**WESTERN
PACIFIC
REGIONAL
FISHERY
MANAGEMENT
COUNCIL**

163rd Meeting of the Western Pacific Regional Fishery Management Council
Laniakea YWCA, Fuller Hall
1040 Richards St., Honolulu, HI 96813

**<u>Options for establishing a broader process for generating and reviewing scientific
information for fishery management in the Western Pacific region</u>**

Purpose and Need: The purpose of this action is to streamline the Annual Catch Limit (ACL) specification process by integrating the uncertainty characterization and evaluation in a series of workshops that would generate various stock assessments used in fishery management. A broader process needs to be established that connects all stages fishery management from: 1) data evaluation; 2) analysis and assessments; 3) review and best available science determination; and 4) fishery management decision (e.g. ACL specification). This action will also include changing the P* dimensions to remove double accounting of parameters between the different dimensions. Lastly, the current FEP includes thousands of species grouped into complexes following the taxonomic groupings are designated as "in the fishery" in which ACLs are required for each one. The list of management unit species (MUS) designated as "in the fishery" needs to be revised and re-designated as "ecosystem components" to reduce the number of species that requires ACL-based management. Majority of these species are harvested in State/Territorial/Commonwealth waters and over the course of 4 years, the local fishery management agencies did not show any interest in utilizing ACLs as management tools for stocks that occur from 0-3 nm. By designating majority of the MUS as "ecosystem components", this would allow the Council to focus its efforts to improve the data and increase research for the management of stocks under ACL-based management while continue to monitor the ecosystem components to determine if it would require future management.

Proposed Actions:

Action 1: Establishment of a broader process for generating scientific information and review for management

<u>Problem statement:</u> The Western Pacific region has very limited institutional capabilities in:
1. collecting scientific data through various researches;
2. analysis of existing data and generation of different models appropriate for the kind of data and applicable for the stock in question;
3. generating stock assessments for stocks in need of management;
4. review and evaluation of the existing data

Majority of the science being used for fishery management is generated by the Pacific Island Fisheries Science Center. Currently, the Science Center's resources in terms of manpower and funding are limited and prioritization is required to determine which stocks are going to be

assessed by the Center and which stocks can be assessed using an outside entity. There is a need to diversify the source of the science by collaborating with the local and the US mainland universities and private and international scientific institutions.

Pros: By creating this process, this formalizes the process in evaluating the data and locking the set of data that will be used for assessment generation through a data workshop. This would then allow the database managers to lock the data. Subsequent analysis with additional years of data can easily be without recreating the time series again. Once the sets of data have been finalized a model workshop will be conducted to explore various models applicable to the sets of data that is available.

This process also allows for flexibility in out-sourcing additional technical resources that can provide the analysis needed for fishery management. This can augment the limited resources PIFSC currently has and increase the assessment throughput in the region. This would also enhance the transparency of the assessment generation process by involving stakeholders and fishermen in the data and model workshop.

Cons: Codifying this process in the fishery Ecosystem Plan will make the elements of this process as Federal requirements. Justification will have to be given if the process is not followed. This would also decentralize the science provider responsibility which may result in conflicting scientific information available. In this situation, the role of WPSAR is critical in determining best information available. Enhancing the transparency of the assessment generation process increasing the parties involved in the process has a tendency to prolong and delay the delivery of the products. However, given that status quo is deemed unsatisfactory, exploring other process may be beneficial.

Action 2: Building uncertainty characterization in the workshop process

Problem statement: The current ACL specification process involves formation of ad-hoc working groups to quantify the scientific and management uncertainties. Although it is an intrinsic part of the ACL specification process, convening a P* (Risk of Overfishing – denoted by P*) Working Group and a SEEM (Social, Ecological, Economic, and Management Uncertainty) Working Group requires significant time and effort to generate the final ACL specification for each stock. There is a need to streamline the process under this broader framework in order to efficiently come up with a final ACL specification. In the process of incorporating the uncertainty characterization in the workshop process, the P* and SEEM dimensions and criteria will be revisited. There is a need to add more flexibility to the P* and SEEM process because the dimensions (at least the P*) is codified in the FEP. There is a need to explore other methods that would provide a better handle on the uncertainties aside from the semi-quantitative scoring process described in the FEP (e.g. Management Strategy Evaluations that is being used in other Council regions)

Pros: The scientific uncertainty can be incorporated in the data and model workshop. Data and models are major sources of uncertainties. Other data would also include the socio-economic information, ecological information through life history or ecological data from observation buoys or underwater census surveys, and management information from institutional analysis.

This would alleviate the need to assemble an ad-hoc P* and SEEM WG. The quantification of uncertainties will be described in the workshop documents and will be incorporated in the SAFE report. This would also utilize the existing Council advisory groups if there is a need to re-evaluate the uncertainties outside the workshop timeframe or framework.

Cons: The FEP requires the SSC to specify the Acceptable Biological Catch (ABC) through the P* analysis and the Council to specify the ACLs through the SEEM, percent reduction, or use of an Annual Catch Target (ACT). Not all of the stocks "in the fishery" will have a data and model workshop. However, these stocks are likely the data-poor ones and the ones likely to be designated as ecosystem components (see action 3). Nonetheless, a separate process will have to be developed of these stocks otherwise force these stocks to undergo a data review workshop and a model selection workshop.

Action 3: Trimming down of management unit species "in the fishery" – Ecosystem Component designation

Problem statement: The Council currently has thousands of species in the FEP considered "in the fishery". This was a consequence of the transition from Fishery Management Plans to FEPs. The introduction of ACLs created a conundrum in which ACLs will have to be specified to every single species in the FEP designated as "in the fishery". This resulted in specification of 115 ACL where the MUS are grouped into taxonomic families. Aside from the numerous ACLs that needs to be specified, majority of the species are caught in state/territorial/commonwealth waters and some of the fisheries that harvest these species are currently inactive. The local fishery management agencies did not show any interest in adopting the ACL management system. Having numerous ACLs diffuses the limited resources that can be used to improve data collection as well as research to augment the limited scientific information available for the different stocks.

Pros: By reducing the number of MUS designated as "in the fishery", it would allow the Council to focus on management of important stocks and enhance the data and scientific information for that fishery. This would reduce the number of ACLs that needs to be specified and monitored on an annual basis. By designating species under ecosystem component, this allows the Council to continue monitoring the status of the stock and can designate it back to "in the fishery" status if the stock is in danger of being overfished or going into overfishing.

Cons: By designating species under ecosystem components, the pressure to generate assessments and to improve the monitoring may diminish.

Council Options: The Council needs to assess and deliberate the utility of this amendment.

Option 1: If the Council sees the merit in pursuing these actions, the Council can then direct staff to explore and develop the options for Council's consideration at its March 2016 meeting.

Option 2: If the Council thinks that the current system is satisfactory, the Council can choose not to pursue that three actions and staff will no longer explore the actions further