The Mackay-Whitsunday region

The Mackay-Whitsunday region (the region) is a gateway to the Great Barrier Reef, with 1,750 tropical islands and is rich in natural resources that underpin a vibrant community lifestyle and a range of industries. These natural assets have significant and unique environmental and cultural values, which are at the heart of a strong tourism sector, attracting hundreds of thousands of visitors annually from all around the globe. The region hosts a number of vibrant urban centres, a significant superecore industry, and three major ports, as well as smaller marinas and harbours. The community has a strong and enduring connection with its waterways, from fishing and recreation in freshwaters and estuaries, to boating and water sports in the waters of the Great Barrier Reef.

Conceptual model: Mackay-Whitsunday region from the catchments to the reef

Indicators of human activities

Stewardship

Management of the diverse natural resources in the region is not only the responsibility of our partners, but each of us as a community. This is vitally important to the ecosystem health of the region and has flow-on effects.

Agriculture

Agricultural assessments present the proportion of the area of land for each sector under the current best practice management (defined as low or moderate risk to water quality) as of June 2014.

Sugarcane and grazing results are for the whole report card area, while the Horticulture results are for the Cool Down Basin only. This is limited to those landholders that successfully implemented Reef Programme (formerly Reef Rescue) Water Quality Growth in the reporting year for the pilot report card region.

Markie Sugar produces more than 20% of Australia’s sugarcane.

Scoring

The examples below show the indicators that make up the overall score for the relevant Basin, Estuarine, and Offshore scores on the catchment map opposite.

Basin indicators

Basin indicators are scored for faunal, habitat and hydrology, and water quality, based on 2013/14 data.

Estuarine indicators

Estuarine indicators are scored for fauna, habitat and hydrology, and water quality. Based on 2013/14 data. These results will be repeated in the 2016 report card.

Marine indicators

Marine indicators are scored for fish, seagrass, coral, and water quality. Offshore marine indicators are scored for fish, coral and water quality. Both are based on 2013/14 data.

Report card indicators

The pilot report card indicators have been developed based on an evaluation of existing Queensland environmental ecosystem health and water quality report cards, as well as incorporating local knowledge to ensure the indicators are specific to the region and relevant to the local community. This interpretative approach to the pilot report card crafting stage will allow for greater consistency of interpretation of results across Queensland waterway health report cards.

The natural assets and indicators of the Mackay-Whitsunday region follow as additional monitoring and data collection. Additional data in indicators and scoring methods will be reviewed and outcomes incorporated into the first report card to be delivered in 2016.

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Waterways link catchments to the marine environment. This connectivity of the landscape and waterways is vitally important to the ecosystem health of the region and has flow-on effects. The conceptual model above shows the importance of river flows and currents in connecting the region, and the many pressures from activities in the region’s catchments and marine areas that can impact on its natural assets.

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When a time lag occurs between the time of these impacts and the time an effect is seen. Frequently, impacts are combined; for example, important to the ecosystem health of the region and has flow-on effects. The conceptual model above shows the connectivity of the landscape and waterways is vitally important to the ecosystem health of the region and has flow-on effects. The conceptual model above shows the importance of river flows and currents in connecting the region, and the many pressures from activities in the region’s catchments and marine areas that can impact on its natural assets.

Region’s aquaculture industry is comprised of a small number of prawn, barramundi and salmon farms. These industries are highly regulated and have high levels of confidence in compliance. Ineffective management practice for nutrients and pesticides, and only 20% of land is under best management practice for nutrients.

There are several practices in place to minimise the impact of port-related activities in the region on ecosystem health and water quality. There is little hard data on biodiversity and water quality, with significant contribution to river input coming from the regional port industry. The region accounts for 43% of all commercial tourism visits to the GBRMP.

The commercial marine tourism industry of the Mackay-Whitsunday region is comprised of a number of cruise ships and smaller day/night cruises. In addition to tourism, the region’s ports accounted for 43% of Queensland’s total sea trade in 2013/14.

The coasters below show the indicators that make up the overall score for the relevant Basin, Estuarine, and Offshore scores on the catchment map opposite.

Confidence rating

This system rates the level of confidence the technical experts allocate to the data feeding into each of the indicators or indicator categories.

Inshore marine indicators

Inshore marine indicators are scored for fauna, habitat and hydrology, and water quality. Based on 2013/14 data. These results will be repeated in the 2016 report card.

Scoring system

The system comprises five scoring categories.

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Overall grades for the region's waterways ranged from B (Good) to D (Poor). Contaminants have been identified as a key issue in the region, with a very poor score for abundance due to very high nutrient levels. The condition of the region's waterways ranged from B (Good) to D (Poor). Contaminants have been identified as a key issue in the region, with a very poor score for abundance due to very high nutrient levels.

The condition of the Whitsunday inshore marine area (C) is also of concern given this area's importance to the tourism industry. The condition of the region's waterways ranged from B (Good) to D (Poor). Contaminants have been identified as a key issue in the region, with a very poor score for abundance due to very high nutrient levels.

Key messages of the pilot report card

Key values and key concerns

The pilot report card has been designed to provide the community with accurate, relevant information to help improve the long-term health of the region's waterways and the adjacent area of the Great Barrier Reef.

The lack of data available for the southern inshore reporting zone (east of Carmila) flags the critical need for monitoring programs to be established in this area. In addition, better integration of both coral and seagrass data across the region is required for future report cards.

The condition of the region's waterways ranged from B (Good) to D (Poor). Contaminants have been identified as a key issue in the region, with a very poor score for abundance due to very high nutrient levels.

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Cultural and Economic

The region has a growing economy and has a rich cultural heritage. Cultural initiatives will be developed for the next report card in consultation with traditional Owners and the community. An economic indicator related to the region will be developed for the final report card.

Format and structure

This report card is the first pilot report card to establish the format and structure for future report cards. It establishes a benchmark for waterway health, and waterway management. The value of waterways presents the results of how respondents value different aspects of the marine environment, contributing to their lifestyle, such as aesthetic beauty, opportunites, and access to travel-activities. The community's social satisfaction was rated as B (Good). The local community values the waterways as A (Very good) in terms of their importance.

Data

Due to large and varied spatial coverage (i.e. from basins to offshore in multiple catchments), this pilot report card represents the first of its kind for the Great Barrier Reef. The report card has used data from a variety of sources, testing existing methods used by other report cards for analysing and integrating the data for calculation of a score. It highlights significant gaps in understanding, which need to be improved over time. The framework will play a key role in facilitating the future Reef Water Quality Protection Plan Independent Science Panel has assessed all methods and calculations for the pilot report card.

For further information please visit www.healthyriverstoreef.org.au
Partnership background and history

The Mackay-Whitsunday Healthy Rivers to Reef Partnership was launched in October 2014 as a collaboration between community, industry, agriculture, science, fishers, tourism, Traditional Owners, and government.

It is founded on a shared vision for the region to ensure the region’s rivers and Reef are healthy and contribute to a prosperous and iconic region where people visit, live, work, and play.

The Partnership has used the best available independent science, including results from a range of regional waterway and marine monitoring programs. The Reef Water Quality Protection Plan Independent Science Panel has peer reviewed the program design and pilot report card results to ensure confidence in the results.

The pilot report card will help us as a community to work together to determine how and where we can do more to look after our waterways.

We welcome feedback.

We invite your feedback on the pilot report card. For more information and to stay up to date, visit our website: www.healthyriverstoreef.org.au

Acknowledgement of Country

The Mackay-Whitsunday Healthy Rivers to Reef Partnership acknowledges the continuing land and sea country management and custodianship of the Mackay-Whitsunday region and Great Barrier Reef by Aboriginal and Torres Strait Islander Traditional Owners whose rich cultures, heritage values, enduring connections and shared efforts protect the land and Reef for future generations.

Mackay-Whitsunday Healthy Rivers to Reef Partnership

Partner Acknowledgements

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