WESTERN PACIFIC REGIONAL FISHERY MANAGEMENT COUNCIL

Fishery Ecosystem Plan Team Meeting

April 11-13, 2016
8:30 a.m. – 5:00 p.m.
Ala Moana Hotel
Honolulu, Hawaii

DRAFT REPORT

Archipelagic Fisheries Concurrent Session

1. Welcome and introductions

Stefanie Dukes, Fishery Ecosystem Plan Team Chair, opened the meeting at 8:40 am with a round of welcome. In attendance are the following members from the Archipelagic Plan Team: Stefanie Dukes, David Benavente, Brent Tibbatts, Domingo Ochavillo, Yvonne Mika, Kimberly Lowe, Michael Quach, Ed DeMartini, Sam Kahng, Reginald Kokubun, Frank Parrish, Alton Miyasaka, Jo-Anne Kushima, Justin Hospital, Melanie Brown, Sarah Pautzke, Michael Parke, John Marra, and Reka-Domokos-Boyer. The first day of the meeting is a concurrent session with the Pelagic Plan Team. This report covers discussions and outcomes from the Archipelagic Plan Team concurrent session and the Joint Fishery Ecosystem Plan Team meeting sessions.

2. Approval of draft agenda, 2015 report & assignment of rapporteurs

The agenda was approved by the body with one agenda item (administrative reports) moved to the joint session. The 2015 Report was also approved with no comments or revisions. Rapporteur was John Wiley, Marlowe Sabater, and Rebecca Walker

3. Report on previous Plan Team recommendations and Council actions

Marlowe Sabater, Council staff, presented on the status of the Plan Team recommendations from the 2015 meeting. There were three recommendations:

1) Formation of a regional Cooperative Research working group that would develop, draft and vet the Regional Cooperative Research Implementation Framework – the framework has been drafted and PIFSC is reviewing the draft. Once PIFSC commented then it will be circulated to the working group;
2) Exploration of the effect of the Fuel Subsidy Program to the fishery data – an analysis was conducted by Toby Matthews and was submitted to DMWR. Council staff requested for WPacFIN to provide the report to the Council. The report was provided to the Plan Team through a follow up made by the Plan Team Chair, Stefanie Dukes. Domingo Ochavillo presented on the results of the analysis indicating that the Fuel Subsidy resulted in fishermen fishing longer and did not increase catch or number of interviews. With the presentation of the results and having the report on file, the Plan Team closes this recommendation.

3) Formation of the HAPC working group that will produce the HAPC designation process – the working group was formed by the Council and incorporated the process in the development of the annual/SAFE report.

4. 2015 Annual/Stock Assessment and Fishery Evaluation (SAFE) Report

A. Fishery Performance

1. Archipelagic fisheries modules

a. American Samoa

Domingo Ochavillo, American Samoa Plan Team member, presented on the American Samoa Coral Reef and Bottomfish Fisheries Module. The presenter enumerated the statistics described in the draft Fisheries Module. There were questions regarding the absolute value of the commercial landing estimates which were deemed underestimated relative to the estimates from the creel survey based catch expansions. This needs to be investigated for the next year's reporting. It was also noted that the bottomfish report only focuses on the all species caught in the bottomfish fishery. There is no statistic for the Bottomfish Management Unit Species (BMUS). It was recommended to revisit the CPUE estimates and use a direct method to calculate CPUE rather than basing it on individual representative species groups. Method is a stratum that can be used to calculate overall fishery based CPUE.

The bycatch tables aims to track the amount of bycatch in the boat and shore-based fisheries. This bycatch monitoring is a requirement under the Sustainable Fisheries Act of 1996 (of the Magnuson Steven Act). It is also a requirement under the Fishery Ecosystem Plan and the SAFE reports under National Standard 2. The shore-based data collection has the required fields to input bycatch-related information but is not consistently implemented since the fisheries in American Samoa rarely have bycatch. Most of the catches are kept and in order to minimize interview saturation, the bycatch questions were not asked. It was pointed out that American Samoa does not have any size restriction that may result in a regulatory bycatch. This portion of the data collection program needs to be implemented consistently in order to meet the requirements of NS2 and SFA. Zero is still a value that can be reported to indicate that there is no bycatch in that fishery.

b. Guam

Brent Tibbatts, Guam Plan Team member, presented on Guam coral reef ecosystem and bottomfish fishery modules. The presenter described the statistics in the draft Fisheries Module. It was reported that there was an increase in the number of vendors reporting their catches brought about by the TSI project and also an increase in catch interview participation with the help of additional data collector. DAWR is still keeping track of the military closures of W-517 and its potential impact to the fishery as well as the number of small craft advisories and high surf warnings that have impacts on fishing effort. DAWR also monitors the MPA violations and records the amount of fish caught illegally within the protected area.

c. CNMI

David Benavente. CNMI Plan Team member, presented on the CNMI coral reef ecosystem and bottomfish fishery modules. The presenter described the history and

characteristics of the fishery and summarized the statistics in the draft Fisheries Module. A new law was passed to require fisher and vendors to report their catches and fish sales. The rules and regulations are still being drafted by DFW. The BioSampling program conducted by a private contractor also provides additional fishery information through their market survey and life history sampling. They work with 6 major fish vendors in Saipan. CNMI also anticipates increases in fish imports due to the rapid boom in tourism and building of local casinos.

The commercial fisheries were highly impacted by Typhoon Sodelor. The electricity was out for several months which could explain the drop in catches. The direct impact to the fishing fleet is unknown. The sampling efforts were also affected by the recent typhoon.

There is a need to increase sampling effort for spearfishing and cast netting. It is difficult to get catch interviews due to the time in which the fisheries occur and the nature of the fishing method itself (active gear).

d. Hawaii

John Wiley, Council contractor, presented on the Hawaii fishery module. This is the first annual/SAFE report developed for Hawaii. The Hawaii module covers the bottomfish (deep 7 and non-deep-7 bottomfish MUS), coral reef ecosystem, crustacean, and invertebrate fisheries. The module was developed by taking the top gear types and the top species landed by the respective gears. The main Hawaiian islands deep 7 bottomfish fishery in 2015 showed a higher landing and numbers caught compared to the 10 year average whereas the effort indicators showed lower values (number of licensees reporting and number of trips) compared to the 10 year average. These results showed a higher CPUE in 2015 for 6 of the 7 species (except gindai) in the complex under the deep sea handline method.

The non-deep seven bottomfish fishery is dominated by uku (*Aprion virescens*). Overall, the catch and effort statistics in 2015 were higher compared to the 10 year average. The CPUE for the deep sea handline and inshore handline that catches uku was slightly lower in 2015 (by 1.6%) compared to the 10 year average. The dominant species in the Coral Reef Ecosystem Management Unit Species (CREMUS) complex are the coastal pelagics namely *Selar crumenophthalmus* (akule, halulu) and *Decapterus macerellus* (opelu); and reef fish like *Mugil cephalus* (ama'ama – striped mullet) and *Lutjanus kasmira* (taape – blue-lined snapper). These species are the dominant catch from the fishing gear that landed most by pounds (inshore handlline, purse-seine net, lay-gill-net, and seine nets). Overall in 2015, the number of licensees was slightly up (0.07%) while the number of trips and catch (pounds and number) were down. Fishing year 2015 was a boom year for juvenile akule (halalu – up by 316%) and adult akule (up by 40.9%) whereas lower catch for opelu, ama'ama, and taape. The CPUE for seine nets and purse seine nets whowed dramatic fluctuations due to the nature of the species being caught (coastal pelagics) whereas the CPUE for inshore handlline and lay gill nets remain constant over time.

The invertebrate fisheries are comprised of crustaceans and invertebrates. For the crustacean fisheries, the 2015 effort, participation and pounds landed are lower compared to the 10 year average whereas the number of pieces caught was higher. The crustacean

fisheries were dominated by kuahonu crab landing 15% higher in 2015. The trap CPUE is up and stable over the past 10 years. Mollusk and limu landings were also down slightly compared to the 10 year average. Mollusk is dominated by octopus and opihi catches which are up last year. The dominate gear harvesting these invertebrates are traps

e. Pacific Remote Island Areas

There is no fishery dependent data collection occurring in the PRIAs. Council staff is coordinating with USFWS for any fishery data available on fishing activities happening in the refuge. However, there is reef fish biomass information from the CRED survey.

2. Discussions

The Archipelagic Plan Team members discussed the new information and process moving forward. The revision of the Fishery Ecosystem Plans (FEPs) and the recent changes to the National Standard 2 drives the changes to the annual report and the generation of an integrated annual and SAFE report. This is the first report for Hawaii and a reorganization of the Territory reports. The main changes were the streamlining of the methods and species complex being reported. The report shall focus on fishing methods that have adequate data and informative enough to detect the changes in the fishery. New elements being reported are:

- the meta-data for the creel sampling and receipt book program. This presents the information on survey performance;
- Effort estimates derived from catch and CPUE data;
- Estimate of fishery participation;
- By catch information;
- Stock status, ACLs, and OY

This is the first year of implementation of the new process. The critical factor to consider in order for the process to be efficient is the timely delivery of the data at the end of the calendar year. Territory agencies are required to submit a quarterly summary as part of their grant agreements with WPacFIN. This should enable timely input of data that would allow for summarization of report by the end of January. Participants commented that the best set of data (80-90% processed) will be available by March of each year. The best case scenario will allow for the modules to be finished in March which would be tight given that the draft modules will be vetted through the Council committees in early April prior to the Plan Team meeting towards mid-April.

There were numerous discussions on the calculation of CPUE. A PT member suggested using raw CPUE data from the interview files at a method level rather than separating the information by species groups. Currently the representative CPUE was based on the top 3-4 species groups that dominate the catch per fishing method. The CPUE for these groups were then averaged across to represent the CPUE for that gear. A direct method for extracting

The group used this opportunity to discuss the data definitions of each of the tables in the Archipelagic Report. It was recommended that Council staff work with WPacFIN staff on a separate meeting to define the data that goes into each table on a separate meeting

after the Plan Team meeting. The outcome will be used for the tables in the next iteration of the report.

3. Public Comment

There were no public comments

B. Ecosystem Considerations

1. Protected species section

Asuka Ishizaki, Council staff, presented on the protected species section of the annual/SAFE report. Potential protected species interaction will be tracked through the annual/SAFE report for each of the fisheries described in the FEP. Some of the indicators tracked are: 1) FEP measures (like prohibited gear that could affect ESA listed species); 2) ESA consultation coverage; 3) MMPA list of fisheries category 3; 4) interactions through observer data (if none possible use of effort statistics and gear proxies). She reported on the outcome of the Protected Species Advisory Committee meeting and their comments on the protected species section of the report. The PSAC provided recommendations for research, data and assessment needs for the Plan Team to consider that includes:

- Improve the precision of non-commercial fisheries data to improve understanding of potential protected species impacts.
- Develop innovative approaches to derive robust estimates of protected species interactions in insular fisheries.
- Update analysis of fishing-gear related strandings of Hawaii green turtles.

The following are the questions raised to the Archipelagic Plan Team members:

- Other interpretation of protected species interaction status in archipelagic fisheries?
- Other information that may suggest changes in potential protected species interactions?
- Other research, data and assessment needs?

The Plan Team members suggested refining the effort statistics in order to make it a viable tool to predict potential protected species interactions. There is a need to develop that relationship between effort and interaction in order to use effort as a predictive tool for potential interaction. Monitoring new gear entering the fishery and gears that showed an increase in effort, catch and participation can be used as flags for potential interactions. It was suggested to take this at a case-by-case basis rather than developing a all-encompassing trigger. The interactions in the Territories are so low that putting too much effort in looking at this might not be as practical.

2. Climate, ecosystems and biological section

a. Environmental & climate variables

John Marra, PIFSC staff, presented on the Climate Change and Environmental variables affecting the archipelagic nearshore fisheries. This module was developed by the Marine Planning and Climate Change Committee members. Several environmental parameters were included namely: atmospheric CO2, oceanic pH, sea surface temperature, cyclone

tracks, time series of number of tropical storms, sea level, El Nino and La Nina events, wave energy and wave height. All these parameters can be used as a covariate to the fishery dependent information and have the potential to affect the fisheries.

Plan Team members recommended to include wave power and wind shear that can have an effect on catchability and effort. Productivity is another factor that needs to be considered. Ocean Color products can be used as a proxy for primary production. However, these are satellite derived products which would be limited to the top layer of the water column. The effects at deeper depths will be subject to certain assumptions. One solution would be to highlight a certain area from the satellite derived product and conduct a more details *in situ* study to get a better understanding of the water column. Stratification of the water column should also be considered which would not be much of an issue for shallow water habitats. Also the scale of the remotely sensed data product would be useful on a large scale but can be information limited in near shore areas.

b. Coral reef ecosystem variables

Jill Zamzow, PIFSC staff, presented on the products derived from the PIFSC-CRED Resource Assessment and Monitoring Program. The underwater census survey using stationary point count was used to derive biomass data for the coral reef species groups from the different WP areas including the Pacific Remote Island Areas. Mean length estimates were also provided. Combining the biomass density with the estimates of the extent of hard bottom habitat provides estimate of standing stock biomass. These products are available to describe the amount of coral reef fish available to the coral reef fisheries and the mean length as a proxy for potential fishery impacts.

c. Life history and length-derived variables

Marlowe Sabater, Council staff, presented on the information available derived from the NMFS BioSampling Program. The Life History Program produced a section that monitors the species that have life history information. This list and the life history values will be updated every year as samples are being processed and analyzed. This section of the report can be a source document on best available life history information along with the primary literature from which the parameter values were derived. The second section is the length-derived variables including average length, maximum length, number of samples from which the average length and the a&b coefficients were based on. There are plots available on the average length over time to determine if the sizes caught in the fisheries are decreasing over time indicative of population impacts.

3. Habitat section

Michael Parke, PIFSC staff, presented on habitat section of the report. This report describes trends in habitat conditions and report on the review of Essential Fish Habitat (EFH) information. Information accumulated overtime can provide more specifics and meaningful values such as incorporation of life stages in specific habitats. Habitat condition covers information on benthic cover and bathymetry but no biological data associated with this information. Future information should include the information on live coral, macroalgae, crustose coralline algae from PIFSC CREP towed diver surveys. These sets of information are limited to the 15m contour.

Regarding the EFH information review, precious corals was updated according to the Council's 5 year program plan. There were tremendous amount of taxonomic improvement in reliability due to morphological and phylogenetic methodologies as a result new species are continually discovered with each dive. Species have been discovered to grow extremely slow and are some of the oldest living species on the planet >2700 years and >4000 years old. Makapuu is one of those special places that might deem specific management considerations because of the volume and diversity in a small area. There is a need to revisit and expand the legal definitions for the precious coral beds in Hawaii, and reexamine current EFH and HAPC delineations in addition to revisiting harvest limits of the precious corals.

4. **Human dimension section**
   Justin Hospital provided the Plan Team with an overview of the Socioeconomic Module's preliminary format and data availability for each variable for each island fishery. The intention is for the SAFE Reports to track 20 socioeconomic variables across three categories (Demographics, Importance of Fishery to the Community, and Economics). In general, the small boat characteristics surveys that PIFSC conducts approximately every five years will provide the bulk of the information. Periodic PIFSC cost earnings studies are also important data sources for the Socioeconomic Module. An important take-away from Hospital's presentation is that there is data for many of the socioeconomic variables, but there we currently have no data collection associated with several of the variables. For Demographics, there appears to be no information for fishermen household income and number of total fishermen in the household for all island fisheries and no Demographic information for any of the islands' crustacean fisheries. For Importance of Fishery to the Community, there is also no information for any of the islands' crustacean fisheries, as well as for fisheries dependent services and industries and fishery's role in the local economy. With the exception of the HI bottomfish fishery, we also lack import and export information. Finally, for Economics, we lack total direct employment from fishery data or all island fisheries, and we have no information regarding fishing household income and reliance in fishing for income for any crustacean fishery.

5. **Marine Planning section**
   Sarah Pautzke, Executive Secretary for Regional Planning Body, presented on the marine planning section of the report. This section takes into consideration mapping of the following: marine protected areas, aquaculture siting, and other facilities. This section incorporates all regulatory spatial boundaries and monitoring sites. The main aquaculture facility in Hawaii is on the Big Island – Kampachi Farms. Other facilities indluce alternative energy sites such as AAW Hawaii and Progression Wind. Regarding military activities, information includes the surface danger zone at Ritidian, water quality at bases and military controlled areas, some information on the impacts of Navy training and testing to the fishery and hard bottom substrate. The section will include maps of navigation routes and main shipping lanes.

6. **Discussions**
   Domingo Ochavillo, American Samoa Plan Team member, reported on the effects of the ASG Fuel Subsidy Program on the small boat fisheries. This program was initiated as

part of the funded provided by NMFS to ASG after the impacts of the 2009 tsunami to the small boat fleet. NMFS declared a fishery disaster for the small boat bottomfish fishery. Congress provided appropriation to support the rebuilding of the bottomfish fishery in American Samoa. DMWR attempted to capture the information on the effects of the fuel subsidy program on the small boat fishery dynamics. Part of the arrangement was that in order to receive fuel subsidy, fishermen are to report their fishing activities to DMWR. The Council requested to have this information from its 163rd meeting. Based on the report provided by WPacFIN, it appears that there were more trolling and small boat longlining activities after the program was implemented (rather than bottomfishing). The subsidy program had increased the number of hours fishing (left the port and returned to port – proxy for effort) by 34% and catch by merely 18%. The CPUE was shown to be decreasing. It was mentioned that it appears that there is a lot of time spent cruising. Interestingly, the number of longline reported trips increased from 6 trips on average to 85 trips. Non fishing hours also increased by 53%. It was concluded that this program is tricky and DMWR needs more time to prepare for the planning and implementation of this program in order for it to be effective.

7. Public Comment

There were no public comments

C. Administrative Reports

Melanie Brown, PIRO SFD staff, presented on the federal administrative and regulatory actions made in 2015 to March 2016. On July 28, 2015, NMFS published a final rule to close the U.S. pelagic longline fishery for bigeye tuna in the western and central Pacific Ocean because the fishery reached the 2015 catch limit (80 FR 43634). On August 31, 2015, NMFS published a final rule to implement annual catch limits for 2015 Pacific Island bottomfish, crustacean, precious coral, and coral reef ecosystem fisheries, and accountability measures to correct or mitigate any overages of catch limits (80 FR 52415). On October 9, 2015, NMFS specified a limit of 2,000 mt of longline-caught bigeye tuna for the Commonwealth of the Northern Mariana Islands (CNMI), and allowed the CNMI to allocate up to 1,000 mt to U.S. longline fishing vessels in a specified fishing agreement (80 FR 61767, October 14, 2015). On November 6, 2015, NMFS specified a limit of 2,000 mt of longline-caught bigeye tuna for Guam, and allowed the territory to allocate up to 1,000 mt to U.S. longline fishing vessels in a specified fishing agreement (80 FR 68778). On January 19, 2016, NMFS establishes the annual harvest guideline for the commercial lobster fishery in the Northwestern Hawaiian Islands for calendar year 2016 at zero lobsters (81 FR 2761). On January 25, 2016, NMFS announced the availability of a draft environmental assessment in support of a Special Coral Reef Ecosystem Fisheries Permit to Kampachi Farms, Inc. (81 FR 4021). On February 3, 2016, NMFS issued a final rule that allows large (≥ 50 ft in length) federally permitted U.S. longline vessels to fish in certain areas of the American Samoa Large Vessel Prohibited Area (LVPA) (81 FR 5619). On February 12, 2016, NMFS published proposed Amendment 4 to the Fishery Ecosystem Plan for Fisheries of the Hawaiian Archipelago. If approved, Amendment 4 would revise the descriptions of essential fish habitat and habitat areas of particular concern for 14 species of bottomfish and three species of seamount groundfish in the Hawaiian Archipelago. On February 23, 2016, NMFS published proposed 2015-16 Annual Catch Limits (ACLs) and

Accountability Measures (AMs) for Main Hawaiian Islands Deep 7 Bottomfish. NMFS proposes to specify an ACL of 326,000 lb for Deep 7 bottomfish in the main Hawaiian Islands (MHI) for the 2015-16 fishing year, which began on September 1, 2015, and ends on August 31, 2016.

D. Facilitated discussion on identifying data gaps and variable definitions

1. Fishery modules

Marlowe Sabater, Council staff, opened the discussion on trying to identify data gaps that will be addressed by the FDCRC-Technical Committee. There were no data gaps identified at the moment. However, the discussion focused on the definition of CPUE as well as participation and bycatch. The Plan Team recommended that Council staff and WPacFIN to finalize the variable definitions post-PT meeting and incorporate that to the following year's annual/SAFE report.

2. Ecosystem modules

Chris Hawkins, Council staff, took this opportunity to address the Plan Team on the needs and information gaps for the human dimension section of the report. There are only few monitoring systems in place to capture human dimension and socio-economic information from the fisheries particularly from the Territories. Price per pound information and revenue estimates extrapolated from the expanded catch generated by WPacFIN can be included in the human dimension section of the report. The fishing community profiles needs to be improved and small boat surveys to determine fishery characteristics should be done more frequently.

E. Workshop discussion on data integration (Chapter 3)

Chris Hawkins, Council staff, provided an overview of the data integration chapter of the report. A workshop will be convened after the June Council meeting to discuss which data elements will be used to interpret the trends in the fishery. The Plan Team members support the convening of the Data Integration Workshop.

F. Summary of annual report module action items

The following are the work related items associated with the annual report:

- Council staff coordinate and work with WPacFIN to finalize the definition for each tables in the annual report and find ways to directly calculate the following parameters on a method level: 1) CPUE; 2) effort; 3) participation; 4) bycatch
- Investigate the large difference between the total catch estimate from the boat based creel survey and the commercial receipt book reports in American Samoa.
- Follow up with PIFSC on the Guam BioSampling module;
- Finalize the dashboard statistics in the annual report.

G. Discussions

There were no further discussions

H. Public Comment

There were no public comments

Joint Session of the Archipelagic and Pelagic Fishery Ecosystem Plan Team Meeting

1. **Welcome and introductions**
   Stefanie Dukes, FEP Team Chair opened the meeting with the round of introductions. Present were: Edward DeMartini, Christofer Boggs, Paul Bartram, David Benavente, Tom Graham, Justin Hospital, Russell Ito, Sam Kahng, Reginald Kokubun, Jo-Anne Kushima, Tepora Lavatai, Kimberly Lowe, Yvonne Mika, Alton Miyasaka, Domingo Ochavillo, Sarah Pautzke, Michael Tenorio, Brent Tibbatts, Phoebe Woodworth-Jefcoats.

2. **Approval of the draft Joint meeting agenda, 2015 report, and assignment of rapporteurs**
   The agenda was approved with a minor revision where the Administrative Report by PIRO was moved to the joint session from the Insular Fisheries concurrent session.

3. **Plan Team 101 and Regional Operating Agreement**
   Mark Mitsuyasu, Council staff, opened with the Regional Operating Agreement (ROA). The document is intentionally short and generic to keep the region flexible. The ROA is organized by the five steps of the fishery management process: planning, scoping, and coordination; document preparation; Council action; post-Council action; and ongoing management. The Plan Team is charged with the evaluation of the fishery, so it fits in to the ongoing management step. There are two plan teams, the archipelagic and the pelagic.

   Plan Teams are a creature of the FEPs itself. They are charged with overseeing the ongoing development and implementation of the FEPs; reviewing fishery performance and stock status issues; and making recommendations for conservation and management adjustments under framework processes. The Council's Statement of Organization, Practices and Procedures (SOPP) governs the process aspects of the plan team and outlines the role of the Plan Teams. Generally, the plan teams put the data and information together in the SAFE reports and the documents are developed by the staff. Mitsuyasu said without the extra work the plan team puts in, the Council has a hard time making informed decisions so their work is greatly appreciated.

   Marlowe Sabater, Council staff, presented on the role of the Plan Team in the Council process. Sabater gave an overview of the required components of SAFE reports and annual reports. He explained that the report the Plan Team produces meets the requirements of both the FEP annual reports and the National Standard 2 SAFE report requirements, while integrating Council-identified ecosystem components.

   Chris Boggs, PIFSC, commented that the Plan Team should agree if the annual reports and SAFE reports are the same thing. Sabater replied that we haven't decided how the report will be finalized, but we will work with the Plan Team and PIFSC on the issue. The Plan Team is the workhorse of the fishery management mechanism, and the information that goes to the Council comes from this report. Melanie Brown, PIRO, commented that a discrete annual report, called a SAFE report, supports the administrative record as far having a record of the best available science at the time of the action. Boggs replied that there are different pieces of

the report and the Plan Team needs terminology for these sections. Sabater responded that the executive summary will indicate which portions of the report were updated.

Boggs clarified that there are chapters, and one of them is fishery indicators. The fishery modules from the territories make up the fishery indicators chapter. Tom Graham commented that the purpose of the SAFE report, as Mark outlined, is to report on the purpose and performance of the FEP. He elaborated that the most logical prime organizer of the SAFE report are the ten FEP objectives, which would also force the Plan Team to make sure the SAFE report has indicators that speak to each of those objectives. He opined that while this seems like a logical approach, the actual objectives might not lend themselves to serving as an organizational structure if the Plan Team considers them. Boggs concluded that this conversation needs to be continued following a clear proposal of report structure, sooner rather than later.

Kim Lowe commented that the SAFE report should have a document control and tracking section, to track changes in, for example, species requested for certain tables. This could be part of the dashboard, such as changes in species inclusion.

4. Status of Fishery Ecosystem Plan revision

Chris Hawkins, Council staff, gave a broad overview of the entire FEP review process and presented a status update on the five FEP amendments. He emphasized that the changes are technical and administrative in nature and will likely qualify for a categorical exclusion under the National Environmental Policy Act. There were no questions or comments.

5. Monitoring and updating priorities

A. Council's 5-year research priorities – work item (process of monitoring the status of the research priorities)

Marlowe Sabater, Council staff, presented on the Council research priorities and tasked the Plan Team with reporting on the progress in meeting the research priorities. He posed the question of the efficiency in monitoring progress on addressing each of these research needs. Boggs commented that PIFSC staff updating the status lines is more efficient than updating the lines in a meeting, but that other groups such as Council and PIRO staff, SeaGrant, and the tuna commissions should be solicited to update the status lines as well so that research does not fall through the cracks. This process is more efficient than updating the document in a meeting. Sabater confirmed with the Guam, CNMI, American Samoa, and Hawaii plan team members that they will update the status lines on the 5 year research priorities document.

Edward DeMartini commented that a glaringly obvious missing research priority is a biosampling program in Hawaii. The Plan Team recommended revising the life history and population parameters research needs line to include establishment of a biosampling program in Hawaii.

B. Cooperative Research priorities

1. Regional Implementation Framework

Marlowe Sabater, Council staff, presented the Regional Implementation Framework for the cooperative research program, which outlines the roles and responsibilities of each

organization involved in the program. He explained that the Council is attempting to build a network of fishermen who are willing to participate in cooperative research in the territories. The document is under review at PIFSC.

Brown asked about ESA and NEPA compliance for the cooperative research program funded projects. Sabater said the PIFSC NEPA programmatic analyses should cover this framework. Boggs thanked Brown for bringing this up and reported that PIFSC is engaged in tightening its NEPA program.

2. Revision of priorities to streamline with MSA requirement

Marlowe Sabater, Council staff, reported that the cooperative research funds are divided equally among the regions, so proposals in the $200,000 regional competitive pot are not competitive nationally. This gives the territories a better chance to operationalize their cooperative research programs. In response to a question from PIRO, Sabater explained that the review and implementation of the program resides with PIFSC and the cooperative research working group members are Brian Langseth (PIFSC), Scott Bloom (PIRO), and Sabater. The PIFSC Director ultimately awards the funding from recommendations of the working group.

Domingo Ochavillo asked for a reminder on the conditions of cooperative research proposals. Sabater explained that the research priorities were identified three years ago and are in need of an update to align them with the MSA priorities and jurisdictional needs. Sabater circulated the MSA priorities to jurisdictional Plan Team members, who reported the revised priorities to the Plan Team in the Other Business portion on Day 3. Sabater reminded Plan Team members that proposals for research priorities are due on Friday, April 15.

DeMartini asked if the implementation framework or the research priorities came first. Sabater responded that the priority language in MSA came first, but the requirements did not guide the development of the research priorities in a Plan Team workshop. The Plan Team is back correcting that oversight at this stage.

C. Pacific Island Fisheries Research Program

Marlowe Sabater, Council staff, reported on the evolution of the Pelagic Fishery Research Program to the Pacific Island Fisheries Research Program (PIFRP). This research program is maintained through the Sustainable Fisheries Fund and the Council is looking to partner with other institutions to maintain the program. Six proposals covering all four themes were received this year; a board will meet to review the proposals the week after the Plan Team meeting. Absent another funding source, there may not be a solicitation next year.

D. Discussions

There was no additional discussion.

E. Public Comment

There was no public comment

7. Action agenda items

A. Evaluating 2015 catches to its respective 2015 ACLs

Marlowe Sabater, Council staff, presented the 2015 catch evaluation relative to the ACLs. The Plan Team is responsible for monitoring the fisheries. The Plan Team provided rationale on the overage for the SSC to review and consider. Briefly, the 2015 catches were compared to the 2015 ACL. The 2015 catches are based on the 3 year running average (2013, 2014, and 2015) based on Council recommendations from the 160th meeting. The 2015 coral reef ecosystem, spiny lobster, and Hawaii non-deep 7 ACLs are based on BAC-MSY approach as reduced by P* and SEEM factors. The territory bottomfish ACLs are based on the updated Territory Bottomfish assessment (Yau et al 2015) as reduced P* and SEEM factors. The remaining ACLs are roll-over from the previous years since no new scientific information is available.

Three MUS exceeded the ACLs in 2015: 1) Guam jack; 2) Hawaii crustaceans; and 3) Hawaii mollusks. The Plan Team evaluated some of the indicators and recommended no overage adjustments are required on the basis of:

Guam jacks

- fishing mortality rate (percentage of the stock) did seem to increase based on examination of fishing effort;
- stock appears to be stable and the fishery dependent indicators showed that the stock is productive in the shore and boat-based fisheries;
- fishing effort is stable;

Hawaii crustaceans

- no indication that there has been any expansion in the trap fishery in recent years. The CPUE for traps had increased over the past years indicating increased productivity that could have contributed to the high catch
- number of participants in the crab trap fishery had decreased and the number of trips remained stable

Hawaii mollusk

- octopus has a short life span and the recent year catch may follow the abundance of the stock;
- CPUE for spearing of mollusk increased in recent years and the inshore handline fishery appeared stable showing increased abundance of the stock;
- fishing effort and participation is relatively stable or decreasing in the past 10 years suggesting stable or decreased fishing mortality.

The Plan Team commented that any attempt to explain the overage should be based on data and scientific information if the Team will justify not taking any overage adjustment. Certain rule of thumb should be developed some of which are:

- look at trends in CPUE, effort, and participation to insight abundance and vulnerability to fisheries;
- use life history information;
- use scientific information as much as possible; qualitative information can be used based on local knowledge and information on the dynamics from the fishery data collection program

- Do not ignore the possibility taking action from the Plan Team level; Plan Team can make the recommendation and have the Council make the final action

B. ACL specification process amendment

1. Method of risk determination

Marlowe Sabater, Council staff, presented on the options associated with improving the ACL specification process. At its 166th meeting, the Council will be taking initial action on the revision of the ACL specification process. This addresses the Council recommendation at its 163rd meeting to explore and provide the Council with details in improving the ACL specification process through an omnibus amendment of the Fishery Ecosystem Plan to include:

1) Establishing a process for generating scientific information to support fishery management; and;

2) Improving the efficiency of the uncertainty characterizations by incorporating it in a workshop process. Council staff will present different options for the Council to consider at this meeting.

The existing ACL specification process outlines the steps to quantify uncertainties associated with the different species groups and the fisheries. These steps are described in the 'Control Rules' but there is no clear guidance on when to implement the Control Rules. The default trigger is when new data becomes available which would require the recalculation of the MSY. In practice, this default was proven to be logistically impractical.

The Council will consider establishing a decision process on when to trigger the recalculation and triggering the P* (risk of overfishing) and SEEM (Social, Ecological, Economic and Management uncertainty) analysis and also potential changes to the quantification of the uncertainties. The Council will also consider an action to amend the Control Rules:

ACTION 1: Establishing a process for the Plan Team and SSC to evaluate whether there is significant change in the data and the fishery characteristics to trigger revisiting the risk of overfishing level

ACTION 2: Changing the Control Rules. This action would entail the following options –

- Option 1: Status quo – maintain the existing control rules with no change
- Option 2: Modify the existing Tier system of control rule
- Option 3: Use a formulaic approach to risk determination
- Option 4: Use a data and model workshop approach to quantify the uncertainties

Initial Action is expected to be taken on these issues at the 166th Council Meeting. Final Action is anticipated at the Council's 167th or 168th meetings.

At the discussion, the Plan team supported the first action to develop guidelines on when the risk of overfishing level needs to be revisited and changed thereby triggering the convening of a P* Working Group. Regarding the options to change the P* process, the Plan Team opted for a combination of elements that would have the following considerations:

- Retain the fishermen involvement;
- Simplifying the current P* process;
- Must include the criteria not covered within the assessment;

The Plan Team did not endorse option 4 (data and model workshop approach) to move forward. The Plan Team prefers a formulaic approach but has to incorporate direct involvement of the fishermen in the scoring process to provide much needed insight on the fisheries. The Plan Team also would like to compare the sensitivity to the changes in the P* using the different approaches

2. ACL as Optimum Yield (OY)

Chris Hawkins, Council staff, presented and led the discussion on optimum yield (OY) specification relative to ACLs. OY as currently specified for each fishery in the Council's five fishery ecosystem is generally consistent with other regional fishery management council OY descriptions. However, it could be more quantitatively rooted.
The annual catch limit (ACL) specification process in place since 2011 in our region provides a basis and vehicle for discussing and then enumerating the types of social, economic, ecological, and management uncertainty (SEEM) factors described in National Standard 1 OY guidelines at 50 CFR 600.310 (appended) (this was done purposefully). To do so, the Council convenes, as part of its ACL specification process, working groups to examine SEEM factors and recommend, if appropriate, a percentage reduction from Allowable Biological Catch. Therefore, with the exception of a couple of our fisheries, the Council's SEEM analysis appears to be a logical way of specifying Optimum Yield (i.e., OY would equal ACL). The Plan Team recommended that an options paper be developed for the Plan Team and the Council to consider in operationalizing the OY specification.

C. Ecosystem component designation criteria: changing Management Unit Species designation

Marlowe Sabater, Council staff, presented on the efforts associated with designating ecosystem components in order to reduce the number of species with ACLs. There were 5 criteria presented:

- a state/federal split;
- percent of total catch;
- number of years occurring in catch;
- Fisheries are inactive? Or non-existent
- Species-habitat association – proxy method

PIFSC PT members recommended using a multidimensional analysis with no more than 4 dimensions when conducting the analysis. There is also some rule of thumb proposed some of which are: 1) need to have a final assessment to determine if the final list of species make sense; 2) should have a mechanism to pull out a species designated as ecosystem components back to the species considered as "in the fishery" once deemed the status had changed based on the monitoring of the fisheries; 3) be cautious in showing spatial plots because fishermen are sensitive to revealing their fishing spots; 4) 0-2 mile DAR reporting grid will be State whereas anything outside will be considered federal (federal share will be considered as biased high). The Team agreed to move forward with the analysis.

D. Discussions

No further discussions on the above agenda topics.

E. Public Comment

There was no public comment

8. Workshop discussion on ecosystem and fishery data integration

A similar discussion from the Archipelagic Concurrent Session was held at the Joint Plan Team. There were no additional inputs from the Pelagic Plan Team members regarding the data integration workshop being scheduled for July or August of 2016. There was a suggestion to keep the group small but pick the right participants. There was also a question about whether the fishery dependent data is good enough to run analysis with the environmental variable. That was also extended to how realistic would the analysis be in terms of accurately describing the dynamics of the fishery and how much of it would just be noise from the data.

A. Discussions

No additional discussion on the above agenda item.

B. Public Comment

There was no public comment

9. General Discussions

There were no further discussions

10. Fishery Ecosystem Plan Team Recommendations

Regarding the ACL-Catch monitoring, the Fishery Ecosystem Plan Team recommends the Council not consider the overage adjustment for the Guam Carangidae, Hawaii coral reef mollusk, and crustaceans due reasons described in the ACL-Catch Monitoring Report (attach the report).

Regarding the ACL specification process amendment, the Fishery Ecosystem Plan Team:

1. chooses Action 1 that establishes a process for the Plan Team and SSC to evaluate the changes in the fisheries and data to warrant changing the risk level;
2. chooses option 3 establishing a formulaic approach to determining the risk level to which the fishery will be managed with a caveat that the process will include fisherman's participation;
3. recommends the Council work with PIFSC in analyzing the sensitivity of the different options to changes in the risk levels which the fishery will be managed;

Regarding the ecosystem component designation criteria, the Fishery Ecosystem Plan Team recommends the Council work with PIFSC in applying the following criteria, in addition to the National Standard regulatory guidelines, to designate ecosystem component species. The criteria are as follows:

- Parsing the catch between state/territorial catch versus federal catch;
- Proportion of the catch;
- Frequency of species detected in the time series;

- Habitat association of each MUS species and habitat distribution;
- Existence of an active fishery

The FEP Team further recommends to use a combination of these criteria and the analysis be conducted in a multi-dimensional statistical framework. The analysis should also consider weighting the criteria and use a range of threshold levels to evaluate the species to be designated as ecosystem components.

Regarding Optimum Yield, the Fishery Ecosystem Plan Team recommends the Council to direct staff develop an options paper on the range of alternatives for specifying OY to include but not limited to the following:

- The most harvested by the fishery following the implementation of existing conservation and management measures;
- ACLs equal to OY;
- MSY as reduced by a SEEM-like process;

Regarding the Council's five year research priorities, the Fishery Ecosystem Plan Team recommends adding the development of the Hawaii BioSampling Program to the life history research priority;

Regarding the Annual/SAFE report, the Fishery Ecosystem Plan Team recommends the Council, in coordination with NMFS, organize a workshop in developing the Data Integration Chapter of the Annual/SAFE Report.

11. Other Business

There were no other businesses to discuss.