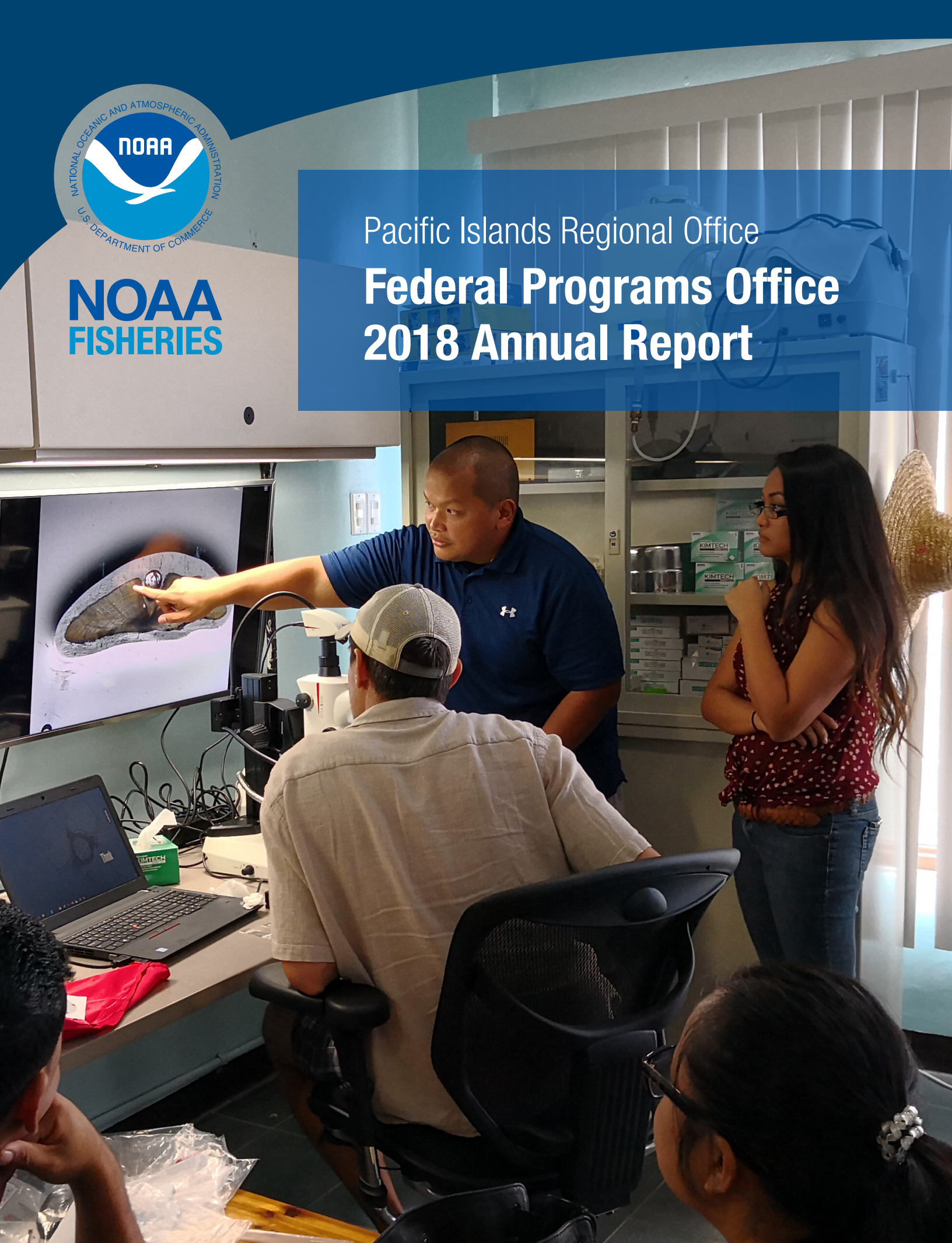
NOAA FISHERIES

Pacific Islands Regional Office

Federal Programs Office 2018 Annual Report



A Message from the Regional Administrator

Michael D. Tosatto

We are pleased to announce that in fiscal year 2018 (FY18), the Federal Programs Office of the NOAA Fisheries Pacific Islands Regional Office (PIRO) funded 47 projects totaling $7,217,417 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 23 U.S. and international agencies and organizations from Hawai‘i, the Commonwealth of the Northern Mariana Islands (CNMI), Guam, American Samoa, and the greater Pacific.

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.

Front cover: Students and teachers analyzing an otolith to determine vital life history information on targeted commercial reef fish species. This 2017 project by Micronesian Environmental Services in Saipan will greatly add to the fishery data available in the region. Photo credit: NOAA Fisheries

Back cover: Valentine Vaeoso, past American Samoa QUEST alumni, conducting a coral reef survey. Photo credit: American Samoa Community College

American Samoa QUEST alumni, Motusaga Vaeoso, checking salinity levels in the stream flowing into the bay. Photo credit: American Samoa Community College

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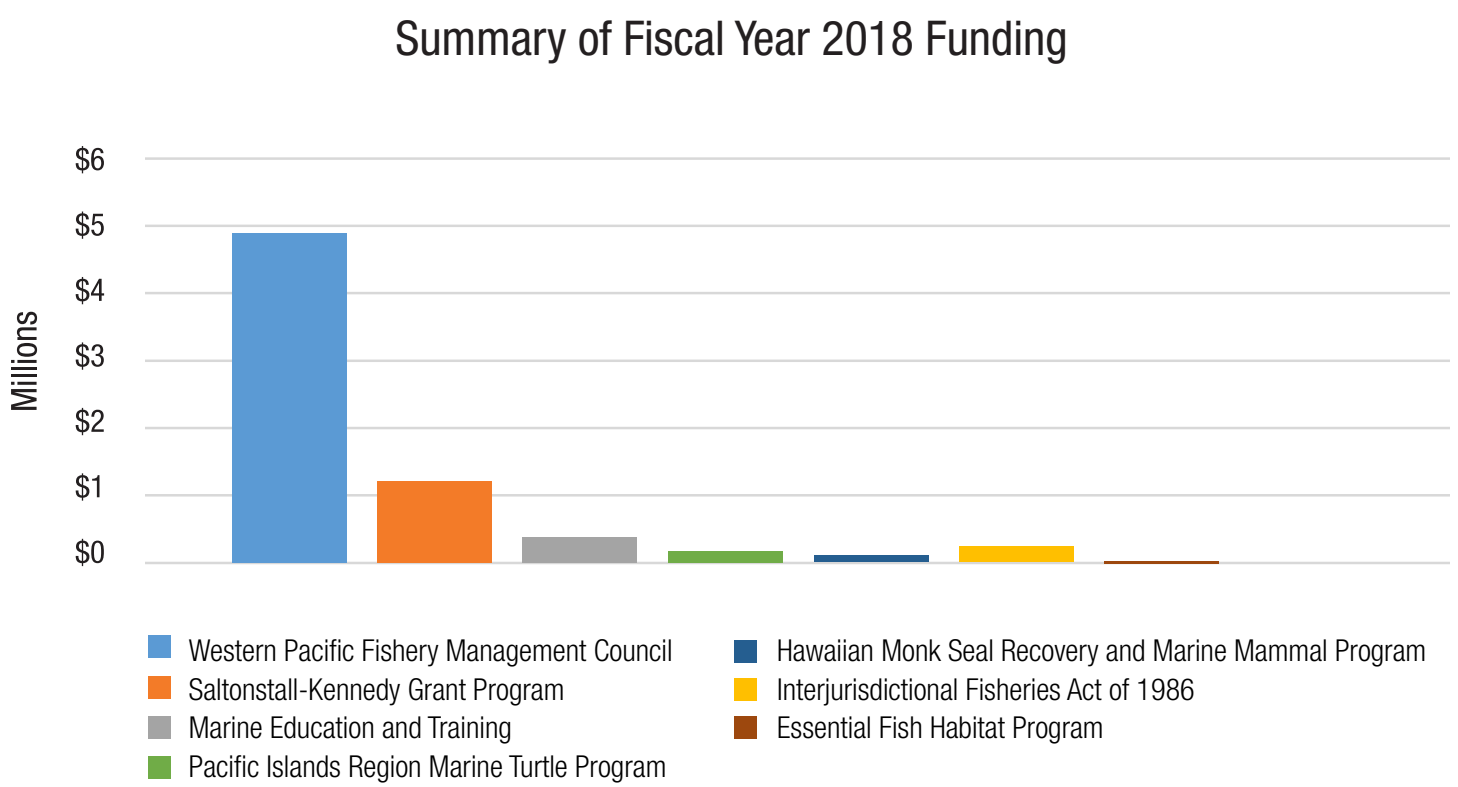
Highlights of PIRO's Federal Programs Office Activities

- Expanded partnerships and collaborative efforts with public and private partners in the PIR to further NOAA's mission through federal financial assistance.
- Awarded $7,217,417 in grants and cooperative agreements



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 FY18:

- Western Pacific Fishery Management Council
- Saltonstall-Kennedy Grants Program
- Marine Education and Training Program
- Pacific Islands Region Marine Turtle Program
- Hawaiian Monk Seal Recovery and Marine Mammal Program
- Interjurisdictional Fisheries Act of 1986
- Essential Fish Habitat 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 FY18, PIRO funded the fourth 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 $4,844,806 for the following activities:

1. Council Base Operations Base Administration and Operations ($2,880,356)
2. Territorial Science Initiative ($189,000)
3. Annual Catch Limits Implementation ($197,528)
4. Scientific and Statistical Committee ($55,764)
5. Deregulation and Regulatory Reform ($117,750)
6. National Environmental Policy Act (NEPA) ($88,998)
7. Council Peer Review ($142,075)
8. Council Education Committee Scholarships ($50,000)
9. Council Education Committee Internships ($50,000)
10. WCPFC Meeting Support ($75,000)
11. Protected Species Conservation and Management Program ($200,000)
12. Olive Ridley and Leatherback Case Studies for Hawai'i and American Samoa Longline Fisheries ($75,000)
13. Western Pacific Sustainable Fisheries Fund X ($511,600)
14. High School Fisheries Workshops ($62,500)
15. Stock Assessment and Fishery Evaluation (SAFE) Report ($60,000)
16. Magnuson-Stevens Act Implementation ($89,235)

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 and Western Pacific leatherback turtles, both of which are high priority subpopulations due to historically high interactions with Hawai'i-based fisheries.

The Western Pacific Sustainable Fisheries Fund will help implement two efforts: one in the CNMI to support a fishing demonstration and training program, and another in American Samoa to support the longline dock extension.

The goal of the CNMI fisheries training and demonstration program is to increase catch to meet expanding local demand through the enhancement of fishing skills and introduction of new fishing methods that target bottomfish and pelagic species. The program will include training and demonstrations on fisheries techniques, fish handling and storage, and marketing. Expert fishermen, seafood purveyors, and culinary experts will lead the demonstrations and training program

The dock extension project will assist the development of a fishing dock to support the 15 U.S.-flagged longline vessels based in American Samoa, which currently do not have a permanent docking area. The longline vessels fish almost exclusively in the U.S. EEZ around American Samoa and principally land albacore tuna at the local cannery. This effort will support the long-term goals of this important U.S. fishery.

Students in the 2018 Hawai'i High School Summer Course on Fishery and Resource Management learn about community-based management from Uncle Mac Poepoe at Moomomi, Moloka'i. The annual course is a partnership between the Western Pacific Regional Fishery Management Council and Moanalua High School and funded by NOAA Fisheries. Upon course completion, students earn a science credit from the Hawai'i Department of Education. Photo credit: WPFMC

Students in the 2018 American Samoa High School Summer Course on Fishery and Resource Management received a tour of the StarKist Samoa facility from Taotasi Archie Soliai, the StarKist community relations manager and a member of the Western Pacific Regional Fishery Management Council. Photo credit: WPFMC

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 2018, PIRO awarded $1,243,362 in federal funds via the S-K Grant Program to 5 grants.

Elementary students learning about aqua mariculture at the Pacific Aquaculture and Coastal Resources Center (PACRC) of the University of Hawai'i Hilo (UHH). Photo credit: Dr. Maria Haws, University of Hawai'i Hilo

Hawai'i Seafood Council — Fisheries 101: Improving Territorial Science and Fishery Management in U.S. Pacific Islands, $165,000

Island communities can contribute to sustainable fishery development, management, and science by having trained and prepared individuals. With a developed training curriculum, this project will strengthen members of the fishing community with principles and details of fishery management within local jurisdictions, as well as federal and international waters. Local management agencies will then be able to compare and contrast federal and local management approaches, with the aim of continual improvement. The project will rely on local contacts who understand that sustainable fishery development and management is an ongoing process with an essential need for local fishery resource knowledge, participation in the rule-making process, ecosystem observations, and theories to inform fishery researchers and managers, following the regulations and catch data reporting. This project will improve fishing community resilience by enhancing the process and building capacity for local fisheries development, management, and science in the U.S. Pacific.

Kampachi Farms, LLC — Developing Cost-Effective, Fishmeal-Free, and Fish Oil–Minimized Diets for High Market Value U.S. Marine Fish Aquaculture, $289,480

With the limited scalability of marine finfish culture due to the lack of fingerlings and the high cost of feed, Kampachi Farms will research cost-effective, protein-rich oil feed formulations for alternatives to the expensive fishmeal and other forage fishery-sourced ingredients. The current market holds tested human-quality protein and oil products, such as Spirulina, and high-quality poultry-meal at a costly price; however, feed-grade and byproduct testing may provide a viable fisheries product. This work proposes to formulate and test fishmeal-free and fish oil–minimized feeds for carnivorous and herbivorous finfish through the use of low-cost alternatives of Spirulina pigment, poultry meal, and saltwater-grown macroalgae. The project is expected to identify protein-rich products at lowered feed costs, achieve environmental sustainability away from forage fisheries, devise socially accepted practices, and increase market products. The potential benefits may range from establishing food security to increasing commercial aquaculture for the Pacific Islands.

Aholehole is one of two targeted native Hawaiian fish species that will be cultured during the study from the University of Hawaii, Hilo. Photo credit: Dr. Maria Haws, University of Hawai'i, Hilo

University of Hawai'i — Developing Culture Methods for Native Fish Species in Support of New Business Models for Increased Participation in Mariculture, $272,622

This project will explore two business development models for commercial aquaculture production techniques using two lesser cultivated native Hawaiian fish species. Potential products of these models can then be used by ordinary citizens, fishermen, and existing small businesses. Currently, any forward progress in mariculture development faces lengthy and costly commercial leases and permits that are hindered by insurmountable social, economic, and political barriers. Creating and exploring a small-scale hatchery capacity for native species will foster the possibility of carving a new road for a socially and culturally acceptable business structure with potentially high returns. This endeavor could establish more opportunities to enter aquaculture farming in Hawai'i and provide the state with a greater independence from imported seafood. The project will cultivate two native Hawaiian fish species to support new mariculture business development and possibly alleviate existing permitting pressure. Outcomes from the project may help create jobs and revenues, with potential results of minimal environmental impacts and a greater understanding of aquaculture in the community.

Pacific Islands Fisheries Group — Exploratory Research and Data Collection to Determine Viability of Developing a Squid Fishery in the Mariana Islands, $216,260

The Pacific Island Fisheries Group (PIFG) will explore a potential squid fishery in the Mariana Islands, as increased visitors from the Asian regions to Guam and the CNMI have propelled significant squid imports in the local market. PIFG will create an independent squid sampling design to collect data by using input from the local fishery agency, local fishermen, and NOAA Fisheries staff. They will train and charter local professional fishermen to conduct the standardized data collection for squid fishing and availability in the waters around Guam and the southern islands of CNMI throughout the year. PIFG will collect historical literature and accounts to verify data collection, while also engaging local fishermen and markets to determine the viability of developing a prosperous and resilient local squid fishery. Community workshops will share information on squid fishing and the potential a viability of a market for squid seafood products.

Aquafeed.com, LLC — Scale Up Production of a Complete Fish Feed and an Organic Fish Fertilizer from Fish Processing Waste for Sustainable Aquaculture and Agriculture in Hawai'i and the Pacific Islands, $300,000

The significant cost burden to fish processors for the disposal of fish processing waste and the environmental impact of keeping this waste out of landfills will be addressed with this project. Converting waste into a valuable raw material may support local fish food production with lower costs, lesson the carbon footprint, and create jobs. Through the development and testing of pilot-scale manufacturing techniques and technologies, the project will produce a low-cost, semi-moist feed for local fish farmers by processing wet fishery waste to make a high-protein, high-quality, water-stable complete fish feed. Steps will be taken to transform fish processing waste into locally sourced, high-performing, organic, liquid and solid fish fertilizers that can be used for hydroponics, horticulture, and agriculture with the benefit of a potential income stream. The development of sustainable fish farming in Hawai'i and the Pacific Islands will help achieve local food production goals.

Marcellus Thomas, a student technician, working in the copepod container at the Pacific Aquaculture and Coastal Resources Center (PACRC) of the University of Hawai'i Hilo. Photo credit: Dr. Maria Haws, University of Hawaii Hilo.

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 2018, PIRO funded 12 marine education and training projects in the amount of $394,927.

University of Hawai'i — UH Mānoa Marine Option Program (MOP) Support, $160,000

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 make scientific diving opportunities available and assist in teaching aspects of hands-on underwater-

Kio (Sida fallax) flower found on Wake Atoll, Photo credit: Mark Merlin, University of Hawai'i at Mānoa

PROJECT UPDATE: In 2017, MET funded KUPU to support interns gathering information on the indigenous cultures, practices, and heritages of Pacific Remote Islands Marine National Monument. One finding gave a better understanding of how the small, orange flower, known as 'ilima in Hawai'i and kio in the Marshall Islands, is found across the Pacific and played a role in the place naming of two locations. Early Marshallese voyagers named Wake Atoll Enen Kio for the abundant kio flower. In the late 1800s, guano laborers sent from Hawai'i to Baker Island named the island Puaka'ilima.

NOAA Captain Barry Choy with the winners of the 2018 Hawai'i State Science and Engineering Fair. Photo credit: NOAA Fisheries

surveying practices and principles courses. Funding support comes from PIRO and the NOAA Office for Coastal Management.

Hawai'i Academy of Science — Hawai'i State Science and Engineering Fair, $60,000

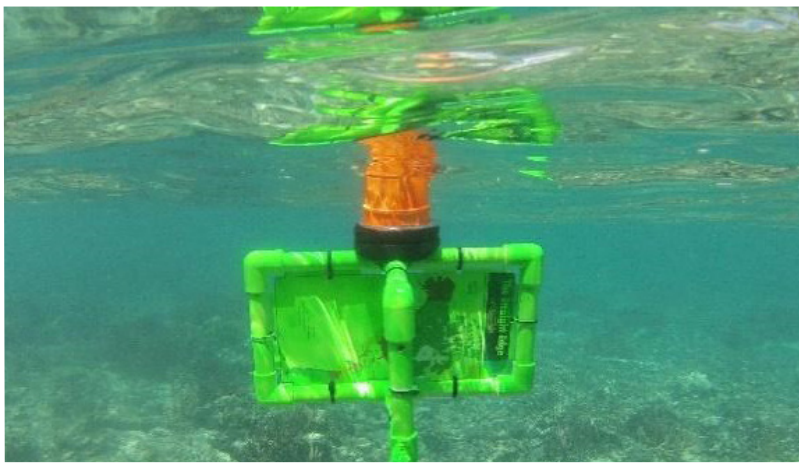
To build the capacity of Hawai'i students interested in marine and natural science, this project will provide every student in the State of Hawai'i the opportunity to participate in a science fair activity. The science fair provides a platform for students to use the scientific method to investigate questions and solve problems in the real world. High school students will interact with leading scientists in Hawai'i to conduct in-depth and comprehensive science investigations. Exposure to science activities could provide a catalyst to increase the number of students in Hawai'i pursuing advanced degrees in areas of study related to STEM (Science, Technology, Engineering, and Math). The administration and execution of the Hawai'i State Science and Engineering Fair will connect students, scientists, and teachers; leverage partners and donors; and offer scholarships and awards to fair winners.

Ayuda Foundation — Guam's Environment, a Service Learning Classroom, $15,000

An enhancement of Guam's Environment Service Learning website will inspire high school students to seek courses, degrees, certification, or training that will lead them to marine-related careers. As local high school students seek options to fulfill required service-learning hours in order to graduate, the website will provide them updated information about community projects including those in marine-related fields. Students can then use the website to connect with marine-related education projects and habitat restoration activities needing volunteers. The learning website will incorporate the latest technology and communication tools for training webinars in which students can utilize at home when unable to travel to project site locations.

Jameson Kaeo Newtson — Educational Training on Ocean Current Monitoring of Vatia Bay, American Samoa, $15,000

This project will provide American Samoan students and local resource agency staff with valuable training and field experience in ocean current monitoring technology and methods used in marine science. It will also produce necessary ocean circulation data to support marine resource management on Tutuila, American Samoa. Project activities will train local students and staff to deploy GPS-tracked ocean drifters and then analyze the gathered data on water currents in Vatia Bay, Tutuila. Participants will gain skills and experience applicable towards future careers in marine science. Collaboration with local agency staff will build participants' professional networks and exposure to working in professional environmental management. Collected data will support ongoing marine resource management efforts in the Territory and provide supplemental material for the classroom projects, regulatory agencies, and scientific researchers for future environmental management actions.



The drifter is a small and non-invasive tool that students will be using to collect and analyze critical ocean circulation data in the Pago Pago Harbor, American Samoa. Photo credit: Jameson Newtson, American Samoa Community College Marine Science Program

Kupu — Kupu Hawai'i Youth Conservation Corps Community Program, $14,948

Kupu seeks to engage O'ahu economically disadvantaged youth in the Hawai'i Youth Conservation Corps Community Program by expanding programing to include on-the-job training opportunities in the marine resource and management field. Funding will help develop a career pathway for participants interested in marine resource conservation and management, provide students with basic marine conservation training, and create career exploratory experiences. These activities and pathways will assist

successful employment for youth by ensuring participation in hands-on and classroom learning. Kupu will provide guidance and mentorship needed by Hawai'i's at-risk youth population, in order to increase their socio-economic well being through preparation for the future workforce, including marine-related professions.

University of Hawai'i — Continuing to Build Pacific Islander Capacity Through Training in Underwater Surveying Techniques, $15,000

An underwater surveying training course aims to build career capacity of Pacific Islanders in fisheries science, marine biology, and other related fields. Students will participate in a hands-on training course covering a modified (snorkeling) version of the Quantitative Underwater Ecological Surveying Techniques (QUEST) scuba diving course conducted by MOP. Undergraduates at American Samoa Community College will gain hands-on experience, new technical skills, and knowledge of marine resources that will enhance their academic portfolio, increase their job competitiveness, and strengthen their desire to pursue a career in marine science.

University of Hawai'i — Nā Wa'a Mauō: Marine Monitoring Project, $15,000

The Nā Wa'a Mauō marine monitoring program introduces participants to the application of Native Hawaiian canoes in marine conservation monitoring efforts for both nearshore and semi-pelagic ocean regions of Hawai'i Island. The training workshops and field days will engage participants in community-driven marine conservation efforts that combine the fluid traditional practices of Native Hawaiian science with the mechanics of Western science research processes. The development of a longitudinal marine monitoring effort on Hawai'i Island will strengthen local communities in active marine conservation as they become ocean stewards and participate in active marine conservation. Scientifically sound results will then be disseminated to diverse audiences in both the scientific and local island communities.

Natosha Ripley, an American Samoa QUEST participant alumni, is now a benthic monitor with the Coral Reef Advisory Group in American Samoa. Here she is assisting with a marine debris clean up at Tagasa with other DMWR Marine Fisheries staff. Photo credit: American Samoa Community College

Fa'asalafa Kitiona, an American Samoa QUEST alumni now works for the Coral Reef Advisory Group as the watershed coordinator. In this photo she is checking salinity levels in the stream flowing into the bay in Vatia. Photo credit: American Samoa Community College

North Kohala Community Resource Center — Kohala Unupaʻa: Watchers and Caretakers, $15,000

Kohala Unupaʻa: Watchers and Caretakers increases youth education and community outreach to sustain the long-term health of fisheries and marine resources in Kohala through Hawaiian values and practices and scientific research. Kohala youth will engage with kupuna (elders), cultural practitioners, university students, marine professionals, and community members in science-based and culturally relevant marine resource management practices. As Kohala youth deepen their understanding of the traditional ways, they are empowered with senses that sharpen their observation skills and understand what they are seeing through a traditional cultural lens. As active participants learn through a traditional cultural context and apply knowledge in marine science professions, healthy and sustainable fisheries will grow for future generations.

Pacific Islands Fisheries Group — Tracing the Tracks of Hawaiʻi's Early Fish Mongers, $15,000

PIFG will provide Hawaiʻi high school culinary instructors, community college culinary instructors, students, and targeted visitor industry representatives a rare glimpse into Hawaiʻi's rich past and present fishing and seafood industry through custom walking tours and hands-on workshops. Polynesians once depended on limited land and vast oceans to produce all of their food. As Hawaiʻi evolved into its current landscape, fresh healthy seafood has been deeply integrated into our island culture and heritage. The importance of our fisheries and seafood to Hawaiʻi's economy, culture, and traditions has largely been overlooked by our local residents, institutions, government, and visitors. Funding through this grant will support a customized tour each month. The tour will stop at three locations: The United Fish Auction and Honolulu Fishing Village; the historical Kekaulike fish markets; and the Aloha Poke Shop for a hands-on workshop.

University of Guam — Enhancing Marine Science Capacity in the Western Pacific Through Science Internships at the University of Guam, $24,979

The University of Guam will select students with qualified projects from the Guam Island-wide Science Fair for a science internship at the university. Project selection will be based upon the student's abstract, oral presentation, and overall display. The student internship will extend for 5 weeks from mid-June into July under the supervision of a qualified scientist engaged in marine research. The internship schedule begins with an orientation week followed by project initiation and data collection. The final week focuses on data analysis from the 5 weeks and a presentation of their summer research to the community in a mini science symposium.

North Kohala Community Resource Center (NKCRC) promotes education and outreach of Hawaiian values and practices relevant to sustainable fishing and safe boating practices for youth in coastal community. Photo credit: Johnelle Ching, NKCRC

PROJECT UPDATE: In 2011, the American Samoa Hawaiʻi Sea Grant program initiated their marine training program, Quantitative Underwater Ecological Survey Techniques (QUEST). Of the 50 past QUEST participants, 45 of them earned their QUEST certificate, and 95% of those are continuing their education in marine science or working in a related field. Four students have returned to American Samoa after obtaining a bachelor's degree and are working at the American Samoa Environmental Protection Agency, the National Park of American Samoa, and the American Samoa Governor's Coral Reef Advisory Group. In addition, 8 local staff in marine resources positions have been trained through QUEST to improve their survey and data management skills. One of those local staff, Motusaga Vaeoso, was recently selected as the very first American Samoan to be appointed as the NOAA Coral Reef Fellow for American Samoa.

United Fishing Agency LTD — United Fishing Agency Employee Training Program, $20,000

In November 2016, an abrupt closure of Tri Marine's Samoa Tuna Processors cannery resulted in a huge loss of wages and jobs in Pago Pago, American Samoa. As this training project continues into the second year, displaced America Samoa Tuna processors will receive training in Hazard Analysis and Critical Control Points, Occupational Safety and Health Administration forklift, and Transportation Security Administration–certified packing at a Honolulu location.

University of Hawai'i Systems — Hawai'i Institute of Marine Biology (HIMB) Boating Safety and Marine Education Improvements Project, $25,000

The Motorboat Operator Certification Course (MOCC) and Open Water Module (OWM) will provide adequate training for all facets of boating-related marine research activities. Training ensures that vessel operators and affiliate researchers are adequately prepared for any potential hazards they encounter while performing research activities in the marine environment. In the past, HIMB has taught the course in conjunction with NOAA and the Department of Interior. Conducting this course on a more regular basis for University of Hawai'i HIMB students has been limited by logistical and financial constraints. Adequate boating safety training is paramount to ensuring safe research activities for all agencies involved. Increased MOCC/OWM courses offerings enable HIMB to ensure that all university student boat operators possess the skillset needed for safe operations and conduct effective research activities with a safety-first mindset.

University of Hawai'i, Marine Institute of Marine Biology's Marine Safety Officer discussing safety protocol and use of flotation devices. Photo credit: NOAA Fisheries

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 region, 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 2018, PIRO issued 6 federal assistance awards totaling $238,194.

Hawai'i Wildlife Fund — The Research, Protection, and Monitoring of Maui Nui's Nesting and Foraging Hawksbill Populations, $22,000

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. Efforts will continue and expand ongoing monitoring research and protection of sea turtles within Maui Nui (Maui, Lāna'i, and Moloka'i) and extend to involve and educate the community about the plight of the Hawaiian hawksbill. A collation of all existing and collected new data (1991–2016) further equips management decisions with the most up-to-date information.

The Honu Project — Hawai'i Island Hawksbill Turtle Recovery Project, $68,828

The Hawai'i Island Hawksbill Turtle Recovery Project (HIHTRP) strives to manage and protect hawksbill sea turtles and their nesting habitats along the southern coast of Hawai'i Island. To understand population trends and 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 Hawai'i. 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, endangered nesting sea birds, and other marine life benefit from the HIHTRP's protection and management of coastal habitat and educational outreach efforts.

CNMI Department of Land and Natural Resources (DLNR) — Stewardship of Northern Mariana Islands Sea Turtles Through Conservation and Management, $35,000

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, CNMI. To 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.

Mālama Na Honu — Mālama Na Honu Educational Outreach and Volunteer Support, $15,000

By the late 1970s, the honu (Hawaiian green sea turtle) population was almost decimated, but their numbers have increased significantly since State and Federal protections were enacted. 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 Oʻahu'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.

Hawaiʻi Marine Mammal Alliance Inc. — Marine Turtle Management and Outreach, $43,146

Hawaiʻi Marine Mammal Alliance, doing business as Hawaiʻi Marine Animal Response (HMAR), will provide a volunteer-based stranding response program on the Island of Oʻahu for dead, injured, or otherwise compromised sea turtles. The program will develop, maintain, and implement a comprehensive volunteer network to 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.

Photo credit: D. Mcleish

DID YOU KNOW? Hawksbill and green sea turtles are found in coastal waters of Hawaiʻi. The hawksbill turtle population is a small and isolated population that has yet to show signs of recovery from intense overexploitation for its shell. Only 20 to 25 hawksbill females nest each year in Hawaiʻi. In contrast, 500 to 800 green turtles nest annually. Protecting hawksbill nests is critical to their survival. On Maui, the Hawaiʻi Wildlife Fund (HWF) relocated two hawksbill turtle nests, in 2017 and 2018, threatened by high tides and would have been lost to wave inundation and beach erosion. These nests contained 241 and 223 eggs, respectively. Activities are authorized under federal U.S. Fish and Wildlife Service permit.

Hawaiʻi Volcanoes National Park hawksbill turtle conservation program working in partnership with county lifeguards to utilize cages to protect hawksbill turtle nests from mongoose, cat and rat predators. Photo credit: Hawaiʻi Volcanoes National Park

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, $54,220

To establish a deeper understanding of marine turtles in the Philippines, this project 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. The database will highlight conservation priority areas, helping to develop an understanding and connectivity of Philippines turtles with those of the U.S. PIR and other neighboring countries. To improve data collection and scalability of the population monitoring system, the project will then initiate efforts to collect genetic samples to understand the connectivity to other turtle populations. Conducting both photo-ID and paired laser photogrammetry will improve understanding of growth rates, residency times, individual presence, and movement, as well as other life history parameters and health conditions. Satellite telemetry, time-depth recorder tagging, and flipper tagging will allow the study to track the movement, connectivity, and habitat use of the turtles, while monitoring nesting and fishery interactions.

This green sea turtle was tagged at Apo Island Protected Landscape and Seascape, an island in the municipality of Dauin, Negros Oriental in the Philippines. Tagging programs like this allows vital information to be collected about the turtles nesting and foraging areas. Photo credit: Large Marine Vertebrates Research Institute

Hawaiian Monk Seal Recovery and Marine Mammal Response Program

The Hawaiian Monk Seal Recovery and Marine Mammal Response Program supports specific programmatic activities related to promoting the recovery of endangered Hawaiian monk seals and supporting responses to marine mammal strandings 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 for Hawaiian monk seal recovery and marine mammal response. In 2018, PIRO issued 3 federal assistance awards in the amount of $158,038.

Marine Mammal Center — Hawaiian Monk Seal Response Program, Big Island, West, $42,042

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. Through coordinated community efforts and partnerships, TMMC will assemble a volunteer response network at each location for active participation in the 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 to increase volunteer numbers. An improvement in signage and outreach collateral give awareness to visitors and residents along with a response hotline number. This project will also strengthen the management of hotline responsibilities.

Hawai‘i Marine Mammal Alliance Inc. (HMMA) — Hawaiian Monk Seal Recovery and Marine Mammal Response, $103,996

To assist and protect the recovery of a monk seals, HMMA doing business as Hawai‘i Marine Animal Response (HMAR) 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 conditions and assist NOAA staff with disease vaccination, behavioral modification techniques and protocols, and recovery and transport of dead marine mammals. HMAR will also develop an Education Team to educate students about marine mammals and how to protect these animals, as well as appropriate viewing behavior, sustainable fishery interaction tactics, and the ocean environment.

University of Hawai'i — The Implementation of a Specimen Tracking System and a Cetacean Stranding Safety Plan, $12,000

The University of Hawai'i at Mānoa, at the Marine Corps Base Hawai'i (MCBH) stranding facility, leads cetacean (whale and dolphin) stranding response and cause-of-death investigations for stranded cetaceans throughout the Pacific Islands region. Stranding investigations are the only means to determine causes of mortality in up to 20 different species of cetaceans that inhabit Hawaiian waters and those of the Pacific Island American territories. The University of Hawai'i at Mānoa continues to be at the forefront of disease discovery and monitoring of cetacean health in the Pacific Islands. For the first time in this region, a number of anthropogenic impacts to cetaceans have been documented. Implementing a long-term tracking system for specimen parts and generating a detailed safety protocol will increase overall operational capacity for stranding response activities.

Photo credit: Dr. Kristi West

DID YOU KNOW? The Longman's beaked whale is one of the world's most poorly known whales, and was not officially recognized as a distinct species until 1999 due to less than 10 confirmed stranding worldwide and only one sighting in Hawaiian waters. A recent Longman's beaked whale stranding and necropsy from the Hawaiian archipelago is the first report confirming the presence of this species in U.S. waters. This is the only case of a Longman's beaked whale stranding worldwide where the response included extensive necropsy collection for study. Due in part to Dr. Kristi West's work with the cetacean stranding program at the University of Hawai'i, this species can now be identified at sea and sighting reports are no longer uncommon in subtropical and tropical waters.

Endangered Hawaiian monk seal in the Northwestern Hawaiian Islands. Photo credit: Keelan Barcina

Interjurisdictional Fisheries Act of 1986

American Samoa fisherman takes advantage of a beautiful day to use his rod and reel in Ta'u, Manu'a. Photo credit: American Samoa Department of Marine and Wildlife Resources

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 2018, PIRO allocated $288,090 to this program.

State of Hawai‘i, Department of Land and Natural Resources, Division of Aquatic Resources (DLNR-DAR) — Fisheries Act Award Application-State of Hawai‘i, $83,603

DLNR-DAR is modernizing the State of Hawai‘i's commercial marine licensing and fisheries reporting systems. The agency has nearly 3,800 fishermen required to obtain commercial marine licenses to offer marine life for commercial purposes in the State and 3,000 commercial fishermen submitting monthly fishing reports. Per State Hawai‘i Revised Statute (§189-10), DLNR-DAR also collects transaction purchase reports from 255 active primary commercial marine dealers. Both federal and state fisheries agencies use this integrated "best available" data to assess the status of marine resources and to establish fishery regulations in State and U.S. EEZ waters. It is essential, therefore, that timely and accurate fisheries data are available for fisheries agencies to make

Boats in dry docked in American Samoa reviewed as part of a vessel inventory conducted every month through their Interjurisdictional Fisheries Act project. This allows an accounting of active/inactive vessels in the fisheries throughout the year. This picture was taken in Ta'u, Manu'a. Photo credit: American Samoa Department of Marine and Wildlife Resources

informed management decisions. The web portal fisheries reporting online application will have continued maintenance and support while a modified Commercial Marine Licensing System will issue and renew licenses to both commercial marine and marine dealer licenses.

DID YOU KNOW? In 2017, NOAA had 421 active small boats used to conduct various research and management activities. These vessels logged over 5,000 days last year, and range from kayaks and small skiffs up to 90 foot small research vessels. In the Pacific, small boats are used almost daily for research and rescue activities in the conservation and management of our ocean and marine life.

Government of Guam – Department of Administration — Data Collection and Entry in the Management of Guam's Interjurisdictional Fishery Resources, $15,052

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. Continued support allows for 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. Data collected will help address the information requirements needed by both state and federal governments. The Department of Administration can then develop and implement conductive policies for the maintenance and expansion of Guam's fishing industry. With these policies, Guam can devise sound management and conservation plans for its interjurisdictional fishery within its Territorial waters and EEZ.

American Samoa Government – Department of Marine and Wildlife Resources — American Samoa Inter-jurisdictional Fisheries Stock Assessment and Monitoring Program, $165,921

The Department of Marine and Wildlife Resources of the American Samoa Government assess and monitor the status of interjurisdictional fish species caught within American Samoa's EEZ. The data obtained will be the main source of information utilized to address local and federal requirements for Fishery Ecosystem Reports through cooperative efforts between federal and local agencies, and the WPFMC.

An alia boat leaving port to go trolling in Ofu, Manu'a. Photo credit: American Samoa Department of Marine and Wildlife Resources

CNMI: Division of Fish and Wildlife — Data Collection and Entry in the Management of CNMI's Interjurisdictional Fishery Resources, $15,052

During fishing tournaments, the CNMI Division of Fish and Wildlife will collect, process, and share important fisheries monitoring data. This principal source of information will provide CNMI an analysis of fisheries activities and management options of pelagic landings during tournaments. Data can further equip federal and local fisheries management programs in the CNMI and assist in addressing federal requirements for Fisheries Management Plans (FMPs) under the jurisdiction of NOAA Fisheries through WPFMC. A record of fisheries data guides in the development, implementation, evaluation, and amendment of FMPs in the Western Pacific Region.

Essential Fish Habitat Program

In 1996, the amended Magnuson-Stevens Fishery Conservation and Management Act (MSA; 16 U.S.C. 1855(b)) established a new requirement to identify and describe Essential Fish Habitat (EFH) in order to protect, conserve, and enhance EFH for the benefit of the fisheries. EFH is defined as those waters and substrate necessary for federally managed species to spawn, breed, feed, and grow to maturity. This covers a species' entire life cycle. As species require a healthy habitat to survive and reproduce, the goals of protecting and restoring the EFH have helped to maintain productive fisheries and rebuild depleted fish stocks in the United States. In 2018, PIRO supported one grant in the amount of $50,000.

University of Hawai'i — Developing Stressor Thresholds for Reef-Building Coral Species in the Pacific Islands Region, $50,000

The University of Hawai'i proposes to perform a systematic review of peer-reviewed, public, and gray literature to develop thresholds for common anthropogenic (human-borne) stressors that affect nearshore coral reef and associated ecosystems. A systematic review under established methodologies will help identify, collect, and evaluate sources of empirical data on the effects of select anthropogenic stressors on coral reefs in the PIR. The university will extract, organize, and store relevant data for further analysis. It will use statistical analyses and meta-analytic procedures to identify thresholds and multiple-stressor synergisms that identify the effect of these stressors on coral reefs as essential fish habitat. These procedures provide the most rigorous and transparent approach to identifying the best scientific and commercial data available on a subject. The specific thresholds developed and the degree of certainty in these thresholds will depend on the amount of data the review procedure identifies.

Photo credit: NOAA Fisheries

DID YOU KNOW? Before launching projects that may directly or indirectly harm coral reefs, federal agencies must consult with NOAA Fisheries first to gauge the potential effects on EFH, managed species, and associated species (such as major prey species), and discuss mitigation measures. In PIR, NOAA Fisheries conducts about 200 consultations a year with a majority recommending mitigation measures that have helped protect hundreds of thousands of coral colonies.

2018 Unfunded Federal Programs

The following programs were not funded in FY18 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.

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.

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): Valentine Vaeoso, past American Samoa QUEST alumni, is working for the National Park of American Samoa's marine team. Photo credit: American Samoa Community College; Mālama Na Honu's volunteers provide guidance to human and turtle interactions at O'ahu's north shore. Photo credit: Joseph Murphy; American Samoa Community College Marine Science Students underway to new ocean monitoring location in Pala Lagoon, Nuuuli, American Samoa. Photo credit: Jameson Newtson, American Samoa Community College Marine Science Program; Kohala Unupa'a Watchers and Caretakers project connects and engages youth with marine observation and exploration opportunities in the nearshore marine environment. Photo credit: Johnelle Ching, NKCRC

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