

## CLIMATE CHANGE

### in the Western Pacific: Where to Now?



Pago Pago harbor in American Samoa showing infrastructure supported on the shoreline and the nearby coastal mountains. Photo: Wikipedia Commons/Iseulaolemoana.



**Across the globe, climate change** is altering the way people look at the world. Adjusting to shifts in economic drivers are now the norm, as access to natural resources becomes more limited and coastal infrastructure is often diminished. Many nations experiencing the impacts of climate change are responding by relocating to inland areas and identifying new target resources. However, for island nations in the Western Pacific, land and resources are limited. Without the ability to move inland, perform indigenous and cultural practices, and/or pursue traditional food sources through local fisheries and agriculture, many of these Pacific Island nations have nowhere to turn.

The Western Pacific Regional Fishery Management Council has jurisdiction over the federal waters of Hawai‘i, American Samoa, Guam, the Commonwealth of the Northern Marianas

Islands and the U.S. Pacific Remote Island Areas. The implications of climate change affect these islands in the Western Pacific with a higher degree of severity when compared to other regions in the world, such as the continental United States (Figure 1, see page 3). For example, in American Samoa, climate-related changes are being observed through increased ocean temperatures and acidity, shifts in species distributions and ocean currents, reduced nutrient levels, and most immediately devastating, rises in sea level. Infrastructure in American Samoa is extremely vulnerable to sea level rise due to the steep terrain of its islands and relatively narrow coastlines. The situation is worsened by the recently recognized rapid sinking of the islands, triggered by the 2009 Samoa earthquake and predicted to last for decades. This subsidence is estimated to lead to roughly twice as much sea level rise by 2060 as what was

CONTINUED ON PAGE 2

#### TROLL ON IN TO THIS ISSUE

- |   |   |   |
|---|---|---|
| <p>1 Climate Change in the Western Pacific: Where to Now?</p> <p>4 193rd Council Meeting Highlights, December 5-8, 2022</p> <p>5 Scientists Work With Fishermen to Understand Bottomfish Data</p> <p>6 Positive Outcomes from International Fisheries Commission Meeting Lead to Optimism in 2023</p> | <p>8 Large-Scale MPAs Have Limited Conservation Benefits for Pacific Tropical Tunas According to New Study</p> <p>10 New DLNR Chief in the CNMI Administration</p> <p>10 Revetment Work Begins at the Garapan Fishing Base</p> <p>11 Get to Know Your Council Members: Shaelene Kamaka‘ala</p> <p>12 Congressional Corner</p> | <p>12 Council Family Updates</p> <p>13 Meet Your Council Advisory Panel Leadership</p> <p>14 Summary of Action Items at the March 2023 Council Meeting</p> <p>15 Recipe: Seafood Miso Soup with Dipping Sauce</p> <p>16 2023 Council Calendar</p> <p>16 Upcoming Events</p> |
|---|---|---|



## PACIFIC ISLANDS FISHERY NEWS

is published by the  
Western Pacific Regional Fishery  
Management Council  
1164 Bishop St., Suite 1400  
Honolulu, HI 96813  
www.wpcouncil.org

Telephone: (808) 522-8220  
Fax: (808) 522-8226  
info@wpcouncil.org

### CHAIR

John Gourley—CNMI

### VICE CHAIRS

Will Sword—American Samoa  
Sylvan Igisomar—CNMI  
Manny Dueñas—Guam  
Roger Dang—Hawai'i

### EXECUTIVE DIRECTOR

Kitty M. Simonds

All rights reserved.

## STORY ICON KEY

### REGIONAL INTEREST



### CONSERVATION



### FISHERMEN



### EDUCATORS



### GOVERNMENT



Federal



Hawai'i



Guam/CNMI



American Samoa

*Dedicated to ecosystem-based  
fisheries management in the  
U.S. Pacific Islands.*

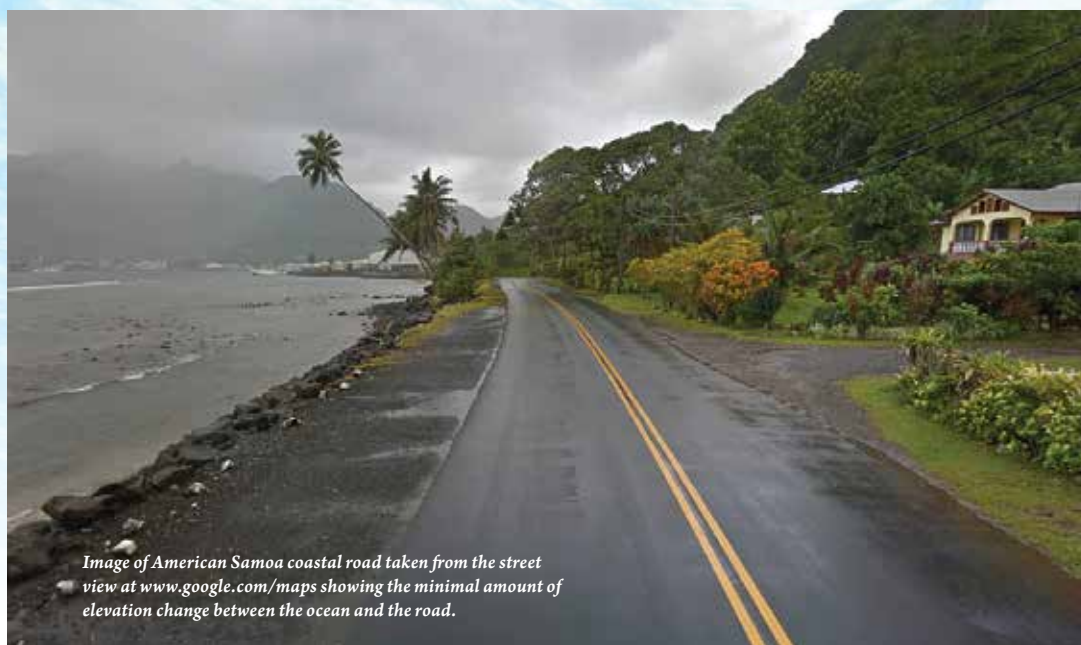


Image of American Samoa coastal road taken from the street view at [www.google.com/maps](http://www.google.com/maps) showing the minimal amount of elevation change between the ocean and the road.

already predicted from climate change alone.<sup>1</sup> According to University of Hawai'i Sea Grant, American Samoa faces a total relative sea level rise of 0.8-1.4 m (2.6-4.6 feet) by 2100,<sup>2</sup> which would severely impact the airport and low-lying coastal roads. Ultimately, these changes will affect insular and pelagic ecosystems and the communities that depend upon them.

As sea level continues to rise, coastal infrastructure and agricultural grounds will diminish, and communities will be pushed further up the mountainside. So where can many of these Pacific island communities turn? This question is especially relevant when considering employment in the tuna industry, specifically through the Starkist Samoa cannery, located at sea level in the Pago Pago Harbor. The cannery provides more than 80% of private employment for people in American Samoa, and also to many nationals of other Pacific Island countries and territories, particularly Samoa, Niue, Tokelau and Tonga. Tuna exports from American Samoa are valued at approximately \$353 million per year, with canned tuna comprising 99.5% of the total.<sup>3</sup> **Loss of this industry due to the implications of climate change would be devastating to American Samoa and the communities it supports.**

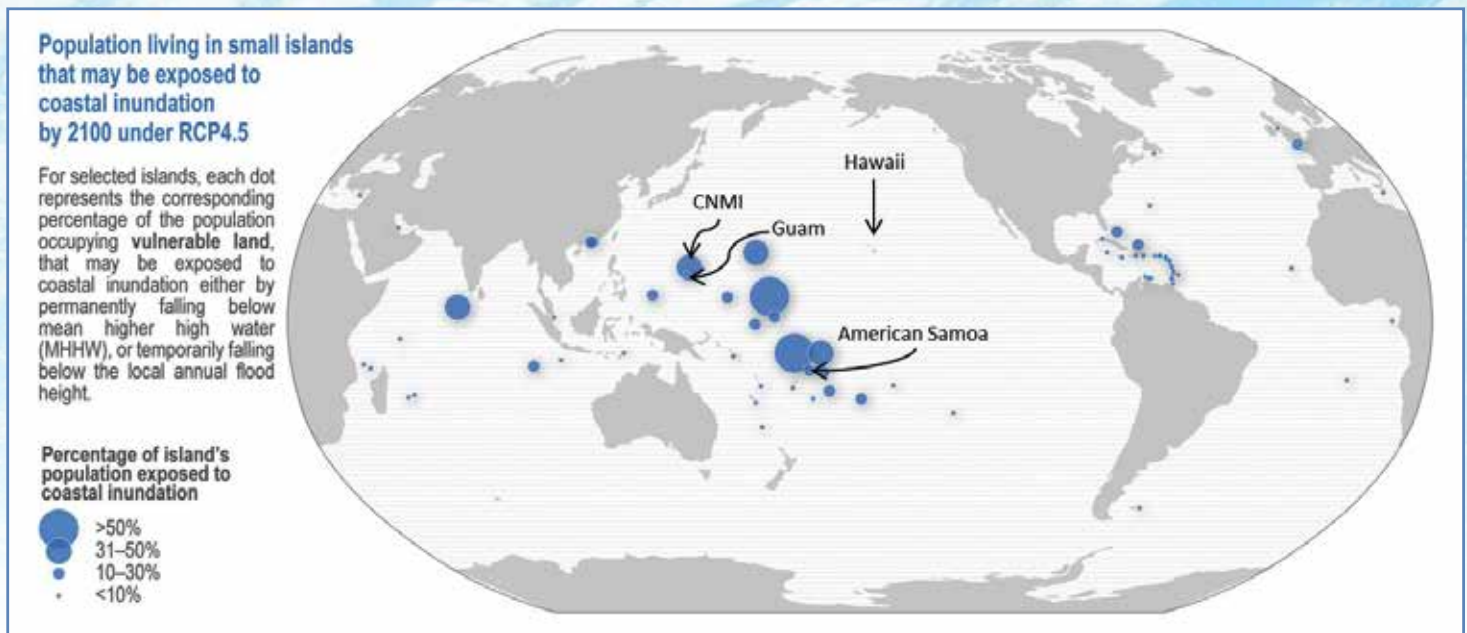
Recently, members of the American Samoa Resilience Commission met with the U.S. Government Accountability Office to discuss climate change in the islands. Director of Marine and Wildlife Resources and Commission Co-chair (and former Council Chair) Taotasi Archie Soliai shared the Commission's mission: "American Samoa recognizes the urgency of

climate impacts with grave concerns and the need to respond quickly and strategically to ensure the protection, adaptive capacity, resilience, and well-being of the islands and residents of American Samoa."<sup>2</sup> Following, Acting Governor Talauega Eleasalo Ale said the quarterly meetings of the Commission allow and ensure immediate accessibility for government leaders to address issues. "As a small island in the middle of the ocean, we feel the effects of climate change every day. We see it in the rising tides, and we feel it in the increased heat in the day. We are mindful of the constant change, and have refocused our efforts through this commission."<sup>4</sup> A main point highlighted in the discussion was the lack of a fair playing field when island territories compete against states for federal funding.

Fortunately, on Nov. 15, 2021, President Biden signed the Bipartisan Infrastructure Law,<sup>5</sup> recognized as the largest long-term investment in the Nation's infrastructure and economy in history. It provides \$550 billion over fiscal years 2022 through 2026. As of February 2023, this has translated into \$49.7 million allocated for American Samoa<sup>6</sup> including:

- \* \$4.6 million to rebuild roads and bridges (~\$24 million expected over five years)
- \* ~2,000 households enrolled in Affordable Connectivity Program to help ensure high-speed internet coverage (\$100 million expected)
- \* \$31 million to provide clean and safe water and improve water infrastructure





**Figure 1.** The percentage of small island populations exposed to coastal inundation by 2100 as identified through the 6th Assessment Report from the Intergovernmental Panel on Climate Change.

- \* \$1.5 million to improve public transportation options (\$8 million expected)
- \* \$395,000 towards clean public transit and school buses
- \* \$5.6 million for clean energy, energy efficiency and power
- \* \$1.3 million to replace and modernize airport infrastructure
- \* **\$1.7 million to bolster resilience against climate change and extreme weather events**
- \* \$3 million to repair and improve ports and waterways
  - \$873,000 to construct ferry boats and terminal facilities
  - \$2.1 million for Aunu'u wharf reconstruction – the sole access point to the island

Much of the work focusing on climate resilient fisheries in the Western Pacific results from efforts led by the Council, NOAA Pacific Islands Fisheries Science Center and Pacific Islands Regional Office with funding from the Department of Commerce. Collaborative efforts have led to the development of the Pacific Islands Regional Action Plan. It identifies

priority needs and specific actions to implement the NOAA Fisheries Climate Science Strategy in the region. The Strategy has seven key objectives:

1. Identify climate-informed reference points
2. Create robust management strategies for a changing climate
3. Incorporate adaptive decision processes
4. Project future conditions
5. Understand how things are changing and why
6. Track changes and provide early warnings
7. Build our science infrastructure

NOAA hosts Annual Collaborative Climate Workshops to put these objectives into action and address the vulnerability of the islands in the Western Pacific Region. The goal of these workshops is to prioritize research needs and indicate how managers may respond to changing climate conditions in support of the Pacific islands and their communities under the jurisdiction of the Council. The next workshop is scheduled to take place in fall 2023. 🐟

### Council Resources on Climate Change:

Pacific Islands Regional Action Plan - <https://tinyurl.com/3t49nd3f>

Shifting Stocks and Changing Ocean Conditions handout - [www.wpcouncil.org/educational-resources/education-library](http://www.wpcouncil.org/educational-resources/education-library)

Little Changes Have Big Impacts on Little Islands video - <https://tinyurl.com/LittleChangesBigImpacts>

### References

<sup>1</sup> USGS. Sea-Level Rise Viewer for American Samoa: A Co-Developed Visualization and Planning Tool. Climate Adaptation Science Centers. Dec. 31, 2019. <https://tinyurl.com/ASSeaLevelRise>

<sup>2</sup> [www.samoanews.com/local-news/sea-level-rise-growing-threat-here-american-samoa](http://www.samoanews.com/local-news/sea-level-rise-growing-threat-here-american-samoa)

<sup>3</sup> American Samoa Statistical Yearbook 2018 and 2019, American Samoa Department of Commerce. [www.doc.as.gov/resource-center](http://www.doc.as.gov/resource-center)

<sup>4</sup> [www.talane.com/2023/01/23/gao-team-sees-impacts-of-climate-change-first-hand](http://www.talane.com/2023/01/23/gao-team-sees-impacts-of-climate-change-first-hand)

<sup>5</sup> [www.fhwa.dot.gov/bipartisan-infrastructure-law](http://www.fhwa.dot.gov/bipartisan-infrastructure-law)

<sup>6</sup> [www.whitehouse.gov/wp-content/uploads/2023/02/American-Samoa-Fact-Sheet-E3-1.pdf](http://www.whitehouse.gov/wp-content/uploads/2023/02/American-Samoa-Fact-Sheet-E3-1.pdf)

**According to University of Hawai'i Sea Grant, American Samoa faces a total relative sea level rise of 0.8-1.4 m (2.6-4.6 feet) by 2100, which would severely impact the airport and low-lying coastal roads.**

# 193rd Council Meeting Highlights, December 5-8, 2022



WPRFMC Council members (or designee) and executive director at the Pagoda Hotel in Honolulu for the 193rd meeting, with Shaelene Kamaka'ala and Roger Dang joining virtually.



## Noncommercial and Native Hawaiian Subsistence Fishing Returns to the NWHI After 15 Years

**Fishery managers** from across the Western Pacific recommended fishing regulations for the Papahānaumokuākea Marine National Monument (PMNM) Expansion Area. Members of the Western Pacific Regional Fishery Management Council urged the National Marine Fisheries Service (NMFS) to authorize noncommercial and Native Hawaiian subsistence fishing from 50 to 200 nautical miles around the Northwestern Hawaiian Islands (NWHI).



For Native Hawaiian practices, this would include an opportunity to recover fishing costs up to \$15,000 per trip.

The Council members discussion on this action was lively.

"It is important to provide this opportunity for people in the Pacific, specifically Hawai'i, to provide food for their community, especially areas that have been culturally their place to fish," said American Samoa Council member Will Sword. "We can also take advantage of the chance to gather much needed data."

"I'm concerned that any action we take here will define our culture and its evolution," said Manny Dueñas, Council member from Guam. "In the end, we are looking at ways to sustain our native peoples and see them flourish like hundreds of years ago."

In discussing cost recovery, Council member McGrew Rice said, "By my estimate, if a 1-day trip to the NWHI costs \$3,000 plus fuel, most people can't afford this without being able to recoup their costs." This echoes sentiments heard from the public at meetings the Council held across Hawai'i in November 2022. Cost recovery includes actual trip expenses like fuel, bait and

ice. The NWHI are 400 miles from the main Hawaiian Islands, and take two days to reach by boat.

Some members disagreed with the final recommendation. David Sakoda, the State of Hawai'i representative, was concerned with dissolving established Native Hawaiian rights under the State Constitution. "We don't want to water down customary and traditional rights by extending beyond what is included in the Constitution," said Sakoda. The State was amenable to cost recovery, as long as it was only included in the noncommercial fishing permit.

Hawai'i Council member Shae Kamaka'ala said, "I feel the term Native Hawaiian subsistence is much too narrow. Native Hawaiian practice permits are in place for the original monument area, and it is a more appropriate term to describe the broader human interaction in that space."

The Council has had an indigenous fishing rights standing committee since the 1980s, and from 2006 to 2017, a series of Puwalu conferences to identify traditional fishing practices in Hawai'i to inform management decisions.

The Council approved the fishing regulations in the Monument Expansion Area with two dissensions and two abstentions, and included prohibiting commercial fishing, limiting gear types and catch limits for managed pelagic and bottomfish species. NMFS and the Council will include fishery performance indicators, such as number of permits issued and catch and effort information, in the annual Hawai'i and Pacific Pelagic Fishery Ecosystem Plan reports.

In 2016, Presidential Proclamation No. 9478 set aside an area of 50 to 200 nautical miles (the outer boundary of the U.S. exclusive economic zone) adjacent to the PMNM. The Proclamation provides for management of activities and species under the Magnuson-Stevens Act, including noncommercial fishing and Native Hawaiian practices.



## International Fisheries Commission Adopts Council's Recommended Shark Conservation Measure

An improved shark conservation and management measure proposed by the United States and Canada was adopted at the Western and Central Pacific Fisheries Commission meeting in Da Nang, Vietnam held last week, effective Jan. 1, 2024. The measure to prohibit wire leaders and shark lines in tuna and billfish longline vessels from 20 degrees north latitude to 20 degrees south latitude is consistent with the Council's MSA 304(i) international recommendations. It also contains safe release provisions for non-retained sharks and extends obligations for fins to be naturally attached to carcasses through 2024. Fishing vessels are instructed to release non-retained sharks as soon as possible, taking into consideration the safety of the crew and observer by using a line cutter to cut the branchline as close to the hook as possible.



### 2023 North Pacific Striped Marlin Catch Limit

The Council recommended an annual catch limit of 457 tons of striped marlin for the U.S. longline fishery in the Western and Central Pacific Ocean, consistent with previous Council action and a WCPFC measure. The Council also recommended an annual retention limit of 443 tons as an accountability measure. If the limit is reached, the fishery would not be allowed to retain striped marlin, but other fisheries would not be restricted. The Council will reevaluate this catch limit when a new stock assessment is available from a scientific services provider (ISC), anticipated in 2023.

The meeting agenda and summary of action items are available at [www.wpcouncil.org/event/193rd-council-meeting](http://www.wpcouncil.org/event/193rd-council-meeting). 🐟

## Scientists Work With Fishermen to Understand Bottomfish Data

**The National Marine Fisheries Service's** Pacific Islands Fisheries Science Center (PIFSC) is planning a new stock assessment for the Guam bottomfish fishery in 2024 and engaged the local fishing community in kicking off the process. PIFSC scientists, in collaboration with the Guam Department of Agriculture and the Western Pacific Regional Fishery Management Council, held workshops in January 2023 to ask Guam fishermen to help ground truth and interpret fishing catch data. The assessment is the first step in determining the status of the Guam bottomfish stock and setting an annual catch limit.

include multiple fishing methods and the method chosen is determined by the weather conditions (wind, waves, etc.).

The second and third workshops provided an opportunity for fishers to give their interpretation of the various bottomfish data collected by DAWR surveys to ensure that what scientists see in the numbers is comparable to what the fishermen experience. A common perspective was that there are not many zero catch trips because if you are not catching, you switch gears, methods, sites, etc. Bottomfishing is just one method and nearly everyone carries multiple gears. One fisherman said he brings his speargun because he will at



Guam fishermen gather to provide their insight to scientists on bottomfish fishing. Photo: Joshua DeMello.

A 2019 stock assessment determined that Guam's bottomfish fishery was overfished. A stock is overfished when the population is below a target level that maximizes harvest. The Council developed a rebuilding plan to address the overfished condition and return the Guam bottomfish stock to a level that can support maximum sustainable yield.

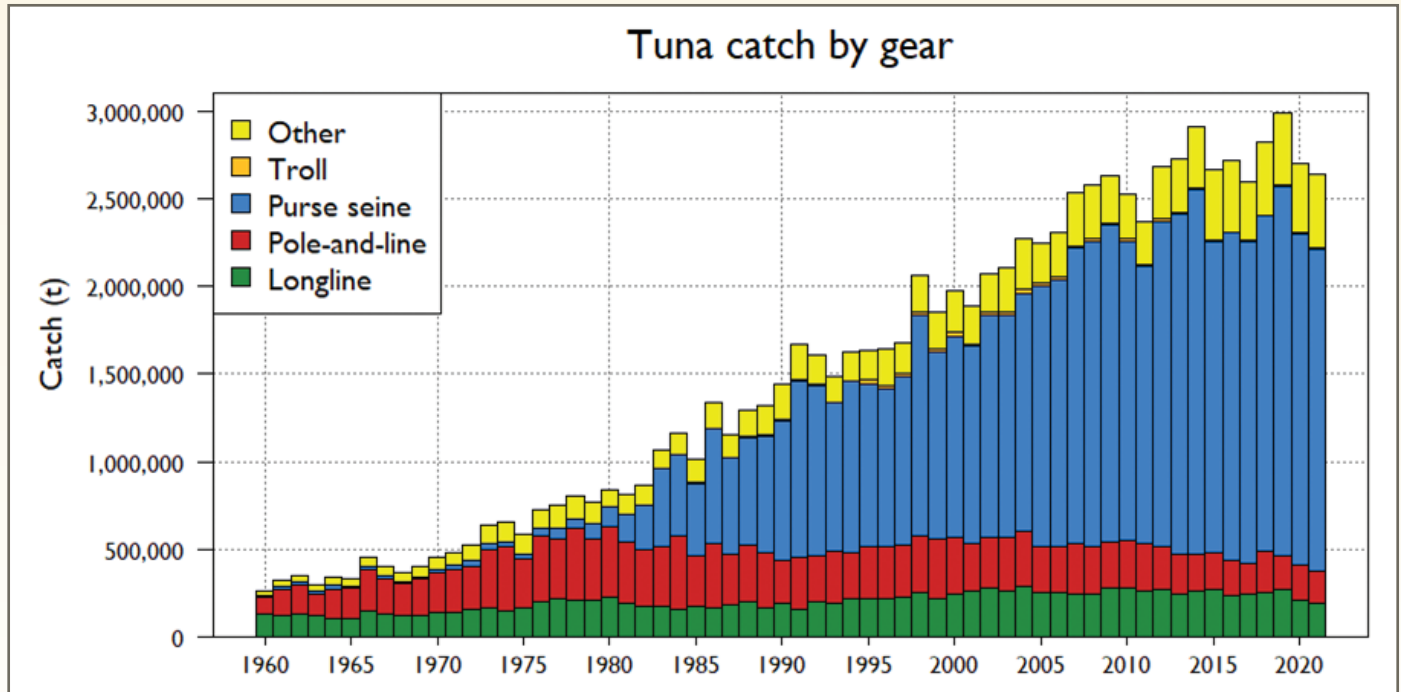
The first workshop allowed Guam's Division of Aquatic and Wildlife Resource (DAWR) staff members to offer their insights on creel survey implementation and data management. Surveyors described how they conduct surveys and their explanations for the historical data presented. Workshop participants noted that most trips

least come home with dinner if the fish aren't biting. Switching from deep- to shallow-water (<500 feet) bottomfishing also often allows fishers to catch fish even if they aren't biting at deeper depths. Another fisherman emphasized, "There are no bottomfish fishermen in Guam. We are fishermen, period."

PIFSC, the Council and the Guam Department of Agriculture appreciated members of the fishing community participating and providing their knowledge. For more information, come to the March Council meeting to hear a presentation and visit [www.wpcouncil.org/event/194th-council-meeting](http://www.wpcouncil.org/event/194th-council-meeting). 🐟



# Positive Outcomes from International Fisheries Commission Meeting Lead to Optimism in 2023



Credit: Hare et al. 2022. *The western and central Pacific tuna fishery: 2021 overview and status of stocks*. Tuna Fisheries Assessment Report no. 22. Noumea, New Caledonia: Pacific Community. 63 p.



**The 19th Regular Session** of Western and Central Pacific Fisheries Commission (WCPFC19) met in Da Nang, Vietnam from Nov. 27 to Dec. 3, 2022. This was the first time in three years the WCPFC met in-person following the virtual format used during the COVID-19 pandemic. A major positive meeting outcome was the adoption of a WCPFC management procedure and harvest strategy work plan, which will safeguard Marine Stewardship Council (MSC) certifications for the Hawai'i and American Samoa longline fisheries. Third party certifications are often required for fish products to enter certain large retailers and markets, such as Walmart. The MSC had required the WCPFC to make progress on developing harvest strategies for tropical tunas in order to retain certifications for fisheries under WCPFC management. The American Samoa longline fishery relies on its MSC certification to supply the StarKist Samoa cannery and the Hawai'i longline fishery that targets swordfish, bigeye and yellowfin tuna



The U.S. delegation to the WCPFC.

just recently earned its certification in 2022. The WCPFC manages nearly 60% of the world's tuna supply and is the only international entity that has all of its managed tropical tunas not overfished or experiencing overfishing. WCPFC members with a wide range of management objectives were successful in negotiating harvest strategy work plans and a management procedure for

skipjack tuna (the largest stock).

The WCPFC also adopted a new shark conservation management measure that follows a Western Pacific Regional Fishery Management Council recommendation. The measure prohibits use of wire leaders in longline fisheries that target tuna and billfish in waters from 20 degrees south latitude to 20 degrees north latitude, where most protected

CONTINUED ON PAGE 6



shark interactions occur. The Council and Hawaii Longline Association led this effort and National Marine Fisheries Service staff successfully managed to get this measure through to help “level the playing field” for conservation burdens.

The United States, with coordination among several Pacific Island members, was able to incorporate climate change into management decisions, requiring the topic be a standing agenda item for all meetings of the WCPFC and its subsidiary bodies. Climate change is an important matter to Pacific Island nations. Successfully leading efforts to push the WCPFC to make decisions that strongly consider climate change issues certainly helps the United States achieve much-needed goodwill to negotiate the needs of Hawai‘i and the U.S. Pacific territories in tropical tuna management.

Most importantly, the WCPFC now has a clear path forward to negotiate a new tropical tuna measure at the December 2023 meeting, due at least in part to the Council’s efforts. WCPFC19 participants recommended a plan to hold two workshops in 2023 to negotiate components of a tropical tuna measure, noting that the largest fisheries are purse seine fisheries, followed by longline fisheries that include Council-managed fisheries.

Leading up to WCPFC19, Council staff organized a productive workshop on Western and Central Pacific Tropical Tuna Longline Fishery Management Nov. 1-3, 2022, co-convened with the Marshall Islands Marine Resources Authority. One workshop outcome was to increase the priority level of revising longline components of the tropical tuna measure. In this informal and open setting, the workshop addressed the wants and needs of the Council-managed fisheries and of the Pacific Island nations alike. Pacific Island nations favor zone-based management, meaning controlling catches on the high seas and allocating catch attribution to the exclusive economic zones (EEZs) of Pacific Island nations. Workshop participants came to a mutual understanding that the Hawai‘i fishery is itself an island fishery, is required to fish primarily on the high seas, and doesn’t have the fleet range to fish within the EEZs of other nations. Attendees acknowledged the need for special distinctions for “fresh fish” fisheries and those that have small vessel capacities like the Hawai‘i fishery, and to incentivize monitoring and compliance. The Hawai‘i-based longline fishery has led the way in conservation and monitoring, with no real incentive to date within existing management measures.

The Western and Central Pacific Tropical Tuna Longline Fishery Management workshop was discussed at WCPFC19



Left: Rhea Moss-Christian. Photo: RNZ Pacific/Koroi Hawkins.

Right: Josie Tamate. Photo: PMN News.

**The WCPFC made history in 2022 by being the first organization of its kind to be led by Pacific Islander women. Rhea Moss-Christian of the RMI, with whom the Council has worked for decades, will succeed former WCPFC Executive Director Feleti Teo of Nauru. Josie Tamate of Niue is the new chair of the WCPFC, replacing Riley Kim of Korea.**

and included as a delegation paper by the Republic of the Marshall Islands (RMI). This inaugural workshop was the first concerted step by the United States and Pacific Island nations and organizations with the intent to develop guidance on longline fishery management in the Western and Central Pacific and identify mutual interests. The RMI made a critical intervention on the floor of WCPFC19, recognizing that the current tropical tuna measure needs “tweaks” to be favorable for all members, including the United States. Members were asked to consult the Council’s workshop report to guide the follow-up workshops in 2023 to develop a new tropical tuna measure at the 20th Regular Session of the WCPFC.

To complement the two WCPFC workshops, the Council will coordinate a series of informal workshops in 2023 focusing on longline management. The Council remains optimistic that these steps will lead to further momentum and that next year progress will be made for our largest Council-managed fishery in renegotiating bigeye tuna longline catch limits for the Hawai‘i fishery. 🐟



## Large-Scale MPAs Have Limited Conservation Benefits for Pacific Tropical Tunas According to New Study

**A new comprehensive study** found that the Phoenix Islands Protected Area (PIPA) and development of large static oceanic no-take marine protected areas (MPAs) in the tropical Pacific do not have discernible conservation benefits for Pacific skipjack and bigeye tuna, two of the most important tropical tuna species to U.S. fisheries.

The study published in *Frontiers in Marine Science* was led by world-renowned tuna expert Dr. John Hampton of the Pacific Community (SPC) and a team of tuna scientists and oceanographers. It analyzed the efficacy of closing the PIPA on the conservation of tropical tunas since the area's prohibition of commercial fishing in 2015. The PIPA, a 408,250 sq km (more than 157,000 sq mi) UNESCO World Heritage Site located about halfway between Hawai'i and Fiji, was at one point the world's largest MPA.

The authors evaluated the estimated population and fishery changes for these two commercially important tunas in the PIPA and a series of large hypothetical MPAs, making up approximately 33% of the western and central Pacific Ocean under jurisdiction of the Western and Central Pacific Fisheries Commission (WCPFC).

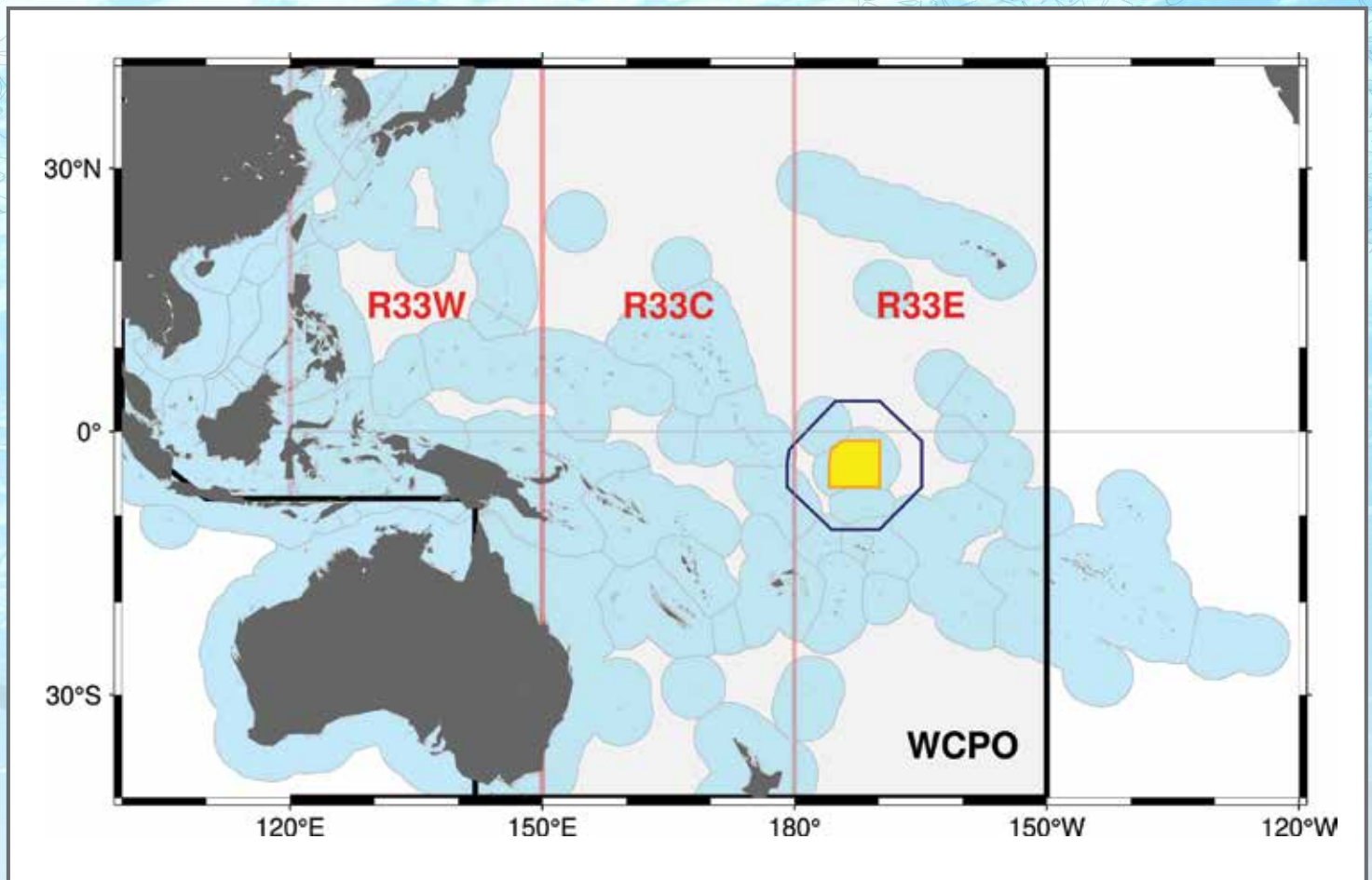
"Skipjack and bigeye tuna have a wide distribution in tropical and sub-tropical waters of the Pacific, and are capable of spawning anywhere the water temperature is greater than about 25 °C," said Hampton. "Their larvae drift in the surface water currents, and as they grow, they are able to move widely throughout the region. So closing off one part

of the area does not offer much, if any, protection to species like this." He added, "When areas like the PIPA are closed to fishing, we tend to see the vessels that would have fished there simply move their activities to adjacent areas, which again limits their conservation effectiveness."

Unlike the Papahānaumokuākea Marine National Monument in the Northwestern Hawaiian Islands, the PIPA is in a known hotspot for tuna and has had significant historical exploitation by large industrial tuna fisheries. Purse seine fisheries operated in these waters targeting adult skipjack tuna, while incidentally catching juvenile bigeye tuna. Longline vessels also fished these waters catching adult bigeye tuna. Skipjack tuna managed under the WCPFC account for 40% of global tuna supply and two-thirds of total tuna catch in the region, accounting for 3 million tons landed in 2019. Bigeye tuna is a longer-lived and larger tropical tuna, supporting much lower catches. The PIPA was established to be a reserve for spawning tunas and to replenish tuna stocks. Proponents for the PIPA thought that a theorized "spillover effect" from this MPA would render a significant conservation benefit, given the area's biological importance and historical fishing levels. However, this benefit was never realized, according to the study authors.

Ray Hilborn, Council Scientific and Statistical Committee member and professor at the University of Washington, who was not involved in the study, noted, "The experience with small coastal MPAs has been that they often see the abundance of targeted





The western and central Pacific Ocean showing the exclusive economic zones of coastal States (light blue), PIPA (yellow) and the three large oceanic MPAs evaluated in the study. Figure taken from Hampton et al., 2023.

fish increase dramatically inside the MPA when those fish species are experiencing overfishing or have limited spatial range. However, Hampton et al. have demonstrated such MPAs do not increase populations for tropical tunas since they are not subject to the kind of overfishing seen in some coastal MPAs, and exhibit very high movement rates."

The authors also accounted for oceanographic impacts, known to be major drivers for tuna distributions, by using sophisticated modeling techniques. The authors estimated tuna stock abundance and then simulated their distributions, abundance, movement and mortality. The model accounted for biological environmental forcing, including the impact of climate, such as El Niño and La Niña phases in the ocean. The authors were then able to see any possible changes in tuna abundance related to natural population fluctuations versus

changes due to management interventions like closing the PIPA.

In November 2021, the Kiribati government announced it planned to lift prohibitions on commercial fishing in the PIPA effective January 2023. 🐟

Original scientific article: <http://journal.frontiersin.org/article/10.3389/fmars.2022.1060943/full>

Pacific skipjack tuna. Credit: NOAA.



Pacific bigeye tuna. Credit: NOAA.



## New DLNR Chief in the CNMI Administration



Sylvan Igisomar (right) with wife, Christine Torres Igisomar, LCDR US Coast Guard.

**Sylvan Igisomar has been appointed** by the Commonwealth of the Northern Mariana Islands (CNMI) Governor Arnold Palacios as secretary of the Department of Lands and Natural Resources (DLNR). While his appointment requires Senate consent, Igisomar began working Jan. 30, 2022.

“I am committed to supporting the administration in meeting its goals to address natural resource matters, as well as working with federal partners within the region,” said Igisomar. He noted his top three priorities are to fix the budget, seek available federal assistance and relocate the DLNR office to one of the government facilities on Saipan's Capitol Hill.

Igisomar brings 20+ years of public service experience in natural resource and emergency management. More than eight of those years were in leadership positions at both the local and federal levels as the director of the CNMI Division of Fish and Wildlife, and as the program coordinator for the U.S. Fish and Wildlife Service. He has a bachelor's degree in natural resources-conservation biology from Colorado State University, and a master's degree in public administration from Grand Canyon University. Igisomar is from the CNMI and is passionate about natural resource management and advancing the region's issues. 🐟

## Revetment Work Begins at the Garapan Fishing Base



**Western Pacific Sustainable Fishery Funds** are being put to good use in the CNMI at the Garapan Fishing Base to stabilize 380 feet of shoreline. The CNMI Department of Lands and Natural Resources, in partnership with the Western Pacific Regional Fishery Management Council and the Department of Public Works, has been coordinating for the past year on permitting and the project is finally seeing some movement. The project was awarded to USA Fanter and will be completed in three phases. 🐟



© Micro Enviro Svcs  
13 February 2023



## Get to Know Your Council Members:

# SHAELENE KAMAKA'ALA



Shae (center) at the Kahana Bay Papio Tournament at Kō'olauloa, O'ahu. Photo: Holladay Photo.

***Learn about the people who balance competing interests, while trying to make fishery management decisions for the overall benefit of the nation.***

Shaelene “Shae” Kamaka’ala was appointed to the Western Pacific Regional Fishery Management Council as an at-large voting member from Hawai‘i for a 3-year term starting in August 2022. She has a law degree and certificates in Environmental Law and Native

Hawaiian Law and is the Director of ‘Āina Protection at Hawai‘i Land Trust. Born and raised in the rural communities of Punalu‘u and Kahana in Windward O‘ahu, she has experience in both commercial and recreational fishing and has been extensively involved in community-based fisheries efforts.

### ***Why did you want to be part of the Council?***

Sharing about the lifeways of the indigenous peoples of Hawai‘i can be a missing asset in these spaces. Our familial relationship with the ocean and its finite resources has been something that kua‘āina, people of the land, have maintained for generations. This long relationship is a source of wisdom and knowledge that can really help to inform solutions to issues that the Council seeks to address.

### ***How do you think your knowledge and experiences will contribute to fishery management efforts in the Western Pacific?***

I provide a unique perspective as an indigenous woman and bring a diverse background of educational and professional expertise in environmental and indigenous law and forging public-private partnerships and collaborations to support fisheries and ecosystem comanagement efforts on the local, state, federal and international levels.

My main areas of study and work pertaining to fisheries include researching and developing tools, methodologies and processes to meaningfully integrate community and culture into fisheries and ecological management plans, regulations and laws on local, state, federal and international levels. This involves more of the social science and legal work of this field, while I also have experience directly working and partnering with fisheries scientists, GIS professionals, etc., as well as traditional ecological knowledge holders.

### ***How long have you been involved with fisheries in Hawai‘i?***

Since I was a little girl, my father has always provided his gatherings from the ocean for our family. From nearshore and pelagic fish, to crabs, to *limu* (seaweed). Seeing our east O‘ahu lobster population disappear in the 1990s was a stark realization for me that there is no infinite supply of fish out there. Fishing, and more so, the time it takes to watch and observe the ocean and its cycles, was always an important glue for our larger family. It kept us together as my father

and uncles shared their catch with the community as we did traditionally. My father started an annual Kahana Bay Papio Tournament as a fun way to enjoy each other’s company, growing to a beautiful event that the greater community comes out to enjoy. Our Kahana community also does an annual hukilau at the opening of mullet season. Everyone from babies to kupuna (elders) come to learn our traditional way of harvesting mullet in Kahana Bay, passing down integral values of working together, sharing and maintaining our relationships with the ocean and each other.

### ***What are some challenges facing Hawai‘i fisheries and what are your thoughts to address them?***

Human’s resistance and fear of change. A seemingly impossible challenge to address, yet I’ve seen that the ability to see from others perspectives and leadership making hard decisions for the betterment of the resource are simple solutions.

### ***What does effective fishery management look like to you?***

Effective fishery management is knowing that years from now fish and limu stocks will be guaranteed and understanding the interconnectivity of the fish, sand, corals, limu, whales, etc. The indigenous peoples of Hawai‘i maintained three of the world’s most efficient and effective management systems, from the mountains straight out to the sea. Effective fishery management for me, looks like fisheries cared for by konohiki and the fishermen of place, where our communities again fish within their areas. The term konohiki has been long misunderstood. Kono, to invite, and hiki, willingness, simply translates to someone who invites willingness to gather in ways that are reciprocal with nature’s cycles. Konohiki were the gatherers of data shared amongst fishers and those that gathered from the ocean, providing them the ability and flexibility to make important management decisions that allow for resource abundance. They observed and kept tabs on how many generations of each species they saw at one time, always ensuring our future needs were protected.

### ***Lastly, what is your favorite fish to eat and how do you prepare it?***



Aerial view of the hukilau at Kahana Bay. Photo: Holladay Photo.

Oh that’s a hard one, I love hā’uke’uke (helmet urchin) and toro! But if I had to choose a (whole) fish, my hands down favorite is nabeta (peacock wrasse) coated in corn starch and fried until crispy. The crunch of the nabeta fish scales

are heavenly and I love the dipping sauce that Mark Pomaski of Hilo’s Moon and Turtle prepares for this dish! 🐟

## Congressional Corner



To keep up to date on the latest legislation affecting fishing in your region and the nation, visit [www.congress.gov](http://www.congress.gov).

Jan. 3, 2023, was the first day of the 118th United States Congress with changes to the House of Representatives and the Senate. New members, including James Moynlan, (R-H.R., Guam) and Jill Tokuda (D-H.R., Hawai'i), were sworn in as the balance of power changed in the House from Democrat to Republican but remained with the Democrats in the Senate. All bills from the 117th Congress that did not pass and get signed by the President are now dead. The last Congress passed 362 public laws and 3 private laws, including the American Fisheries Advisory Committee Act (Public Law 117-121), which provides for regional representation in the review of certain fisheries grants. Bills that included changes to fisheries and the Magnuson-Stevens Fishery Conservation and Management Act did not pass.

Currently, members of the House and Senate are being assigned to committees and bills are just starting to be introduced. While no fisheries-related bills have been introduced as of the drafting of this article, it is certain that Congress will likely see fishery bills similar to what was introduced in the last session.

Local legislatures are also gearing up for another session with fisheries bills being introduced in the state and territories. One bill in the Fono (American Samoa's legislature) House of Representatives would give the American Samoa Department of Port Administration authority to establish a local licensing system for U.S.-flagged purse seiner vessels. With American Samoa dependent on the tuna industry, this bill would be the first step towards being recognized, and afforded with, full benefits and privileges as a Small Island Developing State/Participating Territory under the Western and Central Pacific Fisheries Commission. These benefits include allowing U.S. purse seine vessels to fish during closed months to continue to sustain American Samoa's tuna industry. In Hawai'i, the start of the biennial brings new bills introduced to the legislature, including bills to prohibit the harassment of fishers, to authorize permits for traditional Native Hawaiian fishing practices and to limit entry to commercial fisheries. The legislatures in Guam and the CNMI are also starting their sessions and may consider fisheries bills in the future. 🐟

To follow along with the legislation in the other island areas, visit:

**American Samoa** - [www.americansamoa.gov/fono](http://www.americansamoa.gov/fono)

**CNMI** - <https://cnmileg.net>

**Guam** - <https://guamlegislature.com/index/bills>

**Hawai'i** - [www.capitol.hawaii.gov](http://www.capitol.hawaii.gov)



## Council Family Updates



Top row from left: John Gourley (chair); William Sword (vice chair, American Samoa); Sylvan Igisomar (vice chair, CNMI). Bottom row from left: Manny Dueñas (vice chair, Guam); Roger Dang (vice chair, Hawai'i).

At its 193rd Council Meeting, the Council appointed the following members as its 2023 officers:

- ✳ **John Gourley**, chair
- ✳ **William Sword**, vice chair, American Samoa
- ✳ **Sylvan Igisomar**, vice chair, Commonwealth of the Northern Mariana Islands
- ✳ **Manny Dueñas**, vice chair, Guam
- ✳ **Roger Dang**, vice chair, Hawai'i

At the 193rd Council Meeting, the Council supported the following advisory body changes:

- ✳ Appointed **Kisei Tanaka** to the Archipelagic Plan Team.
- ✳ Appointed **Tia Brown** as an ex-officio member of the Scientific and Statistical Committee.

The Council is a winner! Since 2016, the Gourmand Awards publish annually the *Food & Drink* best free publications available for downloads on the internet. The list published January 2023 includes 375 entries, from 125 countries and regions: <https://tinyurl.com/GourmandAwards2023> 🐟





# Meet Your Council Advisory Panel Leadership



From left: Clay Tam (AP chair); Nathan Ilaoa (American Samoa AP vice chair); Richard Farrell (CNMI AP vice chair); Judy Amesbury (Guam AP vice chair); Gil Kualii (Hawai'i AP vice chair).

## *Learn about the people who bridge the gap between the community and management agencies.*

In summer 2022, the Western Pacific Regional Fishery Management Council sought applicants for the 2023–2026 Advisory Panel (AP) term. At its 192nd meeting in September 2022, the Council reviewed a number of applicants and selected nine members (including three alternates) for the American Samoa, the Commonwealth of the Northern Mariana Islands (CNMI), Guam and Hawai'i APs. The Council chose members who they believed would serve as the best bridge between the fishing community and fishery managers and scientists.

The AP is one of three congressionally mandated groups created to provide advice and recommendations to the Council and ensure fisheries management is a true “bottoms-up” approach to governance. Council staff interviewed the AP chair and vice chairs to get insight into why participating in the AP is important to them.

**Clay Tam** (AP chair) is a Hawai'i-born and raised fisherman who learned how to fish from his elders. They taught him to always fish responsibly, respect our precious resources and never waste what our creator has given us. Clay is an avid fisherman, scientist and project leader. He has been involved in the nearshore, bottomfish and pelagic fisheries through fish tagging and collecting and processing fisheries data and information. He worked for many years with state and federal fisheries agencies, and now with the nonprofit Pacific Islands Fisheries Group. Clay encourages fishermen, scientists and agencies to work together to better manage our fisheries for future generations, as it is everyone's kuleana (responsibility)!

**Nathan Ilaoa** (American Samoa AP vice chair) is the owner of the Flying Fox Gastropub where he serves fresh, locally caught Samoan fish. Nate was the Council's American Samoa Island Coordinator before deciding to pursue his dream of establishing his first micro-brewery while supporting his local fishery. As a returning vice chair of the American Samoa AP, Nate hopes to continue serving as a liaison for the fishing community and pushing for an increase in the U.S. tuna quota to promote equity and environmental justice.

**Richard Farrell** (CNMI AP vice chair) is an avid fisherman and Island Inspector for the Department of Finance from the island of Tinian. Previously, he worked at the Tinian Department of Lands and Natural Resources for 32 years. He has served as an AP member for more than 10 years and is appreciative for his second term as the CNMI AP vice chair. Richard's goal with the Council is to service his community by providing insight into fishery issues of the Marianas. He is admired as a great communicator within his Tinian fishing community. He believes in promoting self-sustainability and hopes to become a Council member one day.

**Judy Amesbury** (Guam AP vice chair) is an archaeologist with a specialty in marine resource use. She recently used her expertise to create the film for the Council entitled “Open Ocean Fishing in the Mariana Archipelago.” (<https://tinyurl.com/OpenOceanFishingMarianas>) For 20 years, Judy has served in many roles with the Council, including as a Scientific and Statistical Committee and AP member. She is especially interested in cultural issues regarding fishing, such as the cultural take of the green sea turtle. As the new vice chair, she looks forward to working with the Guam AP to improve fishing conditions, while addressing data collection, stock assessments and fish aggregating device issues.

**Gil Kualii** (Hawai'i AP vice chair) is a commercial fisherman from Hilo. This is his third term on the AP, and he is returning for his second term as vice chair. The ocean plays a tremendous role in his life. Since his retirement from the U.S. Navy in 2003 and the purchase of his brand-new custom Force 21' boat in 2004, he has made it a priority to learn how to be a better waterman. Gil and his wife enjoy the camaraderie and excitement of tournament fishing and participate whenever their schedule and pocketbook allow. His ultimate desire as a fisherman is to be an active participant in the management of our natural resources. Gil feels that it is his kuleana to remain involved and engaged with his community and is key to seeing positive changes.

The AP leadership is excited for the new term to help the Council achieve its motto of “Fish Forever!” 🐟

# Summary of Action Items at the March 2023 Council Meeting

**The Council will consider and may take action on the issues summarized below.**

## 1. NWHI Fishing Regulations - Native Hawaiian Subsistence Permit and Cost Recovery (Final Action)

In 2016, President Obama created an area called the Monument Expansion Area (MEA) near the Papahānaumokuākea Marine National Monument (PMNM), which stretches 50-200 nautical miles. The Secretary of Commerce (NOAA) and the Secretary of the Interior (U.S. Fish and Wildlife Service) are responsible for managing activities and species within the MEA. Commercial fishing and anchoring on coral is prohibited, but regulated fishing activities are allowed, including Native Hawaiian practices and noncommercial fishing.

At the 193rd meeting, the Council recommended regulations for fishing in the MEA, including Native Hawaiian subsistence fishing permits and cost recovery for those permits. The cost recovery maximum was set at \$15,000 per trip, and permittees must document and report direct costs and any catch sold, bartered, or traded. NOAA conducted an analysis of historical trip costs and current prices and Council staff will present the findings at the 194th meeting.

The Council also recommended a meeting with advisors and Native Hawaiian groups to provide details of Native Hawaiian practices and a review process for the Native Hawaiian subsistence fishing permit. *At the 194th meeting, the Council will consider a process for reviewing Native Hawaiian subsistence permits and an analysis of total cost recovery, and may make a final recommendation to the Secretary of Commerce.*

## 2. MHI Kona Crab Status Determination Criteria

The latest stock assessment on Kona crab in the MHI found that the stock is not being overfished or experiencing overfishing. However, the Fishery Ecosystem Plan (FEP) for the Hawai'i Archipelago does not have criteria for

determining the status of the Kona crab species being managed. As a result, despite the study's results, the Kona crab stock's status remains unknown in the national database for stock assessments and status determination.

Furthermore, since the Hawai'i FEP lacks criteria for the Kona crab species, it does not meet the requirements of National Standard 1 of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), and it cannot determine or report the stock's status under section 304(e) of the MSA.

*At its 194th meeting, the Council will discuss establishing criteria for the Kona crab species under the Hawai'i FEP to comply with MSA's requirements and enable the determination and reporting of stock status.* This action aims to support sustainable management of the Kona crab fishery in the MHI.

The Council will consider three alternatives, including taking no action, amending the Hawai'i FEP to establish criteria based on technical guidance and the most recent Kona crab stock assessment, or establishing criteria based on management provisions for crab fisheries outside of the Western Pacific Region.

## 3. Gold Coral Management (Final Action)

The gold coral fishery in the Western Pacific Region is currently not active, although research on gold coral is still ongoing. Studies have shown that gold coral growth is slower than previously thought, leading to a recommendation by the Council to impose a five-year moratorium on gold coral harvest, which the National Marine Fisheries Service (NMFS) implemented in 2008. This moratorium will expire June 30, 2023.

Annual catch limits have been established for all marine species in the Western Pacific Region except for gold coral due to the moratorium. Recent studies suggest that gold coral growth may be slower than originally estimated, but only when established on older substrates. Extending the moratorium

would provide time to reassess gold coral estimates and incorporate this information into a better assessment of the stocks and the development of an appropriate annual catch limit.

The Council and NMFS have yet to develop a management strategy for the gold coral fishery that takes into account the recent changes in the science of gold coral growth. *At its 194th meeting, the Council will review options prior to the expiration of the moratorium and may choose to extend it while developing a long-term management strategy for the gold coral fishery.* This strategy is necessary to ensure the sustainability of the fishery and prevent overfishing under regulations that may not be adequate.

## 4. Review of MCPs for Guam, the CNMI and the PRIA/Hawai'i

The MCPs for Guam, the CNMI and the PRIA/Hawai'i are set to expire in 2023. *At its 194th meeting, the Council will assess the MCPs for agreement and approval.* Once approved by the Council and the Secretary of Commerce, the MCPs will be valid for three years. However, the plans can be adjusted at any time and resubmitted for approval.

The MSA authorizes the Secretary of State to negotiate and sign a Pacific Insular Area Fishery Agreement (PIAFA), provided that the Secretary of Commerce and the Council concur. A PIAFA would allow foreign fishing within the 200-mile U.S. exclusive economic zone (EEZ) around American Samoa, the CNMI, Guam or the PRIA with the concurrence of the appropriate governors. Before entering into a PIAFA, the appropriate governor must develop a three-year MCP providing details on the use of any funds collected by the Secretary under the PIAFA, with the concurrence of the Council.

In addition to PIAFA funds, fines and penalties resulting from violations by foreign vessels in the EEZ around the Pacific Insular Areas are to be deposited into the local government's treasury and used to implement the respective MCP. The Council is also authorized by the MSA to use funds from the



Western Pacific Sustainable Fisheries Fund to implement MCP projects.

The MCPs must be consistent with the Council's FEPs. The MSA mandates that the MCPs comprise conservation and management objectives, such as Pacific Insular Area observer programs, marine and fisheries research, and conservation, education, and enforcement activities related to marine and coastal management. Education and training in sustainable marine resources development, scientific research, and conservation strategies are also required. The MCPs must also include Western Pacific community-based demonstration projects to promote the management, conservation, and economic enhancement of the Pacific Insular Areas.

### 5. Multi-Year Territorial Bigeye Tuna Catch & Allocation Specifications

Bigeye tuna, found in the Pacific Ocean, is managed and assessed separately in the Western and Central Pacific Ocean (WCPO) and Eastern Pacific Ocean by international organizations. The most recent assessment conducted in 2020 shows that the bigeye tuna population in the WCPO is not overfished or experiencing overfishing. In December 2021, the Western and Central Pacific Fisheries Commission agreed on a conservation and management measure that maintained the 2016 longline bigeye limits for six countries, including the United States. However, no individual limit was established for Small Island Developing States and Participating Territories, including American Samoa, Guam and the CNMI. This measure will expire at the end of 2023, and the commission may decide to establish new catch limits.

Amendment 7 to the Council's Pacific Pelagic FEP created a framework that allows catch or effort limits for the U.S. Participating Territories to be managed through specified fishing agreements. In June 2019, the Council established multi-year catch and allocation limits for U.S. Participating Territories. The Council recommended an amendment to the Pacific Pelagic FEP to allow multi-year limits and remove the requirement for separate total catch or effort limits for the territories. The Council would annually review any established limits to determine whether to modify or rescind them. The Council also recommended removing catch limits for the U.S. Participating Territories and establishing allocation limits for 1,500 metric tons (mt) per territory for 2020-2023, based on their minimal impact on the bigeye stock. This action was delayed due to administrative prioritization, among other reasons.

In the process of developing regulations to implement the framework modifications to Amendment 7, Council and NMFS staffs identified additional considerations. These include the timing of multi-year specifications, if multiple concurrent agreements may be made with U.S. Participating Territories, if catch limits for U.S. Participating Territories are necessary, allocation limits from Territories to U.S.-flagged Hawai'i longline vessels, and the scope of the framework with respect to applicable pelagic managed species.

**The Council may provide direction on further analysis for these issues at its 194th meeting, where it will also consider taking initial action to specify multi-year territorial bigeye tuna catch and/or allocation limits to take effect in 2024 or later. The Council will consider three options specifically for WCPO bigeye tuna, including no catch or allocation limits, a 2,000 mt catch limit and up to 2,000 mt allocation limits, or no catch limit and up to 2,000 mt allocation limits.** 🐟

## Seafood Miso Soup with Dipping Sauce

MAKES ABOUT 4 SERVINGS OF ABOUT 2 CUPS



### INGREDIENTS

- 2 pieces dashi kombu (dried seaweed, 4 in x 4-in square)
- 1 slice ginger, crushed (about 1-in piece)
- 6 cup water
- 1/2 cup bonito flakes (2 individual packets)
- 1/2 lb clams (or mussels, scrubbed)
- 8 large shrimp
- 12 oz swordfish fillet, cut into 1-in pieces (can substitute opah or mahimahi)
- 1/4 cup sake
- 3 tbsp miso
- 4 tsp soy sauce
- 1/4 cup daikon radish, grated fine (use a ginger grater for best results)
- 4 tsp lemon juice or ponzu
- Steamed baby bok choy or Shanghai cabbage, sliced green onions (optional)

### DIRECTIONS

1. In a pot, bring kombu, ginger and water to a boil. Remove from heat, add bonito and cover the pot. Let steep at least 15 minutes, strain and discard kombu and bonito. Reserve 2 tbsp of the broth for the dipping sauce.
2. Bring the rest of the broth to a boil, and add clams and shrimp. As soon as clams begin to open and shrimp start to turn opaque (about 2 minutes), remove from heat and add fish. Mix sake with miso, adding 1 tbsp of sake at a time until smooth. This is the broth. Cover and rest 5 minutes or until fish is cooked through.
3. Meanwhile, prepare dipping sauce. In a mixing bowl, combine reserved broth, soy sauce, daikon and lemon juice or ponzu.
4. Divide sauce into 4 small bowls or deep saucers (about 2 tbsp each). Gently re-heat soup (do not bring to a boil).
5. Top each portion with baby bok choy and sliced green onions (if using).
6. Serve with brown rice on the side. Dip fish in sauce as you eat.

## Upcoming Events

## 2023 Council Calendar

Check the Council website for in-person and remote public participation options for meetings hosted by the Council.

### MARCH

5-7

Spatial Assessment Modeling Workshop, Wellington, New Zealand\*

7-10

Pacific Science Review Group meeting, Honolulu\*

7-10

Tuna Stock Assessment Good Practices Workshop, Wellington, New Zealand\*

14-16

147th Scientific and Statistical Committee meeting, Honolulu (Hybrid)

16

Joint Hawai'i & American Samoa Advisory Panel and Fishing Industry Advisory Committee meeting on BiOp Review, Honolulu

20-23

15th Heads of Fisheries meeting (the Pacific Community), Noumea, New Caledonia\*

23

Guam Regional Ecosystem Advisory Committee (REAC) meeting

24

Commonwealth of the Northern Mariana Islands (CNMI) REAC meeting

25

Joint Mariana Islands Advisory Panel meeting

26-28

194th Council meeting, Saipan, CNMI

28-31

False Killer Whale Take Reduction Team meeting\*

30-31

194th Council meeting, Tumon Bay, Guam

### APRIL

11-13

6th Annual Collaborative Climate Change Workshop\*

19-21

Archipelagic Plan Team meeting

The 147th Scientific & Statistical Committee meeting will be held March 14 to 16, 2023, and public attendance is limited to participation via web conference (Webex): <https://tinyurl.com/147SSCMtg>.

**Major agenda items include:** Main Hawaiian Islands (MHI) Kona crab status determination criteria establishment (action item); Gold coral management (action item); Northwestern Hawaiian Islands (NWHI) fishing cost recovery analysis (action item); Multi-year territorial bigeye tuna catch and allocation specifications (action item); Hawai'i deep-set and American Samoa longline draft biological opinion (BiOp) review; Review of potential measures for the False Killer Whale Take Reduction Plan (FKWTRP) modifications; American Samoa bottomfish management unit species (BMUS) stock assessment and Western Pacific Stock Assessment Review updates; and Area-based management issues.

**The 194th meeting of the Western Pacific Regional Fishery Management Council** will be held March 27 to 28, 2023, at the Crowne Plaza Hotel & Resort Saipan, Hibiscus Ballroom, Coral Tree Ave, Garapan, Commonwealth of the Northern Mariana Islands (CNMI), and March 30 to 31, 2023, at the Hilton Guam Resort & Spa, Micronesia Rm., 202 Hilton Road, Tumon Bay, Tamuning, Guam. The meeting will be in a hybrid format, with in-person participation available for Council members and the public, or remote participation via Webex: <https://tinyurl.com/194CouncilMtg>.

**Major agenda items include:** NWHI fishing regulations-Native Hawaiian subsistence permit and cost recovery (final action); MHI Kona crab status determination criteria establishment (action item); Gold coral management (final action); CNMI, Guam and Pacific Remote Island Areas (PRIA)/Hawai'i Marine Conservation Plan (MCP) review (action items); Multi-year territorial bigeye tuna catch and allocation specifications (action item); Hawai'i deep-set and American Samoa longline draft BiOp review; Review of potential measures for the FKWTRP modifications; American Samoa BMUS stock assessment and review; Guam bottomfish data workshop report; and Endangered Species Act and Marine Mammal Protection Act updates.

For more information on the Webex connections, and complete agendas and meeting documents, go to [www.wpcouncil.org/meetings-calendars](http://www.wpcouncil.org/meetings-calendars).


**The Fishers Forums on "All About Bottomfish in the Mariana Islands"** will take place from 6 to 9 p.m. March 27, 2023, at the Crowne Plaza Hotel & Resort Saipan – Hibiscus Ballroom, and March 30, 2023, at the Guam Museum, 193 Chalan Santo Papa Juan Pablo Dos, Hagåtña, Guam. This free, family


friendly event includes informational tables, presentations, demonstrations and more. Come learn about the history of bottomfishing, different fishing gears and methods, and the science and management of bottomfishing in the region. 🐟

\* Meetings not hosted by the Western Pacific Regional Fishery Management Council.

 facebook.com/wpcouncil

 @wpcouncil

 @wp\_council

 YouTube youtube.com/wpcouncil

