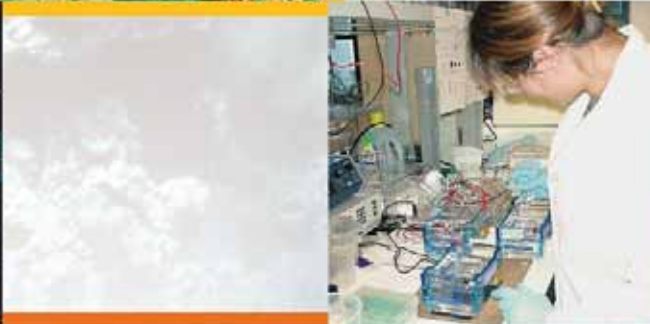
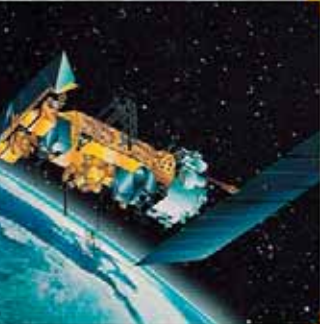


Implementation of the National Coral Reef Action Strategy

REPORT TO CONGRESS

*Report on
U.S. Coral Reef
Task Force Agency
Activities From
2002 to 2003*



U.S. Department of Commerce
National Oceanic and Atmospheric Administration
Produced in Cooperation with the U.S. Coral Reef Task Force



This document was produced by the National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce, in cooperation with the U.S. Coral Reef Task Force, to fulfill requirements of the Coral Reef Conservation Act of 2000 (P.L. 106-562; 16 U.S.C. § 6401 et seq.).



National Oceanic and Atmospheric Administration.
2005. Implementation of the National Coral Reef
Action Strategy: Report on U.S. Coral Reef Task Force
Agency Activities From 2002 to 2003. Silver Spring,
MD. 124 pp.

July 2005

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Acknowledgments



The National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce, wishes to thank the members and staff of the federal, state, territory, and commonwealth organizations of the U.S. Coral Reef Task Force (USCRTF) for their support and cooperation in producing this report, *Implementation of the National Coral Reef Action Strategy*. This report involved collecting, assessing, and presenting information on coral reef activities from the USCRTF, which includes 12 federal agencies, 7 states and territories, and 3 freely associated states. NOAA thanks the USCRTF, the USCRTF Steering Committee, the USCRTF Working Groups, and all of the individuals who committed their time to drafting and assembling the individual chapters of this report for their assistance and collaboration in producing this document.

In addition to all of the members and staff of the USCRTF, NOAA wishes to thank other federal, state, territory, and local agency partners; nongovernmental organizations; academic institutions; and other partners for their dedication to improving the health of coral reef ecosystems.

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(The following appendix is available at <http://www.coralreef.gov>.)

Appendix B: Additional Coral Reef Task Force Activity Highlights

List of Acronyms

AIS	Aquatic Invasive Species	DNER	Department of Natural and Environmental Resources
AS	American Samoa	DOC	U.S. Department of Commerce
AGRRA	Atlantic and Gulf Rapid Reef Assessment	DoD	U.S. Department of Defense
APEC	Asia-Pacific Economic Cooperation	DOI	U.S. Department of the Interior
BUIS	Buck Island Reef National Monument	DOJ	U.S. Department of Justice
CBD	Convention on Biological Diversity	DOS	U.S. Department of State
CDHC	Coral Disease and Health Consortium	DOT	U.S. Department of Transportation
CDOM	Colored Dissolved Organic Matter	EFH	Essential Fish Habitats
CFMC	Caribbean Fishery Management Council	EIMS	Environmental Information Management System
CIRES	Cooperative Institute for Research in Environmental Sciences	EIS	Environmental Impact Statement
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora	EPA	U.S. Environmental Protection Agency
CNMI	Commonwealth of the Northern Mariana Islands	EEZ	Exclusive Economic Zone
CNP	Coastal Nonpoint Pollution Control Program	FGBNMS	Flower Garden Banks National Marine Sanctuary
COE	U.S. Army Corps of Engineers	FKNMS	Florida Keys National Marine Sanctuary
CoRIS	Coral Reef Information System (NOAA)	FAS	Freely Associated States (Republic of Palau, Republic of the Marshall Islands, Federated States of Micronesia)
CRCA	Coral Reef Conservation Act of 2000	FEMA	Federal Emergency Management Agency
CRED	Coral Reef Ecosystem Division	FMP	Fisheries Management Plan
CREMP	Coral Reef Evaluation and Monitoring Program	FMRI	Florida Marine Research Institute
CRES	Coral Reef Ecosystem Studies	FRA	Fisheries Replenishment Area
CREWS	Coral Reef Early Warning System	FWC	Fish and Wildlife Conservation Commission (Florida)
CRON	Coral Reef Outreach Network	FWRI	Fish and Wildlife Research Institute (Florida)
CRW	Coral Reef Watch	FY	Fiscal Year
CWA	Clean Water Act	GCRMN	Global Coral Reef Monitoring Network
CZMP	Coastal Zone Management Program	GIS	Geographic Information System
DAWR	Guam Division of Aquatic and Wildlife Resources	GPS	Geographic Positioning System
DHS	U.S. Department of Homeland Security	GU	Guam

HACCP	Hazard Analysis and Critical Control Point	NWR	National Wildlife Refuge
HCRI	Hawai'i Coral Reef Initiative	PR	Puerto Rico
HIWG	Hawai'i Interagency Coral Reef Mitigation Working Group	PRDENR	Puerto Rico Department of the Environment and Natural Resources
HOST	Hawai'i Ocean Safety Team	PSSA	Particularly Sensitive Sea Area
ICRI	International Coral Reef Initiative	RACE	Restoration and Assessment of Coral Ecosystems
IMO	International Maritime Organization	ROV	Remotely Operated Vehicle
LAS	Local Action Strategy	SeaWiFS	Sea-Viewing Wide Field-of-View Sensor
LIDAR	Light Intensity Detection and Ranging	SHARQ	Submersible Habitat for Analyzing Reef Quality
MIL	Mobile Irrigation Lab	SST	Sea Surface Temperature
MMA	Marine Managed Area	SPAW	Special Protected Areas Wildlife
MMS	Minerals Management Service	TNC	The Nature Conservancy
MOI	Memorandum of Intent	UNEP	United Nations Environment Programme
MPA	Marine Protected Area	UNESCO	United Nations Educational, Scientific and Cultural Organization
MPCD	Marine Pollution Control Device	USAID	U.S. Agency for International Development
NASA	National Aeronautics and Space Administration	USCG	U.S. Coast Guard
NCRI	National Coral Reef Initiative	USCRTF	U.S. Coral Reef Task Force
NEPA	National Environmental Policy Act	USDA	U.S. Department of Agriculture
NGO	Nongovernmental Organization	USFWS	U.S. Fish and Wildlife Service
NPS	National Park Service	USGS	U.S. Geological Survey
NOAA	National Oceanic and Atmospheric Administration	USVI	U.S. Virgin Islands
NOWRAMP	Northwestern Hawaiian Islands Reef Assessment and Monitoring Program	VIIS	Virgin Islands National Park
NRCS	Natural Resources Conservation Service	WRP	Wetland Reserve Program
NSF	National Science Foundation		
NWHI	Northwestern Hawaiian Islands		

Executive Summary



Coral reefs, often called the “rainforests of the sea,” are among the oldest and most diverse ecosystems on the planet. They provide resources and services worth billions of dollars each year to the United States and worldwide economies, a surprising amount considering that these ecosystems cover less than 1 percent of the Earth’s surface. With 10.5 million people living adjacent to a U.S. coral reef in mainland coastal communities or on islands (U.S. Census 2002), coral reefs have become an integral part of the culture, heritage, and economies of these regions.

Millions of people across the United States depend on coral reefs for food, protection from storms, and jobs. For example, South Florida’s coral reef ecosystems have a nonmarket value of \$228 million and support more than 44,500 jobs (Turgeon et al. 2002). U.S. coral reef fisheries alone support an ex-vessel landing (value of catch paid to fishermen) of more than \$137.1 million (Turgeon et al. 2002).

However, U.S. coral reef ecosystems and worldwide reefs are in danger. They are continuously damaged or destroyed by anthropogenic impacts such as pollution, overfishing, and coastal development, and by natural impacts such as tropical storms. The Global Coral Reef Monitoring Network (GCRMN) estimates 20 percent of the world’s coral reefs have been destroyed and predicts 24 percent are under pending destruction from adverse human impacts (Wilkinson 2004). In addition, GCRMN estimates another 26 percent of reefs are under a long-term decline (Wilkinson 2004). Compounding this problem is the lack of public awareness regarding the value and condition of U.S. coral reefs and the impact people upstream have on reef health.

Implementation of the National Coral Reef Action Strategy highlights the activities of the U.S. Coral Reef Task Force (USCRTF) in 2002–2003 to promote understanding of coral reefs and to reduce the threats to these valuable marine ecosystems. The report provides summaries and examples of many of the activities conducted by USCRTF members and their extramural partners to fulfill the goals and objectives of the *National Action Plan To Conserve Coral Reefs* (2000) (the Plan) and the *U.S. National Coral Reef Action Strategy* (2002) (the Strategy). This report is not intended to be a comprehensive list of agency programs and activities directly or indirectly affecting coral reefs. More comprehensive information on USCRTF accomplishments and future challenges can be found on the USCRTF website (<http://www.coralreef.gov>) or by contacting USCRTF members directly.



The report follows the 13 goals of the Plan and the Strategy to reduce threats to coral reef ecosystems worldwide:

- Create comprehensive maps of all U.S. coral reef habitats.
- Conduct long-term monitoring and assessments of reef ecosystem conditions.
- Support strategic research to address the major threats to reef ecosystems.
- Increase understanding of the social and economic factors of conserving coral reefs.
- Improve the use of marine protected areas to reduce threats.
- Reduce adverse impacts of fishing and other extractive uses.
- Reduce impacts of coastal uses.
- Reduce pollution.
- Restore damaged reefs.
- Improve education and outreach.
- Reduce threats to coral reef ecosystems internationally.
- Reduce impacts from international trade in coral reef species.
- Improve coordination and accountability.

As called for by the Coral Reef Conservation Act of 2000 (Pub. L. No. 106–562; 16 U.S.C. §6401 et seq.), the report addresses each goal and charts annual funding by federal agencies for activities directly related to the Strategy. It also presents a brief analysis of the future challenges facing coral reef ecosystems and the communities that depend on them. Appendix A lists federal obligations totaling \$177.29 million for coral reef conservation in 2002, \$163.59 million in 2003, and \$200.50 million in 2004. Appendix B (only available online at <http://www.coralreef.gov>) provides a more comprehensive list of USCRTF activity highlights.

Due to partnerships among USCRTF members and the involvement of nongovernmental organizations, much progress has been made to meet the Strategy's goals and objectives. These partnerships have been successful at leveraging funding and resources to better understand and address threats to coral reef ecosystems, and thus partnerships are a major focus of this report and are included as highlights wherever possible.

Some highlights of USCRTF member activities in 2002–2003 include:

Mapping all shallow coral reefs. The USCRTF's goal is to produce comprehensive digital maps of all U.S. shallow coral reefs (<30 m) by 2009. Between 2002 and 2004, the percentage of mapped areas increased from 35 to 66 percent. In addition,

new tools, including the Draft Northwestern Hawaiian Islands (NWHI) Atlas, are being created to give managers much needed habitat information for improved management.

Monitoring coral reef health. In 2002–2003, more than 50 monitoring activities were supported by USCRTF organizations and significant advances were made toward a national coral reef monitoring system. The National Oceanic and Atmospheric Administration (NOAA) partnered with other federal agencies to expand its Pacific coral reef ecosystem monitoring to American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands (CNMI). The first *State of Coral Reef Ecosystems of the United States and Pacific Freely Associated States* (Turgeon et al. 2002) assessed the condition of U.S. coral reefs, ranked threats in 13 geographic areas, detailed ongoing conservation actions taken by USCRTF agencies, and provided recommendations from coral reef managers to fill information gaps. The second biennial report, scheduled for publication in summer 2005, will reflect more quantitative data obtained through collaborative monitoring programs.

Research. USCRTF agencies and their partners have significantly expanded the understanding of processes affecting the structure, function, and health of coral reef ecosystems, which has improved coral reef ecosystem threat response and reduction. This increased understanding has improved the ability to respond to and reduce threats to coral reef ecosystems in some areas. For example, the Coral Disease and Health Consortium is coordinating scientific resources to investigate coral health, coral bleaching, and factors affecting the emergence, transmission, and impact of coral diseases.

Improving the use of coral reef-protected areas. New coral reef-protected areas were established or proposed in federal waters and several jurisdictions, including the U.S. Virgin Islands, Hawai'i, Puerto Rico, Florida, American Samoa, and the CNMI. In addition, management plan completion, regulation updates, and an increase in the capacity to implement enforcement and education efforts improved the effectiveness of existing coral reef-protected areas. NOAA, working with state and territory partners, is leading the first comprehensive, nationwide inventory and assessment of all U.S. coral reef-protected areas to identify key needs.

Reducing the adverse impacts of fishing. Since 2002, five of the seven U.S. states or territories with coral reefs have instituted new or revised fishery regulations to help restore and/or sustain coral reef fisheries. Actions were also taken to strengthen the management of coral reef fisheries in federal waters, including the implementation of the first Fishery Management Plan for Coral Reef Ecosystems of the Western Pacific Region and initiation of the process for establishing a new multi-jurisdictional fishery management plan in Biscayne Bay.

Reducing the impacts of coastal uses. Ship groundings and anchor damage continue to affect coral reef health throughout U.S. waters. USCRTF agencies have improved planning for and response to grounding events and implemented





measures to avoid vessel impacts by improving navigational aids and installing permanent moorings that obviate the need to anchor on coral reefs. For example, in 2002 and 2003, NOAA, the U.S. Coast Guard, and state and territory agencies completed an inventory of existing grounded vessels on U.S. coral reefs to help managers identify and prioritize vessels for removal.

Reducing the impacts of pollution on reefs. Land, sea, and air pollution continue to seriously affect coral reef ecosystems. Many actions have been taken to reduce these impacts, including removing more than 220 tons of fishing nets and other debris from the NWHI coral reef ecosystem and designating all state waters within the boundary of the Florida Keys National Marine Sanctuary as a no-discharge zone for vessel sewage.

Reducing the impacts from international trade. Since 2001, the United States has helped many countries address the adverse impacts of international trade on their coral reef ecosystems by assisting in identifying strategies to mitigate overfishing and destructive fishing and by collecting rare, threatened, or endangered species. These programs have strengthened implementation of sustainable management plans, enforcement of relevant laws and regulations, development of environmentally sound collection practices and alternatives, and implementation of other measures that protect and conserve the coral reef ecosystems outside U.S. control.

Improving coordination and accountability. State and territory members of the USCRTF, with assistance from federal agency members, developed 3-year local action strategies to identify and implement priority actions to reduce land-based sources of pollution, overfishing, recreational misuse and overuse, lack of public awareness, disease, and coral bleaching and climate change—six key threats to coral reefs. To improve coordination in the Pacific, the USCRTF invited the Republic of Palau, the Republic of the Marshall Islands, and the Federated States of Micronesia to be observers on the Task Force. These efforts have increased collaboration and cooperation among partners at all levels, resulting in improved local action to protect valuable coral reefs.

The activities summarized in this report represent significant achievements by government and nongovernmental partners to reduce threats to reefs and conserve healthy, resilient coral reef ecosystems and the human communities that depend on them. However, these accomplishments represent only intermediate steps toward achieving the goals of the Strategy. Much remains to be done to halt the degradation of coral reefs and to sustain these valuable marine ecosystems and the economies that depend on them. Building on this foundation of achievement and collaboration, NOAA and the USCRTF are committed to continuing efforts to protect the Nation's valuable coral reefs and working with international partners to protect coral reefs worldwide.