WESTERN PACIFIC REGIONAL FISHERY MANAGEMENT COUNCIL

102nd Meeting of the Scientific and Statistical Committee
October 14-16, 2009
Council Office

1. Report from the Pacific Islands Fisheries Science Center Director

Dr. Michael Seki, Deputy Director, presented the PIFSC report and among other things he noted the planned research cruise to the Mariana Archipelago.

The SSC recommended focusing these survey activities in the CNMI on the banks surrounding Farallon de Medinilla before the US Military expands their protracted inshore closures from 3 to 10 nmi, due to increased training activity. This bank is an important source of shallow-water bottomfish for CNMI, and may be an important source of larval recruitment for the archipelago.

2. Program Planning

A. Habitat

1. Report on Deep Slope Habitat Workshop

Gerard DiNardo reported on the need for this recent workshop noting that most research has been conducted in a vacuum, duplication of effort was occurring, and the current piecemeal approach to research does not bring in significant funding. The workshop goal was to develop a comprehensive, integrated and prioritized research plan. DiNardo also noted the need to finalize the genetic analysis, mapping of the NWHI, and develop a fishery independent survey methodology. The SSC looks forward to further development of the research plan.

2. Review of EFH and HAPC

Chris Kelley presented an excellent summary of options for the MSA mandated 5 year review of bottomfish and groundfish EFH and HAPC definitions being developed under contract to PIRO. Chris Kelly noted the new habitat and species records data that was now available through the HURL and BOTCAM Databases, submersible transects, and fishing surveys. He presented a matrix that showed where the current definitions of 0-400 m depth ranges for bottomfish EFH were overly broad and not very useful and suggested a range of alternative options.

SSC discussion centered on the of potential for downward propagation of impacts of shallow water activities on EFH, the possible use of shallow waters during certain life stages of some bottomfish species, and the variability of known depth ranges of certain species between the NWHI and MHI and the Samoan and Marianas Archipelagos. Staff noted that changes in these definitions would require FMP amendments.

The SSC recommends that EFH definitions and depth ranges for Bottomfish be conducted separately for each archipelago. The SSC also recommends that the analysis be further refined so that the Bottomfish complex can be broken into shallow, mid-, and deep water categories with depth ranges based on either 40 m or 50 m depth bins. The SSC suggests that the analysis concentrate first on the MHI Deep Seven and possibly uku and that the exercise could then serve as a pilot for further refinement of EFH designations for the other archipelagos.

3. Insular Fisheries

1. WPSAR Stock Assessment Review

The SSC heard the results of the first official Western Pacific Stock Assessment Review (WPSAR-1 second meeting) of the Hawaiian bottomfish stock assessment by Brodziak et al. (2009). Briefly, the review panel identified significant issues with this stock assessment, particularly with respect to data filters and CPUE standardization. While the WPSAR-1 panel expressed confidence in the Bayesian surplus production model as well as the abilities of the Pacific Islands Fisheries Science Center (PIFSC) staff to perform the assessment, the review panel concluded that the estimated management benchmarks were not sound for management of MHI bottomfish stocks at this time.

The SSC requests that PIFSC address the recommendations of the WPSAR-1 external review, as follows:

1) By the 103rd SSC – provide a response to recommendations raised in the WPSAR-1 review, and approaches proposed to address these recommendations.

2) Prior to 104th SSC – provide a new stock assessment, specifically addressing the following issues in order of priority:

- **Scientific justification of CPUE data selection and filtering.**
  - **Model sensitivity to changes in assumptions in the standardization and filtering of CPUE data.**
  - **Explain and document the method used in CPUE standardization, in particular the definition of "bottomfish trip", changes in gear efficiency and species composition over time.**
- **Generation of a separate stock assessment for the bottomfish complex in the MHI only.**
  - **Adequate specification of multilevel priors to account for changing species composition in a multispecies complex.**
- **Segregation of the stock complex into single species stock assessments, most critically for certain "Deep 7" species (onaga and ehu).**
- **Model presentation and documentation.**

The SSC reminds PIFSC that this work must be completed by June 2010 because MSRA requires the SSC to set ACLs for any stock complex that is overfished or approaching an overfished condition in 2010.

The SSC asks that the Council request copies of the two CIE reports that were part of the WPSAR-1 review and the reconvened session.

2. Haleiwa Shark Viewing Tour Research

The SSC heard with great interest a presentation by Yannis Papastamatiou and colleagues regarding the species composition and migratory patterns of sharks associated with shark feeding operations off the coast of Haleiwa, Hawaii. Results from their study suggest that sharks at the feeding site remained close to the area and were mostly comprised of low risk species (i.e., sandbar and Galapagos sharks). It was also noted that Oahu-based fishermen had continued to report bottomfish losses that were believed to be due to habituation of sharks to the sound of boat engines.

3. Larval Dispersal

The SSC listened to a presentation by Ana Vaz (UH Manoa) regarding models of larval dispersal around the Hawaiian archipelago using 3D models of ocean circulation. The larval dispersal models suggest that larvae within the MHI are distributed much more broadly than those from the NWHI and that there does not appear to be significant larval exchange between the two regions. The SSC thanked her for her interesting report.

4. Acceptable Biological Catches

Council staff presented the results of an SSC working group reviewing the MSY estimates of several stocks, including shallow and deep water bottomfish complexes, precious corals, and *Heterocarpus* shrimp. SSC members discussed at length appropriate measures of scientific uncertainty that the Council should consider when developing the appropriate ABC control rules.

The SSC considers the MSY estimates for the stocks treated by the working group to be the best available science. For fisheries in this assemblage with no current harvest, the SSC proposes to apply a default ABC control rule such that the ABC is set at 0.70 F_{MSY} (= yield 91% OFL = 91% MSY = ABC: see Walters et al 2005[1]) as a precautionary measure, so as to maximize yield while minimizing biomass impact and account for scientific uncertainty. An alternative value may be specified if additional data or modeling are available to support it.

The SSC also recommends the Plan Teams re-examine all MUS lists to determine which species should be retained in the fishery, and which should be proposed as

[1] Walters, C. J., Christensen, V., Martell, S. J., and Kitchell, J. F. 2005. Possible ecosystem impacts of applying MSY policies from single-species assessment. ICES Journal of Marine Science, 62: 558-568.

Ecosystem Component Stocks.

7. Pelagic Fisheries
A. Longline Management
1. Recommendations on Tuna Quota Management (Action Item)

The SSC was presented with a wide range of alternative options for the bipartite aim of

1) Maintaining Hawaiian catch limits in the Western & Central Pacific Ocean within the catch limit set by WCPFC, and;

2) Mitigating the social and economic problems consequent on possible closure of Hawaii longline fishery toward the end of the calendar year. The development of a LAPP system is seen as advantageous for management in the long run. The SSC was advised that the industry appears to favor the process that was used to allocate set quota for shallow set fishery. It was noted that the social and economic aspects are likely to be of greater concern than biological aspects in the setting of these management measures.

The SSC recommends the no-action alternative for the short term, but suggests that it would be advisable to monitor the effects of any closure on fishermen, markets and consumers. For the long-term, the SSC advocates a rapid decision on a suitable management regime to implement the RFMO quotas in the Hawaii longline fishery. The SSC suggests that such a suite of measures could include:

1) **Catch shares (ITQs or LAPPs), including the immediate establishment of a control date.**
2) **Input controls, such as hook, set, or trip limits**
3) **Management of catch limit based on a non-calendar fishing year to minimize market disruption.**
    - **Include a provision for secondary closure toward the end of the calendar year to assure that calendar year catches remain within WCPFC catch limits.**
    - **Submit proposal to WCPFC to allow flexibility in setting fishing year for catch/effort reporting so that secondary calendar closure would not be necessary.**
    - **Allow "rolling" quota so that quota is met on average.**

2. Recommendations on Territory Bigeye Longline Quotas (Action Item)

The SSC was presented with a wide range of alternative options for bigeye catch limits in the US territories of Guam, American Samoa and the Commonwealth of the Northern Mariana Islands. CNMI.

Under WCPFC 2008-01 the “Small Island Developing States and Participating Territories” are provided with 2000 mt bigeye tuna catch limits, as well as no limits if undertaking “responsible fisheries development”. Given the continued decline of the status of the bigeye stock the SSC does not support any increase in bigeye catch by any entity authorized by the

Commission, and declines to endorse any specific alternatives related to this draft FMP amendment.

B. Non-Longline Management
1. Social and economic aspects of Hawaii's small boat fisheries

The SSC heard with interest a presentation on a survey of small fishing vessels in Hawaii, given by Justin Hospital of NMFS PIFSC. The presentation covered a cost-earnings study, fisher classification, the costs of fishing, fishing activity and market participation, financial performance, social importance and the implications for future management of the fishery.

2. Cross Seamount TAC (Action Item)

Council staff presented a range of options for a total allowable catch (TAC) for seamount monchong and bigeye tuna on Cross Seamount.

The SSC recommended that both state and federal reporting of monchong catches should clearly differentiate pelagic (*Tarachtichthys* spp) and seamount (*Eumigistes* spp.) so as to allow better assessment of stock status.

The SSC also recommended that funding be sought by the NMFS PIFSC for a comprehensive study of pelagic and seamount monchong life history.

The SSC further recommended that NMFS conduct a stock assessment of seamount monchong (*Eumigistes illustris*) in the Hawaii Archipelago.

In addition, the SSC recommends that if a TAC is considered for seamount monchong that it be inclusive of the stock in the Hawaiian Archipelago as a whole, rather than only the Cross Seamount.

SSC made no conservation recommendation for bigeye tunas caught on the Cross Seamount. Monitoring should be continued.

The SSC request that Council staff include on the agenda for the next meeting the recommendations made by a local fishermen during public comment at its 102nd meeting. Several SSC members volunteered to consider and summarize the issues prior to the 103rd SSC.

3. Shortline Management in the Longline Exclusion Zone (Action Item)

Council staff presented an options paper with a number of possible actions that could be applied to the management of the shortline fishery; however the **SSC was unable to support any of the specific options presented in the draft options paper because the full range of data could not be made available due to confidentiality reasons.**

Nevertheless the SSC supported continued monitoring of this fishery by HDAR because of changes in the economic conditions and recent conservation measures for the Hawaii-based longline fishery.

The SSC notes that shortlines are not defined under the Council's pelagic FMP. **The SSC recommended exploring the possibility of adopting the State of Hawaii definition of shortline for Council use.**

C. Update on Blue Shark Stock Assessment

This item was not presented in the interest of time and to accommodate other speakers.

D. Hawaii Longline Shark Bycatch Information

The SSC heard with interest a presentation on a detailed analysis of observer data on shark catches by the Hawaii longline fishery given by Bill Walsh of NMFS PIFSC. Walsh showed that the Hawaii-based pelagic longline fishery has made substantial progress in reducing shark mortality.

E. American Samoa and Hawaii Longline Quarterly Reports

David Hamm and Russell Ito presented their regular quarterly updates on Hawaii and American Samoa longline fisheries.

F. International Fisheries/Meetings

1. Stock Assessments
a. WCPO Bigeye Tuna
b. WCPO Yellowfin Tuna
c. South Pacific Albacore Tuna
2. Report of the WCPFC Science Committee
3. Report of the WCPFC Northern Committee
4. Report of the WCPFC TCC
5. Report on NPRFMO Science Plan

The SSC was presented with a synopsis of recent stock assessments by the Western & Central Pacific Fishery Commission and its subsidiary meetings, and the science plan of the emerging regional fishery arrangement for management of fisheries on North Pacific seamounts.

G. Pelagic Plan Team Report

Keith Bigelow, Chair of the Pelagic Plan Team (PPT), presented the recommendations from the September 15, 2009 PPT meeting.

<u>Plan Team Recommendations</u>

Keith Bigelow, Pelagic Plan Team Chair presented the recommendations stemming from the Pelagic Plan Team meeting in September.

1. Plan Team recommends that members provide additional comments to Council staff on the pros and cons identified in Table 3 of the options paper, and which will include management options for yellowfin as well as bigeye. The deadline for comments on these options is September 21, 2009.

2. The Pelagics Plan Team recommends that if the Council proceeds with a LAPP program for bigeye and yellowfin tuna for the Hawaii longline fishery, and that if such a program is based on catch history, that of the six options for documenting catch history, the most reliable method for such documentation is permit number.

3. With regard to Amendment 20:

   The Pelagics Plan Team recommends that Council staff investigate how increasing fishing mortality on bigeye tuna in the Territories above the limits provided by CMM 2008-01 paragraph 32 (2000 mt) and to those specified under paragraph 34 (unlimited 'responsible' development) could be consistent with "responsible" under the FAO Code of Conduct provisions as a standard, when increasing fishing mortality on a stock that is subject to overfishing and nearly overfished. Anticipating some difficulty in reconciling the FAO Code of conduct with such an increase in fishing mortality, the Pelagics Plan team further recommends that the Territorial longline bigeye tuna catch limits should be limited to 2,000 mt or less.

   The Pelagics Plan Team recommends that Council staff include in the draft amendment alternative sets of criteria, such as one that includes port of landing, recent history of landings, port of vessel servicing and vessel office location, for determining if vessels operating under domestic charter arrangements are integral to a Territory's domestic fleet as required under CMM 2008-01 paragraph 2 and to be discussed at WCPFC 6.

The SSC endorsed the PPT recommendations, echoing the PPT concern about the WCPFC regulation which allows unlimited bigeye catch by developing countries and territories as long as they are "responsibly" developing their longline fishery. The SSC is further concerned that the alternative limit of 2000 mt is larger than warranted by information given in the latest bigeye assessment document for the WCP.

8. Protected Species

A. Loggerhead Status Review

Kyle Van Houtan (PIFSC) presented on the recent NOAA 5-year status review of the North Pacific loggerhead sea turtle genetic stock. It included an overview of 2 methods for assessment based on the diffusion approximation approach and a deterministic matrix projection model approach. The SSC noted that neither of these 2 approaches include density-dependent

demographic effects and so are conservative approaches to population extinction risk modeling. The SSC thanks Dr Van Houtan for an informative presentation.

9. Other Business

The SSC supports in principle the convening of a bigeye population dynamics and stock assessment workshop which reviews the various models and approaches employed, and to have SSC members and staff work on the scope, participants and meeting agenda prior to the 103 SSC.