

Overview

Public awareness of the importance of coral reefs has grown in recent years, especially in light of the reefs' rapid decline in many regions and their importance to developing countries. Still, an alarming amount of basic information about these ecosystems remains unknown, at a time when management interventions are increasingly important.

The Coral Reef Targeted Research & Capacity Building for Management (CRTR) Program has been established to address gaps in our basic knowledge and understanding of coral reef ecosystems, so that management options and policy interventions can be strengthened globally.

The first phase of the Program, expected to be a 10-to-15-year initiative, lasts from 1 December 2004 to 30 November 2009.

The Program's goal is to:

"Build the scientific capacity needed to provide information essential for management and policy, so that coral reef ecosystems under threat from climate change and multiple human stressors can be sustained for current and future generations".

The Program will:

1. Align the expertise and resources of the global coral reef community around key research questions related to the resilience and vulnerability of coral reef ecosystems.
2. Integrate the results and disseminate them in formats readily accessible to managers and decision-makers.

To undertake this, the CRTR Program is working to:

1. Address knowledge and technology gaps.
2. Promote scientific learning and capacity building.
3. Link scientific knowledge to management and policy.
4. Program Management.

Addressing Knowledge & Technology Gaps

The Program is organised around six key themes, which will be investigated by interdisciplinary teams (working groups) of developing and developed country scientists.

The working groups are:

1. Coral Bleaching & Local Ecological Effects
2. Connectivity
3. Coral Disease
4. Restoration & Remediation
5. Remote Sensing
6. Modelling & Decision Support.

These working groups will produce credible research that will be recognised internationally. The Program aims to thematically integrate the research work undertaken by the working groups and to coordinate site work in four regions (East Africa, Southeast Asia, Australasia/South Pacific, and the Mesoamerica region of the Caribbean).

A series of targeted research studies will address the most significant gaps in global understanding of how major drivers and stressors affect the structure and function of coral reefs (from the cellular level to the ecosystem level). These studies will also reveal how fuller knowledge can be used to design more effective management tools and techniques. The new knowledge and management tools produced should help coral reef managers understand and address both chronic and acute forms of stress.

Promoting Scientific Learning and Capacity Building

Although most coral reefs are located in developing countries, most coral reef research is currently based in universities and research institutes in the developed world. Rectifying this global imbalance in knowledge and capacity is a key mission of the CRTR Program. The Program intends to build or enhance the capacity of institutions at sites in at least three developing countries within the first phase so that they can function as regional Centres of Excellence. These three sites will be supported by a fourth site based in a developed country.

The four sites or Centres of Excellence are:

1. *Southeast Asia:* Marine Science Institute of Bolinao, University of the Philippines.
2. *East Africa:* Institute of Marine Sciences, University of Dar es Salaam, Zanzibar, Tanzania.
3. *Mesoamerica/Western Caribbean:* Unidad Academica Puerto Morelos, Universidad Nacional Autonoma de Mexico, Mexico.
4. *Australasia/South Pacific:* Heron Island Research Laboratory, Centre of Marine Studies, The University of Queensland, Australia.



Each Centre of Excellence (COE) will become a regional resource, with responsibility for engaging stakeholders in the region and serving as a hub for research, capacity building, and information exchange. It is important to support the first steps in what will be a long-term effort.

Linking Scientific Knowledge to Management and Policy

To achieve effective outcomes in the management of coral reefs, the CRTR Program aims to link outputs from the Working Groups and Centres of Excellence to management and policy within developing and developed countries.

By linking advances in scientific knowledge to on-the-ground decisions and by providing and improving science-based coral reef management and policy tools, the Program aims to help strengthen the way coral reef managers and policy makers view and manage coral reefs.

The Program aims to:

1. Improve the transfer of knowledge about how management practices can effectively alleviate local natural and human-induced stressors that render coral reefs more vulnerable to the effects of climate change.
2. Strengthen institutional and human capacity to support coordinated long-term investigations into the nature of the stress/response interactions that threaten the sustainability of coral reefs.
3. Facilitate coordinated scientific and management efforts to visualise future scenarios, to support decisions about tradeoffs related to coral reef use, to identify appropriate regulatory and incentive-based interventions, and to build support for sustained conservation of coral reefs.

The Program aims to help shape local and national policy decisions affecting the sustainability of coral reef ecosystems, providing decision-makers with a sounder basis for management interventions and for policies that may ensure the sustainability of coral reef ecosystems for generations to come.

The information and tools generated by targeted investigations will be formulated and disseminated as knowledge products to enhance the management of coral reefs.

Program Management

The University of Queensland, Australia, has been appointed as the Project Executing Agency (PEA) for Phase One of the Program. The PEA is responsible for the implementation and management of the Program.

Further Information

More information about the CRTR Program can be obtained from the Project Executing Agency:

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CRTR Project partners include the Global Environment Facility (GEF), World Bank (WB), The University of Queensland (UQ), United States National Oceanic and Atmospheric Administration (NOAA), UNESCO-Intergovernmental Oceanographic Commission (IOC/UNESCO) and approximately 50 research institutes & other third parties around the world.

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