



Report of the 100th Meeting of the Scientific and Statistical Committee

**Pago Pago, American Samoa
March 17-19, 2009**

1. Introductions

The meeting opened at 9.00 a.m. on Tuesday March 17, 2009

2. Approval of Draft Agenda and Assignment of Rapporteurs

3. Status of the 99th SSC Meeting Recommendations

4. Report from the Pacific Fisheries Science Center Director

Mike Seki presented the report from the NMFS Pacific Islands Fisheries Science Center. Items in his report that generated discussion included the fishery independent acoustic surveys of bottomfish, the bottomfish CPUE standardization workshop, derelict fishing gear removal from Oahu, and monk seal conservation in the Northwestern Hawaiian Islands and the Main Hawaiian Islands.

Discussion on bottomfish included the loss of information from the Northwestern Hawaiian Islands after 2011, when all fishing activity would be prohibited in the NWHI Monument. The issues concerning the CPUE standardization workshop for the SSC included how the standardized CPUEs were computed, given their influence on the outcomes of the stock assessment. The SSC asked if the workshop would be documented as a tech memo and if the WPSAR review in June would include consideration of the workshop methods. The workshop is documented in the stock assessment document currently under internal review.

The discussion on the derelict fishing gear from the MHI included the source of these nets and if they were cargo nets or trawl fishing gear. It was noted that the marine debris is a mix of fishing gear, cargo nets, rope etc, but their source is as yet unidentified.

Discussion on the Hawaiian monk seals noted the increase of funding from \$3.8 to 5.7 million for 2009. However, this would only allow a return to the level of field camp activity in the NWHI prior to 2008, which was a stripped down field program. There was also discussion about the utility of diverting so many resources to NWHI population which was in a precipitous decline due to the poor survival of post weaned recruits, for reasons which were still unclear, versus the exponential increase of the smaller MHI population. It was noted that the increased funding would allow PIFSC to increase its work on monk seals in the MHI.

5. Program Planning

A. Annual Catch Limits

1. Plan Team Risk Rankings

The SSC commends the Archipelagic Plan Team members and the Council staff for their efforts in producing risk rankings for prioritization of ACL development by the four island areas in a timely manner. These risk rankings elicited substantial discussion regarding the specific species rankings and the differences in methodologies employed. The quantitative approach employed for biological factors by American Samoa was noteworthy.

The SSC had several concerns about the rankings: 1) the flexible guidelines provided by the Council resulted in lack of uniformity in methodologies used by each of the island areas; 2) not enough attention was given in some cases to biological factors such as the apparent productivity of species (r- versus k-selection), growth rate, and sex reversal; and 3) not enough consideration was given in some cases to the social and economic consequences of a collapse of a dominant species in a fishery, regardless of biological considerations. As a result of this discussion, the SSC believes that some species were included on the rankings when they probably should not have been and vice versa. The rankings for the Hawaii Island area were of particular concern in this regard.

The SSC recommends that the rankings be accepted on a provisional basis so that the Council and the NMFS can proceed with the process of gathering information necessary for development of ACLs. Regarding the Hawaii species ranking, the SSC recommends that Kona crab, parrotfish (uhu), black coral, and menpachi remain on the list, that akule and opelu be dropped pending further consideration, and seamount monchong added. The SSC further recommends reconsideration of onaga and hapuupuu (Hawaiian grouper) given that they are already under TAC-based management in a stock complex with defined ACLs.

The SSC also recommends that Council staff develop a standard set of criteria based on work currently being done by Rick Methot at NMFS headquarters (and other studies that might be appropriate) and work with the Plan Team to provide an expanded list of species by island area in time for the July 2009 SSC meeting.

B. WPSAR Bottomfish Stock Assessment Review

Earlier during the discussion of the Hawaii bottomfish cpue standardization workshop in the Report from the Pacific Fisheries Science Center (Agenda #4), the PIFSC Deputy Director indicated that data confidentiality concerns prevented them from providing the SSC with a detailed documentation of the computation procedures employed. **Since the Deputy Director indicated that PIFSC was counting on the WPSAR review team to examine Hawaii bottomfish CPUE standardization procedures in detail, the SSC requested that the Chair of the WPSAR Bottomfish Stock Assessment Review ensure that a review of the bottomfish CPUE standardization take place.** The Chair agreed to do so.

C. Impacts of New Monuments

The SSC heard a presentation on the recent designations of National Marine Monuments by

President Bush via the Antiquities Act of 1906. The presentation reviewed the Monument proclamations for each monument including potential management protocols unique to each monument. Additionally, historical fishery catch and effort were reviewed for each monument area, and potential permitting requirements were discussed.

1) The SSC recommends that the Departments of Commerce and Interior develop a Research Program designed to understand the various impacts associated with Monument designation. A Research Plan should be developed to specifically address the following topics associated with Monument designation:

- a. changes in fish biomass or size structure,**
- b. changes in species composition,**
- c. changes in benthic habitat composition,**
- d. spillover effects,**
- e. protected species abundance estimates and usage rates within the Monuments,**
- f. local socio-economic impacts.**

Furthermore, the SSC recommends that DOC and DOI provide open access to local government agencies for the purpose of conducting research germane to local fisheries management and stock assessment needs.

2) The SCC recommends that Council staff work with the American Samoa and CNMI governments on the development of regulatory definitions for sustenance, subsistence, recreational, traditional indigenous, and other definitions as appropriate for fisheries management in the newly established monuments. SSC members Allen, Amesbury, Callaghan, Sabater, Severance, and Trianni will also participate with Council staff in the development of these definitions.

D. Review of CRED Survey Methodologies and Data

Ben Richards of NMFS PIFSC CRED (Coral Reef Ecosystem Division) provided a presentation of CRED data pertaining to the apparent decrease in large reef fish biomass (>50cm) at Rose Atoll from the first CRED biannual cruise in 2002 through the 2008 cruise, as observed from the fishery independent CRED towboard method. Members of the SSC voiced some concern regarding the apparent lack of incorporation of the variability from methodological, oceanographic, and lunar phase sources.

The SSC recommends a more exhaustive statistical analysis of the CRED data from Rose Atoll and other jurisdictions sampled by the CRED program, in order to take into account the different sources of variability inherent in the data set, thereby generating a more accurate level of uncertainty around survey estimates. The SSC suggests that the CRED program complete efforts to hire a statistician to carry out such analyses, to provide guidance for future CRED data collection efforts in terms of sampling design, and to facilitate survey designs that promote the robust testing of hypothesis. Additionally, the SSC requests a presentation on the precision and power of CRED fish sampling methodologies by Dr. Jerry Ault.

The SSC is concerned about the release of preliminary data from the CRED program data

that have not been completely analyzed nor peer reviewed.

6. Insular Fisheries

A. American Samoa Archipelago

1. Report on Coral Reef Fisheries

Staff from DMWR presented information on the status and trends of American Samoa coral reef fisheries from 1996 to 2007. Boat and shore-based catch in American Samoa have declined for 20 years and are presently at low levels due to decreased fishing effort despite large increases in population over the same time period. The reasons for decreased effort have not been studied directly but likely are related to the transition to a cash economy, dependence on other food sources, availability of jobs, and availability of imported reef fish. The reef area is not large so impacts from increased levels of fishing effort could lead to a rapid decline of reef fish stocks.

2. Report on Bottomfish Fisheries

Staff from DMWR presented information on the status and trends of the American Samoa bottomfish fishery over the past 20 years. The trend in landings is downward since the mid-80s but varies up and down over the past few years. Because most trips in this fishery are mixed bottomfish and pelagic trips, it can be difficult to accurately partition effort and derive associated CPUE data for the time series. Catch estimates are currently being standardized so the numbers should be viewed as preliminary until this process is completed. Bottomfish markets and fishing effort could be affected by bottomfish imports from Samoa but, as is the case in Hawaii, Guam, and CNMI, imports of bottomfish (and reef fish) are not monitored at the airport or docks. **The SSC recommends that the Council investigate options for improving the ability of American Island States and Territories to monitor imports and exports of fish and fish products.**

B. Reports from Samoa on Insular Fisheries

An official from neighboring Samoa provided an update on the status of insular fisheries in that country. Fishing and fish consumption is especially important to rural households. Declines in reef fish catches and stock sizes documented from 1985-1990 and a report (Zann 1991) describing the degraded conditions of coral reefs led to development of a village-based fisheries management program. The program, which involves all groups in the village, is now widespread; 75 villages have management plans and the program is viewed as a model by residents of many countries who have come to Samoa to study it. Samoa's MAFF recently added an ecosystem approach to the program, provided stock assessment training, revised fisheries legislation, and are exploring coverage for coastal areas without villages. The two Samoas have had an exchange to study each other's village-based fisheries management programs and another is planned for the near future. Regarding bottomfishing, there are currently fewer than 10 full-time aliases that only do bottomfishing. No management is in place but MAFF is conducting assessment work and will then begin management. Catch is estimated from sales in the main fish market in Apia and other outlets. Data from 2006-2008 suggest increases in reef fish catch and stable levels of bottomfish catch. The connectivity between bottomfish in the two Samoas has not been studied. **The two Samoas may benefit by collaborating to address bottomfish stocks, management of the albacore fishery, and import/export patterns. The SSC recommends that the Council explore options to support collaboration on these issues.**

C. Recommendation on CNMI Management Authority of Fisheries Resources

The SSC was informed that an amendment to the Submerged Lands Act has been introduced in Congress which would give CNMI jurisdiction over its nearshore waters from the shoreline out to 3 nautical miles. This bill, which is believed to have a good chance of becoming law, would obviate the need for Council actions regarding management within 3 miles of the CNMI.

D. Seamount Groundfish Moratorium Review

This item was discussed at 5.F.3.

7. Pelagic Fisheries

A. Longline Management

1. Update on Hawaii Shallow-set Fishery

Eric Kingma updated the SSC on the progress of Amendment 18 which will remove the fishing trip limit for the Hawaii shallow-set swordfish fishery. Kingma stated that the amendment document had been officially transmitted to NMFS for Secretarial review and approval.

2. Recommendation on American Samoa Longline Fishery Management Measures to Minimize Turtle Interactions

The SSC heard a presentation on management alternatives to reduce turtle interactions in the American Samoa longline fishery. Most interactions occur on the shallowest hooks and those closest to floats. **SSC Prefers alternative 2, increasing the distance from each float to adjacent branch lines to at least 70m to help ensure that all hooks are deeper than 100m.**

The SSC also recommends research on the effect of larger circle hooks on both albacore catch rate and turtle interactions, and increasing observer coverage to the level of the Hawaii deep-set fishery.

The SSC further recommends an intensive year-long experiment with high observer coverage, at a minimum of 30% of trips, to explore the variability in turtle interactions over time and space and with different gear configurations.

Identification of the genetic stock of the turtles which interact with the American Samoa LL fishery is essential to interpret the population effects of interactions. The SSC is concerned that sea turtle genetic samples are not being processed in a timely manner. The possibility of performing this work at the Hawaii Institute of Marine Biology by Dr. Brian Bowen should be explored. The SSC encourages Dr. Peter Dutton to publish his current manuscript on Pacific Green Turtle stock structure.

The SSC encourages the Council to continue to work with the US delegation to the WCPFC to strengthen conservation and management measures that would reduce sea turtle interactions with non-US fishing fleets.

3. RFMO Quotas

A PIFSC statistician presented trend lines for the Hawaii LL fishery indicating that the 3763 mt US bigeye quota allowed under the 2009 WCPFC conservation and management measures would likely be exceeded by October 2009. **The SSC discussed several possible management measures that would help to prevent an “empty Honolulu auction” at the end of the year. The SSC supports the development and rapid introduction of a limited access privilege program (LAPPs) for catch quota allocation. The SSC also recommends that this Council seek the advice from other Regional Councils and other jurisdictions experienced with LAPPs, regarding how to successfully implement a LAPP for the Hawaii LL fishery.**

In addition, the SSC views this situation as an “emergency” and urges PIRO to immediately announce the WCPFC bigeye quota for US longline fisheries in the CFR.

B. Non-Longline Management

1. Recommendation on Cross seamount/NOAA Weather Buoy Fishery Limited Entry Program

Paul Dalzell reported to the SSC on progress to develop a limited entry program for the offshore handline fishery focused on Cross Seamount and the NOAA Weatherbuoys. Dalzell noted the four issues on which the Council would deliberate.

Issue 1: Affected area: Over which area should the limited entry program apply, Cross Seamount only, Cross Seamount and NOAA Weatherbuoys, or Cross Seamount, NOAA Weatherbuoys and other areas

Issue 2: Affected gear types : Which gear types should be included in a limited entry program, longlines only, longline and shortline, longlines shortlines and handlines, or these and other gears.

Issue 3: Participation criteria

What criteria will be used to establish eligibility to participate in a limited entry program? Should a control date be set, and if so when? Should a points system be used instead or maybe a combination of both points and control date?

Issue 4: Permit transferability

Should permits be freely transferable (as in the Hawaii longline fishery) or revert to NMFS when surrendered (as in the NWHI bottomfish fishery)?

The SSC supports creation of a new control date for management of hook and line fisheries on Cross Seamount and the NOAA weather buoys.

SSC supports expanded research on monchong (*Eumigistes illustris*) biology and residency on Cross Seamount and other features. The SSC recommends that monchong be added to the Hawaii Risk Ranking. The SSC further wants clarification of which family Bramidae species are included under UNCLOS Annex I. Whatever species are not listed under UNCLOS and not managed by RFMOs would require Council management action such as MSY and ACL development.

2. Recommendation on Purse Seine Fishing on FADs and FAD Registration in the US EEZ of the Western Pacific

Paul Dalzell updated the SSC on the draft amendment to regulate FAD based purse seine fishing in the Western Pacific Region. Dalzell explained that the preliminary preferred alternative was to prohibit the deployment or use of purse seine FADs and purse seine fishing on FADs in the remaining US EEZ waters of the WPR where purse seine fishing is allowed.

The SSC reiterates its support for Alternative 3B (Prohibit Purse Seine FAD Fishing in all U.S. EEZ Waters). The SSC notes that fishing effort has never been well defined in tuna purse seine fisheries. This situation has been exacerbated by the increasing use of FADS and vessel effort is no longer related to fish abundance, as measured by days fished. Fishing effort is related in some way to the number of FADs fished by purse seiners, but this is incompletely understood. Therefore, as catch no longer depends on fish abundance, it is impossible to interpret CPUE using catch per set or catch per day fished as an index of abundance. Without additional information it is impossible to effectively use purse seine effort in stock assessments. The SSC therefore supports well designed research on purse seine FAD fishing. Some of the critical research issues include:

- **Quantification and characterization of catch per set.** Currently, BET stock assessments use only catch per unit of effort data (CPUE) from longline vessels and only incorporate BET purse seine catch and no measures of CPUE.
- **Quantification and characterization bycatch per set.** The quality of bycatch data from FFA observers is highly variable, meaning that raising these data to fleetwide totals through a statistical analysis of the data is not conducted.
- **Quantification and characterization of the number/rate and impacts of “lost” FADs.** Elicit and test fishermen knowledge regarding potential methods to reduce or mitigate adverse impacts.
- **FAD replenishment rates,** i.e. how quickly after being fished fish biomass re-accumulates under a FAD.
- **Utilizing of time-depth recorders (TDRs) to characterize the actual fishing depth of purse seines.**
- **Evaluation of onboard species composition and length frequency sampling versus port sampling.**

With respect to the new Alternative 3G (Prohibit Purse Seine FAD Fishing in all U.S. EEZ Waters Except Around the PRIA for US-Hull Vessels Participating in Cooperative Research), the SSC recommends that research projects with the goal of reducing incidental catch of juvenile bigeye in purse seine fisheries should be a priority and should incorporate milestones and performance standards. The SSC recommends research initiatives with an experimental design reviewed by SSC or WPSAR, and recommends that all research cruises utilize well-qualified scientific observers.

C. American Samoa and Hawaii Longline Quarterly Reports

Dave Hamm provided the SSC with a summaries of the he American Samoa and Hawaii longline fisheries in 2008.

D. Proposals for Additional Marine Reserves on the High Seas

Pierre Kleiber reviewed a recent paper which suggested that 20% of the high seas globally should be closed to fishing. Keliber questioned the assumptions made in the paper and that the authors did not account for how fishing effort would be displaced from the area closures, without reducing fishing mortality.

E. Reports from Samoa & Cook Islands on Pelagic Fisheries Development

Ueta Fa'asili, a fisheries official from neighboring Samoa provided an update on the status of the Samoa longline fishery. Like the American Samoa fishery, catches were dominated by albacore which totaled 1,300 – 3,000 mt annually, and was exported to the American Samoa canneries. Fa'asili reported on management issues for the Samoan longline fishery, including the frequent depredation of longline sets by cetaceans. Among the management measures in place for the fishery were a moratorium on the number of licenses for local commercial fishing vessels and the allocation of the 50 nm zone for fishing vessels 15m and below. Recent management developments for the longline fishery included updated legislation with provisions for WCPFC measures/legal obligations; collaboration with SPC and FFA on a bio-economic model for Samoa's pelagic fisheries; and an ecosystem approach to fisheries management with assistance from FFA.

F. International Fisheries/Meetings

1. WCPFC Conservation and Management Measures

The SSC heard with interest a summary of Conservation and Management Measures approved at the 2008 WCPFC meeting in Busan. **The SSC recommends that the Council express its appreciation for the initial conservation measures for bigeye and yellowfin, and that the Council urge the WCPFC to further develop these measures into an effective conservation regime by 2010. The SSC remains concerned, however, over the apparent low level of compliance, in particular inadequate catch data reporting by some Commission members, and the impact this has on our ability to assess the status of stocks.**

2. North Pacific Seamount RFMO

Eric Kingma reported on the progress towards an international management convention for North Pacific seamounts. Some stock assessments are for pelagic armorhead and alfonsins are being planned.

G. Pelagic Plan Team Recommendations

Paul Dalzell presented the recent Pelagic Plan Team meeting report held subsequent to the December 2008 WCPFC meeting. The following recommendations deal with facilitating the U.S. response to actual or potential catch limits imposed by regional fishery management organizations (RFMOs) responsible for tuna fisheries in the Pacific Ocean.

- 1. The Pelagic Plan Team (PPT) recommends the Council consider requiring that Hawaii and US West Coast-based longline vessel captains be required to make daily reports of bigeye and yellowfin catches (numbers kept and released and estimated total weight of fish kept) and in which RFMO area the beginning of**

the fishing set occurred (IATTC being east of 150 deg W, WCPFC otherwise). Days at sea without fishing should also be reported. The PPT suggests that the longline vessels acquire satellite phones for this purpose and ultimately the ability to use email via VMS units.

2. The PPT recommends that NMFS consider requiring observers to use their satellite phones daily for reporting of bigeye and yellowfin catches (numbers kept and released and estimated total weight of fish kept) and in which RFMO area the beginning of the fishing set occurred (IATTC being east of 150 deg W, WCPFC otherwise). Days at sea without fishing should also be reported.
3. The PPT recommends that the Council consider requiring longline vessels to use electronic logbooks to reduce the time interval between landing and data quality control approval.
4. The Council should consider reviewing its VMS policy since confirmation of vessel position is critical for estimation and validation of fishing effort used to estimate catch relative to limits in the WCPFC and the IATTC. This becomes essential if recommendation Number 1 is not realized.
5. The Council may consider a number of options to optimize yields and socio-economic benefits and maintain viable longline fisheries in Hawaii. These may include:
 - a. ITQs
 - b. Sector allocation of catch limits (shallow versus deep sets)
 - c. Trip catch limit for non-target sector
 - d. Temporary fishery closures triggered by attainment of some proportion of the catch limit
 - e. Seasonal fishery closures
 - f. Catch limits based on an alternative 12 month non-calendar year
6. The PPT recommends that the Council recommends to NMFS and the DOS that US delegations to tuna RFMOs promote flexibility in relation to catch limits such as: 1. use of non-calendar fishing years; 2. multiple year schedules to accommodate overages, deficits and carry-overs.

The SSC supports the PPT recommendations and notes that some of the PPT recommendations would be less urgent if the Council chooses to use the Limited Access Privilege Program (LAPP) as a method of allocation.

8. Protected Species

1. Report on Japan Sea Turtle Meetings

Asuka Ishizaki (WPRFMC) reported on 2 recent marine turtle conservation and research meetings held in Japan. The two key issues raised at the STAJ meeting were nesting habitat degradation and bycatch in coastal poundnets. Importantly, it was reported that 2008 was a record loggerhead nesting year. A key issue raised at the North Pacific Loggerhead Conservation

in Japan meeting was bycatch in coastal net fisheries and it was noted that the Far Seas Fisheries Laboratory is planning to test poundnet excluder devices. The SSC thanks Asuka Ishizaki for an informative presentation.

2. Report on Fixed Net/Sea Turtle Interaction Workshop

Asuka Ishizaki (WPRFMC) reported on a technical workshop convened in Honolulu on minimizing marine turtle interactions in coastal net fisheries. Key fisheries considered were gillnet and poundnet fisheries with various methods proposed to reduce marine turtle interactions including illuminated net sections and poundnet design modifications — all these methods need extensive evaluation to demonstrate efficacy. The SSC thanks Asuka Ishizaki for an informative presentation.

3. Species Recovery Credits

Asuka Ishizaki (WPRFMC) presented on the Endangered Species Recovery Credits scheme proposed by the US Fish and Wildlife Service. It is a scheme that might be used to offset a range of coastal and pelagic fisheries impacts on the North Pacific loggerhead stock that nests in the Japan Archipelago. The SSC thanks Asuka Ishizaki for an informative presentation.

The SSC expressed its continued support for the Council’s Sea Turtle Conservation Program.

4. Update on protected species petitions

i. Monk seal critical habitat designation

Paul Dalzell (WPRFMC) updated the SSC on a petition to extend designated critical habitat for Hawaiian monk seals to include beach and marine habitat around the main Hawaiian islands. He advised that a determination on whether this revision is warranted is still pending.

ii. Loggerhead DPS response

Paul Dalzell (WPRFMC) updated the SSC on a petition to revise the current status of the North Pacific loggerhead under the ESA. He advised that a determination on whether this revision is warranted is still pending.

iii. Leatherback critical habitat

Paul Dalzell (WPRFMC) updated the SSC on a petition to extend designated critical habitat for the leatherback sea turtle to include waters along the coasts of Oregon and California. He advised that a determination on whether this revision is warranted is still pending.

iv. TRT for false killer whales

Paul Dalzell (WPRFMC) reported on NMFS progress towards establishing a take reduction scheme for false killer whales that interact with the Hawaii longline fishery. This species is considered as a “strategic stock” because the average number of interactions with the deep-set

longline fishery exceeds the PBR or potential biological removal level. A lawsuit by an environmental NGO is now pending on this issue.

9. Other Business

A. National SSC Workshop

Paul Dalzell reported on outcomes of the November 2008 National SSC Workshop. Dalzell noted that the workshop had been universally acclaimed as a success and had helped inform NMFS working groups that were dealing with providing guidance on the estimation and allowable biological catches and uncertainties due to data issues.

B. 101st SSC Meeting

The 101st meeting will be held in July 2009 in Kona

C. National Standard 2 Comments

Paul Dalzell reviewed the response by this Council to the advanced notice of proposed rule making for revising National Standard 2 (NS2). The issues to be considered in the proposed revision included:

- Should SAFE reports contain Scientific and Statistical Committee (SSC) recommendations for Acceptable Biological Catch?
- Should NS2 prescribe 'best science'?
- Should NS2 contain specific language to regarding the peer review process?

The meeting concluded at 12.30 pm on Thursday March 19, 2009.