



# Reef Water Quality Protection Plan

Annual Report **2006–2007**

**Healthy land, healthy waterways, healthy Reef**



**Australian Government**



**Queensland  
Government**

Cover (L-R) Canefields near the Daintree Ferry (courtesy of CSIRO); Mossman Gorge, Daintree National Park; Slashers Reef, Townsville (courtesy of the Great Barrier Reef Marine Park Authority).

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# Executive summary

The Reef Water Quality Protection Plan (Reef Plan) is a joint initiative of the Queensland and Australian Governments. Through Reef Plan, the governments and key stakeholders address the potential risk to the Great Barrier Reef from the progressive decline in water quality in the waterways entering the Reef. In particular, Reef Plan addresses diffuse sources of pollutants entering waterways in Reef catchments.

Reef Plan aims to halt and reverse the decline in water quality entering the Reef within ten years. Reef Plan has been in place for four years, with the focus on the implementation and refinement of the 65 actions identified within Reef Plan. This has provided a strong foundation for the delivery of the on-ground actions to improve management practices that are the key to restoring the Reef's health.

While there have been significant scientific and technical advances in understanding the underlying issues associated with halting and reversing the decline in water quality entering the Reef, the major challenge lies in determining practical solutions for landholders and others to deal with the dynamic nature of environments, climatic variability, and agricultural development in the catchments adjacent to the Great Barrier Reef (GBR).

In recognising that Reef Plan is nearing the halfway mark since its inception, government agencies, with support from stakeholders, commenced a rigorous process of evaluating the progress of Reef Plan with the clear intention of developing an updated version in 2007–08. This activity is in keeping with the recommendations of an audit of the Reef Plan undertaken in 2005 that was reported to the Prime Minister and Premier of Queensland. The first stage of the review process culminated in a meeting between the Intergovernmental Operational Committee (IOC) for Reef Plan and stakeholders on 7 June 2007.

The meeting provided a forum for frank and open discussion about Reef Plan's progress and an opportunity to identify current shortfalls in the programme. There is agreement that if the goal of Reef Plan is to be met, uptake of best management practices and the undertaking of other on-ground actions need to be accelerated. This will require focusing more resources on priority actions.

This report highlights the progress and major achievements that have taken place in 2006–07 by providing an overview of some of the more significant activities carried out across the following five key areas:

- creating successful implementation partnerships around priority Actions
- setting targets and monitoring and reporting results
- targeting land use practices to water quality issues
- identifying and removing barriers to the uptake of sustainable management practices
- protecting and conserving wetlands and riverbanks.

A series of case studies are included that detail how these key areas are being addressed across the catchments by government agencies, regional Natural Resource Management (NRM) bodies and industry groups. They outline some of the achievements from the many projects that support Reef Plan.

These achievements would not have been possible without the continued cooperation and skills of landholders and the dedication and expertise of staff in each of the government agencies, regional NRM bodies, peak industry bodies, scientific and non-government organisations engaged in Reef Plan.





# What is Reef Plan?

The Great Barrier Reef (GBR) is a nationally and internationally significant area with outstanding natural, social and economic values. The Great Barrier Reef Marine Park and World Heritage Area contributes approximately \$6 billion and 63 000 jobs to Australia's economy, with major benefits at the local, regional and national scale. It is the world's largest system of coral reefs and is home to extensive seagrass beds, mangrove forests and a vast range of marine plants and animals.

Over the past 150 years, the catchment areas adjacent to the GBR have been extensively modified for urban development, agricultural production, tourism and mining. These changes have led to declining water quality in waterways that flow into the Reef lagoon.

Pollutants such as sediments, nutrients and chemicals entering waterways and the GBR threaten inshore reefs and ecosystems. While the vast majority of the 2900 reefs that make up the GBR are in good condition, some of the 450 inshore reefs close to areas of human activity are showing symptoms of decline. The long-term health of the GBR has implications not only in terms of biodiversity conservation, but also for the future of significant industries such as tourism and fisheries.

In response to these concerns, the Australian and Queensland Governments, in partnership with a wide range of industry and community groups, developed the Reef Water Quality Protection Plan (Reef Plan). Reef Plan was launched in December 2003 and is now in its fourth year of operation.

## Scope

Reef Plan is aimed at improving water quality by addressing the problem of diffuse sources of pollution from agricultural land use. Diffuse sources of pollution are those that enter waterways through a wide range of sources and cannot be directly attributed to one point of dispersal, such as a pipe or waste outlet. These pollutants include sediment, nutrients and chemicals that wash into waterways and ultimately flow into the Reef lagoon.

Climate change, shipping accidents, tourism, urban development, fishing and point sources of pollution, such as sewage, also impact on the water quality of the GBR. Reef Plan does not deal directly with these issues as they are covered by separate regulatory and planning processes.

## Goal and objectives

The goal of Reef Plan is to halt and reverse the decline in water quality entering the GBR within ten years. The Plan has two objectives:

- to reduce the load of pollutants from diffuse sources in the water entering the Reef
- to rehabilitate and conserve areas of the Reef catchment that have a role in removing waterborne pollutants.

Reef Plan focuses on implementing sustainable land management practices to reduce concentrations and loads of diffuse pollutants entering the Reef lagoon. However, the impact of improved land management practices on water quality

may not be immediately obvious. During the ten-year life of the Reef Plan, there will be declines in water quality; for example, floods may flush significant quantities of sediment into the GBR lagoon.

The adoption of sustainable production systems is expected to provide long-term water quality improvements.

## Who is involved in Reef Plan?

A complex, wide-ranging network of organisations and individuals are involved in implementing Reef Plan. These include:

- Australian Government agencies, including the departments of the Environment and Water Resources (DEW) and Agriculture, Fisheries and Forestry (DAFF), and the Great Barrier Reef Marine Park Authority (GBRMPA)
- Queensland Government agencies including the departments of Natural Resources and Water (NRW), Primary Industries and Fisheries (DPI&F), Premier and Cabinet (DPC), and the Environmental Protection Agency (EPA)
- landholders
- industry groups such as AgForce, Queensland Farmers' Federation (QFF) and their member organisations CANEGROWERS, Growcom, Queensland Dairyfarmers' Organisation (QDO) and Cotton Australia
- regional Natural Resource Management (NRM) bodies in the Burnett-Mary, Fitzroy, Mackay-Whitsunday, Burdekin Dry Tropics and Far North Queensland regions



- research organisations such as CSIRO, James Cook University, Australian Institute of Marine Science (AIMS), University of Queensland (UQ), and the Marine and Tropical Science Research Facility (MTSRF)
- local government
- community groups such as Landcare
- Indigenous people.

### How is Reef Plan implemented?

The implementation of Reef Plan is managed through a cooperative, partnership approach and relies on the commitment of governments, industry,

and regional NRM bodies to align resources to Reef Plan's objectives, and utilise existing projects and programmes.

Reef Plan outlines 65 Actions across nine Strategies. These Strategies are:

- self-management approaches
- education and extension
- economic incentives
- planning for NRM and land use
- regulatory frameworks
- research and information sharing
- partnerships
- priorities and targets
- monitoring and evaluation.

Milestones for each action are defined – as are the government agencies, industry, research, and regional NRM bodies – to implement the action. Reef Plan identifies the most at-risk catchments to target efforts at high priority areas. It also identifies monitoring and evaluation activities needed to measure the impact of the Plan.

The actions in Reef Plan will be implemented over a ten-year period. However, the results of these actions are likely to become evident over a much longer timeframe; improvements in water quality will be measured and further actions will be carried out beyond the life of Reef Plan.





## Governance arrangements

Figure 1 outlines the governance arrangements for delivering Reef Plan.

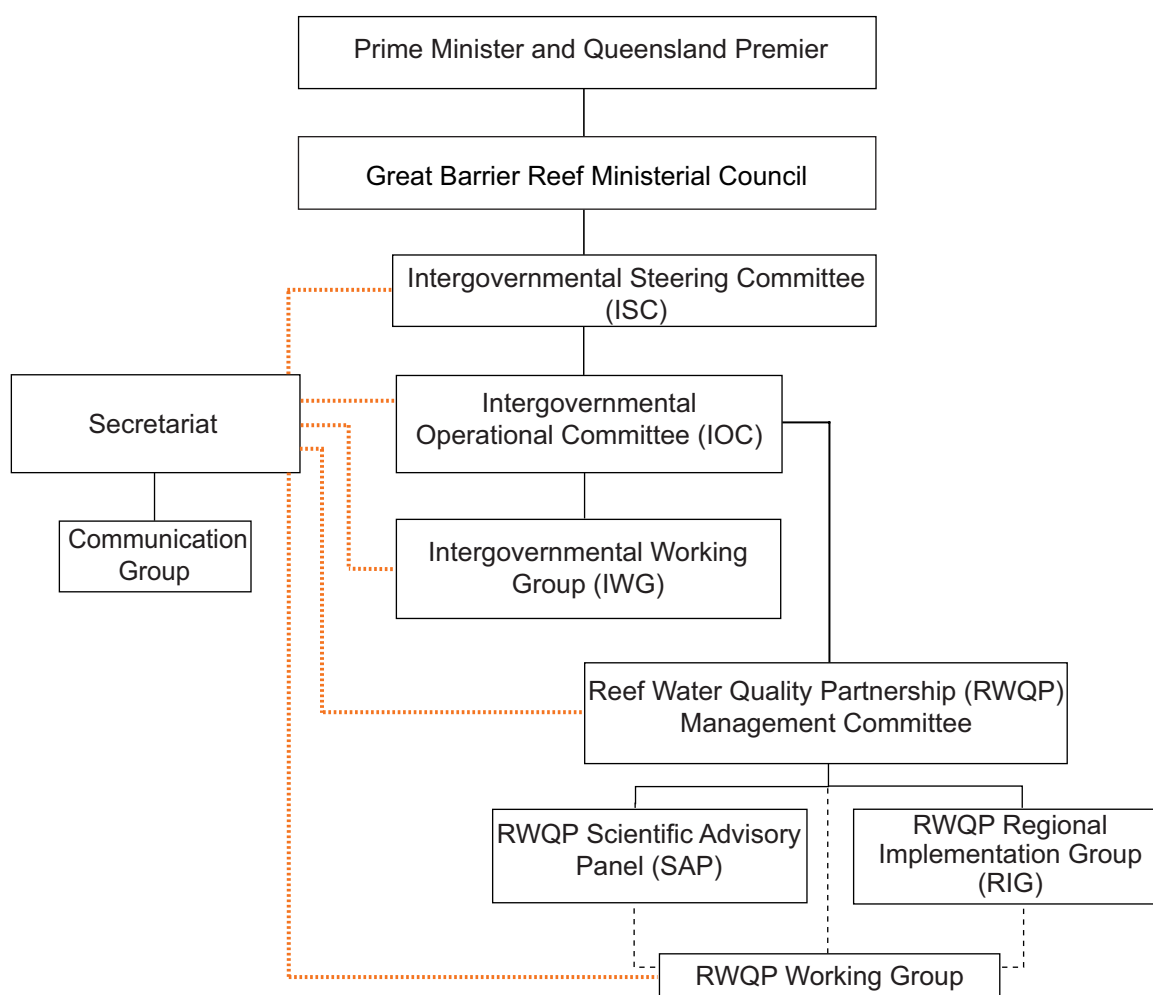


Figure 1 Governance structure for Reef Plan





Healthy land, healthy waterways, healthy Reef



# The story so far

Now in its fourth year, Reef Plan has made significant advances in progressing towards its goal.

Following an audit of the Reef Plan in 2005, the *Report to the Prime Minister and the Premier of Queensland: Implementation of the Reef Water Quality Protection Plan – Progress to date, challenges and future directions 2005* (the Evaluation Report) was publicly released in December 2006. The Evaluation Report found that not all Reef Plan actions with 1 July 2005 milestones were achieved, but the independent auditors determined that progress was consistent with the expectations for such a complex, engagement-focused initiative.

As at 30 June 2007, 41 of the 65 actions within Reef Plan had met their original milestone. 18 actions had not met their original milestone but are progressing well, while six actions did not meet their original milestones and are showing inconsistent or unsatisfactory progress.

A range of management strategies are being implemented to improve the progress of these actions.

As a result of the Evaluation Report, Reef Plan stakeholders are working to:

- improve consultation and communication
- develop more effective partnerships with industry sectors, regional NRM bodies and the wider community
- update the Reef Plan.

To access the Evaluation Report, including its recommendations, visit [www.reefplan.qld.gov.au](http://www.reefplan.qld.gov.au)

Over the life of Reef Plan, substantial preparatory work has been completed on the understanding and development of the relevant science, design of monitoring, evaluating and reporting systems, and establishing the working relationships necessary to ensure the success of the plan. Implementation of Reef Plan was, however, slower than anticipated and

a number of concerns have emerged. The most challenging of these are the need to:

- build productive partnerships around implementation priorities
- improve the speed of uptake of best management practice and its measurement
- improve the monitoring and reporting of land condition and water quality.

A number of significant actions were implemented to address these challenges and they are outlined below.

## The Reef Water Quality Partnership

Ongoing collaboration between the Australian and Queensland Government agencies and regional NRM bodies of the GBR was formalised with the signing of a Memorandum of Understanding (MoU) for the establishment of the Reef Water Quality Partnership (RWQP) in March 2007. The Partnership coordinates and supports



Image courtesy of the Great Barrier Reef Marine Park Authority



the water quality target-setting, monitoring and reporting that links management actions in the GBR catchments to the health of the GBR lagoon ecosystems.

The RWQP draws its functionality from a Management Committee, Regional Implementation Group (RIG), Scientific Advisory Panel (SAP), and a partnership support team. These groups have the following roles:

- the Management Committee leads the RWQP activities by providing strategic policy advice and programme direction, and coordinating partner activities to deliver agreed priorities
- the SAP provides independent scientific and technical advice relevant to the management needs of the Partnership
- the RIG ensures that the RWQP has strong connections to regional

operational activities. It provides advice on implementation issues and is a means for regional delivery of the RWQP's priorities.

### Regional NRM arrangements

A major delivery mechanism for Reef Plan activity is the regional NRM arrangements by which regional NRM bodies work with industry and community stakeholders to develop and implement their regional NRM plans. Through this process, significant work has been completed on aligning on-ground actions with Reef Plan's goal and objectives across the GBR catchment.

The 2005 Evaluation Report highlighted that positive partnership arrangements had been developed between Australian and Queensland Governments and with industry and regional NRM bodies.

### Consistent support from NHT and NAP

The Natural Heritage Trust (NHT) was established by the Australian Government to support the sustainable management of Australia's natural resources and cultural heritage and is supported by contributions from the Queensland Government.

The National Action Plan for Salinity and Water Quality (NAP) is a joint Australian and Queensland Government initiative to address salinity and water quality issues in priority catchments in Queensland.

Since the launch of Reef Plan, regional investments and State-level Investment Projects (SIPs) funded by NHT and NAP have delivered projects that contribute directly to Reef Plan's objectives.



Image courtesy of the Great Barrier Reef Marine Park Authority

### Roll out of best management practice

Industry, with support from regional NRM bodies and governments, has continued to roll out best management practice (BMP) initiatives. Work is being carried out to improve the measurement of uptake of BMP and monitor the impact this has on water quality. However, there are still some challenges to overcome in terms of collating the data and using it to inform policy and decision makers.

### Understanding the catchment-coast-lagoon system

Understanding of this system has been partially achieved through marine monitoring programmes, research activities and the mapping and protection of wetlands, with the focus now moving to improving the coordination and integration of these processes.

Finalisation of a catchment scale Water Quality Improvement Plan (WQIP) in Douglas Shire in North Queensland, with continued support from NHT, has laid the groundwork for the development of WQIPs in seven other catchments across the Reef catchment. Future emphasis will be placed on the implementation of the WQIPs.

### Monitoring and reporting progress

Reporting against Reef Plan Actions occurs regularly, with emphasis placed on high priority Actions.

Australian and Queensland Government agencies contribute several hundred activities to Reef Plan. Regional NRM bodies and industry also contribute substantially to Reef Plan implementation. There are major challenges in mapping the details of activities across agency

reporting systems, regional planning, and industry programmes, although improvements to progress reporting are underway.

### Government programme and policy initiatives that support Reef Plan

There has been continued support from Australian and Queensland Governments for Reef Plan through other policy and programme initiatives, for example:

- Queensland Wetlands Programme
- Rural Water Use Efficiency (RWUE) initiative
- Grazing Land Management (GLM)
- Rural Leasehold Land Strategy
- Vegetation Management Act amendments
- Farm Management Systems (FMS).