this program is handled by a team which includes officers from Planning and Management. The Effects of Shipping and Ports Program groups the Authority's activities relating to the prevention, management and research of ship-sourced pollution, including oil spills, ballast, sewage and garbage. It also takes in the environmental assessment, monitoring and management of port operations, including dredging and sea dumping of dredge spoil.

Outcomes

Significant achievements for the year have been:

- Responding to several small oil spills from illegal ship discharges and fishing vessel accidents in the Great Barrier Reef Region

- Taking part in the review of the National Plan to Combat Pollution of the Sea by Oil and REEFPLAN, the Marine Pollution Contingency Plan for the Great Barrier Reef, which will result in improvements to the ability to respond to oil spills in the Great Barrier Reef Region

- Completion of the first fully operational stage of the 'A Strategic Atlas Program' (ASAP) coastal resource atlas and oil spill trajectory model for the whole Queensland east coast.

Participation in two major oil spill simulation exercises; Exercise Northern Reaches in Torres Strait/Cape York, and Exercise Townoil in Townsville

- Continuing participation in the National Plan and REEFPLAN training program by providing speakers at courses and workshops
- The development of policies and guidelines on the use of dispersants and bioremediation for oil spill response
- Joining the National Scientific Working Group on the Introduction of Exotic Organisms in Ballast Water
- Significant involvement in the design, development and implementation of the environmental monitoring program and management framework for the 1993 Townsville Port development
- Advising on the assessment of dredging and sea dumping proposals for Gladstone Port and the Dalrymple Bay Coal Terminal
- Continuing participation in the development of long-term dredge spoil disposal strategies by Cairns and Townsville Port Authorities.

Crown-of-thorns Starfish

The damage to coral reefs caused by crown-of-thorns starfish outbreaks remains one of the most serious scientific and management issues for the Great Barrier Reef. During the most recent outbreak cycle (which commenced in 1979) 17% (±4%) of all reefs comprising the Great Barrier Reef have been damaged by outbreaks. About one-third of affected reefs have been seriously damaged, the remainder to a lesser extent. No other threat has had such a dramatic documented impact on the Region. During the year the Australian Institute of Marine Science recorded active outbreaks on 10 reefs of the 100 reefs surveyed, a slight increase from the previous year when 7% of surveyed reefs were affected. Four of the affected reefs were in the Swain Reefs group off Gladstone. This distribution, with most outbreaks towards the southern end of the Great Barrier Reef, indicates that the current outbreak cycle is continuing to decline. The Authority's committee which advises on the program (the Crown-of-thorns Starfish Research Committee) met twice during the year to recommend research directions and monitor its progress. Professor J M Swan, the Chairman of this Committee and its predecessors since 1985 retired from the position in January 1993. He has been succeeded by Professor G F Mitchell, former Director of the Royal Melbourne Zoological Gardens.

Outcomes

The program has three major objectives:

- to monitor the pattern of starfish outbreaks and the status of reefs

- to investigate the causes and effects of crown-of-thorns starfish outbreaks
- to inform the public of the results of research and monitoring.

All three objectives have been met in 1992-93 through a program of 21 research projects together with extension and public information activities. It is still not known what causes outbreaks, but information from research is helping scientists to better understand the problem.

Major achievements for the year include:

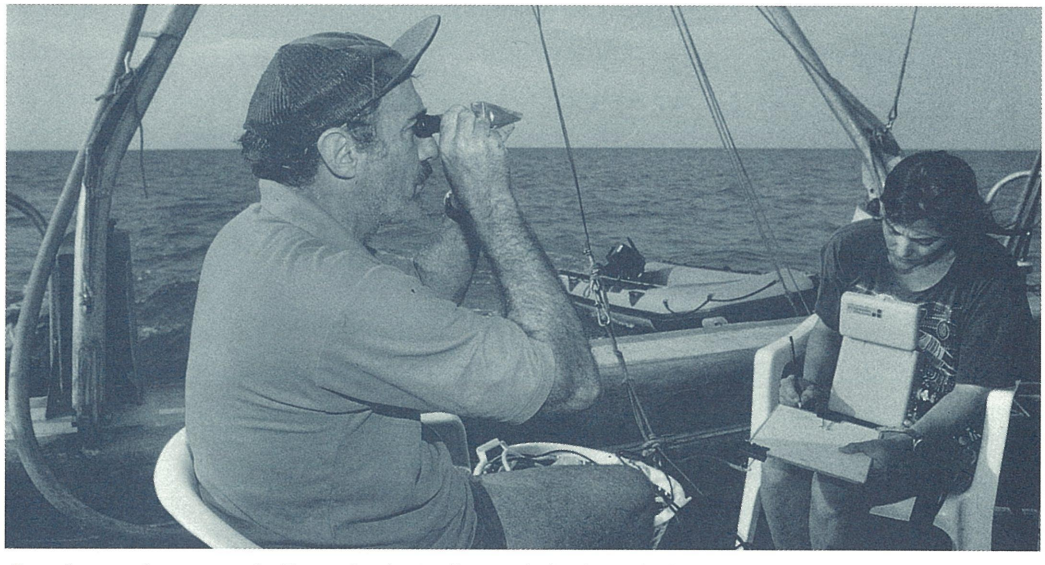
- The Reef-wide surveys of crown-of-thorns starfish and coral cover have been incorporated into a broader, integrated monitoring program by the Australian Institute of Marine Science. The expanded program provides concurrent information on crown-of-thorns starfish, corals, fish and water quality. In the event of another outbreak cycle this additional information, collected simultaneously may help in determining the causes of outbreaks.
- Laboratory and field experiments have demonstrated a link between water quality and the survival of crown-of-thorns starfish larvae. There is now strong evidence that crown-of-thorns starfish larvae are generally limited by food availability. The food of larvae, phytoplankton, is in part controlled by the level of nutrients available for its growth. Research indicates that human activities have contributed to a major increase in nutrients in Great Barrier Reef waters since European settlement. In theory, increased nutrient concentrations can result in higher larval survival and ultimately outbreaks. Further research is needed to establish any connection between human activities and outbreaks through changes in water quality.
- Preliminary research into predation on juvenile starfish by reef fish indicated that this hypothesised controlling influence may play only a minor role in preventing outbreaks.
- The proceedings of a workshop *The Possible Causes and Consequences of Outbreaks of the Crown-of-thorns Starfish* was published during the year. The publication contains 17 contributions covering a range of research and management aspects of the program.
- Contingency plans of action in the event of another outbreak cycle have been developed. Some scientists are predicting that the next outbreak cycle may start as early as 1995.

The research program suffered a setback during the year when the Australian Institute of Marine Science seawater aquarium facilities were damaged. Juvenile crown-of-thorns starfish being reared for predation and feeding studies were lost, resulting in the modification or postponement of some

projects. To avoid such events happening again, security at the Institute has been improved and backup rearing facilities are being established.

Torres Strait Baseline Study

The Torres Strait Baseline Study is investigating the possible effects on the Torres Strait marine environment of mining operations in the Fly River region. The four-year study, funded by the Commonwealth Government and industry sources, will conclude in 1993-94.



Over the past three years, the Torres Strait Baseline Study has been checking the effects, if any, of the mining run-off from New Guinea's Fly River on Torres Strait marine life.

The study has collected data to determine the current levels of trace metals in sediments and selected marine organisms in the Torres Strait and will assist in determining if there is evidence of trace metal contamination in the marine environment from mining operations in Papua New Guinea.

Outcomes

- The scientific program commenced in 1991 and was completed in 1993. The program consisted of four collection projects: sediments, indicator species, community fisheries and commercial fisheries. A pilot study was undertaken in 1991-92 and the main study in 1992-93. 3560 samples of marine organisms, 472 sediment samples, 545 community fisheries samples and 4000 commercial fisheries samples were collected.

- Selected samples have been analysed or are currently awaiting analysis at four laboratories, all of which participate in a continuing inter-laboratory quality assurance program supervised by the United States National Oceanic and Atmospheric Administration.

- The report on the pilot study has been presented to the Advisory Committee and is currently being edited for distribution. The final report of the pilot study and the report on the main study collection program will be completed during 1993.

Effects of Fishing

Although recreational and commercial line fishing, and commercial prawn trawling are important activities in the Great Barrier Reef Marine Park, there is concern that such fishing may be having substantial ecological effects over large areas of the Marine Park. Line fishing may, by the removal of the major predatory species, have a variety of indirect effects such as altering the abundance of secondary species. Similarly, trawling may permanently change the seabed and have unacceptable effects on the bottom plant and animal communities. Understanding the direct and indirect ecological effects of such fishing on reef associated communities is central to the long-term management of the Great Barrier Reef Marine Park, so research into the effects of recreational and commercial fishing is a priority for the Authority.

Effects of fishing research began in early 1992. The main projects under-way are:

- preliminary work for a large scale manipulative experiment to assess the effects of line fishing and inter-reefal trawling on target reef fish and associated reef communities

- a joint project by CSIRO and QDPI to assess the environmental effects of trawling.

Advice on the research program is provided by the Effects of Fishing Advisory Committee.

Outcomes

- A descriptive survey of the fauna and flora in a specific study area of the Far Northern Section of the Marine Park has been completed. Particular attention was given to the distribution and abundance of the fish and prawn species, bottom plant and animal communities and the substratum types in the study area. A report on the survey including full data analysis and the design of future research is expected in July 1993.

- Surveys of targeted reef fish populations and their respective age structures, before and after a review of zoning plans, have been completed on several outer-shelf reefs in the Cairns Section. Half of the reefs under study were originally closed to fishing but have opened

under the new zoning plan. Pre-rezoning surveys found higher numbers of several commercially and recreationally targeted species on the protected reefs. In addition, unlike closed reefs, a greater proportion of the total catch of coral trout on open reefs belonged to younger age classes.

- A total of 5230 fish have been successfully tagged and released as part of a study to assess the movement of large reef fish within and between reefs. The research, which involves both commercial and recreational fishing activities, will provide important preliminary results for the design of future manipulative experiments. Approximately 240 tags, predominantly from coral trout, have been returned.

- A study evaluating trap and drop-line techniques to sample reef fish populations at depths beyond the effective limit of SCUBA, and in reef slope areas inaccessible to trawling, has been completed. A workshop, convened in September 1992, discussed likely bias associated with traps, possible solutions to minimising variation in catches, and identified future research directions.

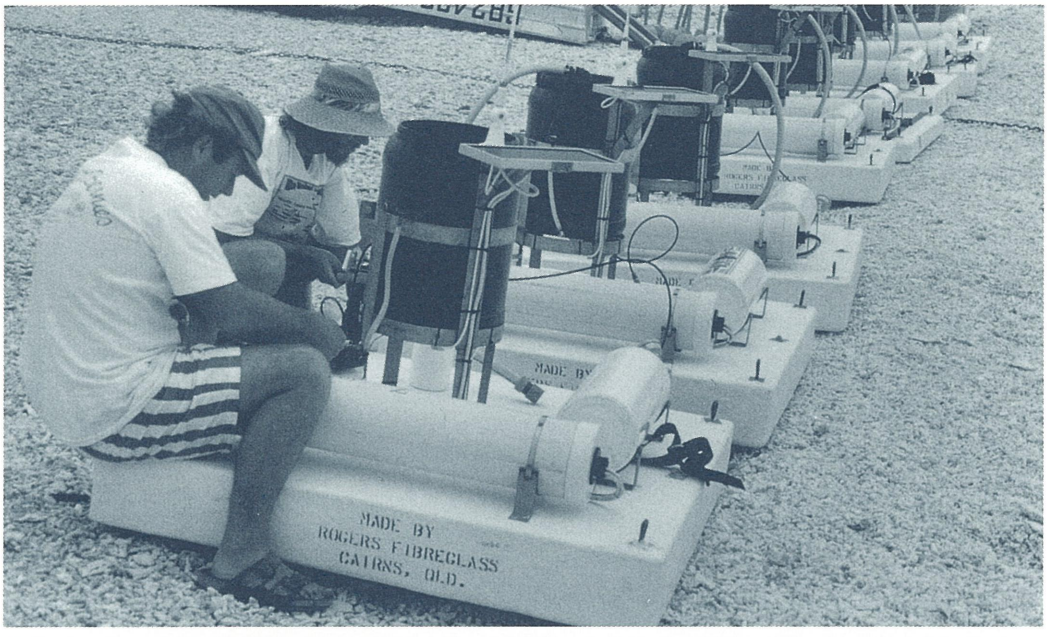
- Research into the effects of recreational fishing will be funded by the CRC and will have direct involvement of Authority staff. The research is expected to commence in the coming financial year.

- An extensive liaison program has been implemented to raise public awareness of effects of fishing issues and GBRMPA's commitment to effects of fishing research. A series of presentations has been given to community groups, recreational and commercial fishing people, and Marine Park managers to seek their support and participation in the research program.

The longevity and success of the research program has been enhanced by the commitment made in the Prime Minister's Statement on the Environment of $3 million over the next three years for the Water Quality and the Effects of Fishing research programs. The continuing research will provide a far greater understanding of the interaction between fishing activities and ecological processes in the Great Barrier Reef Region.

Reef Monitoring

The collection of long-term data has continued during 1992-93. This information is essential to determine naturally occurring change in the Reef ecosystem. It is only with this type of data set that effects caused by humans can be separated from the natural changes of the system.



Scientists from the ENCORE program on One Tree Island ready their fleet of computer-programmed 'pollution rafts'. The units spray controlled bursts of nutrients onto small, enclosed reefs, to duplicate the effects of nutrients from land run-off.

Outcomes

- Detailed monitoring of specific sites associated with commercial activities (primarily tourist pontoons) has continued. A formal policy for the monitoring of commercial activities has been drafted for approval in 1993-94.

- The Authority played a major role in conjunction with QDEH in devising a monitoring program for the effects of developmental dredging of the Townsville harbour channel from January to May 1993. The program involved measurements of a number of variables at intervals varying from hours to months, and was one of the largest site-specific monitoring programs ever to be undertaken in a reef environment. The management cooperation built into the program, together with its comprehensive scope and scientific calibre make it a model for future large-scale projects.

- There has been substantial progress in the development and implementation of a coordinated long-term monitoring program for the whole of the Great Barrier Reef. A Monitoring Advisory Committee composed of representatives of various government and non-government agencies, met on two occasions during the year. It endorsed the long-term programs proposed by both AIMS and GBRMPA, and the need for further funding to fully implement the overall program. The AIMS/GBRMPA long-term monitoring program for corals, fish, crown-

of-thorns starfish and water quality has commenced, and over 100 sites have been surveyed.

- The long-term photographic monitoring program which started last year with QDEH has been further developed so that it is complementary with the AIMS/GBRMPA long-term monitoring program.

- Two projects funded by the Greenhouse Research Program have been completed. The first project (in conjunction with AIMS) has been to set up a series of temperature loggers at different sites. A database has been constructed to accumulate the results, which will continue to be collected as long as funding permits.

Water Quality

Water quality in the Great Barrier Reef Region is a critical management issue. The main concerns are the potential effects of nutrients and sediments on coral reefs, phytoplankton communities and seagrass beds. The human-induced sources of pollutants appear to be run-off of soil and fertilisers from agricultural activities, discharge of sewage and dredging of harbours and marinas. The best estimates available suggest that three to five times as much nitrogen and phosphorus now flow off Queensland east coast catchments than before European settlement. The principal contributors to the increased run-off are believed to be grazing and sugarcane cultivation. Coastal city and island resort sewage discharges may be a significant source at local levels but the amounts are small relative to agricultural inputs at the Great Barrier Reef scale. The evidence available for adverse effects on the Great Barrier Reef is of three types. Anecdotal evidence suggests that inshore reefs are now muddier and have more algae than twenty to forty years ago. Photographic records of reef flats from earlier this century show higher levels of coral cover than at present. Scientific evidence of change includes alterations in coral growth seen in coral cores and claimed increases in phytoplankton levels in Great Barrier Reef waters.

An integrated research program to answer questions related to the sources, transport, fate and effects of pollutants, particularly nutrients, in run-off from the land is under way. At the same time research is also directed at understanding nutrient processes in the Great Barrier Reef system. Management action to minimise this particular form of pollution is commencing.

Outcomes

- A long-term water quality monitoring program, targeted at nutrient levels, has commenced. GBRMPA, AIMS, Reef Biosearch, QDEH, Heron Island and Lizard Island Research Stations cooperate in the program.

Twenty-seven stations are now sampled on a monthly, or more frequent, basis while a further group of over one hundred stations are sampled less frequently.

- An integrated research program to assess the effects of elevated levels of nitrogen and phosphorus on the coral reef ecosystem has started. The program, involving fertilisation of patch reefs at One Tree Island Reef, is being carried out in collaboration with the University of Sydney, AIMS, James Cook University of North Queensland, the University of Central Queensland, the Queensland University and the Australian Museum.

- Research programs directed at the areas of sediment/nutrient sources, transport and effects continued and initial attempts to integrate our present understanding of nutrient processes in the Great Barrier Reef Region commenced.

- A four-year study of nutrient budgets in the Cooktown - Tully area of the Great Barrier Reef was completed. This study measured various sources of nutrients on the Great Barrier Reef, including river run-off, how much is washed up over the continental shelf from the ocean bottom of the Coral Sea, and the potential of Trichodesmium blooms (a marine algae) as a source of nitrogen.

- Progress on the upgrading of island resort sewerage systems continued; there are now only three resorts which do not have either tertiary treatment or full land disposal systems.

- Collaboration with the Queensland Department of Primary Industries, QDEH, and industry groups, through the Queensland ministerial advisory committees, (the Catchment Management Coordinating Committee and the Downstream Effects of Agricultural Practices Committee) is continuing to establish a system to ease the downstream effects of farming and grazing.

State of the Marine Environment Report (SOMER)

The first State of the Marine Environment Report for Australia (SOMER) is being prepared as part of the long-term Commonwealth Government program, Ocean Rescue 2000. The Department of the Environment, Sport and Territories commissioned the Authority in 1991 to prepare the Report.

SOMER will provide baseline information for the development of Ocean Rescue 2000's national marine conservation strategy, for the establishment of a representative system of marine protected areas, for the national marine education program, and for future marine environmental reporting. The

Report will be the first comprehensive description of Australia's marine environment, its resources, management, human uses, and impacts. It will identify major issues in the marine environment, assess existing data, and consider appropriate environmental indicators.

Preparation of the report involves consultation with the marine scientific and industrial communities, with other Commonwealth and State agencies, local government, and community groups. The cooperation of the States is supported through the Australian and New Zealand Environment and Conservation Council (ANZECC), the nation's main mechanism for intergovernmental coordination and consultation on environmental issues. SOMER will provide the initial marine component of the Commonwealth Environment Protection Agency's national environmental reporting program. It will also contribute to aquatic environment reporting recommended by the Ecologically Sustainable Development Working Group.

The SOMER Advisory Committee provides advice to the Authority on technical aspects of the program, such as the proposed outline of the report, possible expert contributors and the peer review process. The Committee will oversee the quality of the information compiled and will review the conclusions drawn to ensure the highest possible technical credibility for the report.

Outcomes

- Major progress on the Report was achieved during the year. As a result of wide interest in the state of Australia's marine environment, it was decided to expand the review to more than 80 topics. It was therefore necessary to extend the reporting date to December 1993 with publication to take place in the first half of 1994.

- Most of the 80 topic review papers were submitted by the end of June 1993, with the peer review and editing processes expected to take until the end of 1993. Synthesis of the main report from the topic reviews has proceeded simultaneously. After final checking with the authors and State agencies involved, the main report will be considered initially by ANZECC. The collection of topic review papers will be published as a technical annex to the main report. An executive summary will also be prepared, briefly summarising the major findings of SOMER.

1993-94 PROSPECTS

In the coming year, priority will be given to:

- the completion of the Torres Strait Baseline Study

- the completion of the State of the Marine Environment Report
- the establishment of long-term monitoring programs in high use/high priority sites, which will provide strategic information for continuing planning and management
- the gathering and interpretation of research information on water quality in the Marine Park, on which a water quality policy will be based
- research into the causes of outbreaks of the crown-of-thorns starfish, and preparing contingency plans for management action in the event of another outbreak
- continuing research into the effects of trawling, and the development and initiation of research into the effects of line and spear fishing
- the development of a research and monitoring program into the environmental effects of shipping and ports
- the implementation of a strategy for the storage, retrieval and management of research data and information relevant to the management of the Marine Park.



EDUCATION AND INFORMATION

This section's primary objective is to increase the knowledge and commitment of reef users and the general public to the Great Barrier Reef and the Authority and to have public support for the ecologically sustainable use of the Marine Park. Another objective is to provide efficient and effective design, production and library services to the Authority.

The section's responsibilities include:

- encouraging public appreciation of, and responsibility towards the Great Barrier Reef Marine Park to increase voluntary compliance with provisions of zoning and management plans and support for the Authority's policies and programs
- supporting the work of all sections of the Authority through the design and production of publications, video and other audiovisual materials, acquisition of photographs, and by providing library services
- cooperating with agencies and organisations concerned with the Great Barrier Reef Marine Park to achieve the Authority's goal and aims
- disseminating information and educational services for the Authority
- encouraging community cooperation and participation in planning and management the Great Barrier Reef Marine Park
- supporting community organisations in providing quality public information, education and advisory services about the Great Barrier Reef Marine Park
- handling media inquiries and providing news releases on noteworthy events.

Performance Information

The section fully implemented its approved program for 1992-93 with most

projects being completed within budget and time estimates. Total net expenditure including staffing costs was $1 197 256 i.e.13% more than in 1991-92.

A deliberate shift in emphasis of the section's operations towards more direct and extensive communications with industry and reef user groups resulted in more diverse extension programs and related products, and fewer information products for the general public. Income from sales and royalties amounted to $62 733 i.e. 27% less than in 1991-92. This shortfall can be partially attributed to long delays in the reprinting of the booklet *'Discovering the Great Barrier Reef Marine Park'*, a joint venture with Bay Books.

Extension, education and production activities relating to the Great Barrier Reef World Heritage Area Strategic Plan, Environmental Management Charge (User Pays) workshops, Ocean Rescue 2000 and Secondary/Tertiary Teacher workshops placed additional demands on the extension and production units while demands for library services and Marine Park information continued to grow.

EXTENSION AND COMMUNITY EDUCATION

Tourist Operator Assistance

A ten-minute video entitled *Pardon my Bubbles - A guide to low impact diving on coral reefs* was produced to increase awareness amongst divers of techniques on diving in an environmentally friendly manner. The video was a joint production with Channel 7 Brisbane and 300 copies were distributed free of charge to all reef dive operators. Evaluation of the video showed that it effectively highlighted the major causes of diver damage on the Reef.

The issue of anchor damage was addressed via the publication of a brochure called *C.A.R.E. - Code of Anchoring on the Reef Environment*. This was a joint publication with Yaffa Marine Publications and 101 000 copies of the brochure were distributed throughout Australia as inserts in all major boating and sailing publications. An additional 40 000 brochures were distributed throughout the South Pacific islands.

A community volunteer organisation was formed in the Whitsundays to assist the regional office of the Queensland Department of Environment and Heritage (QDEH) with provision of interpretive facilities. Extension officers provided training for the volunteers in interpretive and communication techniques, in addition to reef ecology programs.

The introduction of the new Environmental Management Charge (the so-called 'user pays' fee) required a major extension and liaison program

with the commercial tourism industry. The views of all commercial operators on the implementation of the new charge were sought through a series of 20 major meetings along the coast from Bundaberg to Port Douglas. An additional series of meetings was held with smaller operators and specific sectors of the industry. The introduction of fees commenced on 1 July 1993 after more than 12 months of extended negotiations with the industry.

Extension staff helped conduct a review into the way the impacts of recreational and commercial users are being managed. The views of private users were sought at eight public meetings held at major regional centres from Gladstone to Cooktown.

Two community-driven regional Marine Parks Advisory Committees were established in Bundaberg and Gladstone, with further groups to be established in all major coastal communities by December 1993. The aim of these groups is to formalise communication links between Marine Park managers and local interest and user groups. They include representation from all groups including conservation, local government and residents.

Tourist operator training courses on Reef interpretation and management were again conducted in Port Douglas, Cairns, Mission Beach, Townsville, Airlie Beach and Heron Island. Approximately 200 industry staff attended these evening courses. Arrangements have been completed to have these courses included throughout the Queensland TAFE system, with the first being offered in Cairns in 1994. The training courses were recognised with an award for excellence in the North Queensland Tourism Awards.

Commercial Fishing

A commercial fisheries consultant was contracted again to assist in a number of industry educational and liaison projects. The program included continued development of liaison projects involving the Queensland Commercial Fishermen's Organisation (QCFO), the Queensland Fish Management Authority (QFMA) and QDEH, as well as help from regional Marine Park advisory groups.

The fifth and a sixth edition of the free video program *Deckhand* were produced and distributed to an audience of over 3000 Queensland commercial fishing operators. A special Western Australia version, sponsored by Ocean Rescue 2000 and GBRMPA, was also produced and seen by a similar number of WA operators. A survey on both versions was undertaken which showed a positive response and prompted many suggestions for future stories. The main goal of the video program is to communicate management and conservation messages to the industry in an entertaining and attractive way.

The consultant also ran a three day/one night course for QDEH and GBRMPA staff on commercial fishing in the Marine Park, including a night-trawl field trip.

National Marine Education Report

Contributions were made to the Ocean Rescue 2000 State of the Marine Environment Report with chapters describing formal and community marine education programs in Australia today. These contributions, compiled by Australia's leading marine educators from schools, non-government organisations, government agencies and tertiary institutions, include recommendations for improving public attitudes and behaviour about Australia's coastal and marine zones. Assistance was also provided to the Resource Assessment Commission, Coastal Zone Inquiry, for a similar national review of marine education programs.

Seaweek

The Extension Unit continued to support the Marine Education Society of Australasia (MESA) by conducting Seaweek '93. The national theme was 'Caring For Our Coast', focusing on coastal and marine management and conservation issues.

Over 30 000 people participated in Queensland with 11 local coordinating committees from Port Douglas to Surfers Paradise.

A special poster, an educational booklet and displays helped promote this campaign extensively throughout Australia, highlighting such Seaweek activities as public seminars, beach clean-ups, marine drama performances, water quality testing, displays, open days and essay competitions.

Support For Formal Education

Secondary and tertiary institutions continued to receive support for marine education and conservation projects. In November, a training workshop was conducted in Brisbane at Griffith University to prepare tertiary marine lectures about a range of Reef-related topics for various course requirements. Over 30 tutors and lecturers from Queensland, New South Wales and Victoria took part in the two-day briefing.

In March, a secondary teacher workshop was held at Magnetic Island to train geography, science and environmental education teachers in the ecology of the Reef and management of the Marine Park.

All teacher training courses are run in cooperation with QDEH staff and have been developed as part of a public contact strategy for both agencies.

Strategic Plan Focus Groups

Extension staff managed a social research project to measure public opinion for the draft Great Barrier Reef World Heritage Area Strategic Plan. The project gauged the reaction of groups such as recreational and commercial fishing interests, tourist operators, residents and students from selected capital cities and regional Queensland centres, to the Plan's objectives and strategies. The focus groups tested the public acceptability of the draft Plan and provided an opportunity to involve groups further in the consultation process. A final report was produced.

COMMUNITY ASSISTANCE

The Reef Education Development Scheme was offered again to assist community organisations develop innovative educational projects about the Marine Park. The following projects were approved for funding:

Recreational Fishing Expo

Organisation of a public education day on fishing in the Marine Park for Townsville region.

National Seaweek '93



School students from Magnetic Island and Townsville performing the dance-drama 'Polyp', a colourful re-creation of the annual coral spawning on the Great Barrier Reef.

Contribution towards production of a national Seaweek promotional poster sent to every Australian primary and secondary school.

Reef Essay Competition

Sponsorship of a regional school student essay project about managing the Reef by Mackay Conservation Society.

'Polyp' Theatre Performance

Sponsorship of dance/drama educational performance about life of the Reef for 2500 young people in the Townsville region.

Coral Spawning Video

Production of a school education kit and drama video on coral spawning.

Tertiary Educators Workshop

Consultancy to plan and conduct a training workshop on how to include Reef education programs in tertiary marine studies courses.

FREEDOM OF INFORMATION

The Authority received four requests for information under the *Freedom of Information Act 1982* (FOI). All were handled within the 30-day response period to the satisfaction of applicants.

The Authority maintained its updated documentation called for under sections 8 and 9 of the FOI Act, and its regular reporting. Documents available to the public are listed in appendix D.

PRODUCTION UNIT

The Production Unit provided services, products and advice in regard to graphic design, photography, cartography, corporate identity, publishing, quality control and copyright.

The unit produced a constant stream of small and medium sized publications and special project material (e.g. an Authority calendar). Fewer jobs were started and finished during the year, but the range of products was more diverse.

The production of the newsletters *Reef Research* and *Coralines* continued but only one edition of the magazine *Reeflections* was published before further production was suspended pending a review of its effectiveness.

The Aquarium's souvenir booklet *The Living Reef*, and an assortment of logbooks for the Environmental Management Charge scheme proved to be two of the year's most challenging projects.

During the year, unit staff developed new skills in the area of Computer Aided Design (CAD) and Desktop Publishing (DTP) particularly through the



Computer Aided Design (CAD) is now used for all publications and design projects in the production unit.

development of display design and interpretive graphics for use in the Great Barrier Reef Aquarium.

The advent of CAD and DTP has brought significant changes to work practices and to productivity. Almost all graphic design, publication layout and map production is now created electronically, making previously unavailable or time consuming design options possible. The other time consuming process of external typesetting is also eliminated.

The progress of desktop publishing and multi-skilling in a highly computerised organisation has also created new challenges in monitoring and control of corporate identity, quality control and copyright.

THE SUPPORT UNIT

The unit handles requests for information, manages distribution of publications and video stocks, and alerts the appropriate sections on trends and problems raised by clients.

The unit has been increased from four to five staff to service an increasing demand for information.

As the general public and particularly school children become more aware of issues related to the Great Barrier Reef and the Marine Park, the nature of

requests for information is becoming more demanding. Suitable methods for producing more topical, sophisticated, and up-to-date information are being investigated.

FILM AND VIDEO

The Authority continues to use video to get information to the general public, but the emphasis has shifted from specific target group productions to more cooperative joint productions with television networks; in this way, the Authority has been able to increase the communication of its activities through wider coverage at reduced cost.

The popular video production *Deckhand* is one specific production that continues to provide the Authority with an effective way of getting Marine Park information and basic messages out to this vital target audience.

MEDIA

Media interest in the Marine Park, locally, nationally and internationally, remained high throughout the year. There was an overall increase of 17% in the number of news and general reports published about the Authority and its management of the Marine Park during 1992-93.

Commercial radio networks along the Reef coast have maintained support for the daily Reef information news and stories taped for them by the Authority.

LIBRARY

Once again heavy demands have been placed on the Library information services over the last 12 months. Policies initiated by GBRMPA, such as Ocean Rescue 2000, Water Quality, State of the Marine Environment Report and Effects of Fishing have all included major information collection components. This particular aspect of each new policy has drastically increased demand for library services, which has resulted in a review of current procedures. There was a perceived need for a faster and more streamlined library service.

To that end, on-line reference services were expanded. A range of CD-ROM products are now accessible through the library. These products provide easy and cost-effective access to a range of databases including the Heritage & Environment CD-ROM and the Scientific and Geographic Education (SAGE) CD-ROM, which can call up all popular Australian publications in this area. It is now also possible to search and retrieve the full text of all Commonwealth statutes and statutory rules on the Commonwealth Statutes CD-ROM.

Throughout the financial year the library continued to rely heavily on the resources and collections of other libraries. Demand for inter-library loans

from staff continued to grow with usage rates at least double that of previous years. In order to broaden the Authority's scope, membership was renewed with the International Association of Marine Science Libraries and Information Centres (IAMSLIC). The library also became a registered user with the British Library Document Supply Service. This allows GBRMPA staff access to the full resources of the Serials Collection of the British Library. A further step into the international arena involved the library formalising information exchange agreements with several overseas organisations with similar interests to those of the Authority.

In order to make the library collection an integral part of Australia's information base, work has started on the monograph collection with the Australian Bibliographic Network (ABN). The process will eventually also include all serial publications held at GBRMPA.

The REEF database continued to be updated with material relevant to the Great Barrier Reef Region. Apart from being available on-line through the CSIRO AUSTRALIS network, REEF is now available in CD-ROM format. The 1993 edition of the Heritage and Environment Databases CD-ROM now includes REEF, as well as other important Australian marine and aquatic bibliographic databases. This new format will provide more opportunities to gain access to current environmental information.

Due to increasing demand and rising costs, a fee structure was introduced for outside use of the Authority's slide collection. This process will go some way towards better management of the collection.

OCEAN RESCUE 2000

The Education and Information Section is coordinating the national education component of Ocean Rescue 2000, a national marine conservation program, for the Department of the Environment, Sport and Territories. A communications strategy has been produced in collaboration with the Media and Public Relations Unit of the Department.

The main emphasis is on raising community awareness of marine issues and the need for active marine management programs.

Projects successfully completed were:

- the community service advertisements screened around the nation
- involvement in the Pulse of The Planet environmental radio programs
- support for In Service courses for teachers in Melbourne, Adelaide, Perth and the Gold Coast

- support for Seaweek, particularly in Sydney where a sea fair at Manly attracted thousands of people
- compiling a lift out for The Weekend Australian.

Diverse articles and the regular *Ocean Rescue 2000 Update* newsletter have been forwarded to a number of industry and conservation publications. A new series of community service announcements for the summer of 1993-94 is currently being developed with an emphasis on what people can do to protect the marine environment.

Staff are also working with a number of television programs to promote the marine conservation message, notably *Quantum* (ABC), *Totally Wild* (TEN), *A Question of Survival* (ABC) and *World About Us* (SEVEN). Negotiations are under way with the TEN network for a series of documentaries featuring marine environmental issues and the value of marine protected areas.

Ocean Rescue 2000 staff have met with Aboriginal community rangers and representatives of the Torres Strait Islander community to discuss the best way to communicate marine issues to traditional users. This culminated in an involvement with the Laura Dance Festival, the largest cultural meeting of Cape and Gulf country communities, where officers provided information on Ocean Rescue 2000.

The Ocean Rescue 2000 award scheme is being developed, which will allow schools to allocate awards to individuals or groups in their own communities for noteworthy contributions to the marine environment.

1993-94 PROSPECTS

The specific priority areas for 1993-94 are:

- a major program of extension, training and other assistance to the tourism industry funded from the Marine Park Environmental Management Charge
- implementation of a joint GBRMPA/QDEH day-to-day management public contact strategy
- development of a strategy to influence the education system (curriculum development and teacher attitudes) initially in Queensland
- upgrade library resources to meet the existing large increase in demand for services and to meet projected new areas of demand in relation to the CRC and products for the tourism industry training strategy
- continued liaison with the commercial fishing industry
- further liaison with the recreational Reef users, particularly in the areas of fishing and boating.

AQUARIUM

The objective of the Great Barrier Reef Aquarium is to enhance community understanding, appreciation, experience of and support for the Great Barrier Reef, the Marine Park and the Authority by providing a readily accessible onshore reef environment and interpretive facility.

The Great Barrier Reef Aquarium, which has been operating for six years since it was opened on 24 June 1987, is now established as one of Australia's premier environmental education facilities. It is a living museum featuring the world's largest living coral reef on land, a predator exhibit, walk-through viewing tunnel and complementary living exhibits and interactive displays. The Aquarium provides visitors and local residents with a realistic educational experience, helping them appreciate and understand the diversity and vulnerability of the Great Barrier Reef World Heritage Area.

REPUTATION

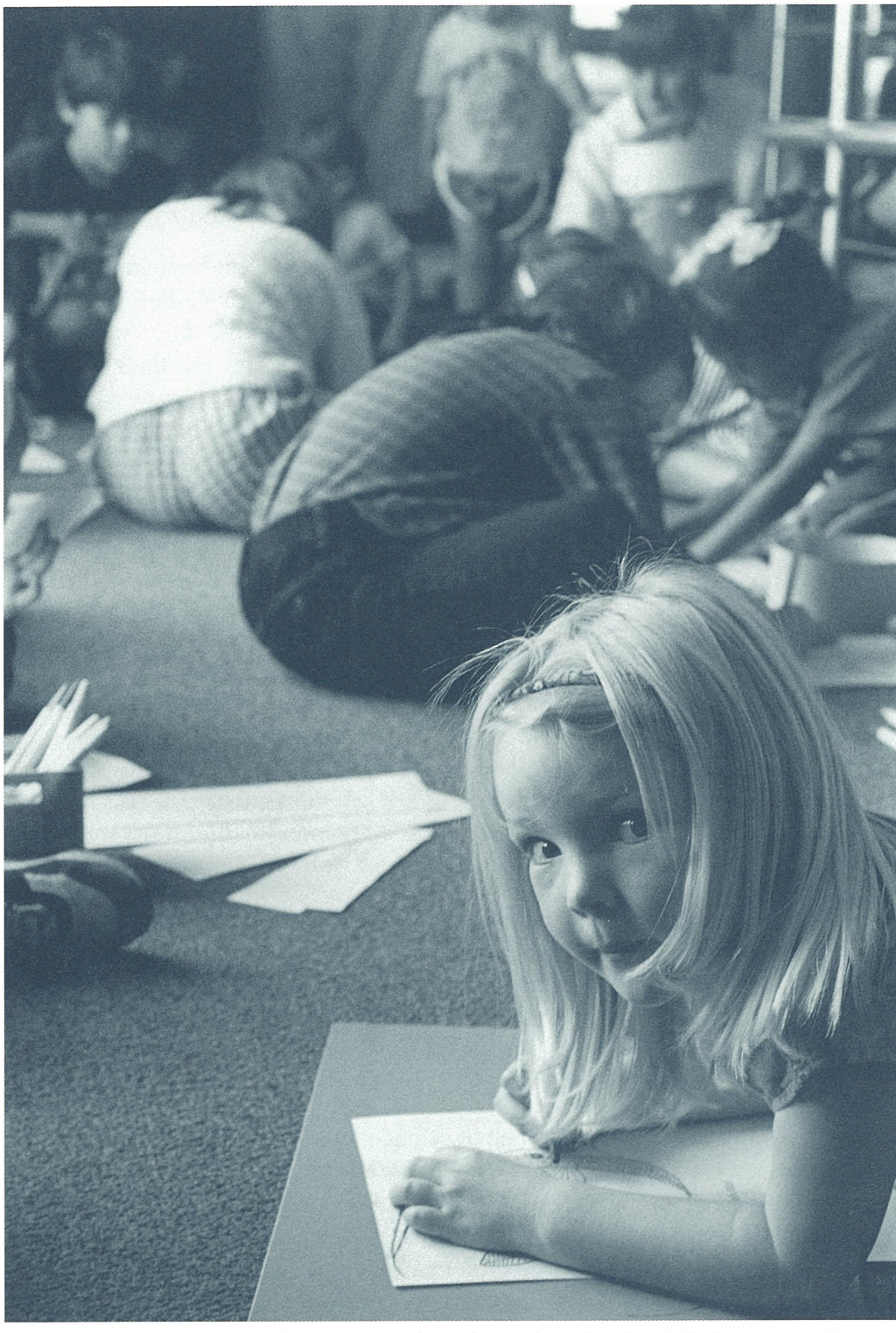
The Aquarium's reputation as a leader in environmental education was formally recognised when GBRMPA was awarded the UNESCO's Einstein Gold Medal. The medal, the first for an Australian institution out of seven worldwide presentations to date, is recognition of the efforts of the Aquarium in combining tourism, education and environmental protection.

The Aquarium also received the Environmental Tourism Award at the 1993 North Queensland Tourism Awards.

EXHIBITS

During the year new exhibits have been developed and existing displays improved. In November, a new exhibit 'Coral Cays', was opened by the Prime Minister, the Honourable Paul Keating. This interactive exhibit explores the formation of coral cays, their ecology and their importance as nesting sites for turtles and sea birds. Juvenile turtles, hatched and reared at the Aquarium are housed in their own private cay, as part of the exhibit.

The Fibres and Fabric Association of Townsville designed and constructed a soft sculpture reef entirely from fabric. This highly tactile 'Hugapolyp Reef' exhibit is very popular with children of all ages. This was a community project involving 700 hours of volunteer effort by the Association.



Education at the Aquarium provides a vast array of experiences. Art and craft activities have a reputation amongst children of all ages as something not to miss during weekends and school holidays. This program is run by the Aquarium Volunteers.

Opened in June 1993, the Aquarium's latest exhibit 'Gone Fishing' is a light hearted approach to a serious environmental issue - fisheries management and conservation. A combination of cartoon and caricature, with easy to read environmental messages in rhyming text, is complemented by two aquariums displaying commercial and recreational target species of fish. Funding for the display was provided by the Queensland Fish Management Authority, the Queensland Department of Primary Industries and the Authority.

New seawater treatment methods for the Coral Reef exhibit have improved its appearance and enhanced the growth of corals. Recently installed communication equipment now allows visitors to join in the daily 'underwater talkback' session and ask the divers questions as they carry out their maintenance duties in the main Coral Reef exhibit. 'Marine Cuisine' is a new activity where staff explain the dietary and other requirements of animals living in the theme tanks as they feed them. Tours of the Algal Turf Farm have proven popular with visitors. Well attended Discovery Sessions, held every fortnight, are in-depth presentations conveying a range of themes.

EDUCATION

The Aquarium Schools Program catered for the needs of preschool to undergraduate university students throughout the year. Approximately 9000 students and 270 teachers took advantage of this Program in 1992-93 which consists of nine resource books which complement specific areas of the secondary school syllabus, notably Geography, Science, Biology and Tourism studies. The needs of preschool and primary school students are also met by programs that offer parents the opportunity to be involved with the teaching of their children about the marine environment.

There is a high demand from teachers for a greater understanding of the environment. Ocean Ed Camp, a professional development program for teachers, addressed this need, concentrating on innovative techniques for teaching about the environment. The Aquarium provided teachers with living examples of scientific and environmental concepts, and much of the program was devoted to assessing suitable sites for school field trips.

The Aquarium promotes an interest in science within the secondary school system by participating in the national CSIRO Student Research Scheme. The students have the opportunity to find out first hand what it is like to work in the marine science field and are provided with assistance and direction from the Aquarium's scientific staff. Work experience placements at the Aquarium are provided for the graduate, undergraduate and secondary education levels.

MARKETING AND PROMOTION

The marketing of the Aquarium is carried out with the Great Barrier Reef Wonderland complex through a Joint Marketing Fund. During 1992-93 a marketing consultant reported on customer attitudes and marketing opportunities for the Aquarium and the complex. One major component of this research assessed the ways in which the Aquarium could gain a better share of the traditional Queensland winter holiday market that exists in Victoria. The consultant concentrated on market testing programs for secondary schools, and already block bookings have been received from student groups. A report on marketing to Victorian senior citizens is also under consideration for action in the near future.

Plans are in hand for better Aquarium signage in other parts of the complex and outside the main building.

The Aquarium director was appointed to the Tourism Advisory Committee of Townsville Enterprise, the region's tourism and economic development organisation.

The following marketing initiatives were undertaken in 1992-93, in addition to the joint Wonderland marketing.

- Familiarisation tours for tourist operators
- Annual 'Open House for Educators' to market the Aquarium Schools Program directly to teachers
- A one hour television program for children's television in Japan.(This was part of the Japanese series *My Dad*, which follows a day in the life of 'Dads' in different walks of life. (Aquarium curator Martin Jones was chosen as the subject of the episode, which is seen by millions of Japanese youngsters.)
- Production of an Aquarium colour souvenir book
- Advertising the Aquarium as a conference and function venue
- Issue of the 'Privilege Card' to encourage local residents to bring their visitors to the Aquarium
- Increased media coverage through television and radio sponsorship.
- Issue of the 'Media Card' to allow unlimited access of local media personnel to the Aquarium.

ADVISORY BOARD

The Great Barrier Reef Aquarium Advisory Board was formed, with representation from the local business, scientific and local government communities. The Board advises the Authority on business, planning, marketing, policy and operational issues for the Aquarium.

COMMUNITY PROGRAMS

Programs and achievements in 1992-93 include:

- Winner of the Festival of Townsville Parade 1992
- Travelling exhibits and displays used at many community functions as part of the Aquarium Outreach Program
- A series of 'sleepovers' for the children of members was a popular activity which showed the nocturnal creatures of the Reef and their habits
- Programs for Aboriginal and Torres Strait Islander people
- Townsville community service organisations (Rotary, QUOTA Club) supporting Aquarium youth employment programs.

FRIENDS OF THE AQUARIUM

The Aquarium 'Friends' program brings together a network of concerned Australians who support the conservation and management of the Great Barrier Reef World Heritage Area. The Friends program allows interested people in the community to visit the Aquarium as often as they wish and to participate in a range of reef education programs. There is a special concession for out-of-town residents.

Sponsors and Patrons are special Aquarium 'Friends'. They are the key to longer-term support of the Aquarium. The Aquarium is recognised by local, national and international businesses and individuals as a major contributor to nature-based tourism and environmental education. The Aquarium relies on their financial assistance for new exhibits and programs which support our objectives of promoting the wise use and conservation of the Great Barrier Reef World Heritage Area. The increasing numbers of Aquarium sponsorships and members is a significant indication of increased support.

Coralines, the Aquarium magazine, keeps all 'Friends' up to date with what is happening not only at the Aquarium but on the Great Barrier Reef itself.

VOLUNTEERS

The Aquarium Volunteer Association continued to thrive and made a significant contribution to the operation of the facility. In 1992-93 Aquarium Volunteers provided approximately 10 300 hours of service, worth $143 000.

Volunteers learn about the Great Barrier Reef, the Marine Park and the Aquarium through an intensive nine-week training course. Regular interaction with Aquarium staff, meetings with scientists, a newsletter and field excursions provide continual training. The volunteers form a highly committed team of local people passing on their specialised knowledge to visitors, both in the Aquarium and at outside community events.

In 1992-93 the Aquarium Volunteers coordinated the training program for new volunteers. Public courses were offered in introductory and advanced marine biology as well as a home aquarium course. A student volunteer corps was established with 14 - 18 year olds receiving valuable experience in all facets of Aquarium education and biological activities. The success of the Aquarium Volunteer program has generated considerable interest from other community and government agencies around Australia, to the extent of prompting a special conference on the role of volunteers in the arts, tourism, environment and heritage, in Townsville in September 1993.

RESEARCH

The Aquarium provides a controlled and monitored environment which is ideally suited to tropical marine research. The reputation and potential of the Aquarium as a research facility has steadily increased over the past five years and much of the ongoing research effort is complemented by externally funded projects.

This year Aquarium research has focused mainly on water quality, coral survival, coral reproduction and coral recruitment. As a result, significant improvements have been made on the water colour and clarity of the Coral Reef exhibit and the successful recruitment of acroporid coral juveniles in experimental systems.



So much like the real thing, the Aquarium's Coral Reef Exhibit is filmed by the ABC Quantum team for a story about an underwater computer.

The Aquarium is committed to cooperative research programs, and the increased interest in the Aquarium as a research facility has produced some significant funding opportunities.

- Facilities have been established for scientists from James Cook University studying coral reproductive biology and sea snake biology (both funded by the Research and Monitoring Section of the Authority).
- Scientists from the Australian Institute of Marine Science (AIMS) are using the Aquarium to study the hydrodynamics of the Coral Reef exhibit.
- Earthwatch is funding a large project on coral reproduction and recruitment to be conducted during the 1993 mass spawning event.
- As part of the Visiting Scientist Program, Professor Bill Hamner from UCLA has continued his research into box jellyfish.
- A specially designed and constructed research facility was completed for a collaborative research project with the Research and Monitoring Section. This long-term project will examine water quality factors that affect the survival of acroporid corals.

The Aquarium continued supporting the next generation of scientists by participating in the CSIRO Student Research Scheme and, with the support of the Rotary Clubs of Townsville, running a summer Science Student Employment Scheme. These students are encouraged to pursue a career in marine science by active involvement in Aquarium research projects.

ACHIEVEMENT OF COST RECOVERY

The Aquarium has achieved an 80% cost recovery on day-to-day operations. This figure, unusually high among similar community education centres in Australia, has been achieved through entrance fees, the 'Friends' Program and consultancies. Approximately 145 000 people visited the Aquarium during 1992-93.

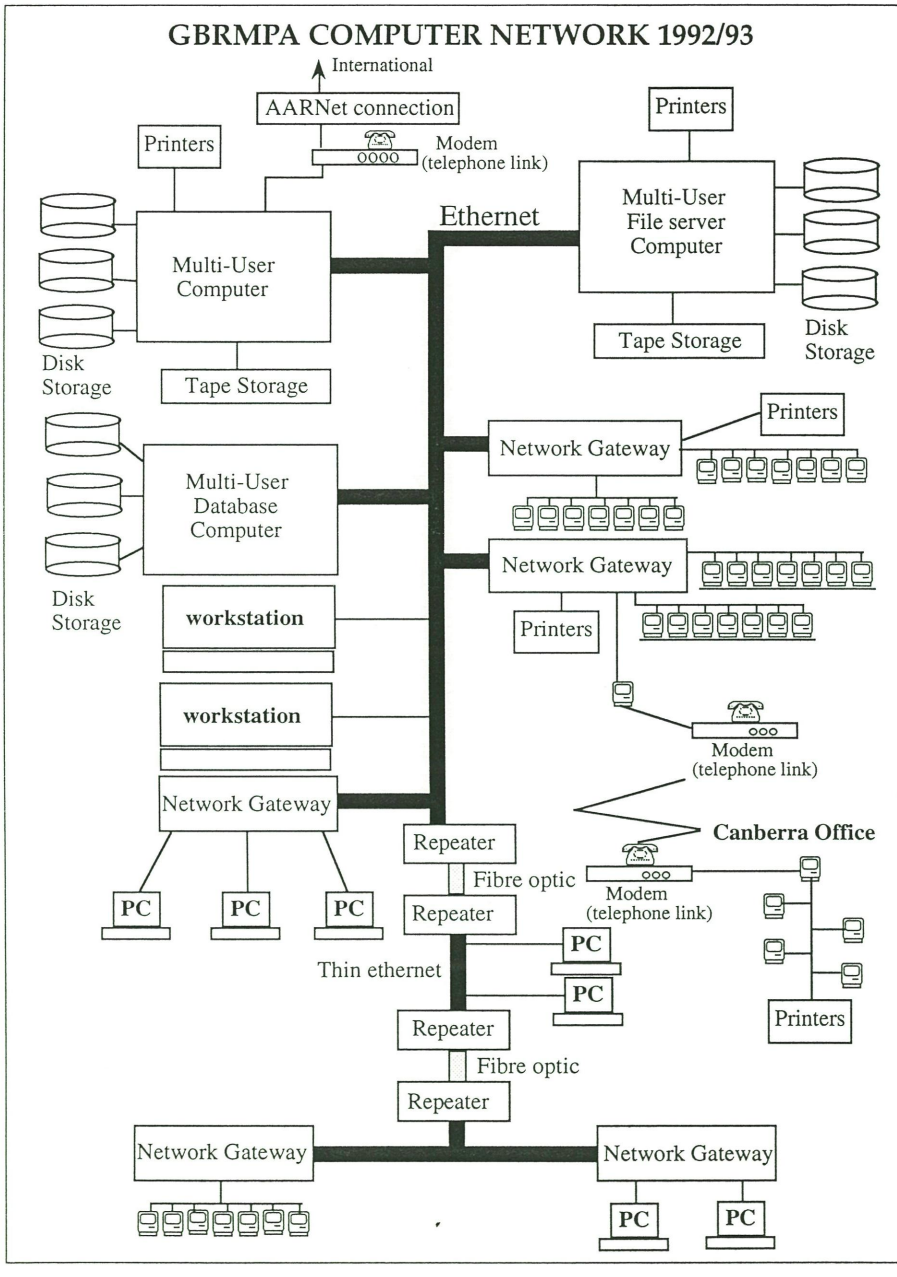
A reduction in domestic and international tourism to Townsville has seen Aquarium attendance drop. The downturn in Townsville tourist numbers can for the most part be attributed to the economic recession, the scaling down of Townsville's international airport and cheap airfares to Cairns which caused visitors to the north to bypass Townsville. The Aquarium management is working with local tourism organisations and the Great Barrier Reef Aquarium Advisory Board in an effort to improve Townsville's overall performance as a destination for international and domestic visitors.

Aquarium operating methods and systems are being improved continually.

CORRIGENDUM

Page 29 :

FIGURE 2 : Network extensions refer to the bottom area of Figure.



A new monitoring and security system , installed this year, will result in a cost saving from 1993-94. Despite declining visitor numbers, the performance of the Aquarium shop has improved significantly with turnover increasing from $229 000 in 91-92 to over $300 000 in 92-93. This has meant an increase in net profit for the year of some 30%.

Consultancy work by the Aquarium has increased, with services marketed to:

- The Australian Pavilion at World Expo 92 in Seville, Spain
- The Penguin Parade in Victoria
- Quicksilver Connections in Port Douglas, Queensland
- The Coconut Beach Resort EcoCentre, Cape Tribulation, Queensland
- Training of personnel for the Australian Development Assistance Bureau
- Training of Aboriginal and Torres Strait Islanders for the Commonwealth Employment Service.

1993-94 FORECASTS

In the coming year, priority will be given to:

- seeking corporate sponsorship
- improving visitor experience and learning at the Aquarium through new exhibits on Aboriginal and Torres Strait Islanders traditional uses of the Great Barrier Reef, Plankton, Giant Clams, 'How the Aquarium Works' and renovating the Quicksilver Discovery Room
- improving the business performance of the Aquarium by promoting the marketing of Townsville as a tourist destination, modifying the building and support systems to reduce overheads, continued improvement in the Aquarium shop, and pursuing consultancies, training schemes and public education courses to raise revenue
- running a conference on the role of volunteers in the fields of arts, tourism, environment and heritage in September 1993
- carrying out externally funded research on giant clams, the effect of water quality on coral health, coral reproduction, box jellyfish and crown of thorns starfish
- bringing the Coral Reef and Predator exhibits to closer representation of natural environments.

ADMINISTRATION

The section is part of the corporate management and services program of the Authority, (which also includes the Marine Park Authority, the Executive and Secretariat and the Canberra Office). The objective is to achieve cost-effective delivery of programs by providing executive management and administrative support to the Minister, the Authority and its staff and to the Great Barrier Reef Consultative Committee.

The section's responsibility covers the following corporate services:

- Human Resources Management
- Financial Management
- Accommodation and Facilities
- Office Services
- Records Management.

The objective of the corporate management and services program requires continual development of appropriate infrastructure to allow the Authority and its programs to achieve objectives with informality and through the simplification of procedures and systems whenever possible.

The efficiency of corporate services is assessed in relation to their cost and the extent to which they comply with and meet Authority and external requirements, as measured by:

- the management of staff numbers and salary budget - % variation from budget
- the management of financial resources - % variation from budget
- the cost of the support services in relation to the Authority's overall outlays - time/cost for key tasks or services, e.g. payment of accounts, staff recruitment activities
- compliance with standards of quality - as reflected by audit findings.

The effectiveness of corporate services is assessed by the extent to which the

corporate services infrastructure is adapted to support all programs and central resource management requirements as measured by:

- the degree of 'client' satisfaction with the standard of each service
- the timeliness of the implementation of Authority policies and decisions
- implementation of government policies and directives flowing from government decisions
- resource usage outcomes
- the provision of an equitable and participative work environment
- providing training and development opportunities which enable staff to achieve their full potential and acquire the expertise and flexibility to meet changing requirements.

PROGRAM OUTCOMES

Program targets successfully achieved during 1992-93 were:

- review of corporate planning
- completion of a review of the Authority's corporate structure
- appointment of graduate recruits
- review of the performance appraisal system
- provision of competency based training and development to meet appraisal identified needs
- establishment of structures for joint consultative arrangements with staff associations
- devolution of accountability and responsibility for financial management
- implementation of a financial information management system
- implementation of activity based costing
- redesign, refit and occupation of new areas of office accommodation
- improvements in communications equipment.

HUMAN RESOURCES MANAGEMENT

Human Resource Budgeting

Outcomes for the year in the management of staff numbers and expenditure on salaries and related costs were satisfactory under the increasing demands upon all Authority programs.

The staff of the Authority at 30 June 1993 is set out in table 6.

The number of staff years utilised in appropriation funded operations during 1992-93 was 99. Total expenditure on salaries and related costs during the 1992-93 year was $5 259 211, comprised of $3 867 934 for budget funded operations and $1 391 277 for non-budget funded operations, including the Great Barrier Reef Aquarium. Expenditure on appropriation funded operations was $751 334 above the running costs salary estimates.
This expenditure was funded from allocations related to increased research activities, World Heritage Area Management, the implementation of the Environmental Management Charge system, funding of specific projects by the Department of the Environment, Sport and Territories, provision of external services and revenue received from a number of cost-recovery activities. The staffing costs of the Great Barrier Reef Aquarium are not funded through parliamentary appropriation but are met from Aquarium revenues.

TABLE 6

STAFF OF THE AUTHORITY AT 30 JUNE 1993

	Operative	Permanent	Temporary	Total
Townsville	Executive and Secretariat (includes Corporate and Strategic Planning)	8		8
	Research and Monitoring	14	7	21
	Planning and Management	16	2.5	18.5
	Environmental Impact Management	13	2	15
	External Services	4		4
	Education and Information	13	6	19
	Administration	11		11
	Aquarium	16.5	9.5	26
	Townsville Total	95.5	27	122.5
Canberra	Executive	2		2
	Support	4		4
	Canberra Total	6		6
	Total June 1993	101.5	27	128.5
	Total June 1992	106.1	28.7	134.8
	Inoperative Staff			
	Temporary Transfer	3	3	
	Leave with pay	4.5	4.5	
	Leave without pay - public interest	2		2
	Leave without pay - private	4		4
	Inoperative Total	13.5		13.5

Staff numbers are expressed as full-time equivalents

During the year three permanent staff (3%) left the Authority compared with six permanent staff (6%) in the previous year. Six permanent staff were recruited during the year. The reduced staff turnover figure for 1992-93 continues the trend since 1991-92 and affirms the positive outcomes from recent initiatives to improve career path structures and provide a greater emphasis on staff development.

Performance Management

Performance Pay arrangements for Senior Officers were implemented during 1992-93. Adaptations to the Authority's existing Staff Development Appraisal Program, to include a greater emphasis on performance appraisal and to meet APS-wide guidelines, were approved by the Public Service Commission. Reporting of payments made under the Performance Pay arrangements follows in accordance with APS guidelines.

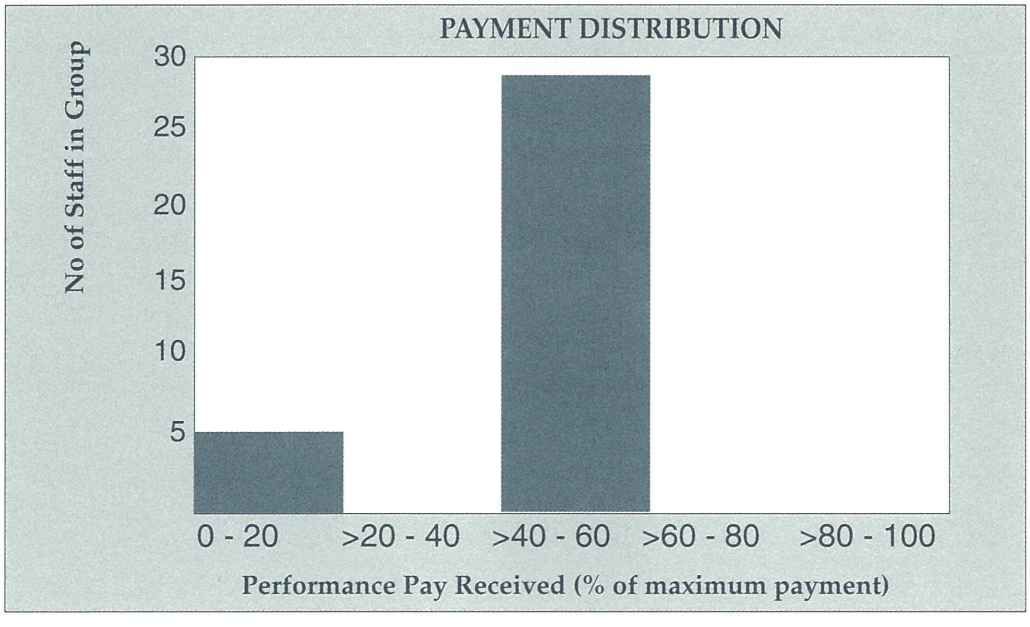
Senior Officer Performance Pay

There were 36 staff eligible for performance pay during the reporting year, and a total of $61 966 was paid.

Staff by Classification Group

	SES	SOA	SOB	SOC
No of Staff	3	0	11	22
Performance Pay Paid	Nil	Nil	$35167	$26799

FIGURE 3



Human Resource Development

Training and development activities during 1992-93 continued to focus on the development of management skills in the middle manager group and to provide a broad range of competencies for all other staff.

Total expenditure on Human Resource Development (HRD) activities for the year was $269 453, including the cost of administration of HRD activities and expenditure on Study Assistance programs, which represents 5.12% of total salary expenditure. This level of expenditure exceeds the Training Guarantee requirement of 1.5% of salary expenditure by $190 565. Human Resource Development expenditure on Middle Management Development Program activities for the year was $57 318 including $12 350 in subsidisation provided by the Public Service Commission.

TABLE 7

SUMMARY OF HUMAN RESOURCE DEVELOPMENT, PARTICIPATION AND EXPENDITURE FOR 1992-93

LEVEL	STAFF	TIME Days	$	ADMIN. EXP. $	STUDYBANK $	TOTAL $
SES & quivalent	3	14	4012	12184	0	16196
SO A-C & Equivalent	25	139	28397	56649	598	85644
ASO 5-6 & Equivalent	40	125	20226	50637	27402	98265
ASO 1-4 & Equivalent	63	211	23906	19949	18517	62372
GSO	11	35	3464	1802	1710	6976
TOTAL	**142**	**524**	**$80005**	**$141221**	**$48227**	**$269453**

SES Senior Executive Service
SO Senior Officer
$TIME Salary dollars
ASO Administrative Service Officer
GSO General Service Officer

STAFF Operative staff as at 30 June 1993
ADMIN. EXP. Course fees, transport costs, travel allowance and HRD staff salaries
STUDYBANK $Time & HECS & reimbursement

TABLE 8

REPRESENTATION OF EEO GROUPS WITHIN SALARY LEVELS AS AT 30 JUNE 1993

SALARY	TOTAL NO OF STAFF	WOMEN	NESB1	NESB2	ESB	ATSI	PWD	STAFF WITH EEO DATA
Below $23499 (includes ASO 1)	29	22 76%	2 7%	1 4%	24 89%	3 11%	2 7%	27
$23500 to $26568 (includes ASO 2)	24	16 67%	1 4%	2 9%	20 87%	0 0%	1 4%	23
$26569 to $29452 (includes ASO 3)	21	11 52%	0 0%	1 5%	20 95%	0 0%	1 5%	21
$29453 to $33024 (includes ASO 4)	6	3 50%	2 33%	1 17%	3 50%	0 0%	1 17%	6
$33025 to $35971 (includes ASO 5)	14	5 36%	0 0%	1 7%	13 93%	1 7%	0 0%	14
$35972 to $42088 (includes ASO 6)	28	7 25%	1 4%	0 0%	27 96%	1 4%	1 4%	28
$42089 to $47107 (includes SOC)	16	4 25%	0 0%	0 0%	16 100%	0 0%	1 6%	16
$47108 to $55234 (includes SOB)	12	2 17%	1 8%	0 0%	11 92%	0 0%	0 0%	12
Above $55234 (includes SES)	5	1 20%	0 0%	0 0%	5 100%	0 0%	1 20%	5
TOTALS	155	71 46%	7 5%	6 4%	139 91%	5 3%	8 5%	152

TABLE 9

REPRESENTATION OF EEO GROUPS WITHIN OCCUPATIONAL GROUPS AS AT 30 JUNE 1993

OCCUPATIONAL GROUP	TOTAL NO OF STAFF	WOMEN	NESB1	NESB2	ESB	ATSI	PWD	STAFF WITH EEO DATA
SES	5	1 20%	0 0%	0 0%	5 100%	0 0%	1 20%	5
ASO & related	123	61 50%	7 6%	4 3%	110 91%	4 3%	5 4%	121
GSO & related	12	2 17%	0 0%	0 0%	11 100%	1 9%	2 18%	11
Professional	9	5 56%	0 0%	1 11%	8 89%	0 0%	0 0%	9
Technical	6	2 33%	0 0%	1 17%	5 83%	0 0%	0 0%	6
TOTALS	155	71 46%	7 5%	6 4%	139 91%	5 3%	8 5%	152

Note: Percentage for women based on total staff; percentages for other groups based on staff with available EEO data.
SOURCE: Data retrieved from GBRMPA EEO Database.

TABLE 10

REPRESENTATION OF EEO GROUPS WITHIN AUSTRALIAN PUBLIC SERVICE

	TOTAL NO OF STAFF	WOMEN	NESB1	NESB2	ESB	ATSI	PWD
TOTALS	144102	67722	6596	12122	79043	1844	5797
		47%	5%	8%	55%	1%	4%

Figures shown are for those staff with data recorded in the Continuous Record of Personnel at June 1992

SOURCE: APS Statistical Bulletin December 1992

TABLE 11

REPRESENTATION OF EEO GROUPS WITHIN THE POPULATION OF THE GREAT BARRIER REEF REGION

	TOTAL POPULATION	WOMEN	NESB1	NESB2	ESB	ATSI	PWD
TOTALS	861978	423330	43774	118415	699789	41373	84700
		49%	5%	14%	81%	5%	10%

SOURCE: Australian Bureau of Statistics from 1986 and 1991 Census data

NESB1	Non-English Speaking Background, first generation
NESB2	Non-English Speaking Background, second generation
ESB	English Speaking Background
ATSI	Aboriginal or Torres Strait Islander
PWD	People with a disability

Equal Employment Opportunity

The Authority's Chairman and Executive Officer are the senior executives responsible for Equal Employment Opportunity (EEO) and the Human Resources Manager undertakes the role of EEO Coordinator. EEO activities undertaken during the year focused on the provision of management training to women.

The Authority continued to pursue its aim to have target group representation in its staffing to reflect the representation of those groups in the population of the Great Barrier Reef Region of the Queensland coast. Representation of EEO Target Groups within the Authority's staffing is generally comparable to that of the APS as a whole and exceeds APS averages in the representation of women in SES and SO positions, Aboriginals and Torres Strait Islanders and people with disabilities. Some of these variations may be due to the very

comprehensive nature of the Authority's EEO data. Representation of Aboriginals and Torres Strait Islanders in the Authority's staff was maintained at 3% of total staff numbers during 1992-93. Steps to increase Aboriginal and Torres Strait Islanders community involvement in the management of the Marine Park are being pursued via a Marine Park Ranger Training program and the establishment of joint management arrangements for the control of traditional hunting activities in the Great Barrier Reef Marine Park.

EEO data for the Authority's staff is provided in tables 8 and 9.

Industrial Democracy

While it has always been recognised that the ultimate responsibility for the management of this agency lies with the Authority, effective management will be enhanced through the involvement in, and the commitment of, staff to the decision making process. This requires the involvement of staff in consultations which:

- allow staff to fully apply their skills and experience
- recognise the dignity of all staff
- provide all staff with the opportunity to influence decisions which affect the quality of their working lives

During the year many staff have made significant contributions to the development of the Corporate Plan and a Strategic Plan for the Great Barrier Reef World Heritage Area, a structural review of the Authority and the development of a marketing strategy. During the year regular interactive meetings were attended by all Townsville based staff to improve communication and information flow within the organisation and to give all staff an opportunity to raise issues of concern to them and to convey information and ideas to the executive and all staff.

Occupational Health and Safety

Occupational Health and Safety (OH&S) activities during the year continued to focus on the development of safe work practices appropriate to the Authority's operations and on raising awareness amongst all staff of OH&S issues and the importance of adherence to safe work practices.

Staff participated in a number of OH&S training activities during the year including;

- Comcare OH&S Representative Training
- Fire Safety and Emergency Procedure Training

During 1992-93 three compensation claims were lodged. Resulting expenditure totalled $632.

During the year the Authority continued to provide its staff with an Employee Assistance Program provided by Employee Assistance Service North Queensland.

FINANCIAL MANAGEMENT

In 1992-93 Parliament appropriated $11 758 000 for the Authority's programs, including the Great Barrier Reef Aquarium. Additional funds amounting to $ 3 906 289 were carried forward from the 1991-92 financial year and applied towards 1992-93 activities. Under the cost-sharing arrangements for the day-to-day management of the Marine Park, an amount of $3 058 000 was received from the Queensland Government during the year. Receipts from other sources including funding of specific projects by the Department of the Environment, Sport and Territories, provision of external services, interest, permit assessment fees, contributions to baseline and monitoring studies and the sale of education materials amounted to $1 985 697 and Aquarium earnings totalled $1 708 274.

Program expenditure for the year, other than expenditure on the Great Barrier Reef Aquarium, amounted to $18 221 067 or 87% of funds available. Expenditure of $2 058 274 on the Great Barrier Reef Aquarium program was met from its income generating activities and by drawing on funds advanced by the Department of Finance. Full details are provided in Appendix **L**, which have been prepared on a accrual accounting basis.

The expenditure of funds for all programs is shown in figure 4. These expenditures include the allocation of salaries and certain overheads to each program.

GENERAL SERVICES

The cost of corporate services in 1992-93 was $1 434 604 which represents 13% of the Authority's expenditure (excluding the Great Barrier Reef Aquarium and day-to-day management of the Great Barrier Reef Marine Park) compared with 11.5% in 1991-92 and 12.6% in 1990-91. This reflects increased property operation, office services and communication expenses associated with increased research programs and external services functions.

A Townsville based accountancy firm, C E Smith and Co are internal auditors to the Authority. A Strategic Audit Plan has been developed to ensure that all areas of the Authority are regularly evaluated.

FIGURE 4

EXPENDITURE OF FUNDS BY PROGRAM 1992-93

(Total Expenditure $20 279 341)

Planning and Management	8 798 982
Environmental Impact Management	1 379 596
Research and Monitoring	3 941 288
Education and Information	1 461 513
External Services	498 406
Corporate Management and Services	2 141 282
Sub Total	18 221 067
GBR Aquarium	**2 058 274**
TOTAL	**20 279 341**

BUDGET FUNDED

OFF BUDGET

Additional space has been leased to provide office accommodation for staffing increases associated with new research programs and improved Library facilities. Staff participated in the development of plans for the fit out and renovation of accommodation. The expansion of Authority programs continue to place increased demands on the provision of office services, in particular telecommunications, registry and the issue and maintenance of equipment.

SUMMARY OF PERFORMANCE INFORMATION

Program expenditure during 1992-93 was largely within budget. Cash carryover at 30 June 1993 of $2 681 000 is mostly due to delays in the establishment of large scale research projects. The carryover is comprised of provision of funding for these projects but also includes commitments for unfilled orders and contracts, funds set aside for payment of legal expenses and funds provided for industry-funded baseline and monitoring studies and the provision of external services.

1993-94 PROSPECTS

During 1993-94 priority will be given to:

- funding the objectives of the Corporate Plan
- continual review of strategic and corporate plans, projects and programs
- assessment and implementation of the recommendations of the corporate structure review
- further allocation of appropriate delegation of power under the devolution process
- full implementation of project management procedures
- assessment of future staffing needs
- agency-level workplace bargaining
- improved induction and orientation procedures
- provision of training and development to meet the needs identified in the appraisal process
- implementation of corporate health and workplace safety programs
- development and implementation of corporate communication strategies
- a feasibility study into Authority-owned office accommodation
- cutting down on waste
- further implementation of the use and access to Financial Management Information Systems
- planning of a Human Resources Management Information System.

CANBERRA OFFICE

The objective of the Canberra Office is to contribute to the effective development and delivery of Authority programs by establishing and maintaining liaison and coordination with the Minister and Canberra-based agencies. This is achieved by providing policy advice and administrative support, and by undertaking investigations and contributing to policy development for national and international marine and coastal management issues.

The Canberra Office has five full-time staff. It also provides an office for the Chairman of the Authority and is the principle point of contact on Great Barrier Reef matters in Canberra.

The Office advises the Minister, liaises with the Department of the Environment, Sport and Territories, Parliamentary Committees, other Canberra-based government and non-government organisations with interests in the Great Barrier Reef and assists in the development and communication of Authority policy.

It also assists other departments and organisations in the development of their marine and coastal policies and programs.

The Office provides administrative support to the Chairman and a secretariat for the Great Barrier Reef Ministerial Council.

The extent to which the objective is achieved will be assessed by the following indicators:

- the quality and timeliness of advice, assistance, submissions and correspondence to the Minister, Ministerial Council, Chairman, Parliamentary Committees, other organisations, members of the public and other sections of the Authority
- the extent to which statutory, Ministerial, Authority and Ministerial Council requirements are met
- the extent to which advice and assistance provided by the Office is utilised within the Authority
- the extent to which the Authority goal and its aims are supported by and taken into account by other government and non-government organisations.

During 1992-93 the Canberra Office contributed to the following major Authority activities:

Great Barrier Reef Ministerial Council: 19th Meeting

Organised a successful meeting of the Council in Cairns in June 1993 (see separate report).

Introduction of Marine Park Charges

Assisted with the development and passage of legislation which implemented a new system of charges for commercial operators from 1 July 1993.

Ocean Rescue 2000

Continued to assist with the co-ordination of the Ocean Rescue 2000 program. DEST has overall policy responsibility while the Authority and the Australian Nature Conservation Agency are responsible for implementation of the program elements.

Appointments

Liaised with QDEH and assisted DEST in the identification of prospective appointees to the Great Barrier Reef Consultative Committee.

Submissions to inquiries and investigations

Made 64 submissions to the Minister on a range of policy matters and coordinated and provided submissions to, and commented on draft papers on range of matters including the Endangered Species legislation, the national Ecologically Sustainable Development strategy, the draft Commonwealth Coastal Policy and the Resources Assessment Commission Inquiry on the Coastal Zone. It also organised responses to public submissions to the Minister.

International System of MPAs

Continued to assist the Chairman in his role as Vice-Chairman (Marine) of the IUCN Commission on National Parks and Protected Areas with the objective of co-ordinating the establishment of a global representative system of marine protected areas. This has involved:

- management of a global network of marine working groups
- coordination of activities to develop and participate in regional marine reserve management programs (carried out in cooperation with the External Services Section)

- undertaking further consultancy work for the World Bank to recommend priority areas for global marine biodiversity conservation.

Evaluation

Assisted DEST in gathering information for a comprehensive evaluation of the Authority which was commissioned as part of the Department's routine evaluation of programs. The evaluation was carried out by Mr John Whitehouse, a solicitor and consultant to local government.

Oil Spills

In April, the Canberra Office and the Australian Maritime Safety Authority organised a meeting of technical experts to discuss ways to improve protection of the Great Barrier Reef from the threat of an oil spill. The two day meeting involved 40 experts from Queensland and Commonwealth government agencies, the shipping and oil industries and environmental groups. They identified and recommended new technologies and measures that can improve protection. Participants recommended the introduction of the latest satellite and electronic chart navigation equipment and the declaration of a 200 nautical mile Exclusive Economic Zone around the entire Australian coastline. Proceedings of the meeting will be published.



The UNESCO Einstein Gold Medal was awarded to the Authority 'in recognition of its outstanding contribution, particularly through its Aquarium, to the conservation of the world heritage and to the advancement of environmental education'. The award was presented to the Environment Minister Mrs Ros Kelly, by Professor Ken Wiltshire, Acting Chairman of the Australian National Commission for UNESCO, at a function in Parliament House attended by Authority Chairman Professor Graeme Kelleher and the Prime Minister Mr Paul Keating.

EXTERNAL SERVICES

This section's objective is to coordinate the Authority's consultancy activities which provide efficient and cost effective environmental management advice, training and technical assistance, both nationally and overseas, on a cooperative and cost recovery basis.

The Authority is committed to sound coral reef environmental management, as a basis for ecologically sustainable use. The staff of the Authority and its associated agencies have world class expertise and experience in the application of legislative, technical management, regional planning and environmental management techniques. It is the aim of the Authority, through its External Services Section, to make this expertise available nationally and internationally.

External Services fulfils these functions, operating under sections 7 and 7A of the Great Barrier Reef Marine Park Act.

Such assistance can take the form of:

- conducting research or investigations at the request of, and on behalf of, a client agency
- providing educational, training, advisory or information services
- planning and management.

National and international demand for this expertise and knowledge is increasing as it becomes more widely known that it is available on a consultancy or cost recovery basis.

The Authority has joined with James Cook University of North Queensland and the Australian Institute of Marine Science to form the International Tropical Marine Resource Centre (INTROMARC). The Centre focuses on the provision of quality education, training, scientific capability and management expertise in tropical marine aspects of ecologically sustainable development.

In the national context, the Authority is a member of the commercial marine and environmental consulting company, Australian Marine Science and Technology Limited (AMSAT) which draws on the expertise of Australian marine agencies, and coordinates the relevant agencies for particular assignments.

In May, the section Director, Mr Dan Claasen, resigned to take up duty with the United Nations Environment Program in Nairobi.
Mr Richard Kenchington resumed duty with the Authority as the section's Senior Director. Mr Kenchington previously worked with the Resource Assessment Commission as the Secretary to the Coastal Zone Inquiry. From 1977-90 he held the position of Director, Planning and Management with the Authority.

The program objectives for 1992-93 were to:

- increase the number of external activities and consultancies carried out on a cost recovery basis
- provide technical assistance to the Ocean Rescue 2000 National Representative System of Marine Protected Areas program
- finalise and institute a promotion and marketing strategy
- refine the project/consultancy bidding procedures.



Marketing the expertise: External Services' first marketing brochure, 'The Challenge of Balance' was launched at the Third ASEAN Science and Technology Week exhibition in Singapore. The Minister for Industry, Technology and Commerce, Senator John Button joined AMSAT CEO Bob Harris in a chat with Singapore's Deputy Prime Minister Lee Hsien Loong.

PERFORMANCE INFORMATION

Strong progress was made towards achieving these objectives. Six external assignments were completed during the year compared to the three completed

in the previous twelve months. Consultancies undertaken during 1992-93 included:

- continued project assistance for information exchange networks in the Asia-Pacific Region under a second Memorandum Of Understanding (MOU) with the United Nations Environment Program (UNEP) Global Environment Monitoring System (GEMS)
- the development, under an MOU with the World Bank, of a reference guide which identifies, maps and establishes priority areas for the conservation of global marine biodiversity. (A second MOU with the World Bank is being negotiated which will build on information contained in the reference guide.)
- providing placement training in marine area management planning for two rangers of the Ras Mohammed National Park, Egypt
- management assistance for the Science and Technology component of the ASEAN Australia Economic Cooperation Program (AAECP) Marine Science Project (done as a member of AMSAT)
- providing assistance on a preliminary study of an environmental management plan for the Western Gulf of Papua and the Torres Strait region
- participating in a specialist workshop for the South Pacific Regional Environment Program (SPREP) to develop program documentation for appropriate approaches to integrated Coastal Zone Management for Pacific Islands.

The section again gave technical assistance to Ocean Rescue 2000 by continuing coordination of Authority contributions to the National Representative System of Marine Protected Areas. This was done in cooperation with DEST, ANCA, the Northern Territory, Western Australia, Queensland and the Torres Strait Island Coordinating Council. In particular, the section provided advice and assessment of project proposals from the States and the Northern Territory, and jointly coordinated a national project officers workshop in conjunction with ANCA.

This year marked the launching of the section's first marketing brochure *Challenge of Balance* at the Third ASEAN Science and Technology Week Exhibition in Singapore. The Authority participated as a member of the AMSAT consortium and the exhibition proved an ideal opportunity to meet with key officials from Asia to consider potential areas of cooperation.

Considerable progress has been achieved in project/consultancy bidding procedures, which is reflected in the increase in the number of projects which have been undertaken. However, further refinement of the process is needed.



External Services is steadily introducing the Authority's unique management techniques to marine programs in Asia and the Pacific islands.

The section provides secretariat and project management support to the INTROMARC consortium. In particular, the focus has been on the development of the Tropical Marine Ecosystem Project (TROMES) which trains South-East Asian scientists and resource managers in the skills of resource assessment, coastal zone management and the delivery of education to management staff and users. A preparatory mission to Malaysia was made in June 1993.

1993-94 PROSPECTS

In 1993-94 priority will be given to:

- development of and participation in Phase 1 of the TROMES project on behalf of INTROMARC
- increasing the number of external activities and consultancies carried out on a cost recovery basis
- institute a more flexible human resource strategy within the Authority
- enhancement of the strategic alliances between AMSAT and INTROMARC.



CORPORATE AND STRATEGIC PROJECTS

This section's objectives are to contribute to the effective development and delivery of the Authority's programs and to support the functions of the Chairman and the Executive Officer in providing corporate and strategic direction.

This will be achieved by:

- **undertaking projects aimed at making the Authority's operating methods more flexible**
- **providing direction and resources for significant corporate projects**
- **assisting other sections with specific programs**
- **helping to develop overall corporate policy and strategic plans.**

The Corporate and Strategic Projects Section was created in December 1992 and is designed to be a flexible and adaptable unit within the executive/administration area. Specifically, the section will undertake projects of corporate and strategic significance to GBRMPA, including:

- developing the Corporate Plan
- monitoring and making recommendations on the Authority's policy of greater flexibility and adaptability in its operations
- the review of documents and making recommendations concerning GBRMPA's public participation processes
- the completion of the Primary Schools Curriculum Project.

The Corporate and Strategic Projects Section will operate principally through consultancy or secondment. It is expected to remain a small section, staffed by a director/manager and some support personnel to work with experts who have been temporarily seconded to the section for specific tasks.

Performance information will be provided in the next Annual Report.

APPENDIX A

FUNCTIONS OF THE AUTHORITY

The functions of the Authority, defined in sections 7 and 7A of the Act, as amended in December 1988, are as follows:

(a) to make recommendations to the Minister in relation to the 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 cooperation with other institutions or 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 in accordance with Part V;

(ca) to furnish information and advice to the Minister in respect of matters relating to the Marine Park, including -

  (i) information and advice in relation to any agreement (including any proposed agreement) between the Commonwealth and Queensland on such matters;

  (ii) information and advice on the following matters:

    (A) whether the Commonwealth should grant financial assistance to Queensland in respect of a matter relating to the Marine Park;

    (B) the amount and allocation of such assistance;

    (C) the terms and conditions (if any) on which such assistance should be granted; and

  (iii) information and advice on the following matters:

    (A) whether it is desirable that Queensland should make a payment to the Authority in respect of a matter relating to the Marine Park;

(B) the amount and allocation of such payment;

(C) the terms and conditions (if any) on which such payment should be given;

(cb) to receive and disburse moneys appropriated by the Parliament for payment to the Authority for the purpose of payment of the moneys to Queensland by way of financial assistance to Queensland in respect of matters that relate to the Marine Park;

(cc) to receive and disburse moneys paid to the Authority by Queensland under an agreement between -

(i) the Commonwealth and Queensland;

(ii) Queensland and the Authority; or

(iii) the Commonwealth, Queensland and the Authority;

(cd) to provide, and arrange for the provision of, educational, advisory and informational services relating to the Marine Park;

(d) such functions relating to the Marine Park as are:

(i) conferred on the Authority by this Act; or

(ii) provided for by the regulations;

(da) to provide assistance to other institutions and persons in accordance with section 7A; and

(e) to do anything incidental or conducive to the performance of any of the foregoing functions.

(1A) For the purposes of this section but without limiting the generality of paragraph (1) (ca), (cb) or (cd), a matter shall be taken to relate to the Marine Park if it relates to -

(a) the use or management of an area (which may be a Queensland national park or a Queensland marine park) the use or management of which would or might affect the Marine Park; or

(b) the use of a place outside the Marine Park for a purpose relating to the Marine Park.

(1B) The Authority is responsible for the management of the Marine Park.

(2) The Authority shall perform its functions in accordance with any general directions given by the Minister not inconsistent with this Act.

(3) The Authority shall include in each report prepared under section 63M of the *Audit Act 1901* particulars of any directions given by the Minister under sub-section (2) during the period to which the report relates.

7A (1) Subject to this section, the Authority may, at the request of another institution or person, provide assistance to the institution or person in matters relating to environmental management.

(2) The assistance may be provided by the Authority acting by itself or in co-operation with other institutions and persons.

(3) Without limiting the generality of the assistance that may be provided, the assistance may take any of the following forms:

(a) the carrying out of research or investigations;

(b) the provision of educational, advisory or informational services;

(c) the making available of facilities.

(4) The Authority shall not perform a function that the Authority has only because of this section unless the Minister has approved, in writing, the provision of the assistance concerned.

(5) The Minister shall not give an approval under subsection (4) unless the Minister is satisfied that the provision of the assistance concerned is not likely to affect adversely the performance of the functions of the Authority conferred by other provisions of this Act.

(6) An approval under subsection (4) may be given subject to conditions or restrictions set out in the instrument of approval (including conditions requiring the charging of fees).

(7) Nothing in this section limits the functions that may be conferred on the Authority by the regulations.

APPENDIX B

FUNCTIONS OF THE GREAT BARRIER REEF CONSULTATIVE COMMITTEE

The functions of the Great Barrier Reef Consultative Committee, defined in section 21 of the Act, are as follows:

(a) to furnish advice to the Minister, either of its own motion or upon request made to it by the Minister, in respect of matters relating to the operation of:

  (i) this Act; or

  (ii) the *Great Barrier Reef Marine Park (Environmental Management Charge - General) Act 1993* or

  (iii) the *Great Barrier Reef Marine Park (Environmental Management Charge - Excise) Act 1993*

(b) to furnish advice to the Authority in respect of matters relating to the Marine Park, including advice as to the areas that should be parts of the Marine Park, referred to it by the Authority.

APPENDIX C

AUTHORITY SENIOR OFFICERS

TOWNSVILLE OFFICE

Dr Wendy Craik *(Executive Officer)*

Peter McGinnity *(Director, Planning and Management)*

Dr Zena Dinesen *(Director, Environmental Impact Management)*

Jon Brodie *(Acting Director, Research and Monitoring)*

Ray Neale *(Director, Corporate and Strategic Projects)*

Ian Burston *(Director, Aquarium, Acting Director Education and Information)*

Ross Hebblewhite *(Director, Administration)*

Richard Kenchington *(Senior Director, External Services)*

CANBERRA OFFICE

Peter Ottesen *(Director)*

APPENDIX D

PUBLICATIONS

WORKSHOP SERIES (ISSN 0156-5842)

The Possible Causes and Consequences of Outbreaks of the Crown-of-thorns Starfish. U Engelhardt and B Lassig (eds). Townsville, GBRMPA, 1993. (Workshop Series No. 18) 168p. ISBN 0 642 17417 2

Workshop on the Impacts of Flooding. GT Byron (ed). Queensland, QDEH/GBRMPA, 1992. (Workshop Series No. 17) 155p. ISBN 0 642 12044 7

Sustainable Development for Traditional Inhabitants of the Torres Strait Region: Proceedings of the Torres Strait Baseline Study Conference. D Lawrence and T Cansfield-Smith (eds). Townsville, GBRMPA, 1991. (Workshop Series No. 16) 535p. ISBN 0 642 12028 5 (Out of print.)

Workshop on the Role of Scientific Support Co-ordinator (SSC) in Oil Spill Response. Ian M Dutton (ed). Townsville, GBRMPA, 1989. (Workshop Series No. 12) 133p. ISBN 0 642 12010 2

Nutrients in the Great Barrier Reef Region. CL Baldwin (ed). Townsville, GBRMPA, 1988. (Workshop Series No. 10) 191p. ISBN 0 642 12016 1 (Out of print.)

Fringing Reef Workshop: Science, Industry and Management. CL Baldwin (ed). Townsville, GBRMPA, 1987. (Workshop Series No. 9) 280p. ISBN 0 642 52633 8

Traditional Knowledge of the Marine Environment in Northern Australia. F Gray and L Zann (eds). Townsville, GBRMPA, 1988. (Workshop Series No. 8) 196p. ISBN 0 642 52609 5

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Papers and Proceedings of the Workshop 'Tourism and the Great Barrier Reef' held in Mackay 9-11 April, 1979. Townsville, GBRMPA, 1981. (Workshop Series No. 4) 182p. ISBN 0 642 52273 1 (Out of print.)

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Workshop on Reef Fish Assessment and Monitoring held at Heron Island, 18-28 November, 1978. Townsville, GBRMPA, 1978. (Workshop Series No. 2) 64p. Reprinted 1985. (Out of print.)

Workshop on the Northern Sector of the Great Barrier Reef: Papers and Proceedings of a Workshop held in Townsville, 20-21 April, 1978. Townsville, GBRMPA, 1978. (Workshop Series No. 1) 462p. ISBN 0 642 91150 9 Reprinted August 1983. (Out of print.)

TECHNICAL MEMORANDUM/REPORT SERIES (ISSN 0817-6094)/(ISSN 0814-9224)

Management of Recreational Fishing in the Great Barrier Reef Marine Park. Wendy Craik. Townsville, GBRMPA, 1990 (GBRMPA-TM-23) 35p. ISBN 0 642 12003 X Reprinted 1991.

Morphology and Development of the Cape Tribulation Fringing Reefs, Great Barrier Reef, Australia. Bruce R Partain and David Hopley. Townsville, GBRMPA, 1990. (GBRMPA-TM-21) 45p. ISBN 0 642 12026 9

The Effects of Increased Sedimentation on the Recruitment and Population Dynamics of Juvenile Corals at Cape Tribulation, North Queensland. David A Fisk and Vicki J Harriott. Townsville, GBRMPA, 1989. (GBRMPA-TM-20) 31p. ISBN 0 642 12018 8

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The Hard Line (BRA Q117)

Northumberland Islands (BRA Q118)

Riptide Cay (BRA Q119)

Shoalwater Bay (BRA Q120)

Howard Patch (BRA Q121)

Keppel Islands (BRA Q122)

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Cockburn (BRA Q102)

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Princess Charlotte (BRA Q105)

Lizard Island (BRA Q106)

MISCELLANEOUS MAPS (CURRENTLY AVAILABLE)

Companion Map to Great Barrier Reef 1: 2 200 000 (Strip map, coloured) March 1991 (BRA Q144)

Cairns Section, Great Barrier Reef Marine Park Zoning Plans - Zoning Maps (2) to (6) 1: 300 000 (A3 size, coloured) May 1983 (BRA Q51) to (BRA Q55)

POSTERS (CURRENTLY AVAILABLE)

Aerial of Hardy Island Reef. 1985

Clown Fish and Anemone. 1985

Gorgonia and Feather Stars. 1985

Reef Walking at North West Island Reef. 1985

Snorkelling at Heron Island. 1985

Turret Coral. 1985

Coral Trout of the Great Barrier Reef. 1985

Portraits of the Reef. [2 prints + notes] Robert Ingpen. Ruskin Press, October 1981

AUDIOVISUAL PRODUCTIONS

Deckhand. A Video Magazine for Queensland Commercial Fishermen. Edition 1 -, 1989/90 -

Reef Report. 1 -, 1987 -

A Day on the Great Barrier Reef. Video, 8 minutes. Townsville, GBRMPA, 1987.

Encounters with the Reef. Structure and Evolution of the Great Barrier Reef. 50 slides and audio cassette. Townsville, GBRMPA, 1987.

Encounters with the Reef. Video, 30 minutes. Townsville, GBRMPA, 1987.

The Crown of Thorns Story. Video, 25 minutes. Townsville, GBRMPA, 1987.

The Crown-of-Thorns Phenomenon. Video, 16 minutes. Townsville, GBRMPA/AIMS, 1991.

A Walk in the Sea. Video, 46 minutes. Perth, Nomad Films Inter. Pty Ltd, 1991.

Pardon My Bubbles - A Guide to Low Impact Diving on Coral Reefs. Video, 10 minutes. Townsville, GBRMPA, 1992.

A Question of Balance. Video, 24 minutes. Townsville, GBRMPA, 1992.

FREEDOM OF INFORMATION

Documents available for purchase through AGPS bookshops:

Current Annual Report

Nomination of the Great Barrier Reef by the Commonwealth of Australia for inclusion in the World Heritage List. GBRMPA, 1981.

Bibliography of the Great Barrier Reef Province. Edgar Frankel, 1978.

Great Barrier Reef Marine Park Act 1975 and Regulations.

Documents available free of charge for single copies from the Authority's Townsville office:

Zoning Plans

Research Report 1976-1982

Information brochures, bulletins and leaflets

Selected maps of the Great Barrier Reef Marine Park

REEF database publications

Reef Notes series

Reeflections and *Reef Research*

Media releases and communiques

Corporate Plan, 1992 to 1997. Townsville, GBRMPA, 1993.

Corporate Plan. Townsville, GBRMPA, 1991.

Documents available for bulk-purchase from the Authority's Townsville office:

Posters

Various information brochures, books and audiovisual productions

Research reports and workshop proceedings

Maps of the Great Barrier Reef Marine Park

Small quantities may be purchased through the Great Barrier Reef Aquarium Shop.

Facilities for access:

The Townsville office holds most of the documents relating to the Authority, its Office and the Great Barrier Reef Consultative Committee. It is possible to arrange access to documents, available under provisions of the Freedom of Information Act, through either the Canberra or Townsville office (see addresses below), or at the State FOI Information Access Office. Staff are available to provide assistance in relation to any aspect of FOI requests.

Members of the public may make inquiries on FOI matters and inspect documents to which access has been granted at either office. Business hours, Monday to Friday, are

8.30am - 4.50pm. Formal requests for access to documents must be directed to the office listed in the following section.

Information about facilities for access by disabled persons can be obtained by contacting the FOI Officer at the Townsville office.

The following facilities for access are maintained at the Townsville office:.

- computer printer
- microfiche reader
- film and slide projectors
- video and audio tape recorders
- photocopy machine
- reading room.

FOI Procedures and Initial Contact Points:

Inquiries may be made in writing, by telephone or in person at the official FOI access points listed below. It is also suggested that inquirers give a telephone number.

Great Barrier Reef Marine Park Authority
2-68 Flinders St PO Box 1379
TOWNSVILLE QLD 4810 TOWNSVILLE QLD 4810
Telephone (077) 81 8811; Telex GBRMPA 47332; Fax (077) 72 6093
OR

Great Barrier Reef Marine Park Authority
Acorn House, 37 Torrens St GPO Box 791
BRADDON ACT 2601 CANBERRA ACT 2601
Telephone (06) 247 0211; Telex ARRIC 62552; Fax (06) 247 5761

If any difficulty arises in the identification of a document or in providing access in the form requested, an officer of the Authority will contact the applicant with a view to resolving the difficulty.

In consultation with applications, documents will be made available as follows:

- by mail to the address specified by the applicant
- at the official FOI access point.

The authorised decision-makers under the Act for the Authority and the Consultative Committee, with official addresses for the lodging of requests, are:

The Executive Officer
Great Barrier Reef Marine Park Authority
PO Box 1379
TOWNSVILLE QLD 4810

The Secretary
Great Barrier Reef Consultative Committee
PO Box 1379
TOWNSVILLE QLD 4810

APPENDIX E

STAFF PAPERS PUBLISHED /PRESENTED IN 1992-93

BRIGGS, D. **A 25-year strategic plan for the Great Barrier Reef World Heritage Area.** Australian Ranger. 26: 1993; 29-30.

BRODIE, J. **Monitoring water quality changes in coral reef areas : statistics versus chemistry versus logistics.** Published in the Proceedings of the 7th International Coral Reef Symposium, University of Guam, 1993.

BRODIE, J. **Problems of land-based pollution on the Great Barrier Reef.** Issues. 22: 1993; 40-43.

BRODIE, J. and FURNAS, M. **A water quality monitoring program for the Great Barrier Reef.** Published in the Proceedings of the 7th International Coral Reef Symposium, University of Guam, 1993.

CRAIK, W. **The effect of oil on the Australian marine environment with particular reference to the Great Barrier Reef.** Presented at: Spillcon '92, held at ANA Hotel, Gold Coast, Queensland Australia, 4-8 July 1992.

CRAIK, W. **The Great Barrier Reef Marine Park: Its establishment, development and current status.** Marine Pollution Bulletin. 25(5-8): 1992; 122-133.

CRAIK, W. **Implications of marine park management for tourism in the Whitsundays.** In: Queensland's Whitsundays - the envy of the world : conference proceedings : developing and investing in the Whitsundays' tourism industry : Whitsundays Tourism 2000 Conference 25-27 November, 1992, held at Hamilton Island on 25-27 November 1992. Sponsored by the Whitsunday Tourism Association in association with the Queensland Tourist and Travel Corporation and Hamilton Island Resort.

CRAIK, W. **The Great Barrier Reef Marine Park : a model for regional management.** In: Protection of marine and estuarine areas : a challenge for Australians : proceedings of the Fourth Fenner Conference on the Environment, Canberra, 9-11 October 1991. (Edited by A. Ivanovici, D. Tarte and M. Olson) Canberra : Australian Committee for IUCN, 1993. p. 91-97.

CRAIK, W. and BRODIE, J. **Water quality : promoting tourism and recreation.** Presented at: Delivering opportunities : AWRC and ANZEC 1992 National Conference : water quality management and ecologically sustainable development, Adelaide, 3-4 December, 1992. Sponsored by the Australian Water Resources Council and Australian and New Zealand Environment and Conservation Council.

DAVIES, S. **REEFlections** ... Star Australis. 10: 1993; 3.

DIGHT, I. **Computer models and the spread of outbreaks.** In: Crown-of-thorns starfish research update, 1991/92. (Edited by U. Engelhardt and B. Lassig) Townsville : GBRMPA, 1992. p. 10-11.

ENGELHARDT, U. and LASSIG, B. (Editors) **The possible causes and consequences of outbreaks of the crown-of-thorns starfish** : proceedings of a workshop held in Townsville, Queensland, Australia, 10 June 1992 at the Sheraton Breakwater Casino Hotel. Townsville : Great Barrier Reef Marine Park Authority, 1993. (Workshop series / Great Barrier Reef Marine Park Authority); no. 18. 168 p.

GLADSTONE, W. **The Torres Strait baseline study : monitoring for possible effects of mining operations in the Fly River catchment area on the Torres Strait marine enviornment.** Published in the Proceedings of the 7th International Coral Reef Symposium, University of Guam, 1993.

GLADSTONE, W. **The history of crown-of-thorns starfish controls on the Great Barrier Reef and an assessment of future needs for controls.** In: The possible causes and consequences of outbreaks of the crown-of-thorns starfish : proceedings of a workshop held in Townsville, Queensland, Australia, 10 June 1992 at the Sheraton Breakwater Casino Hotel. (Edited by U. Engelhardt and B. Lassig) Townsville : Great Barrier Reef Marine Park Authority, 1993. (Workshop series / Great Barrier Reef Marine Park Authority); no. 18. p. 147-155.

GLADSTONE, W. **Sea science : labour of love.** Scuba Diver. June/July 1993; 20-24.

HARRIGAN, B. **Anchors away!** Issues. 23: 1993; 48-51.

HARRIOTT, V. **Coral lipids and environmental stress.** Environmental Monitoring and Assessment. 25 (2) April 1993; 131-139.

JONES, M. **The living coral reef ecosystem exhibit.** In: AAZPA/CAZPA Annual Conference proceedings 1992, Toronto, Canada, 13-17 September. [Toronto : American Association of Zoological Parks and Aquariums, 1992]. p. 381-387.

KELLEHER, G. **Models for integrated resource management : the Great Barrier Reef.** Presented at: Coastal Management Conference, Ramada Renaissance Hotel, Sydney, Australia, 22-23 October 1992.

KELLEHER, G. **Lessons for marine management from the Great Barrier Reef Marine Park Authority.** Presented at: 11th National Environmental Law Conference, Perth 20-22, September 1992. Sponsored by the National Environmental Law Association.

KELLEHER, G. **Who is responsible for national parks?** Issues. 21: 1992; 20-24.

KELLEHER, G. **Sustainable development of the Great Barrier Reef Marine Park.** In: The greening of tourism from principles to practice : a casebook of best environmental practice in tourism, March 1993. (Edited by S. Hawkes and P. Williams) Burnaby, B.C. : Simon Fraser University, 1993. p. 53-58.

KELLEHER, G. **A management approach to the COTS question.** In: The possible causes and consequences of outbreaks of the crown-of-thorns starfish : proceedings of a workshop held in Townsville, Queensland, Australia, 10 June 1992 at the Sheraton Breakwater Casino Hotel. (Edited by U. Engelhardt and B. Lassig) Townsville : Great Barrier Reef Marine Park Authority, 1993. (Workshop series / Great Barrier Reef Marine Park Authority); no. 18. p. 157-159.

KELLEHER, G. **Can the Great Barrier Reef model of marine protected areas save reefs worldwide?** Presented at: Global aspects of coral reefs : health, hazards and history, held at Rosentiel School of Marine and Atmospheric Science, University of Miami, Miami USA, June 1993.

KELLEHER, G. **Progress towards a global system of marine protected areas.** In: Protection of marine and estuarine areas : a challenge for Australians : proceedings of the Fourth Fenner Conference on the Environment, Canberra, 9-11 October 1991. (Edited by A. Ivanovici, D. Tarte and M. Olson) Canberra : Australian Committee for IUCN, 1993. p. 36-38.

KELLEHER, G. and BLEAKLEY, C. **Progress towards a global system of marine protected areas.** Parks. 3(1): 1992; 42-43.

KELLEHER, G. and CRAIK, W. **The Great Barrier Reef : its health and hazards.** Presented at: Global aspects of coral reefs : health, hazards and history, held at Rosenstiel School of Marine and Atmospheric Science, University of Miami, Miami USA, June 1993.

KELLEHER, G. and CRAIK, W. **Maintaining biodiversity in a managed land/seascape : the Great Barrier Reef, Australia.** Presented at: Biodiversity in Managed Landscapes : Theory and Practice, held at Sacremento, USA, 13-17 July 1992. Sponsored by IUCN, UNEP and the World Resources Institute.

LASSIG, B. **The need for a crown-of-thorns starfish contingency plan.** In: The possible causes and consequences of outbreaks of the crown-of-thorns starfish : proceedings of a workshop held in Townsville, Queensland, Australia, 10 June 1992 at the Sheraton Breakwater Casino Hotel. (Edited by U. Engelhardt and B. Lassig) Townsville : Great Barrier Reef Marine Park Authority, 1993. (Workshop series / Great Barrier Reef Marine Park Authority); no. 18. p. 161-168.

LASSIG, B., AYLING, A., BIRTLES, A., DONE, T., DREW, E., KELLY, G and WILKINSON, C. **The benthic communities of Raine Island.** In: Raine Island and environs, Great Barrier Reef : quest to preserve a fragile outpost of nature : proceedings of the Workshop on Raine Island and its Environs held at Townsville, Queensland 2-3 November 1991. (Compiled and edited by A. Smyth, K. Zevering and C. Zevering) Brisbane : Raine Island Corporation, 1993. p. 39-42.

LASSIG, B., GLADSTONE, W., MORAN, P. and ENGELHARDT, U. **A crown-of-thorns starfish contingency plan.** Published in the Proceedings of the 7th International Coral Reef Symposium, University of Guam, 1993.

LAWRENCE, D. and CORNELIUS, J. **History, relics and tower graffiti.** In: Raine Island and environs, Great Barrier Reef : quest to preserve a fragile outpost of nature : proceedings of the Workshop on Raine Island and its Environs held at Townsville, Queensland 2-3 November 1991. (Compiled and edited by A. Smyth, K. Zevering and C. Zevering) Brisbane : Raine Island Corporation, 1993. p. 1-11.

MAPSTONE, B. **Fish research at Raine Island.** In: Raine Island and environs, Great Barrier Reef : quest to preserve a fragile outpost of nature : proceedings of the Workshop on Raine Island and its Environs held at Townsville, Queensland, 2-3 November 1991. (Compiled and edited by A. Smyth, K. Zevering and C. Zevering) Brisbane : Raine Island Corporation, 1993. p. 43-45.

MCGINNITY, P. **Planning and management of Australia's Great Barrier Marine Park.** Presented at: Ocean Resources Committee, Western Legislation Conference, Agana, Guam, November 1992.

MCGINNITY, P. **Involving aboriginal and Torres Strait islanders in the Marine Park.** Issues. 21: 1992; 41.

MULDOON, J. **The role of marine protected areas in Australia.** Issues. 21: 1992; 55-58.

MURDOCH, L. **The Great Barrier Reef World Heritage Area.** Issues. 22: 1993; 2-7.

NEALE, R. **Three faces of communicating for resource conservation : tailored school curriculum support, park user-group communication and training tour operators.** Presented at: 7th International Coral Reef Symposium, University of Guam Marine Laboratory, Guam. Mini-symposium : public awareness and education : keys to coral reef conservation, June 22-26 1992.

OLIVER, J. and MAPSTONE, B. **Design criteria for long-term broad-scale monitoring on coral reefs.** Published in the Proceedings of the 7th International Coral Reef Symposium, University of Guam, 1993.

OLIVER, J. and SCHNEIDER, R. **Monitoring the impact of tourist developments in the Great Barrier Reef Marine Park : some case studies.** Published in the Proceedings of the 7th International Coral Reef Symposium, University of Guam, 1993.

OTTESEN, P. **Tourism in the Great Barrier Reef Marine Park : how is it managed and who pays?** Presented at: Heritage Management : Parks, Heritage and Tourism National Conference, sponsored by Royal Australian Institute of Parks and Recreation, 4-9 October 1992, Hobart, Tasmania.

POSTLE, D. **Education as management tool in the Great Barrier Reef Marine Park.** Presented at: Seines to satellites : taming technology : 1992 National Marine Educators Annual Conference, Portland and Newport Oregon, USA, 3-8 August, 1992. Sponsored by the US National Marine Educators Association.

RAAYMAKERS, S. **Environmental considerations during oil spill response and the role of the scientific support coordinator.** Presented at: National Plan Training Course, held in Mackay, Townsville and Cairns, Australia, 1992.

RAAYMAKERS, S. **Ship sourced pollution in the Great Barrier Reef : causes, frequency, response and prevention.** Presented at: Meeting of Experts on the Transport of Oil and other Hazardous Substances through the Great Barrier Reef, April 1993, Canberra.

SMITH, G. **Endangered species in the Great Barrier Reef Marine Park.** Issues. 22: 1993; 34-39.

SMYTH, A. and STOKES, T. **Problems of preservation management.** In: Raine Island and environs, Great Barrier Reef Marine Park : quest to preserve a fragile outpost of nature : proceedings of a Workshop on Raine Island and its Environs held at Townsville, Queensland 2-3 November 1991. (Compiled and edited by A. Smyth, K. Zevering and C. Zevering) Brisbane : Raine Island Corporation, 1993. p. 57-61.

WILLIAMS, A. **Human use of the Great Barrier Reef Marine Park.** Issues. 23: 1993; 25-27.

ZANN, L. **Some perspectives on the *Acanthaster* phenomenon.** In: The possible causes and consequences of outbreaks of the crown-of-thorns starfish : proceedings of a workshop held in Townsville, Queensland, Australia, 10 June 1992 at the Sheraton Breakwater Casino Hotel. (Edited by U. Engelhardt and B. Lassig) Townsville : Great Barrier Reef Marine Park Authority, 1993. (Workshop series / Great Barrier Reef Marine Park Authority); no. 18. p. 103. [Abstract]

APPENDIX F

RESEARCH IN PROGRESS 1992-93

*** Project completed during 1992-93**

($) Refers to 1992-93 expenditure only

REEF MONITORING

238* Monitoring coral spawning using remote sensing (Pilot Study)
PROJECT LEADERS: Dr JT Baker (Biological Sciences, James Cook University), Dr J Oliver (GBRMPA), Dr D Kuchler (Mapping and Monitoring Technology Pty Ltd) ($nil)

291 Coral spawning experiment (CORSPEX '86)
PROJECT LEADER: Dr B Willis et al. (Biological Sciences, James Cook University), Dr J Oliver (GBRMPA) ($nil)

383 An investigation of optimum methods and unit sizes for the visual estimation of abundances of some coral reef organisms
PROJECT LEADERS: Dr B Mapstone (James Cook University), Dr AM Ayling (Sea Research) ($nil)

385 CORSPEX '87 Analysis of plankton samples
PROJECT LEADER: Dr B Willis et al. (James Cook University), Dr J Oliver (GBRMPA) ($nil)

392* Heron Island spoil dump - effect of cyclone 'Fran'
PROJECT LEADERS: Dr J Jell, Dr M Gourlay (University of Queensland) ($2500)

393 Monitoring of Heron Island Reef
PROJECT LEADER: Dr I Lawn (Heron Island Research Station) ($7000)

394* A case history of a tourist pontoon on an outer barrier reef and on-going monitoring projects relating to marine biota
PROJECT LEADER: Ms W Richards (Reef Biosearch Pty Ltd) ($5000)

440*, 513* Development of turbidity monitoring system
PROJECT LEADER: Mr J Gillies (GBRMPA) ($nil)

479 An investigation of scales and magnitudes of variability in population densities of some coral reef organisms: Stage II in the development of long term monitoring procedures
PROJECT LEADERS: Dr B Mapstone, Prof. JH Choat (James Cook University), Dr AM Ayling (Sea Research) ($nil)

510* Review and outline of fish cage culture in the Great Barrier Reef Region
PROJECT LEADER: Dr J Trendall (West Beach Aquaculture) ($2350)

511 A visual survey of demersal biota in the Cairns Section of the Great Barrier Reef Marine Park
PROJECT LEADER: Dr B Mapstone, Prof. JH Choat (James Cook University), Dr AM Ayling (Sea Research) ($nil)

512* Coral recovery at Green Is. 1984-1991: A synthesis
PROJECT LEADER: Mr D Fisk (Reef Research and Information Services) ($2900)

524* Major structuring determinants of coral reef assemblages - Whitsundays, Keppels etc.
PROJECT LEADER: Mr R van Woesik (Reefsearch) ($2250)

525 Monitoring temporal changes in the distribution and abundance of

dugongs, sea turtles and cetaceans in the northern Great Barrier Reef Marine Park between Cape Bedford and Hunter Point PROJECT LEADER: Dr H Marsh (James Cook University) ($nil)

645 Magnetic Island temperature monitoring/bleaching study
PROJECT LEADER: Dr J Oliver (GBRMPA) ($273)

646 Seabird Atlas of the Great Barrier Reef
PROJECT LEADER: QDEH ($nil)

654 Infra-red aerial photography - ground truth study
PROJECT LEADER: Dr J Oliver (GBRMPA), Prof. D Hopley (Sir George Fisher Centre for Tropical Marine Studies, James Cook University) ($30 000)

665* Bramble Reef Replenishment Area - 1992 survey
PROJECT LEADER: Dr AM Ayling (Sea Research) ($8650)

677* Continuation of long-term monitoring of fish recruited in seven lagoons - Capricorn Bunker Group
PROJECT LEADER: Dr P Doherty (Australian Institute of Marine Science) ($500)

687 An experimental study on the effect of water quality on the survival of Acroporid corals in the Great Barrier Reef Aquarium
PROJECT LEADER: Dr J Oliver (GBRMPA), Dr J Morrissey, Mr P Hough (Great Barrier Reef Aquarium) ($15 100)

709 Monitoring temporal changes in the distribution and abundance of dugongs, sea turtles and cetaceans in the GBRMP between Cape Bedford and the southern boundary
PROJECT LEADER: Dr H Marsh (James Cook University) ($40 000)

728 Bramble Reef Replenishment Area - 1993 survey
PROJECT LEADER: Dr AM Ayling (Sea Research) ($23 000)

Long-term monitoring of temperatures on the Great Barrier Reef
PROJECT LEADER: Dr J Oliver (GBRMPA), Dr M Furnas (Australian Institute of Marine Science) ($38 000)

OCEANOGRAPHY

530 Modelling approach to larval dispersal and reef fish recruitment
PROJECT LEADER: Mr P Bikaunieks ($nil)

EFFECTS OF FISHING

358 The seasnake by-catch of the east coast prawn fishery. Development of a reliable age determination technique
PROJECT LEADER: Mr T Ward (Zoology, James Cook University)
SUPERVISOR: Dr H Marsh ($nil)

381 Review of published and unpublished information on reef fishes of commercial and recreational fishing interest in the Great Barrier Reef Region
PROJECT LEADERS: Prof. JH Choat, Dr G Russ (James Cook University), Dr D Williams (Australian Institute of Marine Science) ($nil)

444 Catch / effort study of Great Barrier Reef recreational fisheries - boat ramp survey
PROJECT LEADER: Dr T Hundloe (Griffith University) ($nil)

550 Commercial reef/line catch/effort program
PROJECT LEADER: Mr B Shorthouse (GBRMPA) ($4064)

661 Visual surveys on the Cairns cluster reefs and closed reefs that will be opened under the new Zoning Plan
PROJECT LEADERS: Dr AM Ayling and Dr AL Ayling (Sea Research) ($25 300)

637* Effect of zoning changes on the

fish populations of unexploited reefs: Stage I pre-opening assessment
PROJECT LEADER: Dr I Brown (QDPI) ($6567)

638 Inter-reef movements of large reef fishes
PROJECT LEADER: Mr C Davies (James Cook University) ($60 923)

639 Detection of fixed differences among reefs and rates of fish recruitment
PROJECT LEADER: Dr P Doherty (Australian Institute of Marine Science) ($5000)

641 Development of trap and drop-line sampling techniques for reef and inter-reef fishes
PROJECT LEADER: Dr D Williams (Australian Institute of Marine Science) ($nil)

644 The environmental effects of prawn trawling in the Far Northern Section of the Great Barrier Reef
PROJECT LEADERS: Dr I Poiner (CSIRO), Dr J Glaister (QDPI) ($464 545)

694 Fish tagging study - funding for tag returns
PROJECT LEADER: Mr J Robertson (GBRMPA) ($1260)

720 Effect of zoning changes on the fish populations of unexploited reefs: Stage II post-opening assessment
PROJECT LEADER: Dr I Brown (QDPI) ($25 425)

WATER QUALITY

344 The importance of siltation and sedimentation resuspension on reefal development in the Whitsunday Islands area
PROJECT LEADERS: Dr D Johnson, Mr S Blake (Geology, James Cook University) ($nil)

422 Nitrogen and phosphorus budgets for Great Barrier Reef shelf waters - Palm Passage to Low Isles
PROJECT LEADER: Dr M Furnas (Australian Institute of Marine Science) ($nil)

442 Assessment of the effects of the removal of a pontoon system supporting a large-scale tourist operation on the Barrier Reef - Agincourt Reef
PROJECT LEADER: Ms AE Gibson (Reef Biosearch Pty Ltd) ($nil)

480 Changes in seagrass distribution and abundance at Green Island
PROJECT LEADERS: Mr W Lee Long, Mr M Potter (QDPI Cairns) ($3369)

485 Heron Island groundwater monitoring program
PROJECT LEADERS: Dr A Krol, Dr P Bell (University of Queensland) ($750)

495 Shelf scale nutrient dynamics in Great Barrier Reef waters: regional variability, shelf scale processes and water column cycling
PROJECT LEADER: Dr M Furnas (Australian Institute of Marine Science) ($15 000)

497 River inputs of nutrients to the central Great Barrier Reef
PROJECT LEADERS: Dr M Furnas, Dr A Mitchell (Australian Institute of Marine Science) ($4000)

532 Evaluation of the fate and effects of sewage discharge at Green Island
PROJECT LEADERS: Mr A Steven, Mr R van Woesik (Sir George Fisher Centre, James Cook University) ($455)

537 Validation of the 1928-29 phosphate and micro-phytoplankton data for Low Isles as a baseline for eutrophication in the Great Barrier Reef Lagoon
PROJECT LEADERS: Dr P Bell, Mr I Elmetri (University of Queensland) ($nil)

538 Study to detect possible effects of nutrient input from Fitzroy River on coral reef communities in Keppel Bay during recovery from the 1991 floods
PROJECT LEADERS: Ms E Tentori (University of Central Queensland) ($35 000)

539 Response of inshore coral reefs to elevated nutrient input
PROJECT LEADERS: Dr D Klumpp, Dr A Robertson, Dr D Alongi (Australian Institute of Marine Science) ($27 000)

541 Structure and dynamics of pelagic microbial food webs in tropical marine systems
PROJECT LEADER: Dr T Ayukai (Australian Institute of Marine Science) ($1000)

542 Nutrients from bird guano and local eutrophication on Heron Island
PROJECT LEADER: Dr C Johnson (University of Queensland) ($4500)

546 Sediment replication study - Low Isles
PROJECT LEADER: Prof. D Hopley (Sir George Fisher Centre for Tropical Marine Studies, James Cook University) ($nil)

553* Grant in aid towards a study of anthropogenic inputs to sediments over a Cairns - Green Island Transect
PROJECT LEADER: Dr RB Johns (Melbourne University) ($3140)

556 Historical and modern shelf sediment mobility, nutrient dynamics, and the present day productivity of the fringing reef dominated inshore
PROJECT LEADER: Mr S Blake (Australian National University) ($24 000)

558 Response of fringing reefs along a gradient of riverine discharge - an examination of historic and contemporary processes
PROJECT LEADERS: Mr R van Woesik (Reefsearch), Dr T Tomascik, Dr P Isdale (Australian Institute of Marine Science) ($3000)

565 Effects of experimentally enhanced nutrients on inshore seagrass beds in the Great Barrier Reef Region
PROJECT LEADERS: Prof. H Marsh, Ms J Mellors (James Cook University) ($30 000)

574 An investigation of the spatial, temporal, and environmental interpretative properties of trace metals precipitated into coral skeletal material
PROJECT LEADERS: Ms C Rasmussen, Prof. D Hopley, Dr C Cuff (James Cook University) ($43 000)

598 Phosphate load in the Johnstone Rivers discharge and factors affecting the desorption of phosphate
PROJECT LEADER: Dr C Pailles (UNE - Northern Rivers) ($50 000)

600 Nutrient and sedimentological analyses of water, soil and sediment samples from north Queensland river estuaries (part of EARTHWATCH)
PROJECT LEADERS: Dr A Arakel (Sydney Water Board), Dr T Loder (USA) ($nil)

614 Effects of sediment related environmental parameters on fringing reefs
PROJECT LEADERS: Dr M Stafford-Smith, Prof. JH Choat (James Cook University), Dr T Done (Australian Institute of Marine Science) ($15 000)

672 An investigation of the role of sediment as a nutrient transport mechanism in estuarine and nearshore marine environments
PROJECT LEADERS: Mr J Taylor, Dr C Cuff (James Cook University) ($3000)

673 Phosphorus dynamics of the Fitzroy River Estuary
PROJECT LEADER: Dr TD Waite (Australian Nuclear Science and Technology Organisation) ($nil)

674 Determination of the rate of uptake of dissolved inorganic, dissolved organic and adsorbed particulate phosphorus by living corals, the chemical factors influencing uptake rates and the distribution of the phosphorus within the corals
PROJECT LEADERS: Dr D McConchie, Dr V Harriott (UNE - Northern Rivers) ($18 000)

675 Historical fertiliser use in coastal Queensland
PROJECT LEADER: Mr JG Pulsford ($nil)

ENCORE (**E**nrichment of **N**utrients on **CO**ral **RE**efs)

678 One Tree Reef Fertilisation Experiment ENCORE
PROJECTS LEADERS: GBRMPA, Sydney University, James Cook University, Australian Institute of Marine Science ($141 865)

560 Dimethylsulphide as an indicator of stress in reef environments
PROJECT LEADER: Dr G Jones (James Cook University) ($6000)

681 Elevated nutrient levels on coral reefs: the effect of enhanced ammonium and phosphate levels on a range of biological, physiological and biochemical parameters in corals and clams
PROJECTS LEADERS: Assoc. Prof. D Yellowlees (James Cook University), Dr O Hoegh-Guldberg (University of Sydney) ($20 690)

682 Effects of experimentally manipulated nutrient loadings on settlement and recruitment of turf algae, crustose coralline algae and corals
PROJECT LEADER: Dr C Johnson (University of Queensland) ($11 000)

684 The effect of nutrient enrichment on the energetics and growth of reef-building corals
PROJECT LEADER: Dr O Hoegh-Guldberg (University of Sydney) ($13 000)

685 Effect of elevated nitrogen and phosphorus on the dynamics of dissolved free amino acids (DFAA) on microatolls
PROJECT LEADER: Dr O Hoegh-Guldberg (University of Sydney) ($8000)

713 Effects of experimentally enhanced nutrients on gametogenesis, fecundity and reproductive success in corals
PROJECT LEADER: Dr P Harrison (UNE - Northern Rivers) ($4844)

714 Effects of experimentally enhanced nutrient levels on coral tissue structure and skeletal growth and microstructure
PROJECT LEADER: Dr P Harrison (UNE - Northern Rivers) ($6642)

GBRMPA water quality monitoring program
PROJECT LEADER: Mr J Brodie (GBRMPA)
Infrastructure and analysis ($56 302)
Port Douglas transect ($7800)
Lizard Island transect ($10 840
Rockhampton transect ($5500)
Cairns transect ($5500)

Intercalibration of nutrient analyses
PROJECT LEADERS: Dr M Furnas (Australian Institute of Marine Science) Mr J Brodie (GBRMPA) ($nil)

HUMAN USE / SOCIAL IMPACT

434* Economic valuation of non-market goods: the contingent valuation method
PROJECT LEADER: Mr R Blamey (Griffith University) ($500)

457 Survey of the educational effectiveness of the Great Barrier Reef Aquarium
PROJECT LEADER: Ms G Moscardo (James Cook University) ($nil)

522 Great Barrier Reef Recreation Experience Study (Lady Musgrave)
PROJECT LEADERS: Dr L Scherl, Mr P Valentine, Mr M Millard ($1732)

628* Social Impact Assessment: a limited literature review with general recommendations for implementing social impact assessment in the Great Barrier Reef Marine Park
PROJECT LEADER: Ms L Roughley (James Cook University) ($2000)

633 Social survey to determine recreational visitor experience in the Whitsundays
PROJECT LEADER: Ms M Gooch (QDEH) ($nil)

653* To investigate the social carrying capacity of Green Island
PROJECT LEADER: Ms N Beaumont (James Cook University) ($nil)

716* Aboriginal and Torres Strait Islander interests in the Great Barrier Reef Marine Park
PROJECT LEADER: Dr A Bergin (University of New South Wales) ($11 442)

721 Economic values of the Great Barrier Reef World Heritage Area
PROJECT LEADER: Ms S Driml (Consultant) ($4000)

MANAGEMENT STRATEGIES

Oil Spills

415 Draft production of oil slick identity pamphlet
PROJECT LEADER: Dr B Kettle (Marine Bio Logic) ($nil)

436 Effects of oil and dispersants on Great Barrier Reef corals
PROJECT LEADER: Mr P Hough (Great Barrier Reef Aquarium) ($nil)

Other

117 Australian Marine Research in Progress (MRIP)
PROJECT LEADER: Australian Institute of Marine Science, Great Barrier Reef Marine Park Authority, Victorian Institute of Marine Sciences, Information Services Unit (CSIRO) ($nil)

229 Information retrieval from remote weather stations on the Great Barrier Reef
PROJECT LEADER: Australian Institute of Marine Science ($nil)

508 Preparation of workshops and other publications
PROJECT LEADER: Ms C Baldwin (Consultant),Centre for Coastal Management (UNE - Northern Rivers) ($2392)

635 Staff/researcher conference 1993
PROJECT LEADER: In house ($nil)

DEVELOPER FUNDED MONITORING

406 Baseline study for Environmental Monitoring Program: Magnetic Quay Development - benthic communities, water quality turbidity / sediments
PROJECT LEADER: Marine Biology Department (James Cook University) (100% developer funded)

407 Biological calibration and construction - study for Environmental Monitoring Program: Magnetic Quay Development
PROJECT LEADER: James Cook University (100% developer funded)

Assessment of the effects of the establishment of a pontoon system supporting a large-scale tourist operation on the Barrier Reef - Agincourt Reef
PROJECT LEADER: Ms AE Gibson (Reef Biosearch Pty Ltd) (100% developer funded)

447 Ongoing biological monitoring John Brewer Reef: post hotel removal

PROJECT LEADER: Mr MI McCormick (James Cook University) (100% developer funded)

504* Water quality and sediment condition John Brewer Reef: post hotel removal
PROJECT LEADER: Dr G Jones (James Cook University) (100% developer funded)

391*, 506 Monitoring impact of dredge spoil dumping - Cairns Port Authority
PROJECT LEADER: Connell Wagner (100% developer funded)

507 Kelso Reef Pontoon Environmental Monitoring Program - baseline study
PROJECT LEADER: Sinclair Knight & Partners Pty Ltd (100% developer funded)

403*, 531* Cleveland Bay sediment movement study
PROJECT LEADERS: Dr E Wolanski (Australian Institute of Marine Science), Dr M Heron (James Cook University) (100% developer funded)

650 Arlington Reef pearl oyster mariculture - Arlington Pearls
PROJECT LEADER: Mr R Berkelmans (GBRMPA) (100% developer funded)

666 Norman Reef - monitoring of the impact of the new Great Adventures' pontoon
PROJECT LEADERS: Dr AM Ayling and Dr AL Ayling (Sea Research) (100% developer funded)

668 Arlington Reef Sunlover Pontoon Environmental Monitoring Program - baseline survey
PROJECT LEADER: Sinclair Knight & Partners Pty Ltd (100% developer funded)

669 Moore Reef pontoon monitoring - baseline phase 2
PROJECT LEADER: Sinclair Knight & Partners Pty Ltd (100% developer funded)

670 Moore Reef pontoon monitoring - phase 3
PROJECT LEADER: Sinclair Knight & Partners Pty Ltd (100% developer funded)

676* Wistari tourist pontoon EMP - final study: mobile fish
PROJECT LEADER: Dr J Thorogood (100% developer funded)

710 Moore Reef - monitoring of the impact of the new Great Adventures' pontoon
PROJECT LEADERS: Dr AM Ayling and Dr AL Ayling (Sea Research) (100% developer funded)

711 Hardy Reef - monitoring of the impact of the new Fantasea Cruises pontoon
PROJECT LEADERS: Dr AM Ayling and Dr AL Ayling (Sea Research) (100% developer funded)

718 Arlington Reef environmental monitoring program - Sunlover Cruises pontoon ongoing monitoring
PROJECT LEADERS: Dr AM Ayling and Dr AL Ayling (Sea Research) (100% developer funded)

719 Moore Reef environmental monitoring program - Sunlover Cruises pontoon - phase 4
PROJECT LEADERS: Dr AM Ayling and Dr AL Ayling (Sea Research) (100% developer funded)

CROWN-OF-THORNS STARFISH

272 Status of *Acanthaster planci* in the South Pacific and selected groups in the Indo-Pacific
PROJECT LEADER: Dr L Zann (GBRMPA) ($nil)

280 Population dynamics of crown-of-thorns starfish on Suva Barrier Reef
PROJECT LEADER: Dr L Zann (GBRMPA) ($1000)

322 Mainland run-off hypothesis (land use)
PROJECT LEADERS: Prof. D Hopley, Mr P Valentine, Ms C Rasmussen (Sir George Fisher Centre for Tropical Marine Studies, James Cook University) ($nil)

324 Crown-of-thorns starfish sighting survey
PROJECT LEADERS: Dr B Lassig, Mr U Engelhardt (GBRMPA) ($nil)

327 Use of infra red photography for monitoring effects of *Acanthaster planci* outbreaks
PROJECT LEADER: Prof. D Hopley (Sir George Fisher Centre for Tropical Marine Studies, James Cook University) ($nil)

429* Develop interactive crown-of-thorns display based on Apple Macintosh computer
PROJECT LEADER: Dr B Kettle (Marine BioLogic) ($1000)

430 An integrated study of hard coral regeneration and juvenile crown-of-thorns starfish at Green Island
PROJECT LEADER: Mr D Fisk (Reef Research and Information Services) ($14 000)

431 The impact of the crown-of-thorns starfish *Acanthaster planci* on the community structure, demography and morphology of massive corals
PROJECT LEADER: Mr L DeVantier (Australian Institute of Marine Science) ($nil)

471* Modelling approach to hydrodynamics and the large-scale larval dispersal of *Acanthaster planci*
PROJECT LEADERS: Dr L Bode, Dr I Dight, Dr MK James (James Cook University) ($5000)

472 Modelling to assess the impact of predators on crown-of-thorns starfish populations
PROJECT LEADER: Dr H McCallum (University of Queensland) ($nil)

476 Age determination in *Acanthaster planci*
PROJECT LEADERS: Prof. J Lucas, Mr R Stump (James Cook University) ($6000)

477 Feeding studies on potential fish predators of post-settlement *Acanthaster planci*: A post-doctoral fellowship
PROJECT LEADERS: Prof. JH Choat, Dr H Sweatman (James Cook University) ($80 750)

478 COTSREC
PROJECT LEADER: COTSREC Committee ($500)

492 Assessment of the utility of *Linkia* to test connectedness of reefs with reference to *Acanthaster planci* dispersal
PROJECT LEADER: Dr J Benzie (Australian Institute of Marine Science) ($nil)

534 *Acanthaster* feeding on coral reefs: the implications for bioerosion
PROJECT LEADER: Ms B Musso (Australian Institute of Marine Science)
SUPERVISORS: Prof. JH Choat (James Cook University), Dr CR Wilkinson (Australian Institute of Marine Science) ($15 500)

535 The physical oceanography of the Great Barrier Reef during and prior to crown-of-thorns starfish outbreaks
PROJECT LEADER: Dr K Black (Victorian Institute of Marine Science) ($nil)

615 Starfish Larvae: identification and capture
PROJECT LEADER: Ms K Roper (James Cook University) ($6500)

616 The movement of actual starfish outbreaks during the 1980s - unification of the oceanography and biology
PROJECT LEADER: Dr K Black (VIMS) ($nil)

689 Analysis of crown-of-thorns starfish controls at Bait Reef
PROJECT LEADER: Mr U Engelhardt (GBRMPA) ($555)

Projects undertaken at the Australian Institute of Marine Science ($451 070)

Broad-scale surveys of the crown-of-thorns starfish and its effects on corals along the Great Barrier Reef
PROJECT LEADERS: Dr P Moran (Australian Institute of Marine Science), Dr B Lassig (GBRMPA)

Investigation of the trophodynamic implications of crown-of-thorns outbreaks
PROJECT LEADERS: Dr D Klumpp, Mr T Hart (Australian Institute of Marine Science)

Analysis of coral colonies, populations, and communities: interpretation of outbreak history and projection of recovery
PROJECT LEADER: Dr TJ Done (Australian Institute of Marine Science)

A pilot study to assess the utility of mitochondrial DNA as a genetic marker in crown-of-thorns starfish (*Acanthaster planci
PROJECT LEADER: Dr J Benzie (Australian Institute of Marine Science)

Reproductive biology of the crown-of-thorns starfish
PROJECT LEADER: Dr R Babcock (Australian Institute of Marine Science)

Feeding ecology of early developmental stages of *Acanthaster planci*
PROJECT LEADER: Mr K Okaji (Australian Institute of Marine Science)

Assessing the role of dissolved organic matter and bacteria in the nutrition and energetics of *Acanthaster planci*
PROJECT LEADER: Dr T Ayukai (Australian Institute of Marine Science)

The role of predation in factors influencing the survival of small juvenile *Acanthaster planci* cultured in the laboratory
PROJECT LEADER: Dr J Keesing (Australian Institute of Marine Science)

TORRES STRAIT BASELINE STUDY

A four year environmental study in the Torres Strait marine environment, funded by the Commonwealth Government. The study will determine the background levels of environmental parameters particularly heavy metals, in selected marine species and in sediments in the Torres Strait marine environment. It will assist in determining whether there is evidence of contamination to the Torres Strait ecosystems from mining operations in the Fly River catchment area.

481 Torres Strait baseline scientific program coordination.
PROJECT LEADERS: Dr D Lawrence (GBRMPA), Dr I Dight (James Cook University) ($580 686)
Environmental baseline study - sediment: Dr W Gladstone (GBRMPA)
Environmental baseline study - biota: Dr W Gladstone (GBRMPA)
Community fisheries study: Mr V McGrath (GBRMPA)
Commercial fisheries study: Ms L Evans Illidge (Port Lihou Research), Mr H Mawhinney (QDPI)

STATE OF THE MARINE ENVIRONMENT REPORT

GBRMPA is preparing the State of the Marine Environment Report for Australia (SOMER), on behalf of DEST, as part of the Ocean Rescue 2000 program. The Report will provide baseline information for the development of a national marine conservation strategy, for the establishment of a representative system of marine protected areas, for the national marine education program, and for future marine environmental reporting.

Preparation of SOMER Technical Annex
PROJECT LEADERS: Dr L Zann, Ms E Eager (GBRMPA) ($64 192)

SOMER Advisory Committee
CHAIR: Dr Don Kinsey, AM ($3428)

Preparation of SOMER Main Report
PROJECT LEADER: Dr L Zann (GBRMPA) ($nil)

AUGMENTATIVE RESEARCH GRANTS SCHEME 1993

The Great Barrier Reef Marine Park Authority awarded 25 small grants this year to tertiary students of subjects related to management of the Marine Park.

737 Ecology of seagrasses as food for dugong and green turtles
PROJECT LEADER: Mr L Aragones
SUPERVISOR: Dr HD Marsh (James Cook University) ($1000)

738 Metapopulation dynamics of reef fish assemblages and the importance of habitat structure, reef connectivity, and scale
PROJECT LEADER: Mr TR Ault
SUPERVISOR: Dr C Johnson (University of Queensland) ($760)

739 Do scleractinian coral larvae from the Great Barrier Reef influence the community structure of the Gneering Shoals - a high latitude reef complex?
PROJECT LEADER: Mr SA Banks
SUPERVISOR: Dr V Harriott (UNE - Northern Rivers) ($700)

740 The effect of elevated phosphate levels on the giant clam, *Tridacna gigas*
PROJECT LEADER: Ms CA Belda
SUPERVISORS: Assoc. Prof. D Yellowlees, Dr JS Lucas (James Cook University) ($900)

741 Taxonomic survey of the tropical Corallimorpharians (Cnidaria: Anthozoa) in the Great Barrier Reef Marine Park
PROJECT LEADER: Mr A (Chao-Lun) Chen
SUPERVISOR: Dr B Willis (James Cook University) (($900)

742 Sex steroids and stress in sea turtles
PROJECT LEADER: Ms FK Corrie
SUPERVISOR: Dr J Whittier (University of Queensland) ($880)

743 Population dynamics of corallivorous gastropods, *Drupella* spp.
PROJECT LEADER: Ms R Cumming
SUPERVISOR: Prof. JH Choat (James Cook University) ($1048)

744 Optimising the use of video transect techniques for monitoring change in cross-shelf benthic communities
PROJECT LEADER: Mr J Davidson
SUPERVISORS: Dr HD Marsh (James Cook University), Dr TJ Done (Australian Institute of Marine Science) ($1000)

745 The capacity for tourism: Michaelmas Cay and Reef
PROJECT LEADER: Ms SG Golden
SUPERVISOR: Dr A Birtles (James Cook University) ($1000)

746 Sediments, sedimentary processes and morphological zonation of Heron Island Reef, southern Great Barrier Reef
PROJECT LEADER: Mr CD Groves
SUPERVISOR: Dr JS Jell (University of Queensland) ($1000)

747 Sub-lethal damage and regeneration in reef corals
PROJECT LEADER: Ms V Hall
SUPERVISOR: Dr T Hughes (James Cook University) ($1000)

748 Sedimentation on Low Isles
PROJECT LEADER: Ms K Johnston
SUPERVISOR: Prof. D Hopley (James Cook University) ($1250)

749 An experimental investigation of environmental impact assessment and monitoring in the coral reef environment
PROJECT LEADER: Mr AR Lewis
SUPERVISOR: Prof. JH Choat (James Cook University) ($1500)

750 Importance of nitrogen fixation of *Trichodesmium* spp. in the Great Barrier Reef
PROJECT LEADER: Mr Haiming Li
SUPERVISOR: Dr PR Bell (University of Queensland) ($500)

751 Influence of habitat structure and disturbance on the ecology and behaviour of *Labrichthys unilineatus*
PROJECT LEADER: Ms JL McIlwain
SUPERVISOR: Dr JP Jones (James Cook University) ($780)

752 Potential impacts of fishing on the social and territorial behaviour of two predatory reef fish at Orpheus Island, north Queensland
PROJECT LEADER: Mr M Mackie
SUPERVISOR: Dr GR Russ (James Cook University) ($1000)

753 Regional scale mapping of coastal seagrass resources in tropical Queensland
PROJECT LEADER: Ms NM Morissette
SUPERVISOR: Dr HD Marsh (James Cook University) ($1000)

754 Small scale patterns and processes in coral recruitment: their significance in determining community structure
PROJECT LEADER: Mr C Mundy
SUPERVISOR: Dr C Johnson (University of Queensland) ($1000)

755 Revegetation of seagrasses
PROJECT LEADER: Ms ML Nelson
SUPERVISOR: Dr A McComb (Murdoch University) ($850)

756 Nitrogen fixation and trophodynamic fate of the bloom forming cyanobacteria *Trichodesmium* in the Great Barrier Reef
PROJECT LEADER: Ms J O'Neil
SUPERVISOR: Dr J Greenwood (University of Queensland) ($720)

757 The effect of algal blooms (due to nutrient enhancement) on scleractinian corals at Heron Island
PROJECT LEADER: Mr J Tanner
SUPERVISOR: Dr T Hughes (James Cook University) ($1900)

758 Development of digitised aerial photography techniques for mapping and monitoring biological distributions on reefs
PROJECT LEADER:
Mr T Thamrongnawasawat
SUPERVISOR: Prof. D Hopley (James Cook University) ($1000)

759 Genetic variation in dugong (*Dugong dugon*) populations
PROJECT LEADER: Ms D Tikel
SUPERVISOR: Dr HD Marsh (James Cook University) ($1000)

760 Sedimentation rates and trace metal fluxes to sediments in a Cairns-Great Barrier Reef transect
PROJECT LEADER: Mr PH Towler
SUPERVISOR: Dr J Smith (University of Melbourne) ($1000)

761 Population genetics of the asteroid *Linckia laevigata*
PROJECT LEADER: Ms ST Williams
SUPERVISOR: Dr J Benzie (Australian Institute of Marine Science) ($1000)

APPENDIX G
ABBREVIATIONS

AAT	Administrative Appeals Tribunal
AIMS	Australian Institute of Marine Science
AMPTO	Association of Marine Park Tourism Operators
AMSA	Australian Maritime Safety Authority
AMSAT	Australian Marine Science and Technology Ltd
ANCA	Australian Nature Conservation Agency
ANPWS	Australian National Parks and Wildlife Service
ANZECC	Australian and New Zealand Enviroment and Conservation Council
APS	Australian Public Service
ASAP	A Strategic Atlas Program
ASEAN	Association of South-East Asian Nations
ATSIC	Aboriginal and Torres Strait Islander Commission
CAD	Computer Aided Design
CNPPA	Commission on National Parks and Protected Areas
CRC	Cooperative Research Centre (for the Ecologically Sustainable Development of the Great Barrier Reef)
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DEST	Department of the Environment, Sport and Tourism
EEO	Equal Employment Opportunity
ESD	Ecologically Sustainable Development
GBR	Great Barrier Reef
GBRMP	Great Barrier Reef Marine Park
GBRMPA	Great Barrier Reef Marine Park Authority
GEMS	Global Environment Monitoring System
GIS	Geographic Information Systems
IMO	International Marine Organisation
INTROMARC	International Tropical Marine Resource Centre
IUCN	International Union for the Conservation of Nature and Natural Resources
JCU	James Cook University of North Queensland
MESA	Marine Education Society of Australasia
MOU	Memorandum Of Understanding
NOAA	National Oceanic Atmospheric Administration
OECD	Organisation for Economic Cooperation and Development
OH & S	Occupational Health and Safety
OR 2000	Ocean Rescue 2000
QB & FP	Queensland Boating and Fisheries Patrol
QCFO	Queensland Commercial Fishermen's Organisation
QDEH	Queensland Department of Environment and Heritage
QDPI	Queensland Department of Primary Industries
QFMA	Queensland Fish Management Authority
SAGE	Science and Geography Education database
SOMER	State of the Marine Environment Report
TAFE	Technical and Further Education
TROMES	Tropical Marine EcosystemProject
UNEP	United Nations Environment Program
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WTMA	Wet Tropics Management Agency (Authority)

APPENDIX H
MEMBERS OF ADVISORY COMMITTEES

Crown-of-thorns Starfish Research Committee (COTSREC)
Professor J M Swan (Chairperson) [to Jan 1993]
Professor G M Mitchell *CSL Limited* [from Jan 1993]
Dr M Williams *Director, Australian Institute of Marine Science*
Dr P J Moran *Australian Institute of Marine Science* [to May 1993]
Dr T Ayukai *Australian Institute of Marine Science* [from May 1993]
Professor G Kelleher *Chairman, Great Barrier Reef Marine Park Authority*
Dr B R Lassig (Program Coordinator) *Great Barrier Reef Marine Park Authority*
Professor R M Golding *Vice-Chancellor, James Cook University of North Queensland*
Mr R Pearson *Queensland Department of Primary Industries*
Dr K Sainsbury *Commonwealth Scientific and Industrial Research Organisation*
Professor P J Davies *The University of Sydney*

Advisory Committee on Research into the Effects of Fishing in the Great Barrier Reef Region
Dr W Craik (Chairperson) *Great Barrier Reef Marine Park Authority*
Dr B Pollock *Queensland Department of Primary Industries*
Dr J Glaister *Queensland Department of Primary Industries*
Mr L Gwynne *Queensland Fish Management Authority*
Mr T Loveday *Queensland Commercial Fishermen's Organisation*
Dr B Hill *Commonwealth Scientific and Industrial Research Organisation*
Mr D Perkins *Queensland Department of Environment and Heritage*
Dr M Williams *Australian Institute of Marine Science*
Mr D Griffith *Queensland Sport and Recreational Fishing Council*
Dr B Mapstone (Program Coordinator) *Great Barrier Reef Marine Park Authority*

Torres Strait Baseline Study Advisory Committee
Mr S Woodley (Chairperson) *Great Barrier Reef Marine Park Authority*
Dr D Lawrence (Program Coordinator) *Great Barrier Reef Marine Park Authority*
Dr I Dight (Scientific Adviser) *James Cook University of North Queensland*
Mr J Brodie *Great Barrier Reef Marine Park Authority*
Mr G Rayment *Queensland Department of Primary Industries*
Dr I Poiner *Commonwealth Scientific and Industrial Research Organisation*
Dr F Ziolkowski *Department of the Arts, Sport, the Environment and Territories*
Dr D Staples *Bureau of Rural Resources*
Mr G Williams *Bureau of Resource Sciences*
Mr T Waia *Island Coordinating Council/Saibai Island Community Council*

Mr C Ross *Porgera Joint Venture*
Mr M Eagle *Ok Tedi Mining Ltd*
Dr M Sullivan *North Australia Research Unit*
Mr R Pearson *Queensland Department of Primary Industries*
Dr D Waite *Australian Nuclear Science and Technology Organisation*
Dr R Coles *Australian Fisheries Management Authority*
Mr M Bishop *Australian Fisheries Management Authority*
Dr E Wolanski *Australian Institute of Marine Science*
Dr A Robertson *Australian Institute of Marine Science*
Dr D Connell *Queensland Government Chemical Laboratory*
Mrs L Kesu *Papua New Guinea Department of Environment and Conservation*
Mr M Kennedy *Papua New Guinea Department of Minerals and Energy*

Monitoring Advisory Committee
Dr W Craik (Chairperson) *Great Barrier Reef Marine Park Authority*
Dr M Williams *Australian Institute of Marine Science*
Dr J Oliver (Program Coordinator) *Great Barrier Reef Marine Park Authority*
Dr P Moran *Australian Institute of Marine Science*
Mr L Gwynne *Queensland Fisheries Management Authority*
Mr G Rayment *Queensland Department of Primary Industries*
Dr B Freeland *Queensland Department of Environment and Heritage*
Professor J H Choat *James Cook University of North Queensland*
Mr M Doohan *Queensland Commercial Fishermen's Organisation*
Mr D Griffith *Queensland Sport and Recreational Fishing Council*
Mr E Hegerl *Australian Littoral Society*
Mr Graeme Lee *Queensland Department of Tourism, Sport and Racing*
Mr I Ballantyne *Canegrowers Association*
Mr K Nielson *Association of Marine Park Tourism Operators*

Water Quality Technical Advisory Panel
Dr D W Kinsey (Chairperson) *Great Barrier Reef Marine Park Authority*
Dr P Bell *Department of Chemical Engineering, University of Queensland*
Mr J Brodie (Program Coordinator) *Great Barrier Reef Marine Park Authority*
Dr D W Connell *Queensland Government Chemical Laboratory*
Dr M Furnas *Australian Institute of Marine Science*
Professor J Coll *University of Central Queensland*
Dr T Done *Australian Institute of Marine Science*
Professor D Hopley *James Cook University of North Queensland*
Dr T Hughes *James Cook University of North Queensland*
Associate Professor A W D Larkum *The University of Sydney*
Mr A Moss *Queensland Department of Environment and Heritage*
Mr G Rayment *Queensland Department of Primary Industries*
Dr D Klumpp *Australian Institute of Marine Science*
Dr K Smettem *Commonwealth Scientific and Industrial Research Organisation*

Associate Professor D Yellowlees *James Cook University of North Queensland*
Mr A Steven *Great B arrier Reef Marine Park Authority*

Members of Great Barrier Reef Aquarium Advisory Board
Mr John Lyons (Chairman) *John A Lyons and Co. Chartered Accountants*
Mr Michael Gleeson *Townsville Enterprise Ltd*
Mrs Lindsay Plante *Commercial Studies Centre*
Professor R E Jones *James Cook University of North Queensland*
Mr Mike Reynolds *Townsville Port Authority*
Mr Geoff Pickering *Geoff Pickering Motors*
Mr Gerald Theron *Sheraton Breakwater Casino Hotel*
Mr Richard Power *QTV*
Alderman Tony Mooney *Mayor of Townsville*
Dr J T Baker *Australian Institute of Marine Science*
Mr Ian Burston *Great Barrier Reef Aquarium*
Mr Graham Jenkinson *(TNT-Ansett)*

Somer Advisory Committee
Dr Don Kinsey (Committee Chair)
Associate Professor Paul Adam *University of New South Wales*
Dr Eric Bird *Geostudies*
Professor Ben Boer *University of Sydney*
Dr Des Connell *Queensland Government Chemical Laboratory*
Ms Pam Eiser *Australian Committee, IUCN*
Dr Laurie Hammond *formerly Victorian Institute of Marine Sciences*
Dr Tor Hundloe *Industry Commission*
Professor Arthur McComb *Murdoch University*
Professor Jason Middleton *University of New South Wales*
Dr Russell Reichelt *Bureau of Resource Sciences*
Dr Graham Ross *Australian Biological Resources Survey*
Professor Graeme Kelleher *Great Barrier Reef Marine Park Authority*
Observers from *DEST Marine and Coastal Section* and the *Commonwealth Environment Protection Agency* attend meetings also.

APPENDIX I
REPRESENTATION ON EXTERNAL COMMITTEES

Australian Committee of the International Union for the Conservation of Nature and Natural Resources (ACIUCN)(Caring for the Earth program), Working Party - Ray Neale

Australian Committee of the International Union for the Conservation of Nature and Natural Resources (ACIUCN), Marine Subcommittee - Wendy Craik

Advisory Committee on Research into the Effects of Fishing on the Great Barrier Reef - Wendy Craik

Astrolabe Inc, Board of Advisers - Don Kinsey (Member)

Cairns Port Technical Advisory Committee - Wendy Craik (Chair)/Steve Raaymakers

Cape York Peninsula Land Use Study - Peter McGinnity

Commonwealth Inter-departmental Committee (IDC) - Peter McGinnity

Downstream Effects of Agricultural Practices (DEAP) - Don Kinsey/Jon Brodie

Editorial Board 'Australian Journal of Tourism Studies' - Don Kinsey

Editorial Board 'Coral Reefs' - Don Kinsey

Institute for Tropical Rainforest Studies, Advisory Committee - Don Kinsey

INTROMARC Management Committee - Wendy Craik

Johnstone River Integrated Catchment Technical Advisory Committee - Jon Brodie

Monitoring Advisory Committee (AIMS, GBRMPA) - Wendy Craik (Chair)

Museums Advisory Board of North Queensland - Ray Neale

National Centre for Tropical Rainforest Studies, Management Board - Don Kinsey

National Plan Advisory Committee - Wendy Craik

Pacific Congress on Marine Science and Technology Board of Directors - Don Kinsey

Queensland Catchment Management Coordinating Committee - Wendy Craik/Simon Woodley/Jamie Oliver

Queensland Incident Response Management Group - Wendy Craik/Steve Raaymakers

Raine Island Scientific Advisory Committee - Simon Woodley

Reefmac - Wendy Craik

Sir George Fisher Centre Advisory Committee - Don Kinsey

Torres Strait Environment Management Committee - David Lawrence

Torres Strait Fisheries Scientific Advisory Committee - Simon Woodley

Torres Strait Joint Advisory Committee - David Lawrence

Townsville Enterprise - Tourism Advisory Committee - Ian Burston

Townsville Port Technical Advisory Committee -
Simon Woodley/Christine Schweizer/Steve Raaymakers/Jamie Oliver

Trinity Inlet Management Plan Committee - Allan Williams

Wet Tropics Management Authority Scientific Advisory Committee - Lea Scherl

APPENDIX J

SUMMARY OF COMPLIANCE WITH REPORTING GUIDELINES

This annual report has been compiled using the Guidelines for the *Preparation of Departmental Annual Reports* issued by the department of the prime minister and cabinet in April 1992.

The following is a summary of this annual report according to those guidelines, where applicable.

	Section
Chairman's Report	From The Chairman
Corporate Overview	From The Chairman
Objectives	Each section
Social Justice	Administration
Corporate Structure	Administration
Enabling Legislation	GBR Marine Park Authority
Legislative Overview	GBR Marine Park Authority
Non-statutory bodies	GBR Ministerial Council
EEO in appointments	Administration
Major Documents	Appendixes
Program Reporting	Each section
Activities	Each section
Social Justice	Administration
Human Resources	Administration
Staffing	Administration
Performance Pay	Administration
Training	Administration
Equal Employment Opportunity	Administration
Industrial Democracy	Administration
Occupational Health and Safety	Administration
Other Resources	
Financial Statements	Administration
Fraud Control	Administration
Claims and Losses	Administration
Purchasing	Administration
Information Technology Purchasing	Planning & Management
Payment of Accounts	Administration
Capital Works Management	Administration
Property Usage	Administration
Consultancy Services	Each section
Freedom of Information	Education & Information

	Section
Environmental Matters	Not applicable
Market Surveys	Nil
External Scrutiny	
Reports by the Auditor-General	Financial Statements
Inquiries by Parliamentary Committees	Nil
Comments by the Ombudsman	Nil
Decisions of Courts and Administrative Tribunals	Envir. Impact Man.
Freedom of Information	Ed/Info.
Privacy	Nil
Client Comments	Nil
Impact Monitoring	Nil
Business Regulations	Nil
Status of Women	Nil
Environmental Matters	From The Chairman

APPENDIX K

INDEX

25-Year Strategic Plan (see Strategic Plan) 9, 17
Aboriginal and Torres Strait Islanders 2, 10, 20, 21, 32
Administrative Appeals Tribunal 9, 32, 42
Aquarium 29, 70
Arlington Reef 35
Bramble Reef replenishment 24
Clamsaver project 37
commercial fishing 62
communication strategy 3
compulsory pilotage 28
computing 29,66
consultants (each section & appendix F)
Cooperative Research Centre 4, 9, 14, 18, 47
Corporate Plan 9, 19
crown-of-thorns starfish 48, 50
day-to-day management 9, 25, 27
effects of fishing 48, 53
Einstein Medal 70
enforcement 5
Environmental Management Charge 4, 9, 15, 32, 40
equal employment opportunity 84
financial management 86
Freedom Of Information 65
Geographical Information System 30
Heron Island 34
industrial democracy 85
Kinsey Dr D 4
legal program 42
library 67
light stations 23
Low isles 20, 22
Mabo 17
Magnetic Quay development 10, 42
management plans 15, 25, 36, 42
marine protected areas 90
media contact 67
National Marine Education report 63
Norman Reef 35
Ocean Rescue 2000 16, 68
oil spill conference 15, 91
oil spills 9, 15, 49
performance pay 82
permits 32, 33, 38, 41, 42
public moorings 25
Reef monitoring 54
sea installations 36
Seaweek 63
sewage treatment 35
shipping and ports 49
socioeconomic 48
SOMER (State Of The Marine Environment Report) 48, 57
staffing 80
Strategic Plan (25-Year) 2, 9, 17, 64
Surveillance 15, 27
Torres Strait Baseline Study 48, 52
Tourist Industry Codes of Practice 42
tourist operator assistance 61
traditional hunting 40
training 27, 44, 83
user pays (See Environmental Management Charge)
videos and films 61, 67, 69
volunteers 21, 75
water quality 56
Wet Tropics Management Agency 20
Whitehouse, John 3
Whitsunday 20, 23, 33
zoning 9

APPENDIX L
FINANCIAL STATEMENTS

GREAT BARRIER REEF MARINE PARK AUTHORITY

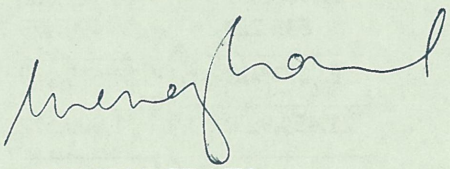
Financial Statements for the Year Ended 30 June 1993

In our opinion, the accompanying Operating Statement , Statement of Financial Position and Statement of Cash Flows, have been prepared in accordance with the ' Guidelines for Financial Statements of Public Authorities and Commercial Activities ' approved by the Minister for Finance, applicable accounting concepts and standards and show fairly

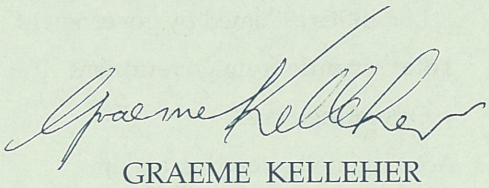
(a) the operating result of the Authority for the financial year ended 30 June 1993,

(b) the financial position of the Authority as at 30 June 1993, and

(c) the Authority's cash flows during the financial year ended 30 June 1993.



WENDY CRAIK
Executive Officer
2/11/93



GRAEME KELLEHER
Chairman
2/11/93

GREAT BARRIER REEF MARINE PARK AUTHORITY
OPERATING STATEMENT FOR YEAR ENDED 30 June 1993

	Notes	1992-93 $	1991-92 $
COST OF SERVICES			
Operating expenses			
Research and Monitoring		**3,978,832**	3,374,853
Planning and Management		**1,540,768**	1,286,439
Education/Information		**1,367,565**	1,426,644
Great Barrier Reef Aquarium	4(c)	**1,841,066**	2,014,454
Environmental Impact Management		**1,129,576**	1,851,940
External Advisory Services		**789,095**	419,042
Corporate Management and Services	5	**2,199,462**	2,062,052
Unfunded charges	4(d), 6	**824,556**	972,186
Superannuation contributions	1(i)	**515,723**	490,479
Payments to Queensland for day-to-day management	2	**7,071,501**	6,693,194
Total operating expenses	7, 8	**21,258,144**	20,591,283
Operating revenues from independent sources			
Payments from Queensland for day-to-day management	2(a)(c)	**3,058,000**	3,038,000
Great Barrier Reef Aquarium	4(a)	**1,573,704**	1,615,793
Miscellaneous Revenue	3(b)	**2,897,792**	2,322,583
Total operating revenues from independent sources		**7,529,496**	6,976,376
Net cost of services		**13,728,648**	13,614,907
REVENUE FROM GOVERNMENT			
Parliamentary appropriations from the Commonwealth	3(a)	**11,758,000**	14,125,000
Liabilities assumed by government	1(i)	**515,723**	490,479
Total revenue from government		**12,273,723**	14,615,479
Operating result		**(1,454,925)**	1,000,572
Accumulated operating results at beginning of financial year		**(942,280)**	(1,942,852)
Accumulated operating results at end of financial year		**(2,397,205)**	(942,280)

The accompanying notes form an integral part of these financial statements.

GREAT BARRIER REEF MARINE PARK AUTHORITY
STATEMENT OF FINANCIAL POSITION AS AT 30 June 1993

	Notes	1992-93 $	1991-92 $
CURRENT ASSETS			
Cash	9	**2,778,956**	3,937,266
Receivables	11	**327,266**	158,735
Inventories	1(f)	**122,049**	103,612
Other		**40,142**	40,663
Total current assets		**3,268,413**	4,240,276
NON-CURRENT ASSETS			
Property, plant and equipment	10	**7,791,378**	8,051,859
Total non-current assets		**7,791,378**	8,051,859
Total assets		**11,059,791**	12,292,135
CURRENT LIABILITIES			
Creditors		**663,961**	561,624
Provisions	12	**747,066**	670,723
Other	13	**274,425**	429,232
Total current liabilities		**1,685,452**	1,661,579
NON-CURRENT LIABILITIES			
Provisions	12	**780,520**	736,970
Other	13	**1,510,993**	1,355,835
Total non-current liabilities		**2,291,513**	2,092,805
Total liabilities		**3,976,965**	3,754,384
Net assets		**7,082,826**	8,537,751
EQUITY			
Capital		**1,103,988**	1,103,988
Reserves		**8,376,043**	8,376,043
Accumulated deficits		**(2,397,205)**	(942,280)
Total equity		**7,082,826**	8,537,751

The accompanying notes form an integral part of these financial statements.

GREAT BARRIER REEF MARINE PARK AUTHORITY
STATEMENT OF CASH FLOWS FOR YEAR ENDED 30 June 1993

	Notes	1992-93 $	1991-92 $
CASH FLOWS FROM OPERATING ACTIVITIES			
Inflows:			
Industry / DEST funded projects		**1,242,618**	1,001,019
Permit assessment fees		**137,710**	106,190
Interest		**256,823**	313,829
Aquarium admission fees		**1,170,999**	1,325,389
Payments from Queensland for day-to-day management		**3,058,000**	3,038,000
Other		**1,440,294**	1,099,881
Outflows:			
Salaries		**(5,254,403)**	(4,531,379)
Suppliers		**(7,518,427)**	(7,396,619)
Payments to Queensland for day-to-day management		**(7,071,501)**	(6,693,194)
Net cash used by operating activities	22(b)	**(12,537,887)**	(11,736,884)
CASH FLOWS FROM INVESTING ACTIVITIES			
Inflows:			
Proceeds from sale of plant & equipment		**21,139**	26,736
Outflows:			
Payments for purchase of plant & equipment		**(399,562)**	(560,118)
Net cash used in investing activities		**(378,423)**	(533,382)
CASH FLOWS FROM GOVERNMENT			
Inflows:			
Appropriation from the Commonwealth		**11,758,000**	14,125,000
Net cash provided by government		**11,758,000**	14,125,000
Net (decrease) / increase in cash held		**(1,158,310)**	1,854,734
Cash at beginning of reporting period		**3,937,266**	2,082,532
Cash at end of reporting period	22(a)	**2,778,956**	3,937,266

The accompanying notes form an integral part of these financial statements.

NOTES TO AND FORMING PART OF THE FINANCIAL STATEMENTS
for the year ended 30 June 1993

1. ACCOUNTING POLICIES

The following accounting policies have been adopted in the preparation of the accounts.

(a) Accounts Format

The accounts of the Authority have been prepared in accordance with:
- the 'Guidelines for Financial Statements of Public Authorities and Commercial Activities', issued by the Minister for Finance in March 1993; and
- applicable accounting concepts and standards.

(b) Historical Cost Convention

These accounts have been prepared on the basis of the historical cost convention and except where stated do not show the current cost of specific assets and the impact of such costs on operating results.

(c) Non-current Assets

Capitalisation occurs on all items which cost more than $1,500. Non-current assets are depreciated by the straight line method over their estimated useful lives.

Great Barrier Reef Aquarium

The Great Barrier Reef Aquarium building was funded as a Commonwealth-State Bicentennial project, through the Great Barrier Reef Wonderland Association Incorporated. The Aquarium is sub-leased by the Authority from the Association for a period of 75 years. Under the terms of the sub-lease agreement the Authority is responsible for the replacement of the Aquarium building as necessary and for all expenses and revenue in relation to its operation. Consequently, the value of the Aquarium building has been taken up as an asset in the Authority's accounts and is being amortised over 25 years, which is the estimated useful life of the building. The base stock of audio visual displays at the Great Barrier Reef Aquarium and the base stock of marine life, sand, coral and water in the Aquarium have been included under non-current assets as a non-depreciable item. Stock replacement costs are treated as operating expenses.

(d) Advances to Consultants

Under the terms of certain contracts with consultants, payments are made in advance. Expenditure on assets which, under the terms of the contract, become the property of the Authority from the date of acquisition is fully expensed in the year of payment. On completion of the contract, such assets are brought on charge by the Authority at that time, at their written down value and depreciated over their remaining useful life.

(e) Day-to-day Management Advances

Except for expenditure on fixtures upon land owned by or under the direct control of the Commonwealth or the Authority, advances to the Queensland Department of Environment and Heritage for day-to-day management are fully expensed in the year of payment (refer to Note 2 for details of the day-to-day management item).

(f) Stock on Hand

Goods for resale have been valued at the lower of cost and net realizable value.

(g) Provision for Long Service Leave

Provision has been made for pro-rata entitlements of all staff who have at least five years eligible service at balance date. The current liability represents the estimated value of long service leave that is proposed to be taken by staff during the succeeding year.

(h) Superannuation

Staff of the Authority are employed under the Public Service Act and prior to 1988-89 there had been no obligation in respect of employer contributions to the Commonwealth Superannuation Scheme. However, as the Authority is required to manage the Great Barrier Reef Aquarium on a cost recovery basis, employer superannuation contributions for Aquarium employees became payable from 1 July 1988.

(i) Superannuation Liabilities Assumed by Government

Employer superannuation contributions are not paid by the Authority but are funded by the Commonwealth when required.

2. DAY-TO-DAY MANAGEMENT OF THE GREAT BARRIER REEF MARINE PARK

(a) Principles agreed between the Commonwealth and Queensland Governments relating to the day-to-day management of the Great Barrier Reef Marine Park provide for:

- the Queensland Department of Environment and Heritage (QDEH) to carry out the day-to-day management of the Great Barrier Reef Marine Park, subject to the Authority in accordance with inter-governmental agreements
- the Commonwealth to fund 100% of an initial capital works program (in the first three years or so) required to establish management of the Great Barrier Reef Marine Park on a sound basis; other capital costs (i.e. the post-initial program) of day-to-day management of the Great Barrier Reef Marine Park to be shared equally between the two Governments
- the Commonwealth and Queensland to meet in equal shares the recurrent costs for day-to-day management in relation to the Great Barrier Reef Marine Park (which may include Queensland national parks or Queensland marine parks, the use or management of which would or might affect the Great Barrier Reef Marine Park)

. moveable property funded pursuant to the arrangements to be used and administered by Queensland; proceeds from the sale of any such moveable property are paid into the day-to-day management account to offset Commonwealth /Queensland contributions on a 50:50 basis

. fixed assets funded pursuant to the arrangements to be used by Queensland and administered by the Government (or the Authority) which owns or controls the land on which the fixture is located

. expenditure on day-to-day management to be in accordance with an annually agreed program, and

. the Authority to administer funds provided by the Commonwealth and Queensland for these purposes.

(b) The Commonwealth appropriation for day-to-day management was made up of:

	1992-93	1991-92
	$	$
(i) Recurrent and Post-Initial Capital Programs	**3,058,000**	2,954,141
(ii) Initial Capital Works	**551,000**	566,859
	3,609,000	3,521,000

(c) The total Queensland contribution to day-to-day management was $3,058,000 in 1992-93 compared with $3,038,000 in 1991-92.

(d) Financial statements for day-to-day management which have been prepared by QDEH and audited by the Queensland Auditor-General are at Note 25.

3. REVENUE

(a) The operations of the Authority are dependant upon the appropriation of moneys by the Commonwealth Parliament. Commonwealth parliamentary appropriations comprised the following:

	1992-93	1991-92
	$	$
Operational	**7,921,000**	10,604,000
Great Barrier Reef Aquarium	**228,000**	-
Commonwealth contribution to day-to-day management	**3,609,000**	3,521,000
	11,758,000	14,125,000

Refer to Notes 2(a) and 2(b) for additional detail on Commonwealth contribution to day-to-day management.

Obligations to the Department of Finance in relation to employer superannuation contributions for the Great Barrier Reef Aquarium and the repayment of establishment costs are initially met by an offset from Authority appropriations. The payment due to the Authority from the Aquarium in 1992-93 (refer Note 15) and recovery of 1992-93 GBR Aquarium superannuation contributions were satisfied by an amount of $228,000 received by the Great Barrier Reef Aquarium in appropriation.

(b) Miscellaneous revenue comprised the following:

	1992-93	1991-92
	$	$
Implementation of DEST funded programs	**601,500**	617,000
United Nations Environment Program funds	**71,386**	136,538
Monies for industry funded monitoring and baseline studies	**753,068**	636,332
Sale of Authority education and information materials	**63,433**	79,258
Interest	**210,668**	270,419
Permit assessment fees	**137,710**	106,190
Payments from QDEH: refer note 2(a)		
for - sale of moveables	**373,005**	114,462
- other receipts	**-**	180,000
Revenue from other miscellaneous sources	**687,022**	182,384
	2,897,792	2,322,583

4. AQUARIUM REVENUE AND EXPENSES

(a) Revenue of the Aquarium comprised the following:

	1992-93	1991-92
	$	$
Admission fees	**1,175,801**	1,325,410
Donations and sponsorships	**83,630**	57,249
Membership program	**39,625**	37,645
Interest	**13,222**	49,954
Funding for traditional use display	**37,500**	-
Consultancy contracts	**39,216**	-
Other revenue	**38,610**	34,631
	1,427,604	1,504,889

Aquarium revenue shown above excludes appropriation of $228,000 shown at Note 3(a).

Shop Sales		**329,515**	228,751
Less: Cost of goods sold	refer note 4(b)	**183,415**	117,847
Gross profit from shop trading		**146,100**	110,904
Total Aquarium Revenue		**1,573,704**	1,615,793

(b) This item represents the cost of goods sold through the Great Barrier Reef Aquarium Shop as follows:

	1992-93	1991-92
	$	$
Opening Stock	**103,612**	71,489
Purchases	**201,852**	149,970
Less: Closing Stock	**122,049**	103,612
	183,415	117,847

(c) Expenses of the Aquarium comprised the following:

	1992-93 $	1991-92 $
Curatorial Operations	**591,690**	536,551
Interpretative Facilities	**339,735**	368,458
Marketing/Promotions	**152,152**	166,747
Shop Management & Services	**75,455**	72,077
Administration	**95,843**	123,939
Repairs and Maintenance	**31,513**	81,775
Corporate Services		
-property services	**323,283**	364,755
-general services	**109,216**	125,421
Interest	**115,943**	160,422
Bad debts written off	**467**	651
Loss on sale of non-current assets	**5,769**	13,658
Total Operating Expenses	**1,841,066**	2,014,454

(d) Unfunded charges of the Aquarium comprised the following:

	1992-93 $	1991-92 $
Depreciation of property, plant & equipment refer note 1(c)	**411,074**	416,275
Staff provisions	**14,398**	57,047
Total unfunded charges	**425,472**	473,322
Total Aquarium Expenses	**2,266,538**	2,487,776
Result from Aquarium operations - excluding appropriation revenue of $228,000 shown at Note 3(a)	**(692,834)**	(871,983)

This result excludes reimbursement of the 1992-93 GBR Aquarium superannuation contributions estimated at $81,500.

5. CORPORATE MANAGEMENT AND SERVICES

Corporate management and services comprised the following:

	1992-93 $	1991-92 $
Expenses of the Authority	**174,148**	191,787
Expenses of the Great Barrier Reef Consultative Committee	**842**	40,615
Executive and Secretariat	**898,681**	751,395
Canberra office	**334,095**	277,912
Administration	**791,696**	800,343
	2,199,462	2,062,052

The item "Expenses of the Great Barrier Reef Consultative Committee" includes sitting fees paid to part-time members in accordance with the Remuneration Tribunal Determination. In 1992-93 no payments were made, compared with $13,401 in 1991-92.

The item "Administration" includes the following:

	1992-93 $	1991-92 $
Bad debts written off	**2,071**	1,427
Net loss on disposal of non-current assets	**37,387**	101,090
Auditor's remuneration - auditing the accounts of the Authority (no other services were provided)	**48,000**	48,000
	87,458	150,517

6. UNFUNDED CHARGES

The aggregate amount of unfunded charges of the Authority comprised the following:

	1992-93 $	1991-92 $
Depreciation of property, plant and equipment refer note 1(c)	**704,663**	732,872
Long service leave	**43,600**	133,397
Annual leave	**71,700**	96,903
Leave fares	**4,593**	9,014
	824,556	972,186

7. TOTAL OPERATING EXPENSES - FINANCE LEASES

Included in total operating expenses are the following charges relating to property, plant and equipment purchased under finance leases:

	1992-93 $	1991-92 $
Amortisation	**11,132**	-
Finance charges	**4,569**	-
	15,701	-

8. TOTAL OPERATING EXPENSES - SALARIES AND WAGES COSTS

Included in total operating expenses are the following salaries and wages costs:

	1992-93 $	1991-92 $
Great Barrier Reef Aquarium		
- Operations	**897,913**	887,979
- Aquarium Shop	**65,800**	68,514
Other Authority Operations	**4,316,822**	3,660,189
	5,280,535	4,616,682

9. CASH

Cash held at 30 June comprised the following:

	1992-93	1991-92
	$	$
Authority Operations Account	1,648,047	2,610,748
Great Barrier Reef Aquarium Account	84,358	372,413
Day-to-day Management Account	1,035,414	945,542
Cash on hand	11,137	8,563
	2,778,956	3,937,266

10. PROPERTY, PLANT AND EQUIPMENT

	Cost		Accumulated Depreciation		Written Down Value	
	1992-93	1991-92	1992-93	1991-92	1992-93	1991-92
	$	$	$	$	$	$
Furniture,fittings & displays	260,876	262,852	97,189	85,385	163,687	177,467
Office machines	165,975	163,474	128,017	137,411	37,958	26,063
Audiovisual & photographic	351,652	293,264	72,243	61,823	279,409	231,441
Marine & diving	36,242	27,622	22,379	18,949	13,863	8,673
Computer hardware	1,213,350	1,277,021	665,160	613,262	548,190	663,759
Computer software	234,360	163,017	79,928	53,238	154,432	109,779
Scientific & technical	119,269	96,154	58,096	45,878	61,173	50,276
Vehicles & mobile plant	60,189	75,080	28,334	27,357	31,855	47,723
Other plant & equipment	533,930	520,888	180,194	149,066	353,736	371,822
Aquarium contents	346,093	346,093	-	-	346,093	346,093
Improvements to leasehold property						
- Fixtures & fittings	321,485	309,030	72,022	58,394	249,463	250,636
- Aquarium building	7,681,881	7,550,538	2,130,362	1,782,411	5,551,519	5,768,127
Total	11,325,302	11,085,033	3,533,924	3,033,174	7,791,378	8,051,859

Included above are the following amounts initially capitalised as assets purchased under finance leases, and accumulated amortisation.

	1992-93	1991-92
	$	$
Office machines	33,396	-
Amortisation	11,132	-
Written down value	22,264	-

11. RECEIVABLES

	1992-93	1991-92
	$	$
Debtors	**327,266**	158,735
Less: Provision for doubtful debts	**-**	-
	327,266	158,735

12. PROVISIONS

Additional detail relating to provisions is as follows:

		1992-93	1991-92
		$	$
Current liabilities			
Provision for long service leave	refer note 1(g)	**21,865**	21,815
Provision for annual leave		**662,039**	590,339
Provision for leave fares		**63,162**	58,569
		747,066	670,723
Non-current liabilities			
Provision for long service leave	refer note 1(g)	**780,520**	736,970
		780,520	736,970

13. CURRENT AND NON-CURRENT LIABILITIES - OTHER

Included in the item "Other" are the following amounts:

		1992-93	1991-92
		$	$
Current liabilities			
Advances from Dept of Finance and accrued interest	refer note 15	**-**	245,960
Finance leases		**7,780**	-
Other current liabilities		**266,645**	183,272
		274,425	429,232
Non-current liabilities			
Advances from Dept of Finance and accrued interest	refer note 15	**1,470,458**	1,354,515
Finance leases		**15,285**	-
Other non-current liabilities		**25,250**	1,320
		1,510,993	1,355,835

14. MATERIAL COMMITMENTS

At the end of the financial year the particulars of research contracts and other material commitments not brought to account were as follows:

	1992-93
	$
Payable:	
Within one year	**632,523**
In the second year	**46,212**
Within a three to five year period	**5,000**
	683,735

Comparative figures for 1991-92 have not been provided as it has not been practicable to reconstruct the position as it would have appeared as at 30 June 1992.

15. REPAYMENT OF ADVANCES FROM DEPARTMENT OF FINANCE

The Department of Finance has determined that funds appropriated for the purposes of the Great Barrier Reef Aquarium are repayable advances. The GBR Aquarium has received two such advances:

- $450,000 in 1986-87 for establishment costs; and
- $1,000,000 in 1989-90.

The advances are being repaid in the form of instalments deducted from Authority appropriation and made up from GBR Aquarium revenue. Interest on the outstanding principal is charged at the long term bond rate and has been capitalised.

Scheduled repayments in respect of the establishment costs advance were made in 1988-89 and in 1989-90. Repayments for the remaining balance of the establishment costs advance together with the other advance in 1989-90 were consolidated and scheduled to be repaid over a period of ten years. The repayment to the Department of Finance due in the 1992-93 financial year was satisfied by a reduction of Authority appropriation. No repayment is due in the 1993-94 financial year.

16. OPERATING LEASES

(a) The aggregate amount of operating leases contracted for and outstanding as at 30 June 1993 is $2,381,012. These leases are for office accommodation and the discharge will be:

	1992-93	1991-92
	$	$
Within one year	**595,084**	515,971
In the second year	**595,674**	515,971
Within a three to five year period	**1,190,254**	1,472,913
Later than five years	**-**	-
	2,381,012	2,504,855

(b) The Authority sub-leases the Great Barrier Reef Aquarium building from the Great Barrier Reef Wonderland Association Incorporated for a nominal amount payable if demanded.

17 TRUST MONEY

GREAT BARRIER REEF MARINE PARK AUTHORITY TRUST MONEYS
Statement of Receipts and Payments for the year ended 30 June 1993

		1992-93 $
Cash at bank 1 July 1992		141,102
RECEIPTS		
Cash Bonds in lieu of bank guarantees	748,070	
Proceeds from bank guarantees	23,789	
Interest	14,256	786,115
TOTAL		927,217
PAYMENTS		
Payment under bank guarantee	34,715	
Return of Cash Bonds and accrued interest	368,710	
Bank charges	23	403,448
Cash at bank 30 June 1993		523,769
TOTAL		927,217

18. INSURANCE

The Authority has a policy of self-insurance for its general operations but has commercial insurance cover for the operation of the Great Barrier Reef Aquarium.

19. COMMITMENTS FOR CAPITAL EXPENDITURE

The Authority has outstanding commitments for capital expenditure totalling $57,054 as at 30 June 1993, (1991-92 $15,605). The full amount is payable within a period of not later than one year.

20. RESOURCES PROVIDED FREE OF CHARGE TO THE AUTHORITY

The following resources were provided free of charge to the Authority and accordingly are not reflected as expenses in the Operating Statement:

		1992-93 $	1991-92 $
(a)	Legal services (the Australian Government Solicitor)	-	156,000

21. CONTINGENT LIABILITIES

The Authority is unaware of any contingent liability existing as at 30 June 1993.

22. NOTES TO THE STATEMENT OF CASH FLOWS

(a) Reconciliation of cash

For the purposes of the statement of cash flows, the Authority considers cash to include cash on hand and in banks. Cash at the end of the reporting period as shown in the statement of cash flows has been reconciled to the related items in the statement of financial position and is shown at note 9.

(b) Reconciliation of Net cash used by operating activities to Operating result.

	1992-93	1991-92
	$	$
Operating result	**(1,454,925)**	1,000,572
Appropriation	**(11,758,000)**	(14,125,000)
Depreciation	**704,663**	732,872
Bad debts	**2,538**	2,078
Loss on disposal of non-current assets	**43,156**	114,748
Increase in Receivables	**(171,069)**	(20,212)
Increase in Inventories	**(18,437)**	(32,123)
(Increase)/Decrease in Other Assets	**521**	(4,726)
Increase in Creditors	**102,337**	139,078
Increase in Provisions	**119,893**	239,313
Increase/(Decrease) in Other Liabilities	**(108,564)**	216,516
Net cash used by operating activities	**(12,537,887)**	(11,736,884)

(c) Non-cash Financing and Investing activities

During the reporting period the Authority acquired equipment and other fixed assets with an aggregate value of $108,915 (1991-92 Nil) by means of finance leases and hire purchase agreements. These acquisitions are not reflected in the statement of cash flows or note 22(b).

23. RELATED PARTIES

(a) Authority Members
The members of the Great Barrier Reef Marine Park Authority during the financial year were:

Professor Graeme Kelleher, AM, (full-time Chairman and chief executive);

Dr Craig Emerson, (part-time member);

Professor Rhondda Jones, (part-time member).

(b) Acting Chairman Appointments
During periods of absence by the Chairman, the Minister appointed the Authority's Executive Officer, Dr Wendy Craik, to act as Chairman from 31 January to 13 February 1993 and from 10 to 17 March 1993.

During a period of absence by the Chairman in June 1993 the Minister appointed Mr Richard Kenchington, Senior Director of the Authority's External Services Section, to act as Chairman from 4 to 16 June 1993.

(c) Remuneration
Information on remuneration of Authority Members is disclosed at Note 24.

(d) Authority Members' interest in contracts
On the basis of statements declared by members in accordance with S16A of the Act, no Authority member has received or become entitled to receive a benefit, other than a benefit included in the aggregate of remuneration received or due and receivable shown at Note 24 by reason of a contract made by the Authority member or with a firm of which the Authority member is a member or with a company in which the Authority member has a substantial interest.

24. REMUNERATION

The number of Authority members or executive officers of the Authority whose total remuneration received, or due and receivable, directly or indirectly, from the Authority, fell within each band of income after $100,000 is:

	1992-93	1991-92
$100,001 - $110,000	**1**	1

Remunerations paid in accordance with the Remuneration Tribunal Determination to part-time members of the Authority were:

	1992-93	1991-92
	$	$
Part-time members	**19,642**	18,644

25. QUEENSLAND DEPARTMENT OF ENVIRONMENT AND HERITAGE
GREAT BARRIER REEF MARINE PARK
STATEMENT OF RECEIPTS AND PAYMENTS FOR THE YEAR ENDED 30 June 1993

1991-92 $		1992-93 $	$
	The balance at 1 July comprised -		
	Recurrent Costs		
58,645	Salaries and Wages	2,826	
(18,027)	Operating Costs	31,652	
	Capital Works and Services		
239,137	Initial Program	240,805	
102,761	Post Initial Program	261,090	
	Balance of proceeds from sale of		
11,112	Moveables	42,590	
393,628			578,963
	Receipts for the year were -		
	Recurrent Costs		
3,517,342	Salaries and Wages	3,342,365	
2,341,411	Operating Costs	2,373,112	
	Capital Works and Services		
223,194	Initial Program	793,501	
611,247	Post Initial Program	562,523	
145,940	Disposal of Moveables	404,454	
180,000	Other Receipts	-	
7,019,134	**Total Receipts (Note 4)**		7,475,955
	From which the following payments were made -		
	Recurrent Costs		
3,573,161	Salaries and Wages	3,343,350	
2,291,732	Operating Costs	2,394,258	
	Capital Works and Services		
221,526	Initial Program (Note 5)	386,087	
452,918	Post Initial Program (Note 5)	641,745	
114,462	To GBRMPA for Moveables sold	373,005	
180,000	To GBRMPA for Other Receipts	-	
6,833,799	**Total Payments**		7,138,445
185,335	**Resulting in an excess of receipts over payments of -**		337,510
	Leaving a balance at 30 June comprising -		
	Recurrent Costs		
2,826	Salaries and Wages	1,841	
31,652	Operating Costs	10,506	
	Capital Works and Services		
240,805	Initial Program	648,219	
261,090	Post Initial Program	181,868	
	Balance of proceeds from sale of		
42,590	Moveables	74,039	
578,963			916,473

The accompanying notes form an integral part of these financial statements

NOTES TO AND FORMING PART OF THE FINANCIAL STATEMENT

Note 1 Statement of Accounting Policies

(a) Basis of Accounts

The accounts have been prepared on a cash basis, consistent with the basis applied in the previous financial year and in the form approved by the Minister for Finance (Commonwealth), as required by the Agreement.

(b) Carryover Transfer to the Queensland Treasury Department

The balance of Commonwealth funds for the Great Barrier Reef Marine Park at 30 June 1993, which does not include the balance of proceeds from the sale of moveables, was transferred to the Treasury Department in terms of that Department's requirements. The amount transferred has been refunded to the Department of Environment and Heritage in July 1993. The total of receipts included in the Statement of Receipts and Payments for the year ended 30 June 1993 represents gross receipts excluding the transfer.

(c) Change in Accounting Policies - Property, Plant and Equipment

From 1 July 1991 capitalisation occurs on all items which cost more than $1,000. This policy change resulted in a $10,593 (1991/92 $527,084) and $8,368 (1991/92 $100,276) write off adjustment to the Commonwealth and Queensland funded assets, respectively.

(d) Investments

Investments are recorded at cost.

(e) Contingent Assets/Liabilities

There were no known contingent assets or liabilities of a significant nature at 30 June 1993 (1992 $NIL).

Note 2 Investments

Equity in Q Fleet	1992-93 $
Commonwealth	147,985
State	147,985
	295,970

Note 3 Property, Plant and Equipment

(a) Statement of Property, Plant and Equipment (at cost) as at 30 June 1993, including movements for 1992-93 financial year.

	Funded by Commonwealth (cumulative from 1 July 1981)			
	Balance	Acquisition	Disposal/ Write Offs	Balance
	1/7/92	1992-93	1992-93	30/6/93
	$	$	$	$
Buildings and infrastructure	1,478,420	55,470	177,369	1,356,521
Vessels and associated equipment	960,359	427,372	287,425	1,100,306
Vehicles #	244,417	-	156,579	87,838
Other plant and equipment	619,516	126,164	40,189	705,491
	3,302,712	609,006	661,562	3,250,156

	Funded by Queensland (cumulative from 1 July 1981)			
	Balance	Acquisition	Disposal/ Write Offs	Balance
	1/7/92	1992-93	1992-93	30/6/93
	$	$	$	$
Buildings and infrastructure	148,021	9,915	-	157,936
Vessels and associated equipment	299,287	110,798	100,908	309,177
Vehicles #	199,937	-	130,178	69,759
Other plant and equipment	151,487	102,206	13,861	239,832
	798,732	222,919	244,947	776,704
TOTAL	4,101,444	831,925	906,509	4,026,860

 # As from 1 July 1991 all vehicles are being leased through Q Fleet - Administrative Services Department.

Stocktakes of Property, Plant and Equipment were carried out by officers of the Department of Environment and Heritage.

(b) Statement of Property, Plant and Equipment Disposed of/Written Off during 1992-93.

	Funded by Commonwealth		Funded by Queensland	
	1991-92 $	**1992-93 $**	1991-92 $	**1992-93 $**
Sale/Transfer of Assets	120,623	**421,717**	50,170	**186,417**
Write off due to:				
Damage and Obsolescence/Worn Out	4,615	**161,750**	-	**130**
Other	13,064	**17,470**	1,340	**-**
Asset criteria adjustment	527,084	**10,593**	100,276	**8,368**
Adjustments - Vehicles leased through Q Fleet	-	**50,032**	-	**50,032**
	665,386	**661,562**	151,786	**244,947**

	1991-92 $	**1992-93 $**
Note 4. Receipts during the year were provided from the following sources:		
Commonwealth Government:		
Recurrent 50%		
Salaries and Wages	1,758,671	**1,671,183**
Operating Costs	1,170,705	**1,186,556**
Capital Works and Services:		
Initial Program 100%	223,194	**793,501**
Post-Initial Program 50%	305,624	**281,261**
	3,458,194	**3,932,501**
Queensland Government:		
Recurrent 50%		
Salaries and Wages	1,758,671	**1,671,182**
Operating Costs	1,170,706	**1,186,556**
Capital Works and Services:		
Post-Initial Program 50%	305,623	**281,262**
	3,235,000	**3,139,000**
Disposal of Moveables	145,940	**404,454**
Other Receipts	180,000	**-**
Total Gross Receipts	7,019,134	**7,475,955**

	1991-92 $	**1992-93** **$**
Note 5. Capital Works and Services		
- Initial Program:		
Buildings and infrastructure	104,096	**45,556**
Vessels and associated equipment	68,413	**316,573**
Office and field equipment	49,017	**23,958**
	221,526	**386,087**
- Post Initial Program:		
Buildings and infrastructure	34,268	**19,829**
Vessels and associated equipment	140,798	**221,597**
Vehicles	103,427	**195,907**
Office and field equipment	174,425	**204,412**
	452,918	**641,745**

CERTIFICATE OF THE QUEENSLAND DEPARTMENT OF ENVIRONMENT AND HERITAGE

We have prepared the foregoing annual financial statement in relation to the operation of the Great Barrier Reef Marine Park as required by the relevant Agreements dated 10 May 1988 between the Commonwealth and Queensland Governments and the Great Barrier Reef Marine Park Authority and certify as follows -

(a) the foregoing financial statement and appended notes to and forming part thereof are in agreement with the accounts and records of the Queensland Department of Environment and Heritage;

(b) the receipt and expenditure of monies were in accordance with the approved programs and in accordance with the aforementioned agreements and previous draft agreements executed between the Commonwealth and Queensland Governments with regard to day-to-day management and control and ownership of assets; and

(c) in our opinion -

(i) the prescribed requirements in respect of the establishment and keeping of accounts have been complied with in all material respects; and

(ii) the foregoing annual financial statement has been drawn up so as to present a true and fair view, on a basis consistent with that applied in the financial year last preceding, of the transactions of the Queensland Department of Environment and Heritage in relation to the Great Barrier Reef Marine Park for the period 1 July 1992 to 30 June 1993 and of the financial position as at the close of that year.

S P Rafter
Executive Manager (Financial Services)
Department of Environment and Heritage

Craig Emerson
Director General
Department of Environment and Heritage

7/10/93

CERTIFICATE OF THE AUDITOR-GENERAL

I certify that, in my opinion:

(1) the foregoing Statement of Receipts and Payments and appended notes for the period 1 July 1992 to 30 June 1993 are based on proper accounts and records and are in agreement with those accounts and records; and

(2) the expenditure of moneys was in accordance with the relevant Agreements dated 10 May 1988 between the Commonwealth and Queensland Governments and the Great Barrier Reef Marine Park Authority in respect of financial assistance for the Great Barrier Reef Marine Park.



B M Rollason
Auditor-General

19/10/93

APPENDIX M

AUDITOR-GENERAL'S REPORT

INDEPENDENT AUDIT REPORT

To the Minister for the Environment, Sport and Territories

Scope

I have audited the financial statements of the Great Barrier Reef Marine Park Authority for the year ended 30 June 1993. The statements comprise:

- Operating Statement
- Statement of Financial Position
- Statement of Cash Flows
- Statement by Chairman and Executive Officer, and
- Notes to and forming part of the accounts.

The Chairman and Executive Officer are responsible for the preparation and presentation of the financial statements and the information they contain therein. I have conducted an independent audit of the financial statements in order to express an opinion on them to the Minister for the Environment, Sport and Territories.

The audit has been conducted in accordance with Australian National Audit Office Auditing Standards, which incorporate the Australian Auditing Standards, to provide reasonable assurance as to whether the financial statements are free of material misstatement. Audit procedures included examination, on a test basis, of evidence supporting the amounts and other disclosures in the financial statements, and the evaluation of accounting policies and significant accounting estimates. These procedures have been undertaken to form an opinion whether, in all material respects, the financial statements are presented fairly in accordance with Australian accounting concepts and standards and statutory requirements so as to present a view which is consistent with my understanding of the Authority's financial position, the results of its operations and its cash flows.

The audit opinion expressed in this report has been formed on the above basis.

Audit Opinion

In accordance with sub-section 63M(2) of the Audit Act 1901, I now report that the statements are in agreement with the accounts and records of the Authority, and in my opinion:

(i) the statements are based on proper accounts and records

(ii) the statements show fairly in accordance with Statements of Accounting Concepts and applicable Accounting Standards the financial transactions for the year ended 30 June 1993 and the state of affairs of the Authority as at that date

(iii) the receipt, expenditure and investment of moneys, and the acquisition and disposal of assets, by the Authority during the period have been in accordance with the Great Barrier Reef Marine Park Authority Act 1975, and

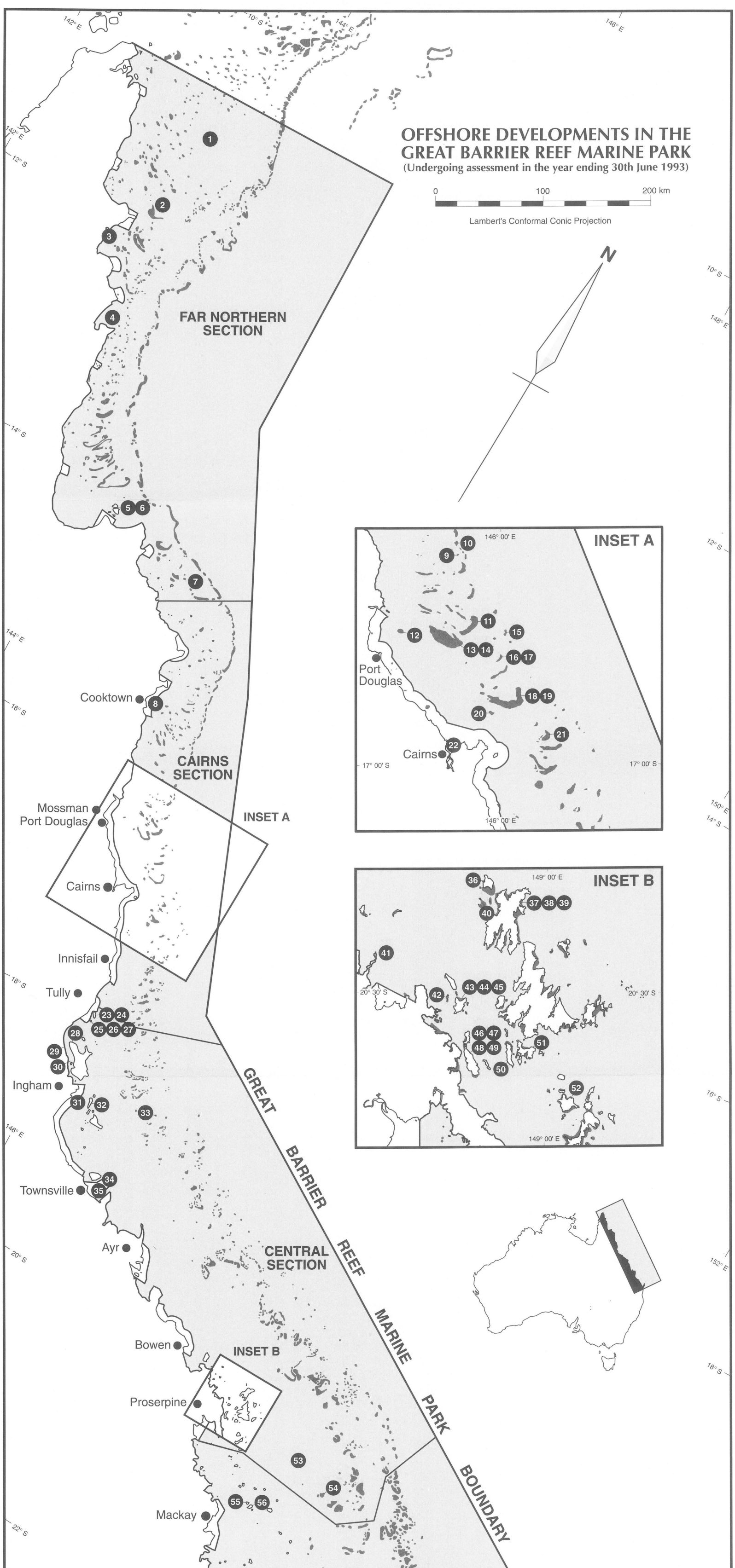
(iv) the statements are in accordance with the Guidelines for Financial Statements of Public Authorities and Commercial Activities.

David C McKean
Executive Director
Australian National Audit Office

Canberra ACT 15 November 1993

No.	Place	Project Type	Proponent	Current Status of Applications	In the Marine Park
FAR NORTHERN					
1	Roving operations	Fishing industry service	Jardine Shipping	Awaiting further info	Partially
2	Roving operations	Fishing industry service	Sea Swift Pty Ltd	Permit issued	Partially
3	Cape York Space Base	Space Base	Bromley Holdings Pty Ltd	Advisory role only	No
4	Lloyd Bay	Resort	Farndale Limited	Advisory only	Partially
5	Owen Channel	Pearls	Barrier Pearls Pty Ltd	Draft permit prepared	Wholly
6	Owen Channel	Fuel barge operation	Frank Markert Pty Ltd	Further info requested	Partially
CAIRNS					
7	Roving operations	Fishing industry service	Endeavour Shipping	Awaiting further info	Partially
8	Cooktown	Pearls	Pirate Pearls Pty Ltd	Permit issued	Partially
9	Agincourt 2d Reef	Tourist Pontoon	Quicksilver Connections P/L	Permit issued	Wholly
10	Agincourt 3 Reef	Tourist Pontoon	Quicksilver Connections P/L	Further info requested	Wholly
11	Tongue Reef	Tourist Pontoon	Nodnoc Pty Ltd	Application withdrawn	Wholly
12	Low Isles	Tourist Pontoon	Quicksilver Connections P/L	Permit issued	Wholly
13	Batt Reef	Pearls	Coral Sea Pearls Pty Ltd	Permit issued	Wholly
14	Batt Reef	Pearls	Pearling Qld Pty Ltd	Permit issued	Wholly
15	Norman Reef	Tourist Pontoon	Reef Management Pty Ltd	Permit issued	Wholly
16	Hastings Reef	Artificial Wreck	Tropical Traders Pty Ltd	Further info requested	Wholly
17	Hastings Reef	Tourist Pontoon	Nodnoc Pty Ltd	Preliminary assessment	Wholly
18	Arlington Reef	Pearls/tourist pontoon	Atlantic Fishing Pty Ltd	Permit issued	Wholly
19	Arlington Reef	Clams	Reefarm Pty Ltd	Permit issued	Wholly
20	Green Island	Foreshore works	Daikyo (NQ) Pty Ltd	Advisory role	No
21	Moore Reef	Tourist Pontoon	Reef Management Pty Ltd (T/A Great Adventures)	Permit issued	Wholly
22	Trinity Inlet	Resort and Residential Development	Sailfox P/L	Advisory role	No
CENTRAL SECTION					
23	Dunk Island	Watersports	Australian Resorts P/L	Permit Issued	Wholly
24	Dunk Island	Jetty	Australian Resorts P/L	Policy development	Partially
25	Bedarra Island	Marine Outfall	Australian Resorts P/L	Renewal/ Assessment	Partially
26	Bedarra Island	Jetty	Australian Resorts P/l	Policy development	Partially
27	Bedarra Island	Watersports	Australian Resorts P/L	Permit Issued	Wholly
28	Hinchinbrook Is	Jetty	Cardwell Shire Council	Policy development	Partialy
29	Oyster Point	Marina	Cardwell Property Development	Advisory role	No
30	Hinchinbrook Channel	Pearl Farm	Indian Pacific Pearls Pty Ltd	Advisory only	No
31	White Lady Bay	Clam Research	Aquasearch/Braley	Renewal	Wholly
32	Orpheus Island	Clamsaver	GBRMPA/ JCU/QDEH	Stage two completed	Wholly

No.	Place	Project Type	Proponent	Current Status of Applications	In the Marine Park
CENTRAL SECTION					
33	Kelso Reef	Tourist Pontoon	Pure Pleasure Cruises	Renewal Assessment	Wholly
34	Magnetic Quays	Marina	Dept Lands	Awaiting further info	Partially
35	Cleveland Bay	Channel Extention	Townsville Port Authority	Monitor	No
36	Hayman Island	Jetty	Australian Resorts P/L	Policy development	Partially
37	Hook Island	Marine Outfall	Permanant Trustee Company	Prelim assessment	Wholly
38	Hook Island	Jetty	Permanent Trustee Company	Policy development	Partially
39	Hook Island	Observatory	Permanent Trustee Company	Under Assessment	Wholly
40	Stonehaven Beach	Tourist Pontoon	Playford Management Servs	Public Notice	Wholly
41	Pioneer Bay & Woodwark Bay	Marina & resort Development	Kumagai/Wardley	IAS under review	Partially
42	Daydream Island	Marina	Jennings Property Development P/L	Permit drafted	Partially
43	South Molle Island	Marine Outfall	Ansett Transport Industries	Renewal/ Assessment	Wholly
44	South Molle Island	Jetty	Ansett Transport Industries	Policy development	Partially
45	South Molle Island	Semi-submersible	Ansett Transport Industries	Permit Issued	Wholly
46	Long Island	Jetty	Mytarc Pty Ltd	Policy development	Partially
47	Long Island	Marine Outfall	Mytarc Pty Ltd	Renewal/ assessment	Partially
48	Long Island	Watersports	Mytarc Pty Ltd	Permit issued	Wholly
49	Long island	Pontoon	Wells & Harris	Awaiting further info	Wholly
50	Dent Island	Harbour/ golf course	Hamilton Island Enterprises	IAS submitted	Partially
51	Hamilton Is	Marina	Hamilton Island Enterprises	Awaiting legal opinion	Partially
52	Lindeman Is (Club Med)	Jetty	Holiday Villages (Aust) P/L	Policy development	No
53	Roving operations	General operations	Roylen Cruises	Renewal/assess	Wholly
54	Credlin Reef	Pontoon	Roylen Cruises	Awaiting further info	Wholly
MACKAY/CAPRICORN SECTION					
55	Keswick Island	Resort	Transtate Pty Ltd	Draft IAS under review	Partially
56	St Bees Island	Resort	St Bees Island Pty Ltd	Prelim Assessment	Partially
57	Hummock Hill	Resort	Walsteam Pty Ltd	IAS under review	Partially
58	Bustard Bay	Exploration	Department of Resource and Industry	Advisory role	Partially
59	Heron Island	Harbour works	P & O Australia	Assessment	Wholly
60	Wistari Reef	Tourist Pontoon removal	P & O Australia	Permit issued	Wholly
61	One Tree Island	Research Station	University of Sydney	Permit issued	Wholly
62	Lady Musgrave Is.	Tourist Pontoon	Mr L Woodrow	Permit issued	Wholly
63	Lady Musgrave Is.	Tourist Pontoon	Lady Musgrave Cruises	Awaiting further info	Wholly



Great Barrier Reef Marine Park Authority

