



Wet Tropics Waterways

REPORT CARD 2024

Reporting on data from July 2022 to June 2023



Overview

This Report Card is an important tool to track changes to waterway health over time. In the 2022-23 reporting period, overall waterway condition grades were mostly unchanged. Exceptions are the Daintree River which declined from 'very good' to 'good', and the Moresby Estuary and Central and Palm Island inshore zones which improved from 'moderate' to 'good'. The underlying waterway health indicators show more changes than the overall grades.

To view all results in detail, visit our website:

wettropicswaterways.org.au

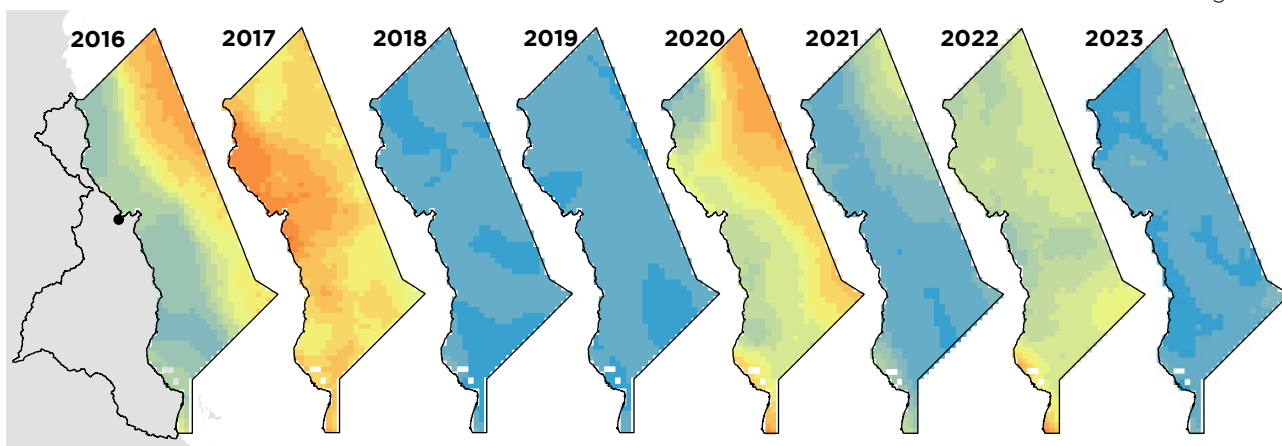
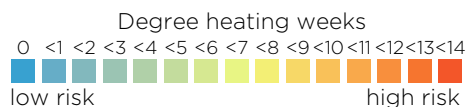
RAINFALL

Rainfall in July was significantly above average in some areas - Kuranda had its highest monthly rainfall on record in July and rainfall for the Daintree, Mossman, Barron and Mulgrave was in the highest 1% of long-term rainfall records.

However, annual rainfall was average for most basins except the northern basins (Daintree, Mossman, Barron) which were above average. Annual discharges from the major rivers were above average, and more than double the average for the Daintree River.

SEA SURFACE TEMPERATURES

Sea surface temperatures in 2022-23 presented a low likelihood for coral bleaching during the summer months.



Annual degree heating week estimates for the Wet Tropics inshore and offshore marine environments. This indicates the likelihood of coral bleaching. Data are the annual maximum degree heating week estimates for each ~25 km² pixel. Data sourced from: <https://coralreefwatch.noaa.gov/>.

SEAGRASS

Seagrass restoration has been scaled up in the Moresby Estuary and seagrass condition improved, even though the overall grade remained 'very poor'. Volunteers have been helping James Cook University's TropWATER to plant 8000 seedlings in the estuary.

Seagrass condition in Trinity Inlet reached its highest score since 2015-16, improving from 'poor' to 'moderate' and in the North Inshore zone it also improved from 'moderate' to 'good'.





FISH CONNECTIVITY

Five newly constructed fishways have improved connectivity and fish passage along 100+ kilometres in the Herbert catchment. This has helped to improve the fish barrier score for the Hinchinbrook channel from 'moderate' to 'good'.

FISH IN THE LOWER HERBERT

New fish surveys across 16 sites in the Herbert Basin recorded many species of native fish and low numbers of pest and translocated fish. As a result native fish diversity was scored as 'good' and non-native fish as 'very good'. However, subsequent surveys by Ozfish have shown an increase in pest fish, including tilapia, which indicates that pest species could be spreading. Ongoing fish surveys will help to target actions for management and control measures.

ALGAE

Microscopic algae (phytoplankton) has increased in the Daintree, Moresby and Hinchinbrook over the past four years. The causes for this are unknown.

PESTICIDES RUNOFF

The pesticide risk increased in some basins, particularly the Murray, Tully and Herbert. However, it decreased in the Johnstone. Pesticide use in agriculture can vary substantially depending on climatic conditions.



NUTRIENT RUNOFF

Scores for dissolved inorganic nitrogen, or DIN, have remained mostly constant over the last three years. In contrast, basin scores for Filtered Reactive Phosphorus (FRP) have declined, which coincided with wetter conditions. Higher amounts of phosphorus runoff in waterways can promote algal growth, which impacts waterway health.

Waterway grades 2022-23

This Report Card is part of a framework that is tracking progress towards the Reef 2050 Water Quality Improvement Plan targets. Go to www.wettropicswaterways.org.au/report-cards for more information.

Great Barrier Reef Outlook Report

Reef wide. Released every **5 years**.

Reef Water Quality Report Card

Reef wide (inshore). Released **biennially**.

Regional Report Cards. Released **annually**.



MARINE Palm Islands Inshore

Overall - B
Water quality - B
Coral - C
Seagrass - Insufficient data
Fish - Insufficient data



ESTUARY Hinchinbrook

Overall - B
Water quality - B
Habitat and hydrology - B
Fish - Insufficient data



MARINE South Inshore

Overall - C
Water quality - B
Coral - C
Seagrass - D
Fish - Insufficient data

These grades are based on multiple indicators. For more information go to: www.wettropicswaterways.org.au/report-card

FRESHWATER Herbert

Overall - B
 Water quality - B
 Habitat and hydrology - C
 Fish - A

FRESHWATER Murray

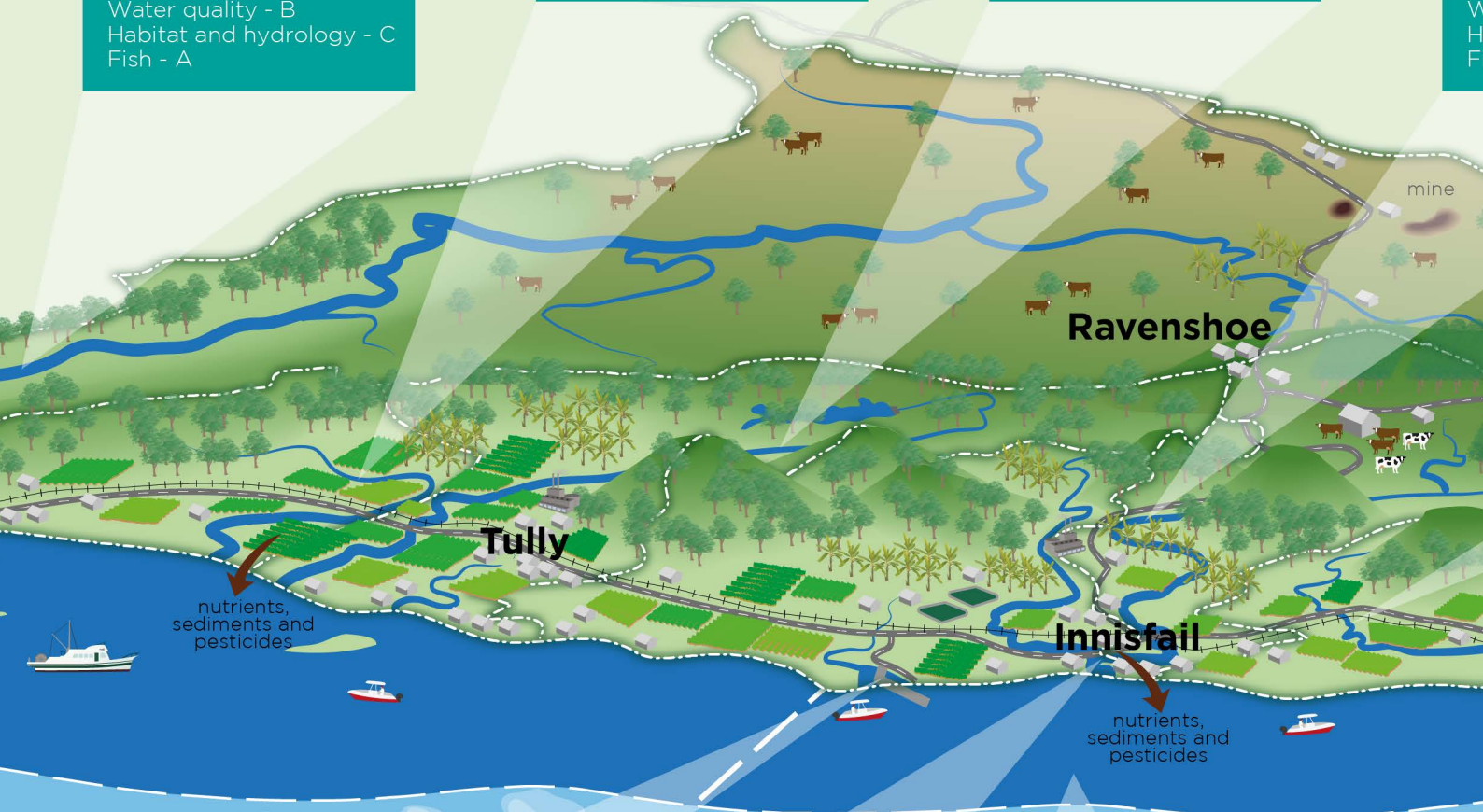
Overall - B
 Water quality - C
 Habitat and hydrology - C
 Fish - B

FRESHWATER Tully

Overall - B
 Water quality - B
 Habitat and hydrology - C
 Fish - A

FRESHWATER Ravenshoe

Overall - B
 Water quality - B
 Habitat and hydrology - C
 Fish - A



ESTUARY Moresby

Overall - B
 Water quality - B
 Habitat and hydrology - C
 Fish - Insufficient data

ESTUARY Johnstone

Overall - B
 Water quality - B
 Habitat and hydrology - C
 Fish - Insufficient data

MARINE Central Inshore

Overall - B
 Water quality - B
 Coral - C
 Seagrass - Insufficient data
 Fish - Insufficient data

ESTUARY Moresby

Overall - B
 Water quality - B
 Habitat and hydrology - C
 Fish - Insufficient data

Regional drivers

Key pressures on waterways in the Wet Tropics are driven by human activities such as urban and agricultural land use, and weather extremes.



economy



population



climate

FRESHWATER
Johnstone

Overall - B
Water quality - B
Habitat and hydrology - C
Fish - B

FRESHWATER
Russell

Overall - B
Water quality - B
Habitat and hydrology - B
Fish - A

FRESHWATER
Mulgrave

Overall - B
Water quality - B
Habitat and hydrology - B
Fish - A

FRESHWATER
Barron

Overall - C
Water quality - C
Habitat and hydrology - C
Fish - C



ESTUARY
Russell-Mulgrave

Overall - B
Water quality - B
Habitat and hydrology - B
Fish - Insufficient data

ESTUARY
Trinity Inlet

Overall - B
Water quality - B
Habitat and hydrology - C
Fish - Insufficient data

ESTUARY
Barron

Overall - C
Water quality - C
Habitat and hydrology - C
Fish - Insufficient data

MARINE
North Inshore

Overall - B
Water quality - A
Coral - C
Seagrass - B
Fish - Insufficient data

Legend



very good



good



moderate



poor



very poor



insufficient data

Freshwater



Estuary



Inshore Marine



Offshore Marine



This Report Card, although released in 2024, presents data from July 2022 to June 2023. The time delay is due to the time required for quality control, scientific analysis and expert peer review.

FRESHWATER Port Douglas

Water quality - B
Habitat and hydrology - C



FRESHWATER Mossman

Overall - B
Water quality - B
Habitat and hydrology - B
Fish - B



FRESHWATER Daintree

Overall - B
Water quality - A
Habitat and hydrology - B
Fish - Insufficient data



Port Douglas

Mossman

Daintree



More



ESTUARY Dickson Inlet

Overall - B
Water quality - B
Habitat and hydrology - B
Fish - Insufficient data



ESTUARY Daintree Inlet

Overall - B
Water quality - B
Habitat and hydrology - C
Fish - Insufficient data



MARINE Offshore

Overall - Insufficient data
Water quality - Insufficient data
Coral - B
Fish - Insufficient data



Wet Tropics Waterways

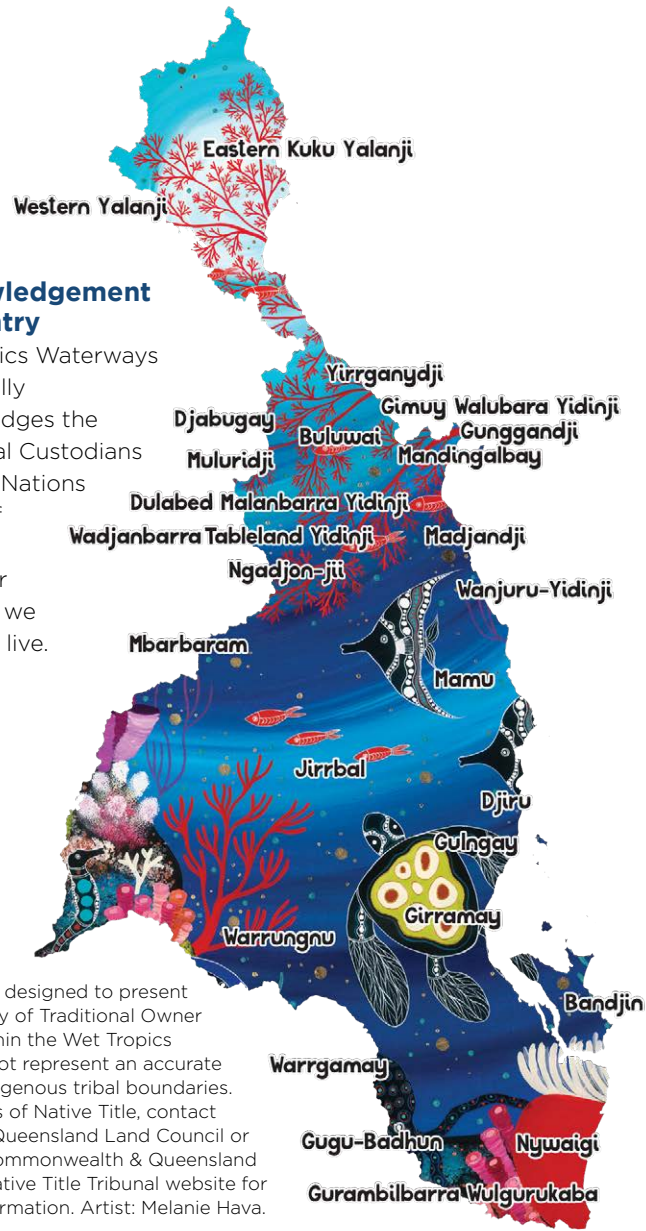
Wet Tropics Waterways is an initiative of the **Reef 2050 Long-Term Sustainability Plan**. We are one of five regional partnerships that produce a region-specific report card each year to track the health of the local rivers and estuaries that flow to the Great Barrier Reef. Find out more about joining the Wet Tropics Waterways partnership by emailing us at info@wettropicswaterways.org.au or go to our website.

Partnering for healthy tropical waterways and vibrant communities

READ: wettropicswaterways.org.au

FOLLOW: Wet Tropics Waterways

LISTEN: wettropicswaterways.org.au/podcast



Acknowledgement of Country

Wet Tropics Waterways respectfully acknowledges the Traditional Custodians and First Nations People of the land and water on which we work and live.

This map is designed to present the diversity of Traditional Owner groups within the Wet Tropics and does not represent an accurate map of Indigenous tribal boundaries. For matters of Native Title, contact the North Queensland Land Council or view the Commonwealth & Queensland National Native Title Tribunal website for further information. Artist: Melanie Hava.

Thanks to our partners



Queensland Government



Australian Government



Australian Banana Growers



AMPTO Association of Marine Park Tourism Operators



Australian Prawn Farmers Association



Cairns Airport



CAIRNS AQUARIUM



Cairns and Far North Environment Centre



CAIRNS REGIONAL COUNCIL



CANEGROWERS



Cassowary Coast REGIONAL COUNCIL



DOUGLAS SHIRE COUNCIL



FNOROC PNG Regional Organisation of Councils



HINCHINBROOK SHIRE COUNCIL



Ports North



PORT OF TOWNSVILLE



QWaLC QUEENSLAND WATER & LAND COUNCIL



TANGAROA BLUE



TERRAIN NATURAL RESOURCE MANAGEMENT



TRC TABLELANDS REGIONAL COUNCIL



TropWATER

Acknowledgements

Wet Tropics Waterways would like to acknowledge the following organisations for their contribution to the Wet Tropics Report Card: Regional Report Card Technical Working Group, Reef Independent Science Panel; Australian Institute of Marine Science; Queensland Government Department of Environment, Science and Innovation; James Cook University; CSIRO; Queensland Department of Regional Development, Manufacturing and Water. We would also like to thank the many other organisations that support and contribute to the release of the Report Card.

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Photo credits

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To find out how you can join the Wet Tropics Waterways Partnership contact:

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