



HEALTHY RIVERS TO
REEF PARTNERSHIP
MACKAY-WHITSUNDAY



THE MACKAY - WHITSUNDAY
2016
REPORT
CARD

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 achieved by working together than as individuals.

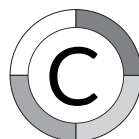
REPORT CARD

The 2016 report card is the second full report card released specifically for the Mackay-Whitsunday-Isaac Region which provides A - E scores on the condition of freshwater, estuarine, inshore and offshore waters for the 2015/16 financial year. Non-agricultural industry stewardship assessments are reported for the 2016/17 financial year.

KEY MESSAGES



The Mackay-Whitsunday-Isaac Region was severely impacted by Tropical Cyclone Debbie in 2017. These impacts will be reported on in the 2017 report card.



For the Whitsunday inshore marine zone the improvement from a D to a C score reflects only a marginal overall increase. This is because two out of three indicators have improved, however the third has declined.



Rainfall is a key driver of water quality and two years of below average rainfall means scores for water quality in freshwater and estuaries are similar to last year, with pesticides remaining a key issue in the Pioneer and Plane basins.



Urban stewardship scores have improved from the last report card due to improvements in implementing the planning and management guidelines for urban development.



In the Whitsunday inshore marine zone, water quality scores from sampling at long-term monitoring sites have decreased from moderate to poor. Research is currently underway to help us understand this situation.



In the sugarcane industry, there was an increase of 2% in the percentage of cane land that poses only a low to moderate risk to water quality. Stewardship in grazing and horticulture has not changed.



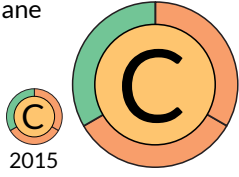
Seagrass and coral habitat extent is stable or has improved in the inshore zone, despite poor to moderate water quality. The potential for these habitats to recover after severe disturbance is uncertain due to the poor scores of resilience indicators, such as reproductive capacity in seagrass and rate of growth in coral.

CHANGES TO THE WAY WE DETERMINE SCORES

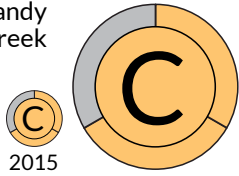
- ▶ Improved methods for scoring freshwater basins and estuaries have meant amendments to previously reported 2015 scores.
- ▶ For the first time the condition of coral near Keswick, St Bees, Round Top, Victor and Slade Islands has contributed to the final Central marine zone score. Condition of coral near Camp and Holbourne Islands now contribute to the final score in the Northern marine zone.
- ▶ More locally relevant marine water quality guidelines in the Whitsunday zone mean water quality scores from last year have been amended from good to moderate.
- ▶ Monitoring of the Southern inshore region for water quality, coral and seagrass began in September 2017. Results of this work will be included in the 2018 report card.

PLANE BASIN

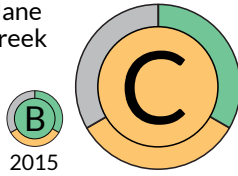
FRESHWATER Plane



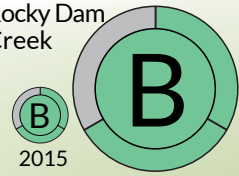
ESTUARINE Sandy Creek



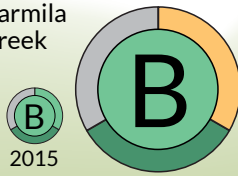
ESTUARINE Plane Creek



ESTUARINE Rocky Dam Creek

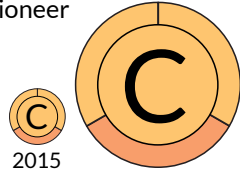


ESTUARINE Carmila Creek

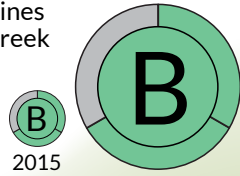


PIONEER BASIN

FRESHWATER Pioneer

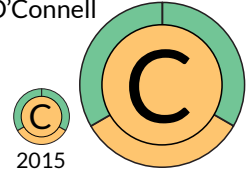


ESTUARINE Vines Creek

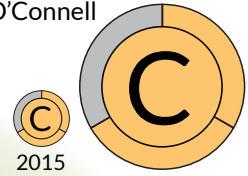


O'CONNELL BASIN

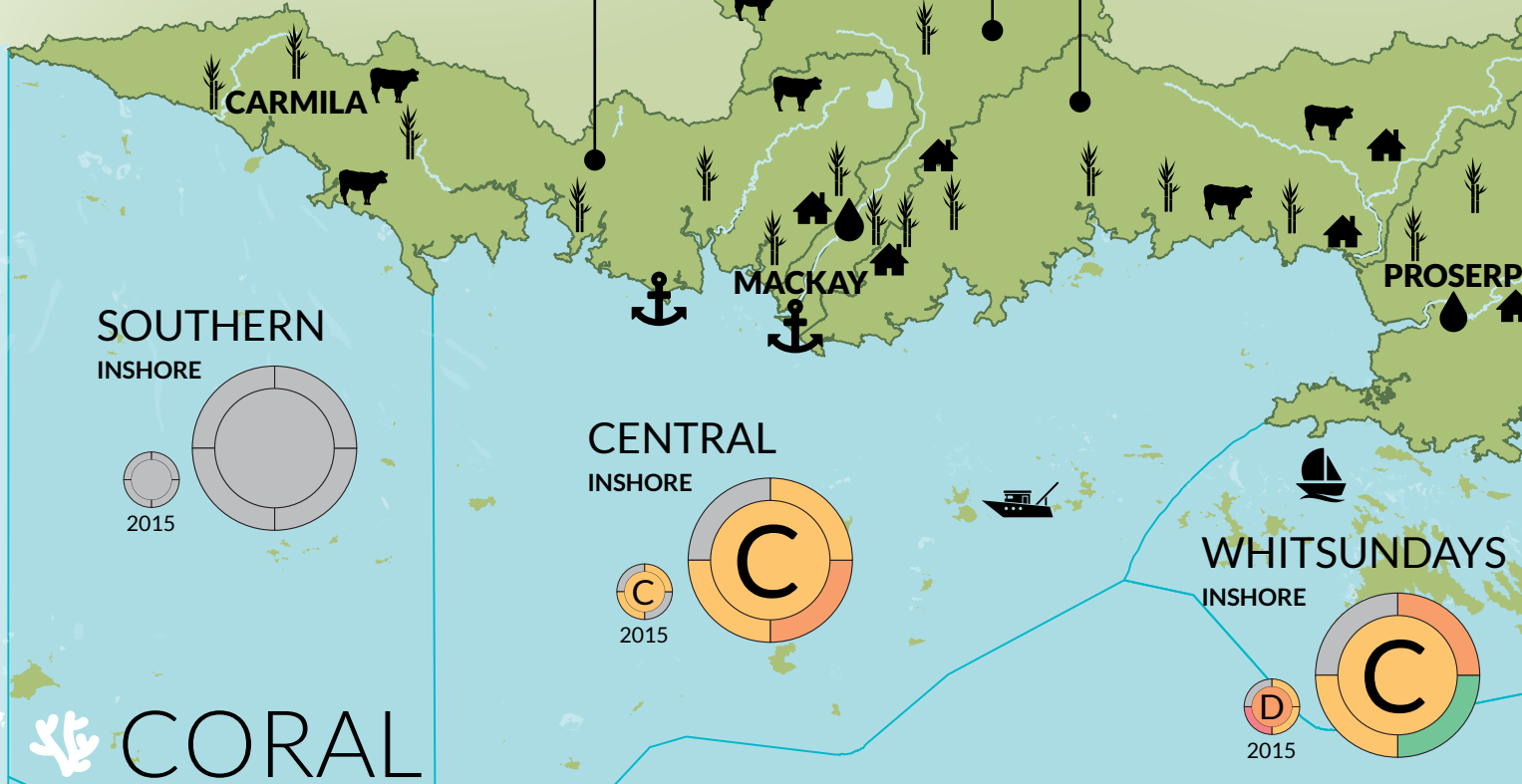
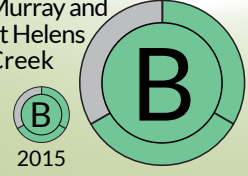
FRESHWATER O'Connell



ESTUARINE O'Connell



ESTUARINE Murray and St Helens Creek



CORAL BLEACHING

Across the Great Barrier Reef mass coral bleaching in 2016 and 2017 was caused by record-breaking sea surface temperatures. High sea surface temperatures associated with climate change were exacerbated by a strong El Niño. The majority of coral assessments conducted in the Whitsundays in June and November 2016 showed minor or no bleaching and associated mortality. One mid-shelf reef surveyed in the Whitsundays showed medium mortality (10-29% coral loss) after the November 2016 surveys.

The Mackay-Whitsunday-Isaac sea surface temperature anomaly for 2015/16 was +0.83°C. Further information can be found on our website:

healthyriverstoreef.org.au/our-region/coral-bleaching



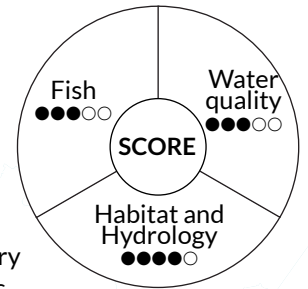
RAINFALL

2015/16 was a slightly wetter year compared to 2014/15, but still drier than the long-term average. A low rainfall year can mean less sediments, nutrients and pesticides are lost from land based activities into our waterways.

INDICATORS

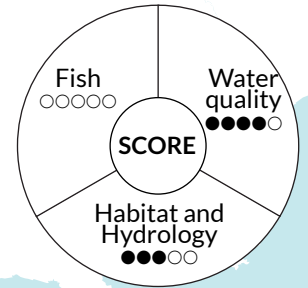
FRESHWATER

Water quality condition is updated every year and is based on data collected at one site in each basin for the Paddock to Reef Program. Habitat and hydrology condition is only assessed every four years and fish condition is assessed every three years.



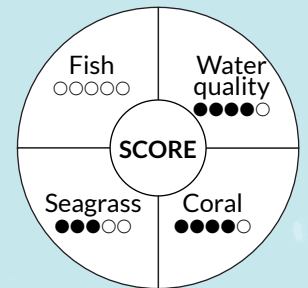
ESTUARINE

Water quality condition is updated every year and is based on monthly data collected at one or two sites upstream of the mouth of each estuary. Estuarine habitat and hydrology condition is only assessed every four years.



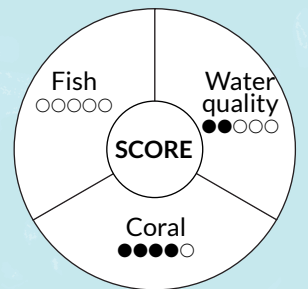
INSHORE

Water quality, seagrass and coral condition is updated every year and is based on data collected for the Marine Monitoring Program, North Queensland Bulk Ports and the Long Term Monitoring Program for coral only.



OFFSHORE

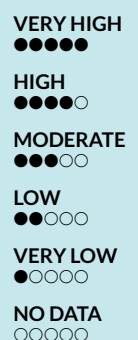
Water quality condition is updated every year and is based on remote sensing data from the Bureau of Meteorology. Coral condition is updated every year and is based on data collected for the Long Term Monitoring Program.



For a more detailed look at the report card data, visit our interactive results page: healthyriverstoreef.org.au/report-card-results

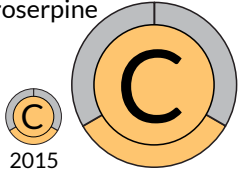
DATA CONFIDENCE

Confidence tells us how sure we are, from low to high, that the calculated grade reflects the true condition of the environment. Further information can be found on our website: healthyriverstoreef.org.au/report-card/data-confidence

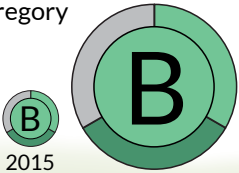


PROSERPINE BASIN

FRESHWATER
Proserpine

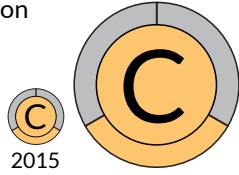


ESTUARINE
Gregory

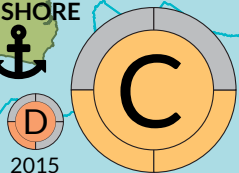


DON BASIN

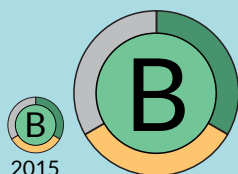
FRESHWATER
Don



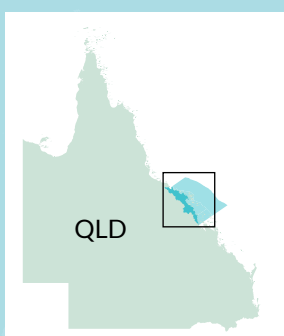
NORTHERN INSHORE



OFFSHORE

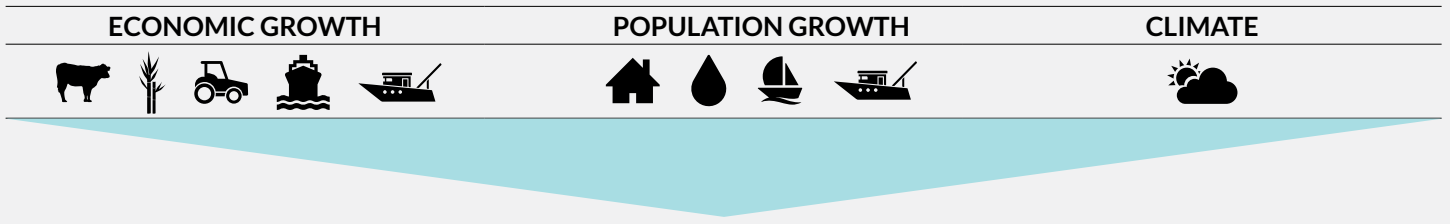


SCORES










































REGIONAL DRIVERS

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



PRESSURES

Human activities put pressure on waterways from the top of the river basins to the outer reef. Many of these activities add nutrients , sediments  and pesticides  into our waterways. The table below specifically focuses on activities that deliver these pollutants of concern. For further information on pressures on our waterways and marine environments, refer to our website: healthyriverstoreef.org.au/our-region/pressures.

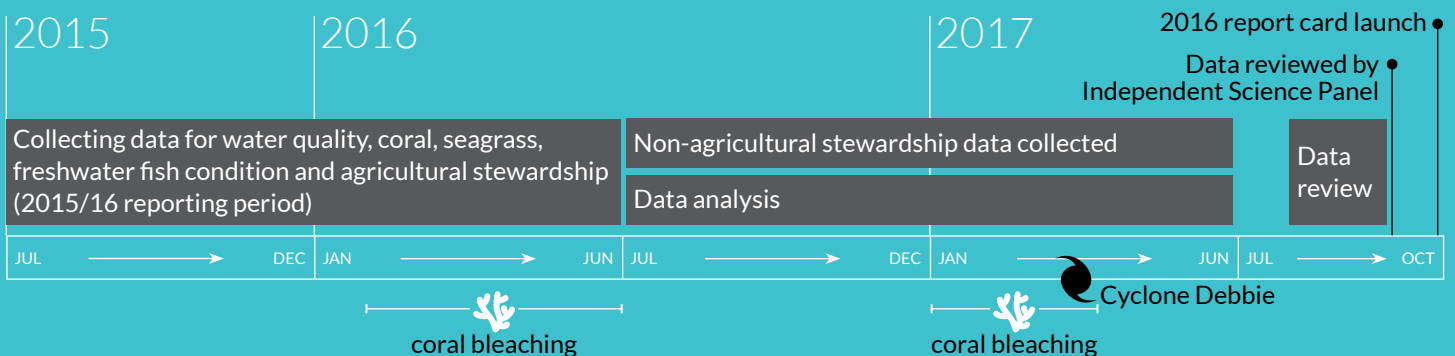
FRESHWATER		ESTUARINE		INSHORE		OFFSHORE	
Activity	Contributes	Activity	Contributes	Activity	Contributes	Activity	Contributes
 Agriculture	  	 Port development	 	  Shipping, ports and marinas	 	 Shipping	 
 Grazing	  	 Sewage discharge		 Tourism and recreation			
 Urban development	  	 Urban development	  	 Urban development	  	 Tourism and recreation	

RESPONSE

Our Partners are working on a range of projects to improve the condition of the Region's waterways. Head to our interactive mapping tool to find out what is being done in the Region or by a specific Partner: healthyriverstoreef.org.au/search-activities.

DEVELOPMENT OF THIS REPORT CARD

The reporting process spans 18 months including verification of assessments and results by an independent panel of scientists.



Habitat and hydrology data is from the 2013/14 year and is updated every 4 years.

STEWARDSHIP IN OUR REGIONAL INDUSTRIES

Stewardship is defined as “responsible and sustainable use, and protection of water resources, waterways and catchment to enhance the social, cultural, environmental, and economic values of the Region”. We assess how our regional industries are performing against stewardship criteria on an annual basis.

AGRICULTURE

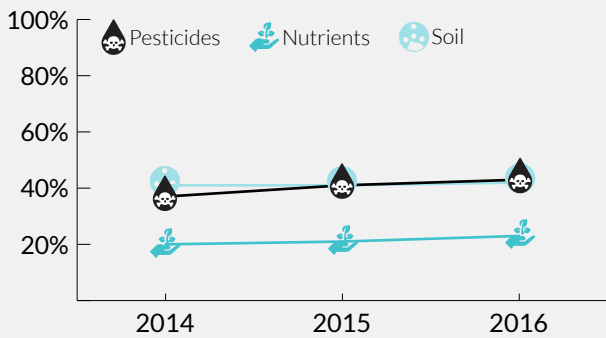
confidence ●●○○○

Stewardship in the Region’s major agricultural sectors is reported based on the percentage of land area under management practices that pose a low to moderate risk to water quality.

SUGARCANE



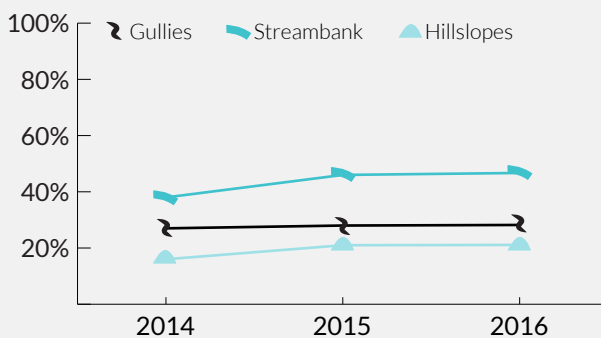
Sugarcane is most improved in the Region with 2% more land under best practice management for soil and pesticides.



GRAZING



No change in the Region since 2015.

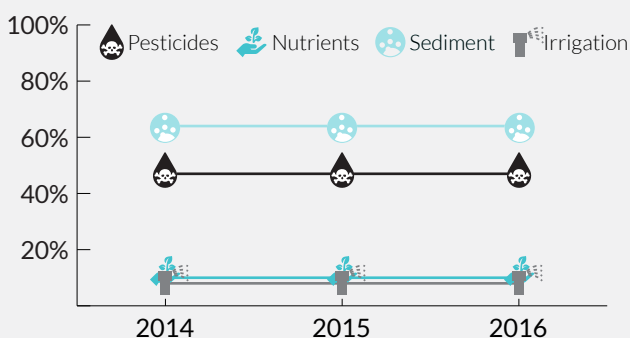


HORTICULTURE



for Don Basin only

No change in the Region since 2014.



OTHER INDUSTRIES

confidence ●●●○○

Management efforts from other industries in the Region that maintain or improve the condition of our waterways are scored from ineffective to very effective at three stages of management (planning, implementation and outcomes).

See our website for more details: healthyriverstoreef.org.au/our-partners-activities/stewardship

- Very effective management practice
- Effective management practice
- Partially effective management practice
- Ineffective management practice



HEAVY INDUSTRY

Effective was scored for the third year in a row. This includes for compliance data related to heavy industry.

2016

2015



AQUACULTURE

Very effective was scored for the third year in a row and this was consistent across each stage of management and for compliance data.

2016

2015



PORTS

Very effective was scored for the first time and this was consistent across each phase of management. There was no capital or maintenance dredging during the reporting period.

2016

2015



TOURISM

Effective was scored for the third year in a row and while this was consistent for the planning and outcomes stages of management, the implementation stage scored very effective.

2016

2015



URBAN

Effective was scored for the first time. This was consistent across each stage of management, an improvement from 2015 where the urban sector scored partially effective at the implementation stage of management.

2016

2015

MAJOR ACTIVITIES IN OUR REGION

RECREATIONAL FISHING

1 NET FREE ZONE

Average hours to catch a legal fish

Oct 2015

Feb-Apr 2016



TOP SPECIES CAUGHT

- ▶ SAND WHITING
- ▶ BARRED JAVELIN
- ▶ PIKEY BREAM

AGRICULTURE



Total value of agriculture in Mackay-Whitsunday-Isaac Region

\$1.19 BILLION

Total water applied to agricultural operations in the Region

115,906 ML

TOURISM



Tourism expenditure in the Mackay-Whitsunday-Isaac Region for 2015/16

\$978.8 MILLION

1.7 MILLION visitor nights in the Region



COMMERCIAL FISHING

764 TONNES

Total catch landed by commercial fisheries in 2015/16

TOP SPECIES CAUGHT

- ▶ PRAWN
- ▶ MUD CRAB
- ▶ BARRAMUNDI

PORTS



146 MILLION TONNES

of commodities shipped through the Ports of Mackay, Hay Point and Abbot Point in 2015/16

MINES



60%

of Queensland's coal came from Mackay-Whitsunday-Isaac mines in 2015/16

MARINE DEBRIS

For the first time this year, we are reporting on both the problem of, and the community response to, marine debris. Marine debris ends up in our waterways and includes items like plastic bottles and fishing nets. It can cause harm to marine wildlife through drowning, entanglement and ingestion. It also reduces the aesthetic value of the Region's waterways and marine environments. To find out more about marine debris in our Region, including regional breakdowns between the Mackay and Whitsunday Local Government Areas, visit our website: healthyriverstoreef.org.au/our-region/marine-debris

AUSTRALIAN MARINE DEBRIS INITIATIVE



CLEAN-UP ORGANISATIONS

Conservation Volunteers Australia QLD

Dalrymple Bay Coal Terminal

Eco Barge Clean Seas Inc

Great Barrier Reef Marine Park Authority

Gudjuda Aboriginal Rangers

James Cook University

Mackay Regional Council

McEwens Beach Progress Association

North Queensland Bulk Ports Corporation

NQ Dry Tropics NRM

Queensland Boating and Fishing Patrol

Reef Catchments

Reef Guardian School's Future Leaders Eco Challenge

Silkwood independent school

Tangaroa Blue Foundation

Youth 4 Beaches

90

CLEAN-UPS

3,498

TOTAL HOURS

2,032

BAGS FILLED

32.5 AVERAGE WIDTH OF BEACH (m)

1,241

VOLUNTEERS

217,353

ITEMS COLLECTED

15,617

WEIGHT (KG)

64,775

DISTANCE CLEANED (m)

JOIN US

Are you interested in waterway health? Sign up for our newsletter at healthyriverstoreef.org.au/contact

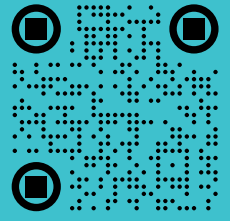
Is your organisation interested in joining the Partnership? There are many great benefits to membership including community recognition and promotion, access to reliable and scientifically supported information and collaborative opportunities to make a difference. We can achieve more together.

CONTACT US

Charlie Morgan – Executive Officer
Mackay - Whitsunday Healthy Rivers to Reef Partnership
Email: info@healthyriverstoreef.org
Phone: (07) 4964 6130

Hosted by Reef Catchments
www.healthyriverstoreef.org.au

 www.facebook.com/MWHR2RP



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Design and layout: Reef Catchments and Hodge Environmental

ACKNOWLEDGEMENTS

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.

The Partnership acknowledges the work of the Regional Report Card Technical Working Group and the Reef Independent Science Panel along with the following organisations for their extensive in-kind input into the science behind the report card: Australian Institute of Marine Science, Catchment Solutions, Central Queensland University, Great Barrier Reef Marine Park Authority, James Cook University, Queensland Department of Science, Information Technology and Innovation, North Queensland Bulk Ports, Queensland Department of Natural Resources and Mines, Queensland Department of Environment and Heritage Protection and the University of Queensland.

The Partnership acknowledges the Australian Marine Debris Initiative and the many indigenous land and sea ranger programmes, community organisations and individuals involved in the collection and provision of data used in this report.

