



Australian Government

Department of the Environment, Water, Heritage and the Arts

**Marine and Tropical Sciences Research Facility (MTRSF)
November 2008 Milestone Report**

Project 1.1.2 – Condition and trend of the GBR ecosystem: indicators, thresholds of potential concern, and ecological influence of GBR Zoning Plan on mid and outer shelf reefs

Project Leader: Dr Hugh Sweatman, AIMS.

Summary

Surveys of the core reefs of the AIMS Long-term Monitoring Program have started; one cruise to the area north of Cooktown has been completed and another to the southern GBR is in progress.

The first cruise included surveys of reefs in the region of the GBR where primary outbreaks of *Acanthaster* are thought to occur. More reefs in the “initiation zone” will be surveyed early in 2009. None of the reefs had outbreak densities of starfish, but the numbers of starfish recorded and the number of reefs where starfish were seen are already higher than in the last set of similar surveys two years ago.

For reference: Milestone extracted from Project Schedule

30 November 2008 Report 1 (with appropriate attribution of MTRSF funding) [AIMS]:

- Progress update for objective (a) [40% of LTMP reefs to be completed (weather permitting) & report on the contributions of the AIMS LTMP to the GBR Reporting for the GBRMPA Outlook report] preliminary findings, schedule of proposed fieldwork for areas still to be surveyed. Delivery of on-line regional assessments for voyages to date (with appropriate attribution of MTRSF funding).

Project Results

Description of the results achieved for this milestone

Fieldwork schedule

The table below gives the schedule of AIMS Long-term Monitoring Program cruises for 2008-09. The first of these cruises has been completed and the data have been entered and checked and reporting is in progress, but has been slowed by problems with data entry software and because there were only two working days between the first cruise and the second.

Start date	End date	Survey region	No of days
22-Oct-08	13-Nov-08	Training / Cooktown – Lizard Is	23
18-Nov-08	04-Dec-08	Capricorn-Bunker / Swains	17
02-Jan-09	09-Jan-09	Cairns (southern reefs)	8
02-Feb-09	12-Feb-09	Cairns (northern reefs)	11
23-Mar-09	09-Apr-09	Whitsundays	18
21-Apr-09	10-May-09	Townsville	20

Preliminary results

Surveys in 2008-09 include “COTS early warning surveys” in the region to the north of Cairns where primary outbreaks of *Acanthaster planci* are thought to occur. This involves manta-tow surveys of the perimeters of numerous reefs, particularly midshelf reefs where most outbreaks are found. Manta tow surveys of 28 reefs in the Cooktown-Lizard Is sector recorded a total of 20 *Acanthaster planci* from 10 of the reefs. One reef in the Cairns sector was also surveyed but no starfish were recorded.

Surveys of more reefs in the southern part of the putative “initiation zone” for waves of starfish outbreaks are scheduled for January-February 2009. None of the reefs had outbreak densities, but the numbers of starfish and the number of affected reefs recorded so far are higher than were recorded in the last early warning surveys in 2006-07, when only 4 starfish were recorded from 41 reefs.

Contributions to the GBRMPA Outlook Report

The reports authors have made several requests for information, data and graphs, particularly concerning long-term changes in coral cover on reefs of the GBR. The AIMS component of this project is on track.

Communications, major activities or events

During next milestone reporting period

The media and the community are always interested in crown-of-thorns starfish, so a media release [with appropriate acknowledgement] is planned for after completion of surveys in the “initiation region” in February 2009.