



Australian Government

**Great Barrier Reef
Marine Park Authority**

Great Barrier Reef Marine Park Authority

Alignment with and Contributions to the

Marine & Tropical Sciences Research
Facility



Introduction

The Great Barrier Reef Marine Park Authority (GBRMPA) bases its management decisions on the best available scientific information. It has a long history of collaborating with scientists and funding science to help deliver the science needed to manage the Great Barrier Reef Marine Park. The GBRMPA is committed to strong partnership with the Marine and Tropical Sciences Research Facility (MTSRF) and has identified strong synergies between many GBRMPA programmes and proposed MTSRF projects from the Annual Research Plan. In total, the GBRMPA has identified \$3.9m in anticipated in-kind contributions for 2006/2007. The amount of ongoing in-kind contributions will depend on GBRMPA's success in securing future funding for some of its programmes.

1 Membership of Steering Groups and Operational Groups

1.1 Activities

- GBRMPA senior managers to be members of Steering and Operational Groups
- Proposed contributors are Andrew Skeat, John Tanzer, Phil Cadwallader, Jon Day, Hugh Yorkston, Lisha Mulqueeny, Mick Bishop, David Wachenfeld

1.2 Outputs

- Direction of and reporting on programmes and projects

1.3 Outcomes

- Programmes and projects delivering on key information needs for management of the Great Barrier Reef Marine Park

1.4 Relevant MTSRF Programmes/ Projects

- Programmes 1 (Status and Trends - GBR), 5.1 (Climate Change - GBR), 7.1 (Indicators and tracers for changes in marine quality), 7.2 (Catchment health, water quality and connectivity), 7.3 (Ecosystem and social frameworks for water quality), 8 (Sustainable Use - GBR)
- Projects 4.1 (Condition trends and projected futures of marine species of conservation concern), 4.2 (Sustainable use of marine species of conservation concern and 3. Communication / Extension), 6.1 (Impact of identification of invasives in the GBR)

1.5 Value of contribution

Contribution	FTE	\$
Andrew Skeat	0.05	18,450
John Tanzer	0.05	18,450
Phil Cadwallader	0.05	10,769
Jon Day	0.05	10,769
Hugh Yorkston	0.05	10,769
Lisha Mulqueeny	0.05	10,769
Mick Bishop	0.05	10,769
David Wachenfeld	0.05	10,769
Total	0.40	101,511

2 Membership of Project Teams

2.1 Activities

- GBRMPA staff to be members of Project Teams for specific projects

2.2 Outputs

- Contributions to project outputs from perspective of maximising value to management of the Great Barrier Reef Marine Park and link to key consultation and policy formulation processes

2.3 Outcomes

- Projects delivering on key information needs for management of the Great Barrier Reef Marine Park

2.4 Relevant MTSRF Programmes/ Projects

- Programmes 1 (Status and Trends - GBR), 5.1 (Climate Change - GBR), 7.1 (Indicators and tracers for changes in marine quality), 7.2 (Catchment health, water quality and connectivity), 7.3 (Ecosystem and social frameworks for water quality), 8 (Sustainable Use - GBR)
- Projects 4.1 (Condition trends and projected futures of marine species of conservation concern), 4.2 (Sustainable use of marine species of conservation concern and 3. Communication / Extension), 6.1 (Impact of identification of invasives in the GBR)

2.5 Value of contribution

Contribution	FTE	\$
James Innes	0.05	8,528
Karen Vella	0.05	7,081
Karen Lawrence	0.05	5,600
Laurence McCook	0.15	25,583
Andrew Chin	0.10	14,162
Katrina Goudkamp	0.10	11,200
Fergus Molloy	0.40	56,649
Chicka Turner	0.05	8,528
Kirstin Dobbs	0.10	17,055
Sarah Salmon	0.15	16,800
Chris Briggs	0.05	8,528
Lorelle Schulter	0.05	8,528
Hilary Skeat	0.05	8,528
Leigh Gray	0.10	17,055
Frances Verrier	0.05	8,528
James Aston	0.05	6,191
New Fisheries EL1	0.30	51,166
Martin Russell	0.20	34,111
Malcolm Turner	0.10	17,055
DDM AO7	0.25	22,927
DDM PO4	0.10	8,233
DDM PO3	0.30	21,585
Total	2.80	383,621

3 Communications and Community Partnerships

3.1 Activities

- Facilitation of science presentations to Local Marine Advisory Committees, Reef Advisory Committees, Great Barrier Reef Consultative Committee, Great Barrier Reef Marine Park Authority, community groups

3.2 Outputs

- Presentations, meetings, workshops

3.3 Outcomes

- Stakeholder and broader community understanding of MTSRF outputs and outcomes, particularly issues affecting the Great Barrier Reef Marine Park, its industries and management

3.4 Relevant MTSRF Programmes/ Projects

- Programmes 1 (Status and Trends - GBR), 5.1 (Climate Change - GBR), 7.1 (Indicators and tracers for changes in marine quality), 7.2 (Catchment health, water quality and connectivity), 7.3 (Ecosystem and social frameworks for water quality), 8 (Sustainable Use - GBR)
- Projects 4.1 (Condition trends and projected futures of marine species of conservation concern), 4.2 (Sustainable use of marine species of conservation concern and 3. Communication / Extension), 6.1 (Impact of identification of invasives in the GBR)

3.5 Value of contribution

Contribution	FTE	\$
LMACs, RACs, GBRCC, GBRMPA	n/ a	72,518
Regional Liaison Offices	0.40	37,000
Leanne Fernandes	0.05	10,769
Total	0.45	120,287

4 Specific Programmes

4.1 Marine Monitoring Programme¹

4.1.1 Activities

- River mouth water quality monitoring, marine water quality monitoring, inshore coral reef monitoring, inshore seagrass habitat monitoring, pollutants in mud crabs monitoring

4.1.2 Outputs

- Annual Marine Monitoring Programme hard copy and web reports and links with the State of the Reef Report
- 'Marine water quality and reef health' component of the Reef Water Quality Protection Plan ' Annual Report
- Report to Premier and Prime Minister in 2010

4.1.3 Outcomes

- Understanding of the effectiveness of the Reef Water Quality Protection Plan in halting and reversing the decline in Great Barrier Reef water quality

4.1.4 Relevant MTSRF Programmes/ Projects

- Programme 7.1 (Marine and Estuarine Indicators and Thresholds of Concern)
- Project 7.7 (Report card framework)

¹ Funding for the Marine Monitoring Programme is secure for 2006/2007. Funding is being sought for 2007/2008 onwards. The future of the Programme, and its status as an in-kind contribution to the MTSRF, are dependent on successfully securing ongoing funding.

4.1.5 Value of contribution

Contribution	FTE	\$
David Haynes	1.00	170,554
Community Monitoring Project Manager	1.00	123,822
Operations	n/ a	1,564,002
Total	2.00	1,858,378

4.2 Social, Economic and Cultural Programme

4.2.1 Activities

- Annual assessment of economic and financial values of Great Barrier Reef industries
- Annual assessment of expectations, values and experiences of visitors to the Great Barrier Reef
- Quarterly reports on tourism visitation to the Great Barrier Reef

4.2.2 Outputs

- Hard copy and web annual reports on economic and financial values and visitor experiences
- Web based, continually updated reporting for Great Barrier Reef visitation data
- 'Great Barrier Reef industries socio-economic values' component of the Reef Water Quality Protection Plan ' Annual Report

4.2.3 Outcomes

- Improved understanding and monitoring of social, economic and cultural aspects of the Great Barrier Reef

4.2.4 Relevant MTSRF Programmes/ Projects

- Projects 7.5 (Socio-economic constraints, incentives and drivers of options for water quality improvement), 8.5 (Social and economic effects of the GBR zoning plan), 8.6 (Analysis of recreational and tourism use and impact on the GBR for managing sustainable tourism)

4.2.5 Value of contribution²

Contribution	FTE	\$
James Innes	0.40	68,222
Karen Vella	0.35	49,568
Karen Lawrence	0.25	28,001
Operations	n/ a	205,000
Total	1.00	350,790

4.3 State of the Reef Report

4.3.1 Activities

- Compilation, synthesis and reporting of information on condition of, pressures on and management responses in the GBRWHA

4.3.2 Outputs

- Web reports
- Planned hard copy summary report
- Planned road show to Great Barrier Reef coastal communities

4.3.3 Outcomes

- Improved community understanding of issues relating to the Great Barrier Reef

4.3.4 Relevant MTSRF Programmes/ Projects

- Programme 1 (Status and Trends - GBR)

4.3.5 Value of contribution

Contribution	FTE	\$
Andrew Chin	0.40	56,649
Katrina Goudkamp	0.10	14,162
Operations	n/ a	15,000
Total	0.50	85,811

4.4 Eye on the Reef

4.4.1 Activities

- Partnership with GBRMP tourism industry
- Monitoring of environmental variables at tourism sites
- Training and education of tourism operators

² Funding for the Social, Economic and Cultural Programme is secure for 2006/2007. Funding is being sought for 2007/2008 onwards. The future of the Programme, and its status as an in-kind contribution to the MTSRF, are dependent on successfully securing ongoing funding.

4.4.2 Outputs

- 'Nature Diaries' reporting on results of monitoring
- Training programme (workshops, on-board training sessions, information and manuals)

4.4.3 Outcomes

- 'Early warning system' for emerging environmental issues
- reports and interpretative material for the tourism industry
- Enhanced stewardship and understanding of the GBRMP by tourism staff

4.4.4 Relevant MTSRF Programmes/ Projects

- Project 1.3 (Condition and Trend of GBR ecosystem)
- Theme 5 - integration/communication?

4.4.5 Value of contribution

Contribution	FTE	\$
Andrew Chin	0.20	28,324
Dean Miller	0.20	28,324
Operations	n/ a	35,000
Total	0.40	91,649

4.5 Climate Change Action Plan (Climate Change Response Programme)

4.5.1 Activities

- Compilation of all available information on likely effects of climate change on the GBRMP ecosystems
- Workshops to determine likely social, economic and cultural effects of climate change on GBRMP communities and industries
- Facilitate meetings and workshops between relevant research providers and potential clients/end-users such as industry and community groups and links to programs like Reef Guardian Councils
- Partnerships with international scientists and marine ecosystem managers to share information on climate change effects and mitigation strategies

4.5.2 Outputs

- 'Vulnerability Assessment' for the ecosystems of the GBRMP
- 'Integrated Assessment' of social, economic and cultural effects of climate change on GBRMP communities and industries
- 'Climate Change Action Plan' detailing potential strategies to help the GBRMP ecosystems, communities and industries adapt to climate change, and mitigate its effects

4.5.3 Outcomes

- Improved understanding of effects of climate change on GBRMP ecosystems, communities and industries
- Improved strategies to help the GBRMP ecosystems, communities and industries adapt to climate change, and mitigate its effects

4.5.4 Relevant MTSRF Programmes/ Projects

- Projects 5.1.3 (Resilience to climate change), 5.1.4 (Tools to support resilience-based management in the face of climate change)

4.5.5 Value of contribution

Contribution	FTE	\$
Paul Marshall	0.55	93,805
Jo Johnson	0.50	70,811
Gillian Goby	0.20	20,067
Operations	n/ a	190,000
Total	1.25	374,683

4.6 Coral Bleaching Response Programme (Climate Change Response Programme)

4.6.1 Activities

- Regular (summer) monitoring and reporting of GBR sea temperatures using remote sensing (satellite) and in situ (AIMS/GBRMPA weather station network) data
- Assessments of bleaching events through aerial and underwater surveys
- Community partnership (BleachWatch) to provide early warning system for coral bleaching
- Support research and development of new and improved methods for monitoring sea temperature and coral bleaching

4.6.2 Outputs

- Regular 'current conditions reports' throughout summer (web)
- Final, end-of-summer, assessments of sea temperatures and coral bleaching (web and hard copy)
- Early warning system (email alerts) for coral bleaching
- New and improved tools for predicting and measuring coral bleaching

4.6.3 Outcomes

- Reports of extent and severity of coral bleaching events each summer
- Improved understanding of sea temperature patterns during each summer, and how these relate to patterns of coral bleaching
- Improved methods for assessing bleaching risk and impacts
- Strong engagement with community, industry and other reef-users

4.6.4 Relevant MTSRF Programmes/ Projects

- Projects 5.1.2 (Early warning and assessment systems for thermal stress on the GBR), 5.1.3 (Resilience to climate change)

4.6.5 Value of contribution

Contribution	FTE	\$
Paul Marshall	0.20	34,111
Jo Johnson	0.35	49,568
Gillian Goby	0.45	45,151
Malcolm Turner	0.05	8,528
DDM AO7	0.05	4,585
DDM PO3	0.10	7,195
Operations	n/ a	47,000
Total	1.20	196,138

4.7 Pew Fellowship (Climate Change Response Programme)

4.7.1 Activities

- Research into resilience of benthic coral reef ecosystems (particularly algal/coral dynamics)
- Assessment of how scientific understanding of coral reef resilience could be applied by managers of tropical marine ecosystems
- Partnerships with international scientists and marine ecosystem managers to share information on climate change effects and mitigation strategies

4.7.2 Outputs

- Scientific and management journal papers
- Report to Pew Fellowship Programme

4.7.3 Outcomes

- Improved understanding of coral/algal dynamics and resilience of coral reefs
- Improved understanding of how principles of coral reef resilience can be applied to management

4.7.4 Relevant MTSRF Programmes/ Projects

- Projects 5.1.3 (Resilience to climate change), 5.1.4 (Tools to support resilience-based management in the face of climate change)

4.7.5 Value of contribution

Contribution	FTE	\$
Laurence McCook	0.25	42,639
Operations	n/ a	
Total	0.25	42,639

4.8 Coastal Bird Atlas

4.8.1 Activities

- Monitoring of key seabird and coastal bird populations at key sites
- Assessment of threats to breeding success of coastal bird populations

4.8.2 Outputs

- Database ('Coastal Bird Atlas') of monitoring information
- Scientific papers
- State of the Environment reporting (GBR and Qld State)
- Advice for management decisions

4.8.3 Outcomes

- Improved understanding of and reporting on condition and trend of coastal bird populations in the GBRMP
- Improved management of pressures on coastal bird populations

4.8.4 Relevant MTSRF Programmes/ Projects

- Programme 1 (Status and Trends - GBR)
- Project 4.1 (Condition trends and projected futures of marine species of conservation concern)

4.8.5 Value of contribution

Note that the contribution valued below is half funded by the GBRMPA and half by the QEPA.

Contribution	FTE	\$
Kirstin Dobbs	0.05	8,528
Malcolm Turner	0.05	8,528
District Managers (AO7)	0.05	4,585
Professional Officers (PO4)	0.20	16,466
Field Staff (TO4)	0.40	27,867
Operations	n/ a	40,000
Total	0.70	105,974

4.9 Stranding Programme

4.9.1 Activities

- Recovery of dead dugongs, turtles and cetaceans and assessment of cause of death, including necropsy

4.9.2 Outputs

- 'Strandnet' database (web accessible)
- Annual summary reports
- Scientific papers
- Advice for management decisions

4.9.3 Outcomes

- Improved understanding of mortality rates of dugongs, turtles and cetaceans and causes of death
- Improved management of pressures on populations of dugongs, turtles, and cetaceans

4.9.4 Relevant MTSRF Programmes/ Projects

- Programme 1 (Status and Trends - GBR)
- Project 4.1 (Condition trends and projected futures of marine species of conservation concern)

4.9.5 Value of contribution

Note that the contribution valued below is half funded by the GBRMPA and half by the QEPA.

Contribution	FTE	\$
Kirstin Dobbs	0.05	8,528
Malcolm Turner	0.05	8,528
District Managers (AO7)	0.05	4,585
Professional Officers (PO4)	0.20	16,466
Field Staff (TO4)	0.30	20,900
Operations	n/ a	10,000
Total	0.60	69,007

4.10 Turtle Monitoring Programme

4.10.1 Activities

- Biological and ecological monitoring of key marine turtle species at key nesting beaches and foraging grounds
- Assessment of threats to breeding and foraging success of key marine turtle populations

4.10.2 Outputs

- Scientific papers
- Advice for management decisions
- Models of turtle populations to determine sustainable levels of anthropogenic mortality

4.10.3 Outcomes

- Improved understanding of condition and trend of marine turtle populations in the GBRMP
- Improved management of pressures on populations of marine turtles

4.10.4 Relevant MTSRF Programmes/ Projects

- Programme 1 (Status and Trends - GBR)
- Project 4.1 (Condition trends and projected futures of marine species of conservation concern)

4.10.5 Value of contribution

Note that the contribution valued below is half funded by the GBRMPA and half by the QEPA.

Contribution	FTE	\$
Kirstin Dobbs	0.05	8,528
Malcolm Turner	0.05	8,528
District Managers (AO7)	0.05	4,585
Field Staff (TO4)	0.20	13,933
Operations	n/ a	40,000
Total	0.30	75,574

4.11 Invasive Pests in the Marine and Island Rainforest Environments

4.11.1 Activities

- Assessments of invasive pests in the marine environment (especially Asian green mussel in Trinity Inlet)
- Assessments of invasive pests (weeds) in island rainforests

4.11.2 Outputs

- Reports on status of invasive pest species in the marine and island rainforest environments

4.11.3 Outcomes

- Improved understanding and management of impacts of marine and island rainforest invasive pests

4.11.4 Relevant MTSRF Programmes/ Projects

- Projects 6.1 (Impact of identification of invasives in the GBR) and 6.2 (Impact and identification of invasives in the Wet Tropics Rainforests)

4.11.5 Value of Contribution

Note that the contribution valued below is half funded by the GBRMPA and half by the QEPA.

Contribution	FTE	\$
Malcolm Turner	0.05	8,528
DDM PO4	0.10	8,233
DDM PO3	0.20	14,390
DDM AO7	0.05	4,585
Operations	n/ a	35,000
Total	0.40	70,736