WESTERN PACIFIC REGIONAL FISHERY MANAGEMENT COUNCIL

Intersessional Archipelagic Fishery Ecosystem Plan Team Meeting

January 25, 2023
11:00 a.m. – 5:00 p.m.
Council Office Conference Room, Honolulu, Hawaii

FINAL REPORT

1. Welcome and Introductions

T. Todd Jones, meeting chair, opened the meeting, reviewed meeting protocol, and asked members to introduce themselves during a roll call. Members of the Western Pacific Regional Fishery Management Council's (WPFMC, or Council) Archipelagic Fishery Ecosystem Plan Team (APT, or Plan Team) present via teleconference were T. Todd Jones, Felipe Carvalho, Bryan Ishida, Robert Ahrens, Keith Bigelow, Brent Tibbatts, Danika Kleiber, Paul Murakawa, Marc Nadon, Domingo Ochavillo, Angela Dela Cruz, Joseph O'Malley, Thomas Oliver, Minling Pan, Kisei Tanaka, Tye Kindinger, and Marlowe Sabater. Heather Cronin sat in for Brett Schumacher from the Pacific Islands Regional Office (PIRO) and Brad Gough sat in for Jenny Suter from the Pacific Islands Fisheries Science Center (PIFSC). Ian Bertram, Frank Parrish, and Jason Biggs were not present.

2. Approval of Draft Agenda

Jones provided background information on the purpose of the Intersessional Plan Team meeting and highlighted the topics of interest, including revising the territorial bottomfish management unit species (BMUS) lists, refining uku essential fish habitat (EFH) in the main Hawaiian Islands (MHI), establishing status determination criteria (SDC) for Kona crab in the Hawaii Archipelago Fishery Ecosystem Plan (FEP), and status updates on Plan Team working group efforts toward annual Stock Assessment and Fishery Evaluation (SAFE) report improvements.

The draft agenda for the January 2023 Intersessional APT meeting was approved by consensus.

3. Review of BMUS MSA Component Working Group Reports

Council staff provided a presentation on the proposed action to revise the territorial BMUS lists, including the various required management components and considerations under the authority of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), including SDC, annual catch limits (ACLs) and accountability measures (AMs), monitoring and bycatch, EFH, and fishing communities. The purpose of the proposed action is to refine the BMUS lists in the FEPs for the American Samoa and Mariana Archipelagos to reflect the current state of the bottomfish fisheries in American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands (CNMI). The need for the proposed action is to revisit the management unit

species (MUS) list to determine whether the current species composition of the lists remains representative of the fisheries. Since the BMUS revision spans various components, several different working groups convened to develop reports on each topic. Council staff provided information on the progress made by each working group to date and a proposed timeline that involves the Plan Team reviewing a draft amendment at its regular meeting in April 2023 for initial action by the Council in June 2023.

a. Status Determination Criteria

Felipe Carvalho, PIFSC Stock Assessment Program (SAP), presented the SDC report for revising the territorial BMUS lists. National Standard 1 (NS1) of the MSA defines overfishing and overfished statuses as states that jeopardize the capacity of a stock to produce the maximum sustainable yield (MSY). Given the characterization of territorial BMUS fisheries as data limited, stock assessment scientists must use proxies for reference points comprising the SDC, and the suitability of these reference points depends on the stocks' characteristics relative to the proxies used to derive SDC. Progress in utilizing data limited methods (DLM) represents progress in effectively using available data, being able to identify manageable metrics, and developing a better understanding of the associated uncertainties. Recently, the most commonly-used DLM are those that make use of size composition information. Such methods employ a snapshot or time series of biological composition and life history information to estimate the fishing rate that produced the observed composition.

The specification of reference points depends on the data available. Much of the NS1 technical guidance was geared toward age-structured assessments, making it difficult to apply the guidance to data-limited situations. However, revised versions of NS1 guidelines include more recent methods developed for application to a wide range of data scenarios, allowing for the use of DLM that produce spawning potential ratios (SPR). Therefore, the working group recommended new SDC be established to allow for status determination to be rate-based (i.e., utilizing length-based analytical approaches). It is noteworthy that overfishing SDC for composition based DLM are the same as outlined for age-based assessments. The new NS1 guidance recognizes the need for data-limited approaches, which are necessary for the Western Pacific region. Additionally, SDC reference points like Minimum Stock Size Threshold (MSST) can be translated into units of SPR such that there is a high probability that the stock is overfished if SPR falls below this rate-based MSST.

A Plan Team member requested clarification on how SPR would indicate both the overfishing and overfished status for the territorial BMUS, and if there would exist a single metric with two separate thresholds. Carvalho noted that SPR is not predetermined and would be decided in the Terms of Reference for stock assessments. Another Plan Team member noted that, for the previous coral reef fish stock assessment (Nadon 2019), the PIFSC-SAP avoided making overfished determinations. The thresholds would be the same; the difference would be the maintenance of SPR at that threshold for a certain period of time. If fishing occurs at an unsustainable rate for a long enough time, it would be considered overfished at equilibrium.

A Plan Team member noted that this technical guidance was released at the national level, and there is still some consternation about what the thresholds could be. Ultimately, the assessment

would specify the appropriate SPR threshold for determining overfishing, but there are no other considerations for determining overfished statuses other than if stock is below x% SPR for some period of time. While there will eventually be technical guidance to establish the percentage for SPR, there are no specific numbers at the moment. Jones noted that the proposed rate-based SDC would simply be added to the FEPs as a possible mechanism.

b. ACLs/AMs/50 CFR 600.310(h)(2) Provision

Marlowe Sabater, PIFSC Fisheries Research and Monitoring Division (FRMD), presented the ACLs/AMs/50 CFR 600.310(h)(2) Provision report for revising the territorial BMUS lists. Adding SPR as a tool for managing the territorial BMUS is appropriate given the data limited nature of the fisheries and that the ACLs and AMs are suitable for this type of management. Moreover, the proposed rate-based control rule allows the Council to utilize the flexibility provisions provided under NS1 (50 CFR 600.310(h)(2)). Given the difficulty of applying ACLs to data limited stocks, the Plan Team proposes using an alternative rate-based approach. The PIFSC stock assessment would act as the basis for the rate-based ACL, and thus there would be no need to convert the rate back to fish by weight or summarize the ACL in pounds.

For the acceptable biological catch (ABC) and ACL, the proposed action would add a new tier to the current five-tier system. Under the new Tier 6 approach, if a stock lacks the biological information (i.e., Life history) to determine number-based reference points and cannot be managed based on catch weight, managers could implement the ABC Control Rule under Tier 6 as an input control rule in lieu of an output control. Setting the Tier 6 ABC and ACL starts with the stock assessment estimating the fishing mortality rate (F) associated with the minimum average length at 50 percent probability that overfishing is occurring. Changes to the ACL control rule would follow the Social, Economic, Ecological, and Management Uncertainty (SEEM) analysis procedure but just for "M" (i.e., management uncertainty, the level of compliance and ability to enforce) because the fisheries are in a data limited situation. For the AMs, there would need to be a proposed approach to bring SPR above the SPR target should it fall below this threshold. The working group outlined various non-prescriptive approaches that could increase SPR should the stock fall below the target level. This approach would offer flexibility for the researchers and managers to utilize the best approach from various options given the needs of the stock and the fishing community.

A Plan Team member stated they understand the rationale associated with keeping the information qualitative but questioned what the review process would look like for the proposed structure as detailed in Figure 1 of the component team report. Jones noted that the Plan Team needs to separate the difference between the list of species and everything that we have available to manage them versus the actual stock assessments. Sabater added that all the information presented for the ACL framework under the Tier 6 approach would be included in the FEP amendment for revising the territorial BMUS lists. Ensuring that flexibility is built into the framework would streamline the process in the long term. Ultimately, if the PIFSC-SAP uses an SPR approach for a given species, then the outcomes would be reviewed through the Western Pacific Stock Assessment Review (WPSAR) process and by the Council's Scientific and Statistical Committee (SSC), and the SSC could recommend the Tier 6 approach after the assessment is approved. Jones added that the flexibility the Plan Team is suggesting in this

approach would provide the PIFSC-SAP the largest range of possibilities to perform appropriate assessments for each stock.

c. Monitoring and Bycatch

Keith Bigelow, PIFSC FRMD, presented the monitoring and bycatch report for revising the territorial BMUS lists. Territorial bottomfish fisheries are monitored using data from the creel surveys and commercial purchase systems. Bycatch data in these fisheries are collected and reported according to the Standardized Bycatch Reporting Methodology (SBRM) developed collaboratively by the Council and NMFS. SBRM relies on creel survey data for these fisheries and data summaries for each are available in the Council's annual SAFE reports. There is currently an APT working group tasked with improving the bycatch summaries in the annual SAFE reports, as they currently only present the amount of bycatch but not the type (i.e., species) for these fisheries. The working group has begun development of summary tables that specify the amount of bycatch by species. As of now, focus is on the Hawaii bycatch tables, but the same improvements can/will be applied to territorial data, which currently indicates BMUS bycatch is low. Ultimately, the proposed action would not likely affect how the territorial bottomfish fisheries are conducted or monitored, as primary target bottomfish species would remain the same. Therefore, significant changes to creel survey and commercial purchase system designs are not needed.

Moving forward, however, there is an opportunity to refine the creel survey design. Since shallow water species are likely going to be removed from the list, data collection can be focused on deep species that would comprise the revised list. Surveyors can also increase their interception rate (to increase representativeness) and collect data aligned with rate-based monitoring (e.g., length).

There was no further discussion on this agenda item.

d. Essential Fish Habitat

Council staff and Joseph O'Malley, PIFSC Life History Program, presented the EFH report for revising the territorial BMUS lists. Council staff reviewed the EFH requirements that the Council must abide by under the MSA, which include identification and description of EFH and Habitat Areas of Particular Concern (HAPC) for all federally managed species, descriptions of adverse impacts to EFH, and recommending conservation and enhancement measures to minimize and mitigate adverse impacts to EFH. O'Malley presented the available life history information for the species comprising the proposed BMUS list at all life stages in American Samoa, Guam, and the CNMI. There are several large data gaps, especially for species proposed to be added, emphasizing data needs going forward.

Tanaka asked if there is a sense of how much of the available information comes from fishery independent data sources. O'Malley indicated the information derived from NOAA cruises around the Pacific in the 1980s would be considered fishery independent information. Additionally, commercial fisheries do not target fish eggs or larvae, so any information on those life stages would also come from fishery independent sources. Some information for juveniles and adults can also be fishery independent, as is the case for PIFSC BotCam initiative.

e. Fishing Communities

Danika Kleiber, PIFSC Social-Ecological and Economic Systems Program, presented the fishing communities component team report for revising the territorial BMUS lists. Kleiber summarized the available information for the fishing communities, most of which is captured in the FEPs and annual SAFE reports. Available information includes FEP and SAFE report community descriptions under the MSA, PIFSC fishing community profiles, Council and NMFS indigenous programs, and additional socioeconomic monitoring by PIFSC. Ultimately, the working group determined that the proposed action to revise the territorial BMUS lists would likely have little to no impact on how island fishing communities are defined in the FEPs, how indigenous programs for island fishing communities are carried out (i.e., despite the change in applicable MUS), the sociocultural or socioeconomic aspects of the bottomfish fisheries, and socioeconomic data collection efforts by PIFSC and the Council. If the proposed action materializes, the working group recommended that the annual socioeconomic summary figures and statistics presented in the annual SAFE reports be updated with the revised species list such that historical and current data are representative of the updated BMUS according to the proposed FEP amendment.

There was no Plan Team discussion on this agenda item.

After completing all presentations under agenda item 3, Jones requested that the Plan Team accept comments from the public given the importance of the proposed action.

Sean Hanser, NMFS Habitat Conservation Division, asked if there could be various assessment approaches applied to the proposed BMUS for comparative purposes, better illuminating uncertainties for each method and allowing the Council to choose. Carvalho responded that the PIFSC-SAP does not use comparative approaches; rather, the science that PIFSC-SAP generates is transmitted to the Council and its SSC for their management decisions after being peer reviewed by the Center for Independent Experts (CIE). The PIFSC-SAP does not provide options for assessment unless the previous assessment used a different approach and the SSC or CIE determines that the new approach is not viable. Hanser noted that this procedure likely retains clarity for the Council but also that it would be good to know if information is conserved that would allow for testing various methods.

4. Next steps for the refinement of uku essential fish habitat

Council staff presented on the ongoing effort to refine the EFH designation for MHI uku based on the results of Level 1 (i.e., occurrence) and Level 2 (i.e., density) EFH modeling efforts by Franklin et al. (2021) and Tanaka et al. (2022), respectively. The current EFH definition for MHI uku is relatively vague, comprising the water column and bottom habitat extending from the shoreline to a depth of 400 m. Both modeling efforts were peer reviewed through the WPSAR process, and each represented a major improvement on previous EFH information for the species. However, there is a need to determine if and how the two recently developed models can be used to refine existing baseline EFH boundaries for uku. Council staff stated that the Plan Team could recommend convening a working group to further review the WPSAR outcomes and available data to assist in the development of an options paper. Council staff also noted that the options could involve incorporating the Level 1 and Level 2 products together or separately, and there could also be options for cross-validation, such that managers could determine the

threshold of the EFH model outputs at which some number (e.g., 80%) of uku observations were predicted by the model.

Each of the proposed working group members affirmed their participation. There was no further discussion on this agenda item.

5. Discussion/Review of Kona Crab Status Determination Criteria

Remington provided a presentation on the proposed action to establish SDC for the Kona crab fishery in the Hawaii FEP. Because the Hawaii FEP does not specify SDC for the Kona crab fishery that allow for determinations of the stock being overfished or experiencing overfishing, the stock status for MHI Kona crab remains "unknown" despite the results of the most recent benchmark stock assessment (Kapur et al. 2019). Thus, the proposed action is for the Council to establish SDC in the Hawaii FEP (i.e., MSST, and Maximum Fishing Mortality Threshold, MFMT) to bring it into compliance with the MSA. Potential options for establishing SDC include rolling over the SDC used in the most recent benchmark stock assessment or utilizing SDC from other crab fisheries and regions.

Carvalho also provided a presentation describing the PIFSC-SAP perspective of the proposed action to establish SDC for MHI Kona crab since this action would have the potential to impact the ways in which assessment scientists apply the results of their assessments to determine stock status. Carvalho reviewed the approach taken in the Kapur et al. (2019) stock assessment, including estimation and standardization of annual catches and catch-per-unit-effort (CPUE) to develop a time series as well as aggregation of biological data for the production model. Ultimately, Option 2 to roll over the previously-used SDC is the PIFSC-SAP's preferred approach since it would be the least likely to impact the science they use to develop assessments.

Jones reminded the Plan Team that it would be making a recommendation to the Council for this proposed action, which will be brought before the Council and its SSC again at their March 2023 meetings. Remington also clarified that the proposed action is presented as a technical correction to the Hawaii FEP because the management framework has been operating as if SDC exist for this fishery, following NMFS technical guidance by Restrepo et al. (1998). However, in officially specifying SDC through the proposed FEP amendment, Remington noted benefits in aligning the SDC to suit the PIFSC-SAP's needs.

A Plan Team member asked why SDC for different species or fisheries are being considered when adequate SDC exist for the Pacific Islands region. Remington noted that this is a unique circumstance where SDC are established for most other species but have not been applied to the Kona crab fishery, and this is the first time in the region that managers have attempted to apply SDC to an active fishery. While SDC could simply be rolled-over, discussions with PIRO prompted the Council to explore other potential options for SDC that may be suitable for application. Jones noted that SDC for many other domestic crab fisheries were also based on guidance by Restrepo et al. (1998).

Council staff asked if it would be possible to keep the SDC "open-ended" such that the stock assessment scientists could decide what B_{MSY} and F_{MSY} would be to better address issues with non-stationarity in lieu of being overly prescriptive in the proposed action. Carvalho responded that the PIFSC-SAP considered all available options relative to the available data and possible

forthcoming regulatory change for the fishery by the State of Hawaii. Ultimately, the PIFSC-SAP believes that Option 2 would not impact how they develop the science for stock assessments. Another Plan Team member agreed that it is reasonable to base the proposed SDC on the current stock assessment and suggested that the P* process may be a better avenue to account for non-stationarity impacts than SDC.

Jones noted that the PIFSC-SAP supports Option 2 and asked if the Plan Team has any opposition to Option 2 or reasons it would not be suitable for implementation in the Hawaii FEP. The Plan Team endorsed Option 2 by consensus.

6. APT Working Group Updates on SAFE Report Improvement Projects

Remington provided a brief overview of the three active Plan Team working groups tasked with various improvement efforts for the Council's annual SAFE reports. At its April 2022 meeting, the Plan Team identified deficiencies in the annual SAFE reports with respect to the monitoring and reporting of non-commercial fishery sectors of the Pacific Islands region as well as bycatch under the Council's SBRM. Each working group provided a brief summary of the progress made so far alongside issues discussed and next steps.

Jones stated that the Plan Team should provide feedback to the working groups based on their status update to facilitate completion and Plan Team approval by the April 2023 meeting.

a. Hawaii Non-Commercial Data Module

Bryan Ishida, Hawaii Division of Aquatic Resources (HDAR), provided a brief presentation to the Plan Team on the progress of the working group charged with developing a non-commercial fishery performance data module for Hawaii fisheries to be included in the annual SAFE reports. There have not been any estimates of non-commercial fishery data for Hawaii in recent years, and initiatives like sector allocation for uku prompted a more immediate need for catch estimates by fishery sector. Non-commercial fishery data are available from the Marine Recreational Information Program (MRIP) through the Hawaii Marine Recreational Fishing Survey (HMRFS). Ultimately, the working group was able to produce a brief time series of estimated non-commercial catch totals by species for both Hawaii MUS, top 10 ECS, and prioritized ECS by HDAR. The working group dealt with several issues, including separating catch estimates based on catch disposition, determining how to best impute weights, discerning between smooth and unsmoothed data, shortening the time series of data based on changes to the effort survey, and investigating missing data. The next steps are to glean updated 2022 catch information, appropriately format the data summaries, and generate descriptive text to be presented alongside the data summaries in the annual SAFE reports.

A Plan Team member asked if portions of catch that were partially sold were taken into consideration when splitting catch estimates based on disposition. Ishida said there are some kinds of mismatch between HMRFS and Hawaii's fisher reporting system (FRS) because sometimes people who are not full-time commercial fishers are categorized as such in HMRFS. Hongguang Ma, Plan Team working group member, was invited to speak and clarified that catch estimates with the disposition of "sold" or "to be sold" were removed.

A Plan Team member suggested that the non-commercial HMRFS data should combine with the FRS data to be the total (i.e., commercial plus non-commercial) HMRFS data. Ma noted that

MRIP provides the total catch metric on their website but also that it is highly variable and some years can be three to four times greater than the FRS total. However, after removing the sold component of the catch according to disposition, the non-sold HMRFS data become more comparable with the commercial catch. The working group believes that the non-sold HMRFS data can be added to the commercial data for total removals, whereas the total catch estimate from HMRFS is likely an overestimate. The same Plan Team member stated that the non-sold HMRFS information could be stacked with FRS data to equal the total with some area of unexplained discrepancy. Ma stated that HMRFS was designed for non-commercial fisheries, though the delineation between commercial and non-commercial is not always clear (e.g., as for expense fishers). HMRFS is likely not representative of the commercial sectors of Hawaii fisheries. Ma also stated that we likely cannot explain the discrepancy between the HMRFS total and the HMRFS unsold plus FRS data as the HMRFS total estimate does not take into account the proportion of intercepted fishers with varying dispositions. The Plan Team member stated that if the HMRFS total estimate is an expansion of the entire intercept without accounting for the proportion of what would be sold, the non-sold estimate should be of focus. Ma agreed that utilizing the HMRFS non-sold catch estimate is the best approach

A Plan Team member asked if there are weight data from the FRS that could be applied to the HMRFS data to have a better idea of biomass. Ishida indicated that this information is available. Another Plan Team member noted that while this approach might not be an issue for opakapaka, it could be problematic for species like uku that sometimes have few weighed fish in a given wave. This can result in uku having their size overestimated despite non-commercial fisheries typically averaging a smaller size than commercial fisheries, so it is important to see how much data went into calculating average weight in an individual wave prior to expansion. Though the number of non-commercial individuals measured in any given wave is low, what is not understood is the relationship between weight of pieces sold commercially and the weight of pieces retained non-commercially due to the low sample size. For example, it could be accurate that fishers sell larger individuals commercially while retaining smaller individuals for consumption. Ma noted that the working group used the grand mean from all available years for Deep-7 bottomfish and uku to impute weights for the presented time series data.

Jones requested that Plan Team feedback be appropriately communicated to each of the working groups in preparation for the April 2023 Plan Team meeting.

b. Territorial Non-Commercial Data Module

Marc Nadon, Cooperative Institute for Marine and Atmospheric Research (CIMAR) at University of Hawaii at Manoa, presented the status update for the Plan Team working group responsible for developing non-commercial fishery performance data modules in the annual SAFE reports for American Samoa, Guam, and the CNMI. The working group examined two different data streams to potentially derive non-commercial catch estimates: 1) determine the difference between total catch from the creel surveys and commercial catch from purchase receipts; or 2) utilize the “intent to sell” information from the creel survey interviews. A typical issue with the commercial receipt book data is that, especially in American Samoa, individuals sold are not identified to the species level. In support of the first option, PIFSC can employ code to reclassify commercial receipt data to the species level from higher taxonomic groupings. Given the disparity in available commercial data at the species level versus higher taxonomic levels, there is a large portion of commercial data in American Samoa that is unaccounted for in

commercial catch totals. Thus, applying the code to reclassify commercial data would likely produce more accurate estimates of non-commercial catch. Additional issues that the working group discussed included incorporating the new data summaries into the workflow of the Western Pacific Fisheries Information Network (WPacFIN), working toward a unified data front for the region, and sociocultural considerations in describing the data. Next steps include generating data for the territories, both pelagic and archipelagic, before developing appropriate formatting and associated text for the modules.

Remington added that the working group did not prefer to use the "intent to sell" data because it was collected at the interview level instead of the species level and was not bounded by individual fish. Working group members thoroughly evaluated the data stream and suggested that it only be used for verification testing for the purposes of a non-commercial data module.

Jones asked whether there are instances in the territorial datasets where the catch from the commercial receipt books is greater than the total estimated catch from creel survey expansions and the commercial catch has to be used as a lower bound for the total catch estimate. Nadon replied that previous stock assessments used the commercial receipt data as the floor. The creel survey data are statistical estimates of the catch with outliers varying year to year. There may be periods in which the total creel survey expansion falls below the commercial catches, but it does not happen often at the species level. Remington added that this has not yet been the case for the creel and commercial data presented in the annual SAFE reports, but Nadon clarified that the commercial data are not yet representative of everything sold due to taxonomic classifications.

Nadon noted that he is especially interested in aligning catch products from WPacFIN with those employed by the PIFSC-SAP as they seem to be diverging more and more as time goes on; for example, WPacFIN is still using Visual FoxPro (VFP). Jones stated that there was a recommendation at the last regular Plan Team meeting in April 2022 for the PIFSC-SAP to use scripts to ensure AMs align with how ACLs are specified such that the same data are used to monitor the ACL as were used to generate it. WPacFIN is moving forward with this process and transitioning the database from VFP to MySQL. A Plan Team member expressed support for the unified data front and WPacFIN script integration such that data are consistent, especially with respect to tracking catch against a standard ACL or rebuilding plan ACL. The issue of whether the numbers managers use are consistent with what PIFSC-SAP uses arises frequently.

Jones asked if the working group envisioned that these non-commercial modules would be ready for review by the Plan Team at its April 2023 meeting. Nadon replied that the timeline for completion partially depends on his other initiatives (e.g., the new American Samoa BMUS stock assessment) since this work would require about a month. Jones stated that the annual SAFE reports are in a state of continuous improvement, and the development of these modules may extend past the current report update cycle.

c. Bycatch Summaries

Bigelow provided a status update on the efforts of the Plan Team working group to improve the bycatch summaries presented in the annual SAFE reports to align with the Council's SBRM in reporting both the amount and type of bycatch by fishery in the region. However, the existing archipelagic bycatch summaries only report the amount of bycatch, and there are no provided data for Hawaii pelagic small boat fisheries. The Plan Team working group generated new

bycatch summary tables denoting the amount and type of bycatch for Hawaii archipelagic and pelagic small boat fisheries with plans to expand the effort to territorial small boat fisheries. Issues discussed included presenting the top ten bycatch species over top 90th percentile bycatch, portraying bycatch as a time series, determining how to illustrate uku bycatch, dealing with data confidentiality, and redefining Hawaii small boat pelagic fisheries to more accurately determine releases. Next steps for the Plan Team working group include developing accompanying text for the summaries and scoping whether this exercise can be applied to territorial creel survey data.

Jones asked Bigelow to clarify if the species included in the bycatch summaries should be capped at the most prominent ten for a given year or if the 90th percentile would provide more utility. Remington responded that the working group used the top ten species in each year for the past ten years to produce the tables. There was some disagreement among Plan Team members as to whether the tables should illustrate the top ten species for the current year only or be inclusive of top ten species from previous years, with alternative suggestions including that full data summaries could be incorporated into the Council's online portal for its annual SAFE reports while retaining more concise tables for the reports themselves. Plan Team members ultimately concurred that the bycatch summaries should not be limited to the ten most prominent taxa of the terminal year of the time series. Since this would be the first year of the more detailed data summary, the tables should display bycatch over the course of the reporting period. Plan Team members agreed that the bycatch summaries' structure makes sense as presented.

A Plan Team member asked why target species are included in the bycatch summaries; for example, opakapaka was one of the top bycatch species in the Hawaii Deep-7 bottomfish fishery. Remington responded that these data indicate opakapaka that were caught but not retained, and a Plan Team member added that the releases are usually due to size issues or another specific reason like tagging. A Plan Team member provided additional context that many undersized Deep-7 bottomfish are retained due to complications related to barotrauma and that tagged fish would show up in the commercial reports as released individuals with notes about tagging on the report. Another Plan Team member noted that from 2007 to 2013, over 8,400 Deep-7 bottomfish were tagged and released as a part of the tagging effort.

Jones asked the Plan Team if members should sign non-disclosure agreements (NDAs) to be able to view and discuss confidential fishery data. A Plan Team member stated that they are opposed to this idea for three reasons: 1) A national working group tried to implement NDAs in 2012 with a proposed rule, could not complete the final rule, but started another proposed rule two years ago such that the Plan Team should await the national decision; 2) Processing the number of NDAs required for the would be a large administrative burden by one individual at PIFSC before going to General Counsel for review; and 3) Viewing the small amounts of data that originate from one to two fishers would not necessarily improve fisheries management, as the Council and its staff can already access confidential data under the MSA. Jones added that because Plan Team meetings are public, confidential data could not be discussed during the regular sessions of the meetings anyway. The Plan Team took no action on prescribing NDAs for its members.

7. Public Comment

There was no public comment.

8. Other Business

There was no other business.

9. Plan Team Discussion and Recommendations

Regarding changes to status determination criteria related to the proposed revision to the territorial BMUS lists, the APT

1. Recommends for territorial BMUS that rate-based analytical approaches, such as spawning potential ratio, be allowed as SDC.

Regarding changes to annual catch limits, accountability measures, and the use of 50 CFR 600.310(h)(2) provision related to the proposed revision to the territorial BMUS lists, the APT

2. Endorses the ACL/AM/(h)(2) report as drafted by the APT component team, including the establishment of a Tier 6 approach to inform the development of ABCs and ACLs and a proposed list of accountability measures that ensure biomass and fishing effort remain at sustainable levels.

Regarding changes to monitoring and bycatch related to the proposed revision to the territorial BMUS lists, the APT

3. Recommends the territorial resource management agencies, in collaboration with PIFSC, review current protocols to augment the length-based monitoring of catch from bottomfish fishing trips in the proposed BMUS lists are properly identified and measured for length (and weight if possible); and conduct training sessions for data collectors on fish identification and length measurements for the proposed BMUS.
4. Recommends developing technological solutions to support length-based monitoring through the use of mobile devices equipped with image recognition technology to identify and optically measure fish-length.

Regarding changes to essential fish habitat related to the proposed revision to the territorial BMUS lists, the APT notes that the proposed action to revise the territorial BMUS lists would have little effect on the designation of EFH required to be specified in the FEPs, and the APT

5. Recommends revising EFH definitions to reflect the proposed deepwater BMUS to be added to the lists, improving EFH definitions for all life stages of all BMUS where able, and removing EFH definitions for shallow-water BMUS transitioning to ECS and into the territorial FMPs as a result of the proposed action.

Regarding changes to fishing communities related to the proposed revision to the territorial BMUS lists, the APT notes that the proposed action to revise the territorial BMUS lists would have little effect on island fishing communities, associated indigenous programs, sociocultural or

economic aspects of their bottomfish fisheries, and socioeconomic data collection efforts by PIFSC and the Council. The APT recommends

6. Updating the socioeconomic summary figures and statistics presented in the Council's annual SAFE reports consistent with the revised species list such that historical and current data are representative of the updated BMUS according to the proposed FEP amendment.

Regarding the next steps to refine uku essential fish habitat in the Hawaii FEP, the APT

7. Establishes a working group initially comprised of Kisei Tanaka, Tom Oliver, Bryan Ishida, Matthew Seeley, and Thomas Remington to review available data and WPSAR outcomes of the EFH modeling Level 1 and Level 2 approaches to assist in the development of an options paper regarding the refinement of uku EFH to be presented to the APT at its April 2023 meeting.

Regarding the proposed establishment of status determination criteria for Kona crab in the Hawaii FEP, the APT

8. Endorses Option 2, which includes rolling over SDC that are derived from recommendations by Restrepo et al. (1998) and are consistent with the previous stock assessment by Kapur et al. (2019), noting the PIFSC Stock Assessment Program prefers Option 2 and that SDC from other regions or fisheries may not be well suited for application in Pacific Island fisheries.

10. References

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