

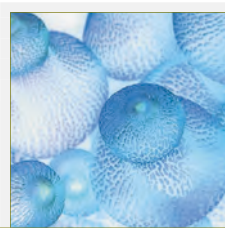
U.S. CORAL REEF TASK FORCE



FY2000 ACCOMPLISHMENTS AND FUTURE ACTIVITIES

Coral reefs are among the most diverse and biologically complex ecosystems on earth. These rainforests of the sea provide economic and environmental services to millions of people as areas of natural beauty and recreation, sources of food, jobs, chemicals, pharmaceuticals, and shoreline protection. Now under threat from multiple stresses that are overwhelming their natural resilience, coral reefs are deteriorating worldwide at alarming rates. An estimated 25% of the world's reefs have already been lost and 60% are threatened by bleaching, disease, and a variety of human activities including shoreline development, polluted runoff from agricultural and land-use practices, ship groundings, over-harvesting, destructive fishing, and global climate change, http://coral.aoml.noaa.gov/gcrmn/status_2000.pdf. The trend in coral reef health is downward, and these ancient ecosystems are in peril.

In response to this growing global environmental crisis, the Coral Reef Protection Executive Order 13089 was issued on June 11, 1998. The Executive Order established the United States Coral Reef Task Force (CRTF), which includes the major federal agencies responsible for aspects of coral reef conservation, plus our state and territorial partners. Through the policies set forth in the Executive Order, directed to strengthen its steward-systems and coral reefs around



the federal government was ship of the nation's reef eco-the world.



The Coral Reef Task Force identified two fundamental themes for immediate and sustained national action:

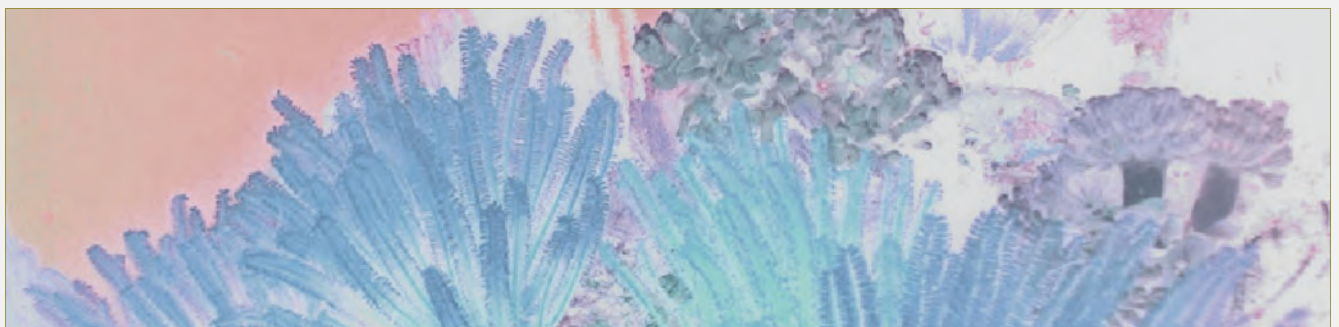
- ***Understand coral reef ecosystems and the natural and anthropogenic processes that determine their health and viability;***
- ***Quickly reduce the adverse impacts of human activities on coral reefs and associated ecosystems.***

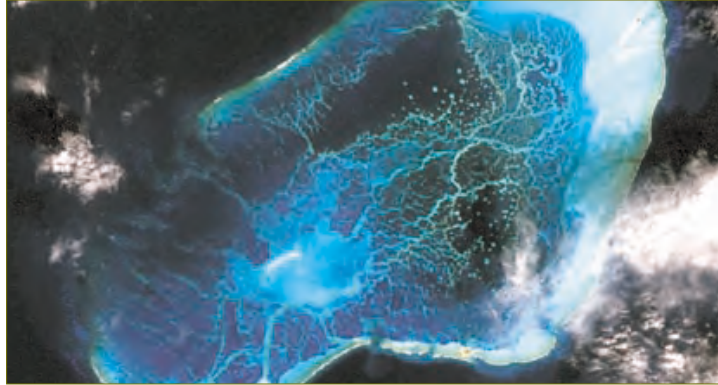
This document highlights the Coral Reef Task Force fiscal year (FY) 2000 accomplishments and lists future activities for FY2001 and beyond.

In March of 2000, the U.S. Coral Reef Task Force unveiled the National Action Plan to Conserve Coral Reefs, the first U.S. plan to comprehensively address the most pressing threats to coral reefs, <http://coralreef.gov/documents>. The Action Plan is designed to be the nation's roadmap to more effectively understand coral reef ecosystems and reducing the adverse impacts of human activities. The Plan responds to the urgency of the current situation, drawing on the expertise and commitment of hundreds of public and private stakeholders.

Working with government and non-government partners, the CRTF has made a number of significant advances to implement the National Action Plan and conserve coral reef ecosystems in the United States and globally. In FY2000 the Task Force agencies, working with many partners, launched critical new efforts to address the growing crisis of coral reef loss and degradation. These new efforts, such as implementing management regimes to protect local reefs, mapping U.S. coral reefs, and monitoring reef health, are some of the highest priorities of the National Action Plan and require long-term commitments to complete.

In FY2001, agencies of the Coral Reef Task Force expect to continue ongoing projects and initiate significant new activities that address priorities in the National Action Plan in partnership with other federal agencies, states, and territories, industry, academia, and non-governmental organizations. Continued implementation of the Action Plan depends upon the availability of new coral reef funding and the continued support and participation of Task Force members and many partners.





UNDERSTANDING CORAL REEF ECOSYSTEMS

MAPPING

Accomplishments:

The agencies of U.S. Coral Reef Task Force are undertaking a major effort to develop comprehensive and consistent coral reef ecosystem maps for U.S. reefs. Most U.S. coral reefs have never been adequately mapped. The National Action Plan lays out a 10-year plan to delineate and digitally map all U.S. coral reefs by 2009 using many different methods including airborne and satellite remote sensing technologies. This information will support more effective fishery and coastal zone management, disaster mitigation, research, and restoration efforts. In FY2000, federal agencies, states, commonwealths, territories, and other partners began implementing efforts to map U.S. coral reef ecosystems. Significant accomplishments in FY2000 include:

- **Completed digital mapping of coral reef ecosystems of the U.S. Virgin Islands, allowing coastal resource managers to better monitor, manage, and conserve these resources.**
- **Obtained aerial photography and hyperspectral imagery to map 30% of the shoreline of the eight main Hawaiian Islands, the first step in comprehensively mapping the coral reefs of the main Hawaiian Islands.**
- **Obtained high-resolution IKONOS satellite imagery for portions of the eight main Hawaiian Islands and nine of the ten major Northwestern Hawaiian Islands.**
- **Acquired the first-ever high altitude hyperspectral data over major portions of the Northwestern Hawaiian Islands, helping to map the location and characteristics of coral reef ecosystems in this remote area.**

FY 2001

Mapping Activities:

- **Finalize maps of Puerto Rico and U.S. Virgin Island's coral reef ecosystems and develop the first phase of map products for the coral reefs of the main and Northwestern Hawaiian Islands.**
- **Continue collecting imagery needed to fully map reefs of the main and Northwestern Hawaiian Islands.**
- **Implement new coordinated mapping efforts among National and Oceanic and Atmospheric Administration (NOAA), United States Geological Survey (USGS), and National Aeronautics and Space Administration (NASA) to improve products and share resources.**

ASSESSMENTS, INVENTORIES, AND MONITORING

Accomplishments:

The National Action Plan calls for building an integrated nationwide coral reef monitoring system to profile and track the health of U.S. coral reefs. Over time, a coordinated coral reef monitoring system could allow for regular assessments of reef health. To be successful, the monitoring will build on and link existing federal, state, and territorial monitoring as well as initiate new monitoring to fill gaps where possible. These efforts will provide managers with essential information to respond to changing environmental conditions, to assess the effectiveness of existing management strategies, and identify the need for additional protective measures.

In FY2000, the nation's coral reef program managers drafted a National Program to Assess, Inventory, and Monitor U.S. Coral



Reef Ecosystems and new monitoring efforts were initiated to begin implementing this national plan. Significant accomplishments include:

- NOAA awarded grants to U.S. Islands to fill gaps in monitoring coverage nationwide and to help build capacity for long-term coral reef monitoring.
- The CRTF Assessment and Monitoring Group prepared the first-ever report on the status of U.S. reefs as input to the Global Coral Reef Monitoring Network's Status of Coral Reefs of the World: 2000. http://coral.aomi.noaa.gov/gcrmn/status_2000.pdf
- NOAA and partners established two new monitoring stations at St. John, U.S. Virgin Islands and Lee Stocking Island, Bahamas, to expand the global coral bleaching monitoring system.
- The U.S. Fish and Wildlife Service (USFWS), NOAA, the University of Hawaii, and the Hawaiian Department of Land and Aquatic Resources collaborated to conduct the first joint rapid ecological assessments of birds, marine mammals, fish, invertebrates, and sediment contaminants of the Northwestern Hawaiian coral reef ecosystem.
- The Environmental Protection Agency (EPA), in partnership with the Center for Marine Conservation, successfully launched the Reef Ecosystem Condition (RECON) monitoring program, a volunteer diver reef monitoring program in the Caribbean.
- The USFWS established long range coral reef monitoring programs at the Midway and Johnston Atoll National Wildlife Refuges.

FY 2001

Monitoring Activities:

- Publish first U.S. biennial report on the status of U.S. coral reefs.

- **Begin implementation of the National Program to Assess, Inventory, and Monitor U.S. Coral Reef Ecosystems.**
- **Continue to link existing monitoring efforts into a national network that can reliably track and predict changes in U.S. coral reef ecosystems.**
- **Support future monitoring and inventory expeditions to the Northwestern Hawaiian Islands and other remote U.S. Islands in the Pacific.**
- **Provide grants to states and territories to build their capacity for long-term monitoring of nearshore reef ecosystems.**

STRATEGIC RESEARCH

Accomplishments:

Additional research is needed to improve our knowledge of the processes that regulate the health of coral reef ecosystems, and what can be done to protect and restore coral reefs. In FY2000 research on disease, bleaching, coral growth, and other aspects of reef communities increased understanding of coral reef health, degradation, and recovery to support improved management decisions. In FY2000, significant accomplishments included:

- NOAA continued to support the Hawaii Coral Reef Initiative Research Program (HCRI) and the National Coral Reef Institute (NCRI), programs that bring the scientific community together to focus on critical coral issues.
- NOAA in partnership with the United Nations Environment Program's World Conservation Monitoring Center supported efforts to understand, monitor, and predict coral disease out-breaks by unveiling the first web-based global database of coral diseases:

www.unep-wcmc.org/marine/coraldis



- *USGS, EPA, United States Department of Agriculture (USDA), the University of Hawaii, and the Hawaii Department of Health collaborated to study and predict the impacts of sediments and nutrients on coral reef ecosystems to improve sediment management practices.*
- *The National Science Foundation (NSF), since the establishment of the CRTF in 1998, has supported \$18 million in research and education projects involving coral reef and related ecosystems. During this past year, NSF renewed a 40-year long-term ecological research project on the coral reefs of the Great Barrier Reef and supported reef studies in Costa Rica, Panama, and the Galapagos.*
- *NOAA dedicated \$4.9 million to support more than 60 coral reef-related research projects through its SeaGrant Program and National Undersea Research Program (NURP).*

FY 2001

Strategic Research Activities:

- *Launch an interagency Coral Reef Disease Consortium to determine the causes and consequences of expanding coral reef diseases.*
- *Implement a new Coral Reef Regional Ecosystem Studies (CRRES) program to support long-term, interdisciplinary research programs on coral reefs.*
- *Fund approximately \$5 million in coral reef research and education projects through the National Science Foundation.*

REDUCING THE ADVERSE IMPACTS OF HUMAN ACTIVITIES

MARINE PROTECTED AREAS

Accomplishments:

The National Action Plan to Conserve Coral Reefs has identified Marine Protected Areas (MPAs) as a key ecosystem management tool in the protection of coral reef ecosystems and the sustainable use of their resources. The last year has seen unprecedented action at the state, territory, and federal levels to strengthen the existing system of coral reef MPAs, and to begin to meet the Coral Reef Task Force’s goal of protecting 20% of U.S. coral reefs and associated habitats by the year 2010. In FY2000, significant accomplishments included:

- *Establishment of the 84 million-acre Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve, the largest protected area ever created in the United States.*
<http://hawaiireef.noaa.gov>
- *Collaboration between NOAA, the State of Florida, local communities, Regional Fishery Management Councils, and other partners, to develop final plans for the Tortugas Ecological Reserve, a 151-square nautical mile no-take ecological reserve to protect a valuable nursery area for the Florida Keys coral reef ecosystem.*
<http://www.fknms.noaa.gov/tortugas/>
- *Enforcement of Guam’s five new coral reef reserves helping to protect over 20% of the island’s reefs.*
- *Establishment of Puerto Rico’s first no-take coral reef reserve.*



- *Collaboration between NOAA and Regional Fishery Management Councils, to establish new no-take or low-take coral reef fishery reserves in federal waters off of Florida and the U.S. Virgin Islands.*
- *Established Navassa Island National Wildlife Refuge which includes approximately 380,000 acres of coral reef and other marine habitats.*

FY 2001

Marine Protected Area Activities:

- *Finalize plans to designate the Tortugas Ecological Reserve and the 35.1-square nautical mile no-take marine research area within the Dry Tortugas National Park.*
- *Work with local, state, federal, and other partners to effectively monitor, acquire, and enforce new and existing coral reef protected areas.*
- *Use \$9.3 million, appropriated to the Department of the Interior, to purchase lands at Palmyra Atoll from The Nature Conservancy and establish the atoll as a new National Wildlife Refuge.*

MANAGING COASTAL IMPACTS

Accomplishments:

The National Action Plan calls for a number of measures by states, territories, and federal agencies to better manage activities on land and water that affect coral reef resources, including habitat destruction and pollution. States and territories, which manage nearshore ecosystems where human impacts are greatest, have the first line of responsibility for action, and have taken a number

of significant conservation actions over the last year to help protect coral reefs. Federal agencies, through base programs, enforcement, new guidance to protect coral reefs, and funding and technical assistance to states and territories have collaborated to improve the management of coral reef ecosystems. In FY2000 significant accomplishments included:

- *American Samoa developed a five-year plan for coral reef management and banned the export of “live rock.”*
- *The U.S. Department of Justice worked closely with relevant agencies to enforce laws that protect coral reefs. For example, defendants responsible for damaging coral reefs and seagrass beds while laying underwater fiber optic cables in the Virgin Islands were required to pay a \$1.8 million civil penalty and ensure removal of the pollutants harming the reefs and seagrass.*
- *The Army Corps of Engineers and EPA instituted new restrictions and prohibitions on the use of some Clean Water Act Section 404 nationwide permits for activities that affect “critical resource waters”, including coral reefs, and issued new guidance to minimize impacts to coral reefs from federally permitted projects.*
- *DOI and NOAA provided technical support, training, and funding to support efforts by U.S. states and territories to improve coral reef management and protection, including monitoring, education and designation of marine protected areas.*
- *The U.S. Coast Guard (USCG), Department of Defense (DOD), NOAA, the State of Hawaii, community volunteers and other partners participated in the third interagency cruise to remove marine debris from Northwestern Hawaiian Islands’ coral reefs.*
- *The Air Force installed permanent moorings for recreational boats at Johnston Atoll to prevent damage to corals.*



ALL-ISLANDS CORAL REEF

Accomplishments:

The U.S. All-Islands Coral Reef Initiative (USAICRI) is a cooperative effort between the U.S. Flag Islands of American Samoa, Guam, Hawaii, the Commonwealth of Northern Mariana Islands (CNMI), Puerto Rico, and the U.S. Virgin Islands to protect and sustainably use coral reef ecosystems. These members of the Coral Reef Task Force work to identify coral reef management needs and priorities in the U.S. Islands and build local, regional, and federal partnerships to support local projects. In FY2000, NOAA and the Department of the Interior provided \$1.35 million to the All-Islands Initiative to support local coral reef management programs. With these and other funds, the Islands have completed a variety of significant projects including:

- *Puerto Rico designated its first no-take coral reef reserve.*
- *American Samoa banned the taking of "live rock."*
- *Hawaii worked with federal agencies and non-governmental partners to remove 50 tons of derelict fishing gear and other marine debris from the Northwestern Islands over the last two years.*

- *The CNMI installed coral reef protection signs along its shorelines.*
- *The U.S. Virgin Islands initiated the development of the Marine Park Management Plan.*
- *Guam developed educational materials for local communities to help protect Micronesia's coral reefs.*

FY 2001

All-Islands Committee Activities:

- *Develop long term coral reef management plans for the U.S. Islands.*
- *Continue to expand partnerships to support local coral reef management initiatives.*
- *Increase long-term monitoring efforts in All-Islands areas.*

For more information please see the web site:

http://www.HAWAII.EDU/SSRI/IS_CRI.HTML

INITIATIVE



- *The U.S. Department of Agriculture (USDA) continued to provide technical and financial assistance to individual landowners and operators to help them reduce impacts from agricultural nonpoint source pollution to near-shore coral reef ecosystems. As a result of these contracts, conservation practices will be applied to nearly 4,600 acres of agricultural lands over the next five to ten years.*

FY 2001

Managing Coastal Impacts Activities:

- *Continue supporting the All Islands Coral Reef Initiative.*
- *Complete a draft rule to revise the Clean Water Act 403(c) regulation to strengthen the application of marine water quality criteria for point source discharges to marine waters, and to develop a process for identifying and designating special ocean protection areas.*
- *Complete an assessment of discharges and environmental impacts from cruise ships and determine opportunities to address impacts on coral reefs.*
- *Continue to make conservation program funds available to private landowners in U.S. states and territories in order to enhance water quality in near-shore coral reef ecosystems by reducing agricultural nonpoint source pollution.*

RESTORATION

Accomplishments:

During FY2000 the Task Force agencies restored coral reef ecosystems injured by vessel groundings and developed new techniques and approaches for improving the efficiency and effectiveness of restoration. These efforts have provided valuable insight into reef restoration techniques. Restoring damaged coral reefs is a very difficult, long-term activity that is still not well understood. Our ability to restore damaged reefs will continue to improve with experience. In FY2000, accomplishments included:

- *USCG, NOAA, DOI, and American Samoa cooperated to successfully remove nine grounded long-line fishing vessels in Pago Pago Harbor, American Samoa, clearing the area to allow natural recovery to begin.*
- *DOI's USFWS funded a reef restoration project to address the grounding and breakup of a long-line fishing vessel at Rose Atoll National Wildlife Refuge, removing over 105 tons of metallic debris.*
- *The Justice Department obtained a \$1 million settlement for natural resource damages to coral reef habitat in Biscayne National Park caused by a vessel grounding.*
- *NOAA and the State of Florida reconstructed four spurs of an ancient coral reef in the Florida Keys National Marine Sanctuary damaged by a 155-foot vessel grounding.*
- *NOAA developed new methods to better assess damages to coral reefs from vessel groundings.*
- *NOAA updated the Environmental Sensitivity Index (ESI) atlases for Puerto Rico and the U.S. and British Virgin Islands; and also held training sessions for partners in the Florida Keys and Hawaii on the scientific aspects of responding to*



PAGO PAGO HARBOR

Restoring Coral Reefs in American Samoa

During a cyclone in 1991, nine foreign-owned long-line fishing boats were driven up onto the coral reefs of Pago Pago Harbor, American Samoa. These vessels were leaking fuel and preventing post-storm recovery of the coral reef ecosystem. In FY2000, NOAA, the U.S. Department of the Interior, the U.S. Coast Guard, and the American Samoa Government worked collaboratively to remove the nine fishing vessels from the reef and restore the

degraded habitat. Prior to undertaking these activities, NOAA temporarily relocated the adjacent coral colonies away from the work area to prevent further damage. The vessels were subsequently disassembled and removed from the reef. Finally, the relocated corals were returned to their original sites and additional restoration activities were begun.

oil spills in coral environments. These activities will help managers respond more rapidly and effectively to minimize the impacts of spills on coral reefs.

FY 2001

Restoration Activities:

- *Develop strategies for addressing abandoned vessels that are significantly impacting coral ecosystems.*
- *Investigate methods for reducing or preventing future groundings.*
- *Develop improved technologies for restoration of damaged coral reef ecosystems.*
- *Improve the oil spill response approach in coral reef environments by developing guidelines to reduce the impact of oil and chemical spill response tactics to coral ecosystems.*
- *Expand efforts to remove marine debris from the new Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve.*

OUTREACH AND EDUCATION

Accomplishments:

Education and outreach efforts are critical to all coral activities implemented by the CRTF. The Task Force strives to increase public understanding of the value of coral reefs, and the threats to their survival. Activities that engage the public and local communities in how they can help in conservation efforts are essential for long-term protection of coral reefs. In FY2000, a number of new efforts were undertaken in this area including:

- *Established a National Coral Reef Outreach and Education Fund with the National Fish and Wildlife Foundation. The Fund will support local-level partnerships that strengthen public awareness of the value and importance of reef ecosystems and help local communities protect these valuable marine resources.*
<http://www.nfwf.org/coralreef.htm>
- *Created a web site, brochure, and other support materials for the CRTF to use to help educate the public on the Task Force, the National Action Plan, and other coral reef activities.* <http://coralreef.gov/>



- *Created and disseminated a brochure to educate American consumers about the marine aquarium trade, its impacts on coral reefs, and their role in protecting coral reefs.*
- *Highlighted the link between terrestrial nonpoint pollution sources and coral reef degradation to promote conservation programs to reduce or eliminate such pollution.*

FY 2001

Education Activities:

- *Create bilingual educational materials.*
- *Support coral reef outreach and education projects through the National Coral Reef Outreach and Education Fund and other partnerships.*
- *Collaborate with non-government organizations to increase conservation efforts for improving water quality near coral reef ecosystems and provide information to the public on the benefits of these conservation programs.*

INTERNATIONAL Accomplishments:

The United States has interests in protecting international coral reefs. Healthy marine ecosystems are critical to U.S. diplomatic and development strategies to: promote economic and food security, establish social stability, improve human health, and conserve biodiversity in many countries. Coral reef ecosystems have great biodiversity and economic, social, and cultural importance to many nations and entire regions. These extremely valuable ecosystems constitute the economic base and future hope for sustained development in many countries, particularly small island

nations. The National Action Plan encompasses a suite of activities to protect and conserve reefs internationally, with an emphasis on capacity building and technical assistance in such areas as integrated coastal management and marine protected areas. Accordingly, the Task Force has developed strategies to reduce adverse impacts to coral reefs from global threats including destructive fishing and international trade in coral reef species. FY2000 highlights included:

- *Building international capacity for sustainable management and conservation of coral reefs and associated coastal watershed. For example...*
 - ...U.S. support for over 50 projects and activities in 20 countries as well as regional activities in the wider Caribbean, Central America, South East Asia, South Pacific and East Africa.
 - ...U.S. support for strengthened park management, including education and enforcement in over ten parks of national and international importance.
- *Supporting programs under the East Asia and Pacific Environmental Initiative to address destructive fishing practices and aspects of international trade in coral reef species.*
- *Initiating the “Ridge-to-Reef” project in Jamaica, which integrates land-based management practices for forestry, agriculture, and urban planning with coastal activities, such as improving coastal water quality to protect the reefs.*
- *Supporting development of Mexico’s first-ever National Marine Park initiated by a local community. The park was recognized by the Mexican federal government in FY2000.*
- *Supporting the Global Coral Reef Monitoring Network and its efforts to expand international cooperation and coordination of global monitoring networks. <http://coral.aoml.noaa.gov/gcmn/index.html>*



- *Obtaining International Maritime Organization (IMO) approval of the U.S. initiative to establish the first mandatory No Anchoring Areas in the Flower Garden Banks National Marine Sanctuary to reduce damage to coral reefs in the northwest Gulf of Mexico.*
- *Working through the International Hydrographic Organization, standard symbols for No Anchoring Areas and coral reefs were added to the catalog of chart symbols. These measures will help mariners avoid anchoring on reef areas.*
- *Addressing the adverse impacts of international trade in coral reef species by: 1) assessing the role of the U.S. in the international trade, 2) developing and implementing a comprehensive trade strategy, and 3) recommending to Congress that new trade measures be adopted to protect coral resources and ensure that U.S. consumer demand does not contribute to the degradation of coral reefs.*
- *Establishing precedent-setting criminal convictions for illegal importation of protected corals and Caribbean spiny tailed lobster.*
- *Continue developing a large format Oil Spill Planning Summary Map which covers Puerto Rico and the U.S. and British Virgin Islands.*
- *Continue to work with the IMO in implementing No Anchoring Areas.*
- *Work closely with the new ICRI (International Coral Reef Initiative) Secretariat (Philippines and Sweden) to support regional meetings to address the full range of coral reef management issues.*
- *Continue working with regional organizations to address overfishing, destructive fishing practices, land-based sources of pollution, and the establishment of Marine Protected Areas.*

FY 2001

International Activities:

- *Highlight coral reef issues in all appropriate international bodies dealing with climate change, fisheries and conservation, including the Kyoto Protocol, Convention on Biodiversity, Convention on International Trade in Endangered Species, Convention on Wetlands, Asia Pacific Economic Cooperation, and others.*
- *Continue to work with Congress, environmental groups and industry representatives on the development of new trade measures that promote and encourage responsible and sustainable use of corals and coral reef products.*





The challenge of conserving the U.S. and international coral reefs requires both concerted efforts and sustained collaboration by many partners concerned with the fate of coral reefs. The United States Coral Reef Task Force would like to thank the many public and private entities, including, scientists, coastal resource managers, non-governmental organizations, and volunteers, who participated in the efforts to help preserve coral reef ecosystems world-wide.

For information on the U.S. Coral Reef Task Force please visit the web site at <http://coralreef.gov/> or contact:

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DOC / NOAA

Department of Commerce
National Oceanic and Atmospheric Administration

EPA

Environmental Protection Agency

USDA

Department of Agriculture

DOJ

Department of Justice

DOT

Department of Transportation

NSF

National Science Foundation

NASA

National Aeronautics and Space Administration

DOS

Department of State

DOD

Department of Defense

USAID

Agency for International Development

STATE OF HAWAII

STATE OF FLORIDA

TERRITORY OF GUAM

COMMONWEALTH OF PUERTO RICO

TERRITORY OF THE U.S. VIRGIN ISLANDS

COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS

TERRITORY OF AMERICAN SAMOA