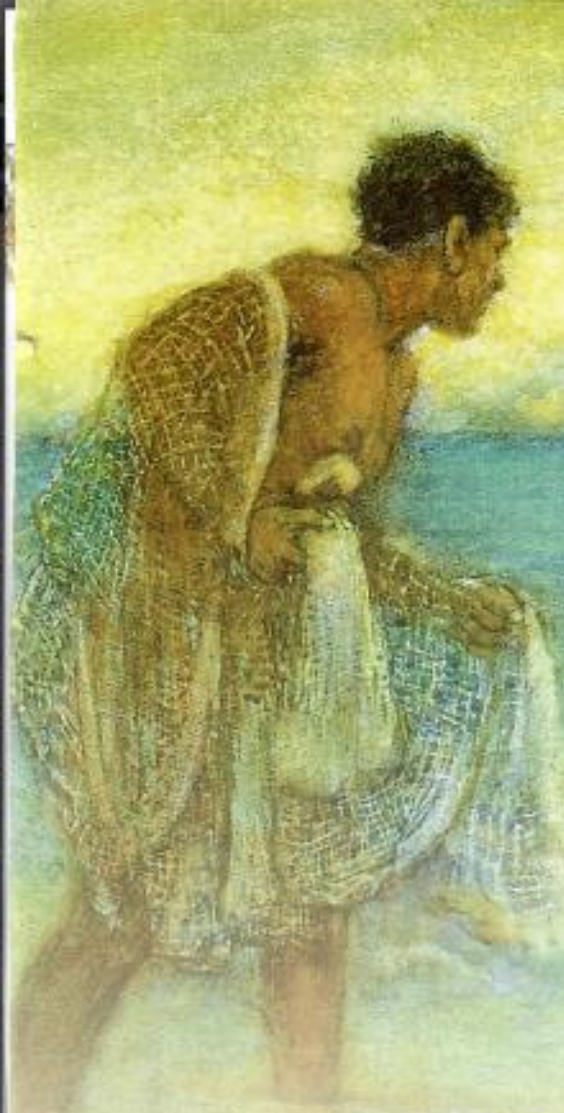


Hawaiian Fisherman, watercolor on paper, 1917, Charles W. Bartlett (1860–1940).

Online source: Wikimedia Commons

Archive source: Miles, Richard and Jennifer Saville, *A Printmaker in Paradise, The Art and Life of Charles W. Bartlett, with a catalogue raisonné of etchings and color woodblock prints*, Honolulu, Hawaii, Honolulu Museum of Art, 2001.

INTRODUCTION

Historical Overview

More often than not, economically deprived countries and indigenous communities are the owners and stewards of the world's natural resources. For the poorest of poor, direct access to nature is their lifeline.[1] But globalization has centralized wealth and reduced the poor's access to economic opportunity. For native communities, the return of economic benefits has been slow as has acknowledgement of the vast traditional knowledge that they hold on managing and utilizing their unique island resources.

In the Pacific Ocean, the United States oversees the State of Hawai'i, Territory of American Samoa, Territory of Guam and the Commonwealth of the Northern Mariana Islands (CNMI). Each of these island entities shares a similar history of settlement by the first people who depended on the marine environment for their survival for millennia and the eventual colonization by the Western world.

In Hawai'i, the first people settled the islands about AD 300–600. The indigenous Hawaiians traditionally held their fisheries privately under a land tenure system. The government administered some fisheries, and the King held certain fisheries in his private reserve. Following Western contact, the King in 1839 divided the nearshore fishing grounds, giving one portion to the common people and one portion to the landlords and retaining one portion for himself. The Kingdom Law of 1842 states: *"The fishing grounds from the coral reef to the sea beach are for the landlords, and for their tenants of their several lands, but not for others."*[2] The Kingdom of Hawai'i was overthrown in 1893, upon which time a Provisional Government was instituted. It was, in turn, replaced in 1894 by the Republic of Hawai'i, which the Congress annexed in 1898 through the Newlands Resolution to establish the Territory of Hawai'i. In 1901, the US Commission of Fish and Fisheries, which provided annual reports to Congress, sent John Cobb to inventory the fisheries of the Territory. After the inventory, legal instruments were set in place to undermine the

Photo: Outrigger canoes with men and boys fishing, 1885. Off Pu'uwai Beach, Kamalino District, island of Ni'ihau. Photo by Francis Sinclair (1833–1916).

Online source: Wikimedia Commons

Archive source: Auckland War Memorial Museum Library Catalogue

[1] World Resource Institute, UN Development and Environment Programs and World Bank. 2005. The Wealth of the Poor: Managing Ecosystems to Fight Poverty. Washington, DC: World Resources Institute.

[2] MacKenzie M (ed). 1991. Native Hawaiian Fishing Rights Handbook. Honolulu: Native Hawaiian Legal Corp.

traditional land tenure, to which fisheries rights were tied, with a system that made access to the fishery a public right and not subject to the prior tenant rights to the fishery. This action impoverished the native community and moved society toward a cash-based economy.

In the Mariana Archipelago, Guam and the CNMI were settled by the first people (Chamorro) more than four millennia ago and were colonized for over three centuries by Spanish, German and Japanese before becoming a US territory (1950) and commonwealth (1976), respectively. Cultural and ethnic genocide efforts by the Spanish were more successful on some islands, e.g., Guam and Saipan, than on the smaller outer islands, such as Rota. In the CNMI, Refaluwasch from the Caroline Islands immigrated to a largely depopulated Saipan in the early 19th century. The CNMI government recognizes the Refaluwasch language as an official language along with Chamorro and English.

The Samoa Archipelago, settled by the first people around 1000–2000 BC, was divided in the late nineteenth century with Germany taking Western and Samoa and the United States taking Eastern Samoa, which was valued for its excellent harbor at Pago Pago on the island of Tutuila. In 1899, the chiefs of Eastern Samoa deeded their islands to the United States in two deeds of cession executed in Tutuila and in the Manu'a island group, and Eastern Samoa became the US Territory of American Samoa. The American Samoan people, however, retained their rights to *Fa'a Samoa*, the Samoan way of life, which is rooted in communal land ownership and the *matai* title (nobility) system. For this reason, American Samoa arguably retains more of its traditions than the Hawai'i and Mariana Archipelagos.

The traditional islander way of managing and utilizing resources are empirical, time-tested methods whose success can be measured by the survival of the cultures that developed them. The wrong methods and practices did not survive.

Today, the Western Pacific Regional Fishery Management Council process of public participatory decision-making can level the playing field for the resolution of conflicts related to marine resources use and management arising out of colonizing activities by the United States in Oceania. The Council process also provides an avenue for indigenous rights and knowledge to deliver benefits to the native communities and improve fisheries in the US Pacific Islands.

Western Pacific Regional Fishery Management Council

In 1976, Congress passed the Fishery Conservation and Management Act, known today as the Magnuson-Stevens Act (MSA), which created eight regionally based fishery management councils to have authority over fisheries seaward of state waters in their region. The Western Pacific Council's jurisdiction includes American Samoa, CNMI, Guam, Hawai'i and eight small, remote US Pacific Island possessions.

From its beginning, the Council has focused on sustaining native fishing rights and participation of the indigenous people of the region, who depend on the sea to fulfill their nutritional and other needs. Although communities at large were included in the new Council process, barriers prevented recognition of indigenous or native fishing rights and practices.

This is not uncommon as the United States, through various Congressional actions, has sought to protect cultural values of the native people while at the same time disinheriting the native people of their natural resources by allowing the privatization of some of them and exercising eminent domain to provide benefits to its citizens through the creation of public trusts and public domains out of native resources.

The United States is not alone in its inability to protect traditional native people and communities. Nations, in general, have been poor custodians of native and traditional natural resource assets. Democracies have been successful in protecting individual rights but have not been successful in protecting communal and traditional rights, particularly when they involve their own native people. These rights need to be protected to ensure survival of the native, traditional cultures and communities.

Original Council members, 1976.

Photo: Brian Sooke (blog: Waterworks)

Contemporary Carolinian canoe based on traditional designs, Saipan, CNMI.

For the Council, an important part of the process to benefit indigenous communities was identifying and recognizing the unique cultural traditions and practices of each island area and determining the best way to support their continuation. This effort had multiple benefits. It demonstrated to the community that the Council supported traditional, cultural practices and it empowered the community by enhancing the value of traditional knowledge and validating it as a viable belief system for contemporary times.

Indigenous Program

To support the increasing participation of native communities in fisheries and fishery management, the Council created an Indigenous Program. This program supports native communities in several ways. It has sought to establish the legal, scientific, statistical and historical justification of preference rights for native Hawaiians, Samoans, Chamorros and Carolinians in the Council's jurisdiction and to empower these communities so they can enjoy full participation in the fisheries that the Council manages. It has been instrumental in advocating for more recognition and support of indigenous communities in MSA reauthorizations. And it has enhanced opportunities of communication with indigenous communities.

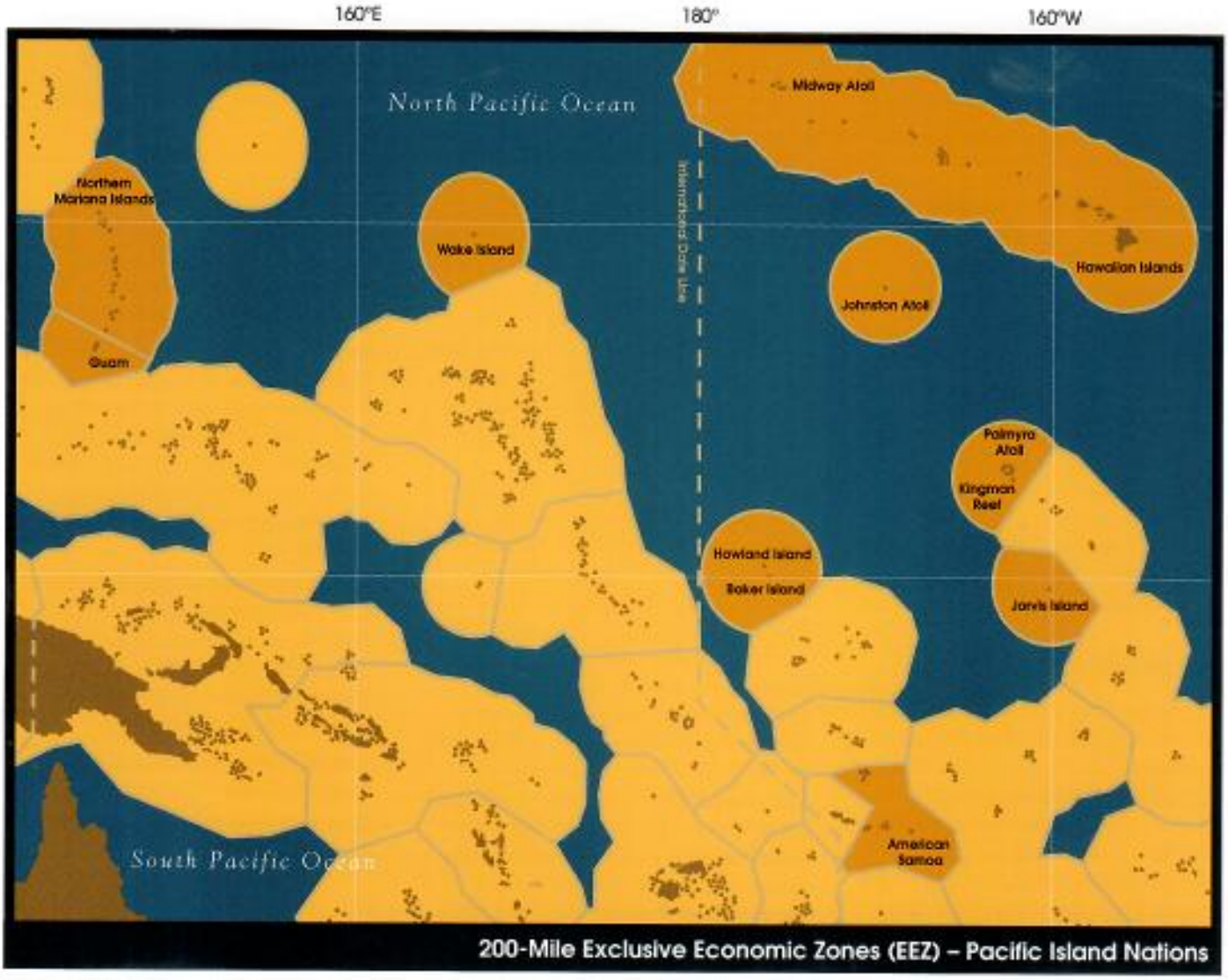
Paul Stevenson, one of the early Council members from American Samoa, recommended the formation of a Fishery Rights of Indigenous People (FRIP) Standing Committee. The FRIP recommended that studies be conducted on native fishing rights in the region. As a result of that recommendation, the Council commissioned five studies, published in 1989 and 1990, to determine if sufficient evidence exists to support a legal basis for preferential rights that could become a part of limited entry systems. The two-volume study for the Hawaiian Islands was co-funded by the Council and the Office of Hawaiian Affairs.

- *Native Hawaiian Fishing Rights, Phase I: Rights of Native Hawaiian Fishermen with Specific Regard to Harvesting of Bottomfish in the Northwestern Hawaiian Islands*
- *Native Hawaiian Fishing Rights, Phase 2: Rights of Native Hawaiian Fishermen with Specific Regard to Harvesting of Bottomfish, Crustaceans, Precious Corals and Open-Ocean Fish in Offshore Areas Surrounding the Entire Hawaiian Island Chain*
- *Justification and Design of Limited Entry Alternatives for the Offshore Fisheries of American Samoa and an Estimation of Preferential Fishing Rights for Native People of American Samoa within a Limited Entry Context*
- *Native Fishing Rights and Limited Entry in Guam*
- *Native Fishing Rights and Limited Entry in CNMI*

These studies established the justification and initiative for the Council to seek remedies for shortcomings in the MSA regarding recognition of traditional aboriginal fishing rights and access to resources. They also formed the basis for the Council's efforts to enhance inclusion of traditional ecological knowledge and participation of the native community in the federal fisheries decision-making process.

Backed with the knowledge from these studies, the Council worked with federal agencies and Congressional representatives to ensure the 1996 and 2006 amendments to the MSA recognized the importance of traditional knowledge and fishery practices in the Western Pacific Region. For example, the 1996 reauthorization, commonly known as the Sustainable Fisheries Act, included provisions for a Community Development Program (CDP) and Community Demonstration Projects Program (CDPP) for the Western Pacific Region, which allowed the Council to customize measures to provide benefits for those who practice traditional fishing methods and to provide funding assistance to demonstrate traditional practices.

A third approach in the Council's Indigenous Program has been creating opportunities for open dialog on how to best incorporate traditional knowledge into current management regiments. To facilitate information flow for decision making, the Council established a series of advisory bodies that meet regularly to provide guidance from the indigenous perspective. Official bodies have included the FRIP Standing Committee; the CDP-CDPP Advisory Panel; the Indigenous Fishing Communities sub-panels of the American Samoa, CNMI, Guam and Hawai'i Advisory Panels; and the American Samoa, CNMI, Guam and Hawai'i Regional Ecosystem Advisory Committees.



200-Mile Exclusive Economic Zones (EEZ) – Pacific Island Nations

SUSTAINABLE FISHERIES ACT PROVISIONS

Henry Chang Wo Jr. of the Ewa Limu Project (pictured upper right) shares traditional knowledge about edible seaweed (limu) with international marine educators.

The 1996 MSA reauthorization reflected Council efforts for national recognition of the traditional fishing practices of native peoples in the Western Pacific Region. The amended MSA, commonly known as the Sustainable Fisheries Act (SFA), included mandates for the establishment of the Western Pacific Community Development Program [Section 305(i)(2)] and the Western Pacific Community Demonstration Project Program [Section 305 note]. The Western Pacific CDP and CDPP provisions provided broad latitude in program development and implementation.

Executing the new CDP and CDPP provisions of the SFA has met many challenges that continue today. Many milestones have been reached with much more work to be accomplished.

1997 Council forms CDPP AP

1998 CDPP AP develops priorities for project funding; Council approves CDPP project funding priorities and CDP and CDPP eligibility criteria, which are linked

2001 National Marine Fisheries Service (NMFS) publishes Federal Register notice for CDP and CDPP draft program process, terms and definitions

CDP and CDPP Eligibility Criteria

1. Be located in the Western Pacific Area (American Samoa, CNMI, Guam or Hawai'i);
2. Consist of community residents descended from aboriginal people indigenous to the Western Pacific Area who conducted commercial or subsistence fishing using traditional fishing practices in waters of the Western Pacific;
3. Consist of community residents who reside in their ancestral homeland;
4. Have knowledge of customary practices relevant to fisheries of the Western Pacific;
5. Have a traditional dependence on fisheries of the Western Pacific;
6. Experience economic or other barriers that have prevented full participation in the Western Pacific fisheries and, in recent years, have not had harvesting, processing or marketing capability sufficient to support substantial participation in fisheries in the area; and
7. Develop and submit a Community Development Plan to the Council and NMFS.

The SFA also included the Pacific Insular Area Fishery Agreements (PIAFA) provision, which allows the Secretary of State, in consultation with the Secretary of Commerce and the Council, to negotiate and enter in fishery agreements to authorize foreign fishing within the exclusive economic zone (EEZ) adjacent to a Pacific insular area. These agreements in the EEZ around American Samoa, Guam or CNMI are to be at the request and with the concurrence of and in consultation with the respective Governor. PIAFAs for the EEZ around Hawai'i and the Pacific Island Remote Island Areas (PRIAs)—which include Baker, Howland, Jarvis and Wake Islands; Johnston, Midway and Palmyra Atolls; and Kingman Reef)—are at the request of the Council. The governors and the Council must develop Marine Conservation Plans, prioritizing marine resource conservation and fishery development projects for their respective areas. Although no foreign fishing agreement has ever been issued, funds have been received by the local governments from foreign fishing violations in American Samoa and the Mariana Archipelagos. Funds received from foreign fishing violations in the PRIAs have also been transferred to the Sustainable Fisheries Fund to support fishery development projects in American Samoa, Guam, CNMI and Hawai'i.

The 2006 MSA reauthorization retained the CDP, CDPP and PIAFA provisions and also included the Marine Education and Training (MET) Program [Section 305(j)(2)(F)] to provide educational and training opportunities for Western Pacific fishing communities.

Community Development Program

The Western Pacific CDP gives the Council the regulatory authority to create opportunities for native communities to participate in fisheries managed by the Council. The program is modeled after the Alaska Community Development Quota Program. However, unlike the Alaska program, the Western Pacific CDP allows benefits to be delivered to the community beyond just quotas. Specifically, the Council sought to provide preferential fishing rights in the form of limited access permits and exemptions for training purposes.

CDP Permits for the Mau Zone Bottomfish Fishery

In 1999, the Council created a limited access program in the Mau Zone of the Northwestern Hawaiian Islands (NWHI) bottomfish fishery. Prior to this, the Mau Zone had been a federally permitted open access fishery set aside as a qualifying area for new entrants to gain experience before entering the larger NWHI Ho'omalu Zone limited entry bottomfish fishery.

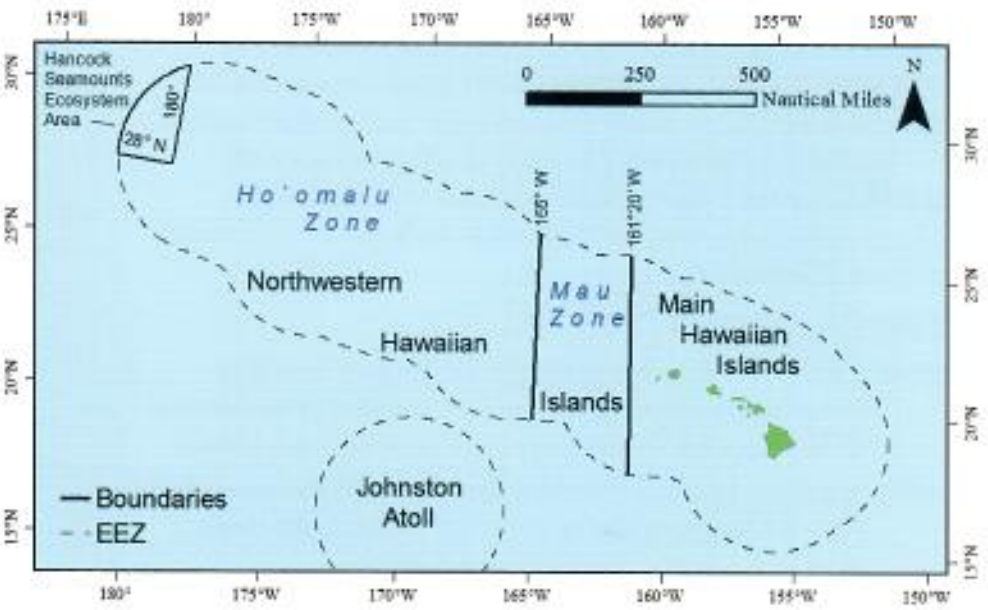
Using the new CDP authority under the SFA, 20 percent of the new Mau Zone limited entry permits were set aside as CDP permits for qualifying native Hawaiian fishermen. The Mau Zone limited entry program was implemented with a cap of 10 total permits, two of which were CDP permits.

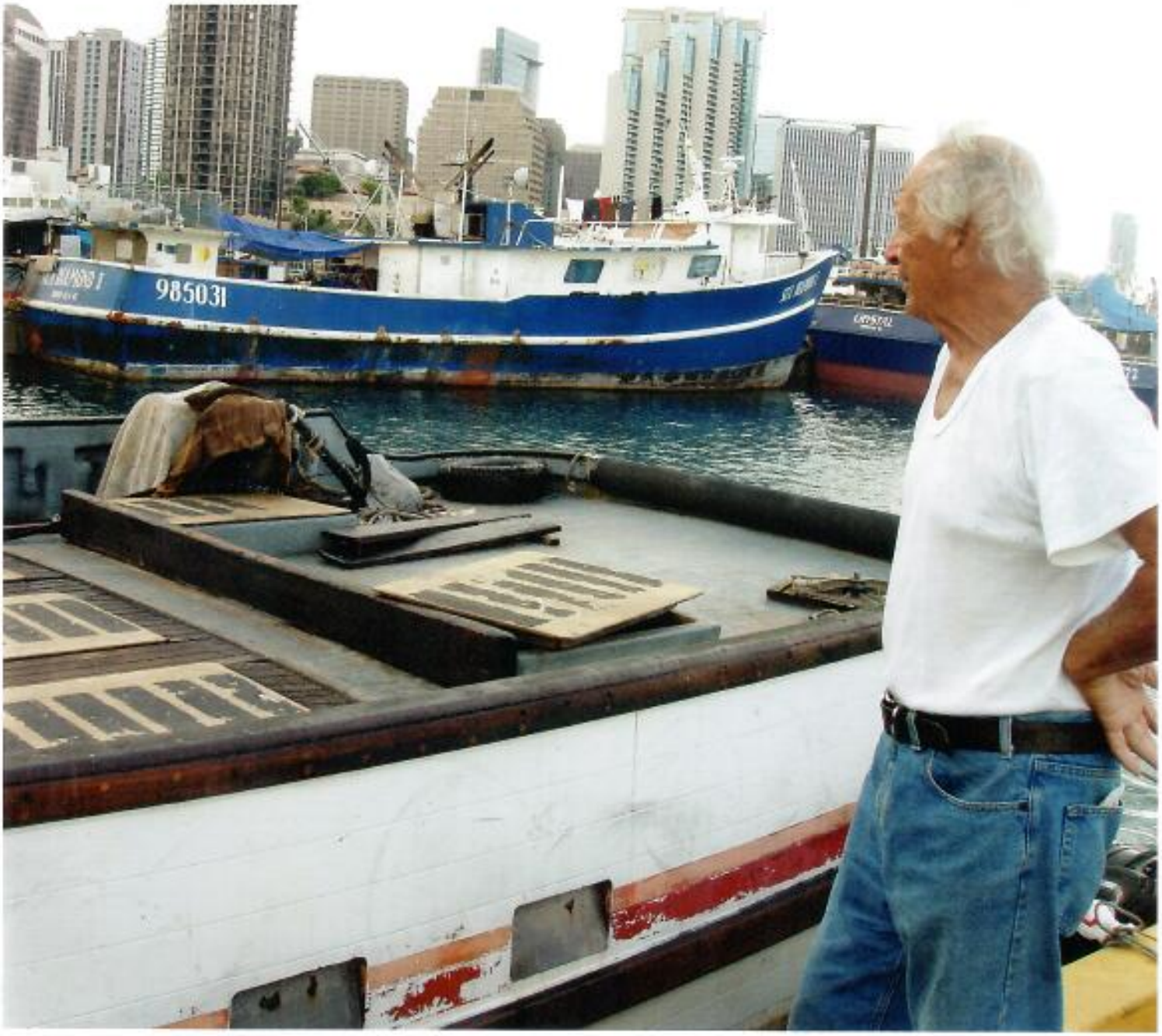
However, shortly after establishment of the new provisions, President Clinton announced the creation of the NWHI Coral Reef Reserve, which encompassed EEZ waters around the NWHI out to 50 miles, overlaying the Council's Protected Species Zone and both the Ho'omalu and Mau Zone fisheries. NMFS immediately ceased issuance of any new permits in the NWHI, and the fisheries were closed in 2010 pursuant to the Presidential proclamation that turned the Reserve into the Papahanaumokuakea Marine National Monument.

CDP Training Project Longline Exemption

The most recent CDP initiative was an attempt to provide an exemption to deploy a longline within the longline closed area around the main Hawaiian Islands to catch yellowfin tuna (*Thunnus albacares*) as part of a commercial fishing program to train young Hawaiian men.

Leo Ohai, a native Hawaiian





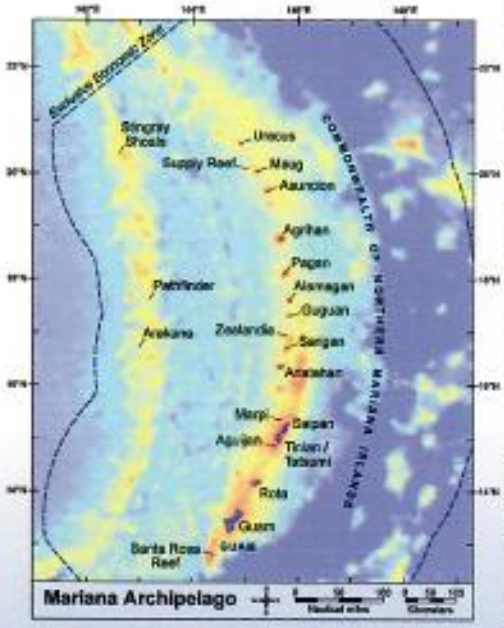
Leo Ohai, pictured in front of his vessel in Honolulu harbor, requested a CDP exemption to teach longlining to native Hawaiian youth.

fisherman who fished commercially for more than 50 years, used a multi-species, multi-gear style of fishing that pre-dates current commercial fishing practices. He had already taught Hawaiian youth to fish for amaebi (*Hetrocarpus spp.*) deplying deep-water traps from a small boat platform as a means to supplement household income. He trained his students to harvest akule (bigeye scad, or *Selar crumenophthalmus*) and various crab species, such as kuahonu, Kona and Samoan. He trained his students to market fresh products as well as value added products that the students could prepare.

For 10 years, the Council unsuccessfully engaged in efforts to obtain a longline permit exemption for this training project under the CDP. During that time, Ohai retired from fishing and his children took over his business and created a curriculum for his style of fishing. The Ohai family recently withdrew its CDP proposal and will be working with the University of California at San Diego to develop a curriculum for a multi-species, multi-gear training program for fishermen.

Community Demonstration Projects Program

The CDPP is a grant program for which Congress mandated that $500,000 be set aside annually to support three to five demonstration projects in the Western Pacific Region. CDPP projects demonstrate customary, traditional and cultural practices as well as provide for the acquisition of equipment and materials for participation in fisheries managed by the Council. Implementation of the CDPP benefitted communities in the Western Pacific Region not only from receiving awards,



but also through increased capacity to compete for federal assistance programs. The CDPP improved grant writing and grant application skills, project planning and monitoring, and community organization and mobilization. The communities involved in the CDPP also became more engaged and effective in addressing fishery rights and access to their native environment through the federal fishery decision-making process.

CDPP First Solicitation Priorities

1. Promote fishery resources stewardship by indigenous communities.
2. Promote economic growth and stability in indigenous communities.
3. Promote self-determination in indigenous communities.
4. Promote solidarity in indigenous communities.

CDPP Second and Third Solicitation Priorities

1. Community education.
2. Processing of fishery products and byproducts.
3. Feasibility studies for participation in fishery and fishery-related activities.
4. Increase opportunities for participation in the Council activities and process.
5. Demonstrate traditional, cultural fishing practices.

The CDPP aimed to increase fisheries participation by indigenous communities in the Western Pacific Region. CDPP projects did this by demonstrating the application and/or adaptation of methods and concepts from traditional indigenous practices in resource management conservation and utilization so as to create opportunities for native communities to participate in fisheries managed by the Council. CDPP projects demonstrate the applicability and feasibility of traditional indigenous marine conservation and management practices; develop or enhance community-based opportunities to participate in fisheries; and/or involve research, community education or the acquisition of materials and equipment necessary to carry out such demonstration projects. These projects may further the goals of the indigenous community and promote the development of social, cultural and commercial initiatives and enterprises to enhance opportunities for communities in the Western Pacific Region to participate in fisheries, fishery management or conservation. Projects may also enhance culture, support traditional and customary fishing practices, or seek new methods and activities. Projects must involve the aboriginal community and the marine resources in the Western Pacific Region.

Projects Funded

Fourteen CDPP projects were approved by the Council for funding through three solicitations in 2002, 2004 and 2005. Thirteen of these projects were funded—four in 2002, five in 2004 and four in 2005—totaling $1,416,633. Restricted from the CDPP was $828,021 as part of the Consolidated Appropriations Act of 2005. NMFS has not provided funding for the CDPP after 2005.

Delivering goods and materials to the CNMI Remote Fishing Station on Alamagan.

Hawai'i Aku Boat Training Project ($100,000), Keliipio Mawae, Moloka'i, Hawai'i. The project proposed to purchase and outfit a boat for the training of youth in pole-and-line fishing for *aku* (skipjack tuna, or *Katsuwonus pelamis*).

Aku fishing trip shakedown off Moloka'i.

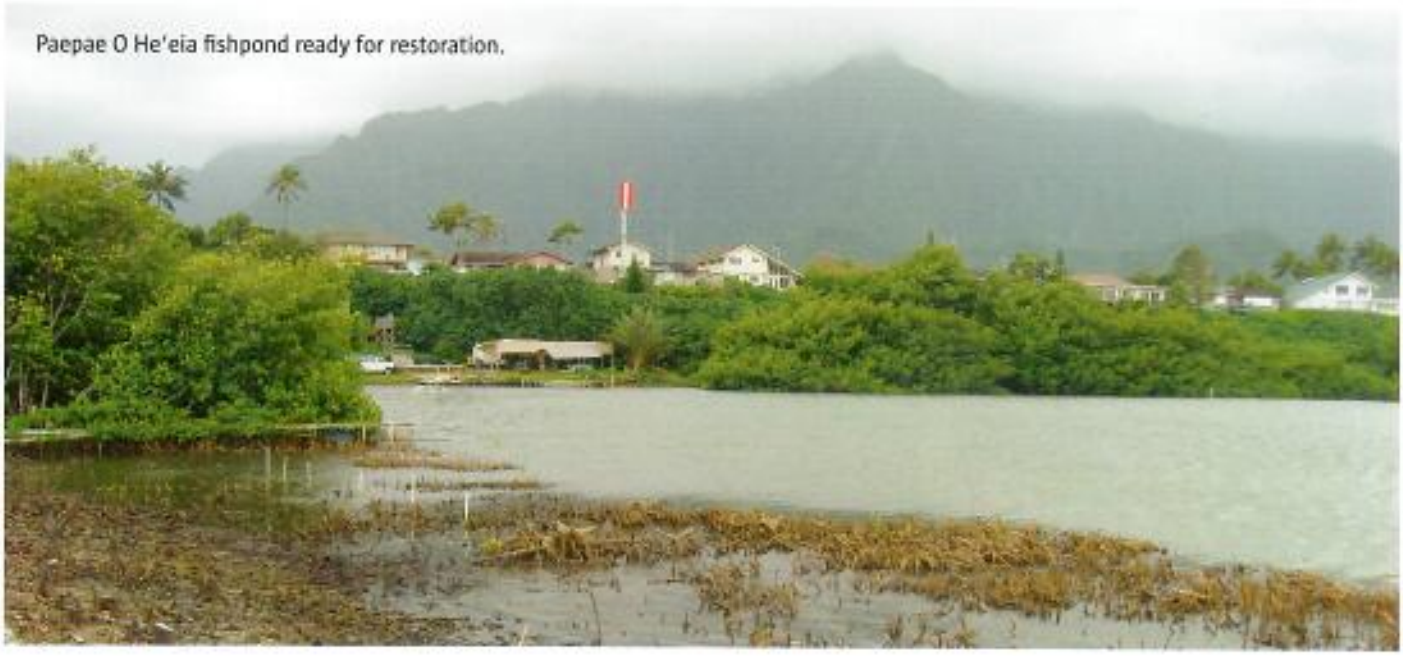
He'eia Kea Fishpond Restoration Project ($129,683), He'eia Paepae O He'eia, Kane'ohe, Hawai'i. The project to restore the fishpond (now known as Paepae O He'eia) involved a partnership with the community and schools to develop curricula and support student projects on management, conservation and scientific monitoring of the Hawaiian fishpond. Three thousand students are cycled through the project each year.

CNMI Remote Fishing Station Project ($90,000), Northern Islands Mayor's Office, Garapan, CNMI. The project was to establish stations on the remote islands of Anatahan and Alamagen in the Northern Islands. The fishing and shipping operations would send fish to Saipan for sale. In May 2003, the project was implemented only on Alamagen. The first harvest was sent to Saipan in June 2005.

Deep-Set Longline Project ($155,000), Guam Fishermen's Cooperative Association, Hagatna, Guam. The project included the purchase and renovation of a longline vessel, development of a training program and testing the marketing potential of the catch.

Launching the *Galaide* to serve as a longline fishing platform for Guam.

Paepae O He'eia fishpond ready for restoration.



American Samoa Cold Storage Installaiton Project ($125,000), Samoa Business and Culture Inc., Pago Pago, American Samoa. The proposal was to erect a four-room cold storage refrigeration system (two freezer rooms, a blast freezer and chill room) to process yellowfin tuna, bigeye tuna, albacore and bottomfish from local fishermen and miscellaneous catch of the local longline fishery into vacuum-packed steaks for sale to local markets and export to food service markets. Initial project was started but failed to attract additional investment needed.

'Ewa Beach Limu Project ($29,525), Henry Chnag Wo Jr., 'Ewa Beach, Hawai'i. The project provided training and skills in the propagation of limu (edible seaweed) at 'Ewa Beach. It was able to gain public and government support for a moratorium of limu gathering on a section of the beach to be used for limu propagation. Community support and participation in the project was gained through the Science Department of nearby Campbell High School.

Keiki (youth) learning about limu at 'Ewa Beach.

Niche Marketing To Reduce American Samoa Longline Byacth ($152,509), Pago Pago Commercial Fishing Inc., Pago Pago, American Samoa. The project proposed to process pelagic fish that would otherwise become bycatch in American Samoa's domestic longline fisheries into value added products. These products would be tested in niche markets targeting traditional family celebrations and consumers of convenience foods versus preparation of whole products. A study would assess the self-sustaining feasibility of the venture. The project aimed to involve all facets of the community in reducing fish bycatch in American Samoa's longline fishery, reinforcing the cultural tradition of not wasting resources. The project did develop products and marketed the products to the American Samoa community with limited success.

Saipan Fishermen's Cooperative ($150,000), Saipan Fishermen's Association, Saipan, CNMI. The project assisted with organizing Saipan's fishermen with the aim of developing a cooperative and fish market on undeveloped government land previously set aside for that purpose.

Saipan Fishermen's Cooperative market development.

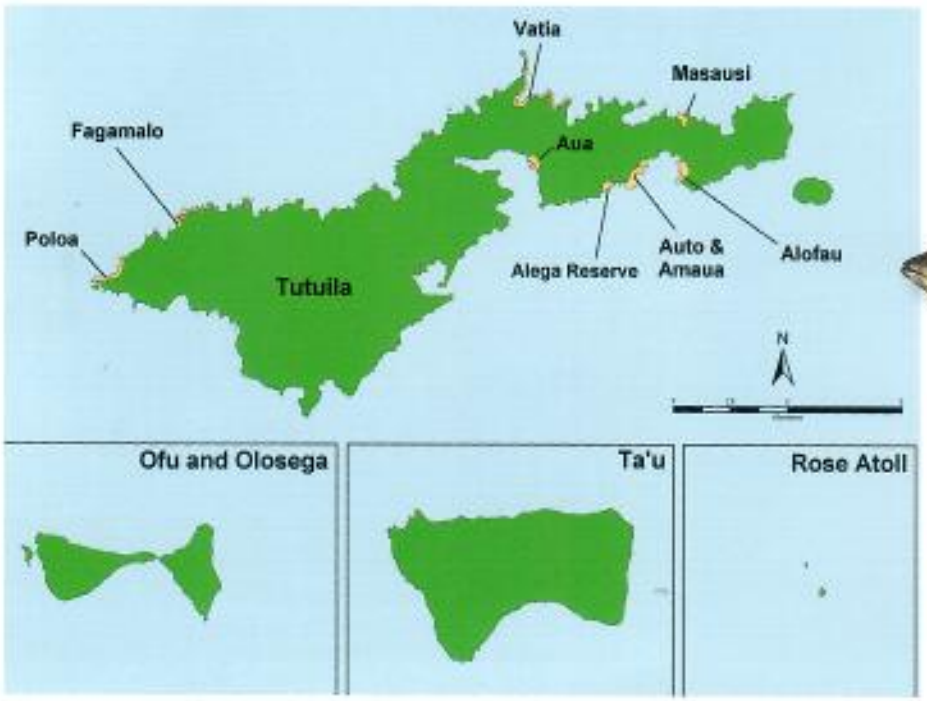
Saipan Traditional Fishing Education Project ($58,064), Carolinian Affairs Office, Office of the Governor, Saipan, CNMI. The project partnered community and indigenous groups to provide traditional fishing practices training for children on Saipan.

Chunchulu fishing demonstration at Tanapag, Saipan.

He'eia Kea Fishpond Revitalization Project ($131,386), Paepae O He'eia, Kane'ohe, Hawai'i. This project undertook feasibility studies in fishery and fishery-related activities to demonstrate how the use of traditional and cultural fishing practices within a fishpond context will contribute to the efficient use of marine resources. The project recognized that Hawaiian fishpond practices were an efficient use of marine resources in the historic context and that utilizing traditional practices for the management of fishponds will work today. This project melded traditional fishpond practices and knowledge with scientific knowledge so they could be applied in the current natural environment.

The makaha (fish gate) at He'eia Kea fishpond.

Small Scale Longline Fishery Development for the Manu'a Islands ($95,080), Olosega Council of Chiefs, Olosega, American Samoa. Olosega has a population of 380 and is located approximately 50 miles from the main island of Tutuila. Olosega has been excluded from territorial development and change to a cash economy. The Olosega Council of Chiefs proposed to create an opportunity for the village to participate in a small scale longline fishing operation. The project would train young Samoans to be fishermen and provide an incentive for Olosega villagers who had moved to Tutuila to return to the village.



Traditional Chamorro and Carolinian Fishing Practices ($90,500), Northern Marianas College Cooperative Research, Education and Extension Service; Saipan, CNMI. This project proposed to revive and restore the traditional fishing practices of the Chamorro and Carolinian communities in the CNMI. The project involved the participation of cultural experts from the community of Rota.

Carving traditional fishing canoe on Rota, CNMI.

Wai'anae Aku Boat Project ($109,886), Henry W. Pelekai Jr., Wai'anae, Hawai'i. Similar to the Moloka'i Aku Fishing Training Project, this proposal sought to train 40 native Hawaiians to fish for aku using traditional pole-and-line fishing techniques.

Western Pacific Marine Education and Training Program

The MET Program provides educational and training opportunities for fishing communities in the Western Pacific Region. The Council developed the Western Pacific Educational Partnership Program (WPEEP) to determine, in consultation with the MET Advisory Committee, the priority of educational projects.

The first MET Workshop, held in Honolulu on April 15 and 16, 2008, identified adult education and youth education as priority areas and the opportunity needs for each group. The WPEPP uses that as a basis for developing the budget to effectively conduct the program.

ADULT EDUCATION OPPORTUNITIES NEEDS:

- For USCG vessel operator license and other certification and training
- For safe boat operations
- For economically successful commercial fishing

YOUTH EDUCATION OPPORTUNITIES NEEDS:

- Development of educational materials
- Development of traditional knowledge curriculum
- Stronger science curriculum with emphasis on practical applications and students going on to higher education
- Economic development opportunities so youth stay home or return home to give back to the community
- Scholarship program that partners with government to fill fishery and other natural resource management positions

At its 144th meeting in March 2009, the Council adopted a process for administrating the MET Program in coordination with the NMFS Pacific Islands Regional Office. The process includes MET Working Groups for each island area that identify projects and priorities and develop recommendations for funding to the MET Steering Committee, which consists of representatives from the Council, NMFS, American Samoa, CNMI, Guam and Hawai'i. Although the process was adopted in 2009, NMFS has not facilitated funding through it. Instead, it has operated independently to directly fund programs and projects.

High School Marine Fisheries and Resource Management Summer Course

One project that has received funding through the MET Program is the Council's annual High School Marine Fisheries and Resource Management Summer Courses. These courses began in Hawai'i through a partnership with Moanalua High School in 2006.

In 2008, similar courses were supported by the Council in each of the island areas. Through contracted instructors and partnerships with local fishery management, enforcement and research agencies and institutions as well as traditional knowledge experts, the course offers students a sampling of experiences and training in marine fisheries and resource management.

The courses target high school students with an interest in fisheries, marine science and resrouce management. Typically, classes are held Monday through Friday from 8:30 a.m. to 4 p.m. for three to six weeks, depending on the island area. In Hawai'i, the course fulfills one Department of Education science credit, which can be used toward graduation.

Hawai'i high school summer course, 2016, Huilua Fishpond, Kahana, O'ahu.

A large part, of the Council's initiatives during the past decade is to inform its Fishery Ecosystem Plans through community collaboration, participation and partnerships. This effort has resulted in the development of activities and programs that engage communities to share, to understand and to document traditional resource management practices and knowledge. Such activities have included the convening of traditional practitioners to share their knowledge of fishing practices and resource monitoring and management, supporting community demonstration projects and activities, conducting training workshops to support capacity-building within the Pacific Island communities and having traditional experts as members of Council advisory bodies to provide guidance in decision making.

Workshop on Fisheries Legislation and Community-Based Management

Sixty-four fishery scientists and resource managers from more than two dozen Pacific Island countries participated in the Workshop on Fisheries Legislation and Community-Based Management, held April 4 to 9, 2005, in Honolulu. Co-sponsored and hosted by the Council along with the UN Food and Agriculture Organization and the Secretariat of the Pacific Community, the workshop recognized development of sustainable coastal fisheries through community-based management as the overarching goal for all of the countries and as the most cost-effective approach for developing countries. With the community enforcing regulations, enforcement costs are reduced, but fairness and equity, as well as traditional tenure and social obligations, may pose problems.

Coastal fisheries management must also take into account the cultural systems that are in place. For example, in discussing fishing violations in Samoa, the penalties seemed unfair considering how little the offenders owned until it was stated that, although the individual was penalized, the matai (chief) of the village was responsible for payment of the fine and the entire village contributed to the payment. The resulting peer pressure helped to prevent a repeat offense.

The varied experiences of the fisheries managers indicated that there is not a single formula for a successful community-based management plan. Developing such plans can be a long and sometimes difficult process. One of the leftovers of colonization in many small Pacific countries is the culture of dependence. The process of community-based management can be empowering; however, the workshop participants recognized that, for many countries, some kind of de-colonization training may be needed.

Above: Blaise Kuemlangan leading legislation exercise. Below: SPC workshop participants.

Traditional Ecological Knowledge Summit

The Traditional Ecological Knowledge (TEK) Summit "Building Windows to the Future: TEK Lessons, Learning and Adaptations" was held Nov. 17 to 20, 2009, on Kaua'i. The summit was hosted by the Coastal America Partnership Program, Pacific Islands Region, in collaboration with NMFS, NOAA Pacific Services Center, US Fish and Wildlife Service and the Council. The summit resulted in a sharing of the scientific disciplines and common practices and expertise of indigenous cultures. The links between science and TEK were acknowledged, and it was agreed that TEK can inform science about practical approaches and solutions to conventional problems. The summit demonstrated the need for tools that allow the participation of TEK holders in the scientific dialogue. The final report recommended ways that TEK can bridge the divide between science and indigenous knowledge.

Ahupua'a Puwalu

The Ahupua'a Puwalu is an ongoing major initiative of the Council, which began as a means to document traditional Hawaiian resource management practices to inform the Hawai'i Archipelago Fishery Ecosystem Plan and to increase native Hawaiian participation in the Council process. ***Ahupua'a*** is the traditional land division and natural resource use and management system, and ***puwalu*** means gathering or conference. The Council was the organizer and major sponsor of the ***puwalu*** series that began in 2006. Other sponsors of the inaugural Ho'ohanohano I Na Kupuna (Honor Our Ancestors) ***puwalu*** included the Office of Hawaiian Affairs, Kamehameha Schools/Bishop Estate, Hawai'i Visitors Bureau and the Association of Hawaiian Civic Clubs. The series continued with island-specific and archipelago-wide ***puwalu***, which included the efforts of some of the original co-sponsors. Below is the list of archipelago-wide ***puwalu*** held to date:

HO'OHANOHANO I NA KUPUNA (Honor Our Ancestors)

- Puwalu 'Ekahi: Lae'ula (First Conference: Experts), Aug. 15–17, 2006, in Honolulu
- Puwalu 'Elua: Ke Kumu Ike Hawai'i (Second Conference: Hawai'i Educators), Nov. 8–9, 2006, in Honolulu
- Puwalu 'Ekolu: Lawena Aupuni (Third Conference: Policymakers), Dec. 19–20, 2006, in Honolulu
- Puwalu 'Eha: Kukulu Ka 'Upena (Building the Structure), April 10–11, 2007, in Honolulu
- Puwalu 'Elima: E Ho'oni I Na Kai 'Ewalu! E Ho'ale Ka Lepo Popolo! (Stir Up the Eight Seas! Rise Up the Maka'ainana!), Oct. 31–Nov. 1, 2007, in Honolulu

HO'OLEI 'IA PAE 'AINA (Cast the Net, Bring All Together in Hawai'i), Nov. 19–20, 2010, in Honolulu

PAPA KANAWAI KAI (Proper Ways to Behave on the Ocean), Nov. 2–4, 2011, in Honolulu

LAWELAWE HANA KE 'AH MOKU (Serving the 'Aha Moku), Sept. 12–13, 2014, in Ka'anapali, Maui

The ***ahupua'a*** division of land ran from the sea to the mountains, which enabled native communities to obtain all the materials and nutrition necessary for survival and perpetuation of the culture. A collection of ***ahupua'a*** into a traditional land district is called a ***moku***. These land divisions were often demarcated with an ***ahu***, a stone marker or cairn, that was topped with a ***pua'a*** symbol, a pig symbol, the skull of a pig or one of its symbolic cultural forms.

The ***ahupua'a*** also represents the structure of Hawaiian society and cosmology. The division of labor, cultural practices and spirituality was based on

the ***ahupua'a*** structure. The accumulated knowledge of centuries of scientific observation of the environment and ecosystems by the native Hawaiians would be of immense value to contemporary natural resource management practices.

The Council's efforts to identify native ***ahupua'a*** practitioners have revealed a large body of knowledge still extant and cultural practices still exercised. As shared by one practitioner, even in the changed and depleted environment in Hawai'i, ***ahupua'a*** practices "still work."

The ***puwalu*** initiative led to the creation of the 'Aha Kiole Advisory Committee, through legislation in 2007, to advise the Legislature on the system of best practices for traditional management of the State's natural resources. In 2009, the 'Aha Kiole Advisory Committee reported that the best practices involved understanding the resources in a detailed way based upon the traditional land tenure system. Five elements of effective traditional resources management were outlined:

- An adaptive management regulatory system,
- A code of conduct, a non-regulatory system in support of the regulatory system,
- A community-consultation process.
- An education process, and
- Eligibility criteria to participate in the management of natural resources: knowledge of resources and traditional management values and methods to be eligible to participate in the resource management.

In 2012, the Legislature created the 'Aha Moku Advisory Committee to advise the Hawai'i Board of Land and Natural Resources, arguably the most important agency in the State government.

Mariana Archipelago Sea Turtle Workshop

On Jan. 25 to 27, 2011, the Council held the Marianas Archipelago Sea Turtle Workshop in Saipan, CNMI, to strengthen international collaborations with areas with known common green turtle stocks. The Council's Indigenous Program was able to include cultural participants and navigators from CNMI, Guam, Hawai'i, American Samoa, Japan and the Philippines to identify the cultural needs and traditions associated with green turtles in order to develop methods to integrate such needs into green turtle conservation activities in the CNMI and Guam.

This was the first time that sea turtle science allowed cultural practitioners to provide traditional knowledge on the importance and significance of sea turtles to the indigenous people and create a dialogue to balance cultural needs and modern-day conservation. Some of the knowledge shared by the practitioners, including sea turtle migratory paths, have been confirmed through modern turtle-tracking research.

Traditional resource managers sharing their knowledge of sea turtles.

First Stewards Symposia on Climate Change and Coastal Peoples

Recognizing that climate change will have a larger impact on indigenous peoples, the Council worked collaboratively with the coastal indigenous peoples of North America in hopes of advancing climate change strategies that secure indigenous cultures. The first symposium was held in 2012 at the National Museum of the American Indian in Washington, DC, to cultivate sustainable projects and education opportunities for indigenous communities that address climate change and its associated impacts. A second symposium was held in Washington, DC, in 2014, to address sustainability, cultural and food security, and traditional resource management practices.

For both symposia, the Council organized and led the Pacific Islands group. It also created a short video *Little Changes Have Big Impacts on Little Islands*, held high school student photo-essay contests on the symposia's themes throughout the Western Pacific Region and supported the winner from each island area to the symposia to showcase their winning entries. For the 2014 symposium, the Council commissioned the American Samoa Community College's Samoan Studies Institute students to study similarities in the traditional stories about climate and fisheries throughout the Pacific Islands and brought a group of the students to the symposium to share their findings.

Together, these symposia provided a louder, unified voice for indigenous peoples to call upon the US government to formally acknowledge indigenous peoples as the nation's first stewards, to recognize their expertise and to consult with them on policies that affect their way of life.

Uniting indigenous voices on climate change.

More than 100 participants attended the Council's CMSP workshop for fishing and indigenous community leaders in the Western Pacific Region.

Coastal and Marine Spatial Planning Community Workshops

In support of the initiative to address indigenous and other fishing communities in the Western Pacific Region, the Council has sponsored and facilitated various workshops and training sessions, meetings and conferences, including those on coastal and marine spatial planning (CMSP). CMSP is one of nine strategic actions of the National Ocean Policy. It was promoted by the federal government to address current and future uses of coastal and marine environments, such as offshore energy and aquaculture.

On Aug. 1 to 4, 2011, the Council sponsored a CMSP community workshop, bringing 125 fishing and indigenous community leaders from the Western Pacific Region to Honolulu to learn the concepts and methods of CMSP. The workshop was facilitated by the NOAA Office of National Marine Sanctuaries' Marine Protected Area (MPA) Capacity-Building Program. The expectation was these leaders would in turn be the conveners and facilitators of CMPS initiatives in their island areas.

The training focused on balancing different ocean resource uses in the development of mock CMSP plans. Working in teams, participants walked through the CMSP process using areas familiar to them, such as Hagatna, Guam; Tanapag, CNMI; Kalealoa, O'ahu; Maunalua Bay, O'ahu; and Kailua-Kona, Hawai'i. Participants acknowledge that the quality of planning depends on the quality of information available. Having the right people at the table is also essential, especially as it relates to generational knowledge of specific places.

Following the Honolulu training, the Council worked with the MPA Capacity-Building Program staff to develop customized curricula for use with Pacific Island communities. The CMPS strategic planning materials and lessons were compressed for use in a two-day course. Council staff used the revised materials to host CMSP workshops in CNMI on Feb. 8 and 9, 2013, and in American Samoa, March 6 and 7, 2013. The CNMI communities were very receptive to the planning process in helping them to organize their natural resource priorities against multiple objectives and develop strategies to address key issues. This effort led to further planning efforts with the communities in Guam and CNMI. In American Samoa, the territory's village-based MPA program is in place and operating. The Council supports the program by providing it with materials and equipment.

Community-Based Fishery Management Plans

The community-based fishery management plan (CBFMP) process developed by the Council is a four-phase program that works with communities to develop an actionable plan to achieve their resource management objectives. CBFMP was an outgrowth and refinement of the CMSP process. It is continually adjusted to fit the community being served. Plans are developed in open community

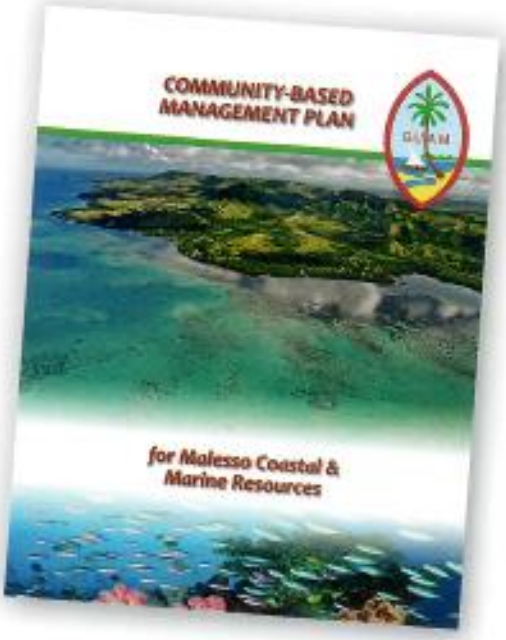
forums based on the community's vision for long-term sustainability, growth and health. Consensus is reached on management, conservation and governance objectives to meet the community's vision. CBFMP is a powerful tool for community cohesion, resilience and change.

The Council has facilitated CBFMP workshops on Guam and the CNMI, with successful results. The CBFMP works well in these territories, the structure is supported by the traditional villages (now known as municipalities) and the local government.

In Guam, Council staff and facilitators have collaborated with village mayors, who have a ready constituency, to ensure commitment and participation throughout the strategic planning process. Guam's 19 village mayors are elected positions, part of the local government and members of the Mayors' Council of Guam. However, each operates with a high degree of autonomy and authority. The CBFMP for the village of Malesso was completed in 2014. The Malesso village is implementing the plan in partnership with Guam agencies, the University of Guam and the Council. The CBFMP process has been initiated in the village of Yigo.

In the CNMI, authority is more centralized in Saipan. Village mayors have less authority, and communities are more diffuse and mobile. However, the Council has worked with the Municipality of the Northern Islands on CBFMP, grants and fishery development projects. The CBFMP process was initiated with the municipality in 2015.

In American Samoa, the coastal area adjacent to a village is considered the property and reserve of the village. The Fono (American Samoa legislature) implemented the village MPA process that allows villages to adopt a package of rules, which the government will recognize and help enforce. The village MPA system has worked well for the two decades it has been in existence. However, over the last few years, villages have been attempting to change their MPA rules to make them more adaptive and responsive to change. Apparently, this will need further Fono action to do. The Council has supported the village MPA by proving material and equipment as well as a forum for presentation of the program to the Council, its advisors and the public.



Participants at the CNMI Northern Islands Community-Based Fishery Management Plan Workshop map the resources on Pagan Island.

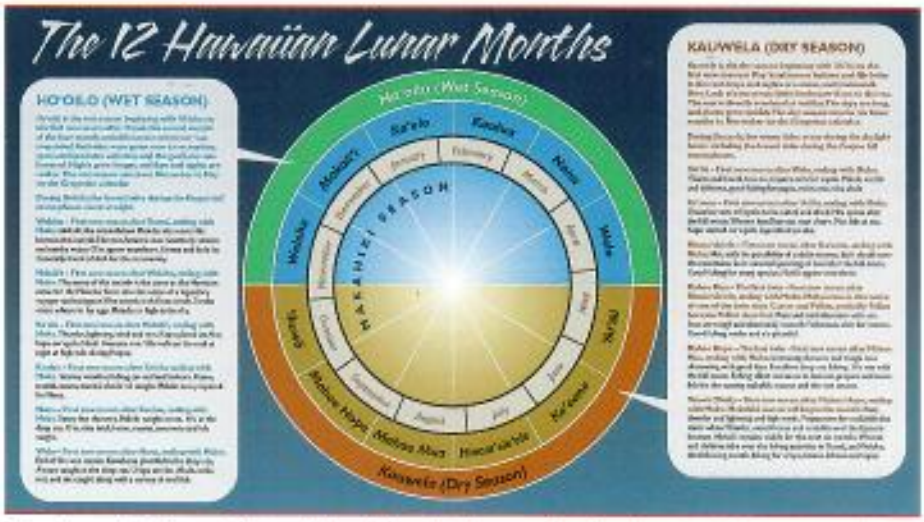
Lana'i 'Aha Moku Project

The purpose of the Lana'i 'Aha Moku Project was to promote ecosystem restoration of the Maunalei Ahupua'a, which would result in a positive impact on the marine environment. The project included workshops to engage community members and work days to collect baseline ecological information, plan for the restoration of the ahupua'a, clear the stream, layout trails and the main irrigation auwai system for wetland cultivation of kalo, and establish food plantings and a ti leaf grove.

Traditional Lunar Calendars and Student Art Contests

Part of the indigenous program is to encourage people to adopt traditional practices. A traditional calendar as an almanac encourages people to traditional practices by providing a guide to activities that were prevalent at certain times of the year. Through calendars, cultures measure time and understand the cyclical nature of living resources. Ancient calendars also defined sacred and secular days, in effect, managing people's time and limiting the time available to secular pursuits, such as planting, harvesting, hunting and fishing. Traditional cultures took advantage of spawning periods as times of abundance and noted how certain events signaled other events.

When the Council restructured its species-based fishery management plans into place-based fishery ecosystem plans, it worked with the respective Departments of Education in the Western Pacific Region to hold student art contests to introduce the concepts of archipelago and ecosystem. The Council decided to place the winning art for each region on traditional lunar calendars for that region. Traditional lunar calendar committees were created in American Samoa, Guam and the CNMI. In Hawai'i, lunar calendar efforts were already strong, so the Council partnered with ongoing experts in the field. The 2006 traditional lunar calendars were so well received by the education, fishing, business, visitors and media sectors that the Council has continued to produce the calendars annually with the traditional lunar calendar committees and other partners. Each year, the theme varies slightly, but remains focused on traditional knowledge and indigenous natural resource stewardship values. In some years, the Council has conducted photo essay contests in conjunction with the calendar for older students. On Guam, the Chamorro Lunar Calendar Festival was developed as an outshoot of the calendar and today is a major event supported by the Guam Visitors Bureau.



The above depiction of the traditional Hawaiian lunar calendar developed by the Council is on display at the Bishop Museum in Honolulu. It is also a popular handout at the Council's booth during public events.

In Jan. 27 and 28, 2011, the Council organized and sponsored a Traditional Lunar Calendar Workshop on Saipan, CNMI, bringing together experts from throughout the US flagged and US associated Pacific Islands. The group reviewed the Council's existing calendars and made suggestions for improving their content, format, delivery and distribution. The Council subsequently contracted with an independent research organization to conduct focus groups and surveys in each of the island areas to get more locally specific recommendations. The Council has also supported traditional lunar calendar efforts on Moloka'i and Palau and the 2015 'Aimalama Lunar Conference on Climate Change in Honolulu.

As lunar calendars in Hawai'i, American Samoa, Guam and the CNMI developed, interest in traditional culture increased. Groups were organized to study the details of traditional practices based on the calendar, and communities were more empowered and more cohesive. The Council's Lunar Calendar display is used by the Bishop Museum.

Fishermen Code of Conduct

One of the five pillars of effective traditional resource management identified by the 'Aha Kiole Advisory Committee is a code of conduct. In 2011, Council staff reviewed the draft proceedings of the Ho'ohanohano I Na Kupuna Puwalu (Honor Our Ancestors Conference) to glean what such a code might comprise. The draft code was vetted by members of the 'Aha Kiole as well as through the fishing community at events such as the October 2011 Fishers Forum in Hawai'i. The Fishermen Code of Conduct was finalized as nine simple standards and practices for when a person goes fishing. The ethics contain within them are universal, such as "only take what you need."

While the original code was created for Hawai'i and offered in English and Hawaiian languages, other island areas quickly asked for the code to be translated into the languages of their indigenous and immigrant communities and visitors as a means to communicate standard expectations of behavior and to defuse user conflicts. Today the code is also available in Chamorro, Refaluwasch, Samoan, Chuukese, Chinese and Korean and requests have been received for translations into Japanese, Indonesian and Vietnamese. The code have been produced as posters, postcards, public service announcements and signs found at harbors, lifeguard stations and hotels.

Impact of Marine Preserve Areas on the Safety of Guam Fishermen

For fishermen on Guam who have traditionally fished inshore, a major concern is the loss of accessible fishing grounds caused in part by the establishment of five marine preserve areas in 1997. These preserves limit fishing activities in areas that were traditional fishing grounds and may expose fishermen to greater risks when they fish in unfamiliar and/or more hazardous waters.

In 2009, the Council approached the Centers for Disease Control, National Institute of Occupational Safety and Health (NIOSH), to examine whether the creation of the preserves might have a deleterious effect on Guam fishing communities. In 2010, NIOSH released its report, which examined changes in the rate and location of fishermen drownings on Guam after the establishment of preserves.

NIOSH found that while the Guam population as a whole showed no statistically difference in drowning rates pre and post establishment of the marine preserve areas, when separated into Chamorro and non-Chamorro residents, there were significant differences. For non-Chamorro fishermen, the drowning rate decreased by 50 percent. For Chamorro fishermen, the drowning rate increased 125 percent.

In addition, the location of the drownings for Chamorro fishermen changed. Prior to establishment of the preserves, only 20 percent of the drownings occurred on the East Coast, which is considered a "dangerous" area. After the marine preserve areas were created, 63 percent of the Chamorro fishermen drownings occurred on the East Coast.

FIGURE 1. Location of Drowning of Chamorro Residents of Guam While Fishing Pre and Post MPAs

In conclusion, the report found that, prior to the establishment of the marine preserve areas, the residents of Guam fished mostly in the protected West Coast. Non-Chamorro residents are primarily recreational users, scaling back their fishing activities when the preserves were created. On the other hand, Chamorro residents, who subsist on fishing activities, traveled further and fished in more hazardous conditions and locations, which resulted in a higher risk of drowning.

Prior to this study, there were no studies on drowning rates on Guam or for other islands in the Western Pacific Region.

OTHER SUPPORT TO INDIGENOUS CULTURES IN THE WESTERN PACIFIC REGION

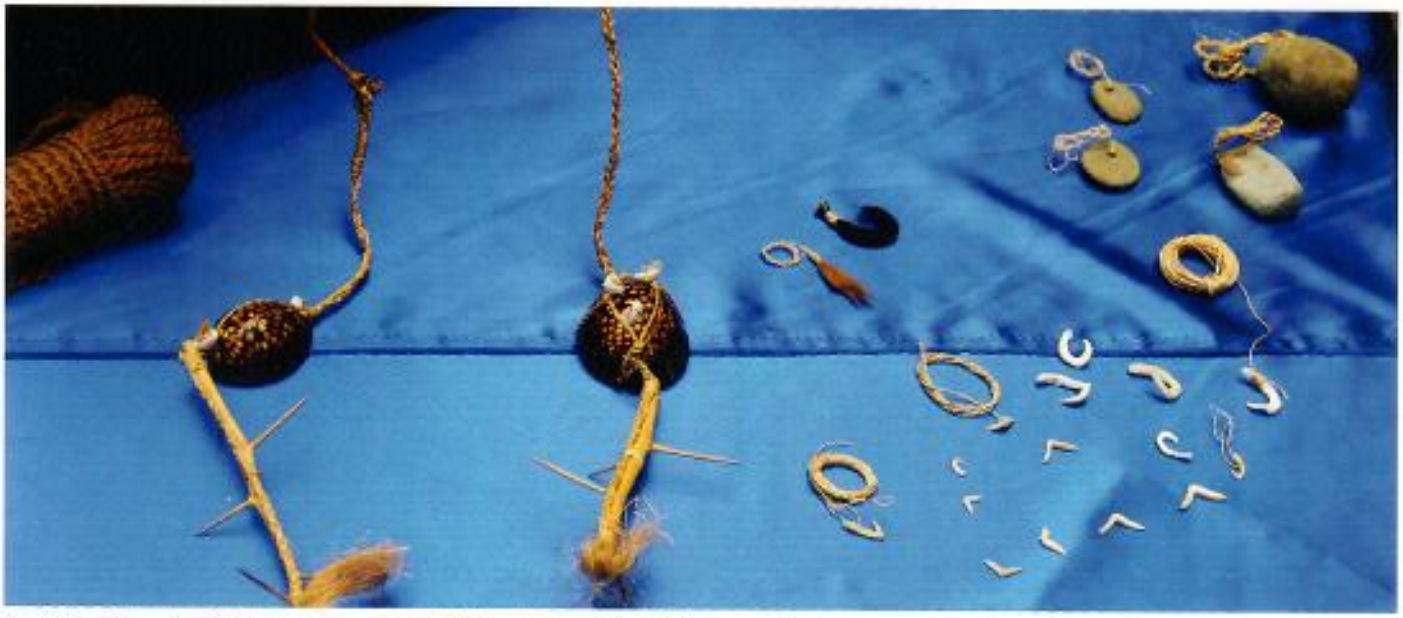
With the program and institutionalized capacity in place for recognizing and including indigenous cultures in fisheries management, the Council continues to provide support to the indigenous peoples of the Western Pacific. Through cooperation and collaboration with these communities, the Council is able to fill some of their science and management needs and priorities. The Council works with communities on monitoring projects, incorporating traditional knowledge into management and promoting indigenous cultures and traditions.

To manage a fishery, the Council needs to know the status of the fish stocks. In most cases, the Western Pacific Region has very limited stock data and must rely on the best scientific information available. To that end, the Council has worked with many communities to supplement the existing data through fishery and ecosystem monitoring projects. The Council has collaborated with the Mokauea Fishermen's Association and Hawaii Pacific University to develop techniques to monitor their resources; with Makawalu Wailua on Kaua'i to look how Western science can be used to monitor a resource and compare it with traditional knowledge; with NOAA OceanWatch and American Samoa departments to teach Manu'a high school students to monitor coral reefs and water quality; with 'Aha Moku O Maui to provide training on measuring water quality in an ahupua'a; and through workshops throughout the Western Pacific Region, in collaboration with the NOAA OceanWatch and local agencies, to train teachers and community leaders on water quality monitoring. The Council has also worked with Hale O Lono and other loko i'a (fishponds) to develop monitoring logs to determine changes in water quality and fish presence within the ponds and correlate these with changes in other flora and fauna on land as well as in the pond, as well as provided financial support for sophisticated water monitoring equipment. Recently the Council provided funding to look at whether traditional measurements of fish biomass can accurately predict true biomass by comparing traditional estimates with camera-observed estimates. The results demonstrate that traditional methods provide the accurate amount and types of fish species in an area.

The use of traditional knowledge has been a topic of conversation across the world for many years. The Council has been at the forefront of this movement through collaboration with such groups as the National Marine Educators Association, through which the Council was able to gain support for a Traditional Knowledge Committee and a Traditional Knowledge Scholarship. The Council was also instrumental in the formation of the International Pacific Marine Educators Network, which has a Traditional Indigenous Local Knowledge Committee and include traditional knowledge as a strand in its biennial conferences.

Documenting and showcasing traditional fishing practices has also been one of the Council's mainstays in festivals and forums throughout the country. The Council has supported documenting hachuman (mackerel scad) and chenchulu (net) fishing in the Mariana Archipelago; created several short videos on traditional practices, including interviews with non-instrument navigators and a traditional fishing and management series *In Old Hawai'i*, among others; provided displays, speakers and activities on the different fishing cultures of the Western Pacific Region at various festivals and conferences throughout the region and in Washington, DC; supported

With assistance from Matson and Guam's Traditions About Seafaring Islands (TASI), the Council brought a traditional Chamorro proa for display in Washington, DC, at the 2012 Capitol Hill Ocean Week's Awards Gala. The proa was also showcased at the First Stewards Symposium and Living Earth Festival at the National Museum of the American Indian.



Traditional Hawaiian fishing implements on display at events in Washington, DC.

the creation of the Pelagic Fisheries Display at the Guam Museum; and provided a cultural exchange of knowledge by bringing fishermen from Hawai'i to Guam, CNMI and American Samoa to demonstrate fishing methods and seafood preparation.

The Council is engaged in communities in other pathways, such as through Neighborhood Boards, civic clubs and other community meetings. The Council also meets with the Office of Hawaiian Affairs, the Mayors' Council of Guam, the Chamorro and Carolina Affairs Offices in the CNMI and the Office of Samoan Affairs in American Samoa, informing them of Council actions and inviting them to participate in the Council process. The Council participates with organizations of interest such as the Big Island Fishers, the Pacific Islands Fishery Group, and Hawai'i Fishermen's Alliance for Conservation and Tradition.

The Council supports the expression of traditional fishing rights wherever and whenever possible. It has established "customary exchange" as an allowable activity associated with fishing in some marine national monuments, and it supports the exemption of seasonal run harvest exemptions by the village mayors at the discretion of the director of the Department of Agriculture on Guam.

The need to create litigation or an exemption to allow traditional practices is indicative of the institutionalized animus toward these practices. Traditionally, conservation and utilization of resources was not separated. The goal of traditional natural resource management is abundance. The abundance is harvested, and scarcity is conserved.

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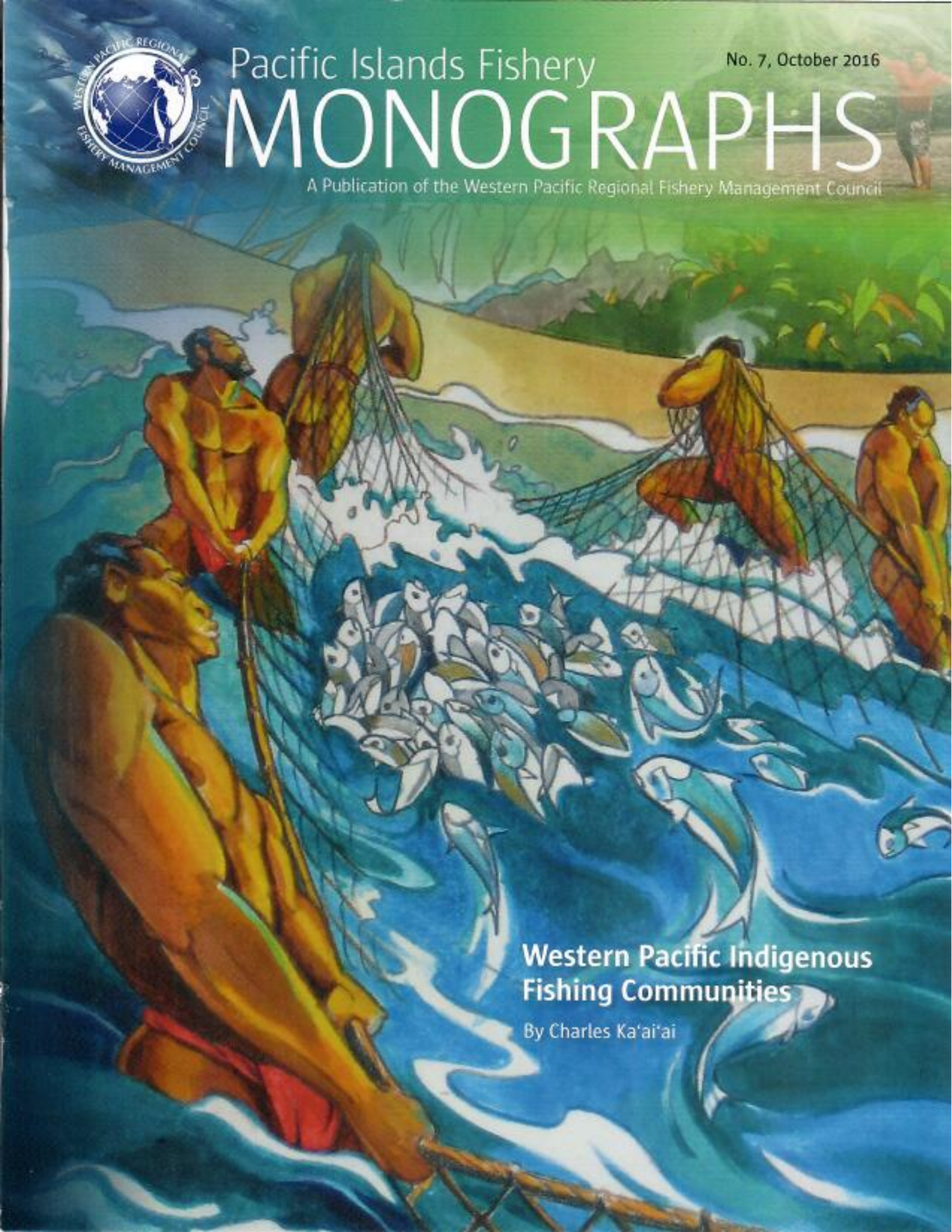

Western Pacific Indigenous Fishing Communities

By Charles Ka'ai'ai

Contents

ACRONYMS

AP	Advisory Panel
CBFMP	Community-based Fishery Management Plan
CDP	Community Development Program
CDPP	Community Demonstration Projects Program
CMSP	Coastal And Marine Spatial Planning
CNMI	Commonwealth of the Northern Mariana Islands
EEZ	Exclusive Economic Zone
FRIP	Fishery Rights of Indigenous People
MET	Marine Education and Training
MSA	Magnuson-Stevens Fishery Conservation and Management Act
MPA	Marine Protected Area
NMFS	National Marine Fisheries Service
NWHI	Northwestern Hawaiian Islands
PIAFA	Pacific Insular Area Fishery Agreements
PRIAs	Pacific Island Remote Island Areas
SFA	Sustainable Fisheries Act
TEK	Traditonal Ecological Knowledge
WPEPP	Western Pacific Educational Partnership Program

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