WESTERN PACIFIC REGIONAL FISHERY MANAGEMENT COUNCIL

Report of the 99th Meeting of the Scientific and Statistical Committee

Honolulu, Hawaii
October 8-10, 2008

6. Insular Fisheries

A. Hawaii Archipelago Bottomfish

1. Update on MHI Management Actions

Mark Mitsuyasu reviewed the previous MHI bottomfish management actions and SSC recommendations.

2. CPUE Workshop

Bob Moffitt, NMFS PIFSC, described the recent CPUE standardization workshop and the effort to interview fishermen about past fishing and reporting practices. These data were integrated into the updated MHI BF stock assessment. The SSC's comments are indicated in item 4 below.

3. Update on MHI BOTCAM Project

The SSC heard with interest an update by Jeff Drazen, UH Oceanography, on the State supported MHI BOTCAM project to develop fishery independent data on deep 7 size frequency and abundance inside and adjacent to the BRFAs. This effort is to evaluate the effectiveness of the State's BRFA management program. Concerns were raised about possible duplications of the length/frequency measurements on individual fish. Suggestions were made about adding a 360 degree rotating camera and/or a vertical snapshot to address duplicate measurements. Concern was also expressed regarding the current ability of this new technology to detect changes in bottomfish density between protected and unprotected areas.

4. Stock Assessment

Jon Brodziak, NMFS PIFSC, presented an update to the previous assessment for the aggregate bottomfish stocks in the Hawaiian Islands. The update did not include additional sensitivity analyses or any alternative model assumptions.

The SSC believes a number of the assumptions in the stock assessment update should be investigated. An alternative set of model assumptions favored by the SSC includes the following technical changes:

1. **Increase the CV on the observation errors to around 20-30%.**
2. **Reduce the shape parameter from the current value of M=1 to something that corresponds to B(msy)/K = 0.4 rather than the 0.5 value in the current model unless a rigorous analysis is presented for an alternative value.**
3. **Keep the process error CV near 0.0**
4. **Reduce the intrinsic rate of growth R to lie within the range (0.16-0.50) suggested for stocks of medium productivity in Musick et al (1999; Fisheries**

24(12)) unless a rigorous analysis is presented for an alternative range of values.

The SSC believes that the above suggested changes to the model assumptions have off-setting effects on the status of the MHI assessment. On the one hand, a decrease in M could improve the estimated status of the stocks, whereas a decrease in R could indicate the stocks are less productive. If a comparison of alternative model results is produced, the SSC does not support the use of AIC as a valid statistic for a Bayesian model unless appropriate technical changes are made as discussed with Dr. Brodziak.

The SSC is unclear about how CPUE standardization was conducted. SSC document 6.A.4(2)-rev 1 does not provide adequate documentation of methodology. The SSC looks forward to reviewing the complete documentation and methodology.

Given that the CPUE standardization presented in the updated stock assessment has a vastly different trajectory from those presented previously, the SSC recommends further investigation of alternatives. **Specifically, the SSC requests NMFS PIFSC produce a CPUE standardization using a zero-inflated regression analysis on the 1990-2007 catch rates including zero-catch trips. There should be a comparison of these new regression results with those from the standardized catch rates in the updated MHI bottomfish stock assessment.**

The SSC requests NMFS PIFSC provide an assessment of the Deep 7 bottomfish complex based on their catch and catch rate data. In addition, the SSC requests NMFS PIFSC produce single stock assessments for species that have different catch trajectories, e.g., Uku, Opakapaka, and Onaga.

5. Total Allowable Catch

Bill Robinson, NMFS PIRO, presented a table of options developed by the NMFS and Council Staff for purposes of developing an environmental assessment for the 2008-2009 MHI Bottomfishing season TAC.

Members of the SSC made some preliminary analyses of the MHI stock complex data as provided by NMFS PIFSC (SSC Document 6.A.4(3)). Results of these analyses are substantially different from those presented in the bottomfish assessment presented to the SSC. These results indicate the stock is above the MSY level of abundance and that catches based on fishing at the MSY level of mortality are substantially higher than results in the bottomfish assessment document. The SSC decided to look at a simple alternative method to produce recommended catch levels for 2009. The new standardized catch rates (CPUE) show a different qualitative trend than ones the SSC has been shown in previous meetings (Figure 1). In fact, a linear regression of CPUE versus year from 1982-2007 has a slope not significantly different from zero (Figure 2). The average catch for the MHI complex and the deep 7 complex for that time period was 469,087 and 339,698 lbs, respectively and median catches were 413,348 and 308,526 lbs, respectively and the 25th percentile 348,334 and 254,050 lbs, respectively.

The SSC recommends a precautionary TAC of 254,050 lbs for the deep 7 complex in the 2008/2009 MHI bottomfish fishing season only.

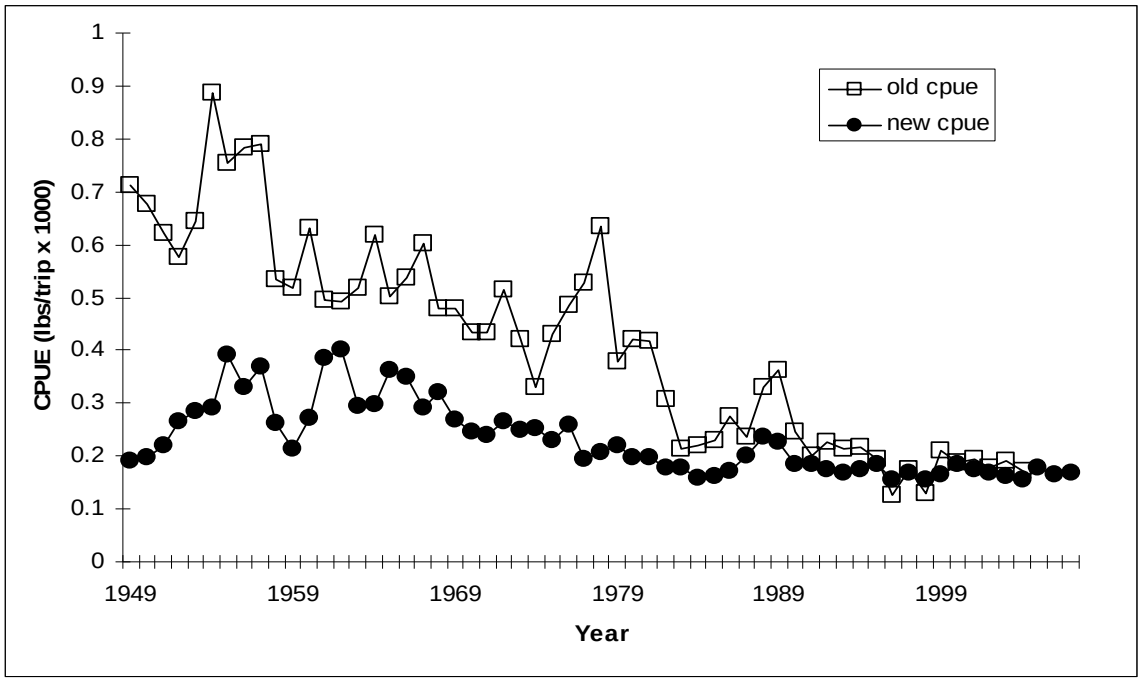

Figure 1. Time series of standardized catch per unit of effort for Main Hawaiian Island 'Deep7' bottomfish complex, 1949-2007. Source: SSC Document 6.A.4(3).

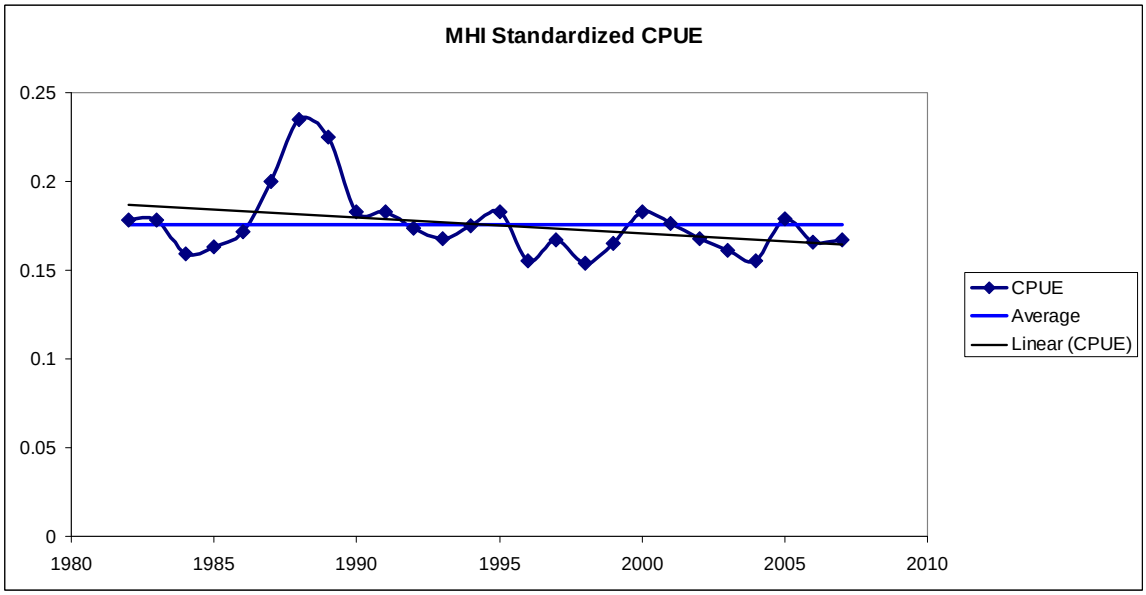

Figure 2. Time series of standardized catch per unit of effort for Main Hawaiian Island 'Deep7' bottomfish, 1982-2007, showing the average and linear regression plots. Source: 99th SSC, generated by SSC member, Rick Deriso (IATTC)

B. Council Advisory Groups

Mark Mitsuyasu updated the SSC on the Hawaii REAC Meeting. Paul Dalzell updated the SSC on the American Samoa Advisory Panel Meeting and noted their recommendations. Jarad Makaiau updated the SSC on the American Samoa and Marianas Archipelago plan team reports.

C. **Public Comments**

A NWHI bottomfish fisherman responded to discussion about a trend of increasing Uku poundage in the composition the NWHI bottomfish complex by pointing out that the monument had closed much of the deep 7 grounds. One MHI bottomfish fisherman expressed the view that there was little scientific justification for the placement of the BRFAs and little evidence that they were working. Another expressed the view that when quota management came fully into effect the BRFAs should be reopened to fishing.

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7. Pelagic Fisheries
A. Longline Management
1. Hawaii Shallow-Set Fishery

A status report on the NMFS BiOp and a review of the public comments on the DSEIS were provided. The SSC discussed the refusal of NMFS to consider the increased hatchling production resulting from Council sponsored nesting beach conservation efforts to offset turtle takes in the domestic longline fisheries. It was noted that no estimates have been made of the number of additional hatchlings that would be required to offset the incidental take of a turtle in a longline fishery. It was also noted that most analyses of turtle population dynamics indicate that nesting beach problems have greater impacts than those caused by the Hawaii longline fishery. However, the SSC appreciates the uncertainty of projecting survival between hatching and the age of vulnerability to fisheries several decades in the future. **However given the potential usefulness of such information, the SSC recommends that the Council approach population modelers, either within NMFS or elsewhere, to make the first attempt to produce these estimates, supporting information, and evaluations of confidence associated with the estimates. The SSC requests information from knowledgeable sources on how mitigating offsets or 'species recovery credits' are used in the conservation of other protected species.**

Public Comment

An environmental NGO representative stated that the use of public funds to conduct sea turtle conservation projects for offsetting the impacts of the Hawaii longline fishing industry was inappropriate.

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

During the presentation, Council staff noted that of the five green turtle takes over a 2 year period during the observer program, the origin of two were identified from genetic analysis. One of these was attributed to an Australian stock, which is in good condition. The other was attributed to a Samoa-Marshall Islands stock for which the geographical extent and the stock status are unknown. **Consequently, the SSC recommends that the Council and NMFS promote research on the stock structure of green sea turtles in the Pacific island area, particularly those that may interact with the American Samoa longline fishery.**

Regarding the alternative management action to minimize sea turtle interactions in the American Samoa-based longline fishery, the SSC rejects the No Action alternative and does not believe that sufficient information is available regarding hook size, catch of target species, and turtle take to consider Alternative 3. **Given the positive performance of minimum hook depth regulations in other similar fisheries, the SSC recommends Alternative 2, with a minimum hook depth of 100 m.** The SSC recognizes that this requirement could be met in various ways, including float line length, length of mainline between the float and the first and last hook, and branchline length. **Thus, the SSC recommends that the Council work collaboratively with the NMFS, fishermen, and the U.S. Coast Guard to develop gear configurations that are enforceable in the field. In addition, the SSC recommends that the NMFS examine existing observer data from this fishery to see if the 100 m minimum hook depth requirement would potentially reduce the catch of fish for which there is no market or a very limited one in American Samoa, and thus reduce bycatch.**

B. Non-Longline Management (Action Items)

Paul Dalzell presented a summary of the draft amendment: Management Measures for Fishing around Fish Aggregating Devices in the U.S. EEZ in the Western Pacific Region.

The SSC recommended the following actions with respect to management of purse seine fishing in association with FADs. The objectives of the proposed actions are:
1. to reduce the likelihood of local depletion of tuna stocks, especially skipjack;
2. to conserve bigeye tuna by reducing purse seine bycatch of juvenile fish;
3. to assist in enumerating FADs to improve definition of fishing effort.

For the purposes of this action, the SSC recommends classifying as FADs all floating objects within US EEZ waters of the Western Pacific Region that have been purposefully deployed, enhanced or instrumented

The SSC supports its previous recommendation to require each FAD exploited by purse seine fishing vessels to be individually and uniquely marked with the means (visible or electronically) to identify each FAD and its electronics package associated with vessel name, and be registered with NMFS.

The SSC supports option 2 as modified below:

2. In those US EEZ waters of the Western Pacific Region where purse seine fishing is allowed, prohibit deployment of purse seine FADs and Purse Seine Fishing on all FADs.

A. American Samoa and Hawaii Longline Quarterly Reports

The SSC heard with interest the quarterly reports on the two long line fisheries delivered

by Dave Hamm and Russell Ito of NMFS

B. International Fisheries/Meetings

1. WCPFC

a. Science Committee

b. US Advisory Committee

c. Northern Committee

d. Technical & Compliance Committee

Chris Boggs reviewed the highlights of the recent WCPFC Science Committee in Port Moresby, Papua new Guinea, including stock assessments for Western Pacific bigeye tuna, South Pacific albacore tuna and Western Pacific skipjack tuna. Bill Robinson presented a brief summary of a recent meeting of the Advisory Committee to the US Commissioners to the WCPFC, which was hampered by the inability of Committee members to ask any substantive questions. There was no presentation on the Northern Committee and Eric Kingma presented on the recent Technical & Compliance Committee meeting in Pohnpei, which considered how member countries and cooperating non-members were complying with the Commissions resolutions and conservation and management measures.

2. IATTC

Rick Deriso updated the SSC on the forthcoming meeting of the IATTC in November 2008, which will seek to develop a conservation and management measure for Eastern Pacific bigeye tuna.

E. American Samoa Advisory Panel

Paul Dalzell referred the SSC to the recommendation made by the American Samoa AP on minimizing interactions between the American Samoa longline fleet and green sea turtles, which was covered under agenda item 7A2. Jarad Makaiau reviewed the balance of the AP report under agenda item 6B2.

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5. Program Planning

A. Annual Catch Limits

The SSC heard a presentation on progress to date in formalizing a process for setting annual catch limits as mandated by the MSRA, including several issues that were previously reviewed in the 98th SSC (Issues 1-4):

1. Establishment of a mechanism for specifying annual catch limits with associated accountability measures

The SSC reiterates its previous recommendation as approved by the Council at its 142nd meeting.

2. Allocation of ACLs (fishery sectors, gear type, etc.)

The SSC recommends that no allocations be made at this time but recognizes that future allocation may be necessary and at that time the SSC will provide comments especially in light of the biological and sociological consequences of ACLs.

3. Consideration of permitting and monitoring managed fisheries subject to ACLs

The SSC reiterates its previous recommendation to require Federal permitting and reporting for all fisheries subject to ACLs (see issue 6).

4. Implementation of ACLs in fishing year 2010 for fisheries determined by the Secretary to be subject to overfishing

The SSC reiterates its previous recommendation as modified by the Council at its 142nd meeting.

5. Determine whether any species should be included in the ecosystem component of managed species

The SSC recommends that the species involved be ranked by risk of overfishing before proceeding further with this discussion.

6. Determine which fisheries need federal logbooks and permitting requirements to reduce uncertainty of ACL values

The SSC continues to support Alternative 6B, i.e., comprehensive Federal data reporting (e.g. permitting and logbooks, surveys, etc.) for all ACL fisheries. Some members had concerns regarding potential duplication of effort.

7. Determine the process by which OFL, ABC, ACL, and ACT values will be established

The SSC recommends that NMFS undertake the initial assessment of the risk of overfishing, then provide this to the SSC for evaluation. When agreement is reached as to the top 5-10 stocks in terms of risk, then the SSC will set ABCs for these stocks and provide these recommendations to the Council. If no OFL, MSY or MSY proxy is available, the SSC will request that NMFS generate such a value for the SSC's evaluation.

B. WPSAR Stock Assessment Process

Gerard DiNardo, NMFS PIFSC, provided the SSC with an update to the Western Pacific Stock Assessment Review (WPSAR) process and requested input from the SSC regarding the committee membership, species candidates for review, and meeting schedules. **In regard to the WPSAR stock assessment process, the SSC recommended:**

1. **That all SSC members be considered part of the pool of potential review panel participants;**
2. **That all review panel members be paid for their service commensurate with other members of the review panel to the extent allowed by law, so as to avoid disparities in compensation;**
3. **That the Council accept the list of species and stock complexes proposed by NMFS PIFSC (SSC document 5.B(1)) for stock assessment review, and the proposed order of the reviews.**

C. Marine Conservation Areas Assessment

Sam Pooley, NMFS PIFSC, briefly described the query from the President's Office about the potential feasibility and possible impacts of a general proposal for increasing conservation and protection around certain Pacific Islands by creating large scale marine sanctuaries or Marine monuments. These included Rose Atoll in American Samoa, the PRIAS and the three northernmost Northern Mariana Islands. SSC discussion centered on what was being protected and why, since many of these islands already have a significant degree of protection under existing statutes. Concern was also expressed as to whether the information being presented by some advocacy groups was scientifically balanced and accurate.

The SSC was informed that the Governor, legislature (Senate and House), the Mayors of Saipan, Tinian, Rota and the Northern Islands, as well as the municipal councils, and Indigenous Rights Groups in the CNMI, had expressed opposition to the proposal. However the SSC noted that the Governor of American Samoa was in favor of a monument status for Rose Atoll. **Therefore the SSC expressed concern regarding the need for the need for proper assessment of the views of the indigenous people associated with areas being considered for monument status.**

The SSC further noted that the Council has an established Policy on Marine Protected Areas (MPA) which recognizes that MPAs can be a useful tool for marine resource

management. The Council' MPA Policy clearly states that the Council should play a key role in joint efforts to establish MPAs and should ensure that MPA objectives are clarified. The Policy further states that the Council should participate in the drafting of environmental and social impact assessments, and when developing MPAs, the Council should also consider the requirements, rights and privileges of the region's native people and their traditional fishing practices.

The SSC has not been provided a presentation on the available science and thus has not been provided the opportunity to provide appropriate input on the scientific merits of the proposed monuments. The SSC notes there are broad, unsubstantiated comments in the document "The Deepest Ocean on Earth: A scientific Case for Establishing the Mariana Trench Marine National Monument," presented by the Global Ocean Legacy.

The SSC notes that in the Marianas there currently exists a small scale commercial bottomfish fishery that accesses the northern islands of the CNMI. It is noted that the estimated MSY for the northern islands is about 64,000 lbs. The long-term average of commercial landings of bottomfish from the entire CNMI has been estimated at about 20,000lbs. They also note that the island of Maug serves as a staging location and potential harbor of refuge for Saipan-based fishermen fishing in these northernmost islands.

The SSC further noted that the Marianas islands are on the fringes of the Indo-West Pacific center of marine diversity, possessing fewer coral species than Palau and less endemism than many other Pacific archipelagos. The proposed area is not even among the top-10 hotspots for reef fish endemism in the Indo-Pacific (Allen 2007)[1].

The SSC also noted that the three islands in the proposed CNMI monument area are currently designated as terrestrial reserves. Monument designation for these islands may inhibit scientific monitoring, exploration and access to this region. Existing protections in the reserves should be adequate to protect the ecology and environment in and around the area.

Rose Atoll is a USFWS National Wildlife Refuge. VMS tracks do not indicate any intrusion by U.S. longline vessels into the adjacent waters. The island is too distant to be reached by the small boat fleet. Existing protections in the refuge should be adequate to protect the ecology and environment in and around the Refuge.

The waters surrounding the PRIAs have been fished sustainably by the Hawaii based longline fleet, and the US Purse-seine fleet targeting skipjack tuna continues to operate in the EEZ of the PRIAs, including Howland, Jarvis and Baker Islands. Continued access to

[1] Allen G.R. 2007. *Conservation hotspots of biodiversity and endemism for Indo-Pacific coral reef fishes. Aquatic Conservation: Marine and Freshwater Ecosystems, Volume 18 (5), 541 - 556

the pelagic fishery resources will not significantly impact these refuges and their nearby waters.

The SSC recommends that the Council request clear scientific justification for the various specific ocean areas to be included in the marine conservation areas (e.g. National Marine Monuments, National Marine Sanctuary, etc) proposed by President Bush. Furthermore, the SSC recommends the Council assert that environmental and social and economic impacts be fully assessed for all people and communities impacted by the proposed action or actions and ensure that the views of the indigenous peoples of the potentially affected areas be given full and fair consideration.

D. Public Comment

There were no public comments.

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8. Protected Species

A. Monk Seal Critical Habitat Designation Petition

The SSC heard with interest a presentation by Dan Hubner, NMFS PIRO, on a recent Monk Seal Critical Habitat Designation Petition. The ESA requires designation of critical habitat for listed species; this designation requires review of federal actions that might affect these habitats and potential impacts are assessed in Section 7 consultations. A recent petition has been lodged to revise the 1988 designation of monk seal critical habitat in the NHWI to also include the MHI. Socio-economic considerations are also taken into account in any designation evaluation.

B. Loggerhead DPS Petition Response

The SSC heard with interest a presentation by Dan Hubner, NMFS PIRO, on a distinct population segment (DPS) and Critical Habitat Petition that has been lodged to list the North Pacific loggerhead sea turtle genetic stock.

C. Leatherback Critical Habitat Petition

The SSC heard with interest a presentation by Dan Hubner, NMFS PIRO, on a recent Leatherback Critical Habitat Designation Petition. A petition has been lodged to revise the 1979 designation of leatherback sea turtle critical habitat in the Caribbean to also include the west coast US waters. The protection of ample forage habitat in, for example, Monterey Bay might be a principle constituent element (PCE) that then becomes relevant under the critical habitat designation evaluation.

D. Update on IAC for the conservation of turtles

Council staff provided an update on the Inter-American Convention on Sea Turtle Conservation. Staff pointed out that it might be useful for Chile to be added to the Convention membership. The SSC noted, with concern, the currently inadequate funding and staffing of the IAC. The loss of this organization would be detrimental to sea turtle conservation efforts in the Western Pacific region. **The SSC recommends the Council communicate its concerns about the long-term continuity of this organization to the Department of State.**

E. Public Comment

There was no public comment.

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9. Other Business

A. National SSC Workshop (November 12-14, 2008)

Council staff explained that the eight Regional Fishery Management Councils had decided to convene a national SSC workshop, to be held in Honolulu in November 2008. Dalzell reviewed the meeting agenda, which focused on SSC operating procedures and using stock assessments and a peer review process in SSC determination of fishing level recommendations (i.e. Allowable Biological Catch). Dalzell noted that this was likely to the first in a series of such meetings

B. 100th SSC Meeting

The 100th meeting of the SSC will be convened in Pago Pago, American Samoa. It was hoped that all members would participate. **The SSC recommends that data files associated with stock assessments and analyses be provided to the SSC at least two weeks in advance of the SSC meeting. Data should be provided as text files.**

C. National Standard 2

Council staff brought a recent Federal Register notice to the attention of the SSC, as it concerned proposed revisions to the Magnuson-Stevens Act National Standard 2. Dalzell noted NMFS is considering modifying the language describing the content and purpose of the Stock Assessment and Fishery Evaluation (SAFE) Report or related documents, and adding language regarding peer review processes, the role of the scientific and statistical committees (SSCs) of the Regional Fishery Management Councils (Councils), and the relationship between peer reviews and SSCs. At this time, NS2 does not specifically mention that the SAFE should include SSC recommendations for acceptable biological catch from either the SSC or peer review process. NMFS is considering how to revise the discussion of SAFE reports in the NS2 to include the scientific recommendations that are to be provided by the SSCs. The proposed rule was developed by a NMFS national working group revising the NS2 guidelines. The working group, which includes PIFSC scientists Stewart Allen and Gerard Dinardo, has had a number of conference calls and met in La Jolla in April, 2008. The working group is exploring changes in SAFE reports, characterization of what constitutes best available science and the peer review process as it applies to information presented to the Council for its use in decisions. Consideration of the peer review process also includes potential roles of the SSC. The working group plans to meet again to develop draft revised guidelines after the end of the public review process.

D. 5 year research plan

Council staff reported to the SSC that at its 142nd meeting the Council endorsed the SSC's list of research priorities. The Council also directed to staff to expand on each research topic with several descriptive sentences, to obtain the SSC's approval of this new text, and then to return the expanded document to the Council for their final approval before forwarding it to NMFS. SSC members reviewed the list of research priorities for the 5 year plan and document and suggested several changes.