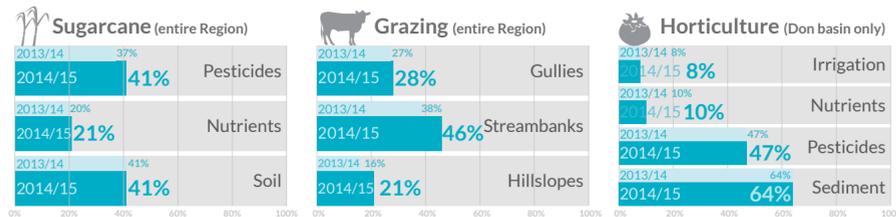


# INDICATORS OF HUMAN ACTIVITIES

Management of the diverse natural resources in the Region is not only the responsibility of our Partners, but of the community as a whole. These management efforts are reported as stewardship in our report cards.

## Agriculture confidence ●●●●●

Percentage of land under best management practices (defined as low and/or moderate-low risk to water quality) in the sugarcane, grazing and horticultural industries of the Mackay-Whitsunday Region. Pilot report card scores (2013/14) are presented alongside 2014/15 scores.



## Other industries confidence ●●●●●

Assessed against specific, regionally tailored criteria for planning, implementation and outcomes through consistent reporting frameworks in the 2015/16 period.



## Heavy industry

Heavy industrial companies in the sugar milling, meat processing, coal handling and mineral sands industries in the Region were assessed in 2014/15 and again in 2015/16. They scored 'effective' on both occasions against specific criteria on a range of activities relevant to their businesses.

## Aquaculture

Aquaculture operations in the Region scored 'very effective' against specific stewardship assessment criteria. This was consistent across administration, development and operations. The result reflects the extensive research partnerships and innovation in place within the industry, along with the high regulatory requirements placed on farms, particularly in relation to the expansion or development of new farms.

## Ports

Both ports and shipping operations in the Region were assessed under the stewardship framework used in 2014/15 and have retained their 'effective' rating. A notable element in achieving these results is the additional non-regulatory activities that are undertaken to deliver positive outcomes for ecosystem health.

## Tourism

The stewardship assessment for tourism in the Region identified 32 Eco-Tourism accredited operations. The industry scored 'effective' in both 2014/15 and 2015/16. The industry is heavily regulated and actively participates in many citizen science programs.

## Urban

Urban stewardship has been assessed for the first time in 2015/16 using a framework developed specifically for the Region. The framework assesses a range of criteria including strategic planning, compliance, training, and community engagement. The urban sector scored 'partially effective' demonstrating room for improvement over the assessed criteria.

## To come in future reports



The Partnership is working to establish stewardship assessment frameworks for both recreational and commercial fisheries in the Region, as well as for our communities and the amount of on-ground work they do for our waterways and marine environments.

For more information, visit our website [www.healthyriverstoreef.org.au/report-card](http://www.healthyriverstoreef.org.au/report-card)

# ACKNOWLEDGEMENT OF COUNTRY

The Partnership acknowledges the continuing land and sea country management of the Traditional Owner tribal groups within the Mackay-Whitsunday-Isaac Region and Great Barrier Reef whose rich cultures, heritage values, enduring connections and shared efforts protect the land and reef for future generations.

## Get involved

Are you interested in waterway health? Would you like to find out more about what activities are happening in your area? Head to our website to see an interactive map of our Partners' activities in managing the health of our waterways and marine environments. You can also sign up to our newsletter to receive regular updates on what the Partnership and Partners are doing.

**GET IN TOUCH**  
[info@healthyriverstoreef.org.au](mailto:info@healthyriverstoreef.org.au)

## Mackay-Whitsunday Healthy Rivers to Reef Partners 2014/15



The Partnership wishes to thank the following organisations for their valuable input to the report card: Australian Institute of Marine Science, Department of Science Information Technology and Innovation, James Cook University, Department of Natural Resources and Mines, Great Barrier Reef Marine Park Authority, University of Queensland.

Design and layout  
Kate Hodge, Hodge Environmental

Photo credits  
Whitsunday Regional Council, Reef Catchments, Terra Rosa, Tourism Whitsundays

Published October 25th 2016

## About the Partnership

Launched in October 2014, the Mackay-Whitsunday Healthy Rivers to Reef Partnership has come together with a shared vision for healthy rivers and Reef contributing to a prosperous and iconic Region where people visit, live, work and play. The Partnership is a collaboration between community, Traditional Owners, farmers and fishers, industry, science, tourism and government who recognise that more can be delivered by working together than as individuals.

The Partnership has built on the 2014 pilot report card (released in October 2015) to include new environmental indicators such as fish barrier assessments in our river basins and estuaries. Assessments of urban sector stewardship and indigenous cultural heritage sites associated with our waterways and marine environments are also included for the first time.

Information and data used in this report card have been provided by a variety of sources and assessed for quality assurance by the Reef Water Quality Protection Plan Independent Science Panel.

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Hosted by Reef Catchments



# Mackay-Whitsunday 2015 REPORT CARD

# KEY MESSAGES

- Fish barriers** **NEW DATA** This year water quality guideline values were met for nutrients in freshwater streams in the O'Connell River basin, while in the Plane Creek basin sediment in freshwater and phys-chem in estuarine waters met guideline values.
- Fish community health** Contaminants are still a key issue for freshwater streams in the Pioneer River and Plane Creek basins.
- Water quality in the central inshore zone** The new fish barrier indicator improves our ability to understand waterway habitat and hydrology and provides an important gauge for native fish health and diversity. A newly developed flow indicator in the 2016 report card will complete the picture.
- Indigenous cultural heritage** Changes in the inshore marine data (especially in Whitsundays' water quality and clarity) should be viewed with caution due to current limited sampling sites and data. Expansion of data sets for this area is a goal of the Partnership.
- Urban stewardship** The marine offshore water quality results again scored an A. Significantly, the numbers of juvenile corals on offshore reefs have also increased.

Stewardship scores across all industries in the Region were similar to the previous year.

Cape Hillsborough and islands of the Whitsundays are home to some very important cultural heritage sites related to waterways/the marine environment.

Primarily, the Region received scores of C, however a number of areas scored a D, particularly river basins. The offshore marine area continues to be the only zone to score a B.

## IMPROVED METHODS

Scores presented in the 2014 pilot report card have changed because methods for assessing indicators have been improved.

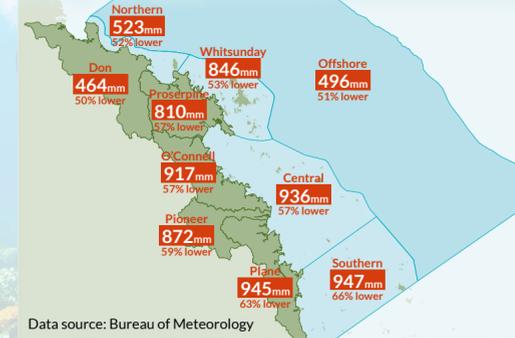
## CORAL BLEACHING

During the 2014/15 year, reefs surveyed as part of the report card had no bleaching, with some minor bleaching observed elsewhere. However between March and May 2016 the Great Barrier Reef experienced the worst mass-bleaching event on record, the effects of which are still being confirmed. The coral bleaching, which was caused by extended periods of high seawater temperature particularly in the northern areas of the Reef, can kill coral or seriously reduce its overall health.

Surveys to assess the extent of 2016 bleaching show the reefs in our Region have sustained minor to no recorded bleaching and little or no bleaching-related mortality. Survivorship surveys are still being undertaken for the 2015/16 year and further information will be provided in the next report card. Further information is available at <http://www.gbrmpa.gov.au/mediaroom/coral-bleaching>.

## HOW MUCH RAIN?

Annual mean rainfall (mm) for the Mackay-Whitsundays 2014/15 period is presented below. The extent to which rainfall in the Region was below average is identified as the percentage difference from the long-term annual average for each reporting zone. Rainfall can strongly influence the water quality of our waterways and marine environments.



Data source: Bureau of Meteorology

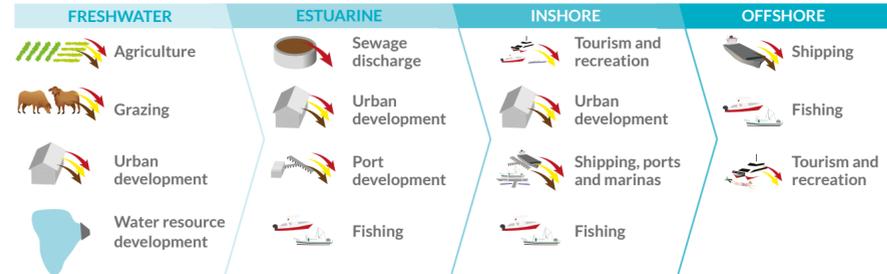
# ABOUT THE REPORT CARD

The report card indicators were developed for the pilot report card in 2014 based on the identification of key regional drivers and pressures in the Mackay-Whitsunday Region outlined below and on the map opposite. A review process was undertaken by the Partnership's Technical Working Group and the Reef Water Quality Protection Plan Independent Science Panel during 2015/16. Results of this review process can be accessed on our website ([www.healthyriverstoreef.org.au/report-card/technical-reports](http://www.healthyriverstoreef.org.au/report-card/technical-reports)). The 'coasters' opposite show the indicators that make up the overall score for the relevant freshwater river basin, estuarine, inshore and offshore marine reporting zones on the map opposite.

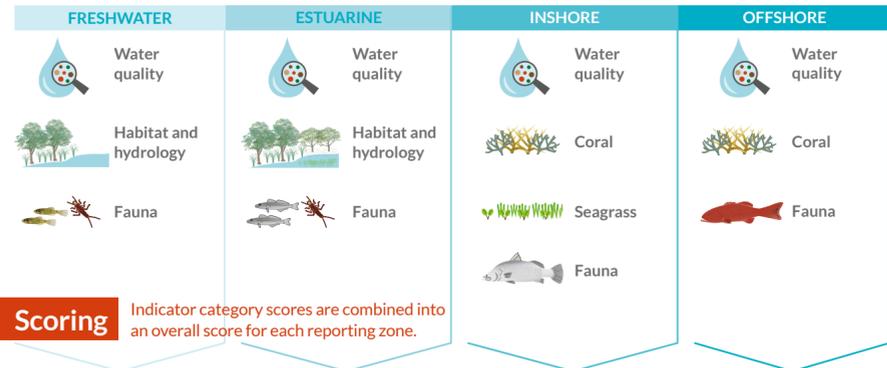
**Regional drivers** Regional drivers are the major factors affecting ecosystem health in the Region.



**Pressures** Nutrient, sediment and contaminant inputs from land based activities put pressure on waterways from the top of the river basins to the offshore reef (see map right).

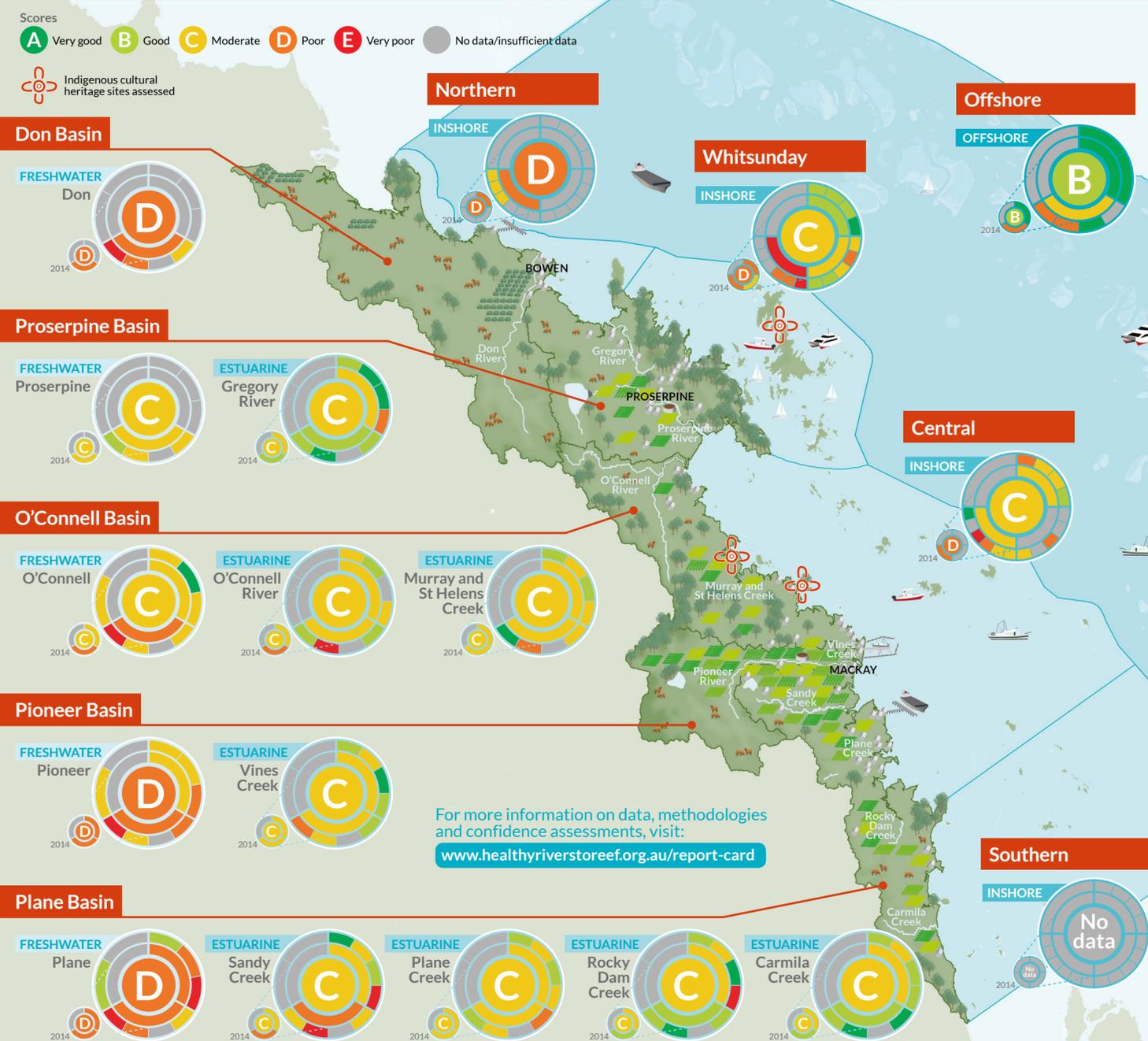


**Indicators** These indicators have been selected based on their sensitivity to changed conditions, their association with pressures in the Region and their alignment with Partnership objectives.



**Response** To find out what our Partners are doing to manage the health of our waterways and marine environments, visit our website: [www.healthyriverstoreef.org.au/ourpartners](http://www.healthyriverstoreef.org.au/ourpartners)

# REPORT CARD RESULTS

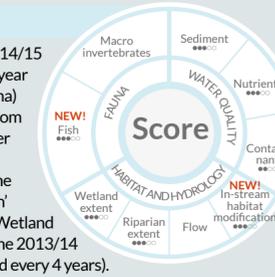


For more information on data, methodologies and confidence assessments, visit: [www.healthyriverstoreef.org.au/report-card](http://www.healthyriverstoreef.org.au/report-card)

## Indicators

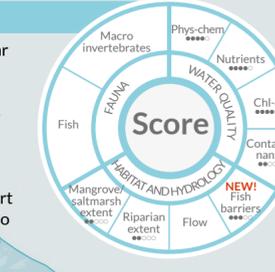
### FRESHWATER

Water quality data is from the 2014/15 year. New to the report card this year is the fish community health (fauna) data and fish barrier data (both from the 2015/16 year). The fish barrier data is one half of the 'In-stream habitat modification' indicator. The other half is 'impoundment length' which is from the 2013/14 year. Wetland and riparian extent data is from the 2013/14 year (these indicators are updated every 4 years).



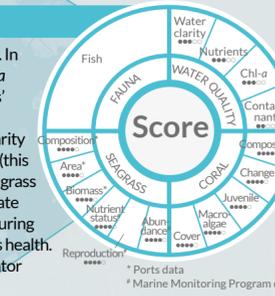
### ESTUARINE

New to the report card this year is the fish barrier data, which is from the 2015/16 year. All other data is from the 2014/15 year and is therefore a repeat of the pilot report card data. It should be noted that flow data were reported in the pilot report card and are not this year due to changes to the methodology to derive this indicator.



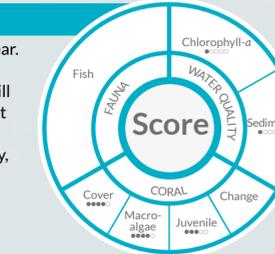
### INSHORE

All data is from the 2014/15 year. In the pilot report card chlorophyll-a was combined with the 'nutrients' indicator however due to its links with both nutrients and water clarity it is reported as its own indicator (this is also the case for estuarine). Seagrass data is represented by two separate datasets (Ports and MMP\*) measuring different components of seagrass health. There is an additional coral indicator used this year (composition).



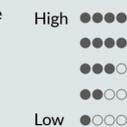
### OFFSHORE

All data is from the 2014/15 year. The approach to calculation of the offshore coral indicators will be revised in subsequent report cards so it better aligns with inshore methods. This year only, the coral change indicator was not calculated.



### Data confidence

Confidence surrounding the data for each indicator was assessed using the framework developed for the Reef Water Quality Protection Plan report card. A confidence score considers methodology, validation, sample size, directness and measured error associated with the indicator. No score is provided for indicators that have no data.



# INDIGENOUS CULTURAL HERITAGE ASSESSMENTS

The Partnership places great importance in understanding both the value and condition of indigenous cultural heritage sites related to waterways and the marine environment in the Region. During 2016 the Mackay-Whitsunday Traditional Owner Reference Group (who are representatives of the Gia, Ngara, Juru, Yuwibara, Koinmerburra and Barada/Wiri Traditional Owner groups), along with external consultants Terra Rosa and Reef Catchments staff, undertook site assessments at St Helens, Cape Hillsborough and at Whitsunday, Hook and South Molle Islands.



Rockshelter at Nara Inlet on Hook Island  
 © Terra Rosa 2016

Scores: A Very good, B Good, C Moderate, D Poor, E Very poor  
 Confidence: High, Low



## ECONOMIC AND SOCIAL FACTORS IN OUR REGION



### How are our communities connected to the Region's waterways and marine environment?

