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Module 8 Introduction to the Bleaching/Crisis Response Plan

Section 1: Developing a Bleaching/Crisis Response Plan

Learning Objectives

In this module you will be developing bleaching response plans for your reef that will enable you to:

- ② Predict Mass Bleaching
- ② Set thresholds for declaring mass bleaching
- ② Assess the ecological impacts of mass bleaching
- ② Assess the socioeconomic impacts of mass bleaching
- ② Communication about mass bleaching before, during, and after the event
- ② Implement management interventions to increase coral survival during events
- ② Fund activities called for in the plan
- ② Staff activities called for in the plan
- ② Gain support for the plan you have developed

Background

In order to respond effectively and quickly to mass bleaching events and the impacts of climate change, managers need a plan. At its most basic level, the plan should identify the goal of the response, specific steps that will be taken to meet the goal, and resources required to implement the response. Plans should also take into account available resources, staff capacity, management authority, and the characteristics of local reef systems. The Great Barrier Reef Marine Park Authority (GBRMPA) Bleaching Response Plan provides a good example. The plan includes procedures for prediction, ecological assessment, and communication of mass bleaching impacts.

Routine tasks occur throughout the summer, whether or not there is bleaching. For example, routine tasks include monitoring environmental conditions and frequently assessing the bleaching risk. Responsive tasks are only implemented if a bleaching event occurs. Responsive tasks include rapid assessment of ecological impacts and increased communication with senior managers and the media. Because it can be difficult to decide exactly when a bleaching event has started, the GBRMPA plan outlines specific thresholds that trigger each type of responsive task. For example, when bleaching thresholds are exceeded at multiple sites, an aerial survey is undertaken to determine the extent and severity of bleaching. Strategic tasks may be taken at any time to

strengthen a bleaching response or support long-term coral reef resilience. Strategic activities can include: building capacity, securing funding, raising awareness, developing professional networks to exchange information, establishing policies that support bleaching response, or protecting/restoring factors that confer resilience to the system.

Activity

Activity 5: Developing a Bleaching Response Plan

Developing Bleaching/Crisis Response Plans

Develop a bleaching response plan for a coral reef area under your management (*i.e.*, the area managed by one group member). You may use the GBRMPA bleaching response plan as a model or create an entirely new approach. Use the worksheets that you have been filling out through out the workshop to help you with the different components of the plan.

- *Work in groups of approximately four people*
- *Use flipcharts*
- *You have a set amount of time to develop the plan*
- *You will be reporting back to the main group at the end of the exercise*

Think about how you will:

- Predict mass bleaching events
- Setting thresholds for declaring mass bleaching
- Assess the ecological impacts of mass bleaching
- Assess the socio-economic impacts of mass bleaching
- Communicate about mass bleaching before, during and after the event
- Implement management interventions to increase coral survival during events
- Fund activities called for in the plan
- Staff activities called for in the plan
- Gain support for the plan

Sharing Bleaching/Crisis Response Plans

In this exercise, you will share your bleaching response plans that you have developed with the rest of the workshop group.



On-the-Web

Great Barrier Reef Marine Park Authority Bleaching Response Plan:

http://www.gbrmpa.gov.au/corp_site/info_services/science/climate_change/management_responses/coral_bleaching_response_plan



Publications and References

Maynard, J.A., J.E. Johnson, P.A. Marshall, C.M. Eakin, G. Goby, H. Schuttenberg, and C.M. Spillman. A Strategic Framework for Responding to Coral Bleaching Events in a Changing Climate. *Environmental Management* DOI 10.1007/s00267-009-9295-7.

Woodley, C.M., Bruckner, A.W., McLendon, A.L., Higgins, J.L., Galloway, S.B. and Nicholson, J.H. 2008. *Field Manual for Investigating Coral Disease Outbreaks*. NOAA Technical Memorandum NOS NCCOS 80 and CRCP 6. National Oceanic and Atmospheric Administration, Silver Spring, MD 85pp.

Slides