



Australian Government

Department of the Environment, Water, Heritage and the Arts

Marine and Tropical Sciences Research Facility (MTSRF) October 2008 Milestone Report

Project 1.1.4 – Dating and Mapping Historical Changes in GBR Coral Communities

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Summary

This report provides a plan for conduct of year three activities including laboratory and field sample collection schedule, and a plan for communication outputs and products

For reference: Milestone extracted from Project Schedule

Report 1 submission October 2008:

- Plan for conduct of year three activities including planned laboratory and field sample collection schedule [UQ]
- Plan of communication outputs and products for Year 3 and summary of any communication activities undertaken to date, including minutes of meetings/workshops if applicable [UQ]

Project Results

Description of the results achieved for this milestone

Fieldwork schedule

- Tara Clark will participate in the AIMS expedition to the Princess Charlotte Bay region in Nov-Dec 2008 and will collect surface death assemblages.
- Fieldwork and sample collection on Heron Island will be conducted between the 8-15 November 2008, targeting surface death assemblages, cyclone-transported coral blocks, and lagoon sediment cores.

Laboratory Schedule

- Laboratory analyses are being carried out, with new interesting data produced.
- Additional laboratory work will be carried out throughout the year.
- A cleaning procedure has been developed to clean sediment-contaminated coral samples for high-precision U-series dating.

- A compilation of all available ^{230}Th age data for both surface rubbles and dead massive corals from Palms and Keswick Islands show two major episodes of coral mortality occurred during 1920-1940 and 1980-2000 AD, respectively, which appears to correlate well with the warm phases of the Pacific Decadal Oscillation. This suggests climate variability does play a significant role in coral mortality and reef development in the GBR.

Other issues

Mr Rodriguez has just received an IPRS scholarship to begin his Ph.D at UQ from February 2009.

Communications, major activities or events

During milestone reporting period

- Tara Clark's confirmation seminar was held at UQ on the 31st October, 2008.
- Jez Roff presented data from the project at the ICRS conference in Florida in July, 2008
- Two papers are being drafted, one on the dating method and methodology, one on the findings.

During next milestone reporting period

Two papers, one on the dating method and methodology and one on the findings, will be submitted.