



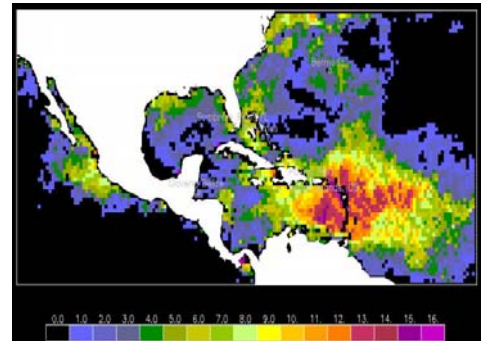
## NOAA Coral Reef Conservation Program Fiscal Year 2006 Accomplishments

*In fiscal year (FY) 2006, the National Oceanic and Atmospheric Administration (NOAA) Coral Reef Conservation Program (CRCP) received \$25.1 million to support activities to conserve, manage, and understand coral reef ecosystems in the U.S. and around the world. The funding allowed NOAA to implement over 114 projects within the agency, fund three coral reef research institutes, and provide just over \$7 million in grants for additional projects. These projects addressed priority goals such as mapping coral reef ecosystems, monitoring reef health, improving management effectiveness, and reducing the impacts of overfishing, coastal uses, and pollution on coral reefs. For more details on all of the activities of the NOAA CRCP, visit the "NOAA's Coral Reef Activities" section of NOAA's Coral Reef Information System (CoRIS).*

*Below are just a few of the many accomplishments NOAA's CRCP achieved, with hundreds of partners, over the past year.*

**NOAA Leads International Response to Record-Breaking Coral Bleaching Event.** Coral bleaching occurs when corals, stressed by temperature and light, expel the symbiotic algae living in their tissues. Bleaching that lasts longer than one week can lead to coral death and loss of coral reef habitats for other marine life. In August 2005, the CRCP's new Coral Reef Watch (CRW) Satellite Bleaching Alert system sounded the first warning of an oncoming warming event in the Caribbean. The alerts mobilized local efforts to monitor the bleaching as it happened, and gave scientists critical advance warning to develop response strategies and minimize additional stress to reefs. In response, a resolution was passed by the U.S. Coral Reef Task Force (USCRTF) to lead a coordinated interagency response to the bleaching event. NOAA, with the National Park Service and U.S. Geological Survey, then took the lead in documenting the extent of the event and collecting and mapping over 1500 bleaching and mortality observations from more than 100 scientists in 22 jurisdictions. Data showed that record-breaking thermal stress had caused the worst bleaching event on record in the Caribbean, with as much as 90% of corals bleached and 40% mortality or greater at many sites throughout the region. To respond to future events, the bleaching alert system will be expanded from six Caribbean sites to 24 sites throughout the U.S. and international Caribbean, and a total of 96 worldwide.

**NOAA, GBRMPA Partner to Develop International Coral Bleaching Response Guide.** NOAA's CRCP and the Australian Great Barrier Reef Marine Park Authority (GBRMPA) led the production of a new document entitled "A Reef Manager's Guide to Coral Bleaching." Over 50 experts from 25 organizations contributed to the Guide, including multiple NOAA offices, the Environmental Protection Agency, the International Union for the Conservation of Nature (IUCN), The Nature Conservancy (TNC) and others. The document grew out of a 2002 resolution by the U.S. Coral Reef Task Force for agencies and partners to develop information and tools for coral reef managers to address coral bleaching. The Guide provides coral reef managers and scientists with the current understanding of the effects and causes of coral bleaching, and provides pragmatic, science-based strategies for adaptive management of this threat to coral reef ecosystems. The Guide was published by the Australian government (GBRMPA) and released at international rollout events in Washington, D.C., the 3<sup>rd</sup> International Tropical Marine Ecosystems Management Symposium and the 16<sup>th</sup> U.S. Coral Reef Task Force meeting in October of 2006.

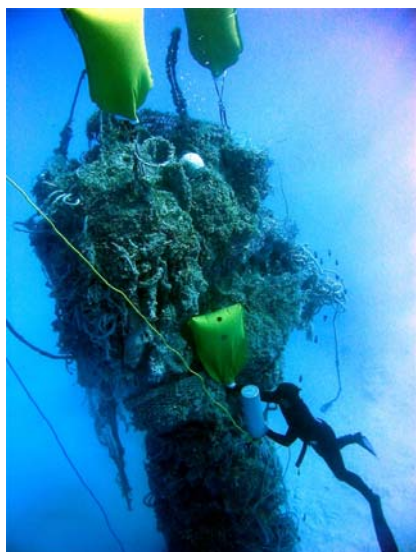


A satellite-generated image showing intensified sea surface temperatures in the Caribbean in October 2005, during an unprecedented bleaching event in the region. Credit: NOAA Coral Reef Watch.

**NOAA, NSTA Partner to Bring Coral Reefs to Teachers Nationwide.** NOAA's CRCP, in partnership with the National Ocean Service and the National Science Teachers Association (NSTA), developed a suite of education and professional development resources for teachers wanting to explore coral reef ecosystem science in their classrooms. The suite includes: a half-day symposium, 'Coral Ecosystems', given at the 2006 annual NSTA convention; the "Coral Reef Ecosystem SciGuide," an online guide to coral reef teaching resources and pedagogy; two online Web seminars; and a series of online professional development tools called "SciPack." A total of 194 teachers from 40 states and two countries participated in the symposium and Web seminars, and ninety-eight percent reported a desire for more coral seminars and teaching resources. The SciGuide and SciPack will reach thousands of teachers and students each year.

**The CRCP Assists With Capacity Building and Planning for the Management of Land-based Sources of Pollution.**

With the goal of improving watershed protection at the local level, the CRCP has held a series of community workshops in Hawai'i, the U.S. Virgin Islands (USVI) and Puerto Rico. The workshops were tailored to the needs of the individual jurisdictions and targeted to increase tools, coordination, and implementation of actions to improve watershed protection and reduce downstream impacts on valuable coral reef resources; they built on efforts in each jurisdiction to implement Local Action Strategies (LAS) that reduce land-based pollution and other key threats to coral reefs. A wide range of stakeholders, from government (federal, territory, local) to non-governmental (business, academic, private land owners), were involved in the workshops. Participants took part in case studies, hands-on activities, group discussions, and regulation review. Outcomes include a draft approach for interagency implementation of erosion and sediment control (ESC) in USVI, establishment of an USVI 'Implementation Team' to continue working on ESC issues, and initiation of a pilot ESC project in Puerto Rico. Additional workshops are planned to address land-based pollution in American Samoa.



A NOAA scientist removes derelict fishing gear from the reefs of Pearl and Hermes Atoll.  
Credit: NOAA Pacific Islands Fisheries Science Center

**NOAA Maps and Removes Tons of Marine Debris from Hawaiian Islands.**

From 1996 to 2006, NOAA and partners have led efforts to locate and remove over 560 tons of marine debris from the Northwestern Hawaiian Islands (NWHI); 18 tons were removed in 2006 alone with the assistance of CRCP funds. These islands, now part of a Marine National Monument, are particularly prone to the accumulation of floating debris due to their central location in the North Pacific gyre. Most of the debris is derelict fishing gear that entangles and kills endangered Hawaiian monk seals and green sea turtles, coral, and other wildlife. A recent study indicates that the NWHI accumulate over 52 tons of debris each year, and future operations will focus on removing as much of that accumulation as possible. In 2006, CRCP scientists also led efforts to assess the extent and impact of marine debris in the main Hawaiian Islands. Hot-spot debris areas were located via aerial surveys, and these data were used to create maps of debris distribution and abundance. Surveys of Kaua'i, Moloka'i, Lâna`i, Maui, O`ahu and the Big Island of Hawai`i are now complete. As in the NWHI, the marine debris problem in the main Hawaiian Islands has proven to be greater than expected, with 711 debris sites reported. These maps will aid communities and federal, state and local coastal managers to identify and prioritize clean-up areas and target sites for future monitoring.

**NOAA Awards \$10 Million in Coral Reef Conservation Grants.**

In 2006, NOAA's CRCP awarded almost \$10 million in grants to external partners in support of coral reef research, education, management, and conservation. Representing over 35 percent of the CRCP budget for 2006, these awards reflect

NOAA's strong support for cooperative partnerships and conservation efforts outside the agency. Funds supported a range of activities, from community conservation projects to large-scale coral reef observation systems, and included support for three coral reef research institutes – one each in Hawai'i, Florida and Puerto Rico. Grants included NOAA's Coral Reef Conservation Grants Program, which supports grants in six domestic and international categories, and the jointly managed NOAA-National Fish and Wildlife Foundation Coral Reef Conservation Fund (Coral Fund). In its first five years, the Coral Fund provided over \$12 million in federal and non-federal matching funds for 140 coral conservation projects in 28 countries, seven U.S. trusts or territories, and four U.S. states.