

valuable ecosystems in peril

global response

national action plan

strategy

constraints

INTRODUCTION



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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.

The *Status of Coral Reefs of the World 2000* report estimates that 27 percent of the world's coral reefs have been effectively lost due to human activities and climate impacts (Wilkinson 2000). By 1997, an estimated 11 percent of the world's reefs had been lost to a variety of human activities including shoreline development, polluted runoff from agricultural and land-use practices, over-harvesting, destructive fishing, and ship groundings. In 1998, a massive climate-related coral bleaching event destroyed or degraded an additional 16 percent of the coral reefs of the world. It is estimated that an additional 32 percent of the world's coral reefs are now seriously threatened. If urgent management action is not taken to protect these ecosystems, a total of 40 percent of the world's coral reefs may be lost by 2010, particularly those near human populations. If current pressures continue unabated, 58 percent may be lost by 2030.

In many areas, the trend in coral reef health is downward, and these ancient ecosystems are in peril. In other areas, there is not adequate monitoring and information to assess the reef condition, or determine the effectiveness of management actions. Recent assessments of U.S. reef ecosystems suggest that many U.S. reefs are under increasing threats and are showing clear signs of serious degradation from human impacts (Bryant et al 1989; Turgeon et al 2002).

In response to this crisis, the U.S. has taken a number of significant actions over the past 5 years to help halt the decline of coral reef ecosystems and sustain the communities and economies that depend on them.

In 1998, the U.S. Coral Reef Task Force (Task Force) was established by Executive Order 13089 to help lead and coordinate U.S. efforts to address the coral reef crisis. The Task Force, co-chaired by the Secretary of the Interior and the Secretary of Commerce, includes the heads of eleven federal agencies (Department of Agriculture, Department of Commerce, Department of Defense, Department of the Interior, Department of Justice, Department of State, Department of Transportation, Environmental Protection Agency, National Aeronautics and Space Administration, National Science Foundation, U.S. Agency for International Development) and the Governors of seven states, territories and commonwealths (American Samoa, Florida, Guam,

Hawaii, Northern Marianas Islands, Puerto Rico, U.S. Virgin Islands) with responsibilities for coral reefs.

In March 2000, the Task Force adopted the National Action Plan to Conserve Coral Reefs (National Action Plan), the first national blueprint for U.S. action to address the loss and degradation of valuable U.S. and international coral reef ecosystems (U.S. Coral Reef Task Force 2000). The National Action Plan was produced by the Working Groups of the Task Force in response to its request for a cohesive national strategy to implement the President's 1998 Executive Order 13058 on Coral Reefs. The National Action Plan also incorporated the coral reef strategies of state and territory members of the Task Force (U.S. all Islands Coral Reef Initiative Strategy 1999). The National Action Plan was developed in consultation with a diverse variety of stakeholders and covered the spectrum of coral reef conservation activities, from mapping, monitoring, management and research, to education and international cooperation.

Based on extensive input from government and non-government organizations, scientists, resource managers, stakeholders and the public, the National Action Plan (1) identified key threats and issues driving the loss and degradation of coral reefs, (2) established thirteen major goals to address these threats, and (3) outlined specific objectives and priority actions needed to achieve each goal.

This document, *A National Coral Reef Action Strategy* (strategy), was produced by the National Oceanic and Atmospheric Administration (NOAA), in cooperation with the U.S. Coral Reef Task Force, to fulfill the requirements of the Coral Reef Conservation Act of 2000 (CRCA) (P.L. 106-562; 16 U.S.C. 6401 *et seq.*) and implement the National Action Plan to Conserve Coral Reefs.

The CRCA requires the NOAA Administrator to prepare, periodically review, and revise a national coral reef action strategy to achieve the purposes of the CRCA. The CRCA states that NOAA may consult with the Task Force in developing the strategy. The strategy is to include a statement of goals and objectives, an implementation plan, and a description of the funds obligated each fiscal year to advance coral reef conservation. The CRCA also requires NOAA to establish a coral reef conservation grants program to address priorities identified in the national strategy. The Act states that the strategy shall include a discussion of:

- Coastal uses and management;
- Water and air quality;
- Mapping and information management;
- Research, monitoring, and assessment;
- International and regional issues;

- Outreach and education;
- Local strategies developed by the states and federal agencies, including regional fishery management councils; and
- Conservation, including how marine protected areas will be developed in a manner consistent with local practices and traditions to serve as replenishment zones.

To fulfill these requirements, NOAA worked closely with the Working Groups and representatives of the Task Force to build on the existing goals, objectives, implementation plans, and other information associated with the National Action Plan to Conserve Coral Reefs. This information was used as the foundation for this strategy, although, this strategy does not necessarily represent the views of the Task Force.

Action is needed on a wide variety of fronts to address the coral reef crisis, especially on threats of global proportions such as the impacts of climate change on reef systems (Best et al 2002). The actions and strategies described in this document depend on a variety of other efforts by governmental and non-governmental entities to successfully address threats and reverse the degradation and loss of coral reef ecosystems.

STRATEGY TO CONSERVE CORAL REEFS

The strategy is designed to track progress and needs to fulfill the purposes of the CRCA and implement the National Action Plan by providing a mechanism to biennially (or as needed): (1) provide information on the major threats and needs in each region, (2) track progress to achieve the goals and objectives, and (3) identify priority actions needed to achieve the goals and objectives. It also provides estimates of federal funding available to support coral reef conservation activities as required by the CRCA.

Based on the U.S. National Action Plan to Conserve Coral Reefs, this strategy is divided into two fundamental themes and 13 goals crucial to addressing and reducing threats to coral reefs worldwide:

- **THEME 1: Understand Coral Reef Ecosystems** - Better understanding of complex coral reef ecosystems will improve management and conservation of these valuable resources. The strategy outlines the following major goals to increase understanding of coral reef ecosystems:

Goal 1: Create comprehensive maps of all U.S. coral reef habitats;

Goal 2: Conduct long-term monitoring and assessments of reef ecosystem condition;

Goal 3: Support strategic research to address the major threats to reef ecosystems; and

Goal 4: Increase understanding of the social and economic factors of conserving coral reefs.

- **THEME 2: Reduce The Adverse Impacts Of Human Activities** – Reducing the impacts of human activities is essential to conserving coral reef ecosystems. The strategy outlines the following major goals to reduce the adverse impacts of human activities:

Goal 5: Improve the use of marine protected area to reduce threats;

Goal 6: Reduce adverse impacts of fishing and other extractive uses;

Goal 7: Reduce impacts of coastal uses;

Goal 8: Reduce pollution;

Goal 9: Restore damaged reefs;

Goal 10: Improve education and outreach;

Goal 11: Reduce international threats to coral reef ecosystems;

Goal 12: Reduce impacts from international trade in coral reef species; and

Goal 13: Improve coordination and accountability.

This initial strategy focuses on tracking and implementing the CRCA and the National Action Plan in 2001 – 2003. It includes partial summaries of accomplishments in 2001 and partial lists of key needs to be addressed by government and non-governmental entities in 2002-2003 to help achieve the goals and objectives outlined in the CRCA and the National Action Plan. It is intended to provide brief summaries and access to additional information. It is not intended to be a comprehensive list of accomplishments or future needs. Additional information is available in annual reports from the member organizations and working groups of the Task Force (see <http://coralreef.gov/> or Appendix B for list of contacts) or other sources and organizations involved in coral reef conservation activities.

The strategy is designed to be revisited biennially (or as need), in cooperation with the Task Force, other organizations, and the public, to track progress and help identify future needs and actions. A comprehensive process for the development of future reports is being prepared in cooperation with the Task Force.

CONSTRAINTS ON FEDERAL AGENCY ACTION

This document identifies goals and objectives set forth in the U.S. National Action Plan to Conserve Coral Reefs, accomplishments towards reaching those goals, and key actions needed in 2002-2003 to fulfill the purposes of the CRCA and implement the National Action Plan. This document is intended to help track progress and guide future actions. However, all decisions on future actions remain the responsibility and authority of federal or other governmental agencies, subject to appropriate authorities and fiscal constraints as outlined below.

Resource Constraints. This strategy assumes the TASK FORCE agencies will work cooperatively wherever their missions, authorities, and resources allow them to implement the actions laid out in this plan. All actions are subject to appropriations and budgetary constraints in the context of Administration priorities. Moreover, agency priorities from year to year will reflect emerging threats and needs, as well as new technologies available to meet those challenges.

Legal and Policy Constraints. In addition to fiscal constraints on federal action, all actions proposed in this plan must conform to legal and policy requirements set forth in domestic policy and international law. These include: applicable legal authorities and statutory mandates; available appropriations; intergovernmental agreements between federal, state and territorial entities; international laws, rules and standards, including the Law of the Sea Principles as reflected in the United Nations Convention on the Law of the Sea; national security; and, Presidential directives.

Annual Priorities. The strategy is designed to be revisited biennially (or as needed) to track progress and help identify future needs and actions, in cooperation with the Task Force, other organizations, and the public. A comprehensive process for the development of future reports is being prepared in cooperation with the Task Force and other organizations.

