

# North Pacific Fishery Management Council

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## MINUTES SCIENTIFIC STATISTICAL COMMITTEE March 29-31, 2004

The Science Statistical committee met March 29-31, 2004 at the Hilton Hotel in Anchorage, AK. Members absent: Seth Macinko, Rich Marasco, Chair, Franz Mueter, Ken Pitcher, Terry Quinn. Members present:

Gordon Kruse, Vice Chair  
Mark Herrmann  
George Hunt  
Doug Woodby

Keith Criddle  
Sue Hills  
Steve Parker

Steve Hare  
Anne Hollowed  
Farron Wallace

### C-1 DPSEIS

The SSC received an excellent and detailed report from Steve Davis (NMFS) and Diana Evans (Council staff). They provided an overview of the Comment Analysis Report (CAR) that summarizes public comment on the PSEIS and NOAA Fisheries response to these comments. They also provided a copy of the revised preliminary preferred alternative (PPA) and a summary of changes to the PPA, and a revised amendment document. As usual, the materials to be reviewed, supplementary information, and the staff presentation were thorough and excellent. Public testimony was provided by Joe Moore (The Ocean Conservancy).

#### Comments on the Preliminary Preferred Alternative C-1(a)(1)1

- The SSC recommends that the general structure of the PPA prominently identify the overall goal of the described management approach. The SSC suggests modifying last sentence of the 2<sup>nd</sup> paragraph to begin with “Given this intent, the fishery management goal is to provide ...”. Further, to aid in clarity, we suggest that the PPA include explicit definitions of the terminology used for “objectives” or “tasks”.
- The SSC encourages the Council to review statements in the PPA that relate to the intent for Council actions regarding habitat to ensure that the intent is clear and consistent with the intent of other Council actions related to habitat, e.g., HAPC. As an encompassing statement of Council management policy, the PPA should include the range of actions and interpretations used by the Council. Additional discussion of this issue is included in SSC comments regarding C-2 on HAPC.
- The SSC recommends broadening bullet 4 under “Prevent Overfishing” to read “Conduct periodic reviews of the adequacy of current harvest policies and adopt improvements, as appropriate”.
- The SSC concurs with the AP and Staff recommendation for the addition of a bullet to highlight management of non-target species. To accommodate potential changes to management categories identified by NMFS National Standard Guidelines, the SSC encourages the adoption of a statement that will allow flexibility regarding designation of species groups.

- Although recent Congressional legislation has codified the 2 million mt OY cap, the SSC encourages the Council to revisit the rationale behind and calculation of the OY caps. All biological parameters should be subject to periodic review to account for possible changes in environmental conditions, changes in the status of fish populations and the status of populations of other species, and to incorporate additional scientific knowledge.
- With reference to task 37, the SSC cautions that “economic impact assessments” only describe the patterns of flow of expenditures and do not characterize the net benefits of alternative actions that might be contemplated by the Council. It is possible to have actions that result in large regional economic impacts and generate negative net benefits. It is also possible to have actions that generate positive net benefits and yet have negligible regional economic impacts. Impact analyses and net benefit assessments are both important for characterizing the economic consequences of alternative actions. Increased data reporting requirements can support both types of analyses.

#### **Comments on the PPA Bookends C-1(a)(1)2**

- The SSC recommends changing the phrase “minimize waste”. Because minimizing could be taken to mean reducing waste to zero, “minimize waste” may set an unachievable standard. An alternative statement of this goal might be to “reduce waste to biologically and socially acceptable levels”.
- The SSC cautions against the adoption of any amendment that reduces the responsibility of harvesters and processors to provide detailed timely information required to ensure responsible management of FMP fisheries. Fishery resources are the property of the people of the United States. The management agencies have a trustee responsibility to ensure that these resources are being used in a manner that maintains that the expected flows of use, option, and nonuse benefits. In order to discharge this responsibility and to ensure compliance with federal law and regulation, the management agencies must have access to detailed information on the magnitude, composition, and location of catches as well as detailed information on the costs, revenues, and expenditures associated with fishing and processing.

#### **Comments on the CAR**

- The SSC recommends that the CAR and PSEIS be released for public review.
- The SSC commends NMFS for developing a process for summarizing comments to key issues and for developing concise answers to comment.
- The SSC recommends that the CAR be reviewed to ensure that actions taken in response to comments are identified. For example, the CAR should indicate whether the comment was already addressed in a particular section of the document or whether new material was added to the document in specific sections to address the comment (e.g., definition of surplus production).
- The SSC requests that additional clarification be included at the top of page 59 to define the thresholds used to estimate the effect of fishing on marine mammals.

### **Comments on the timeline C-1(A)3**

- The SSC recommends that Staff conduct periodic updates of the PSEIS and FMP and that the schedule for these periodic updates be included on the timeline. Additionally, the recurring HAPC proposal process should be indicated in the timeline.
- The SSC was surprised to see that the timeline included specific tasks from the “bookends”; we understood that they were to serve as illustrations of the range of possible actions that could take place under the policy language of the PPA. Staff explained that these tasks were illustrative of a possible timeline and that the actual timeline developed by the Council could look considerably different. The SSC cautions that the items in the “bookends” should not be treated as a detailed “to do” list for future actions without closer scrutiny.

### **Comments on the FMP amendments C-1(b)1**

The SSC did not have adequate time to fully review the housekeeping portions of the FMP amendments. Therefore, the SSC recommends that the “housekeeping” FMP amendments be decoupled from those required for approval of the PSEIS. Decoupling would allow more time to review the proposed “housekeeping” changes without affecting the PSEIS timeline. However, if the Council chooses to move all of the FMP amendments forward together, at a minimum, the following issues should be addressed.

- Some finfish species are not governed by the FMP (Page 5 of GOA) and are not mentioned. Some of these finfish species are managed by the State: e.g., black rockfish, lingcod, and pollock in Prince William Sound. The SSC recommends that the jurisdictional authorities be more clearly identified and that lists be included to identify which species are managed by NMFS and which by the State of Alaska. Footnotes may be useful to explain special situations, such as sablefish in inside waters and parallel seasons for Pacific cod. These state-managed fisheries should also be discussed in other appropriate sections, e.g., Chapter 4.
- The SSC recommends that Section 3.10—Council FMP review—be reconciled between the two FMPs. Specifically, bullet 1 of section 3.10.1 in the BSAI plan seems to have been omitted from section 3.10.1 of the GOA plan.

The SSC did not have time to fully review the proposed revised MSY and OY definitions. Nuances in these definitions could have important effects on stock assessments and the harvest control rules. The SSC wishes to have more time to thoroughly review the proposed revisions.

### **C-2 HAPC**

Cathy Coon (NPFMC) outlined a tentative schedule of work and a framework for analysis of HAPC alternatives. Diana Stram (NPFMC) reported on findings and recommendations that emerged from a joint plan team review of the 23 HAPC proposals received in response to the Council’s initial request for proposals. Scott Miller (NMFS AKR) reported on initial efforts to devise an approach to examine the social and economic effects of HAPC designations and associated management measures. (The draft initial report on socioeconomic effects was not provided in advance and consequently was not formally reviewed by the SSC.) The SSC also received a report on HAPC enforcement issues. (The enforcement report was not provided in advance and was not addressed in staff presentation and consequently was not reviewed by the SSC.) Dr. Bob Stone of NMFS-Auke Bay Laboratory gave a presentation on recent research on coralline habitats in the Aleutian Islands. Areas for study were selected based on the occurrence of coral bycatches. Observations were made from the Delta submersible. Dr. Tom Shirley of the University of Alaska Fairbanks gave a presentation on his deep-sea submersible studies of seamounts in the Gulf of Alaska. The seamount project resulted in detailed maps and unique observations on the distribution of deepwater corals, sponges,

and associated invertebrates. Several species of crabs were observed. Juveniles and adults of some species were stratified into narrow depth ranges. The SSC would like to commend both Dr Stone and Dr. Shirley for their excellent presentations. Public comment was provided by Two Crow, Ed Richardson (Pollock Conservation Cooperative), Heather McCarty (Marine Conservation Alliance), Jon Warrenchuck (Oceana), John Gauvin (Groundfish Forum), and Cora Crome (Petersburg Vessel Owners Assoc).

To facilitate the Joint Plan Team review, the analysts organized the 23 HAPC proposals into 8 groups based on similarities in habitat type or region. The eight groups include: a) seamounts and pinnacles; b) deep water canyons; c) GOA hard corals; d) AI hard corals; e) AI hard corals (additional subset); f) AI marine reserve and AI core bottom trawl areas; g) AI coral gardens and AI coral and sponge; and, h) BS soft coral. Following Plan Team review, Council staff pooled proposed sites similar in habitat type or in the same region into conceptual approaches for HAPC alternatives, which were presented. The SSC endorses this conceptual approach and encourages the development of a process where the public is encouraged to nominate sites and provide rationale for the sites nominated. The analysts could then assemble available information about fishing activities, and fishery and non-fishery resources in the region of the site. This would place all of the proposals on a similar footing for review by the joint plan teams. The SSC commends the analysts for their exceptional work and presentation.

Because this is the first review cycle for HAPC proposals, there has been some uncertainty about the process of proposal review, about linkages between the proposals and actionable alternatives to be considered by the Council, and about the structure of analysis of the actionable alternatives.

Issues that have arisen include:

- Some proposals did not respond to the two specific priorities identified by the Council. However, while the Council identified priorities, it did not stipulate that it would only entertain proposals that addressed those priorities.
- Some proposals identified areas for further research rather than areas for immediate permanent restrictions on permissible fishing gear.
- It would have been helpful if the request for proposals had clearly specified whether the request was for HAPC in terms of specific habitat areas or in terms of habitat type.
- The linkage between coral and sponge habitat on seamounts and pinnacles and the long-term productivity of FMP rockfish species is not well-established and is unlikely to become well-established. If it is imperative that there be a clear linkage between HAPC and the productivity of FMP species, it is unclear whether HAPC is an appropriate instrument for protecting areas of habitat that have other interests to the public.
- Because the criteria to be used for rating the proposals were not announced at the time that the proposals were solicited, some of the proposals did not include enough information to be rated for “ecological importance” or “sensitivity”..
- Because “stressed” was not clearly defined, the Plan Teams used a scale of the relative intensity of fishing effort as a proxy for “stressed”. Although the Plan Teams scored most proposals for most of the criteria, the Teams expressed concern that a “high” rating of 3 might infer greater knowledge than is warranted by available data and cautions that the ratings are categorical, thus a rating of 3 should not be interpreted as having three times the weight as a rating of 1.

**For the above reasons, the Plan Teams have recommended that the summary tables in the Plan Teams report should not be used to evaluate proposed sites. The SSC concurs.**

As noted in the February 2004 SSC minutes “a clear definition must be established for all Council priorities and HAPC considerations”. The Council was deliberate in stating their designated priority areas:

- (1) Seamounts in the EEZ, named on NOAA charts, that provide important habitat for managed species, and
- (2) largely undisturbed, high relief coral beds that provide important habitats for managed species.

There remains a need to provide unambiguous definitions of the four HAPC considerations established in the EFH Final Rule: (1) importance of ecological function; (2) sensitivity; (3) stress; and (4) rarity. The SSC recommends that the analysts review source material such as the recent NRC report on the effects of fishing on habitat, and consult with appropriate experts to develop concise and unambiguous definitions of the four HAPC considerations as they will be applied in the North Pacific.

The definition of “stress” was particularly troubling for the Plan Teams. The Plan Teams interpreted “stress” to be a measure of “relative disturbance”. If disturbance is interpreted as density of bottom contact fishing, then an effort must be made to numerically evaluate effort by gear for each site in contrast to the spatial distribution of the fishery overall. The SSC recommends that the definition for “stress” include a consideration of the frequency of disturbance, habitat recovery time and how natural and human disturbances influence habitat form and function. A kelp forest, for example, is subject to natural perturbation from storms and biota has adapted to a relatively fast regeneration time in contrast to slow growing corals found in deeper waters.

**The SSC requests that the Council clarifies its intentions on several important HAPC issues and that staff include in the EA a clear description of the relevant legislation and Council intentions in these areas.** The SSC notes that it may not be possible to motivate the protection of rare and fragile habitats (e.g., habitat found on seamounts and coral gardens) solely on the basis of their linkage to the productivity of managed species. Although no new management measures are required, the Council chose to proceed with HAPC and associated management measures as a precautionary way to address potential effects on habitat. The analysts noted that MSFCMA and EFH regulations (FR 67 preamble page 2354<sup>1</sup>) provide for the authority to protect habitat that is not directly linked to the productivity of managed species. The criteria used in the Plan Team evaluation seemed to emphasize the need for a demonstrable linkage between the proposed HAPC and the productivity of rockfish. The Council should clarify their intent to require demonstration of the importance of dense coralline habitats to the productivity of managed species before any action is taken. The SSC believes that this is a very high standard of evidence and may not be consistent with Council’s precautionary approach. The SSC recognizes that there are high costs and a long time frame required to achieve a scientifically credible understanding between these habitats and fish productivity. The SSC suggests that an evaluation of the efficacy of precautionary measures in sustaining sensitive marine habitats be conducted in the near future. It is anticipated that this type of analysis would assist in identifying the amount of habitat that should be protected and the types of protection measures that would be most effective in sustaining sensitive marine habitats.

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<sup>1</sup> **Preamble January 17, 2002 FR 67 page 2354 subsection “Response B”**

“It is not appropriate to require definitive proof of a link between fishing impacts to EFH and reduced stock productivity before Councils can take action to minimize adverse fishing impacts to EFH to the extent practicable. Such a requirement would raise the threshold for action above that set by the Magnuson-Stevens Act. The final rule encourages Councils to use the best available science as well as other appropriate information sources when evaluating the impacts of fishing activities on EFH, and to consider different types of information according to its scientific rigor.”

## **Specific Comments about the EA**

All proposals advanced for consideration as alternatives should be represented in a consistent manner; either in terms of areas proposed for additional gear restrictions or as areas that are not proposed for additional gear restrictions. We note that proposal 14 was the only proposal expressed on maps, figures and tables in terms of areas not proposed for additional gear restrictions.

Analysis of HAPC proposals should consider cumulative benefits and costs as well as incremental benefits and costs. That is, while it is important to judge the benefits and opportunity costs of protecting specific sites, it is also important to identify the cumulative benefits and cumulative opportunity costs of protecting all sites. In addition to examining the cumulative effects of concurrent actions, it is important to explore cumulative effects of sequential actions.

The review of the opportunity cost of displaced fishing effort should be based on the full history of commercial fishing to account for shifts in fishing effort that follow shifts in the distribution and abundance of targeted stocks. For instance, the long history of red king crab fisheries in the Aleutian Islands is not reflected by the limited data obtained for the recent fishery on Petrel Bank. The review should be based on individual fisheries to highlight effects on individual sectors.

The potential use value associated with HAPC areas should include a brief discussion of possible opportunities for ecotourism. There should also be a discussion of possible benefits or costs to permitting or prohibiting sport fishing in areas designated HAPC.

The potential for effects on harvest should include a discussion of the potential that HAPC designation could preclude future opportunities to harvest in areas where fishing does not presently occur but may occur in response to changes in regulatory restrictions (e.g., Steller sea lion closure areas), changes in the abundance or spatial distribution of fish populations, or changes in the market demand for currently harvested or unharvested species.

The analysis of potential effects on fishing should include a discussion of the salmon and jig fisheries that occur in the HAPC and a judgment of the potential impacts of those fisheries.

The SSC is concerned that analysis of the potential ecological and economic impacts of HAPC designation has been impaired by lack of access to confidential data on catch magnitude, composition, and location information.

Table ES-3 of the draft socioeconomic analysis and associated text should be revised to replace “significant” with another term (e.g., substantive, non-minimal, possible) to avoid possible confusion with NEPA usage of “significance” or traditional usage of “significance” as a measure of the magnitude of estimated parameters or confidence in the conclusion of hypothesis testing.

### **C-3 AI Pollock EA/RIR**

Bill Wilson (NPFMC) and Dr. Ben Muse (NMFS AKR) provided an overview of the need for Council action to address requirements of Section 803 of the Congressional Appropriation Act of 2004. Staff also provided an overview of the initial review draft Environmental Assessment for an amendment to the BSAI FMP to implement the provisions of the Act.

The SSC commends Staff for a monumental amount of work completed in a very short period of time; the initial review draft EA represents an excellent start for a development of a public review draft EA. We recommend that this document be released for public review after the following suggestions have been

addressed.

1. Two market-based options for funding the AI pollock allocation could be included as alternatives that were considered but not analyzed further.
  - (a) The pollock allocation could be made available through outright purchase of perpetual harvest shares held by AFA vessels. We note, however, that such a purchase would be expensive. For example, the annuity value of 40,000 mt at current market prices and current interest rates is on the order of \$233 million.
  - (b) Alternatively, it might be possible to fund a portion of the AI pollock allocation as an exchange for forgiveness of a portion of any outstanding balance remaining from the \$75 million AFA loan.
2. Two elements of the significance criteria require attention. The criteria (Table 4.1-1 and 4.1-2) for assessment of impacts of spatial temporal concentration should include language that appears in other direct effects; “such that it jeopardizes the ability of the stock to sustain itself”. The criteria used for assessment of impacts on other marine mammals (Table 4.1-10) do not parallel potential impacts on other marine mammals. Some revision of the other marine mammal significance criteria is required particularly with respect to northern fur seals.
3. The EA should highlight the potential implications of adopting the potential boundary between AI and BS pollock stocks at 174° W longitude (see page 13 of the EA and the 2003 SAFE chapter). Adoption of this boundary could affect the catch history relevant to any allocation associated with this amendment.
4. The background section on potential factors influencing the decline of Steller sea lions should include a reference to the cascade hypothesis involving killer whales, recently published in Science. In addition, the EA could acknowledge that the decline in Steller sea lions occurred during the period when the AI pollock fishery was high (see page 104).
5. The gear (*e.g.* net configuration), fishing method, horsepower, and regions fished by vessels < 60 ft may result in different catch rates of species other than pollock. Thus, it may be inappropriate to extrapolate bycatch rates from larger, observed vessels to those of smaller, unobserved vessels. This may influence the estimates of impacts on prohibited species, rockfish, and non-target species.
6. The EA should address two additional potential impacts to seabirds or marine mammals: the amendment could increase the potential for introducing rats to islands either through shipwrecks or near-shore mooring and the action could increase the rate of gear loss and potential for entanglement of marine mammals (104).

The SSC notes that the potential impacts on small entities, specifically CDQ communities, of a non-zero allocation of pollock to the AI could be significant (see note 1a, above). Although the present FMP amendment does not specify an allocation and thus does not result in significant RIR/IRFA impacts, the TAC setting process will trigger a need for heightened attention whenever a non-zero TAC is proposed for the AI region, perhaps as soon as this fall.

The SSC supports the requirement for VMS on vessels participating in this fishery. The SSC also notes that one alternative to observer deployment could be a requirement for video monitoring of all vessels. The technology for on-board video recording has improved to the point where it might be possible to implement a video-based system to monitor vessels for at-sea discarding, and to verify no fishing occurred in restricted

areas.

We also note that one consequence of Section 803 is that it codifies the 2.0 million ton OY cap. While there is a provision for an exception to the cap during the years 2004-2008, there is no provision for a scientific review of the appropriateness of the cap. This codification of the cap is problematic; all biological parameters should be subject to periodic review to account for possible changes in environmental conditions, changes in the status of fish populations and the status of populations of other species, and to incorporate additional scientific knowledge. The SSC has recommended a review of the OY as a component of the Preliminary Preferred Alternative of the PSEIS.

### **C-9 National Bycatch Strategy/Alaska Region Implementation Plan**

Sue Salvesson (NMFS AKR) described the status of ongoing development of an Alaska Region implementation plan for the National Bycatch Strategy. Public testimony was presented by John Gauvin.

NMFS has revised the draft implementation plan to reflect SSC suggestions regarding support for experimental (exempted) fishing permits and other options for advancing research related to bycatch assessment and management. NMFS also addressed the SSC suggestion that NMFS highlight the relationship between the objectives of the Alaska Region Implementation Plan and the objectives in proposed revisions to the observer program.

NMFS considered, but did not address SSC concerns regarding inconsistency between the MSFCMA definition of bycatch as discards, and the National Bycatch Strategy which defines bycatch as all non-target catch whether retained or discarded. It was noted that these concerns will probably be discussed at an upcoming national meeting of Council and NMFS leadership. The definition of bycatch is not a matter of mere semantics, but affects fundamental incentives for fishing behavior and affects a suite of current and proposed Council actions. For example, the preliminary preferred alternatives outlined in the Programmatic SEIS identify objectives for PSC and bycatch reduction that may not be feasible under the bycatch definition specified in the National Bycatch Strategy. There are also problems at a pragmatic level associated with precision and bias of fine-scale estimates of bycatch, limited flexibility in the design of bycatch sampling strategies, difficulties in estimating the magnitudes of unobserved fishery induced mortalities, and difficulty and the arbitrariness of tow-by-tow determinations of target species. The implications of these issues relative to their consistency with Council objectives and FMPs should be fully explored.

### **D-1 Scallop FMP**

The SSC received a report from Diana Stram on potential alternatives to modify the scallop license limitation program (LLP). There was no public testimony. The alternatives were developed in response to a request by a permit holder to modify a gear restriction that limits his gear to a single six-foot dredge statewide. The Council report identifies 3 alternatives: 1) status quo, 2) modify the restriction to a maximum of 2 ten foot wide dredges (or 20 feet maximum width), or 3) eliminate the statewide (outside Cook Inlet) 6 foot restriction. The SSC finds the range of alternatives to be adequate. The SSC requests that the analysis by Council staff include a consideration of potential economic effects on the existing cooperative structure of the fishery.