

Cape York region

Second Report Card 2010

Reef Water Quality Protection Plan

Regional profile

The Cape York region includes 43,000 square kilometres of catchments that drain eastwards into the Great Barrier Reef. The region contains some exceptional conservation assets including relatively intact and extensive coastal dune fields, wetlands, rainforest, heathlands and river systems that support high levels of biodiversity found nowhere else in Australia. A sizeable portion of land in Cape York is under Aboriginal ownership or management. Traditional use of marine resources is relatively high, particularly in inshore areas adjacent to Indigenous communities. The main agricultural land use is grazing (57 per cent).

This report card measures progress from the 2009 baseline towards Reef Water Quality Protection Plan (Reef Plan) goals and targets. It assesses the combined results of all Reef Plan actions up to June 2010. Report cards are produced as part of the Paddock to Reef program.

Key findings

- The overall marine condition in 2009-2010 was moderate. Inshore water quality was moderate and seagrass was in good condition.
- Twenty-three per cent of graziers and 27 per cent of horticulture producers have adopted improved land management practices.
- There has been no historical loss of wetlands and no change in extent over the 2005 to 2009 period.
- The Cape York region lost the lowest proportion of riparian forest out of all the Great Barrier Reef regions with only 265 hectares (0.03 per cent) of loss between the 2005 and 2009 period.
- The greatest proportional catchment load reduction was the nitrogen and phosphorus load with an estimated seven tonnes (two per cent) and three tonnes (two per cent) less, respectively.
- The significant progress has been driven primarily by the Australian Government's Reef Rescue program along with Queensland Government and industry-led initiatives.

Paddock to Reef program

The Paddock to Reef program, funded jointly by the Australian and Queensland Governments, is a highly innovative approach to integrating monitoring and modelling information on management practices, catchment indicators, catchment loads and the health of the Great Barrier Reef.



Map of the eastern catchments of Cape York and Great Barrier Reef Marine Park showing the catchment and marine monitoring sites.

Progress and status

Targets		Region	Catchments						
			Endeavour	Jacky Jacky	Jeannie	Lockhart	Normanby	Olive-Pascoe	Stewart
% adoption improved practices	Grazing		23						
	Horticulture		27						
% loss	Wetlands	0	0.01	0	0	0	0	0	0
	Riparian	0.03	0	0	0	0.02	0.04	0.01	0.03
% load reduction	Nitrogen		2						
	Phosphorus		2						
	Sediment		1						
	Pesticides		0						
Overall marine condition			N/E						
Water quality			N/E						
Seagrass			N/E						
Corals			N/E						

■ Very good
■ Good
■ Moderate
■ Poor
■ Very poor

Hatching indicates low confidence due to limited data availability or limited validation for seagrass and water quality.

N/E Not evaluated

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Australian Government



Queensland Government

Management practice results

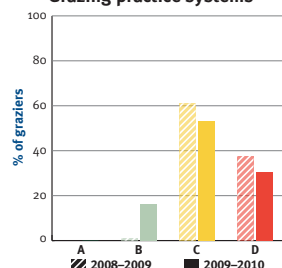
Land management practices have been improving over time. Progress since the 2008-2009 baseline is presented below.

Grazing



By June 2010, 11 graziers (23 per cent) had adopted improved land management practices.

Grazing practice systems

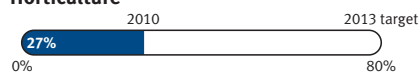


By June 2010, 16 per cent of graziers were using (A or B) practice systems that are likely to maintain land in good to very good condition or improve land in lesser condition.

Improved management practice systems for grazing are presented using the ABCD framework:

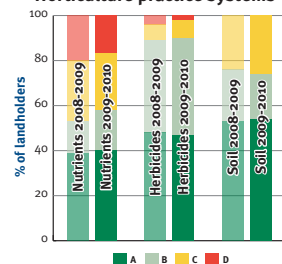
- A** – Practices likely to maintain land in very good condition or improve land in lesser condition
- B** – Practices likely to maintain land in good condition or improve land in lesser condition
- C** – Practices that may maintain land in fair condition or gradually improve land in poor condition
- D** – Practices likely to degrade land to poor condition.

Horticulture



By June 2010, eight horticulture producers (27 per cent) had adopted improved land management practices.

Horticulture practice systems



By June 2010, cutting-edge (A) or best management (B) practice systems were used by 58 per cent of horticulture producers for nutrients, 90 per cent for herbicides and 74 per cent for soil.

Nutrient management had the largest proportion of horticulture producers (42 per cent) using C and D level systems.

Improved management practices for horticulture are presented using the ABCD framework:

- A** – Cutting-edge practices
- B** – Best practices
- C** – Common or code of practices
- D** – Unacceptable practices.

Catchment results

Wetland loss



There was no historical loss of wetlands and no change in extent over the 2001 to 2005 or 2005 to 2009 periods.

Riparian loss



The Cape York region lost the lowest proportion of riparian forest out of all the Great Barrier Reef regions with only 0.03 per cent (265 hectares) of clearing between 2005 and 2009.

Groundcover

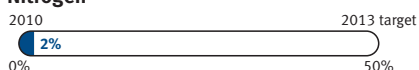
Data for late dry season groundcover was not available for the Cape York region.

Catchment loads

The pollutant loads at the end of the catchment come from modelling, validated by monitoring, to remove the effect of a variable climate from year to year.

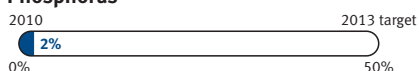
Changes in riparian management could not be modelled due to the lack of data. Load reductions are estimated for the Normanby catchment only.

Nitrogen



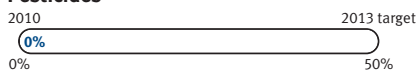
The estimated annual average total nitrogen load leaving the Normanby catchment reduced by two per cent (seven tonnes).

Phosphorus



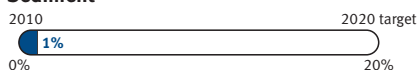
The estimated annual average total phosphorus load leaving the Normanby catchment reduced by two per cent (three tonnes).

Pesticides



There were no load reductions for pesticides in the Normanby catchment.

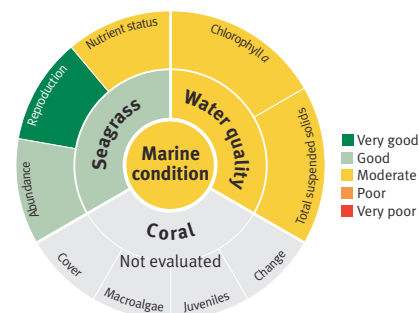
Sediment



The estimated annual average suspended sediment load leaving the Normanby catchment reduced by one per cent (3000 tonnes).

Marine results

The overall marine condition in 2009-2010 was moderate. Seagrass was in good condition and inshore water quality was moderate. Further validation of remotely sensed water quality data for the Cape York region is required to verify this assessment. Coral monitoring is not conducted in the region through the Paddock to Reef program.



Marine graphic descriptions:

- Chlorophyll *a*** indicates nutrient availability and productivity.
- Total suspended solids** measures particulate matter in water.
- Seagrass abundance** includes the cover and change in cover.
- Reproduction** indicates the potential of seagrass meadows to recover from disturbances.
- Nutrient status** measures the response of seagrass to nutrient conditions in surrounding waters.

Water quality

Inshore water quality improved from poor in the 2009 baseline year to moderate. Annual variations since 2005-2006 reflect increases and decreases in chlorophyll *a* and suspended solids. Both chlorophyll *a* and total suspended solids were, at times, above *Water Quality Guidelines for the Great Barrier Reef Marine Park* for inshore waters.

Estimates of chlorophyll *a* and total suspended solids are derived from remote sensing only, which requires further field validation in this region. Therefore, these estimates have relatively low reliability compared to those for other regions.

Seagrass

Seagrass is monitored at one site in southern Cape York and meadow condition improved from moderate in the 2009 baseline year to good.

Seagrass abundance was good and reproductive effort was very good, indicating communities have a relatively high potential for recovery from disturbances compared to seagrass in other regions. The data collected at this site is not representative of the spatial variability of the region.

Seagrass condition

