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The U.S. Coral Reef Task Force: A Model for Fostering Coral Reef Management at National to Local Scales

E. Dieveney[1] and R. Griffis[2]

[1]National Oceanic and Atmospheric Administration, Office of Ocean and Coastal Resource Management, Coral Reef Conservation Program, Silver Spring, MD 20910. [2]National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Office of Habitat Conservation, Silver Spring, MD 20910

This report assessed the strengths and weaknesses of U.S. Coral Reef Task Force (USCRTF) efforts to mobilize U.S. coral reef conservation at local to national levels. The success of the USCRTF has been its ability to bring together government entities with diverse and potentially conflicting mandates to identify common national goals and increase on-the-ground efforts addressing local and national coral reef conservation priorities. The USCRTF includes 12 U.S. Government agencies, seven states and territories, and three Freely Associated States. Through this broad membership, the USCRTF is uniquely situated to promote a holistic, ecosystem-based approach to coral reef conservation. The USCRTF developed the first *U.S. National Action Plan to Conserve Coral Reefs* and the *National Coral Reef Action Strategy* to define and direct its overarching goals, objectives, and activities. The national goals were further refined into place-based Local Action Strategies (LAS) to address six priority threats. The LAS provide a framework for USCRTF members to address national goals through on-the-ground action. While the USCRTF has significantly advanced U.S. coral reef conservation efforts, some key challenges include the inability to set clear conservation goals, targets, schedules and performance metrics, an imbalance of time spent on developing conservation plans rather than focused effort on implementing on-the-ground action, and little power/progress to stem the tide of government sponsored actions impacting reefs.

Key Words: U.S. Coral Reef Task Force, Local Action Strategies, coral reefs, conservation

Introduction

The United States Coral Reef Task Force (USCRTF) was established in 1998 by Presidential Executive Order 13089 to lead, coordinate, and strengthen U.S. government actions to conserve coral reef ecosystems; both domestic and international. The Executive Order recognizes the value of coral reef ecosystems and directs the U.S. Government agencies to work independently "to ensure actions they authorize, fund, or carry out will not degrade the conditions of such ecosystems." To fulfill this mission, the USCRTF develops national strategies, targeted initiatives, and new partnerships to strengthen stewardship of the coral reef ecosystems in the United States and internationally.

USCRTF membership includes leaders from twelve Federal agencies, seven states, territories, and commonwealths, and three Freely Associated States (See Fig. 2). To implement the policies and requirements of the Executive Order, the USCRTF provides a forum for collaborative planning, priority-setting, partnership building, and action among federal agencies, state and territorial governments, and non-governmental partners. The unique success of the USCRTF has been the ability to bring together government entities with diverse mandates and expertise to identify national goals and foster work at the regional and jurisdictional level that addresses both local and national priorities for coral reef conservation.

National Level Collaboration

The USCRTF developed the first U.S. *National Action Plan to Conserve Coral Reefs* (2000) and the *National Coral Reef Action Strategy* (2002) to identify and develop an implementation strategy for national coral reef conservation goals and objectives (see Fig. 1). To implement the *National Action Plan* and *National Action Strategy*, the USCRTF has supported a variety of actions to reduce adverse impacts to coral reef ecosystems, raise the profile of coral reef issues and increase awareness of the threats facing these valuable ecosystems. Some examples include:

The USCRTF has committed to produce comprehensive digital maps of all U.S. shallow-water

Figure 1: ***U.S. National Coral Reef Action Strategy***
13 Goals for Addressing Threats to Coral Reefs:

THEME 1: Understand Coral Reef Ecosystems—
Goal 1: Create comprehensive maps of all U.S. coral reef habitat.
Goal 2: Conduct long-term monitoring and assessments of reef ecosystem conditions.
Goal 3: Support strategic research to address the major threats to reef ecosystems.
Goal 4: Increase understanding of the social and economic factors of conserving coral reefs.

THEME 2: Reduce the Adverse Impacts of Human Activities—
Goal 5: Improve the use of marine protected areas 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 threats to coral reef ecosystems internationally.
Goal 12: Reduce impacts from international trade in coral reef species.
Goal 13: Improve coordination and accountability.

(less than 30 meters) coral reef habitats, and to characterize priority moderate-depth (30-200 meters) reef systems. Completed digital map products cover 6,340 square kilometers of U.S. shallow-water coral reef ecosystems.

The *National Action Plan to Conserve Coral Reefs* calls for the development of a report on the state of U.S. coral reef ecosystems. These reports, The State of Coral Reef Ecosystems in the United States and Freely Associated States, produced in 2002, 2005, and 2008, characterize the condition of shallow-water coral reef ecosystems based on quantitative results of assessment and monitoring activities conducted by Federal, state, territory, commonwealth, non-governmental, private, and academic partners.

The USCRTF works to build capabilities to address such ecosystem-scale threats as disease, bleaching, and other sources of mass mortalities. To help meet this objective, the Coral Disease and Health Consortium (CDHC) was created in 2002 to provide coastal and ocean managers with scientific understanding and tools to help address coral health issues and mitigate degradation. The CDHC is a network of field and laboratory scientists, coral reef managers, and agency representatives devoted to understanding coral health and disease. It is cross-disciplinary, highly collaborative, and completely voluntary. Over 100 partners—including the Environmental Protection Agency, Department of the Interior, NOAA, other Federal agencies, academia, non-profit organizations, and industry—contribute their time and expertise

In 2005, coral reefs in the wider Caribbean suffered a widespread and severe bleaching event, which resulted in extensive coral death in much of the region. The USCRTF passed a decision item in November 2005 to mobilize efforts across the Caribbean to monitor, assess, and research short- and long-term impacts of the 2005 warming and bleaching event. The USCRTF Bleaching Committee coordinated the efforts of NOAA, NASA, the Department of the Interior's USGS and NPS, other government agencies, non-governmental organization partners, university researchers, and local managers.
The USCRTF acknowledges that marine protected areas (MPAs) are an important coral reef management tool, and has taken measures to incorporate this tool into their marine resource management efforts. The USCRTF called for strengthening the Nation's existing network of MPAs with particular attention to increasing the number of "no-take" marine reserves—areas where extractive uses are prohibited—and designing coordinated networks of coral MPAs in U.S. waters and other areas to ensure the long-term viability, ecological integrity, and sustainable use of coral reefs. The USCRTF has taken measures to assess how effectively this tool has been applied and USCRTF members have taken action to use MPAs to protect coral reef ecosystems.

Linking National Goals to Local Action – Local Action Strategies
While the USCRTF as a whole continues to make progress on the national goals, through a parallel and complementary effort these goals were further refined to focus on local, place-based issues. In 2002, the USCRTF developed place-based Local Action Strategies (LAS) which are designed to address priority threats at the local, jurisdictional level. The LAS provide a framework for USCRTF member agencies to identify and address priority threats and additional local needs, connect local priorities to national goals, coordinate Federal agency actions with local management of reef resources, and increase collaboration and resources to implement conservation actions. This approach allows the USCRTF members to tailor their goals and activities to address local issues and support on-the ground action.

Through the LAS process, the following priority threat areas were identified from the U.S. *National Action Plan to Conserve Coral Reefs* (2000):

- over-fishing,
- land-based sources of pollution,

- recreational overuse and misuse,
- lack of public awareness, and
- climate change, coral bleaching and disease.

Further, three jurisdictions used the LAS process to identify additional specific conservation issues and concerns for local action. These issues are:

- Maritime Industry and Coastal Construction Impacts – Florida,
- Invasive Species – Hawaii, and
- Overpopulation – American Samoa.

A *Status Report on Implementation of the Local Action Strategies* covering the fiscal years 2002 to 2006 identified approximately 760 projects across the seven jurisdictions and reports that the LAS have generated $25 million from numerous government and non-governmental sources applied to project implementation to date. Local agencies have leveraged hundreds of thousands of additional finds through volunteer services and in-kind resources, including time and skills, which have not been quantified in the total amounts of support received.

Local Place-Based Conservation Action

The ten USCRTF jurisdiction members span a vast geographic area, each with their own distinct set of issues, priorities, and stakeholder communities. The LAS framework has been specifically designed and used in each of the U.S. State, territory, and Commonwealth jurisdictions to address a particular set of issues and to meet the needs of the local community.

Two LAS examples follow, from Florida and Hawaii, which illustrate the value of and flexibility inherent in the LAS process.

Florida

Florida's LAS process serves as a model for the flexibility and specificity that the LAS structure allows. To meet a very specific management challenge, Florida developed the *Maritime Industry and Coastal Construction Impacts (MICCI*) LAS. Florida, more than any of the other USCRTF jurisdiction partners, experiences intense coastal use, development, shipping activity, and has an active network of commercial ports. This LAS is, therefore, intended to address activities such as vessel anchoring and groundings, infrastructure installation (e.g., cables, pipelines, and outfalls), beach nourishment, and dredge and fill operations in and around coral reefs and coastal habitats that can adversely affect these sensitive ecosystems. The key goals and objectives of the MICCI Focus Team are to:

1. Evaluate existing coastal construction and marine industry practices and their potential (or documented) impacts, and develop alternative or innovative methods and processes that significantly minimize or eliminate those impacts to marine habitats.
2. Compile and/or develop appropriate procedures for response to reef impacts, and reef restoration and monitoring.
3. Review existing regulations and suggest modifications or promote new regulations (as appropriate).
4. Encourage compliance with existing regulations.

Lack of awareness and knowledge of construction practices that can minimize these impacts is a significant source of the continued degradation of the southeast Florida reef ecosystem. Impacts associated with coastal construction projects and activities conducted by contractors unaware of the presence and vulnerability of the reef could be reduced through a combination of strategies to increase awareness and by refining some practices to better protect coral reef habitats.

Hawaii

In Hawaii, the *Climate Change and Marine Disease Local Action Strategy* illustrates how the LAS process can provide a mechanism to apply adaptive management among and between various regions and jurisdictions. *Hawaii's Climate Change and Marine Disease Local Action Strategy*, in part, is a good example of how a jurisdiction has taken existing programs and activities that have proven successful elsewhere and adapted them to meet the specific needs and to accommodate the stakeholder community in Hawaii. In designing this LAS, Hawaii has adopted and adapted monitoring programs and protocols that have proven successful in both Australia and Florida. In addition, Hawaii has taken advantage of an existing network of coral disease experts, the Coral Disease and Health Consortium, to strengthen and enhance their existing capacity for coral disease research, training, and management activities. (Report citations can be found in the reference section.)

As these two examples show, the LAS process provides the USCRTF members with a mechanism to translate national level goals into action for locally driven priority needs. Additionally, at the local level there is opportunity for flexibility and adaptive management schemes in the design and implementation of the LAS.

National Priorities Implemented Locally

While the USCRTF has taken advantage of its unique membership working directly with jurisdictions to

identify and address their priority coral reef conservation issues, the USCRTF continues to coordinate action at a national level. The USCRTF provides a forum for Federal agency members to explore how their diverse mandates, authorities, and programs can be used in concert to reach common conservation goals.

One such example is a U.S. Department of Agriculture (USDA) and NOAA collaborative partnership with Puerto Rico in the Jobos Bay National Estuarine Research Reserve. USDA's Conservation Effects Assessment Project is an effort to quantify environmental effects and benefits of conservation practices on upland agricultural lands. NOAA contributes the scientific research and monitoring data of the near-coastal waters to help make the connections between land-based conservation practices, near-shore water quality parameters, and sediment chemistry within the Bay. This is the first such project in the tropics and is an initial effort to link USDA land conservation practices with NOAA coral ecosystem monitoring activities to determine ecological impacts from land-based sources of pollution.

The USCRTF aims to promote more of these national programmatic partnerships effectively directed towards on-the-ground conservation actions and solutions.

Challenges and Weaknesses

While the USCRTF provides a forum for collaboration across Federal and local agencies, the USCRTF has faced a number of significant challenges in its attempts to increase coordinated action to conserve valuable coral reef ecosystems and the communities that depend on them. At the core, the Executive Order that established the USCRTF is not technically binding in any way, and therefore, provides no explicit authority for the USCRTF as a body. In addition, the USCRTF has no budget or independent source of funding to help promote and facilitate collective and coordinated action but rather is dependent upon individual agency budgets that can be applied to coral reef related activities. The USCRTF serves as an effective planning and coordination body at some levels; however, one of the greatest challenges has been efforts to identify conservation goals and targets, and the establishment of performance metrics at national to local levels to track progress towards the *National Action Plan* goals. The lack of such conservation targets impedes the ability to assess the overall impact the USCRTF or member actions have for conserving coral reef ecosystems.

These fundamental limitations are compounded by the challenges inherent in working cooperatively across many diverse partner mandates, authorities, and interests at the national and local level. For example, the initial process to develop LAS was not necessarily an easy or smooth transition among members to restructure their organizational framework to better link national goals to local action. This, combined with varying levels of capacity to develop and implement LAS has resulted in differing degrees of success across jurisdictions and throughout the life cycle of LAS projects.

Finally, at the National level, the USCRTF and its members are not taking full advantage of the Federal authorities and the potential role they could play in reducing impacts on reefs from threats directly or indirectly impacting coral reef systems. Action also needs to be stepped up across the USCRTF to better implement the Executive Order charge for Federal members "to ensure actions they authorize, fund, or carry out will not degrade the conditions of such ecosystems."

Conclusion & Discussion

Partnership for strategic and collaborative action

The USCRTF has created a range of effective partnerships and in turn, developed much needed capacity at the national and local level. Through the USCRTF, Federal agencies are directed to work together to address, in a collective and strategic way, the threats to coral reef ecosystems and to lead, coordinate, and strengthen U.S. Government actions to conserve coral reef ecosystems. To fulfill this mission, the USCRTF developed national strategies, targeted initiatives, and new partnerships to strengthen stewardship of the coral reef ecosystems in the United States and around the world.

In the ten years since its inception, the USCRTF has taken a variety of actions to reduce key threats and adverse impacts to coral reef ecosystems. It has led the development of national and local strategies to conserve coral reefs, increased collaboration among federal agencies and jurisdictions in coral reef regions, and helped its members launch new actions to protect and manage reef ecosystems. In particular, the real and tangible value of the USCRTF is through its efforts to create a forum for and to build upon the following:

- Foster Partnership
- Strengthen Coordination
- Increase Financial and Technical Resources
- Promote Efficiency
- Improve Effectiveness

However, despite these efforts, many reefs continue to be degraded or destroyed by unsustainable fishing, destructive fishing practices, land-based pollution, and coastal development, among other natural and human-induced impacts. In addition, climate change is having a variety of impacts on coral reef ecosystems, including increasing acidity of our oceans and the loss of corals from bleaching and disease linked to increased sea surface temperatures. Continued efforts for coral reef conservation are dependent upon a host of partners and require a multi-faceted approach. It is essential that the scientific understanding, tools and political will at all government levels exists to take effective action to address the threats these reef systems face. The USCRTF must seek to better utilize individual member authorities, programs, and expertise at the national and local level to respond more effectively to those threats that the USCRTF has the capacity to address.

The USCRTF continues to build on this strong foundation to develop and advance new and innovative opportunities for collaboration among Federal agencies and coral reef jurisdictions. Urgent, coordinated action and a recognition that greater authority is needed to stem further decline of these valuable coral reef ecosystems.

Figure 2: U.S. CRTF Members

Federal Agencies
U.S. Department of Commerce, NOAA
U.S. Department of the Interior
U.S. Agency for International Development
U.S. Department of Agriculture
U.S. Department of Defense
U.S. Department of Homeland Security
U.S. Department of Justice
U.S. Department of State
U.S. Department of Transportation
U.S. Environmental Protection Agency
National Aeronautics and Space Administration
National Science Foundation

States and Territories
Commonwealth of the Northern Mariana Islands
Commonwealth of Puerto Rico
State of Florida
State of Hawaii
Territory of American Samoa
Territory of Guam
Territory of the US Virgin Islands

Non-Voting Members
Federated States of Micronesia
Republic of the Marshall Islands
Republic of Palau

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