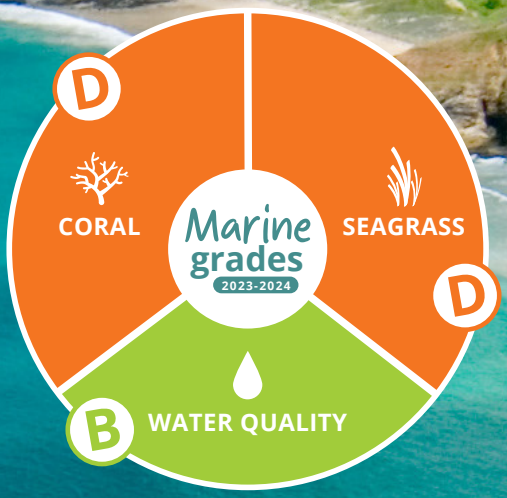
Fitzroy Region Marine Report

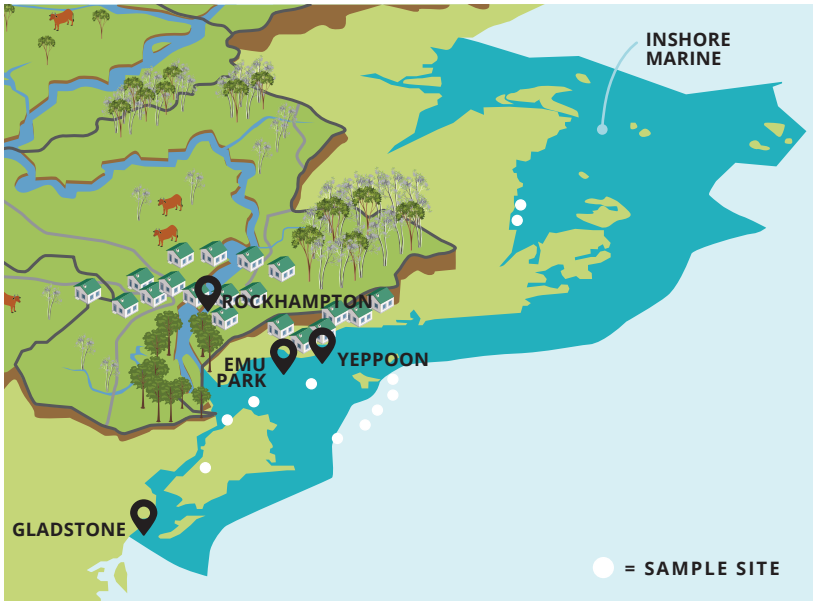
2023-2024



Summary

Our marine monitoring tracks the condition and trends of inshore waters, focusing on Water Quality, Coral, and Seagrass. This program is supported by the Marine Monitoring Program (hosted by GBRMPA) and Water Quality efforts led by the Great Barrier Reef Foundation and key partners, including the Australian Institute of Marine Science and James Cook University

The Coral Index remained 'poor' in 2024, showing no improvement since 2020 with declines in Coral Cover, Juvenile Density, Cover Change and Community Composition. Seagrass conditions in the Fitzroy region improved over the previous year with increased scores for Abundance and Resilience. Seagrass Abundance achieved its highest score since 2009–2010. However, the overall grade remained 'poor'. Overall Water Quality was 'good' with similar indicator scores to the previous year. As in previous years, the Water Quality scores showed trends along the sampling transect (North from the Fitzroy Delta to the Keppel Islands). Sites located nearest the river mouth had higher concentrations of nutrients and had lower Water Clarity while sites further away had lower levels of nutrients and greater Water Clarity.

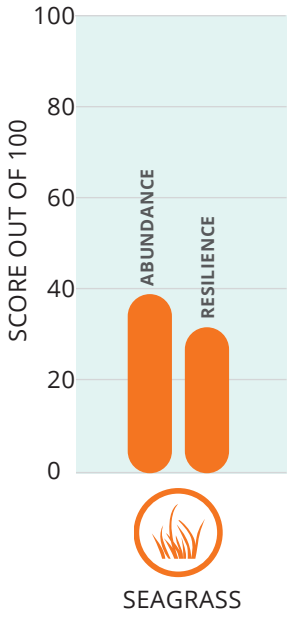


Water Quality B

Inshore Water Quality in the Fitzroy Natural Resources Management region has been graded as 'good' since monitoring recommenced in 2020, which is an improvement over the "moderate" condition reported in most years from 2006-2013. In 2024 all indicator categories—Water Clarity, Productivity and Particulate Nutrients—were ranked overall as 'good', however within those categories, Secchi Depth did not meet guideline values at any site in the region, and nitrate did not meet guideline values at most sites. As in previous years, the water quality scores showed trends along the sampling transect (North from the Fitzroy Delta to the Keppel Islands). Sites located nearest the river mouth had higher concentrations of nutrients and had lower Water Clarity while sites further away had lower levels of nutrients and greater Water Clarity. While the indicators for Water Clarity (Secchi Depth & Total Suspended Solids) were generally similar along the transect between wet and dry seasons, levels of Particulate Nutrients (Particulate Nitrogen & Particulate Phosphorus) were higher in the wet season.

VERY POOR (-1 TO -0.67)	POOR (-0.67 TO -0.34)	MODERATE (-0.34 TO 0)	GOOD (0 TO 0.5)	VERY GOOD (0.5 TO 1)

fitzroy partnership for river health



Seagrass D

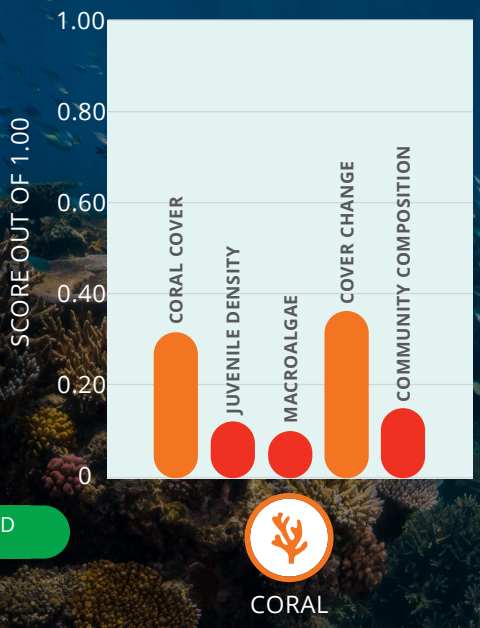
Overall, the Seagrass condition score improved but remained within the 'poor' grade range. Both condition indicators, Abundance and Resilience, remained within the 'poor' grade range although the score for each indicator increased. Seagrass Abundance achieved its highest score since 2009–2010. The increase was attributed to improved conditions in estuarine and coastal habitats as reef habitats remained unchanged from the previous years. Similarly, the improved score for resilience was an improvement in estuarine and coastal habitats rather than marine sites. At estuarine sites reproductive structures were observed although, one site was in the low resistance category owing to low percentage cover. Very low levels of reproduction observed at coastal sites led to an improved score as no reproduction was recorded in the previous year. However, at reef intertidal sites the score was the lowest ever recorded owing to an increased proportion of colonising species.

VERY POOR (0-20)	POOR (21-40)	MODERATE (41-60)	GOOD (61-80)	VERY GOOD (81-100)

Coral D

The marine heatwave of January 2024 has impacted all coral metrics, sending the regional Coral Index to its lowest level in 10 years. The overall Coral Index score was lower than the previous year but remained within the 'poor' range. Scores for four indicators were lower than the previous year and three indicators moved down a grade. Community Composition declined from 'poor' to 'very poor'. Cover Change also had a lower score then the previous year but remained within the 'poor' range. The Macroalgae score has improved marginally but remains 'very poor' as a high abundance of brown macroalgae still persists in the region.

VERY POOR (0.00-0.20)	POOR (0.21-0.40)	MODERATE (0.41-0.60)	GOOD (0.61-0.80)	VERY GOOD (0.81-1.00)



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MMP REPORTS PUBLISHED BY THE GREAT BARRIER REEF MARINE PARK AUTHORITY (GBRMPA)

Coral:
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Water Quality:
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