

**NOAA**  
**FISHERIES**

Pacific Islands Regional Office  
**Federal Programs Office**  
**2017 Annual Report**



## A Message from the Regional Administrator

We are pleased to announce that in fiscal year 2017 (FY17), the Federal Programs Office of the NOAA Fisheries Pacific Islands Regional Office (PIRO) processed 60 individual funding actions, resulting in 46 projects totaling \$8,102,977 in grants, cooperative agreements, and financial assistance to constituents in support of the NOAA Fisheries mission. We issued these awards through competitive and noncompetitive financial-assistance programs. Recipients of the federal awards included 34 US and international agencies and organizations from Hawai'i, the Commonwealth of the Northern Mariana Islands (CNMI), Guam, American Samoa, and the greater Pacific.



*Michael D. Tosatto*

PIRO manages programs that support both domestic and international conservation and management of living marine resources within the Pacific Islands Region (PIR), which is comprised of American Samoa, Guam, Hawai'i, the CNMI, and other U.S. Pacific Islands. Our vision is to achieve healthy marine ecosystems that provide: stability for fishery resources; recovery of threatened and endangered species; and enhanced opportunities for commercial, recreational, and cultural activities in the marine environment.

PIRO is responsible for assisting the Western Pacific Fishery Management Council (WPFMC) in developing fishery management plans and amendments. In addition to PIRO and the WPFMC, the NOAA Pacific Islands Fisheries Science Center (PIFSC) and the NOAA Office of Law Enforcement (OLE) also collaboratively support the conservation and management of marine fisheries, protected species, and marine habitat. Working together, these offices are committed to employing regional expertise to provide improved customer service and stewardship of living marine resources within this expansive geographic region.

Our efforts will continue to focus on capacity building, grant writing, and proposal-development training for Hawai'i and the territories, and working with communities to develop innovative projects that help NOAA Fisheries provide stewardship of living marine resources through science-based conservation and management in our region.

A handwritten signature in black ink, which appears to read "M. D. Tosatto".



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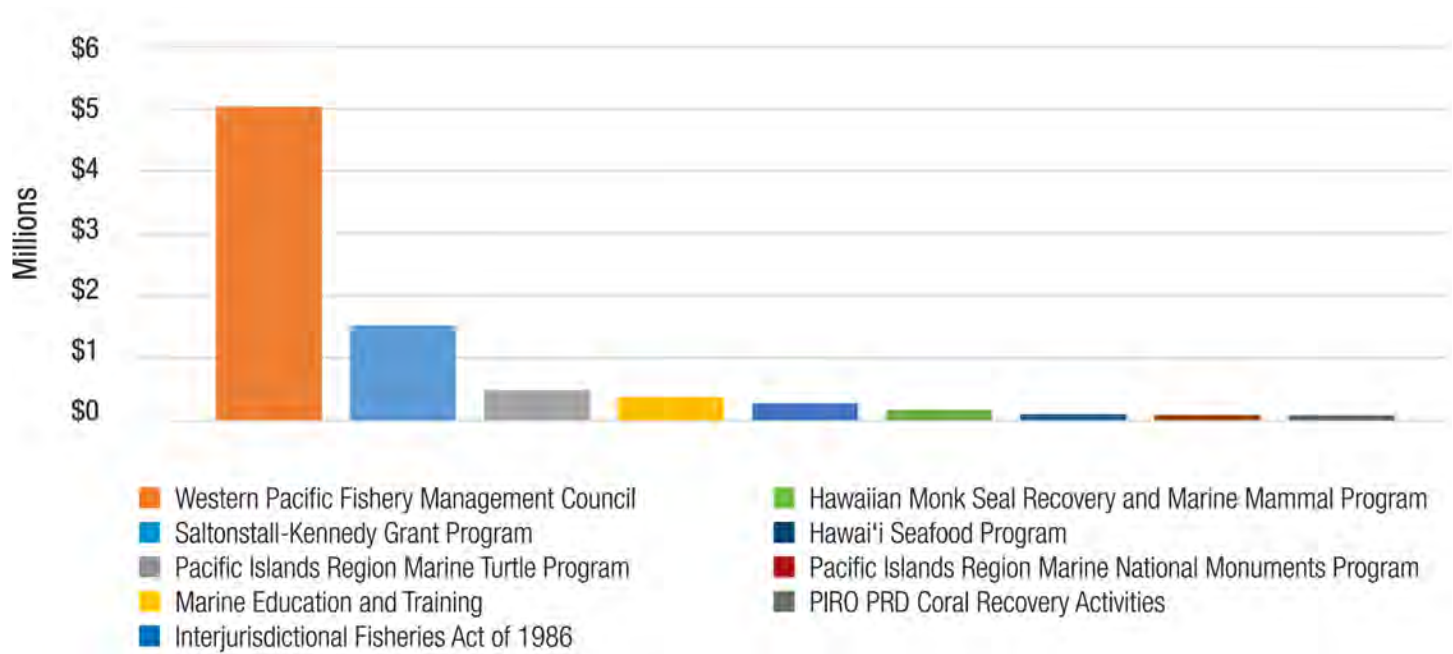
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## Highlights of PIRO's Federal Programs Office Activities

- Expanded partnerships and collaborative efforts with public and private partners in the PIR to further NOAA's mission through federal financial assistance
- Awarded \$8,102,977 in grants and cooperative agreements

### Summary of Fiscal Year Funding



## Federal Programs Office

The Federal Programs Office is located at PIRO in Honolulu, Hawai'i. With technical assistance from PIRO and PIFSC staff, Federal Program Officers (FPOs) administer grants and cooperative agreements throughout the award period, from the initial solicitation through post-award management. FPOs also work closely with the NOAA Grants Management Division, technical monitors, and grant recipients throughout the award period to facilitate the successful completion of each grant's project objectives.

The Federal Programs Office supports the NOAA Fisheries mission through competitive and noncompetitive grants and cooperative agreements. PIRO funded the following grant programs during FY17:

- Western Pacific Fishery Management Council
- Marine Education and Training Program
- Pacific Islands Region Marine Turtle Program
- Hawaiian Monk Seal Recovery and Marine Mammal Program
- Pacific Islands Region Marine National Monuments Program
- Pacific Islands Region Coral Recovery Activities
- Interjurisdictional Fisheries Act of 1986
- Saltonstall-Kennedy Grants Program
- Hawai'i Seafood Program

## Western Pacific Fishery Management Council

The WPFMC prepares, monitors, and revises fishery-management plans for domestic and foreign fishing within the 200-mile U.S. Exclusive Economic Zone (EEZ) in the western and central Pacific Ocean. PIRO is in charge of implementing the management measures created by WPFMC and NOAA OLE, and the U.S. Coast Guard 14th District and local enforcement agencies enforce the measures.

In FY17, PIRO funded the third year of a 5-year cooperative agreement to support the WPFMC base administration and operations and WPFMC's protected species conservation and management program. In addition, the WPFMC received funding support via the Western Pacific Sustainable Fisheries Fund as identified in the MSRA §204. In all, the WPFMC received \$5,031,232 for the following activities:

1. Base Administration and Operations (\$2,884,549)
2. Annual Catch Limits Implementation (\$197,528)
3. Scientific and Statistical Committee (\$55,764)
4. Magnuson-Stevens Act Implementation (\$93,244)
5. National Environmental Policy Act (NEPA) (\$88,998)
6. Council Peer Review (\$142,075)
7. Council Education Committee Scholarships (\$50,000)
8. Council Education Committee Internships (\$50,000)
9. High School Fisheries Workshops (\$62,500)
10. Territorial Science Initiative (\$189,000)
11. International Fisheries Division Support (\$36,000)
12. Recreational Fisheries Summit (\$34,995)
13. Western and Central Pacific Fisheries Commission Support (\$70,900)
14. Cooperative Research Program (\$72,429)
15. False Killer Whale Report (\$8,000)
16. Seabird Workshop (\$32,000)
17. Electronic Monitoring / Electronic Reporting Software Augmentation (\$65,000)
18. Sustainable Fisheries Division Support for Fishing Communities (\$30,000)
19. Protected Species Conservation and Management Program (\$200,000)
20. Western Pacific Sustainable Fisheries Fund V (\$18,250)
21. Western Pacific Sustainable Fisheries Fund VIII (\$250,000)
22. Western Pacific Sustainable Fisheries Fund IX (\$400,000)

The WPFMC Protected Species Conservation and Management Program aims to address fisheries interactions with protected species, and has significantly reduced sea turtle and seabird interactions in the Hawai'i-based longline fishery

through the adoption of various mitigation technologies. The WPFMC management program also supports conservation projects at nesting beaches and foraging grounds for North Pacific loggerhead turtles (*Caretta caretta*) and Western Pacific leatherback turtles (*Dermochelys coriacea*), both of which are high priority subpopulations due to historically high interactions with Hawai'i-based fisheries.

**DID YOU KNOW?** False killer whales develop long-term social bonds and have been known to share prey with their companions. False killer whales have even been known to share their fish with humans!



UFA transferring fresh fish at Honolulu Pier 38 for processing.  
Photo credit: United Fishing Agency

The Western Pacific Sustainable Fisheries Fund V is a two year project that began in 2015. This funding for 2017 is a partial amount for the last year of the effort that supports the goals and projects identified in the Marine Conservation Plan of the CNMI. Efforts for the entire project include improving community-based fishing projects and the fisheries statistics database with the CNMI Department of Land and Natural Resources (DLNR).

The Western Pacific Sustainable Fisheries Fund VIII will support the extension of the Hagåtña Fishing Platform in Paseo de Susanna Park in Guam. Within the park is a popular local recreational fishing area which has shoreline access to deeper waters. The shoreline consists of a wave absorber — a rock rip-rap structure owned and operated by the U.S. Army of Corps of Engineers to protect the shoreline from erosional forces. The uneven surface of the wave absorber and irregular placement of the rocks spawn several safety concerns for fishermen who scramble over the structure to cast their lines. The extension of the Hagåtña Fishing Platform will improve the safety of recreational fishing activities and the accessibility for all fishers, including those with disabilities.

The Western Pacific Sustainable Fisheries Fund IX will support the CNMI government to improve the Garapan Fishing Base. The CNMI government has identified the following projects that will serve to improve the Fishing Base area: 1) shoreline revetment, 2) floating dock, 3) maintenance dredging, and 4) aids to navigation. These projects are consistent with objective 4(c) of the CNMI Marine Conservation Plan. Under this cooperative agreement, the Council will work closely with the CNMI Department of Land and Natural Resources to implement improvements to the Garapan Fishing Base area. The Council will provide a subaward(s) to the CNMI DLNR for it to contract with local firms to make the physical improvements to the area. As a condition of the subaward(s), CNMI DLNR will conduct a public, competitive bidding process.

## Saltonstall-Kennedy Grant Program

The Saltonstall-Kennedy (S-K) Grant Program is a national competitive program administered by NOAA Fisheries. The program provides financial assistance (grants and/or cooperative agreements) for research and development projects that benefit the U.S. fishing industry. The program's statutory authority is the S-K Act, as amended (15 U.S.C. 713c-3). The S-K Act established a fund for the Secretary of Commerce to provide funding support for projects addressing aspects of U.S. fisheries, including, but not limited to, harvesting, processing, marketing, and associated infrastructures. In 2017, PIRO awarded \$1,516,844 in federal funds via the S-K Grant Program.

### **Oceanic Institute of Hawai'i Pacific University** — Transitioning Traditional Hawaiian Fishponds Into Sustainable Aquaculture Enterprises, \$284,203

Oceanic Institute will develop operational approaches for sustainable aquaculture production, supported through a robust research effort to assess water quality, stocking densities and survivability, growth rates, and predator exclusion and control, including costs and constraints for mullet fingerling production and transportation. These production activities will help inform the implementation of economically viable business models and support the development of capacity at fishponds to implement these models for greater social, cultural, and environmental returns. As more traditional Hawaiian fishponds are approaching a fully-restored, fully-functioning status, the next challenge is developing these fishponds into viable aquaculture enterprises that produce food for local communities, support local livelihoods, and create revenue streams to support educational and cultural programs.

### **University of Hawai'i (UH) on behalf UH at Hilo, Pacific Aquaculture and Coastal Resources Center** — Sustainable capture-based aquaculture, of Siganids, with associated hatchery-based aquaculture development, in Pohnpei, Federated States of Micronesia, as an alternative income and food security for rural fishing communities, \$245,580

There is a clear need to develop economic alternatives for fishing communities in Pohnpei, the capital island of Federated States of Micronesia (FSM), where overfishing and climate change are putting stress on natural resources. Aquaculture is seen as an activity to develop the economy of the FSM. Pohnpei is surrounded by a highly protected, well-flushed lagoon and has very infrequent storm activity, making it an ideal location to practice cage farming of fish. The overall goal of this project is to develop sustainable, capture-based aquaculture of Siganids — a family of fish that includes rabbitfish — for fishing communities in Pohnpei. The project will investigate the possibility of a long-term establishment of hatchery-based farming for these fishes, thereby providing alternative incomes, work generation, and increased food security.

### **Micronesian Environmental Services** — Expansion of the Saipan Bio-sampling Data Collection Program (Northern Mariana Islands) into age and growth and sexual maturity research for commercially important reef fish species, \$290,018

Micronesian Environmental Services (MES) runs the Saipan bio-sampling program for the CNMI government. On a previously federally funded bio-sampling project, MES collected length and weight data from 193,000 fish and gonads and otoliths from more than 11,446 commercially

harvested reef fish. The current project will process and analyze the biological samples to acquire information on age, growth, sexual maturity, and reproductive seasonality. This reproductive life history data on reef fish will support future development of Acceptable Biological Catch and Annual Catch Limits for coral reef fisheries.

**Coral Reef Research Foundation** — Validating the use of underwater stereo-video for determining life history parameters of aggregation spawning coral reef fishes, \$183,025

As new fishery stock assessment techniques are being developed to assess the sustainability of coral reef fisheries and guide stocks towards management reference points, the available input data on species-specific life-history parameters are often lacking. The goal of this project is to develop a non-destructive, cost-effective, accurate methodology that can be applied to various regions around the world to generate reliable local life history data of coral reef fish, particularly the size at maturity. This project will film spawning aggregations of sexually mature fishes with a stereo-video system to reveal the size of maturation and size frequency of mature, spawning fishes within aggregations. This underwater stereo-video survey technique will be validated against well-proven methods used to determine maturation in fishes across multiple species and spatial scales.

**University of Guam** — Establishing a fisheries-dependent monitoring network across Micronesia to maximize economic benefits, food security, and ecosystem health, \$214,460

Over the past five years, a regional coral-reef monitoring network has been established to assess the status of reefs and fisheries for conservation efforts. But there is no similar network to develop complementary fishery-dependent data sets that are needed to assess stocks and guide fisheries policies. The focus of this project is to develop the structural foundation necessary to initiate a standardized fisheries-dependent monitoring network across Micronesia, where data deficiencies are greatest. This project will consolidate fisheries-dependent monitoring datasets, improve existing photo-monitoring tools for fish landings, build an online fisheries-dependent monitoring database that connects with local databases, and conduct monitoring efforts in two jurisdictions with no standardized historical data available.

**Marine Applied Research Center of Wilmington, NC** — Identifying priority areas for management of reef-associated fisheries and adaptation of dependent communities under climate change, \$299,558

Many management agencies view reducing vulnerability to climate change as a primary management goal, requiring they

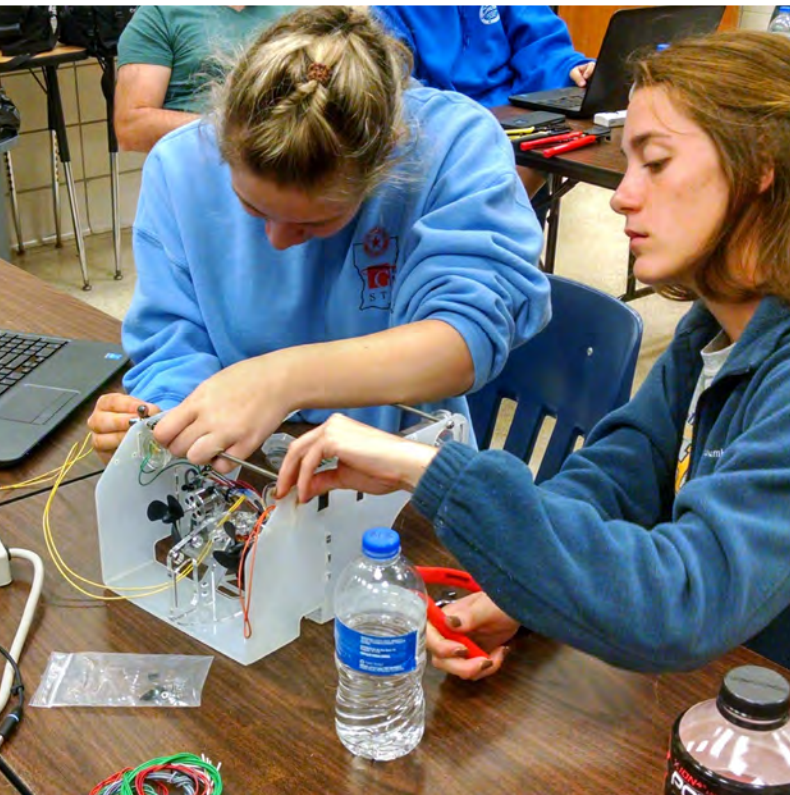
support the social-ecological resilience of the systems they manage. For coral reef-associated fisheries in the Pacific, this requires improving our understanding of spatial variation in future degradation and loss of Essential Fish Habitat. This project seeks to understand past changes to reef-associated fish communities in response to thermal stress and cyclone-generated waves, develop a climate model projection of future reef habitat degradation, and evaluate and prioritize management strategies.



*Corals create the three-dimensional structural complexity of reefs that provides Essential Fish Habitat. Corals can die during thermal stress events that cause bleaching and when damaged severely by cyclone-generated extreme sea states. Photo credit: The Nature Conservancy [Hawai'i office]*

## Marine Education and Training Program

In 2007, the Magnuson-Stevens Reauthorization Act was amended to include §305 (j), which provides guidance on the development of a marine education and training program. Public Law 109-479 states: “the Secretary shall, in cooperation with the Western Pacific Fishery Management Council, establish programs that will improve communication, education, and training on marine resource issues throughout the region and increase scientific education for marine-related professions among coastal community residents, including indigenous Pacific Islanders, Native Hawaiians, and other underrepresented groups in the region.” The Pacific Islands Region Marine Education and Training Program was established to meet Congressional intent. In 2017, PIRO funded 13 marine education and training projects in the amount of \$374,433.



*Students building an underwater robot in order to conduct marine science research. Photo credit: Angelo Villagomez*

**University of Hawai‘i Systems, on behalf of American Samoa Sea Grant** — Continuing to Build Pacific Islander Capacity in Coastal Fisheries and Sustainable Aquaculture, \$15,000.

This project will continue to build capacity of Pacific Islanders in fisheries science, sustainable aquaculture, and marine biology through participation in an internship program,

in which students will participate in community outreach activities and a tilapia marketing survey. The internship program will be at the Center for Sustainable Integrated Agriculture and Aquaculture (CSIAA), where students will learn reef ecology, aquarium and aquaculture sciences. Student interns will mentor 4-H clubs in aquaculture and aquaponics and lead tours at the CSIAA for K-12 school groups and community members. They will also conduct a tilapia marketing survey to inform local aqua farmers of their options to sell tilapia and local stores and restaurants of the option of purchasing fresh, local tilapia.

**Blackbeard Biologic: Science and Environmental Advisor** — Marine Ecology via Remote Observation: Capacity Building in Saipan through Low-Cost Underwater Robotics, \$14,754

To enhance the scientific capacity for local stakeholder groups in the growing field of underwater robotics, Blackbeard Biologic will host two marine robotics workshops in CNMI using the OpenROV 2.8 and OpenROV Trident platforms. The first workshop will engage select leaders and professionals, who will receive intensive technical instruction in OpenROV construction and maintenance. The second workshop will engage 12 to 16 students from high schools, trade schools, and the Northern Marianas College to build three OpenROVs under the mentorship of participants from the first workshop. Students will also receive training in experimental and survey design and will implement their own marine research projects using the robots that they build.

**Micronesian Conservation Coalition, Inc.** — The Fish Identification Spawning Surveys Habitat (FISSH) Project, \$15,000

This project involves a two-semester training program wherein four community residents will participate in a curriculum and an on-site water project in Guam. The classroom curriculum will include measuring and identifying fish while the in-water surveys will allow for a hands-on approach with the aim of locating fish spawning aggregations. In-water activities include: constructing GPS system buoys; recording species and density of fish aggregations; determining how the aggregations vary over time; and recording habitat, water depth, temperature, and geographical features. Time-lapse video systems will be placed at strategic sites to aid in detection of time of spawning and estimated aggregation size.



**Kua‘āina Ulu ‘Auamo — HO‘OKUA: Implementing practitioner-driven and practitioner-determined strategies for accelerating learning and preserving traditional knowledge related to marine resources, \$15,000**

Kua‘āina Ulu ‘Auamo will bring together practitioners for learning, sharing knowledge, and engaging in hands-on training in the art of traditional Hawaiian fishpond methods and invasive tree removal. This project will accelerate learning and preserving traditional knowledge of fishpond and limu (seaweed) management and conservation. Kua‘āina Ulu ‘Auamo acts as a facilitator to three grassroots networks focused on the renewal and innovation of community-based stewardship approaches. These networks include two growing “communities of practice” based in the coastal and marine environment: the Hui Mālama Loko I‘a (over 100 traditional Hawaiian fishpond caretakers from 40 fishponds and fishpond complexes) and the Limu Hui (50 native seaweed stewards and gatherers). This project seeks to address the loss of traditional knowledge, mechanisms for perpetuating traditional knowledge, and the isolation of skilled practitioners (loea) with experience in fishpond management and restoration.

**The Nature Conservancy — Ka ‘Aha ‘Ula o Kekaha Leadership Camp, \$14,811**

The Nature Conservancy will host a youth leadership camp with the communities of West Hawai‘i Island. The camp program will integrate components of intergenerational learning, place-based education focused on stewardship practices of the Kekaha region of Kona, and a multicultural youth leadership curriculum developed to challenge youth

in a safe and fun environment. Activities conducted during the camp will provide participants with exposure to current natural resource management initiatives in the districts of North Kona and South Kohala on Hawai‘i Island. Participants will directly engage with resource management professionals and community organizations through experiential learning opportunities and receive guidance to develop skills necessary to succeed in their intended career paths.

**University of Hawai‘i Sea Grant — ‘O Ke Kahua Ma Mua, Ma Hope Ke Kākulu, First the Foundation, Then the Building, \$15,000**

Utilizing data generated from a previously sponsored NOAA project, the University of Hawai‘i Institute for Hawaiian Language Research and Translation (IHLRT), in partnership with the University of Hawai‘i Sea Grant College Program (Hawai‘i Sea Grant) and Hawai‘inuiākea School of Hawaiian Knowledge (HSHK), will enhance public accessibility through more accurate word-searchable text for Hawaiian language newspaper articles related to fisheries and fisheries management. This project will train Hawaiian language students in techniques and methods to navigate and search the Hawaiian Language Collection in the Papakilo Database and correct the erroneous typescript of articles pertaining to fisheries and fisheries management. The overarching goal is to develop foundational research and literacy competencies in underrepresented Pacific Islanders, particularly native Hawaiians, in building a new cadre of Hawaiian language translators.



*Community members working in the Koieie fishpond located on Maui. Photo credit: Kua‘aina Ulu ‘Auamo, Alex Connelly*

**Aloha Kuamo’o ‘Āina** — Kuamo’o Community-Based Marine Resource Monitoring Program, \$15,000

Kuamo’o is found on an undeveloped coastal section of the west side of Hawai’i island and is surrounded by highly developed coastal areas, which are heavily used and often exploited for tourism, commercial fishing, and recreation, among other activities. Therefore, Kuamo’o provides a perfect venue for studying our marine resources and educating the diverse community of local stakeholders about sustainable marine resource management. This project will establish a community-based, long-term marine resource monitoring project, educate the community about the quality and sustainability of local marine resources, and promote sustainability by learning and sharing traditional native Hawaiian knowledge. The monthly marine resource surveys will be conducted by Hawaiian and local youth who will observe and document coral, fish, macroalgae, and intertidal invertebrates, and monitor water quality by measuring temperature, salinity, dissolved oxygen, and pH (acidity). They will also develop and share educational materials on marine resource sustainability by learning traditional native Hawaiian knowledge about fishing practices and local resources based on information gained through marine resource surveys and community interviews

**University of Hawai’i** — Training next-gen managers in identifying environmental drivers of resilience on coral reefs after climate change-induced stress in Hawai’i, \$14,868

Students will conduct reef resilience research and an inquiry-based teaching approach to studying Hawaiian coral reefs in



*Students reviewing footage of low-altitude aerial overflight of coastal areas and nearshore reefs from a unmanned camera-mounted quadcopter. Photo credit: UH-Mānoa Marine Option Program, Cindy Hunter*

a changing climate. Students will participate in field surveys to map the current distribution, abundance, health, and densities of coral and algae species to compare with historic assessments of reef health and recovery from recent bleaching and freshwater disturbances. They will measure environmental parameters, utilizing recent low altitude aerial overflights of coastal areas and nearshore reefs from unmanned camera-mounted quadcopters to map land-sea connections, and trace potential sources and influences of land-based pollution. Lastly, students will integrate environmental and



*NOAA National Weather Service Director, Ray Tanabe, with students recognized by NOAA for excellent projects at the Hawai’i State Science Fair. Photo credit: NOAA Fisheries*

anthropogenic drivers of reef health and aerial images through GIS spatial analysis to serve as a key repository for reef status, and create maps to identify potential links of land-based threats to reef health in Kāneʻohe Bay.

#### **Keolohilani Lopes — Snorkeling Assessments and New Discoveries (SAND), \$15,000**

High school students from various schools in the Hawaiian Islands will participate in a 10-day program designed to fuel the passion of young adults for the ocean and promote environmental stewardship and marine science careers. Accompanied with a hands-on introduction to current scientific sampling techniques of fish, invertebrates, and algae, the educational curriculum will be held at the Kaʻūpūlehu Interpretive Center in Kalaemanō, Hawaiʻi. Students will gain a deeper understanding of the environment, anthropogenic influences, and traditional Hawaiian approaches to resource management while learning that careers in marine science can be rewarding, exciting, and fun.

#### **University of Hawaiʻi Systems — UH Mānoa Marine Option Program (MOP) Support, \$125,000**

To provide experiential opportunities for students with ocean-related interests, MOP offers marine-education programs and activities for undergraduates across more than 40 disciplines. MOP will continue to provide career counseling, help students identify and implement hands-on internships and research projects to meet their MOP certificate requirements, liaise with project mentors, and monitor student progress. The program will facilitate scientific diving opportunities and assist in teaching aspects of hands-on underwater-surveying practices and principles courses.

#### **Hawaiʻi Academy of Science — Hawaiʻi State Science and Engineering Fair, \$60,000**

To build capacity of Hawaiʻi students interested in marine and natural science, this project proposes to provide every student in Hawaiʻi with an opportunity to participate in a science fair activity, regardless of their island of residence. The goals of the science fair are to produce students who can use the scientific method to investigate questions and solve problems in the real world; create the opportunity for the high school students to interact with the leading scientists in Hawaiʻi and conduct in-depth and comprehensive science investigations; and increase the number of students in Hawaiʻi pursuing advanced degrees in areas of study related to STEM (Science, Technology, Engineering, and Math). This project supports the administration and execution of the Hawaiʻi State Science and Engineering Fair, as well as connecting students, scientists, and teachers; leveraging partners and donors; and providing scholarships and awards to fair winners.

#### **University of Guam — Enhancing marine science capacity in the Western Pacific through science internships at the University of Guam, \$25,000**

Students of qualified projects from the Guam Island-wide Science Fair will be selected for a science internship at the University of Guam. This selection will be based upon the student's abstract, oral presentation, and project display. The internship will be for five weeks from mid-June to July under the supervision of a qualified scientist engaged in marine research. The internship will begin with an orientation week followed by project initiation and data collection. The final week will be focused on data analysis and the presentation of their summer research in a mini science symposium.



*Visitors to the Honolulu Fish Auction learn about the process of purchasing local and fresh fish. Photo credit: NOAA Fisheries*

#### **United Fishing Agency LTD — United Fishing Agency Employee Training Program, \$30,000**

In November 2016, there was an abrupt closure of Tri Marine's Samoa Tuna Processors cannery which resulted in a huge loss of wages and jobs in Pago Pago, American Samoa. The United Fishing Agency (UFA) will develop a one-year project to train displaced Samoa Tuna Processors from American Samoa and employ them at UFA in Honolulu. Training topics will include Hazard Analysis and Critical Control Points (HACCP), Occupational Safety and Health Administration (OSHA) forklift, and Transportation Security Administration (TSA) certified packing.

## Pacific Islands Region Marine Turtle Program

The Pacific Islands region Marine Turtle Program supports specific programmatic activities for the conservation, protection, and management of listed sea turtle species in the PIR. These species may occur within the PIR or have documented linkages to the PIR, such as turtles that originate from areas outside of U.S. jurisdiction but migrate through or forage within the PIR, or interact with PIR fisheries managed by NOAA Fisheries. In 2017, PIRO issued 10 federal assistance awards totaling \$478,493.

### **Mālama Na Honu** — Mālama Na Honu Education and Conservation Project, \$17,000

By the late 1970s, the honu (Hawaiian green sea turtle, *Chelonia mydas*) population was almost decimated, but their numbers have increased significantly since State and Federal protections were enacted in the 1970s. The result is that many more honu are now coming ashore to bask in the main Hawaiian Islands, increasing interactions between honu and people. These interactions, in turn, have caused

some inadvertent harassment of the honu. Mālama Na Honu volunteers will continue to provide sea turtle education for visitors to the famous Laniākea Beach on O'ahu's north shore and monitor and record daily sea turtle behaviors for the NOAA Fisheries Marine Turtle Research Program. Mālama Na Honu volunteers provide public education that reduces sea turtle-human interactions and promotes respectful wildlife viewing.

### **Hawai'i Marine Mammal Alliance Inc** — Marine Turtle Management and Outreach, \$29,986

Hawai'i Marine Mammal Alliance, doing business as the Hawai'i Marine Animal Response (HMAR), will provide a volunteer-based stranding response program on the Island of O'ahu for dead, injured, or otherwise compromised sea turtles. This program will also develop, maintain and implement a comprehensive volunteer network that will improve turtle and human interactions through educational outreach. HMAR will receive, process, and manage reports from the public and others concerning sea turtles strandings, provide fully trained and vetted volunteers to respond to these strandings, and conduct these activities in close collaboration with the NOAA PIFSC Marine Turtle Biology and Assessment Program and the NOAA PIRO Marine Turtle Management and Conservation Program.

### **Nā Kama Kai** — Use of Nā Kama Kai Programs Created to Teach and Disseminate Information about the Status, Natural History, and Conservation of Threatened and Endangered Hawaiian Turtles, \$6,829

Emphasis of all Nā Kama Kai (Children of the Sea) programs focus on community-based educational outreach efforts to manage human disturbance to sea turtles on the Island of O'ahu. The three major Nā Kama Kai projects — Ocean Clinics, Alaka'i Program, and Equipment Recycling Program — all support the goals of promoting appropriate wildlife viewing, elevating public awareness, and building local capacity for sea turtle conservation and stewardship to reduce human disturbance or "take" of turtles. Nā Kama Kai provides environmental, educational and outreach services for keiki (youth), giving them the opportunity to learn about and gain access to the marine environment with modern and traditional cultural equipment. As stewards of the kai (sea) and 'āina (land), keiki from all ethnic origins and economic backgrounds will learn to embrace their kuleana (responsibility) for the protection of sea turtles and the fragile marine ecosystems in which they live.



*U.S. Fish and Wildlife Service and the Hawai'i Wildlife Fund performed an emergency nest relocation of Hawksbill Sea Turtles on the island of Maui. The nest of 241 critically endangered turtle eggs was within inches of collapsing into the surf. Photo credit: Hawai'i Wildlife Fund, Luke Sundquist*

**The University of the South Pacific** — Monitoring of American Samoa-origin stock of green turtles in two key foraging grounds in Fiji, with cascade effects on management of central South Pacific sea turtle populations, **\$69,000**

Representatives of the University of the South Pacific will monitor presence, habitat use, and foraging ecology of the American Samoa-origin stock of green turtles at two key foraging grounds in Fiji. This project builds on a previous PIRO co-funded project, in which more than 80 green turtles were captured, sampled for genetic (mitochondrial DNA) and stable isotopes analyses, tagged, and released. Monitoring activities will focus on two key foraging grounds and relates to three of the eight major actions identified by U.S. Sea Turtle Recovery Plans to achieve green turtle populations recovery: identify and protect primary foraging areas for the species; support conservation and biologically viable management of green turtle populations in countries that share U.S. green turtle stocks; and identify stock home ranges through genetic analysis.

**American Samoa Department of Marine and Wildlife Resources** — Investigations Into the Status of Marine Turtles of American Samoa: An Intensive Monitoring of Green and Hawksbill Turtle Nesting Beaches in Ofu Island and a Stranding Response Programme in Tutuila Island, **\$54,344**

The American Samoa Department of Marine and Wildlife Resources (DMWR) will continue its American Samoa Marine Turtle Conservation Program. DMWR has had significant success in establishing a nesting beach monitoring program in Ofu and Olosgea and an emergency stranding response program in Tutuila. These programs have generated quality data sets and their continuation is critical for informing managers in marine turtle conservation for the territory and beyond. Staff will continue to monitor beaches for green and hawksbill nesting turtles, map and identify harmful lighting on the nesting beaches of Tutuila, continue satellite tracking of sea turtles in the islands, expand genetic studies, and respond to emergency strandings of turtles. In addition, this program will increase education and outreach activities to enhance public awareness and support turtle conservation in the Territory.

**CNMI DLNR** — Stewardship of Northern Mariana Islands Sea Turtles through Conservation and Management, **\$85,000**

Green and hawksbill sea turtles are listed as an endangered distinct population segment in the Central West Pacific. Poaching, increased recreational use of beaches, increased fishing pressures on coral reef and seagrass habitats, human population growth, coastal development, and poorly funded conservation education and public awareness efforts continue to threaten the population of these sea turtles on Saipan. To



**DID YOU KNOW?** As indigenous species in Hawai'i, sea turtles play an important role in Hawaiian cultural traditions and mo'olelo (stories).

Honu (green turtle) and 'ea or honu'ea (hawksbill turtle) are mentioned in the fourth verse of the Kumulipo, the Hawaiian creation chant. Some families continue to revere sea turtles as their 'aumākua, or spiritual guardian.

Traditionally, sea turtles were incorporated into native practices, religious ceremonies, and diet. Shells, bones, and oil were used to make fish hooks, tools, jewelry, and medicine. Harvest was tightly regulated by traditional management practices of the kapu system (cultural rules, code of conduct) enacted by Chiefs or Ali'i.

provide a strong foundation for science-based conservation and management practices, the CNMI DLNR will continue a near-shore capture and tagging program coupled with a program to monitor nesting beaches to determine hatch and emergence success and to collect tissue biopsies for genetic research.

**Hawai'i Wildlife Fund** — The Research, Protection, and Monitoring of Maui Nui's Nesting and Foraging Hawksbill Populations (2015–2019), **\$34,970**

The hawksbill sea turtle (*Eretmochelys imbricata*) is critically endangered in Hawai'i, yet its population and ecology are not well understood. The Hawai'i Wildlife Fund's Hawksbill Recovery Project will monitor and protect Hawaiian hawksbill turtles to increase their survivorship and aid in the recovery of the endangered species. Conservation efforts will identify both nesting and in-water hawksbills and their associated habitats, improve the quality of these habitats, and promote survival by reducing numerous threats. Three primary objectives of this

project are: continue and expand ongoing monitoring research and protection efforts of sea turtles within Maui Nui (Maui, Lānaʻi, and Molokaʻi); involve and educate the community about the plight of the Hawaiian hawksbill; and collate existing (beginning from 1992) and new data so that informative management decisions can be based on the most up-to-date information.

### **World Turtle Trust on behalf of The Honu Project — Hawaiʻi Island Hawksbill Turtle Recovery Project, \$68,974**

The goal of the Hawaiʻi Island Hawksbill Turtle Recovery Project (HIHTRP) is to manage and protect hawksbill sea turtles and their nesting habitats along the southern coast of Hawaiʻi Island. To understand population trends, as well as spatial and temporal nest distribution on the island, this project will continue nightly monitoring, nesting-habitat management, and onsite education activities at hawksbill-nesting habitats and throughout the community on the Island of Hawaiʻi. HIHTRP staff will continue to survey potential nesting sites for signs of activity and control non-native mammalian predators and vegetation. In addition to hawksbills, threatened green sea turtles, endangered Hawaiian monk seals (*Neomonachus schauinslandi*), endangered nesting seabirds, and other marine life benefit from the HIHTRP's protection and management of coastal habitat and educational outreach efforts.

### **Pro Delphinus — Advancing Leatherback Conservation in the Southeast Pacific Through Bycatch Mitigation and Community-Based Conservation: A Three-Year Project, \$59,390**

To promote long-term population stability of leatherback sea turtles in the Pacific, this three-year project will assist by reducing and mitigating interactions with sea turtles in small-scale gillnet fisheries in Ecuador and Chile. This goal will be accomplished through multiple objectives, including: raising awareness within the gillnet fishery, as well as among local and regional government officials and partners in Ecuador and Chile, regarding the conservation of leatherback turtles and mitigation options; conducting sea turtle-bycatch mitigation trails, such as net-illumination, net-patrolling, and net-bycatch-alert activities; and monitoring bycatch-vessel systems and the barriers to mitigation through socio-economic studies and at-sea testing.

### **Large Marine Vertebrates Research Institute Philippines, Inc. — Assessing the status and ecology of endangered marine turtles in the Philippines and its role in PIR turtle conservation, \$56,000**

To establish a deeper understanding of marine turtles in the Philippines, Large Marine Vertebrates Research Institute Philippines, Inc. will create a centralized database with all historical and present data about turtle presence and distribution, to identify existing and potential threats to the species. In addition, the database will highlight priority areas for conservation, and help to further understand the connectivity of Philippines turtles with the U.S. PIR and other neighboring countries. The second phase of the project will focus on data collection and scalability of the population monitoring system. This will include dedicated efforts to: (1) collect genetic samples to understand connectivity to other populations; (2) conduct photo-ID and paired laser photogrammetry to understand growth rates, residency times, individual presence, and movement, as well as other life history parameters and health conditions; (3) satellite telemetry, time-depth recorder tagging, and flipper tagging to understand movement, connectivity, and habitat use; (4) nesting monitoring; and (5) preliminary observation of fishery interactions.



*The Honu Project coordinator Lauren Kurpita conducts sea turtle outreach at Nāʻālehu Elementary School. Photo credit: The Honu Project/World Turtle Trust*

## Hawaiian Monk Seal Recovery and Marine Mammal Program

The Hawaiian Monk Seal Recovery and Marine Mammal Program supports specific programmatic activities related to promoting the recovery of endangered Hawaiian monk seals and marine mammals in the main Hawaiian Islands and U.S. Territories. This program supports community-based and community-integrated projects with an educational component designed to elevate public awareness and build capacity from the community. In 2017, PIRO issued 4 federal assistance awards in the amount of \$167,955.

**Marine Mammal Center** — Hawaiian Monk Seal Stranding Response Program, Hawai'i Island, East, \$10,951 — and Hawaiian Monk Seal Stranding Response Program, Hawai'i Island, West, \$40,994

The Marine Mammal Center (TMMC) will strengthen Hawaiian monk seal response and community outreach through two separate projects on the east and west side of Hawai'i Island. With a volunteer response network in each location and coordinated community efforts and partnerships, this project will improve local resident understanding of and participation in activities that promote Hawaiian monk seal recovery. These goals align closely with NOAA Fisheries 2016 Monk Seal Management Plan and the priorities outlined in the Species in the Spotlight 2016–2020 action plan. TMMC will deepen relationships with residents and coastal communities; increase volunteer numbers; improve signage and outreach collateral so that more visitors and residents are aware of and use the response hotline number; and strengthen management of hotline responsibilities.

**Hawai'i Marine Mammal Alliance Inc. (HMMA)** — Hawaiian Monk Seal Recovery and Marine Mammal Response, \$96,048

To protect and assist in the recovery of Hawaiian monk seals, HMMA will operate a Hotline Team to field calls and website reports and manage field response teams on O'ahu and Moloka'i. Field response teams will patrol beaches known for seal activity, respond to sightings of seals reported to the Hotline, and engage with the public to answer questions and educate them about the Hawaiian monk seal. In consultation with NOAA, HMMA will also develop a Stranding Team to validate and assess Hawaiian monk seal condition, assist NOAA staff with disease vaccination, behavioral modification techniques and protocols, and recovery and transport of dead marine mammals. HMMA will also develop an Education Team to teach students about marine mammals, how to protect these animals, appropriate viewing behavior, sustainable fishery interaction tactics, and the ocean environment.



Monk seal resting on an area of the beach that has been blocked off with ropes and informational signage to create a safe viewing distance for onlookers.  
Photo credit: NOAA Fisheries

**DID YOU KNOW?** Hawaiian spinner dolphins have a cyclical daily pattern. They spend their nights offshore hunting for food and their days in protective nearshore bays, where they nurture their young, socialize, and catch up on sleep (they snooze with only one-half of their brain at a time). While in some of these critical resting bays, however, they're exposed to human activities — including people trying to swim with them — more than 80 percent of the time.

**Oceanwide Science Institute** — Development of an acoustic monitoring plan for Hawaiian spinner dolphins to examine the effectiveness of proposed regulations, \$19,962

Oceanwide Science Institute will develop a Hawaiian spinner dolphin (*Stenella longirostris longirostris*) monitoring plan, which first requires field testing three types of passive acoustic monitoring instruments. An increase in coastal development and human activities along many of Hawai'i's coastlines over the past several decades has led to a parallel increase in commercial and recreational water activities, including vessel-based dolphin-watching and swimming with dolphins. In response to these concerns, NOAA has proposed a new rule that would limit both commercial and recreational interactions with spinner dolphins within a three nautical mile distance from shore statewide. To gauge the effectiveness of the new rule, a spinner dolphin monitoring plan is to be implemented that quantifies any changes in spinner dolphin behavior resulting from the rule's enactment.

## Interjurisdictional Fisheries Act of 1986

The Interjurisdictional Fisheries Act of 1986 assists states in managing interjurisdictional fisheries resources. Apportionment to states is based on the average value and volume of raw fish that domestic commercial fishermen land. The data obtained is the principle source of information and analysis for the fisheries activities and management options that are used to address federal requirements for fisheries management plans under the jurisdiction of NOAA Fisheries. In 2017, PIRO allocated \$272,645 to this program for four awards.

### **American Samoa Department of Marine and Wildlife Resources — American Samoa Interjurisdictional Fisheries Stock Assessment and Monitoring Program, \$162,036**

This project provides both technical and financial support to the Department of Marine & Wildlife Resources of the American Samoa Government to assess and monitor the status of interjurisdictional fish species caught within American Samoa's EEZ. The data obtained through this project will be the main source of information that will be utilized to address local and federal requirements for Fishery Ecosystem Report under the jurisdiction of the Department of Marine & Wildlife Resources and NOAA Fisheries through WPFMC. Through the cooperative efforts between federal and local agencies, the overall goal of this proposed project is to provide fisheries information in a timely fashion to develop, implement, and evaluate Fisheries Ecosystem Report for the territory of American Samoa and WPFMC.

### **State of Hawai'i, Department of Land and Natural Resources, Division of Aquatic Resources (DAR) — Maintain Online Commercial Fisheries Reporting System Applications for the State of Hawai'i, \$83,603**

Since 1948, licensed commercial fishermen have been required to submit monthly fishing reports to Hawai'i's Department of Aquatic Resources (DAR). These reports are an important collection of a series of fishery dependent data. Both federal and state fishery agencies use this "best available" data to assess the status of marine resources and to establish fishery regulations in State and U.S. EEZ waters. Annually, approximately 3,000 licensed commercial fishermen are required to submit a total of 35,000 monthly fishing and Deep 7 bottomfish fishing trip reports to DLNR-DAR and 250 primary commercial marine dealers submit 3,000 monthly purchase reports. Will project will continue to maintain the two websites that manage these fishing reports, issue and renew commercial fisheries licenses and permits, and track fish dealer report logs.

### **Commonwealth of the Northern Mariana Islands, Division of Fish and Wildlife — Data Collection and Entry in the Management of CNMI's Interjurisdictional Fishery Resources, \$13,503**

This project provides financial support to the CNMI Division of Fish and Wildlife to collect, process, and share important fisheries monitoring data during fishing tournaments that will be used in federal and local fisheries management programs for the CNMI. The data obtained through this project will be the principal source of information and analysis of fisheries activities and management options of pelagic landings during tournaments that may be used to address federal requirements for Fisheries Management Plans (FMPs) under the jurisdiction of NOAA Fisheries through WPFMC. The overall goal of this project is to provide fisheries data to develop, implement, evaluate, and amend FMPs for the Western Pacific Region.



*Fishermen offloading a striped marlin, CNMI. Photo credit: NOAA Fisheries*

### **Guam Bureau of Statistics and Plans — Data Collection and Data Entry in the Management of Guam's Interjurisdictional Fishery Resources, \$13,503**

Guam presently serves as a major transshipment and port-of-call for large scale fishing fleets operating in the Western Pacific. Two primary types of fishing vessels — purse seiners and longliners — make up Guam's large scale fisheries. This project will continue to support the coordination of data collection and entry activities under the Pacific Fisheries Data Program with reference to transshipped species offloaded by foreign longliners at Guam's commercial port. The project is designed to help address the information requirements needed by both state and federal governments to develop and implement policies conducive to the maintenance and expansion of Guam's fishing industry, and develop sound management and conservation plans for Guam's interjurisdictional fishery within its Territorial waters and EEZ.



## Pacific Islands Region Coral Recovery Activities

In 2014, 15 Indo-Pacific coral species were listed as threatened under the Endangered Species Act. Since then, PIRO has been actively engaged in projects and activities that contribute to the recovery of these species. We are currently developing a rule that will designate coral critical habitat for the listed species within the United States. The development of a Recovery Plan is also on-going and will address the criteria that needs to be met for these coral species to be delisted, as well as site-specific management actions to help achieve those end goals.

Because many of the listed coral species are difficult to identify in the field, PIRO has developed a Coral Species Identification Guide and has held numerous trainings throughout the region (Guam, CNMI, American Samoa, and Hawai'i) to assist experts who work in the field with identifying listed corals. In addition, we are working with federal partners to develop a tool to aid in coral mitigation determinations. In FY17, PIRO issued one financial assistance in the amount of \$74,998.

### University of Hawai'i — Advancing Coral Conservation By Increasing Reef Resilience Understanding and Managing Chronic Water Quality Stressors, \$74,998

The Kewalo Marine Laboratory at the University of Hawai'i will conduct research to determine threshold values for key stressors to reef-building corals, the rate at which corals can respond to mitigation efforts at stressor reduction, and how surviving populations are functioning in the key areas of reproduction and recruitment. The research project consists of laboratory-based genetics work, a field reciprocal transplant experiment, and development of management tools.



**DID YOU KNOW?** Coral reefs were important to the ancient Hawaiians for food, cultural practices, recreation and overall survival. According to the Hawaiian Creation Chant, the kumulipo, the coral polyp was the first creature to emerge from the sea during the creation of the world. The early Hawaiians recognized that coral reefs are a building block of our islands and used coral in religious ceremonies to demonstrate honor and care for ocean resources.

## Hawai'i Seafood Program

The Hawai'i Seafood Program is an effort to help strengthen the economic viability of Hawai'i's fishing and seafood industry through activities that promote Hawai'i fisheries as high-quality and safe domestic seafood produced by a responsible and well-managed fishery. In FY17, PIRO funded one pilot project for \$98,476.

### Conservation International — Exploring a branding program for Hawai'i wild-caught pelagic seafood, a co-discovery engagement of the Hawai'i Seafood Industry, \$98,476

Conservation International will utilize a multi-stakeholder approach to increase the awareness of and discussions surrounding a branding program for Hawai'i's pelagic fisheries. If it is determined that the industry is ready for a

branding program, this project has significant potential to increase Hawai'i fisheries' capacity to sustainably produce healthy sources of protein for both local and domestic markets, expand market access for local seafood, and increase the market value of these products. In addition to economic benefits, this project is intended to increase access to safe, healthy, locally sourced protein for local consumers; strengthen connections between consumers and the seafood industry; support the perpetuation of the rich fishing heritage, culture, and traditions of Hawai'i; and meaningfully contribute to the ecological sustainability of our fisheries resources.

## Pacific Islands Region Marine National Monuments Program

In 2009, a Presidential Proclamation designated three new Marine National Monuments (MNM) in PIR (adding to the existing Papahānaumokuākea MNM), thereby protecting these relatively undisturbed marine ecosystems, which are flourishing with healthy coral reefs, large numbers of apex predators, significant fish biomass, and healthy seabird populations. PIRO supports the management objectives of these MNMs — the Marianas Trench MNM, Rose Atoll MNM and Pacific Remote Islands MNM — and is developing management plans for them, which will guide managers in the preservation and protection of the resources in these isolated locations. For FY17, PIRO issued a single federal assistance award totaling \$87,901.

### **Kupu** — Kupu Youth Internship to Support NOAA Fisheries Priority Focus in the Pacific Remote Islands, \$87,901

Interns will conduct literature searches and interviews with key historians to gather information on the indigenous cultures, practices, and heritage that occurred in the Pacific Remote Islands Marine National Monument (PRIMNM). They will augment this information with additional literature searches of recent historical activities and combine it with the known military occupations to fully develop a database of indigenous culture(s) and recent history. Monument managers will use this information in drafting the PRIMNM management plan. Understanding the value and importance of the cultural and historical perspectives of PRIMNM is an essential part of the management plan to be developed. It is important to document people's interactions with both land and marine bases, giving cultural and historical interactions weight in modern day management. This also allows managers to raise awareness about the need to develop relevant cultural resources to better understand and appreciate the significance of these areas beyond its present day use.

## Pacific Regional Grants Cooperative

The NOAA Pacific Region Grants Cooperative (PRGC) is a group of grant administration staff representing the various NOAA line offices within the Pacific Islands Region. The PRGC formed to leverage both experience and resources to further NOAA's mission and goals. The creation of this group has formalized a venue for sharing best management practices and precious resources to successfully administer NOAA grants.

### **The Write Source, Federal Assistance Proposal Development Workshops** — \$76,800

As a resource and tool for applicants, PRGC facilitated a series of federal proposal development workshops, complete with half-day consultations, throughout Hawai'i and the Pacific. These workshops allow applicants to enhance their project goals and objectives and improve their project narrative. The consultations will provide participants with one-on-one guidance on either new or revised applications to produce well-conceived, written proposals. The PRGC-developed grant writing manual is available for all applicants on the NOAA PIRO website.

## 2017 Unfunded Federal Programs

The following programs were not funded in FY17 due to budgetary constraints:

**Western Pacific Demonstration Projects:** Public Law 104-297 (16 U.S.C. 1855) authorizes grants for Western Pacific Demonstration Projects that foster and promote the involvement of communities in the western Pacific.

**Native Fishery Observer Program:** The NOAA Fisheries Observer program is responsible for providing long-line observers, who obtain data on incidental sea turtle takings and collect fishing effort data. The observers document interactions of all protected species, tally fish that are kept and discarded, and process selected specimens for life history. The Native Fishery Observer Program targets Native Hawaiian, American Samoan, and other Pacific Islander residents for employment as fishery observers in the Hawai'i and American Samoa fisheries.



Photos (clockwise from top left): Community members working to restore a fishpond at the 2015 Makaha workshop. Photo credit: Kua'aina Ulu 'Auamo, Kimberly Moa, Alex Connelly; UH Students on the dock at Hawai'i Institute of Marine Biology. Photo credit: UH-Marine Biology Department; Leilani Sablan setting down GoPro camera to capture spawning events in Guam. Photo credit: Micronesian Conservation Coalition, Julie Hartup; Dr. Chatham Callan (Oceanic Institute, Hawai'i Pacific University) talks aquaculture production with the National Saltonstall-Kennedy grant program and the NOAA/NMFS/PIRO Aquaculture Coordinator. Photo credit: NOAA Fisheries



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