Accomplishments

CSCOR Coral Programs provide scientific and technical information to resource managers and policy makers for the development of management strategies and new policies that protect coral reefs, such as:

- Mangrove cutting moratorium in Palau to decrease sediment loading on reefs
- Establishment of standards to maintain coral reef health during beach renourishment activities in Broward County, Fla.
- Area closures to create sustainable aquarium trade fisheries off Hawaii's Kona coast
- Forensic evidence for coral reef damage cases and assessments in Hawaii and Micronesia
- Research results used to support reauthorization of the US Coral Reef Conservation Act and policy development by US Coral Reef Task Force All Islands Committee
- Testimony and review for the US Commission on Ocean Policy

In addition, CSCOR is a leader in the incorporation of local ecological knowledge and stakeholder input into the resource management process, as well as in the training and support of Pacific Islanders in coral reef science and policy development.

An endangered hawksbill turtle glides over the reef. (photo credit—NOAA)

A graysby and pink vase sponge live in this colorful coral reef community off Puerto Rico. (photo credit—E. Weil of CCRI)

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CORAL PROGRAMS

Coral Reef Ecosystem Studies

NOAA Coral Reef Institutes

Mesophotic Coral Ecosystems

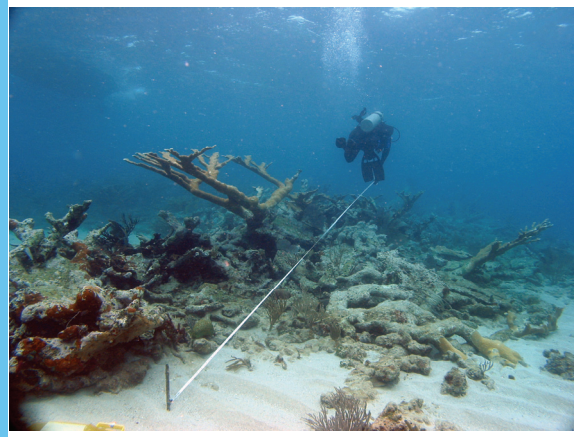
www.cop.noaa.gov

Focus of our Research

CSCOR has developed a robust coral reef research program to address the impact of stressors that affect the Nation's coral reef ecosystems. In order to fulfill its mission, CSCOR sponsors multi-disciplinary studies that provide timely, high-quality scientific results and predictive tools that can be used to develop management strategies to restore and protect coral reef ecosystems. The program seeks to define and understand causes and effects of reef degradation on a regional scale. CSCOR's coral reef program also works closely with other NOAA offices as part of the agency's Coral Reef Conservation Program (CRCP).

Coral reefs provide food and shelter for many fish, such as this stoplight parrotfish. (photo credit—H. Ruiz of CCRI)

NOAA's CRCP is the agency's team in charge of implementing the directives of the U.S. Coral Reef Task Force, established after the 1998 Executive Order on Coral Reef Protection (E.O. 13089) and the Coral Reef Conservation Act of 2000.



A scientific diver collects data along a reef transect in the Caribbean. (photo credit—H. Ruiz of CCRI)

CSCOR Coral Reef Research

Coral Reef Ecosystem Studies (CRES)

CSCOR-sponsored CRES research integrates ecological studies, physical oceanographic research and social science to deal with problems identified as priorities by NOAA and the U.S. Coral Reef Task Force. It focuses on the anthropogenic disturbances of greatest impact to coral reefs and translates this information for managers and for the general public through regional educational outreach. CSCOR has two regional CRES programs, CRES Caribbean and CRES Micronesia.

NOAA Coral Reef Institutes

As a result of the 1998 Executive Order on Coral Reef Protection (E.O. 13089), Congress appropriated funds to support coral reef research initiatives which resulted in the creation of the Hawaii Coral Reef Initiative (HCRI), the National Coral Reef Institute (NCRI), and the Caribbean Coral Reef Institute (CCRI). Devoted to enhancing management effectiveness through research, outreach, education, and conservation, the three Coral Reef Institutes are unique in that they provide direct, valuable timely scientific information to fulfill the research needs of local resource managers within their jurisdictions.

Mesophotic Coral Ecosystems (MCEs)

Coral reefs in shallow coastal waters can be harmed by natural events such as hurricanes, as well as human activity because of their nearness to coastal development and recreational areas, and the potential for their easy removal. Deep, light-dependent coral ecosystems (30-100m) are usually more isolated from these events and may allow these areas to act as a refuge to species depleted in the shallow coral reefs, and to harbor a higher proportion of rare or endemic species compared to shallower coral reef environments. This may warrant special resource management attention and protection to help maintain local and/or regional biodiversity. Thus, research in this area offers potential findings of major interest for resource management.

Management and Policy Implications

Coral reef ecosystems face a suite of common threats, and some that are region-specific. CSCOR's goals are to fill in information gaps on the underlying processes that regulate the health of coral reef ecosystems and to provide resource managers with tools such as models to evaluate alternative management strategies to protect healthy reefs and reverse the decline of degraded ones.

CSCOR-sponsored research integrates ecological studies, physical oceanographic research and social science to deal with problems identified as priorities by NOAA and the U.S. Coral Reef Task Force. The research focuses on the anthropogenic disturbances of greatest impact on coral reefs, and translates this information for managers and for the general public through regional educational outreach. The unifying theme of future CSCOR projects will reflect a significant shift towards an integrated watershed ecosystem approach, vetted through a strategic planning process and aligned with the goals of NOAA's Coral Reef Conservation Program.

Touching coral can damage its protective mucus layer, leaving it susceptible to disease. (photo credit—NOAA)