

WRITTEN TESTIMONY OF
TIMOTHY R.E. KEENEY
DEPUTY ASSISTANT SECRETARY FOR OCEANS AND ATMOSPHERE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
U.S. DEPARTMENT OF COMMERCE

HEARING ON THE CORAL REEF CONSERVATION ACT BEFORE THE
SUBCOMMITTEE ON FISHERIES AND OCEANS
COMMITTEE ON RESOURCES
U.S. HOUSE OF REPRESENTATIVES
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Mr. Chairman, and Members of the Committee, thank you for inviting me to discuss the contributions made by the National Oceanic and Atmospheric Administration (NOAA) to coral reef conservation authorized by the Coral Reef Conservation Act of 2000. I am Timothy Keeney, the NOAA Deputy Assistant Secretary for Oceans and Atmosphere in the U. S. Department of Commerce.

Coral reefs, often called the "rainforests of the sea," are among the oldest and most diverse ecosystems on the planet. Coral reefs provide resources and services worth billions of dollars each year to the United States economy and economies worldwide, a surprising amount considering that these ecosystems cover less than one percent of the Earth's surface. Ten and a half million people in the United States live in coastal communities adjacent to coral reefs (U.S. Census 2002). Consequently, coral reefs have become an integral part of the culture, heritage, and economies of these regions. Coral reef resources provide economic and environmental benefits in the form of food, jobs, natural products, pharmaceuticals, and shoreline protection. In fact, the international media and South Asian officials have reported a dramatic reduction in deaths and destruction from the recent tsunami in some locations due to the wave-absorbing properties of healthy coral reef ecosystems. The Maldives, a nation considered among the most vulnerable to a tsunami, suffered far fewer deaths than some coastal areas of Sri Lanka and Indonesia as a result of the extensive coral reefs that encircle the islands.

Coral reef ecosystems have survived for millions of years despite an abundance of natural disturbances. Warming ocean temperatures and human-induced impacts including pollution, overfishing, and physical damage are also having a significant effect on the health of coral reef ecosystems. A combination of stressors has caused a rapid decline in the health of many coral reefs globally and, if left unchecked, this decline could lead to significant social, economic, and environmental consequences. The Global Coral Reef Monitoring Network (GCRMN) estimates that 20 percent of the world's coral reefs have already been destroyed and predicts that 24 percent face impending destruction from adverse human impacts (Wilkinson 2004).

Congress recognized the need to preserve, sustain, and restore the condition of coral reef ecosystems by passing the Coral Reef Conservation Act of 2000 (CRCA), calling for the creation of a national strategy and program to address the threats to coral reef communities. The CRCA calls for NOAA to carry out a number of activities to promote the wise management and sustainable use of coral reef ecosystems, to develop sound scientific information on the condition of coral reef ecosystems, and to assist in the preservation of coral reefs by supporting external conservation programs.

The CRCA established a national program to conduct activities to conserve coral reefs, which led to the creation of the NOAA Coral Reef Conservation Program (CRCP). The CRCP is a matrix program that draws experts together from throughout NOAA to develop integrated strategies to address coral reef decline. In addition, CRCP works with scientific, private, government and non-government partners to address coral reef conservation on local, national, and international scales.

One of NOAA's goals is to produce comprehensive digital maps of all shallow coral reefs (<30 m) in the United States by 2009. Between 2002 and 2004, NOAA has been very active in our mapping efforts, with the percentage of shallow reef area mapped by NOAA increasing from 35 to 66 percent between 2002 and 2004. These habitat maps provide basic information about coral reef ecosystems to scientists and managers, assisting them in designing research and management plans, assessing damaged corals, monitoring reef health, and evaluating the results of their work.

Partnering with other federal agencies, as well as state and territorial governments, NOAA has helped build a national integrated coral reef monitoring system. Integrated monitoring programs measure and evaluate the condition of the ecosystem over time, help assess the efficacy of management actions, and provide comparable data sets and products that can be used to adapt these measures. In 2002, NOAA worked with federal, state, territorial and commonwealth partners to produce the first State of Coral Reef Ecosystems of the United States and Pacific Freely Associated States. This report assessed the condition of U.S. coral reefs, ranked threats in 13 geographic areas, detailed ongoing conservation

actions taken by agencies participating in the U.S. Coral Reef Task Force (USCRTF), and provided recommendations from coral reef managers to fill information gaps. The second report, scheduled for publication in 2005, will reflect more quantitative data obtained through collaborative monitoring programs.

NOAA-sponsored research has significantly expanded the understanding of processes affecting the structure, function, and health of coral reef ecosystems. This research provides managers with tools to improve the integrity and sustainable use of the Nation's coral reef ecosystems. 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, which are a major cause of reef degradation in Florida and the Caribbean.

NOAA research has resulted in the discovery of entirely new cold-water coral ecosystems, also known as deep-sea corals. These cold-water coral communities are most commonly found between 50 to 1000 meters in depth and are more broadly distributed than tropical coral reefs. Deep-sea corals occur on the edge of continental shelves and slopes throughout the U.S. exclusive economic zone. Research indicates that cold-water coral ecosystems, like tropical shallow-water corals, are potential "hot-spots" of marine biological diversity and function as important habitat for thousands of fish and invertebrate species. Additionally, cold-water corals are long-lived, slow growing animals that are vulnerable to physical disturbances. The discovery of these characteristics has led to calls for enhanced conservation of these resources. NOAA is working with each of the Regional Fishery Management Councils (RMC) to address the impacts that fishing efforts may have on these habitats, under the existing authority of the Magnuson-Stevens Fishery Management and Conservation Act. In February, the North Pacific Fishery Management Council brokered a historic agreement between the environmental and the fishing communities in Alaska to protect approximately 290,000 square nautical miles in the Aleutian Islands and Gulf of Alaska from the impacts of mobile bottom-tending fishing gear; this area includes prime habitat for cold-water corals. Because most fishing in that region has historically occurred in the areas that would remain open, the economic impacts to fishing communities are minimal. This year NOAA will publish the first report on the State of Cold-Water Coral Ecosystems of the United States and sponsor the 3rd International Deep-Sea Coral Symposium in Miami, Florida, this November. Also in 2005, NOAA will conduct a deep-sea coral expedition to explore for and investigate cold-water coral communities in the North Atlantic Ocean from the Gulf of Mexico to Canada.

NOAA's efforts under the CRCA have also addressed the threat to reefs from marine debris and abandoned vessels. Debris and vessels can cause physical harm to coral reefs, through entanglement and collision, and are serious concerns in some regions of the United States. Derelict fishing gear from distant water fisheries is the greatest anthropogenic impact to the coral reefs surrounding the Northwestern Hawaiian Islands (NWHI). NOAA leads a partnership with the State of Hawaii, Department of the Interior (DOI), U.S. Coast Guard, nongovernmental, and many local organizations to remove derelict fishing gear from the NWHI. Since 2001, this large-scale effort has removed over 400 metric tons of marine debris, and this year will complete removal of all major accumulations of debris from the NWHI. Because derelict fishing gear continues to accumulate in this area, NOAA and its partners have been coordinating an international discussion on this issue, and are conducting studies on how to detect and remove derelict fishing gear from the open ocean. NOAA has also created an Abandoned Vessels Program, which developed a comprehensive database of abandoned vessels used to identify candidate wrecks for further attention and to initiate removal of the highest priority cases.

Outreach and education activities to build public awareness and local capacity are another way NOAA promotes sustainable management of coral reef ecosystems. NOAA has reached out to stakeholders both by creating and distributing educational materials and conducting workshops and training modules. For example, NOAA held a series of workshops with fishermen in Puerto Rico and the U.S. Virgin Islands to discuss community values and the importance of coral reefs to fishing livelihoods. NOAA has also assisted state and territorial governments in enhancing their human resource capacity for marine resource management by providing technical trainings and workshops for managers, by creating internship/fellowship programs, and by providing direct funding to support management staff. For example, NOAA funds Coral Management Fellowships in six of the seven coral reef jurisdictions to assist states and territories with their conservation capacity needs.

To assist with on-the-ground management of threats to coral reefs, the USCRTF adopted a resolution in 2002 (the "Puerto Rico Resolution"), which was introduced by NOAA and called for the development of three-year Local Action Strategies (LAS) by each of the U.S. states, territories and commonwealths. These LAS are locally-driven roadmaps for collaboration and cooperation among federal, state, territory and non-governmental partners that identify and implement priority actions needed to reduce key threats to valuable coral reef resources. Florida, Hawaii, Guam, the U.S. Virgin Islands, American Samoa, Puerto Rico, and the Commonwealth of the Northern Mariana Islands each created specific LAS for select, locally relevant, threats using six priority focus areas: overfishing, land-based sources of pollution, recreational overuse and misuse, lack of public awareness, climate change and coral bleaching, and disease. Additional focus areas were identified in some jurisdictions including: invasive species in Hawaii, population pressure in American Samoa, and maritime industry and coastal construction impacts in Florida. With assistance from NOAA and other federal agencies, these jurisdictions completed their strategies in 2004 and will be implementing the various projects through 2007. The Administration strongly supports the efforts made by the local jurisdictions and, as part of the U.S. Ocean Action Plan,

has requested an funding in the FY 2006 NOAA and DOI budgets to support implementation of the LAS. The NOAA portion is \$1.5 million in new funding.

The NOAA CRCP supports local reef management and conservation efforts through multiple grant programs authorized by the CRCA. The comprehensive grants program supports a wide range of coral reef conservation projects both nationally and internationally. NOAA's CRCP grants are awarded in six categories: State and Territory Coral Reef Management; State and Territory Coral Reef Ecosystem Monitoring; General Coral Reef Conservation; Projects to Improve or Amend Coral Reef Fishery Management Plans; International Coral Reef Conservation; and Coral Reef Ecosystem Research. These projects have advanced important conservation activities, such as the Local Action Strategies, local capacity building, publication of educational materials, implementation of school marine science programs, identification and mapping of Essential Fish Habitats, and the promotion of sociological assessments of Marine Protected Areas in the Caribbean and South East Asia. Between 2002 and 2004, NOAA awarded 133 grants to external partners in the public, private, and non-profit sectors providing \$15,650,145, and leveraged an additional \$5,821,553 through matching funds. The awarded funds represent over thirty percent of the CRCP budget for FY 2004. NOAA plans to award an additional \$4,550,000 in FY 2005.

NOAA has also partnered with the National Fish and Wildlife Foundation (NFWF) to administer the Coral Reef Conservation Fund, which is authorized in the CRCA. To date, this partnership has awarded more than \$9 million in Federal and non-federal matching funds for 116 coral conservation projects in 20 countries, five U.S. trusts or territories, and four U. S. states. The Coral Reef Conservation Fund is designed to foster public-private partnerships and to promote site-based conservation efforts. These grants foster integrated resource management and have advanced the development of tools to address threats to coral reefs throughout U.S. and international waters.

NOAA, in collaboration with state and territory partners, has been conducting the first comprehensive, nationwide inventory and assessment of all U.S. coral reef-protected areas. This assessment is the first step in creating a national network of protected areas, which will help ensure the long-term viability, ecological integrity, and sustainable use of coral reefs. In addition, NOAA's National Marine Sanctuary Program conducts research and monitoring and promotes sound management within Fagatele Bay, Florida Keys, Flower Garden Banks, and Gray's Reef sanctuaries and the Northwest Hawaiian Islands Coral Reef Ecosystem Reserve.

NOAA plays a major role in international coral reef conservation. NOAA promotes improved human and institutional capacity to manage and conserve coral reefs internationally through technical assistance and its international coral small grants program. NOAA participates in multiple international efforts such as the International Coral Reef Initiative (ICRI), which supports international coral reef research and management efforts, and the Global Coral Reef Monitoring Network, which produces biennial Status of Coral Reefs of the World reports. The USCRTF and NOAA's partnership with the scientific community led to the U.S.'s successful bid to host the 2008 International Coral Reef Symposium, the largest international gathering of coral reef scientists and managers.

NOAA continues to play an active role in the USCRTF. The Task Force was established by Executive Order and is composed of twelve federal agencies, seven states and territories, and the three freely associated states. As co-chair of the USCRTF with DOI, NOAA leads the planning of the biannual USCRTF meetings. These meetings bring members together to discuss key issues, propose new actions, present progress reports, and update the coral community on past accomplishments and future plans. The USCRTF meetings provide a valuable venue for the exchange of information in which members can voice concerns about their coral reef conservation efforts and collaborate to find more effective alternatives. Many of NOAA's coral reef conservation efforts are the result of partnerships with the various federal agencies and state and territory governments on the USCRTF. We are please that the Committee has chosen to recognize the achievements of the USCRTF by holding this hearing as a kick off to this week's USCRTF meeting.

In 2002, NOAA, in cooperation with the USCRTF, published A National Coral Reef Action Strategy as required by the CRCA. The Strategy is based on the framework presented in the USCRTF's National Action Plan. The Strategy provides information on the major threats and needs in each jurisdiction and identifies priority actions needed to achieve the 13 goals and associated objectives defined in the Strategy. Two years after the Strategy was published and every two years thereafter, CRCA requires NOAA to submit a report describing all activities undertaken to implement the Strategy. NOAA expects to deliver this report to Congress in the coming months.

The authority provided to NOAA under the CRCA has provided many benefits to coral reef management and protection. The Administration recognized the importance of conserving corals in the U.S. Ocean Action Plan released on December 17, 2004. The President's FY 2006 budget request includes \$27.199 million for the NOAA Coral Reef Conservation Program, including the \$1.5 million in new funding to further implement local action strategies mentioned earlier. NOAA's continuing coral reef conservation efforts will include exploring designation of the Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve as the 14th National Marine Sanctuary; forming new international partnerships; re-establishing the interagency marine debris coordinating committee; fostering coral protection by recreational and

agricultural interests; and developing criteria to evaluate the health of coral reefs and associated water quality.

Recent accomplishments represent only intermediate steps toward achieving the goals of the National Coral Reef Action 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. Reauthorization of the Coral Reef Conservation Act is an important step for continuing this work to protect and restore coral reefs in the United States and abroad. Reauthorization would allow continuation of important NOAA-sponsored research, the Coral Reef Conservation Fund partnership with NFWF (for which the authorities in the CRCA are needed).

Thank you again for inviting me to present this overview of NOAA's current contributions to coral reef conservation under the CRCA. I would be happy to answer any questions you might have.

References:

Wilkinson, C. (ed.) 2004. Status of Coral Reefs of the World: 2004. Australian Institute of Marine Science, Australia. pp 7. (<http://www.aims.gov.au/pages/research/coral-bleaching/scr2004/index.html>)