



**103rd Meeting of the Scientific and Statistical Committee
March 17-19, 2010
Hilton Guam Resort & Spa
202 Hilton Road, Tumon Bay, Guam 96913**

Program Planning

A. ACL Process-Ongoing Action

Council staff presented the SSC with a list of items needed to meet the mandates of the reauthorization of the MSA many of which are no longer in the current National Standard 1 Guidelines. For those species that qualify for Council consideration and management, the items needed include MSY or MSY proxies, status determination criteria, optimum yield, an ABC control rule, mechanisms for specifying ACL's, accountability measures, and the identification of stock and stock complexes that have statutory exemptions from ACLs.

SSC member Robert Skillman presented a brief summary of the 2nd National SSC Meeting held in the U.S. Virgin Islands 10-13 November 2009 on "Establishing a Scientific Basis for ACLs". Also attending the meeting were SSC members Stewart Allen (PIFSC), Rick Deriso (IATTC), Don Kobayashi (PIFSC), and Michael Trianni (CDFW). NMFS headquarters staff reviewed additional requirements in the reauthorized MSA as well as related revisions needed to the National Standards 1 and 2 guidelines. Each SSC presented progress on developing ABC control rules for their Council region. Discussion of the issues resulted in agreement on the following topics:

- 1) Determination of Best Scientific Information Available (including that the SSCs determine BSIA regarding advice provided to Councils while stock assessment review panels do so regarding the stock assessment as a science product and the data used in the assessment)
- 2) Stock assessment peer review process (including that SSC members can also be panel members)
- 3) Stock Assessment and Fishery Evaluation Reports should provide Councils with the scientific information needed to manage
- 4) Risk of overfishing and control rules (Councils set the probability level of overfishing and control rules for ACLs and ACTs; the SSCs develop the ABC control rules and the Council approves). Skillman also contrasted the ways SSCs have started developing their ABC control rules.

In addition, Skillman presented some thoughts on possible SSC actions stimulated by this meeting:

- 1) Picking up the pace in developing this SSC's ABC control rules;
- 2) Entering in a discussion with the Council on the SSC providing technical guidance on Council

selection of the probability risk level for computing ABCs

3) Use of special working groups consisting of SSC, Council, NMFS science centers, and NMFS region office staff; 4) utilizing TORs with the PIFSC for the provision of stock assessment information including MSY, BMSY, FMSY, status determination criteria, and OFL, ABC, ACL, and ACT estimates using the SSC and Council control rules

5) Updating our SAFE reports to include MSY, ABC, ACL, and ACT information

6) Future updating of our OY definitions since the tendency is to compare them directly to the management limits and targets just mentioned

7) Need to include a determination of BSIA when the SSC provides advice to the Council

8) Many SSCs continue to use spawner per recruit-based assessments to provide advice to their Councils while this SSC abandoned this tool under pressure from NMFS headquarters

9) The SSC might consider use of PSA in the construction of ABC control rules

10) Including in the TORs for stock assessment reviews the requirement that guidance be provided on how to proceed if the assessment being reviewed is not Best Scientific Information Available.

The SSC recommended and has formed two separate working groups: (1) to draft a tiered ABC control rule for setting catch limits and targets based upon the examples from the various other SSCs (TBD by the Tier Subcommittee) and (2) to review which species under Archipelagic FEPs should be considered as a species managed in the fishery and which should be consigned to the ecosystem component. The latter would continue to be monitored, but management limits and targets would not have to be set.

With respect to the Tier working group, the SSC membership will include Bob Skillman (Chair), Donald Kobayashi, and Pierre Kleiber. The SSC working group to review ecosystem component species will include Frank Camacho, Marlowe Sabater, Craig Severance, and Michael Trianni.

B. Catch Data Work Group Report

SSC member Michael Trianni updated members concerning the progress of a National SSC working group on data poor fish stocks, that was formed at the 2nd National SSC meeting held in St. Thomas, VI November 10-13, 2009. The working group, named the 'Only Reliable Catch Stocks' (ORCS), is comprised of SSC members from each Council region. In addition to Trianni, SSC member Donald Kobayashi and Council staff Sarah Pautzke also represent the Western Pacific Region.

Trianni provided a timeline of ORCS progress towards identifying a method(s) that could result in the estimation of ABCs when only reliable catch is known. The ORCS working group is currently reviewing two methods that have been developed to address data poor stocks under the

jurisdiction of the Pacific Region. These methods include a depletion corrected average catch model (DCAC) developed by Alec MacCall (2009) and a similar variation of Walters et al (2006) Stock Reduction Analysis (SRA), applied by Dick & MacCall (2010) for data poor situations termed Depletion-based SRA, or DBSRA.

With respect to the DCAC, an important assumption is that natural mortality (M) is < 0.2 per year, and there is also a data requirement of an annual catch series of more than 10 years.

Trianni noted that in MacCall's paper an example was provided where the model yielded a more conservative estimate of sustainable yield when compared to target yield estimates for a data rich rockfish species. SSC members mentioned it would be interesting to apply MacCall's Depletion-Corrected Adjusted Catch (DCAC) model to main HI islands deep seven bottomfish, to see what sustainable yield values are generated and to compare those values with the most recent MHI bottomfish stock assessment by PIFSC.

An ORCS working group teleconference has tentatively been set for March 29 or 30th, 2010, to discuss the DCAC and DBSRA approaches.



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Insular Fisheries

A.1. Draft omnibus FEP amendment for non-commercial fishing in the Marianas Trench, Rose Atoll, and Pacific Remote Island Marine National Monuments

The SSC heard the presentation by Council staff on the definitions for permitted fishing and associated management of noncommercial fishing in the Marianas Trench (Islands Unit), Rose Atoll, and PRIA Marine National Monument. It is assumed that the number of fishing trips to the Monuments would be quite small, and that there would be no issues associated with sustainability.

The SSC believes that the definitions for permitted fishing activity in the Rose Atoll and Marianas Trench Islands Unit should be based on “Customary Exchange”, a term developed in economic anthropology to refer to non-market exchanges of goods, services and even social support. These exchanges are quite different from strictly monetary exchange and even trade and barter in that there is not a calculated equivalency or an expectation of immediate return. Specifically, these exchanges have been called “generalized reciprocity” and they refer to the giving and sharing of resources that establish, support and reinforce social relations between family, friends, created kin, and relations between chiefs and followers in important cultural and ceremonial contexts. The sharing and giving of fish often defines the giver as a good and generous person, and may gain them social recognition as well as contribute to the maintenance of individual and cultural identity.

Among the indigenous communities of the Western Pacific, giving fish on ceremonial occasions is critically important to participating in and contributing to the maintenance of the social fabric and cultural continuity of those communities. Cash, through reimbursements, may also enter into customary exchange as a contribution that offsets some of the expenditures that may have become necessary to obtain the resources needed for participating in customary exchange. When cash enters customary exchange, equivalencies may or may not be calculated, but the intent is to participate in production and exchange for social benefits to the community, not to gain immediate economic return or profit.

Given the distances to the monuments, fishermen who want to gain fishing access for non-commercial, sustenance, traditional indigenous, and recreational purposes under the terms granted to them by the MNM proclamations will be unlikely to do so unless they are allowed to receive some reimbursement for expenditures (such as fuel, bait, ice, and provisions). In the Islander conception of things, these are not profit seeking expectations, but a further form of customary exchange.

The SSC believes it is appropriate to adopt a single operating definition for all types of non-commercial fishing permitted in the MNMs because there is broad overlap among the definitions of the individual fishing activities listed in the proclamations. The main intent is to distinguish this set of fishing activities from the prohibited commercial fishing without developing cumbersome and overly narrow definitions.

Regarding the definition of permitted fishing in the Rose Atoll Marine National Monument:

The SSC recommends that the Council adopt a single operating definition for all types of non-commercial fishing permitted in the Rose Atoll monument. This definition, which is consistent with the intent of the American Samoa FEP Plan Team recommendation, is based on the traditional concept of customary exchange as described above and reads as follows:

Fishing activities permitted in the Rose Atoll Marine National Monument shall be defined as fishing conducted for non-commercial, sustenance, traditional indigenous, or recreational purposes, with non-market customary exchange and recovery of trip expenses permitted.

Regarding the definition of permitted fishing in the Islands Unit of the Marianas Trench Marine National Monument:

The SSC recommends that the Council adopt a single operating definition for all types of non-commercial fishing permitted in the Islands Unit of the Marianas Trench MNM. This definition, which is consistent with the intent of the Marianas FEP Plan Team recommendation, is based on the traditional concept of customary exchange as described above and reads as follows:

Fishing activities permitted in the Islands Unit of the Marianas Trench MNM shall be defined as fishing conducted for sustenance, recreational, traditional indigenous, or culturally significant subsistence, cultural or religious uses, with customary exchange and recovery of trip expenses permitted.

Regarding the definition of permitted fishing in the Pacific Remote Island Areas Marine National Monument:

The SSC recommends that the Council adopt a single operating definition for all types of non-commercial and recreational fishing permitted in the Pacific Remote Island Areas MNM, as follows:

Fishing activities permitted in the Pacific Remote Island Areas MNM shall be defined as fishing conducted for recreational and non-commercial purposes, with recovery of trip expenses permitted.

Regarding Plan Team recommendations for other MNM management issues:

The SSC concurs with the recommendations of the Hawaii FEP Plan Team for the Pacific Remote Island National Marine Monument on: (1) maintaining the existing federal permit and logbook requirements for all fishery participants in the PRIA MNM; (2) not establishing any new MPAs within the PRIA MNM; and (3) developing an outreach, education and compliance program for potential users of PRIA MNM.

Spatial management for coral reef protection in Rose Atoll MNM:

The SSC concurs with the American Samoa FEP Plan Team recommendation that a 3 nautical mile no-take area be established around Rose Atoll to ensure that no fishing for coral reef species or bottomfish (or any other demersal MUS) occurs within the MNM.

Federal permits and catch reporting:

The SSC concurs with American Samoa FEP Plan Team recommendation to require permits and catch reporting for all fishing in the Monument and that the AS DMWR be included in the administration and monitoring of the permits and logbooks. The SSC further recommends that the permit application and catch reporting procedures should be designed with the permit applicant in mind, and not pose a barrier to participation in permitted fishing activities. The SSC notes that these permit and reporting requirements should be applied to any recreational fishing that may be permitted and that these requirements may help ensure that any recreational fishing is sustainable.

The SSC recommends that a similar permit and catch reporting system be developed for all permitted fishing in the Mariana Trench MNM Islands Unit and that CNMI DFW be included in the administration and monitoring of the permits and logbooks.

Exemptions from permit requirements for U.S. Department of the Interior and Department of Commerce for research purposes:

The SSC concurs with the American Samoa and Marianas FEP Plan Team recommendations that the AS-DMWR and CNMI-DFW also should be exempted from permit requirements related to scientific research or exploration.

A.2. History of the pelagic fishing in the Marianas

The SSC heard the presentation of Dr. Judy Amesbury on the history of pelagic fishing in the Marianas. The study highlights the original inhabitants of the Mariana Archipelago, the Chamorros, were great pelagic fishermen for 3000 years (1500 BC to AD 1521). Their ability to conduct pelagic fishing was hampered by the Spanish colonizers in the late 1600s and early 1700s by waging war against the Chamorros, burning their villages and canoes, and forbidding them to go offshore. The Chamorros did not conduct pelagic fishing for about 200 years (c. 1750-1950). Eventually, starting in the 1950s the Chamorros began to buy boats, and once again enabled them to practice their heritage as expert pelagic fishermen.

B. Mariana DFW reef fish life history investigations

The SSC heard the presentation of Mike Trianni on the Life History Program of the Division of Fishery and Wildlife in CNMI. The Life History Program provides age, growth, sexual maturation, and length frequency information of several coral reef species. The information generated by this program is used for the formulation of fishery regulations and resource management options.

C.1. Tsunami impacts on nearshore ecosystems

The SSC heard the presentation of Marlowe Sabater on the impact of the September 29, 2009 tsunami on the near shore habitats and fishery of American Samoa. Majority of the impacts involved coral breakage and rubble generation on the shallow reef flats in villages located at bay areas. Minimal impact occurred on the longline fishery whereas a slight impact was inflicted on the small boat fishery with the loss of 7 boats. The real degree of effect on the small boat fishery could be masked by the historic low in fishery participation.

D.1. Options for refining essential fish habitat for MHI bottomfish

The SSC heard the presentation by Council staff on progress toward refining essential fish habitat for MHI bottomfish. The SSC noted that there appeared to be little difference between the intermediate and deep water groupings, warranting further analysis.

Therefore, the SSC recommends that statistical analysis, such as a cluster analysis or other appropriate techniques, be conducted to assess the potential groupings of species by depth bins.

E.1. Other Business

Coral Reef Fisheries Workshop

Paul Dalzell reported on a Council initiative to produce a book on coral reef fisheries. Dalzell noted that the last such book was published in 1996, and much progress had been made on reef fishery studies in the interim. A meeting was planned for November 2009 to assemble the prospective authors for each chapter and plan the book content.



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Pelagic Fisheries

A. Hawaii Longline Bigeye Tuna Management under a Catch Limit

Paul Dalzell summarized the outcomes from the 146th Council selecting alternatives related to limiting fishing year and effort to keep fishery below an annual catch limit 3763 mt from the Western & Central Pacific Ocean (WCPO).

The SSC noted that there is a need for comprehensive evaluation of economic impacts of alternative fishing years. There are various negative factors associated with changing fishing year and shifting fishing effort to the EPO.

The SSC continues to be very concerned about over capacity in the Hawaii longline fishery in terms of the number of hooks and latent permits because it increases the difficulty of managing the fishery under catch limits.

B. Options to Modify Hawaii Deep-set Tuna Longline Fishery Swordfish Trip Catch Limit: Initial Action

Council staff presented to the SSC options for modifying the current deep-set longline fishery swordfish trip limit (10 swordfish per trip).

The SSC supports the Pelagic Plan Team recommendation to establish a 25 swordfish trip limit for deep-set tuna targeting longline vessels using circle hooks, and 10 swordfish per trip for vessels using tuna-hooks.

C Monitoring Dynamics of Changing of Economic Performance of the Hawaiian Longline Fisheries

The SSC received an extremely informative presentation by Dr. Minling Pan, on economic data collection programs including voluntary programs (NE 1996) and for Hawaii, 2004, and American Samoa. Dr. Pan noted reasons for using observers in this program, including efficiency, their good fit with ongoing fishery information collection, and advantages for integration. Data collected in the study included trip expenditures, certificate cost, crew number and national origin. Fifty to 70% observed trips yielded economic data, but there was a slight decline in recent years. Dr. Pan presented a breakdown of costs of tuna vs. swordfish trips and temporal trends for individual features such as fuel, earnings, etc. There is a plan to extend trip cost data collection to main fisheries.

The SSC welcomed this information and recommended that the analysis be extended to Guam and CNMI and should include the Guam Fishermen's Cooperative.

D. Addressing Hawaii BET/YFT Insular Populations

John Sibert presented an analysis of the June 2009 submission to the SSC by Captain Joe Dettling, a Hawaii fisherman, regarding management of tuna fisheries in Hawaii. The SSC thanked Dettling for his submission and agreed that the analysis should be sent to him by Council staff. In addition, the SSC recommended that:

The WCPFC bigeye tuna reproductive biology project should be supported and extended to provide detailed information on bigeye tuna spawning season and locations around Hawaii; and The Hawaii Tuna Tagging Project should be supported and extended to improve estimates of transfer rates between offshore and inshore fisheries for both bigeye and yellowfin tuna, and to provide information on the optimal spacing of inshore FADs.

E. American Samoa and Hawaii Longline Quarterly Reports

Dave Hamm from PIFSC presented 2009 annual reports for the American Samoa and Hawaii longline fisheries.

It was noted that American Samoa-based longliners fishing in the northern Cook Islands provide logsheet data to the Cook Islands Government, which is in turn submitted to the SPC and the WCPFC as Cook Islands catch under WCPFC provisions pertaining to charter arrangements. **The SSC recommended that PIFSC consult with SPC to ensure that double counting of US flag catches in the Cook Islands does not occur in WCPFC data submissions.**

F. Bigeye Tuna Catch Limit Monitoring

Dave Hamm outlined the process for monitoring bigeye tuna catches by the Hawaii longline fishery in near real time. A system of fast tracking data collection and processing has been developed such that bigeye catch tallies are updated weekly, with 97% of the catch data received and processed within three weeks of capture. Predictive modeling of the time at which the catch limit will be reached is undertaken throughout the year. For 2009, the fishery was closed three days before the end of the year, and the final catch for 2009 was eventually determined to be 49 mt (or 1.3%) in excess of the catch limit.

The SSC reiterated its previous recommendation that real-time (daily) at-sea reporting of catch be implemented as soon as possible to facilitate monitoring of bigeye and yellowfin catches against the respective limits.

G. Bigeye tuna stock assessment review.

The Secretariat of the Pacific Community's Oceanic Fisheries Program will host a stock assessment planning workshop in April 2010, in preparation for the bigeye and skipjack assessments to be conducted in 2010. The bigeye assessment will be subject to an independent peer review between 2010 and 2011. The Inter-American Tropical Tuna Commission's bigeye

stock assessment will also be subjected to an external peer review in May 2010.

H. International Fisheries Meetings

The SSC heard with interest summary report of the sixth regular meeting of the Western and Central Pacific Fisheries Commission.

The SSC also heard a report on a meeting of the Stock Assessment Workshop of the North Pacific Fisheries Management Arrangement pertaining to the stock assessment of pelagic armorhead in the North Pacific Ocean. Although this Arrangement is in its early development phase, the SSC encourages continued Council participation in the Arrangement.

I. Pelagic Plan Team report.

The SSC endorses PPT recommendation 2 to modify swordfish catch trip limits on deep-set tuna targeting trips in the Hawaii longline fishery.

The SSC has no objection to PPT recommendation 4 to modify the American Samoa limited entry program. **The SSC is concerned over the large number of hooks deployed in the relatively small American Samoa EEZ and requests an analysis of the effects of high hook densities on stocks.**

J. Protected Species

False killer whale take reduction team report

The SSC heard a presentation by Council staff on a take reduction process established under the MMPA to consider ways to reduce false killer whale (FKW) interactions with the Hawaii-based deep-set pelagic longline fishery. This pelagic FKW population in the NWHI comprises around 484 individuals. A smaller MHI insular population comprising around 123 individuals may also interact with pelagic fisheries and might become listed under the ESA.

The SSC thanked Council staff for an informative presentation. The SSC awaits the take reduction plan before making any further comment but notes that the plan would be more rigorous if it also included and was based on a comprehensive survey of FKW abundance in the NWHI.

Monk seal recovery team report

The SSC heard a presentation by Council staff on the status of the Hawaii monk seal. The monk seal population continues to decline in the NWHI but is increasing in the MHI where the risk of human interactions is also increasing.

The SSC thanks Council staff for an informative presentation. SSC supports the proposed efforts to enhance monk seal survival in the NWHI and to reduce human-seal interactions in the MHI.

Proposed listing of the North Pacific Ocean loggerhead sea turtle stock as endangered

The SSC heard a presentation by Council staff on the NMFS/USFWS proposal that the North Pacific loggerhead stock be listed as “endangered” under the ESA. It was pointed out that current US Biological Opinion for this stock is at odds with this “endangered” listing. It was also noted that the proposed listing under the ESA could lead to a new Biological Opinion addressing loggerhead interactions with the Hawaii-based pelagic longline fishery.

The SSC thanked Council staff for an informative presentation, and notes that Council staff will be preparing a comprehensive response to the petition findings.