

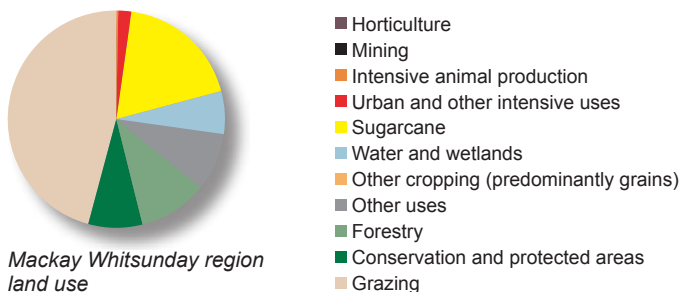


Mackay Whitsunday region

First Report Card 2009 Baseline
Reef Water Quality Protection Plan

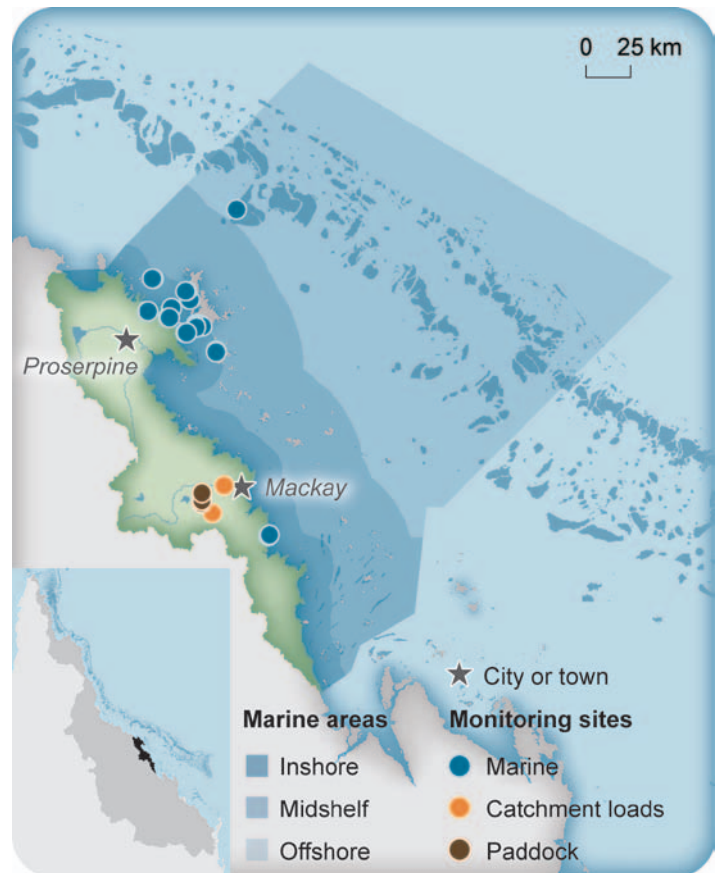
Regional profile

The Mackay Whitsunday region covers an area of 9000 square kilometres and supports a diverse range of ecosystems including soft coral communities and the nationally recognised Goorganga Wetlands. The tropical climate has a distinct wet season, with 50 to 60 per cent of the average annual rainfall occurring between January and March. **This report card presents results up to 2009 and therefore does not include the more recent flood events which will be presented in subsequent reports.**



Key findings

- Cutting-edge or best management practices are used by 40 per cent of sugarcane growers for nutrients, three per cent for herbicides and 24 per cent for soil.
- Pesticide loads are approximately one-third of the total loads entering the Great Barrier Reef.
- Inshore seagrasses are in poor condition. Results for coral and water quality are mixed.

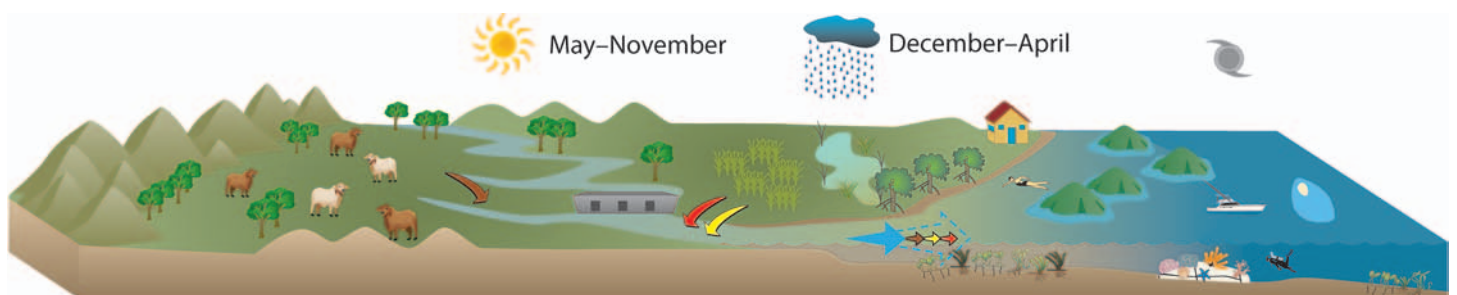


Map of the Mackay Whitsunday region and Great Barrier Reef Marine Park showing the paddock, catchment and marine monitoring sites.

Paddock

Catchment

Reef



The Mackay Whitsunday region has a number of small, steep catchments. The landscape is largely rural, has occasional cyclones and is dominated by summer monsoonal rains delivering sediments, nutrients and pesticides to the inshore and sometimes offshore portions of the reef in pulsed flows, which can be affected by reservoirs and dams. Grazing is the largest single land use, followed by sugarcane and natural areas. Urban centres such as Mackay and Proserpine are located on the coastal strip. Habitats include wetlands, fringing and offshore reefs, intertidal, subtidal and deep water seagrass and mangroves. The continental islands (Whitsunday group) are important for tourism and the region also supports important commercial and recreational fisheries.

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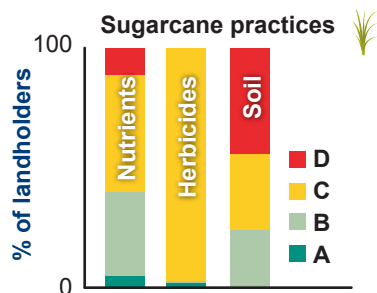
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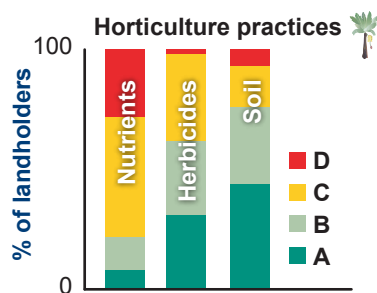
Land practice results

Adoption of improved management practices varies by industry and practice. The adoption of improved management practices is presented using the following framework:

- A – Cutting-edge practices**
- B – Best practices**
- C – Common practices**
- D – Unacceptable practices**



Cutting-edge (A) or best management (B) practices are used by 40 per cent of sugarcane growers for nutrients, three per cent for herbicides and 24 per cent for soil.

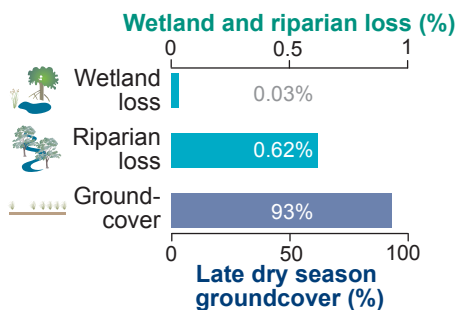


Cutting-edge (A) or best management (B) practices are used by 22 per cent of horticulture producers for nutrients, 62 per cent for herbicides and 76 per cent for soil.

Management practice adoption data for the grazing industry is not available at this time.

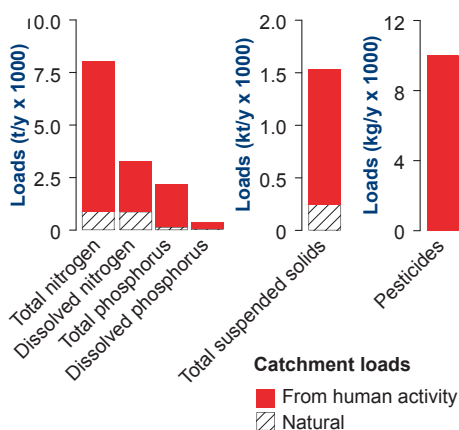
Catchment results

Catchment indicators include wetland and riparian loss, groundcover and catchment loads.



Wetland loss between 2001 and 2005 was 15 hectares (0.03 per cent). The loss of riparian vegetation between 2004 and 2008 was 825 hectares (0.62 per cent). Late dry season groundcover for grazing lands is high (93 per cent).

Catchment loads



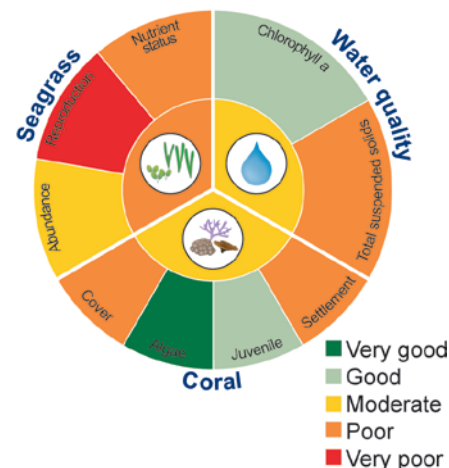
The dissolved nitrogen loads are 3300 tonnes per year, of which 2500 tonnes are from human activity.

The pesticide loads, largely from sugarcane cultivation, are approximately 10,000 kilograms per year. This is equal to the highest regional load in the Great Barrier Reef. Residues of pesticides (diuron, atrazine, ametryn and hexazinone) are commonly found in surface waters leaving sugarcane cultivation areas.

The total suspended solids loads leaving the Mackay Whitsunday region are 1.5 million tonnes per year, of which 1.3 million tonnes are from human activity.

Marine results

The Mackay Whitsunday region shows poor results for seagrass and moderate results for water quality and corals.



Water quality: Water quality is in moderate condition overall with poor results for total suspended solids. Inshore waters have concentrations of chlorophyll a and total suspended solids that are above Great Barrier Reef Marine Park Water Quality Guidelines. A range of pesticides are detectable in inshore waters.

Seagrass: Seagrass abundance is moderate but is declining at many sites. Seagrass reproduction is very poor and in decline, raising concerns about resilience to disturbance.

Coral: Inshore reefs are in moderate condition. Coral cover is poor but macroalgae results are very good (low cover). The number of juvenile corals is good but has declined in recent years.

What is being done?

Reef Catchments is working with the region's agricultural industries to improve management practices, lower pollutant loads and remove associated threats to the reef. In order to determine the relative effectiveness of these improved practices, the region has implemented a detailed paddock scale monitoring and modelling-program.