



Report of the Archipelagic Fishery Ecosystem Plan Team Meeting

May 13-14, 2024

8:30 a.m. – 4:00 p.m. (Hawaii)

7:30 a.m. – 3:00 p.m. (American Samoa)

4:30 a.m. – 12:00 p.m. + 1 day (Guam and CNMI)

1. Welcome and Introductions

T. Todd Jones, Archipelagic Fishery Ecosystem Plan Team (Plan Team) Chair, opened the meeting, reviewed meeting protocol, and invited Plan Team members to introduce themselves. Members in attendance included Rob Ahrens, Keith Bigelow, Felipe Carvalho, Angela Dela Cruz, Sean Hanser, Jason Helyer, Bryan Ishida, Tye Kindinger, Marc Nadon, David O'Brien, Domingo Ochavillo, Tom Oliver, Minling Pan, Marlowe Sabater, Eva Schemmel, Jenny Suter, and Brent Tibbatts.

2. Approval of Draft Agenda

The draft agenda for the May 2024 Plan Team meeting was approved by consensus.

3. Report on Previous Recommendations

Thomas Remington, Western Pacific Regional Fishery Management Council (Council) contractor, reviewed the statuses of Plan Team recommendations from the April 2023 meeting. Some status updates were provided later in the meeting associated with agenda items.

4. 2023 Archipelagic Annual Stock Assessment and Fishery Evaluation (SAFE) Reports

A. Fishery Performance

i. Archipelagic Fishery Performance Modules

a. American Samoa

Domingo Ochavillo, American Samoa Department of Marine and Wildlife Resources (DMWR), presented updates for American Samoa archipelagic fisheries in 2022 using data recently provided by the National Marine Fisheries Service (NMFS) Pacific Islands Fisheries Science Center (PIFSC) Fisheries Research and Monitoring Division (FRMD). Landings of bottomfish management unit species (BMUS) slightly recovered in 2023 from their historic lows in 2022 but still remained relatively small. This is likely caused by various factors affecting the fishery, notably the discontinuation of fuel subsidies and COVID-related impacts in recent years. BMUS commercial data remain confidential due to fewer than three vendors reporting, which may be associated with the poor stock status indicated by the 2019 stock assessment (Langseth et al. 2019). Ochavillo especially emphasized the general decline in fishing effort for bottomfish, especially via bottomfish-trolling mixed trips, and he also noted the need to investigate increased landings of BMUS in the shore-based creel survey expansions in 2023 after substantially lower catch estimates in the preceding decade.

Plan Team discussion on the review of this section included the following:

- There is an increase in BMUS landings in the American Samoa shore-based fishery, but it is not clear which species are driving this trend.

- The appearance of BMUS in the shore-based creel survey data is related to the species list composition in the American Samoa FEP, which includes shallow species such as *Lutjanus kasmira* and *Lethrinus rubrioperculatus*.
 - Despite the relatively low catch for shore-based sources relative to boat-based, DMWR is interested in which species are causing the estimated increase.
 - PIFSC personnel are visiting American Samoa the week of May 20, 2024, and will discuss this topic with fishers and shore-based data collectors.
 - It is unlikely that this increase is due to inappropriate application of the expansion.
 - While examining shore-based increases, low boat-based effort should also be examined.
- The draft territorial non-commercial fishery performance module for American Samoa indicates that 80% to 90% of BMUS are not sold, and there has been low vendor reporting of BMUS for roughly the past decade.
 - Vendors may not be selling bottomfish as much in recent years.
 - A recent PIFSC data workshop had participation by fishers who indicated they do not sell most of their bottomfish catch.

b. Guam

Brent Tibbatts, Guam Division of Aquatic and Wildlife Resources (DAWR), presented updates for the Guam archipelagic fisheries in 2023 using data recently provided by the PIFSC FRMD. All scheduled surveys were completed in 2023 except for aerial surveys, which have been missing in recent years due to COVID-19 restrictions, and one survey data due to Typhoon Mawar. With respect to military operations, there were 47 Broadcast Notices to Mariners (BNM) in 2023, and there were 144 warning days for area W-517 south of Guam. Additionally, in 2023, there were 119 high surf warning dates, which included 108 small craft advisories, and Typhoon Mawar in May 2023 resulted in seven typhoon watch dates. All of these considerations notably impacted fishers' ability to take fishing trips. Total estimated BMUS catch from creel surveys decreased over 22% from last year to 25,713 lb, and commercial data remained confidential. Despite the National Marine Fisheries Service (NMFS) maintaining a waiver to report data from the Guam Fishermen's Cooperative Association (GFCA), Guam's largest fishing vendor, the presence of another vendor in the data results in it being unable to be disclosed. There previously was a large amount of commercial catch information from SCUBA spearfishing fishers, but the gear type was banned in Guam in March 2020; this may be contributing to a declining trend in catch of parrotfish as well. Catch per unit effort (CPUE) for BMUS increased in 2023 because effort decreased to a greater extent than catch, potentially due to the high number of poor weather days. For ECS in 2023, "assorted reef fish" had the highest amount of catch, potentially due to fishers refusing to be interviewed and data collectors weighing the whole catch at once. Tibbatts also noted a continued increase in shark depredation, which is counted as bycatch for reporting purposes because the fish are not retained. In 47 interviews, seven reported shark interactions, which was similar to 2022.

Plan Team discussion on the review of this section included the following:

- There has been a lack of success in DAWR working with the Guam Bureau of Statistics and Plans to encourage fishing vendor data reporting. Many vendors do not speak English and are

not comfortable with providing data. DAWR is looking into providing additional incentives, such as scales or bookkeeping support.

- Vendor turnover inhibits relationship building, as there are many short-term vendors that open and close. Additionally, many commercial sales are roadside or at a flea market.
- The availability of vendor data likely would not impact the evaluation of trends from expanded creel survey data that indicate a dramatic reduction in effort. The decrease in effort is likely attributable to weather, but it would be worth investigating further.
- The lack of commercial data hampers management options, such as utilizing sector allocation as a management tool.
- The amount of catch interviews decreased despite a relatively unchanged amount of survey effort.
 - Military activity and exercises might have contributed to the reduction in fishing effort.
 - Fishers are not overly concerned with the rebuilding plan unless DAWR staff mention that the fishery is nearing its annual catch limit (ACL). DAWR participates in fisher group chats to keep them informed about the ACL and posts information to its website.

c. CNMI

Angela Dela Cruz, CNMI Division of Fish and Wildlife (DFW), presented updates for the CNMI archipelagic fisheries in 2023 using data recently provided by the PIFSC FRMD. There was a continued decrease in the amount of creel survey interviews and sampling days 2023 due to issues with DFW staff turnover as well as lack of access to funds to purchase fuel.

Opportunistic interviews have decreased because, previously, Sugar Dock was part of the sampling regimen despite being inactive, and data collectors would sample other access points; Sugar Dock was replaced by DFW Ramp in the sampling protocols in October 2022. The number of commercial receipt invoices collected significantly decreased in 2023 due to incomplete collection, and DFW expects to complete the collection of 2023 data later in 2024. Relatedly, there were decreases in both total estimated catch from the creel surveys and commercial catch from invoices due to reduced data collection for both. CPUE, effort, and participation all decreased in 2023 compared to 2022, but it is not clear if these values are representative of reality. Atulai again dominated ECS landings in the two data streams. As for the other territories, BMUS bycatch in the CNMI remained extremely limited.

Plan Team discussion on the review of this section included the following:

- The total estimated creel survey catch in 2023 was approximately 21% of the total estimated value for 2022, which does not coincide with empirical observations by DFW staff. Similarly, commercial landings data in 2023 are approximately 16% of the 2022 value.
 - Plan Team members suggested a work item to investigate the reasons 2023 estimates were low, which may include reduced survey effort and late invoice accounting.
 - DFW still has not had fuel since January 2024 due to funding issues, and data collectors cannot perform surveys without fuel. The same issue was present in 2023.
 - If surveys were missed for part of the year, no expansions would be able to be applied to those months, which would result in lower estimates of total catch.

- There were 35 commercial vendors in 2023, which is a high for the past two decades, but this was associated with 1,697 invoices and 5,313 lb of catch, representing relative lows since 2015. The Plan Team requested DFW explore the possible reasons for these findings.
- CPUE declined to less than half of its recent average despite effort remaining constant. If reasons are not determined, the 2023 values may negatively impact the next assessment.
 - Explanatory variables can be used in CPUE standardization for the next assessment to control for drivers not related to abundance.
 - The timing of the next CNMI assessment depends on the outcome of the Guam data review, but an assessment update is scheduled for 2025.
 - PIFSC could request the WPSAR Steering Committee that they simply generate an assessment with additional years of management advice and not update stock status.
- Despite low catch values, the numbers of vendors reporting have increased due to improved relationship building by DFW personnel and vendors are letting others know of the new law requiring them to report. Several vendors are also reopening after the past few years.
 - Vendors are not yet reporting from the Sell It – Log It application, and the provided data are from paper invoices input into Metabase.

d. Hawaii

Bryan Ishida, Hawaii Division of Aquatic Resources (HDAR), presented updates for the Hawaii archipelagic fisheries in 2023 using data collected through their Commercial Marine License (CML) program. There were continued decreases in catch values for Deep 7 bottomfish species relative to historical (10- and 20-year) averages, with gindai being the notable exception. Gindai catch has been increasing overtime, but it remains just ~2% of the total catch composition. Gindai is widely known as an easy bottomfish to catch and is frequently harvested by new entrants to the fishery. The relative proportion of 'ōpakapaka catch was greater than the 20-year average, onaga was relatively lower. Bycatch remains rare in the Deep 7 fishery, but recent increases in releases are likely attributable to catches of kahala. The number of licenses, trips, and catch for uku in 2023 were all decreased relative to the historical trends, which coincided with a decrease in CPUE across dominant gear types; however, there is a more diverse use of gears in this fishery. For the top 10 most harvested ECS, akule and opelu continue to dominate the catch, and the presence of 'ō'io may be due to increased interest in lomi 'ō'io on social media. With respect to priority ECS identified by HDAR, most species showed decreases compared to historical trends except for kūmū and ta'ape, the latter of which is highliner-dominated. Catches of Kona crab are beginning to increase relative to 10-year averages as effort also showed a slight increase from 2022 to 2023. There are no catch data available to be presented for precious corals due to data confidentiality rules.

Plan Team discussion on the review of this section included the following:

- The increases in gindai catch may be associated with the composition of fishers in the fishery, with gindai being one of the first species encountered by early fishers.
- The increase in individuals caught for 'opihi is not a reliable statistic, as many fishers simply estimate the number caught or do not report, which is the case for many small species.
- Regarding Kona crab regulations, HDAR recently amended rules for crab to allow take of females in open season as long as they are not berried and extended the closed season through September. There is an expectation of increased commercial catch.

- Depredation continues to be a problem, and some fishers may be targeting uku less frequently because of it.
 - Fishers are able to report fish lost, but many do not and HDAR is trying to establish better reporting for depredation since it is likely common for bottomfish.
 - Guam depredation rates have been documented as 40%, though fishers suggested it could be as high as 85%.
 - Depredation could be better tracked by filtering fishers that note it through their CML reports.
- Though uku catch has been declining in data available from CMLs, it has been relatively higher in estimates from the Hawaii Marine Recreational Fishing Survey (HMRFS). There are issues with HMRFS, but a trend is evident alongside declining catch from the Fishing Report System (FRS).
 - Proportions of CML to HMRFS catch used to be 50/50 but are more recently 20/80.
 - Declines in CML data may be due to high depredation of uku during the summertime run at Penguin Bank causing fishers to leave the fishery. This has led to decreases in highliner activity, and new entrants are not replacing those leaving. Uku catches are also tied to the hotel and restaurant industries, which have been relying more on imports.
 - Fishers at the P* and SEEM working groups reported that the commercial fisheries for bottomfish are declining in part because restaurants do not consistently buy the fish since fishers are not consistently providing it, creating a negative feedback loop.

ii. Ecosystem Component Species (ECS) Discussion

Jones led a discussion among Plan Team members regarding the purpose of monitoring ECS and the associated implications for management. Several years ago, an FEP amendment reclassified a large number of coral reef fish and other shallow waters species (e.g., emperors, shallow snappers, jacks) from MUS to ECS. Currently, regional MUS lists still include some shallow-water species, resulting in complex stock assessments utilizing surplus production models and leading to a proposed Council action to revise territorial BMUS lists. Jones posed a question to the Plan Team about what it means to monitor ECS and if there should be thresholds that trigger management for these species. The NOAA Office of Sustainable Fisheries (OSF) presented at a Plan Team meeting a few years ago regarding the reclassification of MUS when under an overfished or experiencing overfishing status and reviewed case studies. Jones asked the Plan Team if representatives from OSF should come back to the Plan Team to provide guidance on the concept of managing ECS, what that could look like in nearshore waters, and associated triggers for further federal action given the potential for the jurisdictions to be actively managing the species.

Plan Team discussion under this agenda item included the following:

- The Plan Team has not adequately addressed questions surrounding the intersection of ECS and federal management.
 - Previously, when the current ECS were MUS, federal managers had a process of generating ACLs and tracking stock statuses in meaningful ways despite not having authority to take action in State or jurisdictional waters.
 - Nadon previously developed assessments of 27 species in Hawaii and roughly a dozen species in Guam that are all now ECS.

- There are questions regarding management (e.g., ACLs) for species harvested across archipelagos, such as in the northern islands of the CNMI.
 - Even if we monitored stock status, there is no enforcement or management actions that could be implemented for ECS.
 - Even if there is no clear approach for management, federal agencies can support monitoring. Coordination with the State and territories can be done even if there is no clear management authority.
- Federal ECS may or may not be included as MUS for territorial fishery management plans (FMPs), and there is concern that responsibility for these species will be on territorial agencies.
 - There are currently no State or territorial FMPs, but pressure could be alleviated if the species are ECS in federal FEPs while also being MUS on jurisdictional FMPs.
 - Guam is developing a jurisdictional management plan.
 - Questions remain as to what would trigger management action in territorial FMPs, and DAWR is beginning to focus on species with adequate life history information.
 - HDAR has no issue with working together to monitoring ECS, but the State intends to maintain management of inshore fisheries (e.g., through the Holomua initiative).
 - Federal managers want to get out of the jurisdictions' way while providing support.
 - The nature of coordinated management is unclear.
- There are also ecosystem considerations for the specification of MUS versus ECS and determining how a federal action may impact things like habitat supporting the species.
 - Evaluating ECS in terms of functional groups may be helpful. Indicator species may be able to be identified and monitored to roughly represent that ecological functional group.
 - Determining priority species for the community may be helpful, though the Plan Team had local agencies do this after the ECS amendment in 2019.
 - Federal managers may be focusing too closely on the species, as National Standard 1 specifies that monitoring of ECS occurs to ensure achievement of ecosystem management objectives – i.e., shift focus from species to ecosystem. APT could benefit from defining ecosystem management objectives and work to support them.
- The Plan Team suggested that representatives from OSF provide a presentation at an intersessional Plan Team meeting on how to approach ECS and to provide case studies on ECS from other regions given the lack of technical guidance for these species.
 - In the Mid-Atlantic, they designated ECS for forage fish for the purpose of foraging ecosystem function.
 - In the North Pacific's Bering Sea FMP, they have ecosystem thresholds for multispecies fisheries.
 - The South Atlantic Fishery Management Council designated several groupers as ECS with reasonable documentation of the process.

B. Ecosystem and Climate Considerations

i. Protected Species

Council staff presented updates to the protected species sections of the 2023 archipelagic annual SAFE reports. There is no observer coverage for regional bottomfish and crustacean fisheries, destructive gear types are prohibited, and there are little to no reported interactions with protected species. Rather, through the annual SAFE reports, the Council monitors effort and gear

characteristics as an indicator for change in the potential for protected species interactions in these fisheries. Section updates for the 2023 reports included a review of data for any oceanic whitetip shark (OWT) catches or interactions, for which there were no new records in creel survey or CML data, and updates to the identification of emerging issues, including Endangered Species Act (ESA) coral green turtle critical habitat designations. The presentation by Council staff also contained considerations for reasonable and prudent measures (RPMs) related to OWTs that were included in the recent biological opinion for the continued authorization of regional bottomfish fisheries; however, this effort had not yet been completed for inclusion in the 2023 annual SAFE reports.

ii. Life History and Length-Derived Variables

Eva Schemmel, PIFSC, presented updates to the life history sections of the 2023 archipelagic annual SAFE reports. Substantial progress has been made on coral reef ECS in the Mariana Archipelago through biosampling programs in Guam and the CNMI. Relatedly, a Marianas Biosampling Summit was convened in November 2023 with a report being released soon. There is a new life history dashboard being developed to make life history information more accessible. For Hawaii, a new reproduction study was completed for onaga (Reed et al. 2023) with additional work ongoing for lehi, opakapaka, and onaga. There were no new studies completed for American Samoa, but PIFSC is working with local agencies and fishers to reinitiate a biosampling program there with trainings in 2023 and 2024. For the Mariana Archipelago, an age, growth, and reproduction study was completed for *Variola louti* (Schemmel and Dahl 2023) with ongoing studies for four other BMUS. The PIFSC Life History Program (LHP) is evaluating sampling species across the region to examine plasticity.

Plan Team discussion on the review of this section included the following:

- The Life History Dashboard will be available soon for each island area, though Hawaii has not yet been added.
- Biosampling could support climate-informed stock assessments and management by determining environmental (e.g., temperature) dependencies.
 - The way the PIFSC LHP samples accounts for temperature dependencies by collecting individuals across environmental conditions to determine if growth varies. There is an initiative to establish surveys across the Marianas.
 - The PIFSC Ecosystem Sciences Division (ESD) would be happy to work with the LHP to pair sampling and environmental data.
- New data from PIFSC LHP should be used to update FishBase.
- Data from PIFSC LHP should be used to inform territorial FMPs.
 - DAWR would like to have updated length-weight relationships to assist in calculating estimates of catch each year. They hired a new staffer to develop a life history lab.
 - It was noted that the a-b values did get updated in the DAWR database this year by the Western Pacific Fisheries Information Network (WPacFIN).
 - Available, relevant information is included in the annual SAFE reports.

iii. Biomass Estimates for Coral Reef Ecosystem Components

Tye Kindinger, PIFSC, presented updates on biomass estimates for coral reef ECS, particularly in the Mariana Archipelago where the only National Coral Monitoring Program (NCRMP) stationary point count (SPC) surveys have occurred since 2019. The presented dataset

on benthic coral coverage was changed to photoquadrat imagery annotation instead of diver visual estimates, reducing biases in the data associated with the diver surveys. The data streams are very similar across island areas and time periods. The updates to the 2023 report modules indicate favorable trends across island areas, with increased coral cover and fish biomass in many surveyed areas relative to the previous surveys (i.e., 2016-2018 vs. 2019-2023). In 2024, surveys will be conducted in both the MHI and Northwestern Hawaiian Islands.

Plan Team discussion on the review of this section included the following:

- Apparent effects of the large coral bleaching even in 2015 and 2016 remain as the Pacific Islands region generally prepares to enter another. There was a large loss of corals in Jarvis (~80%) and the MHI (~30%). Impacts in the Mariana Archipelago are from repeated events.
- There was a decline in herbivore biomass around Rose Atoll.
 - Speculatively, this may be due to the system being dominated by crustose coralline algae and coral reefs, meaning that there is not a lot of soft algae for herbivores to eat and limiting their population.
- The presentation of data from new survey methods should be explicitly noted.
 - The photoquadrat method is more standardized than diver surveys and produces estimates with higher confidence.
 - Diver visual estimates are being removed from surveys starting this year.
 - The data are high quality, stable, and long term.
 - Kindinger will add a footnote regarding the data change.
- There likely are elements that can be gleaned from these data to determine what ecosystem-based measures can be developed with respect to ecosystem objectives.

5. Discussions

There was no additional Plan Team discussion under this agenda item.

6. Public Comment

There was no public comment.

7. 2023 Archipelagic Annual SAFE Reports (continued)

A. Administrative Reports

David O'Brien, Pacific Islands Regional Office (PIRO), presented the administrative reports. The presentation included the number of federal permits and amount of reporting associated with these permits occurring in Hawaii, American Samoa, the CNMI, Guam, and the PRIA. Permits and reporting were summarized for ecosystem components, crustaceans, precious corals, and bottomfish, though there were typically very few permits for most fisheries and no reporting able to be disclosed. Additionally, O'Brien presented the archipelagic-focused regulatory actions published by NMFS in 2023, which included the extension of the moratorium on the harvest of gold corals in Hawaii through 2028, specification of ACLs for precious corals and deepwater shrimp from 2022 through 2025, and the lobster harvest guidelines for 2023 and 2024.

Plan Team discussion on the review of this section included the following:

- Federal permits are not being issued due to enforcement and outreach considerations.
 - Few people know that permits are required, and those fishing without these permits are not being cited.

- Some fishers do not need permits if they have other licenses (e.g., CML).
- The Council may consider assessing the efficacy of federal fisheries permits during the regulatory review project funded by Inflation Reduction Act (IRA) funds.

B. Discussion: Archipelagic SAFE Report Matter

i. Changing American Samoa BMUS Reporting Scheme

Jones led Plan Team discussion regarding changes to the archipelagic annual SAFE report associated with stock status being determined and ACLs being specified on a species level for American Samoa BMUS. Previously, American Samoa BMUS were assessed as a complex with 11 species combined in a surplus production model. Now that there are individual ACLs for each of the BMUS, WPacFIN should move forward with the creel survey catch expansions without aggregating the data for the complex.

Plan Team discussion on this agenda item included the following:

- Monitoring the American Samoa BMUS as a group may mask trends for individual species, and one of the responsibilities of the Plan Team is to monitor catches against their ACLs.
- Data deficient species without ACLs utilize indicator species with more available information. The current unknown BMUS status will be assessed using two indicator species.
- It may be useful to monitor species level effort, or at least differences in effort between shallow and deep bottomfish species.
- A table monitoring catches of individual species does not need to present data separated by gear type but should monitor data provided in the most recent stock assessment.
- A working group should develop a template of a data summary to be reviewed by the Plan Team at its upcoming intersessional meeting.
 - New ACLs will be in place for 2024, canceling the rebuilding plan and its ACL.

ii. Other Items

Plan Team discussion on other items included the following:

- The super alia is coming to American Samoa and DMWR has a scheduled meeting with the Department of Commerce next week.
 - The super alia is expected to be used for bottomfishing and longlining, which will increase bottomfishing effort in the coming months.
 - The PIFSC team will also meet with the Department of Commerce about the super alia project and mentioned that a delegation met last week to discuss the changes and limitations identified when collecting data from the super alia.
- The bottomfish rebuilding plan will be discontinued soon, noting that the benchmark stock assessment for American Samoa BMUS was finalized in 2023.
 - The amendment is undergoing final review at PIRO before going to OSF for the proposed rule. The hope is to have the proposed and final rules published in the summer.
- There is ongoing collaboration with HDAR to create a comprehensive database of all fishing vessels in Hawaii, integrating the Division of Boating and Ocean Recreation (DOBOR) vessel registry with the bottomfish registry and CML list using unique vessel identifiers.
 - This dataset, which includes about 9,000 small boats as of 2024, will be used to sample uku catches via mail survey and will be more informative than the current mail survey.

- The database for the combined registry is currently managed by an R script that merges datasets provided by HDAR, but there is ongoing work to fully integrate them.
 - Further discussions are needed to determine data storage and to potentially anonymize some information.
 - WPacFIN would be an appropriate place to store the data and scripts.
- While the pilot project is starting with uku, it may be expanded to Deep 7 bottomfish as a great opportunity to improve non-commercial catch data.
- It is too early to include this information in the annual SAFE reports.
- The socioeconomic module section author attempts to compare CML data with dealer reports to generate proportion of catch sold by fishers.
- There may need to be considerations for the sharing of databases. The most recent Memorandum of Agreement between NMFS and the Hawaii Department of Land and Natural Resources (DLNR) did not include mention of the vessel registry.

8. APT Review: Working Group Progress

A. Territorial Non-Commercial Modules

Marc Nadon, PIFSC, provided a status update on progress made on the territorial non-commercial modules for the archipelagic annual SAFE reports since the April 2023 meeting. Nadon explained how the final catch estimates were developed from raw interview and dealer data alongside the corrections for commercial information for each of the territories using revised code. The working group used the revised code to calculate taxonomic proportions of lower-level groups that contains only species and of the highest-level groups (i.e., bottomfishes), which contains a mix of species and other groups, created a species proportion table for each of the eight groups, and went back to commercial datasets to multiply the grouped catch in each year by the species composition proportions. Subsequently, Nadon subtracted the commercial catch from the total estimated catch derived from the creel survey expansions to get the proportion of non-commercial catch. The results were used to develop the draft territorial archipelagic non-commercial annual SAFE report modules for Plan Team approval. The data will also be integrated into WPacFIN processes. The working group may also reconvene to apply the approach to key pelagic species to inform the territorial pelagic non-commercial module.

Plan Team discussion on this working group update included the following:

- There is uncertainty if the territorial bottomfish fisheries are primarily non-commercial.
 - Provided data suggest up to 90% non-commercial (i.e., in American Samoa).
 - DMWR operates under the impression that bottomfish are more commercial than non-commercial and wondered if commercial catch is underreported.
 - The fishery is dependent on subsidies.
 - Less commercial catch has been reported in American Samoa since 2010. It has been reported that BMUS prices are too high for people to buy.
 - Roadside sales and non-traditional markets would not be apparent.
 - Dealers mostly sell reef fish, though one particular market (TSM) sells bottomfish.
 - Previous data workshops indicated that BMUS are mostly given away.
 - Territorial agencies should investigate the low proportion of commercial catch.
 - PIFSC personnel traveling to American Samoa next week can assist.

- Fishers in Guam typically sell directly to hotels, which are now requiring fishers to be “officially registered.” DAWR is working on how to better document those sales. There is no information on sales to restaurants.
- The Archipelagic Plan Team should develop a recommendation to work with the Pelagic Plan Team to develop a territorial pelagic non-commercial data module in the same way.
 - Key pelagic species in American Samoa for small boats are aku and mahi.
- The species proportion table is key to disaggregate higher level groups.
 - The breakdown of species is derived from raw creel interview data calculated on a 10-year moving average with an adequate sample size.
 - There is risk that the real species composition is slightly different than the table.
- Issues persist surrounding the confounding species, *Etelis carbunculus* and *E. boweni*.
 - Creel surveyors have been asked to take photos of ehu, and biosampling can possibly be used to differentiate the species (i.e., otolith morphometrics).
 - NOAA/small boat surveys may not be helpful since they do not sample many fish.
- There may be differences in proportions of commercial to non-commercial in this section versus the socioeconomic module, but identical numbers should be presented.
 - The new R scripts and data should be incorporated into the socioeconomic module.
 - A Plan Team working group will provide a presentation at the upcoming intersessional meeting reviewing the different methods by which the proportion of commercial catch to non-commercial catch is estimated.
- The data development process was generally approved by the Plan Team (i.e., subtracting corrected commercial data from total estimated catch instead of using “intent to sell”).
 - This will help catch values in WPacFIN align with stock assessments.
- Going forward, the module should report data on individual species catch.
- The Plan Team approved the inclusion of the new subsection of the annual SAFE reports by consensus.

B. Uku Annual Catch Limit (ACL) Monitoring

Remington presented a status update on the Plan Team’s working group tasked with evaluating how uku catches are monitored relative to the ACL. The working group met in August 2023, and discussed how PIRO Sustainable Fisheries Division (SFD) periodically tracks catches (i.e., CML reported catches plus HMRFS estimated non-commercial catches) against the implemented ACL. The working group raised issue with the in-season monitoring accountability measure (AM) for uku, noting that it utilizes a single year of estimated catch instead of the Boggs Method (i.e., a three-year rolling average). Single year HMRFS estimates have a smaller sample size, higher variability, and worse reliability than three-year averages, and the working group is awaiting a response from NOAA General Counsel (GC) on this issue. Nadon also briefly presented information on PIFSC-led investigations into HMRFS biases, which includes a mail survey targeting bottomfish fishing vessels that is further described under agenda item 10.B.

Plan Team discussion on this working group update included the following:

- PIFSC forecasts catch for the year and provides notice when approaching an ACL.
- While FRS data can be tracked with high precision, HMRFS data should be evaluated using a three to five year moving average.
 - However, NOAA GC did not support the use of moving averages for in-season monitoring and management.

- The use of single-year HMRFS estimates to manage the fishery may result in closures due to data variability.
 - The Marine Recreational Information Program (MRIP) has stated that these surveys are not designed for use by in-season management measures.
 - If moving averages cannot be used, managers should not implement in-season monitoring.
- Post-season AMs are a better option for the fishery, and the Plan Team recommended the Council preferentially support post-season AMs if three-year averages are not approved by NOAA GC for in-season monitoring.
 - Removing the current in-season AM would require a regulatory change, but the ACLs should be re-specified later in 2024.
- PIFSC is conducting an MSE on the utility of using HMRFS combined with CML data for catch accounting, but HMRFS was never designed for single-species monitoring.
- HMRFS surveys do not capture data from all the fishing trips that they should, and sometimes catch can be double counted with commercial reports.
- HMRFS estimates may be improved using the uku mail survey using the integrated registry.
- The working group has no need to reconvene.

C. Oceanic Whitetip Shark (OWT) Interactions in Bottomfish Fisheries Asuka Ishizaki

This agenda item was covered in the previous Protected Species presentation (agenda item 4.B.i).

9. Council Actions

A. American Samoa BMUS Revision

Remington provided a presentation on the status of the American Samoa BMUS revision that has been on hold since the Council took initial action in June 2023 awaiting the finalization of the FEP amendment to discontinue the American Samoa BMUS rebuilding plan. The goal of this agenda item was to offer Plan Team members an opportunity to comment on the progress of the draft amendment and identified issues prior to the Action Team reinitiating effort in July 2024. Alternative 1 is the no action/status quo alternative that would not recommend or implement changes to the existing BMUS list in the American Samoa FEP. Alternative 2 would amend the American Samoa FEP to reclassify five current BMUS as ECS and seven current non-MUS as BMUS in addition to the changes specified by the MSA component reports. The Council initially recommended the proposed reclassifications under Alt. 2 in consideration of the hierarchical cluster analysis and previous Plan Team deliberations, which included a review of the MSA component reports and ten factors provided in NMFS' National Standard 1 guidelines. Remington asked the Plan Team to discuss any additional considerations for the actions, to address concerns with the inclusion of rarer species (e.g., *Paracaesio* spp.) on the list, and to comment on the timeline of the action in consideration of the subsequent stock assessment.

Plan Team discussion on this Council action included the following:

- This effort has been in progress for a long time stemming from the stock status determinations in the 2019 benchmark stock assessment for territorial BMUS.
- The rarity of a species should not be a consideration for including or excluding it for management, as the focus should be on species present in federal waters that are intercepted in the fishery.

- Deep snappers should be federally managed despite a large portion of BMUS habitat around American Samoa occurring in territorial waters.
- There are many tools that can be used to manage rare species.
- Rarer species may result in difficulties in the stock assessment, but indicators can be used for those species in the assessment.
- The proposed species list was already endorsed by the SSC and Council.
- The science supports the addition of these species, and if they are removed, the Plan Team needs to provide clear justification.
- There has not been much life history work on *Paracaesio* spp., but they share traits with many other deep snappers.
- Data are available for these species
- Species lists may be different across island areas because there are differences in the fisheries in each place (e.g., uku remain important in Hawaii due to summertime harvests at Penguin Bank despite the proposed removal from the BMUS list in American Samoa).
 - PIFSC performed a cluster analysis for Hawaii that resulted in different groupings.
- The next stock assessment is scheduled for 2026 and is intended to be an update.
- The territories need to continue discussions on appropriate species for their FMPs.

B. Precious Coral EFH Update

Remington provided a brief update of the history of the proposed action to revise MHI precious coral EFH. After initiating the action in 2019, there was a delay as the Council had conversations with NOAA GC regarding the need to also designate new precious coral beds along with identifying new EFH. As the Council sought to reinstate the action this year, it learned that there were additional deep water coral surveys planned for 2025 that may inform a new MSY estimate for precious coral beds in the MHI. The MSY estimates for the most well-known beds (e.g., Makapuu) are used to determine MSY values for precious coral beds that are not surveyed to the same extent. Beth Lumsden, PIFSC, presented on the deep sea coral surveys planned for 2025. Funding was received in 2024 to do a survey of the Makapuu precious coral bed using the *E/V Nautilus*. The survey will look to better articulate bed boundaries. Plan Team discussion on this update included the following:

- The surveys would provide information to allow PIFSC to generate new maximum sustainable yield (MSY) estimates using a basic production model.
- There are no plans for additional surveys in the future around Hawaii.
- The surveys will be 12 hours long, only video, and not photogrammetric data.
- Precious coral EFH is at the lowest level (Tier 1) for the species' benthic phase.

C. ACL Specifications

i. Guam BMUS

Council staff presented an update on the Guam BMUS ACL, which is currently specified by the bottomfish rebuilding plan. The Council is currently waiting responses from PIRO on the progress of the rebuilding plan (i.e., a BSIA memo) and the development of catch projections by PIFSC related to the Guam BMUS stock assessment update that was recently finalized. The Council is also awaiting a new stock status determination memo from PIFSC. Depending on the results of the evaluation and catch projections, there may be an opportunity to adjust the rebuilding plan with a revised ACL and perhaps different AMs. The stock assessment update

found that while the Guam BMUS are not overfished, they have not fully rebuilt (i.e., reached B_{MSY}).

Plan Team discussion on this update included the following:

- There are concerns about using a post-season overage adjustment that results in a “ratcheting down” of the ACL in subsequent years.
 - However, reducing the ACL may be preferable to the current AM of a fishery closure.
 - There is also a “carry over” provision that could be examined.
- The Guam Data WPSAR in July 2024 will determine if there are different ways to assess the stock complex for the forthcoming benchmark stock assessment.
- PIFSC requires clarifications from PIRO regarding the updated catch projections.
 - Projections utilizing 2024 catch data through the rebuilding timeline would be ideal.
 - The goal is to allow as much catch as possible while rebuilding (i.e., $B/B_{MSY}=1$) within regulatory timeframes (i.e., by 2031).
- The stock status memo may include recommendations on possible Council actions.
- PIRO must assess the rebuilding plan every two years to ensure adequate progress and determine if additional management is needed.

ii. Hawaii Deep 7 Bottomfish

Council staff presented updates on the proposed Council action to specify ACLs and AMs for the MHI Deep 7 bottomfish fishery for fishing years 2024-2025 through 2026-2027 based on the results of the new benchmark stock assessment (Syslo et al. 2024) and the outcomes of the associated P* and SEEM working group analyses. The new assessment used the same a Bayesian state-space surplus production modeling approach with new software and included several data improvements. The 2024 assessment determined that the MHI Deep 7 bottomfish stock complex was not overfished nor experiencing overfishing.

Helyer chaired the P* and SEEM working groups associated with the proposed action and presented on the analyses and resulting reduction scores. For P* the reduction scores for the dimensions on Assessment Information, Uncertainty Characterization, Stock Status, and Productivity and Susceptibility were 0.7, 5.0, 0.0, and 4.4, respectively, for a total of ~10. The SEEM dimensions resulted in a total reduction score of 1.0. Helyer noted discussion by fishers present at the working groups, though much of the input was relevant for the upcoming research track stock assessment.

Council staff sought a Plan Team recommendation for the Council to take initial action at its meeting in June 2024. The four options available for Plan Team discussion were (1) no action, (2) status quo implementing an ACL of 492,000 lb based on the previous stock assessment, (3) implementing an ACL of 493,000 lb based on the new stock assessment, and (4) implementing an ACL below the level recommended by the new stock assessment and associated P* and SEEM working group analyses.

Plan Team discussion on the proposed Council action included the following:

- The default recommendation by the Plan Team would be Option 3 to specify ACLs at a risk of overfishing based on the results of the recent benchmark stock assessment and outcomes of the P* and SEEM working groups. There was no dissent in recommending Option 3.
 - Option 1 is not viable. There is no basis for Option 2 because new BSIA exists.
 - Selection of Option 4 would require reasonable justification.

- The period for which catch projections are available extends beyond the period for which the proposed action intends to specify ACLs, which may not align with the schedule for the next research track stock assessment.
 - Catch projections are provided through 2029 to give the PIFSC SAP the time they need to work on research and improving the assessment. The PIFSC SAP noted that, ideally, the ACL specification would be extended for a timeframe (i.e., through the 2028-2029 fishing year) that would not be dependent on an update assessment being completed before the new research track stock assessment.
 - The discussion would need to be brought to the WPSAR Steering Committee, but the Plan Team can make a related recommendation.
 - The projections could still be used to specify ACLs through 2029. If there is no change to the process, a stock assessment update would need to be conducted as scheduled in 2027.
 - The three- and four-year ACL specifications are described in the MSA and provisions of the Hawaii FEP.
 - The Plan Team made no recommendation to request the WPSAR Steering Committee to extend the timeline for the subsequent MHI Deep 7 bottomfish assessment update.

10. Ongoing and Upcoming Uku Efforts

D. Ecosystem-Based Fishery Management (EBFM) Initiative

Sabater provided a verbal update on the EBFM initiative for uku that is being led by Savannah Lewis at PIRO. Several years ago, a regional EBFM summit was held with representatives from the Council, PIRO, and PIFSC. Participants developed a framework to guide the regional initiative to move forward with EBFM, focusing on uku as a pilot species. Earlier this year, a summit was held on uku with representatives from HDAR, Council, PIRO, and PIFSC to review all known information for uku, including available data. Priorities were developed based on available information to develop three scientific products intended to assist management: 1) a climate-informed, research track stock assessment led by Nadon; 2) a management strategy evaluation (MSE) led by Ahrens, for which funding has been received to do community engagement that would solicit information from the public to develop an MSE schedule for 2025; and 3) essential fish habitat (EFH) improvements led by Tanaka. These three products usher EBFM forward in parallel with PIRO and the Council who will develop frameworks to absorb the scientific products. Currently, PIFSC is working with the fishing community to prepare for an uku stock assessment update in September 2024 with meetings scheduled for July and August. They are also waiting on funds to implement fisher engagement for the MSE.

E. Data Survey Project

Sabater provided a verbal update on a data survey project for uku, for which PIFSC received funding from MSA temp funds for one year. Nadon described the initial steps of the project to combine the DOBOR vessel registry with CML and bottomfish registries, noting that the idea came from fishing community to address concerns with HMRFS. The purpose of the project would be to focus sampling from the known universe of bottomfish fishers, which would be around 9,000 vessels according to the combined registries. PIFSC plans to mail 2,000 surveys per month and run this project for one year, with June 2024 being the first potential mailing. PIFSC is also scheduling a working group meeting that includes fishers to review survey materials. The Waialua Boat Club will do a test run of the survey to determine if it is easy to

complete. There is potential funding for a second year of the project to build upon the effort for uku or to expand to Deep 7 bottomfish. PIFSC also attended the POP Fishing and Marine Expo on Saturday, May 18, to talk to members of the community and conduct outreach on this effort.

F. Research Stock Assessment

Sabater provided a verbal update on the research track stock assessment for uku, which will be initiated after the finalization of the stock assessment update with conversations with the fishing communities. PIFSC has meetings planned in July and August regarding the stock assessment but plans to seed the fishing community about providing feedback for the research track stock assessment for uku. Currently, PIFSC is focused on the research track stock assessment in place for MHI Deep 7 bottomfish, and the first related meeting was held last month that identified some priorities. One notable priority is the use of non-commercial data for the fishery as well as the incorporation of information from the bottomfish fishery independent surveys (i.e., BFISH). PIFSC's hope for the research track stock assessments is involving the community in the development of the science. The stock assessment update for uku will not be completed until September 2024, and PIFSC is scoping the start of preparation for the research track assessment in 2025. Suter offered data support from WPacFIN for research track assessment preparation.

11. Public Comment

There was no public comment.

12. Discussion and Archipelagic Plan Team Recommendations

The Archipelagic Plan Team made the following recommendations to the Council:

Regarding Federal Fishing Permits, the Archipelagic Plan Team:

- Reviewed the Federal Permit and Logbook Data module of the annual SAFE reports and noted the lack of federal permits and related reporting for many fisheries (e.g., MHI non-commercial bottomfish). Therefore, the Archipelagic Plan Team recommends the Council include a review of the efficacy of its federal permits as part of its regulatory review project funded by forthcoming Inflation Reduction Act (IRA) funds.

Regarding Uku Fishery Management, the Archipelagic Plan Team:

- Acknowledges the HMRFS data limitations for in-season management of the MHI uku fishery and recommends the Council consider discontinuing the use of in-season AMs for the upcoming specification of uku ACLs following the finalization of the MHI uku stock assessment update later this year.

Regarding MHI Bottomfish Specifications, the Archipelagic Plan Team:

- Recommends the Council select Option 3 and endorses the P* and SEEM working group analyses resulting in a risk of overfishing of 39% using 2027 as the terminal year associated with an ACL equaling the ABC at 498,000 lb and consider an ACT of 493,000 lb (using the M* reduction score) for 2024-2025, 2025-2026, and 2026-2027, consistent with the SEEM framework proposed by Hospital et al. (2019).

Regarding Territorial Non-Commercial Module, the the Archipelagic Plan Team:

- Recommends the Council approve the inclusion of the territorial non-commercial fishery data modules that utilize a new approach of estimating species level commercial landings in the American Samoa and Mariana Archipelago annual SAFE reports as presented. The APT notes the substantial effort required to develop these modules but also their importance in ensuring consistency between data presented in stock assessments and the annual SAFE reports.

The Archipelagic Plan Team also agreed to work on the following work items prior to its next meeting:

American Samoa Archipelagic Fisheries

- Review American Samoa shore-based creel survey estimates to determine the increase in landings by looking at the species composition and which species are driving the increase. Participation by Marc Nadon, Jenny Suter, and Domingo Ochavillo.
- Review low bottomfish fishing effort (especially bottom-troll mixed gear trips) in American Samoa and how this low fishing effort is impacting creel survey catch expansions. Participation by Jenny Suter, Brad Gough, Toby Matthews, Domingo Ochavillo.

CNMI Archipelagic Fisheries

- Review 2023 CNMI creel survey expansion and commercial landings data, noting that numbers seem relatively low. Participation by Jenny Suter, Brad Gough, Toby Matthews, and Angela Dela Cruz.
- DFW to provide a few items on what PIFSC should look into for low boat-based catch and high number vendors reporting but low commercial catch. Effort was relatively similar but catch and CPUE were roughly half (or less) of what has been seen in recent years. Items to be provided by Angela Dela Cruz.
- Verify that annual SAFE report summaries are consistent with data in Metabase. Participation by Jenny Suter, Dios Gonzalez, Angela Dela Cruz, Jude Lizama.

Guam Archipelagic Fisheries

- Review number of high surf/small-craft advisory warnings, military announcements, etc. to determine impact on fishery performance and survey days. Participation by Brent Tibbats, Council Staff, and a Council intern.

Ecosystem Component Species

- APT Chair and Council staff to review other examples of EBFM management for ECS and request a presentation from OSF/other Councils for an upcoming intersessional meeting. Participation by T. Todd Jones, Frank Parrish, Marlowe Sabater.
- APT Chair to discuss with Council staff the ability to host a Joint Plan Team intersessional meeting to discuss ECS and Ecosystem Objectives sometime between November 2024 and February 2025. To be completed by T. Todd Jones and Josh DeMello.
- Add a disclaimer on change in methods to the percent coral coverage figures in the Coral Reef Ecosystem Parameters Module with an explanation. To be completed by Thomas Remington and Tye Kindinger.

American Samoa Bottomfish Fishery ACL Monitoring

- Form a working group to develop a new bottomfish species specific reporting summary table template to report back at the archipelagic intersessional meeting for approval. Participation by Thomas Remington, Domingo Ochavillo, Brad Gough, Jenny Suter, Marc Nadon, and Marlowe Sabater.

Territorial Non-Commercial Modules

- Forms a Working Group to review the potential low commercial dealer reporting issues in the territories, up to 90% non-commercial, determine possible reasons, and include drivers in the non-commercial fishery performance modules. Members suggested reviewing a report by Leilani Sablan. Participation by Marlowe Sabater, Josh DeMello, Domingo Ochavillo, Brent Tibbatts, and Angela Dela Cruz.
- Forms a working group to look at different proportions of commercial to non-commercial dispositions between the socioeconomic module and territorial non-commercial modules to ensure consistency throughout the annual SAFE reports. Members suggested reviewing NOAA Fisheries' recreational reporting website. Working Group to report out at intersessional meeting. Participation by Minling Pan, Marc Nadon, Jenny Suter, Brent Tibbatts, Domingo Ochavillo, Angela DelaCruz, Hongguang Ma.
- Encourages the Pelagic Plan Team to form a working group to develop a similar non-commercial module for territorial pelagic MUS. Participation by Ashley Tomita, Marc Nadon, Jenny Suter, Domingo Ochavillo, Brent Tibbatts, Angela DelaCruz, and Hongguang Ma.