The Great Barrier Reef World Heritage Area

Framework for management

Background

The Australian Government recognises, and takes very seriously, its obligations for care of the Great Barrier Reef World Heritage Area (GBRWHA). The area is very large, about 350,000 square kilometres. It lies off the coast of the State of Queensland and the range of activities which occur within it or affect it are of fundamental significance to the environmental, social, and economic well being of Australia and Queensland. Such is the importance of the Great Barrier Reef in the lives of many Australians that there is continuing community debate over the management of human activity within the Great Barrier Reef World Heritage Area or influencing it. The range of these activities is addressed by legislation and regulations under Commonwealth, Queensland State and Local Government jurisdictions.

Management arrangements are coordinated by a Ministerial Council comprising Ministers of the Australian Commonwealth and State (Queensland) Governments. The managing agency, the Great Barrier Reef Marine Park Authority, is a Statutory Body of the Australian Commonwealth, with one member of the Authority appointed on the nomination of the Queensland Government. By agreement between the governments, the day to day management is carried out by Queensland agencies subject to the Great Barrier Reef Marine Park Authority. These agencies also have their own responsibilities within and adjacent to the GBRWHA. There is a jointly staffed day-to-day management coordinating unit.

The World Heritage Bureau at its meeting in July 1999 considered a state of conservation report from IUCN on the Great Barrier Reef World Heritage Area and *"requested ACIUCN and the State Party to review the 29 recommendations listed in the ACIUCN report and elaborate a more focused set of recommendations and develop a detailed plan for implementation and monitoring those recommendations. Such a plan should, to the extent possible, be built on the consensus view of all stakeholders concerned with the long-term conservation of the GBR World Heritage area."*

ACIUCN consequently undertook a clustering analysis of the 29 recommendations in the previous report. The analysis considered scale, jurisdictional responsibility, urgency of the issue and the nature of the response by the managing agencies and was undertaken by the ACIUCN Executive and by members of the ACIUCN working group who developed the previous report. As a result, it was resolved that there were five priority action areas arising from the original recommendations:

1. **The Management of Land and Coastal Catchments**
2. **The Management of Fisheries**
3. **The Management of Shipping and Ship-sourced Marine Pollution**

4. **Representative Marine Protected Areas**
5. **Resources for Research and Management.**

The framework for the implementation and monitoring of these more focussed set of recommendations is attached.

The priority action areas identified by ACIUCN accord generally with the priority issues identified in the reorganisation of the Great Barrier Reef Marine Park Authority in July 1998 . As such they are the focus of activity in policy development and management for the Great Barrier World Heritage Area. However the Authority has a broader agenda to fulfil all the management requirements for the World Heritage Area, including such major policy issues as the management of tourism, indigenous matters, and rare / threatened species.

With respect to monitoring, the Great Barrier Reef Marine Park Authority published the first State of the Great Barrier Reef World Heritage area report in November 1998. The work program of the Great Barrier Reef Marine Park Authority calls for five yearly reporting on a similar basis. In addition there is provision for annual reporting of significant issues through the Authority's normal annual reporting cycle.

Many of the issues identified in the focused recommendations require substantial social and economic changes of a scale which take some years to achieve. These include modifications to land related impacts and the management of fisheries. The Great Barrier Reef Marine Park Authority has been operating in accordance with the new structure and strategic work program to address these complex and difficult issues.

The issue of resourcing for management of the Great Barrier Reef is taken seriously. When the totality of expenditure is taken into account (for policy development, management, monitoring and research), there is expenditure of the order of $78 million per annum. This involves agencies of the Commonwealth and Queensland Governments, universities and the private sector. The governments are concerned to ensure that the management of programs and the expenditure of funds to support them is efficient, effective, responsive and clearly targeted. The governments consider that arrangements in place with the restructure of the Great Barrier Reef Marine Park Authority provide the capacity to focus on priority issues. A recent move to performance based programming and reporting provides a clear basis for demonstrating that the key issues are being systematically addressed. The measures in place are adequate to anticipate and respond to changing circumstances as they occur.

Format

For each of the above five priority action areas, the following information is provided in the attached plan:

- a brief background to the focussed recommendation
- key issues
- the actions proposed
- an indication of the lead agency (and other agencies involved)
- the date when the action is due;
- any additional comments; and
- main references for further information relating to this matter.

Abbreviations used in the plan are listed at the back.

1. The Management of Land and Coastal Catchments

Background

- Land runoff, increasing nutrients and sediments seen as one of the major impacts on the degradation of water quality and inshore biota of the Great Barrier Reef Marine Park (GBRMP) and Great Barrier Reef World Heritage Area (GBRWHA)
- Management of land runoff is difficult as the source of runoff is in catchments which are adjacent to the Great Barrier Reef but which are outside the legislative boundaries of the GBRMPA or the GBRWHA.
- Principal agricultural industries on the catchment are cropping (sugar cane and banana farming) and grazing.
- Historically the environmental performance of agricultural industries has been inadequate. Increasingly this is being addressed through Integrated Catchment Management, Industry Codes of Practice and the development of regulatory instruments and mechanisms.

Key Issues

- Land management resulting in drainage of wetland systems, inefficient irrigation, oversupply of fertiliser and clearing/destruction of riparian and wetland vegetation.
- Major direct impact of agricultural practices on the GBRWHA is the degradation of water quality in receiving waters caused by increased inputs of nutrients, suspended sediments, pesticides and other chemical pollutants.
- Potential adverse impacts (impaired health and productivity of marine organisms) of sediments and nutrients on the inshore biota of GBRWHA. Can also be associated with loss of habitat and associated aquatic connectivity.

Action (s)	Lead agency (and others involved)	Date due	Additional comments
Wetland Protection Queensland to pursue legislative protection of over-bank riparian zones and wetlands as agreed at 27th Ministerial Council meeting.	QEPA (DNR/QDPI/ GBRMPA)	2001	Protection of wetlands has been identified as a priority local and State issue and is implemented through the Fisheries Act (QDPI protecting marine wetlands), Nature Conservation Act (QPWS), and the Land Act (DNR on leasehold land). On freehold lands, where clearing may still occur, protection is being investigated through the development of vegetation management and policy framework.
Integrated catchment management Queensland to implement Integrated Catchment Management strategies as a matter of priority on all catchments adjacent to the GBRWHA as agreed at 27th Ministerial Council meeting.	DNR (Local Government, GBRMPA)	2001	Integrated Catchment Management has operated in Queensland since 1991 and many strategic plans are in place along with other catchment initiatives. A DEAP (Downstream Effects of Agricultural Practices) database covering all Qld major catchments is at an advanced stage of development.
Codes of practice for agriculture industries - Queensland to progress Industry Codes of Practice as agreed at 27th Ministerial Council meeting.	QEPA (GBRMPA)	2005	Some codes of practice have been finalised with others being drafted.

Sewage discharges Ensure tertiary treatment of all sewerage discharges into the GBRWHA.	GBRMPA QEPA Local Government DNR	2005	Stage 1 (completed) was tertiary treatment of all sewerage discharges into the GBR Marine Park. Stage 2 (ongoing) is tertiary treatment into the GBRWHA.
Coastal planning – finalise the State Coastal Management Plan - ensure all areas adjacent to the GBWHA to have regional coastal management plans consistent with the State Plan	QEPA QEPA (Local Government/DNR /GBRMPA)	By end 2000 2010	Will provide a mechanism for incorporation of State planning policies (eg wetland conversion) into local government planning schemes ; providing assessment policy criteria for developments which potentially affects wetlands; and riparian zones defined & identified in the plan. Includes performance indicators for those policies.

Main references for further reading:

GBRMPA (1998) *Protection of Wetlands adjacent to the Great Barrier Reef*, GBR Workshop series No 24.

GBRMPA (1998) *Preliminary Study of potential impacts of the Great Barrier Reef WHA from coastal urban development: a scoping study to identify projects suitable for future funding proposals.* Report publ. by GBRMPA

Wachenfeld, D, Oliver, J & Morrissey, J (eds) (1998) *State of the Great Barrier Reef World Heritage Area 1998.* Report publ. by GBRMPA (specifically Sections on Water Quality (Environmental Status, pp 13-26) and Water Quality and Coastal Development (Management Status, pp. 109-114)

2. The Management of Fisheries

Background

- Fishing (commercial, recreational and indigenous) is the major extractive activity in the GBRMP.
- Ten commercial fisheries (trawl, reef line, inshore mesh net and 7 harvest fisheries) have a direct economic worth about $150-200 million per annum
- Commercial fishing comprises about 3700 professional fishers and 1400 vessels; up to 24 000 privately registered vessels are used for recreational fishing in the GBR each year.
- The Offshore Constitutional Settlement (OCS) between the Commonwealth and the State of Queensland places responsibility for the management of all fish stocks (other than tuna and tuna like fish) in the GBRWHA under the Queensland Government (specifically Queensland Fisheries Management Authority (QFMA) and for noxious fish Queensland Department of Primary Industries (QDPI)). The Commonwealth has direct responsibility for tuna and tuna like fish throughout the GBRWHA through the Australian Fisheries Management Authority (AFMA). The Commonwealth is also responsible for offshore fisheries in the Australian Fishing Zone adjacent to the World Heritage Area.

Key Issues

- Impacts of fishing on non-target species, the seabed and benthic communities as large areas are subject to trawling (46% of the MP in 1996, but at varying intensities)
- Large excess capacity in some commercial and recreational fisheries (latent effort)
- Increased fishing effort, including technology creep, is leading to increased pressure on both fished and previously unfished areas
- Declining catch (or decreased average size of fish caught) in some areas and some fisheries
- Low levels of compliance with State fisheries and Commonwealth Marine Park legislation and the high cost of enforcement and surveillance

Action(s)	Lead agency (others involved)	Date due	Additional comments
TRAWLING **The level of trawl effort is to be capped.** A schedule for subsequent reductions is under discussion as part of the management plan for the Queensland east coast trawl fishery	QFMA (GBRMPA)	Management Plan by January 2000	The level of trawl effort must be capped and reduced if trawling is to be ecologically sustainable.
Additional closures are to be introduced to limit the areas in which trawling can occur. This will include some areas as part of GBRMPA's Representative Areas Program	GBRMPA	Post 2000 when GBRMPA zoning arrangements have been reviewed	The recently completed CSIRO/QDPI study on the impacts of trawling clearly demonstrated that repeated trawling systematically degrades areas supporting structural epibenthic communities. Increasing the area of closures will reduce the areas that are impacted by trawling.
By-catch Reduction Devices (BRDs) and **Turtle Excluder Devices** (TEDs) will be required on all trawl nets within the World Heritage Area by March 2000.	QFMA/QBFP (GBRMPA)	Mandatory by March 2000	

Vessel Monitoring Systems (VMS) [satellite tracking devices] are mandatory on the commercial prawn trawl fleet in the Marine Park and will be progressively introduced on other fishing vessels operating in the GBRMP over the next few years	QFMA/QDPI (GBRMPA)	Stage 1 (trawl fleet) mandatory by July 1999; other fishing vessels over next few years.	VMS will greatly assist surveillance and enforcement; however there are technical difficulties in using VMS to monitor the line fishing fleet which are being addressed.
Effects of Prawn Trawling on the Far Northern Section has been the subject of a major study by CSIRO; a further stage of this study is currently under way on the recovery of benthic communities after trawling ceases as is a management scenario modelling study.	GBRMPA/ CSIRO	Stage 1 completed; stage 2 due end 2002	GBRMPA will ensure that the major findings of the CSIRO study are incorporated in the East Coast Trawl Fish Management Plan presently being finalised by the Queensland Government.
LINE FISHING			
Effects of Line Fishing is the subject of a major research project assessing the effectiveness of current fishery practices; the study was commissioned in 1997 by GBRMPA and coordinated by the Reef Cooperative Research Centre.	Reef CRC/ GBRMPA/ QFMA (commercial fishers)	Stage 1 and 2 completed, stage 3 due end 2000	Line-fishing catch is made up of a wide range of species, but coral trout make up 35 -40% of total catch. A draft Management Plan for the Reef Line fishery has been released for public comment, (closing October 1999), with a final Management Plan scheduled for mid 2000. Results of the research project will be incorporated into the management plan.
NET FISHING			
Sixteen Dugong Protection Areas (DPAs) were established along the coast in 1997. Restricted net fishing activities to enhance dugong protection have recently been reviewed.	GBRMPA/ QFMA (QPWS & QBFP)	Net fishing arrangements were reviewed in July 1999	Further recommendations to strengthen netting regulations within DPAs have been made. These will be implemented by March 2000 A fishery management plan is scheduled for release for public comment in December 1999.
HARVEST FISHERIES			
Aquarium fish and coral Management Plan will incorporate objectives of the GBRMPA Act and World Heritage Convention	QFMA (GBRMPA) (QPWS)	December 2000	Discussion paper was released for public comment in August 1999
Sea cucumber and trochus and tropical rock lobster Management Plans will incorporate objectives of the GBRMPA Act and World Heritage Convention	QFMA (GBRMPA) (QPWS)	July 2001	Discussion paper to be released for public comment early 2000
Bait fishery and specimen shell/shell fish Management Plans will incorporate objectives of the GBRMPA Act and World Heritage Convention.	QFMA (GBRMPA) (QPWS)	mid 2002	Discussion papers being drafted

COMPLIANCE AND ENFORCEMENT **Increased surveillance and enforcement** in the GBR with the commitment by Government of an additional A$3.4 million over the next three years.	GBRMPA/ QPWS/QBFP (Coastwatch)	Ongoing	Surveillance and enforcement activities will be concentrated in 'no-take' zones and DPAs; VMS is now 'on-line' for trawl fleet.
FISHERIES MANAGEMENT PLANS Management arrangements for all major fisheries are currently being negotiated with the Queensland government.	QFMA/ GBRMPA	Plans due at various times over next few years	GBRMPA will ensure these Management Plans are designed to deliver ecologically sustainable fishing, not only in terms of target species, but also non-target species and the environment generally.

Main references for further reading:

Poiner et al (1998) *Final Report on Effects of Trawling in the Far Northern Section of the Great Barrier Reef: 1991 to 1996*, CSIRO Div. Of Marine Research, Cleveland. Final Report, 565 pp.

QFMA (1999) *Queensland East Coast Trawl Fishery - Draft Management Plan and Regulatory Impact Statement for public comment, June 1999*

QFMA (1999) *Queensland Coral Reef Fin Fish Fishery - Draft Management Plan and Regulatory Impact Statement for public comment, June 1999*

Wachenfeld, D, Oliver, J & Morrissey, J (eds) (1998) *State of the Great Barrier Reef World Heritage Area 1998.* Report publ. by GBRMPA (specifically Sections on Fishes (Environmental Status, pp 51-56), Inter-reefal and Lagoonal Benthos (pp. 71- 75) and Fisheries (Management Status, pp. 85-91)

3. The Management of Shipping and Ship-sourced Marine Pollution

Background

- The GBR was declared the worlds first 'Particularly Sensitive Sea Area' (PSSA) by the International Maritime Organisation (IMO) in 1991.
- A compulsory pilotage regime for all large vessels or those vessels carrying hazardous cargoes has been agreed to by the IMO and implemented within high risk areas of the GBR.
- As well as the National Oil Spill Contingency Plan, REEFPLAN (the marine pollution contingency plan for the GBR) has been reviewed and updated a number of times, most recently in 1998.
- The National Oil Spill Contingency Plan has the capability of responding to oil spills of up to 20000 tonnes in volume.
- A new mandatory ship reporting system (thought to be the worlds first for an international seaway) has been developed requiring all ships greater than 50 metres in length to report their position and course at designated reporting points along the coast (approx every 100 nautical miles). This enables navigational information to be provided to ships including the courses taken by other ships, concentrations of fishing vessels and adverse weather conditions. This will also assist in identifying and prosecuting ships that make illegal (oil, garbage etc) into the GBRMP.
- Under the International Convention for the Prevention of Pollution from Ships 1973 and 1978 Protocol (MARPOL) the GBR receives special protection. MARPOL provisions are implemented within Australian legislation [*Protection of the Sea (Prevention of Pollution from Ships) Act 1983* and *Great Barrier Reef Marine Park Act 1975*]. Vessels are prohibited from discharging oil within the GBRMP and fines apply for breaches (up to $250000 for an individual and $1000000 for a corporation).
- A risk analysis comparing the relative risks of inner and outer GBR shipping routes was completed in 1995.

Key Issues

- An estimated 3000 ships (over 50 metres in length) transit the inner route of the GBR annually.
- The main management focus is on improving the safety of shipping operations to prevent spills, however there is also a clear recognition that the use of the GBR by shipping will always mean that there is the potential for a large oil spill and comprehensive contingency planning for such events is also required.
- Reducing the risks posed by inadequately maintained vessels, inadequately trained ships crews and human error in shipping operations.

Action(s)	Lead agency (and others involved)	Date Due	Additional Comments
REDUCING THE RISK OF SPILLS Differential global positioning systems (DGPS) coverage to assist ship navigation will be finalised by the end of 1999.	AMSA	End 1999	Complete DGPS coverage will greatly assist the navigation of vessels within the BR, by providing highly accurate positional data.
Radar coverage for the Ship Reporting System is being extended to monitor additional passages within the GBR.	AMSA/QDOT	2001	Radar coverage over additional passages will allow authorities to monitor the movement of ships through high risk areas.
An oil spill risk assessment for the GBR and adjacent coastline is being conducted.	GBRMPA/ QDOT	February 2000	The risk assessment will allow authorities to design preventative and response measures on a local/regional scale.

Increased education/awareness of shippers	QDOT/AMSA/ GBRMPA	September 1998	Alert shippers of special significance of GBR, by standard message broadcast from SRS and distribution of brochures/stickers.
Additional surveillance of GBR shipping routes	GBRMPA/ Coastwatch	November 1998	Increased tasking for oil spill detection by Coastwatch aircraft
Target international oil spill convention (MARPOL) requirements under port state control regime	AMSA	November 1998	Ensure shippers are cognisant and compliant with MARPOL requirements
The Royal Australian Navy Hydrographic Office is compiling a digital database of hydrographic charts for use within Electronic Chart and Display Information Systems (ECDIS). The database is expected to be available in January 2000.	RAN	January 2000	ECDIS when combined with DGPS allows ships to superimpose realtime positional information over accurate charting. ECDIS systems also include alarms which sound when vessels move off a programmed track.
State Party will write to IMO highlighting the problems of inadequately trained crews and inadequately maintained ships.	AMSA (GBRMPA)	2000	
SPILL RESPONSE The arrangements within the National Oil Spill Contingency Plan are being reviewed to ensure that the most efficient systems are being employed. The review is expected to be completed by March 2000.	Commonwealth and State/NT Governments	March 2000	The National Oil Spill Contingency Plan review will form the basis of the next review of REEFPLAN.

Main references for further reading

AMSA (1998) *REEFPLAN: Oil Spill Contingency Plan for the Great Barrier Reef World Heritage Area.*

APEC/ANZECC (1998*) Working Together on Preventing Ship-based Pollution in the Asia-Pacific Region*, Proc. of Regional Workshop, Townsville 1998

Duke, N, Burns, K and Swannell R (1999) Research into the Bioremediation of Oil Spills in Tropical Australia; with particular emphasis on oiled mangrove and salt marsh habitats, AIMS & AEA Technology, Final Report to AMSA, July 1999

Hilliard, R, Hutchings S & Raaymakers, S (1997) *Ballast Water Risk Assessment for 12 Queensland Ports*; Stage 3 and 4 Reports, Ecoports Monograph Series No.13 & 14

Queensland Transport (1998) *National Plan to Combat Pollution of the Sea by Oil,* Queensland Coastal Contingency Action Plan (Operations and Procedures Manual, Series 3), 1998.

Queensland Transport/AMSA (1997) *Reef Guide: A Shipmasters Handbook to the Torres Strait and the Great Barrier Reef,* 3rd Edition 1997

Wachenfeld, D, Oliver, J & Morrissey, J (eds) (1998) *State of the Great Barrier Reef World Heritage Area 1998.* Report publ. by GBRMPA (specifically Sections on Shipping and Oil spills (Management Status, pp. 115-117)

4. Representative Marine Protected Areas

Background

- The need to identify and adequately protect representative examples of all habitats in the GBRMP is now well established as being fundamental to effective long-term management.
- The current distribution of highly protected areas reflects an early focus on coral reef habitats as a priority, and pristine reefs located in the remote north. A more comprehensive network of representative natural areas will help ensure protection of the north/south (latitudinal) and east/west (cross-shelf) diversity of all marine habitats.
- GBRMPA commenced a program in1996 which has involved, and will continue to involve consultation with stakeholders. The program's objective is to ensure a comprehensive and representative system of adequately sized and protected areas that provides appropriate levels of protection for all habitat types in the GBR World Heritage Area. The result will be a reef-wide rezoning review which is due to be completed by 2001.

Key Issues

- Many biological communities (like inshore soft-bottom communities which also represent major trawl grounds) and many nearshore communities are known to be currently poorly represented in highly protected zones.
- GBRMPA's program is an important part of Australia's National Representative System for Marine Protected Areas (NRSMPA) Program and will assist in meeting a number of national and international strategies and commitments such as the 25 Year Strategic Plan for the GBRWHA and the Biodiversity Convention.
- Stakeholder involvement will be a vital part of the overall program, as will the cultural, economic, social, legal and practical implications when it comes to choosing from a number of potential 'candidate' areas.
- A comprehensive, adequate and representative protected area network within the GBRWHA will help:
  - maintain options for future users;
  - ensure future economic benefits derived from commercial and recreational fishing and tourism by protecting the resource and offering refuge to some fish populations;
  - increase the guarantee that we pass a healthy marine environment on to future generations; and
  - enhance Australia's international status implementing a broadscale, biophysically-based network of comprehensive, representative marine protected areas.
- QPWS is conducting a complementary program to address the adjacent waters under State jurisdiction.

Action(s)	Lead agency (and others involved)	Date Due	Additional Comments
DETERMINING CURRENT LEVEL OF REPRESENTATION First approximation of 'representative habitats' using physical/oceanographic parameters supplemented with biological data where available	GBRMPA (QPWS/CRC/ QDPI/QEPA)	Stage 1 completed July 1999; Stage 2 due Dec 1999	Workshops of experts for Reefal and Inter-reefal areas will occur in Sept &Oct 1999.

IDENTIFYING HIGHLY PROTECTED AREAS Public participation in reviewing the GBR bioregionalisation and 'candidate representative areas' begins.	GBRMPA and all stakeholders	Dec 1999	
Assessment of cultural, social, economic, practical and legal implications of alternative 'candidate' area options *(selection phase).*	GBRMPA and all stakeholders	Commences June 2000	The negotiation and information will be used to apply the 'least cost' principle where 'cost' does not refer just to monetary value. If different configurations of areas satisfy similar ecological criteria, the option which imposes the least short and long term cost to the community will be adopted.
Complete evaluation of existing zoning and management plans to ensure adequate and comprehensive representation.	GBRMPA	Dec 2000	There is no right answer to the question of what proportion of 'no-take' zones is necessary or appropriate. For rare habitats, like some seagrass beds, it may be important to include a significant portion of the remaining habitat within the Marine Park. Or it may be that a habitat is well represented outside the Marine Park and protected by virtue of its remoteness. Consequently, the Authority does not have a specific percentage target it is seeking to achieve.
Finalise recommendations for new protected areas and commence statutory revisions	GBRMPA	Jan 2001	The outcomes of the RAP process will be implemented through amendments to Zoning Plans for all the Sections; this is likely to take one to two years to finalise.

Main references for further reading:

ANZECC (1999*) Strategic Plan of Action for the National Representative System of Marine Protected Areas: A Guide for Action by Australia Governments*, ANZECC Task Force, Environment Australia, July 1999

Commonwealth of Australia (1996) *National Strategy for the Conservation of Australia's Biological Diversity*, Dept of Environment, Sports & Territories, Canberra.

GBRMPA (1999) *An Overview of the Great Barrier Reef Marine Park Authority Representative Areas Program*, 18 pp.

Thackway, R (ed.) (1996*) Developing Australia's Representative System of Marine Protected Areas*. Proc. of Ocean Rescue 2000 Workshop Series, Publ. No. 2, Canberra, Australia

5. Resources for Research and Management

Background

- Cooperation occurs between GBRMPA, other Commonwealth agencies and agencies of the Queensland (State) Government to fund the World Heritage obligations in the GBR. It is difficult to estimate the total annual expenditure in the GBR but some of the main components include:
  - (a) **GBRMPA** **$25 million** (total operating budget in 1997/98 related to the GBR incl. joint funding and the Qld contribution
  - (b) **Commonwealth Agencies** **$30 million** (AIMS, AMSA, Coastwatch, AQIS, Dept of Defence etc)
  - (c) **Reef CRC** $ **5 million** (non-GBRMPA contributions, both cash and in-kind in 1997/98 related to the GBR)
  - (d) **Queensland Agencies** **$14 million** (GBR-related operating expenditure includes QPWS, QDoT, QBFP, QFMA, QWP, Universities, etc)
  - (e) **Private Sector** **$ 4 million** (environment protection compliance Tourism and other industries)
- GBRMPA was restructured by the Government in 1998 to more specifically address the four most critical issues in the Marine Park: namely, fisheries; tourism and recreation; water quality and coastal development; and the maintenance of conservation, biodiversity and World Heritage values. The Government will continue to resource GBRMPA at an appropriate level to enable it to address these critical issues.

Key Issues

- Australia is committed to providing adequate resources to meet all of World Heritage obligations for the GBRWHA.
- GBRMPA's funding comes from Commonwealth Government outlays, special appropriations (EMC), Qld contributions for Day-to-day management, the GBR Aquarium, external services and various other sources.
- The sources of funding have changed considerably in recent years. For example, GBRMPA's own research funding in 1990 was $1.9 million; this increased by 1993/94 to $4.1 mill. In 1993/94 the CRC commenced and a considerable proportion of the EMC from the GBR went to the CRC for research. Adding the GBRMPA and CRC research funds show that this has increased from 1993/94 from $5 mill to $6.59 mill in 1997/98. On top of these funds, there is also considerable research expenditure by AIMS, QFMA, QDPI,AFMA and industry contributions in the GBR.

Action(s)	Lead agency (and others involved)	Date Due	Additional Comments
GBRMPA and QPWS will review their respective allocations to day-to-day management to ensure that sufficient funds are available to meet programmed operational tasks.	GBRMPA/ QPWS	Late 1999	Agreement has been reached that day-to-day management will concentrate on core activities in the highest priority areas (eg. patrol days will increase by 43% compared to the previous financial year).
Commonwealth funding will be increased by $3.4m over 3 years to enhance enforcement and surveillance of the Reef.	GBRMPA (QPWS/QBFP)	Commenced 1999/00 and will continue for 3 years	This funding will be used for enforcement/surveillance of: - Dugong Protection Areas - Illegal fishing in closed areas (espec. trawling and line fishing in 'green' zones) - New zoning in Far Northern Section - Introducing new technology (eg VMS); and - Upgrading operational and program support systems.
GBRMPA will continue to review its self-generated revenue from user fees and move towards cost-recovery for services provided to commercial operations eg. monitoring.	GBRMPA	Mid 2000	

Abbreviations used in this plan are:

ACIUCN	Australian Committee for IUCN
AFMA	Australian Fish Management Authority
AIMS	Australian Institute of Marine Science
AMSA	Australian Maritime Safety Authority
AMPTO	Association of Marine Park Tourist Operators
ANZECC	Australian and New Zealand Environment and Conservation Council
BRDs	Bycatch Reduction Devices
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CRC	Co-operative Research Centre (primarily the Reef CRC)
DDM	Day-to-day management
DNR	Department of Natural Resources (Queensland)
DPAs	Dugong Protection Areas
EMC	Environmental Management Charge
GBR	Great Barrier Reef
GBRMP	Great Barrier Ref Marine Park
GBRMPA	Great Barrier Reef Marine Park Authority
GBRWHA	Great Barrier Reef World Heritage Area
IUCN	World Conservation Union
IMO	International Maritime Organisation
JCU	James Cook University
NRSMPA	National Representative System of Marine Protected Areas
OCS	Offshore Constitutional Settlement
QBFP	Queensland Boating & Fisheries Patrol
QDPI	Queensland Department of Primary Industries
QDoT	Queensland Department of Transport
QEPA	Queensland Environmental Protection Agency
QFMA	Queensland Fisheries Management Authority
QPWS	Queensland Parks and Wildlife Service
QWP	Queensland Water Police
TED	Turtle Excluder Devices
VMS	Vessel Monitoring system