Coral Reef Conservation Fund – 2015 Funded Projects

Demarcation of the Boundaries of Five Priority Caribbean Marine Protected Areas (Bahamas, St. Vincent and Grenadines, and St. Lucia), *Bahamas National Trust,* Bahamas, St. Vincent and the Grenadines, and St. Lucia

Coral Reef Conservation Fund 2015 Grant: $24,000.00 Partner Contributions: $19,000.00

The Bahamas National Trust will train 20 marine protected area field staff from three countries and five managed areas to construct, deploy and maintain fixed buoys that will be used to demarcate boundaries and/or zones in support of effective protected area enforcement. Clearly defined boundaries and zones that are visible to the public and to stakeholders will enable more effective enforcement of rules and regulations and serve to better protect marine resources. The training will take place in the Bahamas and will build on regional best practices. An expert with experience working with marine protected areas in Jamaica has been selected as potential mentor and trainer for this project. Management staff from two other countries that share the need for demarcation of boundaries will also take part in the training (St. Vincent and the Grenadines and St Lucia). This project builds on past capacity building efforts related to management planning and law enforcement by the National Oceanic and Atmospheric Administration and other donors.

Capacity Building for On-Island Impact Assessment of Sediment Load Reduction in Faga'alu Watershed, American Samoa, *San Diego State University Research Foundation,* American Samoa

Coral Reef Conservation Fund 2015 Grant: $45,156.00 Partner Contributions: $45,622.00

The San Diego State University Research Foundation will build capacity for sediment load reduction monitoring in the Faga'alu watershed, American Samoa. Sediment is the main pollutant impacting coral reefs at many locations in the South Pacific, including the NOAA Priority Watershed, Faga'alu, on Tutuila Island of American Samoa. Turbidity, sediment concentrations and sediment loads have been monitored by San Diego State University at three locations in Faga'alu watershed, during three field campaigns from 2012-2014. During the course of this work, an active quarry was identified as the predominant source of sediment. Mitigation plans were implemented in 2014 to address this source, and preliminary results suggest that sediment loading has decreased following the mitigation. This project will continue monitoring of turbidity and sediment load to quantify the effectiveness of mitigation activities during storms of different sizes and over the long-term. University staff will build capacity on-island for field data collection and sample analysis during the course of the project to ensure that local management authorities will be able to continue monitoring after the project period concludes.

Strengthening Community-Based Coral Reef Management in the Solomon Islands, *Conservation International Foundation,* Solomon Islands

Coral Reef Conservation Fund 2015 Grant: $49.793.13 Partner Contributions: $50,000.00

Conservation International Foundation will support the Expanding the Reach of Community-based Marine Management initiative (Expanding the Reach) in the Solomon Islands. Expanding the Reach empowers communities to make informed marine management decisions to strengthen the health and resiliency of their coral reef ecosystems and resources. This project is

based on experience in the Solomon Islands which shows that communities are more likely to take concerted management action when they can identify the issues, select straightforward actions, and initiate and implement programs themselves. Building on a pilot project in the Guadacanal and Central provinces, the project will leverage established relationships with the government to build capacity of government officers and local practitioners to serve as community mentors. The project will update and refine its community-based marine resource management toolkit and train at least 12 fisheries officers and local practitioners to directly mentor at least four communities in four different Provinces to take marine management actions. The project will also work toward the integration of the Expanding the Reach approaches into ongoing governmental natural resource management programs. Finally the project will share its low-cost, sustainable model for significantly expanding community-based marine resource management with other countries in the Coral Triangle Region through the Coral Triangle Initiative Secretariat.

Fishing Surveys to Inform the Sustainable Use of the Coral Reef Fisheries Resources of Polanui, Maui (HI), *The Nature Conservancy,* Hawaii

Coral Reef Conservation Fund 2015 Grant: $67,371.00 Partner Contributions: $67,371.00

The Nature Conservancy will support the effective management of the coral reef ecosystem and fisheries of Polanui by working with the community to conduct a creel survey that will provide accurate information on fishing activities within the study area and where those activities are located. The once-abundant reefs of Polanui, Maui have been degraded by the overharvesting of fisheries resources compounded by the stresses of recreational overuse and poor water quality. Without information on harvest and how it compares to the impacts of myriad other human uses of the area, it is difficult for the Polanui community to develop a sound strategy that accurately identifies the unsustainable harvesting techniques and other human uses that need to be addressed to restore their resource. Observations and interviews of fishers will define the fishing effort, gear types and target species, with particular emphasis placed on documenting the take of once-abundant but now scarce herbivorous fish species. This information will directly inform the targeted management efforts that the community group Polanui Hiu is developing in collaboration with the State of Hawai‘i Division of Aquatic Resources. In addition, the survey will provide an opportunity to identify and start a dialogue with the community members that most frequently interact with the resource in order to build understanding and support of efforts to improve local management.

Integrating Resiliency Information into Coral Reef Management Planning in Pohnpei, FSM, *Marine Applied Research Center,* Federated States of Micronesia

Coral Reef Conservation Fund 2015 Grant: $50,000.00 Partner Contributions: $70,000.00

The Marine Applied Research Center will inform the protected area planning process in Pohnpei by integrating information on historic and projected future exposure to climate disturbances with recent resilience assessments. Combining information on exposure to climate disturbances with resilience potential will enable the applicant to help managers and conservationists in Pohnpei to assess vulnerability and preferentially protect sites with lower relative vulnerability. The project will also raise awareness of potential climate impacts in Pohnpei among local communities, government, and conservation organizations. The first objective of the project is to ensure historic and projected future exposure to thermal stress is incorporated in the Pohnpei protected area network design. The anticipated outcome is a more resilient network of

marine protected areas in Pohnpei inclusive of areas most likely to persist as disturbance frequencies increase. The second objective is to establish a participatory process that can be replicated in other parts of the FSM, such that the ongoing protected areas network planning process can include state-of-art remote sensing and climate data layers and thus also integrate vulnerability to long-term management.

Build Coral Reef Resource Practitioner Skills, Knowledge, and Comfort with Tools Used to Implement Coastal Ecosystem Adaptation Strategies in the Western Indian Ocean, *The Nature Conservancy,* Comoros, Kenya, Madagascar, Mauritius, Mozambique, Seychelles, South Africa, and Tanzania
Coral Reef Conservation Fund 2015 Grant: $30,000.00 Partner Contributions: $30,000.00

The Nature Conservancy, along with partners, will design and provide participatory, hands-on training to help coral reef managers from at least eight countries in the Western Indian Ocean region improve management capacity. Up to 25 participants will attend the training workshop, including those participating in the capacity building mentor/training of trainer program previously established in the region. The six-day training will be held in late 2015 and supported by the Seychelles National Park Authority who will provide locations for case studies and field activities. Pre-training surveys of potential participants and regional experts will be conducted to help focus the curriculum. Support for the project will continue beyond the training through the Reef Resilience Network.

Rain Garden Installations for the Priority Watersheds of American Samoa, *American Samoa Department of Marine and Wildlife Resources,* American Samoa
Coral Reef Conservation Fund 2015 Grant: $42,000.00 Partner Contributions: $42,000.00

The Department of Marine and Wildlife Resources and the Coral Reef Advisory Group of American Samoa will engage local communities to install rain gardens in four priority watersheds on the islands of Tutuila and Aunu'u. The villages of Faga'alu, Vatia, Nu'uuli and Aunu'u will each be represented by a community group to organize volunteers. Volunteers will work closely with the Watershed Coordinator and other trained project team members to design and construct rain gardens. Educational materials will be distributed to all participants that will provide the information needed to construct rain gardens of their own. Through training and implementation of the project, community members will learn how retaining stormwater in rain gardens reduces the amount of pollution delivered to their local coral reefs. The rain gardens will accomplish objectives set forth in management plans to reduce land based sources of pollution such as sediments and nutrients to coral reefs while engaging the local community in improving surface water quality. In addition rain gardens will reduce flooding, improve the landscape with native vegetation, and assist with groundwater recharge.

Spreading the Reach of Community-Based Coral Reef Management in Milne Bay, Papua New Guinea, *Conservation International Foundation,* Papua New Guinea
Coral Reef Conservation Fund 2015 Grant: $49,715.88 Partner Contributions: $50,000.00

The Conservation International Foundation will increase the number of communities in the Milne Bay Province of Papua New Guinea that are actively pursuing coral reef management. The project will develop and deliver efficient approaches for coral reef conservation and fisheries management with scientifically valid, easy to use guidance. The approach trains local facilitators in government and other permanent positions to engage coastal communities with user-friendly tools, empowering them to utilize their existing planning and governance mechanisms to

improve the scale and scope of resource management. The project will create and distribute management guidance tools designed for community-use through previously tested management tool-kit materials. This toolkit is composed of instructive materials including videos, factsheets, step-by-step guides, interactive workbooks, and radio outreach, which can be used by communities to implement resource management programs. These tools enable communities to make informed decisions about their marine resources and initiate cost-effective management actions. This initiative will also share its sustainable local resource management tools with the other Coral Triangle countries through the Regional Secretariat of the Coral Triangle Initiative. By linking with the Secretariat, this model will be available to help other agencies in the region as they work to expand access to local resource management guidance and enhance coral reef management across the region.

Application of Vegetative and Bioengineering Approaches in West Maui to Help Control Sediment Transport (HI), *Ridge to Reefs, Inc.,* Hawaii

Coral Reef Conservation Fund 2015 Grant: $74,225.00 Partner Contributions: $76,990.00

The Ridge to Reefs, Inc. will implement mitigation projects to reduce sediment runoff in West Maui, HI. West Maui watersheds suffer from a number of stressors to the nearshore reefs including the impact of pollutants from legacy agriculture, increasing urban runoff and wastewater injection wells that connect to the ocean. As former agricultural lands begin to re-stabilize after abandonment, one of the major concerns and observations are the eroding legacy sediments in the channels or gulches which appear to be a significant source of sediment to downstream reefs. Fortunately, the headwater areas within the West Maui watershed have been protected and preserved and extensive efforts have occurred there to remove and keep out invasive and non-native animal species (wild pigs) as well as illegal recreational motor biking. The middle watershed however was intensively farmed until recently for pineapples, seed corn and sugarcane. The relatively erodible soils entrained within the streambeds and flanking terraces within the middle portion of the watershed continue to transport legacy sediments, which preliminary findings suggest, are mobilized by relatively small rain events. The project will work within these middle and lower watershed area to address sediment transport within the gulches using bioengineering practices that can act to re-stabilize these areas for the long-term and help to mitigate the impacts from potential future land use changes.

Building Provincial and Community Capacity for Sustainable Small-Scale Fisheries Management in New Ireland, Papua New Guinea, *Wildlife Conservation Society,* Papua New Guinea

Coral Reef Conservation Fund 2015 Grant: $74,993.86 Partner Contributions: $75,000.00

The Wildlife Conservation Society will continue and extend its work to build provincial and community capacity for sustainable small-scale fisheries management in New Ireland Province, Papua New Guinea. This work will be undertaken at three island groups in northern New Ireland–the Tsoi Islands, the Bangatan group of islands, and the Ungalabu Harbor chain of islands–where Wildlife Conservation Society's existing relationship with communities and their interest in fisheries management will increase the likelihood of success. The five main activities will be to: 1) undertake community assessment of fisheries health and management options, 2) support and implement management initiatives in participating villages, 3) complete fishery assessments and baseline monitoring, 4) develop coordinated community fisheries management plans within each island group, and 5) support the development of a governance structure and legal framework for fisheries management. Expected outcomes of this work will include a

greater level of awareness and appreciation among stakeholders for fisheries management strategies, improved capacity of stakeholders to co-manage their own marine resources, and, ultimately, improved fisheries yield. Wildlife Conservation Society will work closely with local communities and the provincial fisheries authority in New Ireland Province throughout this project.

Quantifying and Addressing Fishing Impacts to ʻAʻalapapa Reef, Lanikai, Oahu (HI), *Lanikai Beach and Park Foundation,* Hawaii

Coral Reef Conservation Fund 2015 Grant: $40,000.00 Partner Contributions: $64,005.00

The Lanikai Beach and Park Foundation will address a major gap in the community's efforts to address fishing impacts by collecting information and data on fishing effort, catch, and practices through creel surveys and developing fishery management measures and proposed rules based on information and data collected as part of a comprehensive conservation action plan. With a grant from the Castle Foundation, biological and human use surveys are being conducted to provide baseline information and data needed to inform management and monitor change. Creel surveys are needed, however, to provide specific data on fishing impacts that can be used to develop new rules. The results of these surveys together with ongoing ecological surveys will be used to develop targeted management actions necessary to improve fish biomass and diversity for seafood security.

Reduction and Control of Sediment-Laden Runoff at Playa Jaboncillo, Guánica, Puerto Rico, *Protectores de Cuencas, Inc.,* Puerto Rico

Coral Reef Conservation Fund 2015 Grant: $74,796.40 Partner Contributions: $75,350.00

Protectores de Cuencas, Inc. will implement sediment control practices in Guanica, Puerto Rico to reduce runoff to coral reefs. The problems of erosion and sedimentation in Jaboncillo Beach are mainly associated with runoff generated from the dirt access road and dirt parking lot that provides vehicular access to adjacent areas of the beach. This infrastructure is in a critical state of disrepair with rutting and small watercourses conveying runoff and sediment down to Jaboncillo Beach. The lack of proper planning and management of erosion and sediment has led to an increase in contamination of the beach with land-based sources of pollution including sediments and motor vehicle associated contaminants.

Through this project Protectores de Cuencas will implement the following restoration activities: Establish temporary erosion and sediment control practices; Stabilize dirt access road and parking lot and create a sediment trap/rain garden; Improve delimitation of public access areas to protect ecological sensitive areas; Reforest vegetated buffer zone of the beach; Provide training for management staff and community groups on implementation and maintenance: and Evaluate functionality.

Advancing Reef Sustainability to Reduce Land-Based Pollution in the West Maui Watershed (HI), *The Coral Reef Alliance,* Hawaii

Coral Reef Conservation Fund 2015 Grant: $50,000.00 Partner Contributions: $173,000.00

The Coral Reef Alliance will advance watershed conservation that complements the Wahikuli-Honokowai Watershed Management Plan by targeting shoreline properties in reducing land-based sources of pollution. Like many watersheds around the world, West Maui's watershed is divided among many owners, sectors, and user groups, each contributing to sediment and

pollution loads that negatively affect adjacent coral reefs and each having a unique opportunity to be part of a conservation solution. The project will result in three outcomes: (1) A minimum of 10 West Maui shoreline properties are introduced to low impact development practices and other sustainability concepts and a minimum of 10 new sustainability measures are implemented; (2) Collective efforts by shoreline properties over the past five years to improve watershed health are measured and quantified for 10 Coral Reef Alliance-partner properties in West Maui; and (3) A pilot course for the hotel industry is established in partnership with University of Hawaii's Sustainable Living Institute of Maui.

Expanding the Delivery of Coral Reef Conservation Support in Eastern Indonesia, *Indonesia Locally Managed Marine Area Foundation,* Indonesia

Coral Reef Conservation Fund 2015 Grant: $41,000.00 Partner Contributions: $74,000.00

The Indonesia Locally Managed Marine Area Foundation will build on previous work in Eastern Indonesia to provide coral reef conservation outreach and management support to over 100 communities. This project will create a sustainable approach to providing coral reef and marine resource conservation support to a growing number of communities. A key component of this approach is to create partner mentor teams with local fisheries offices, universities, and communities that are already successfully managing their coral reefs. These teams will provide targeted outreach and step by step management support to new communities. To support this outreach, a toolkit of management materials will be created to assist and guide communities to take management action to reduce major threats to coral reefs. The materials will be easy to use and focus on supporting communities without the need for the more intensive facilitation processes. Instead the focus of the materials will be on helping communities to understand how other communities have successfully restored and maintained their coral reef resources and what specific actions they can take themselves to improve management in their areas. It is anticipated that at least half of the 100 communities that are reached during the project will take management action reducing threats to coral reefs on over 1,235,527 acres. The applicant's goal for the next five years is to reach and support 500 communities.

Caribbean Marine Managed Areas Partnership, *Gulf and Caribbean Fisheries Institute, Inc.,* Caribbean-wide

Coral Reef Conservation Fund 2015 Grant: $117,000.00 Partner Contributions: $45,636.00

The Gulf and Caribbean Fisheries Institute, Inc. will provide technical support to plan and coordinate capacity-building activities at selected Caribbean marine managed area sites to improve areas of management capacity described in a previous region-wide assessment (sustainable financing, enforcement, management planning and monitoring). The specific activities will include a peer to peer workshop, follow-up activities, website development, project coordination, and networking/communications.

The Institute will develop plans for project activities with input from NOAA Coordination Team and managers at the priority marine managed areas who participated in the assessment. The goal of the effort is to ensure real conservation action at site level for the priority marine managed areas and to contribute in a concrete way to management capacity needs they identified in the assessment, thus delivering on the needs and opportunities identified by the managers themselves.

The Institute will work with the coordination team to identify, plan and coordinate 2-5 follow-up projects to address specific management needs and implement lessons learned from previous peer to peer exchanges. Follow-up activities will be held on-site at the participating marine managed areas with expert and/or peer assistance as appropriate, and will address but not be limited to sustainable financing, enforcement, and management planning.

Indonesia In-country Coordination Services, *PT Pet Norton Consulting International,* Indonesia
Coral Reef Conservation Fund 2015 Grant: $84,600.00 Partner Contributions: $100.00

The PT Pet Norton Consulting International will provide in-country coordination services between coral conservation partners in Indonesia including Indonesia's Marine Resources Program, NOAA, Indonesia Ministry of Marine Affairs and Fisheries, and the U.S. Agency for International Development-Indonesia Mission. This partnership allows for the delivery of trainings, building of capacity, and provision of scientific and technical assistance to the Government of Indonesia, including but not limited to the Indonesia Ministry of Marine Affairs and Fisheries.

PT Pet Norton Consulting International currently provides support in the sectors of marine conservation, management of natural resources, primarily forestry and fisheries, assessment of environmental impacts of projects, public involvement and stakeholder engagement, media and communications relating to conservation, and sustainable development projects. Some of these scientific and technical training areas include but are not limited to: marine managed area management; ecosystem approaches to fisheries management; and combating illegal, unreported, and unregulated fishing.

Philippines In-country Coordination Services, *Philippine Tropical Forest Conservation Foundation, Inc.,* Philippines
Coral Reef Conservation Fund 2015 Grant: $31,850.00 Partner Contributions: $2,000.00

The Philippine Tropical Forest Conservation Foundation, Inc. will provide coordination services between coral conservation partners in the Philippines including the U.S. Agency for International Development--Philippines Office of Environment, Energy and Climate Change, NOAA, the Philippines Department of Agriculture - Bureau of Fisheries and Aquatic Resources, the Philippines Department of Environment and Natural Resources – Biodiversity Management Bureau, and the U.S. Agency for International Development-Philippine's Mission. This partnership allows for the delivery of trainings, building of capacity, and provision of scientific and technical assistance to the Government of Philippines.

Philippine Tropical Forest Conservation Foundation, Inc. currently provides on the ground support in the sectors of marine conservation, management of natural resources, primarily forestry and fisheries, assessment of environmental impacts of projects, public involvement and stakeholder engagement, media and communications relating to conservation, and sustainable development projects. Some of these scientific and technical training areas include but are not limited to: marine areas management; ecosystem approaches to fisheries management; and combating illegal, unreported, and unregulated fishing.