

**Inaugural Queensland Coastal Conference
17-19 September 2007
Bundaberg**

**The Reef Water Quality Protection Plan:
Moving Forward Through Partnerships**

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Introduction

Integrated Coastal Zone Management follows the view that economic development and conservation goals are mutually supportive under the right circumstances. However, in many locations around the world, pollutants and sediment from cities and farms (sometimes far removed from the coast) drain into coastal estuaries and near shore ecosystems. Development that modifies riparian and littoral zones limits the capacity of natural systems to filter out the increased levels of pollution. In turn, these practices reduce the resilience of coastal and marine ecosystems, making them more susceptible to pressures such as climate change and over harvesting.

The health of estuaries, harbours, coastal and reef lagoons reflect, *inter alia*, anthropogenic activities on land that (i) alter or destroy habitat; (ii) pollute groundwater, creeks and rivers that drain to the sea; and (iii) pollute the atmosphere with particulates that deposit on the sea. In this context, it must be concluded that the protection the Great Barrier Reef is as much a terrestrial issue as it is a marine issue.

The Evolution of Marine Park Management: from the Sea to the Land

The Great Barrier Reef extends over 2000km along the Queensland coast. It is one of the richest most complex ecosystems on earth, containing over 3000 reefs and other important habitats. To protect this unique environment, the Great Barrier Reef Marine Park (Marine Park) was gazetted in 1975. World Heritage status was conferred in 1981.

In the early years of the Marine Park, management focused almost exclusively on marine activities, such as tourism and fisheries. Land-based point sources of pollution, such as sewage, were managed through existing local and state regulations, and through a cooperative arrangement for established tourist resorts on offshore islands. In the late 1990s a new threat originating outside the Marine Park was identified, namely declining water quality from diffuse sources of pollution.

In the 200 years since European settlement of Australia, there has been extensive land modification in the Reef catchment, comprising urban development, intensive and

extensive agriculture, aquaculture, mining and mineral processing, and other industrial activities. There is evidence of a four-fold increase in the sediment loads in rivers draining to the near shore regions of the Marine Park, and a three-fold increase in nutrient loads. These pollutants promote algal growth, reduce reproductive success and recruitment of corals, weaken coral structure and enhance the survival of predators, such as the Crown of Thorns Starfish.

In November 1995, the Australian Government joined the international community in initiating the Global Programme of Action for the Protection of the Marine Environment from Land-based Sources (GPA) under the auspices of the United Nations Environment Programme (UNEP). This initiative recognises the need for timely and effective intervention, and that the impact of land-based activities on the marine environment is a local, national and regional problem with global ramifications.

The Reef Water Quality Protection Plan

Consistent with the objectives of the GPA, the Australian and Queensland Governments launched the Reef Water Quality Protection Plan (Reef Plan) in 2003. The objectives of Reef Plan include reducing the load of pollutants (nutrients, sediment and chemicals) from diffuse sources entering the Reef and rehabilitating and conserving areas of the Reef catchment that have a role in removing water borne pollutants (such as wetlands and riparian areas).

The Reef Plan comprises 65 actions divided into 9 broad strategies ranging from planning and regulatory frameworks to economic incentives and self-management approaches. The responsibility for implementing these actions is distributed across multiple agencies at all levels of government, regional NRM bodies and industry. A core aim of the Reef Plan is to improve land use practices at the individual property level.

The Australian Government has invested over \$20 million in the implementation of the Reef Plan. Much of this has resulted in the development of catchment-scale Water Quality Improvement Plans that articulate water quality targets and management actions to achieve those targets. The Australian Government has also invested over \$14 million in monitoring the water quality of the Great Barrier Reef, over \$15 million in the Queensland Wetlands Programme, and over \$59 million in natural resource management in those regions adjacent to the Reef.

The Reef Plan is now in its fourth year of operation. Significant progress towards the Reef Plan's objectives has occurred, for example:

- Support for regional Natural Resource Management planning and management activities;
- Roll out of industry best management practice initiatives;
- Development of catchment scale Water Quality Improvement Plans;
- Implementation of a Marine Monitoring Programme; and
- Improved understanding of the catchment-coast-lagoon system through marine monitoring programs, research activities and the mapping and protection of wetlands.

There has been continued support from governments for the Reef Plan via policy and programme initiatives and in kind support, for example:

- Development and implementation of Water Quality Improvement Plans with support from the Natural Heritage Trust;
- Queensland Wetlands Programme, Rural Water Use Efficiency Initiative and Grazing Land Management Programme; and
- Policy initiatives such as Rural Leasehold Land Strategy, full cessation of broad-scale clearing and a nutrient management zone policy.

In 2005, an evaluation report on the Reef Plan's progress was provided to the Prime Minister and the Premier of Queensland. It found that:

- Positive partnership arrangements between Australian and Queensland Governments and with industry and regional NRM bodies have been developed.
- While not all Reef Plan actions with 1 July 2005 milestones have been achieved, the independent auditors found progress is consistent with their expectations for such a complex engagement-focused initiative.
- There is need to provide ongoing high level political support for Reef Plan.

The report recommended that governments:

- Develop more effective partnerships with industry sectors, regional NRM bodies and the wider community in the implementation of the Reef Plan;
- Update actions and milestones to incorporate new knowledge and scientific information and to reflect developments in policy;
- Publicly launch the updated Reef Plan.

The report to First Ministers marked the transition of Reef Plan implementation into a new phase most recognisable by increased partnership with industry and regional NRM bodies. In the longer-term, a number of critical factors will influence the success of the Reef Plan. These include, amongst others:

- Creating successful implementation partnerships around priority actions;
- Reef Plan partners / implementers contributing resources to support implementation of priority actions.
- Setting, monitoring and reporting against agreed water quality targets and management practices;
- Targeting cost effective land management practices to specific on ground issues;
- Identifying and removing barriers to the uptake of sustainable management practices;
- Monitoring relevant biophysical changes and updating best management practices; and
- Managing new economic activity / development to avoid further decline in water quality discharging to the Reef.

Partnering-Up to Implement the Reef Plan

In theory, the options available to government for working in partnership with regional bodies and industry to protect the Reef from diffuse sources of pollution range from doing nothing through exhortation to regulation. While in practice it may be difficult to define where one ends and the other begins, the do nothing option is neither desirable nor palatable. Rather, a continuum with varying degrees or shades of exhortatory grey may ultimately be complemented by more coercive policy tools. The efforts of a complex and diverse network of landholders, government, industry, community groups and research organisations are needed to give full effect to the Reef Plan strategies and actions.

Not wanting to take from landholders the freedom to make their own decisions, or to collect detailed information on what landholders are doing, but not willing to leave the health of the Reef entirely at the mercy of the market, the Australia and Queensland Governments current preference is voluntary partnerships as an alternative to regulation.

Industry self-regulation based on clear performance indicators that are sanctioned, monitored and even supported by government through a cooperative partnership has many benefits. Industry has the expertise with respect to what can be accomplished and how. Benefits include speed, flexibility, sensitivity to market circumstances and lower costs.

A United Perspective

Some stakeholders (particularly tourism, fishing and conservation sectors) consider further regulation is essential to deliver Reef Plan outcomes. Others consider this would be counter-productive. However, governments and stakeholders (including industry, regional NRM bodies and conservation organisations) are united in the view that in order to achieve the Reef Plan's objectives, a greater level of stakeholder engagement is required to accelerate on-ground implementation.

There is a consensus across stakeholders that:

- Stakeholders are united in their support for Reef Plan objectives and there is a high level of agreement by all stakeholders that the objectives can be met if appropriate resources are applied;
- There is a need to move more quickly to implement Reef Plan to achieve change;
- Targets which will achieve Reef Plan timeframes need to be set and communicated; and
- Regional bodies and peak industry bodies need to be involved in delivery.

This consensus across industry, regional NRM bodies and conservation organisations in support of the Reef Plan is a major milestone in and of itself.

Conclusion

Varying legal and social frameworks, and the complex linkages between the sources of coastal and marine degradation, mean that action by governments to protect a specific coastal / marine system must respond uniquely to the circumstances and priorities of the community in that system. No two approaches to protecting the marine environment from land-based sources will have quite the same appearance, scope or focus.

The Reef Plan provides a platform for governments to work in partnership with the community using multiple policy instruments. These instruments are not viewed as alternatives, rather as complimentary mechanisms. This 'cocktail' approach using a strategic combination of interventions provides the flexibility for all of the partners involved to tailor the Reef Plan's implementation to meet spatial and temporal circumstances.

The building of partnerships is a hallmark of the Reef Plan's success to date and the term 'partnership' is firmly entrenched in the future of Reef Plan. However, for the Reef Plan to truly be a success, this partnership must deliver on the ground with measurable improvements in the water quality of the Great Barrier Reef region.

For the Australian and Queensland Governments the success of the Reef Plan lies in empowering industry, regional NRM bodies and conservation organisations to take the Reef Plan forward through on-the-ground actions that meet world's best practice.