Australian Government

Australia's National Programme of Action for the Protection of the Marine Environment from Land-Based Activities

October 2006

case study 3: reef water quality protection plan

case study 3: reef water quality protection plan

introduction

The *Reef Water Quality Protection Plan* (Reef Plan) aims to address pollution of the Great Barrier Reef World Heritage Area from broadscale land based sources. As such, it is directly relevant to the GPA.

The natural, social and economic values of the Great Barrier Reef World Heritage Area (see Figure 1) are nationally and internationally recognised. However, best available scientific evidence indicates that extensive modification of the land catchment for urban infrastructure, agricultural production, tourism and mining has led to significant increases in pollutant loads in the rivers flowing to the Reef lagoon. Of particular concern are high concentrations of chemicals, sediments and nutrients from broadscale landuses. These threats are not cohesively addressed in other legislation, regulations and strategies.

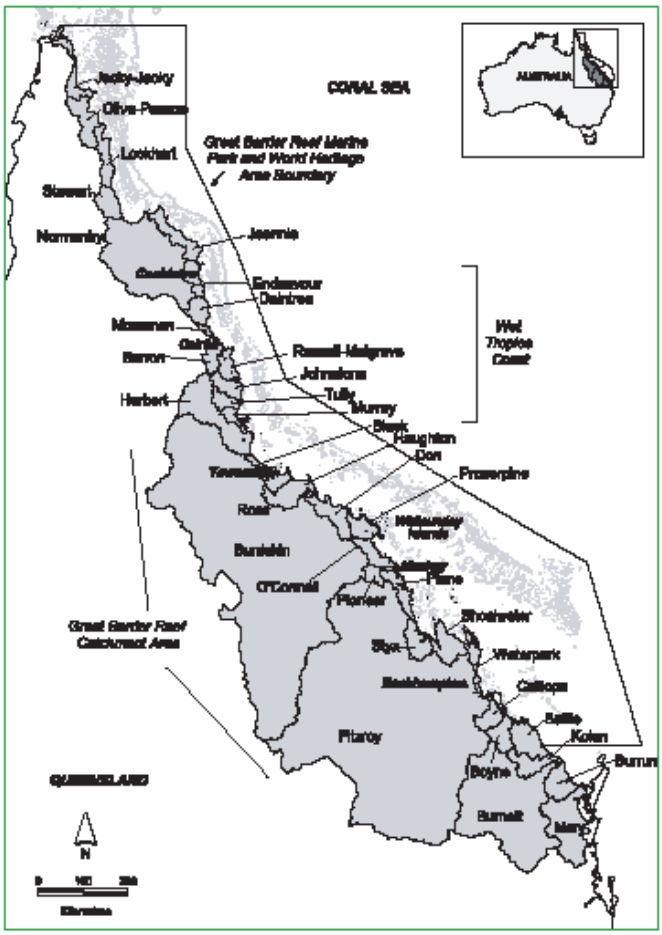
reef plan

In response to these challenges the Australian Prime Minister and Queensland Premier launched the Reef Plan in December 2003. In formulating Reef Plan it was acknowledged that "*single issue-based actions or policies by individual organisations are no longer an effective way to protect the Reef*" from the threat of diffuse land-based coastal and marine pollution.

A cooperative and precautionary approach to Reef protection, involving all levels of government and stakeholders was developed. The Reef Plan identifies appropriate actions, mechanisms and partnerships to build on existing Government policies and industry and community initiatives. The Reef Plan has a focus on actions to address pollutants from diffuse sources through an integrated natural resource management approach.

Reef Plan is to be initially implemented over a 10 year period, with further strategies considered after a review in 2010. Reef Plan acknowledges that the results of actions will be seen over a much longer period, with improvement in water quality continuing to be measured and further actions taken past this time frame.

Figure 1: Great Barrier Reef World Heritage Area and Catchments

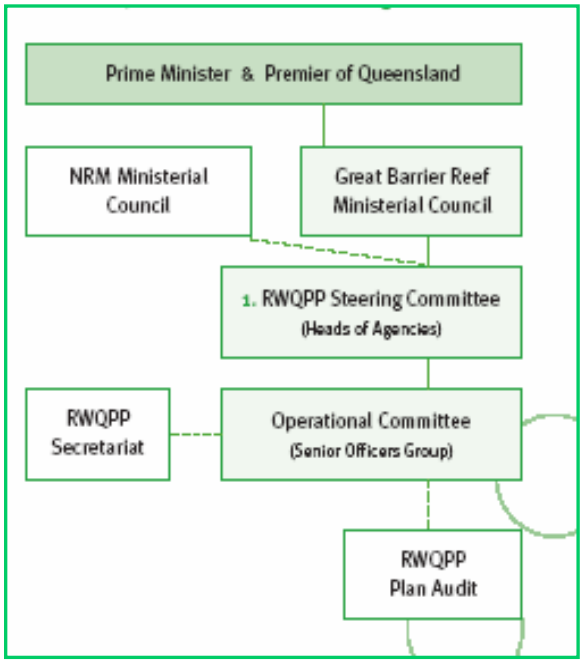


cooperative arrangements

An important component of Reef Plan is the emphasis placed on fostering a whole-of-government approach based on improved investment coordination. The cooperative approach to achieving this goal is reflected in the 2003 sign-off by the Queensland Premier and the Prime Minister of Australia.

Since the launch of Reef Plan, significant work has been undertaken to develop partnerships and align resources to ensure successful implementation on a long-term basis. Key activities have focused on developing key partnerships between the Australian and Queensland Governments and establishing organisational structures (see Figure 2), aligning major joint Government initiatives such as the *National Action Plan for Salinity and Water Quality* (NAP) and the *Natural Heritage Trust* Program (the Trust), and developing partnerships with industry and Regional NRM groups.

Figure 2: RWQPP Administrative Arrangements



reef plan goal

Reef Plan goal is: "Halting and reversing the decline in water quality entering the Reef within 10 years".

reef plan objectives

The two objectives of the Reef Plan to support the achievement of the goal are:

- Reduce the load of pollutants from diffuse sources in the water entering the Reef; and
- Rehabilitate and conserve areas of the Reef catchment that have a role in removing water borne pollutants.

reef plan strategies and example actions

Reef Plan objectives are to be achieved through nine high-level strategies each with its own set of actions or activities with responsible agencies identified. High-level milestones are also listed for each Action.

Reef Plan focuses on a risk management approach that takes into account the threats from each catchment and the sensitivity of the receiving environments. A central element of this approach is the designation of priority catchments, which are to be specifically and preferentially targeted under a number of actions. The following are Reef Plan strategies with an example of identified actions:

case study 3: reef water quality protection plan

strategy a: self-management approaches (6 actions)

Action A3: Support industry-led development of best management practice for land, natural resources and chemical use practices for the sugar, fruit and vegetable, broad-acre cropping, dairy and grazing industries in high risk Reef catchments. In the short term this will involve:

- Continued rollout of COMPASS (Combining Profitability and Sustainability in Sugar);
- Support for further development of best management practice programs for broad-acre cropping; and
- Continued support for implementing environmental management systems in agriculture.

strategy b: education and extension (5 actions)

Action B2: Improve the integration and coordination of research information systems and relevant extension services to support regional Natural Resource Management (NRM), catchment and property resource management planning in the Reef.

strategy c: economic incentives (9 actions)

Action C3: Identify, prioritise and recommend policies and incentives (of a regulatory and non-regulatory nature), that governments could consider, through an analysis of their public and private benefits and costs, that will encourage the uptake of best management practices that lead to improvements in the water quality of the Reef.

strategy d: planning for natural resource management and land use (11 actions)

Action D4: Promote development of Local Water Quality Improvement Plan to local governments and Regional NRM Bodies in high-risk high-priority catchments and give priority to their development and implementation where catchment communities have an interest and capacity to develop plans of a suitable standard.

strategy e: regulatory frameworks (4 actions)

Action E4: Ensure compliance programs and mechanisms for the Environmental Protection Act 1994 and the Land Act 1994 take into account the goal and objectives of the RWQPP, including an increased emphasis on application of the general environmental duty and duty of care for the land respectively in relation to diffuse sources of water pollution.

strategy f: research and information sharing (9 actions)

Action F1: Provide technical information and methods from research and monitoring on water quality entering the Reef to Regional NRM Bodies, landholders, industry peak bodies and the public.

strategy g: partnerships (7 actions)

Action G1: Work in partnership with Regional NRM Bodies to determine water quality environmental values and objectives, and to develop aspirational and short-term resource condition and management action targets that reflect the goal of the RWQPP.

strategy h: priorities and targets (5 actions)

Action H4: In partnership with Regional NRM Bodies identify sub-catchment hotspots responsible for delivering disproportionate quantities of sediment, nutrient and pesticides to the Reef.

strategy i: monitoring and evaluation (9 actions)

Action I1: Report through the Great Barrier Reef Ministerial Council to the Prime Minister and the Premier of Queensland on the implementation of the Reef Water Quality Protection Plan.

case study 3: reef water quality protection plan

Several Actions deserve special mention in Reef Plan implementation.

action d4

Action 4 under the Reef Plan's Strategy D (Planning for NRM and Land Use) is focused on preparation of Water Quality Improvement Plans (WQIPs). These WQIPs bring together a number of actions and activities under the Reef Plan including: setting targets for prioritising activities (actions G1, H1 and H4); coordinating community water quality monitoring (action I6); and trialling best management practices for landholders to improve water quality (B1).

WQIPs are based on implementing the National Water Quality Management Strategy and are the key mechanism adopted under the national Coastal Catchments Initiative (CCI) to improve coastal water quality. The CCI aims to achieve significant reductions in the discharge of pollutants in agreed coastal water "hotspots." Each WQIP identifies the key threats to water quality entering the Reef, develops end-of-catchment targets, prioritises actions and activities to meet these targets and formulates long term monitoring, modelling and adaptive management strategies to evaluate progress of WQIP implementation.

In order to develop WQIPs strong partnerships need to be formed. Steering committees overseeing each WQIP can be made up of a regional NRM body, Queensland state agencies, industry groups, community groups and scientists. The community is also engaged though setting water quality objectives for the waters in their area and industry groups are involved in identifying best land management practices for improving the water quality entering waterways. The integration of WQIPs into state and Australian Government programs and policies is also beneficial for the implementation phase.

Currently the WQIPs being developed in catchments discharging to the GBR World Heritage Area include the Douglas Shire, Tully-Murray, Burdekin, Burnett & Baffle, Townsville & Thuringowa and one WQIP for catchments in the Mackay Whitsunday region (Proserpine, O'Connell, Pioneer and Plane). These CCI hotspots align with the approach of 'priority catchments' under the Reef Plan.

CCI projects are funded through the Australian Government's Natural Heritage Trust and include $2.3 million for the rivers of the Douglas Shire, $1.375 million for the Tully River Basin, $1.569 million for the Burdekin Dry Tropics Region, $1.25 million in the Mackay Whitsunday region, $652,000 for the Burnett Mary region.

Associated projects to inform the WQIPs currently underway vary in nature and range from identifying and trialling best management practices in cane and grazing land uses; assessing sediment and nutrient loads flowing to the reef; and protection and restoration of priority riparian areas.

action a3 and a4

Peak Industry Bodies are important in the delivery of the Reef Plan outcomes and are identified as the lead for actions A3 and A4 which focus on uptake of best management practices for land managers. Industries have recognised the importance of natural resource management through development of and ongoing improvement to various types of management programs, whether these be farm management systems, environmental management and ecoefficiency projects, or commodity specific approaches.

case study 3: reef water quality protection plan

The Queensland Farmers Federation (QFF) and the Queensland Government have negotiated a Memorandum of Understanding (MoU) relating to Farm Management Systems (FMS) for intensive industries in Queensland. Under the MoU each QFF member organisation is responsible for leading the development of industry focused FMS programs (e.g. Cotton Australia, Canegrowers, Growcom, Nursery and Garden Industry Queensland, Queensland Dairyfarmers' Organisation). A FMS Framework has been released and member groups' FMS's are in various stages of development and rollout. Industry bodies have also formed a partnership with Queensland regional bodies, through their Regional Groups Collective, to assist development and promotion of FMS programs.

Extensive industries' representative bodies, such as Agforce are working with Governments to develop best practice programs for example, the Grazing Land Management Education Program and the Grains Best Management Practice program.

regional natural resource management (nrm) bodies

Six Regional NRM bodies border the Great Barrier Reef World Heritage Area and have a significant role in contributing to improved water quality on the Reef. The regions are: Burnett Mary Regional Group, Fitzroy Basin Association, Mackay Whitsunday NRM Group, Burdekin Dry Tropics NRM, Far North Queensland NRM Ltd, and Cape York. An evaluation of the alignment between the regional plan investment strategies by five of the regional NRM bodies and the Reef Plan Actions has identified that the implementation of the resource plans is contributing to many of the Actions within the Reef Plan. Some of the 'big initiatives' identified include:

- significant uptake of an innovative range of self management approaches which focus on grazing and cropping industries;
- initial steps being taken to develop water quality improvement plans;
- successful implementation of education and extension efforts across a range of funded initiatives;
- incentives that are promoting best practice and have the dual benefits of enhancing production outcomes and improving water quality;
- research and development which underpins the promoted best management approaches;
- developing partnerships with key stakeholders including universities and research institutions, industry, local government and Traditional Owners; and
- collaborative water quality monitoring efforts.

The draft report notes that regional bodies are in their initial stages of Reef Plan implementation and that most planning, research and development and investment processes are in a pilot phase. Regions have identified that the next phase is best to be based around comprehensive planning, targeted monitoring and science based on high risk catchments and high risk activities, and a toolbox of incentives for better practices and continuous improvement at all scales. These initiatives are also being supported by the projects funded under the Strategic Reserve.

progress

The 2004-2005 Annual Report for the *Reef Water Quality Protection Plan* lists a number of achievements in relation to the reduction of diffuse land based coastal marine pollution. These include:

- accreditation of regional Natural Resource Management plans and investment strategies that deliver on Reef Plan objectives;
- the introduction of new vegetation management legislation in Queensland to improve land management;
- roll-out of the *Queensland Wetlands Program*;
- funding under the *Coastal Catchment Initiative* for the development and implementation of water quality improvement plans in a number of catchments;
- the development of industry-led best management practice and farm management systems; and
- the Great Barrier Reef Marine Park Authority developed and implemented an integrated marine monitoring programme.

A database of the actions with an indication of progress is maintained by the Reef Plan Secretariat and this indicates that nearly ninety per cent of the Actions either meet their milestones or are progressing well.

For further information see: www.reefplan.qld.gov.au