

A Collaborative Approach to Reporting on the Great Barrier Reef Catchment Loads Monitoring Program

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Key words: Coastal Zone Management; Hydrography; Land management; Risk management; Spatial planning

SUMMARY

The Great Barrier Reef Catchment Loads Monitoring Program (the Program) is a world-leading water quality monitoring program that tracks and reports on the quality of water that flows into the Great Barrier Reef (GBR). The Program has a reporting obligation to capture data for the purposes of long-term environmental monitoring and results are used to calibrate and validate source catchment models for the Reef 2050 Water Quality Improvement Plan progress to targets. □□ This Program's delivery is a collaborative effort, steered by an Alliance consisting of the Queensland Department of the Environment, Tourism, Science and Innovation (DETSI), the University of Queensland (UQ) and James Cook University (JCU). This innovative arrangement capitalises on multiple advantages, notably in advancing academic research, a wider range of stakeholder engagement and creating opportunities for student engagement within a high-performance operational team. The program also uses a partnership-based model, engaging with over 30 individuals and stakeholder organisations to conduct water quality sampling across the state. At the current time, there are 105 monitoring sites spanning the approximately 440,000 km² of land draining to the GBR lagoon. More than 10 million data points are produced annually from these sites, across a range of manual and automated discrete water samples, as well as real-time water quality sensors deployed in situ. □□ Using suitable data management, quality control, analysis, and communication, the Program supports data-driven decision making through the identification of patterns and trends, and the provision of timely information to land managers. This provides feedback for on-ground change aimed at reducing pollution in waterways, which will ultimately improve the health and resilience of the GBR. □□ The Program strives to be innovative in all aspects of delivery, from the equipment installed on-site, to the data quality and management, and the way that data is reported to the public. Reporting of results, which began in 2011 as traditional paper-based scientific reports, evolved into an interactive Esri StoryMaps format in 2019, which allows users to explore maps and the data in a more engaging way. □□ The use of Esri StoryMaps

has allowed for the creative re-interpretation of what 'Reporting' can look like and the purpose it serves. The format is educational, informative and interactive and provides links to additional information and tools to assist stakeholders in decision making. The digital products are designed to align with the FAIR (Findable, Accessible, Interoperable and Reuseable principles, to maximise reach and trust in the valuable data produced by the Program. □

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FIG Working Week 2025
Collaboration, Innovation and Resilience: Championing a Digital Generation
Brisbane, Australia, 6–10 April 2025