

NERP Tropical Ecosystems Hub Project Factsheet

Monitoring status and trends of coral reefs of the Great Barrier Reef

Project leader: Dr Hugh Sweatman (AIMS)

Project summary

This project will continue a unique data set that documents long-term trends in coral reef communities of the Great Barrier Reef (GBR). Regular surveys of fish, coral and coral predators such as crown-of-thorns starfish on 47 reefs since 1992, provide the 'big picture' on the condition of reefs on the GBR and how they are changing over time. This project will employ a range of surveying techniques to detect events likely to have large-scale impacts on reef health, such as coral bleaching, coral disease, cyclones or crown-of-thorns starfish outbreaks.

Why this research is needed

Documenting patterns of reef decline and determining the factors influencing reef recovery is critical to the long-term persistence of the GBR. The surveys show that crown-of-thorns starfish and cyclones have been the leading causes of damage to coral reefs since the early 1990s when surveys began. These kinds of disturbances affect different areas of the GBRMP and their effects persist from years to decades, so long-term data sets are critical for understanding the ecology of coral reefs and for formulating policies to best protect them.

Research-user focus

This project provides information on condition of coral reefs over a large area of the Great Barrier Reef Marine Park and will contribute to the 2014 Great Barrier Reef Outlook Report to be produced by the Great Barrier Reef Marine Park Authority (GRBMPA) and the Department of Sustainability, Environment, Water, Population and Communities. Regular updates on reef status and crown-of-thorns starfish are provided to the Association of Marine Park Tourism Operators to provide early warning of any increases in crown-of-thorns starfish activity.

Research Provider:



Healthy populations of herbivorous fish are important for coral reef resilience.



Coral cover and counts of crown-of-thorns starfish are collected around the reef perimeter by a snorkel diver towed behind the boat.

Photos: AIMS reef monitoring.

Outcomes

- Updates on status and temporal trends in coral, fish and crown-of-thorns starfish populations on survey reefs.
- Report on recovery rates and resilience of reefs after cyclones in 2009-2011.
- Report on crown-of-thorns starfish outbreaks on the GBR.
- Publications on coral and fish dynamics in relation to management and environmental drivers.

Find this project at www.nerptropical.edu.au

Theme 1: Assessing ecosystem condition and trend

Program 1: Historical and current condition of the GBR

Project: 1.1

For more information about this project, contact:

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