

# North Pacific Fishery Management Council

David Benton, Chairman  
Chris Oliver, Executive Director



605 W 4<sup>th</sup> Ste 306  
Anchorage, AK 99501-2252

Telephone: (907) 271-2809

Fax: (907) 271-2817

Visit our website: [www.fakr.noaa.gov/npfmc](http://www.fakr.noaa.gov/npfmc)

Certified: \_\_\_\_\_

Date: \_\_\_\_\_

## **DRAFT MINUTES Scientific Statistical Committee January 27-29, 2003**

The Scientific Statistical Committee met January 27-29, 2003 in Seattle, WA. The following members were present:

Rich Marasco, Chair,  
Gordon Kruse  
George Hunt  
Ken Pitcher  
Doug Woodby

Jack Tagart, Vice Chair  
Steve Hare  
Dan Kimura  
Terry Quinn

Keith Criddle  
Sue Hills  
Seth Macinko  
David Sampson

Mark Herman unable to participate in committee discussions. Rich Marasco and Jack Tagart were re-elected chairman and vice-chair respectively.

### **C-2 (a) CRAB MANAGEMENT: Committee Reports and Trailing Amendments**

The SSC received committee reports and staff (Mark Fina, Darrell Brannan) presentations. Public testimony was provided by Joe Sullivan.

#### ***Data Collection***

Darrell Brannan and John Garner reported on continuing discussions by the Data Collection Committee. The Committee was formed to develop a mandatory data collection program that meets Agency and Council needs while satisfying industry concerns. While the Committee has achieved agreement on many important issues, some issues remain outstanding. **The SSC commends the Committee for progress and encourages the Committee to continue to work towards mutually agreeable resolution of the remaining issues.** The principle remaining issues deal with the degree of aggregation of reported data and the level of information provided regarding fixed costs. In addition, there are ongoing discussions about balancing opportunities for industry to correct inadvertent reporting errors against the need for enforcement actions in response to willful noncompliance with data reporting requirements.

Industry concern about providing disaggregated data seems to be motivated by concerns about inadvertent release of confidential data. The SSC encourages the establishment of safeguards for data access that will alleviate industry concerns about the release of confidential data. The level of data aggregation affects the quality and scope of analyses that can be conducted. As we noted in our December 2002 minutes:

*“The SSC notes that if the data are aggregated prior to submission, the quality and type of economic analyses will be affected. For example: statistical analysis of variations in reported data would not be characteristic of the actual level of variability in the industry; erroneous conclusions may be made in examining average costs data over a very large and very small processor and/or vessels; it may not be possible, depending on aggregation requirements, to identify economic impacts on some of the more remote Alaska coastal communities; and, observation and reporting errors, or outliers in individual data, cannot be separated out from the aggregated data. The researchers who use the data should both be responsible for the use of the data and accountable (to the extent possible) for the accuracy of data used. In the opinion of the SSC separating the individual data from the researchers who use the data is undesirable. Therefore, the SSC recommends that the data committee work on resolving issues that currently serve as obstacles to accessing disaggregated data.”*

The distinction between fixed and variable costs is arbitrary. While all costs are variable through time, some costs vary with greater frequency than other costs. While information about annual operating expenses may be sufficient for certain analytic purposes, information about investment and disinvestment in durable capital is critical for analyses of the actual or potential long-term economic consequences of management actions.

Although rationalization program will include the collection of industry cost data, there is a need to establish a program for collecting data related to community impacts. While the location-specific expenditure data and employment information provide important data that will contribute to an improved understanding of community impacts, there is need for the development and maintenance of additional information about communities.

### ***Binding Arbitration***

Mark Fina reported on the Binding Arbitration Committee and presented the results of the simulated arbitrations. It is important to recognize the limitations and strengths of the simulated arbitrations. The limitations include that the simulations were designed on an abstraction of the bargaining structures being considered by the Council and that the subjects involved lacked first-hand knowledge of the fishery or personal knowledge of the harvesters and processors engaged in the fishery. These limitations are a result of reasonable decisions to structure a model that is amenable to analysis of the structural implications of alternative arbitration program designs.

The SSC notes that binding arbitration should not be construed as a panacea. Arbitration is a tool that may be useful in negotiations that would otherwise reach impasse. The design characteristics of arbitration systems affect the bargaining strength of negotiating parties. The discussion paper by Dr. Plott provides a useful illustration of this principle. It was reported in public testimony that the simulated arbitrations have been helpful in framing committee discussion and understanding of alternative arbitration structures.

### ***Community Protection***

Mark Fina reported on continuing discussions by the Community Protection Committee. The SSC cautions against the presumption that the various protection measures will in fact be advantageous to the relevant communities. As noted in the document, the protection measures could increase market concentration and lessen market competition. **The SSC recommends that the uncertainty regarding the actual outcome of these measures be more clearly emphasized.**

The Council is contemplating extensive and novel "community protection" measures and there is, to date, no research plan focused on these community issues. It is clear that many of the concerns underlying the community protection options for crab rationalization program will confront the Council as it progresses

towards Gulf rationalization. The opportunity to gather critical pre-implementation baseline data is fleeting. **The SSC urges Council staff and NMFS to work on developing a research plan that could provide useful information.**

### **C-2 (a) CRAB MANAGEMENT: EIS Progress Report**

Gretchen Herrington (NMFS-AKR) described progress towards development of the crab management EIS. Target completion date is December 2003. The schedule for completion is ambitious, particularly because of the complex nature of the impending changes in the management of the crab fishery.

### **C-3 Steller Seal Lions**

Gordon Kruse, who served on the NRC committee, presented the National Academy of Sciences/ National Research Council Report on the Decline of Steller Sea Lions in Alaskan Waters. SSC members were presented a copy of the report for review prior to the meeting and the report is available on the NRC website for others interested in reading it. Public comment was provided by Bob Storrs, Unalaska Native Fishermans Association.

The SSC was favorably impressed with the quality and thoroughness of the report. While the report looked extensively at possible causes of the decline and evaluated the probability of the significance of each commonly proposed hypothesis, the focus was on factors that could be preventing population recovery and proposing ways that these might best be evaluated. Through modeling and evaluation of qualitative population response variables the committee concluded that it was probable that the population was currently regulated by top-down processes.

The SSC mentioned that an analysis by Daniel Goodman and Daniel Hennen of Montana State University on Steller sea lion population dynamics found evidence of density dependence prior to 1991 but did not find similar relationships after that date. This suggests that during recent years bottom up processes did not regulate the population and supported NRC findings.

Dr. Kruse was asked if the committee discussed the appropriateness of the finding by NMFS that the groundfish fishery in the EBS, AI, and GOA posed jeopardy to SSLs considering that they concluded that current population regulation was most likely through top-down mechanisms. He stated that they had not discussed this topic. The SSC suggested that, in light of current data and the NRC analyses, NMFS should re-evaluate the jeopardy finding for the groundfish fishery.

There was discussion on the adequacy of the various indices currently being used to evaluate the nutritional relationship of Steller sea lions to their environment such as juvenile growth, condition, and behavior. Table 6.2 in the NRC report indicated these indices overwhelmingly suggested top-down population regulation. Still there is some level of uncertainty as the possibility exists that sampling schemes and small sample sizes are masking the effects of bottom-up processes.

There was substantial interest in the adaptive management experiment proposed by the NRC Committee in which paired sets of rookeries would be subjected to differing management schemes of fishing and fishing closures. The NRC Committee believes that this could be done in such a way that the fishing industry would lose little opportunity to fish and in fact speculated that by opening areas that were now closed that additional opportunity may be provided. The SSC, while supportive of the concept, wondered if such an approach would be practical due to the highly contagious nature of both Steller sea lion rookeries and fisheries but

supported the idea of exploring the concept with a group of fisheries biologists, fishermen, local community representatives, and Steller sea lion biologists to evaluate the practicality of such an experiment. The response variable of such an experiment would be the performance of the Steller sea lion population. The experiment would not necessarily provide information regarding the impact mechanism, only whether or not there was a fishery effect. It was pointed out that a fishing impact may not necessarily be negative; e.g., a situation in which fishing of adult fishes results in increased availability of small fishes (forage fishes) important for juveniles sea lions.

Despite support for adaptive management schemes, the SSC is concerned that ESA regulations might preclude their adoption. Moreover, public testimony by Bob Storrs of Unalaska Fisheries Association expressed concern about the proposed experiment as it might have detrimental effects on local communities because of the complete closures around some rookeries.

The identification of Steller sea lion critical habitat as it pertains to the ESA was discussed by the SSC. It was suggested that identification of critical habitats could be refined using more recent information.

Appendix D of the NRC report documents the seemingly low abundance of Steller sea lions in the Bering Sea/Aleutian Islands in about 1877. A SSC member also commented on an account he had read suggesting low numbers of Steller sea lions in Alaska in early recorded history. These observations raises the question of whether SSL abundance has experienced large natural fluctuation.

#### **C-4 Essential Fish Habitat**

The SSC heard a report on Essential Fish Habitat issues by John Kurland, John Olson, and Cathy Coon. Staff focused on recent activities of the EFH committee, and presented the list of current alternatives and maps with proposed closure areas. Supporting documents received at the meeting included notebook briefing materials and supplemental documents on mitigation alternatives, research closure areas, and draft maps. Public comments were received from John Gauvin, Ben Enticknap (Alaska Marine Conservation Council), Astrid Sholtz (Ecotrust), Whit Sheard (The Ocean Conservancy), Geoff Shester (Oceana), Heather McCarty (Central Bering Sea Fishermen's Association), and Donna Parker (Arctic Storm).

Consideration of EFH, habitats of particular concern, and potential additional measures to reduce habitat effects of fishing are extremely important, and pending decisions may have long-term consequences. These issues are critical to compliance with the Magnuson-Stevens Fishery Conservation and Management Act, and they are required to satisfy current litigation under a pressing court-mandated deadline.

The SSC heard a status report on this issue at its December meeting. As noted in its minutes, the SSC "*found the alternatives difficult to evaluate because there was no statement of goals or objectives of the mitigation effort. There was no clear rationale for the particular closures proposed.*" Moreover, the SSC was "*unable to determine whether the closed areas are intended to achieve a specific reduction in fishery impacts or establish a specific percentage of protected habitat*" and was unable to tell "*whether the emphasis is on protecting habitat that supports commercially important fish species or protecting specific biogenic features.*" In addition to other comments, the SSC provided a list of 10 items that should be included in the developing EFH documentation. The requested statements of goals, objectives, methods to evaluate success of taking alternative actions, and other requested information have not been provided. All of the previous SSC comments continue to apply, as stated in the December meeting minutes.

The SSC recognizes the hard work performed by staff and other members of the EFH committee. Their task is onerous, considering the limited time and resources available. Nonetheless, the SSC continues to find it

extremely difficult to provide meaningful scientific input on this critical issue. Also, the SSC found it very difficult to digest the alternatives and associated detailed maps resulting from the January 26<sup>th</sup> EFH committee meeting, given the lack of time for review of the draft documents. Testimony indicated that this very hurried process has also seriously compromised public involvement. Staff is similarly affected.

Beyond a request that the staff respond to the comments provided in the SSC's December meeting minutes, the SSC offers the following guidance.

Conceptual approach. Documentation should begin with a conceptual approach (overall strategy) to the problem. Clearly, the Rose-Fujioka model has played a significant role in the direction taken by the EFH committee and staff. EFH must be designated for all FMP species. However, with the exception of the slope rockfish complex, it is unclear for which of the FMP species the mitigation alternatives have been developed. The conceptual approach should be clearly laid out to indicate whether slope rockfish mitigations is the only EFH action proposed to satisfy MSFCMA and legal requirements or whether it is simply part of an ongoing and iterative process. Likewise, the conceptual approach for addressing both EFH and HAPC should be clearly articulated.

Goals and objectives. The MSFCMA and Council's EFH problem statement provide the broad goal for this issue. However, missing from the documentation is a clear statement of the specific goals and objectives of the mitigation alternatives and when/where mitigation is required. Some have argued that sustained productivity of Alaskan groundfish fisheries does not prove evidence of loss of productivity from habitat damage. On the other hand, linkages between habitat and productivity of FMP species are virtually impossible to establish experimentally. Based on the NRC trawling effects report and other reviews, the presumption is that mobile bottom-contact gear affects habitat.

Alternatives. It appears that the alternatives may fall into several categories. One (Alternative 5) appears to have something to do with protection of corals and sponges, and, presumably, managed fish species that utilize these habitats. Another category of alternatives (2 & 3) appears to relate to slope rockfish habitat, whereas others seem directed toward protecting a fixed percentage of some types of habitats (alternative 6). The intent of rotational closures, alternatives 4 and 5 is unclear. The SSC heard discussion about alternatives intended to constrain fishing to current fishing grounds to avert adverse effects in non-impacted deepwater areas. In any case, it may be useful to organize the alternatives into categories pertaining to the specific goals and objectives of the alternatives. **In stating these, it is not sufficient to state that the goal is "to protect corals" or "protect slope rockfish habitats." Rather, the goal statements should speak to the intent and degree of the protections and their intended FMP-related species and habitat benefits so that, if implemented, their efficacy can be evaluated.**

Lacking a clear understanding of the overall conceptual approach and specific goals and objectives of the various alternatives, the SSC found it virtually impossible to comment on the scope of the alternatives and their specifications. Description of the alternatives should begin with their origin and justification. As reported in the NRC trawling-effects report and the SSC's December minutes, three general tools are available to mitigate potential effects of trawling on benthic habitats: (1) closed areas, (2) effort reduction, and (3) gear modifications. All alternatives presented to date focus solely on the use of closed areas. It is not clear why some combination of all three measures was not considered. The NRC report indicated that the particular combination selected depends on the situation.

The SSC heard and discussed testimony relating to the piecemeal nature of some of the alternatives. For example, alternatives 2 and 3 address slope rockfish habitats in the Gulf of Alaska (and Aleutian Islands), but not in the Bering Sea. Alternative 5b considers a tradeoff between coral bycatch and groundfish catch, but appears to limit the approach to the Aleutians. Alternatives should be considered to address a species

complex or habitat type throughout its range, as well as alternatives that consider all the perceived sensitive EFH habitats collectively rather than alternatives that seem to require choosing only one over another. **It is essential to present a clear rationale for the selection of areas designated for closure. These reasons should be scientifically justifiable, and not open to criticism that they solely reflect the least desirable fishing locations.**

Regarding alternative 5b, an approach that considers both coral habitats and groundfish catches has merits, but there are problems associated with a criterion based on high coral bycatch rate and low groundfish catch rate. It is possible to create large adverse affects on corals, even if the bycatch rate is low, when total groundfish catches are large. Likewise, low sample sizes (i.e., few tows) can lead to spurious results when only considering rates. Therefore, such attempts to trade off coral bycatch and groundfish catch should consider total removals as well as their rates.

Questions were raised about alternative 4, including the rotational closures. Public testimony indicated that the purpose was to afford some measure of habitat protection while providing for fishing opportunities. However, it is not clear that all of the rotational closed areas were established in areas where fishing actually occurs. The duration of open and closed periods was questioned. The supplemental briefing document shows that, over a 20-year period, each of 5 subareas are open to fishing for 16 years and closed for 4 years. Recovery time is estimated as 2-5 years. Thus, during the 4-year closure, the closed area would provide for 0-2 years of “climax” communities. So, each of the 6 areas would be impacted or recovering 90% or more of the time. Thus, this type of closure, while disruptive to fishing, will provide little to no meaningful benefit to FMP species and their habitats. Rotational closures have been recently questioned for their utility as a habitat protection measure. If Alternative 4 is to be considered seriously, it appears that other options need to be considered with much longer closed periods.

Research closures. A draft research plan and associated maps provided an example of a preliminary research closures under the status quo. Staff comments indicated that research plans for each alternative are still under development, and specifics for research under the status quo and alternatives are unavailable. **The SSC believes that it is crucial to include research to test the efficacy of fishery closures under the status quo and all mitigation alternatives. The research plan should be tailored specifically and designed explicitly to test the effectiveness of each alternative.**

Analysis. The EIS should include analysis of the following: (1) ability to meet the stated objectives; (2) biological consequences in terms of recolonization with respect to ocean currents, seed stocks, and generation time of affected species; (3) economic and social costs and benefits by sector and community; and (4) enforceability.

In summary, the SSC is frustrated with the fast pace of developing specific EFH alternatives without clear statement of the goals and objectives and overall strategy for fishery management policy development.

## **C-6 IR/IU: Trailing Amendments C and D**

The SSC received reports from John McCracken of Council staff and Marcus Hartley of Northern Economic on trailing Amendments C and D to the IR/IU flatfish regulations. Public testimony was provided by Donna Parker (Arctic Storm).

### Trailing Amendment C-Establish Minimum Groundfish Retention Standard

The purpose of this trailing amendment is to provide an alternative groundfish retention standard to the flatfish retention requirements under IR/IU in the BSAI. Due to increasing complexity of this issue and need

for further guidance from the Council, a full EA/RIR/IRFA could not be prepared in time for this meeting. In its stead, a Discussion Paper was prepared which contained many elements of the an EA/RIR/IRFA. While the Discussion Paper addresses a number of important issues, the SSC believes there is a need for further discussion of several points before the EA can be released for public review.

An item of major concern is the issue of enforceability. The NMFS has stated that no minimum groundfish retention program can be enforced without use of a flow scale. To measure a groundfish retention rate, estimates of both total catch (denominator) and retained catch (numerator) are required. It is NMFS opinion that only flow scale measurements of total catch will withstand legal challenge. Due to space limitations, flow scales are practical only on vessels greater than 125' in length. In essence then, the regulations resulting from this Amendment is unenforceable for vessel under 125'. Other issues that need to be considered are monitoring of use and calibration of flowscales. Observers do not generally monitor every haul on catcher-processor vessels. The Discussion Paper gives brief mention of alternatives for monitoring every haul, including 100% observer coverage, video surveillance, and reduced fishing frequency. However, a greatly expanded discussion of the impacts of these alternatives is warranted.

Problems in determining the denominator of the groundfish retention rate appear to be minor in relation to potential problems in determining the numerator. The proposed method for estimating retained catch involves the use of NMFS product recovery rates (PRRS). Round weight of retained catch is estimated by dividing retained product weight by the published (i.e., official) PRR. The Discussion Paper did not report on the source and history of the published PRR, and it is likely these values may be dated. The SSC foresees problems using this method. Vessels with actual retention rates greater than the official rate, will be able to discard a larger fraction of their total catch than vessels with retention rates less than the official rate. Vessels found in violation of a minimum retention rate are likely to challenge NMFS official rate as unrepresentative of industry's realized retention rates.

#### Trailing Amendment D-5% Exemption

The SSC received the EA/RIR/IRFA on this amendment and recommends it be sent out for public review.

### **C-7 Observer Programs**

Nicole Kimball, NPFMC council staff presented a "Discussion paper on options for Observer Program restructuring" and the OAC report on the review of this document. Public testimony was presented by Michael Lake, Alaska Observers, Inc. who discussed the importance of an alternative approach for providing insurance for observers.

The SSC commends the Agency and the OAC for presenting a clearly defined set of options for moving forward on longstanding problems. The Agency's document noted the need for federal funding combined with some fee based mechanism to allow the changes to move forward. The OAC highlighted the importance of a flexible, scalable observer program that can be tailored to meet the needs of individual fisheries as they evolve, potential bias in fisheries that are covered at 30%, and the lack of equity that allows observer costs to be high relative to gross earnings.

The SSC concurs with key OAC recommendations:

1. That a new program should have NMFS contracting directly with Observer providers.
2. That the initial program under the new regime should be small in scale, perhaps addressing the 30% coverage fleet in the GOA, and expanding to similar fleets in the EBS or the under 60' fleet as problems are worked out.

The SSC also noted the importance of studies that could provide some clearer answers to some statistical questions that surround the Observer Program:

1. Establish baseline data that would measure coverage by area, time, and fishery. This would allow examination of the extent of fisheries and observer coverage overlap. Sue Salveson noted that fish ticket data and VMS data are available from which to make these comparisons.
2. Analyze data to determine what would be appropriate levels of observer coverage. These analyses would assume that vessels selected for coverage are randomly selected and that non-observed vessels are behaving the same as the observed vessels.
3. In particular the SSC believes that an experimental approach may be of value in evaluating the potential bias that may occur in observer data. Currently, there are concerns about possible bias in the data from the segment of the fleet that has only 30% observer coverage. Because the fishers have some choice over when they will have an observer on board, the observed trips probably are not representative of the unobserved trips in terms of fishing locations. Furthermore, there may be subtle differences in fishing operations when vessels have observers onboard. Modifying the observer system so that NMFS staff chooses the trips that will be observed may provide more uniform representation of fishing locations but this change will not rectify the problem of observed vessels having modified fishing behavior. For the revised observer system there may be merit in conducting some experiments that attempt to directly measure the bias of the current system. A portion of the new system could have the fishers selecting the trips that would be observed and a separate portion would have the observed trips selected by NMFS staff. An additional portion of the fleet could have 100% observer coverage for extended periods; say several months, with the idea that these vessels would be more likely to behave as if they were unobserved. Contrasts amongst these three portions might provide some indication of the two kinds of bias that are probably inherent in the current observer system.

## C-8 Halibut Charter

Rob Bentz and Allen Bingham (ADF&G) reported on comparisons of halibut harvests reported in the logbook entries with estimates derived from annual statewide surveys of licensed anglers. The analysts clarified that their studies examine the appropriateness of using logbook data to determine the magnitude of total sport catches. To that specific question, the finding is that the logbook data are not consistent with estimates derived from the statewide survey of licensed anglers. The analyses were not structured to address whether the logbook data are suitable as a basis for determining eligibility for or the magnitude of initial charter-vessel quota shares.

In our October 2002, the SSC noted that:

*“There appear to be two issues related to use of halibut charter logbook data and implementation of a Charter Halibut IFQ Program. The first is the appropriateness of using these data to establish whether or not a vessel was active in the fishery during the qualifying years (1998-1999). The second is whether logbook data are representative of the distribution of catch among participating charter vessels in those years, and suitable as documentation for a catch-history based initial allocation of quota shares. Finally, the suitability of the logbook data as a basis for GHL management is also in question.”*

In response to the first two issues raised in our October 2002 minutes, we note that the logbook requirement is public record; consequently **compliance with the logbook requirement could serve as a criterion in determination of initial allocations**. Moreover, **the SSC finds that it would be reasonable for the Council to use the logbook data in determining whether a vessel was active in the fishery during the qualifying years (1998-1999 in 2C, 1998 in 3A) and/or as a basis for determining an initial allocation of quota**



**shares.** Other approaches for determining initial allocations are also available, for example, equal shares, random share assignment by lottery, or shares proportional to historic days fished.

Whether the logbook records are appropriate as a basis for GHM management depends on whether it is more important to have accurate estimates of sportfishing catches or more important to have timely estimates. We also note that if there is concern about the accuracy of information recorded in charter operator logbooks, it might be advisable to consider designing a strategy for sampling charter clients as they disembark.

## **D-1(b) ROCKFISH MANAGEMENT**

The Committee heard public testimony from Carl Haflinger (representing the trawl fleets of the Bering Sea), John Gauvin, Ed Richardson (Pollock Conservation Cooperative), and Donna Parker (Arctic Storm).

The SSC considered three issues related to rockfish management: 1) rockfish research and management, 2) criteria for lumping or splitting rockfish assemblages, and 3) use of commercial fisheries data to estimate northern rockfish biomass in the EBS

### 1) Rockfish Research and Management

Paul Spencer (NMFS/AFSC) on behalf of the Rockfish Working Group summarized material presented in a "Discussion Paper on Rockfish Research and Management". He reviewed what is known about stock structure and life history characteristics for five BSAI rockfish species (Pacific ocean perch, northern, roughey and shortraker rockfish, and shortspine thornyhead), and he described the quality of trawl survey data available for these species and possible methods for improving the surveys. Recent genetic research suggests population structure at fine spatial scales for POP, weak structuring at broad spatial scales for shortraker rockfish, and little structure for northern rockfish. For roughey rockfish there is evidence of two reproductively isolated "species". Virtually nothing is known about the areas used by these species for breeding and parturition or about their early life histories. Regarding the trawl survey data and estimates of biomass, rockfish often are patchily distributed and can occur in very rough habitats, so that trawl survey estimates of biomass are quite variable and may also be biased (because the surveyed areas are not representative of untrawlable grounds). Some modest improvements may be possible from modifications to the trawl survey gear or from modifications to the sampling design, such as adaptive sampling approaches or surveys that use sonar to identify areas with rockfish aggregations. The surveys provide length and sex composition data and otoliths, but age-reading techniques have been a limiting factor, especially for shortraker rockfish and shortspine thornyhead. Also, maturity studies are needed for all five species.

The SSC noted that the rockfish discussion paper does not address how the Council could move towards separately managing the five individual rockfish species identified in the report, either in terms of setting species/area ABCs and OFLs or by using other management tools. Also, the report does not consider other minor rockfish species in the complex, which could be in danger of becoming overfished if they are caught with other members of the complex but are less productive and resilient. Finally, the report does not discuss how the residue of species in the complex would be managed following the removal of some species from the complex for management as separate species.

### 2) Lumping/splitting rockfish assemblages

Sarah Gaichas (NMFS/AFSC) gave a presentation about efforts by the ad hoc Other Species working group to develop a general framework for prioritizing management decisions about lumping or splitting species complexes, such as the BSAI rockfish complex.

The working group was formed in summer of 2002. Their recent efforts have been focused on developing a decision matrix to facilitate species complex management decisions. This matrix is, organized around two dimensions: vulnerability and data quality. The working group constructed a preliminary decision matrix following receipt of evaluations from several stock assessment authors concerning data quality and vulnerability and the concept shows promise as an information classification scheme. The working group indicated that it will meet soon to expedite consideration of criteria for classification of rockfish complexes.

The SSC is fully supportive of the working group's process and the direction in which it is proceeding. The SSC views management of species complexes as a multi-dimensional issue and urges expansion of the number of factors consider in the lumping/splitting decision-making process. Examples of additional factors include, the ability of fisheries to target spawning aggregations, selective harvest by age or sex, general life history traits, rarity in surveys rather than just sampling variability, costs for collecting and improving data, the feasibility of managing remaining species of interest, and the potential costs incurred by other fisheries if OFL of a small stock component is exceeded.

Further discussion is also needed on the type of decision rule to be produced. If a strict rule is designed, then interested parties may seek exceptions in many situations. If the rule is not sufficiently unambiguous, then the lumping/splitting decisions may continue to be variable and defeat the purpose of this exploration.

In addition, the Council may wish to explore alternative management measures to splitting out species assemblages. Such alternatives include time/area closures, refuges, reducing TAC by a specified safety factor, and multi-species IFQ's.

### 3) Northern rockfish biomass in the EBS

During the December 2002 SSC meeting, the SSC reviewed reports on the annual status of stocks, and made recommendations to the Council on Acceptable Biological Catch (ABC) and Overfishing Levels (OFL). During its review of the status of Bering Sea and Aleutian Islands northern rockfish, the SSC received public testimony challenging the credibility of biomass estimates of northern rockfish abundance in the Eastern Bering Sea (EBS). In past years, the SSC had accepted trawl survey biomass estimates as the best estimates of northern rockfish abundance in both the AI and EBS and had set ABC and OFL levels for the combined stock as the aggregate of the independent regional estimates. However, in December 2002, after considerable discussion and debate "*the SSC concluded that there was no reliable estimate of northern rockfish biomass for the EBS*". As a consequence of this finding, the SSC recommended setting EBS northern rockfish ABC and OFL based on a tier 6 harvest strategy, i.e., on average historic catch. Catch allowance and overfishing levels for the Aleutian Islands northern rockfish were set using tier 5 harvest strategies based on estimated biomass from trawl surveys and a reliable estimate of the natural mortality rate. But unlike prior years, the SSC retained the independent regional ABC and OFL recommendations without aggregation across regions.

Acknowledging the challenge to the credibility of northern rockfish biomass estimates in the EBS, the Council passed a motion seeking immediate analysis by the NMFS of all available data, including commercial fishing data, in an effort to provide an improved biomass estimate. Drs. Jim Ianelli and Paul Spencer of the NMFS/AFSC completed such an analysis and reported to the SSC at this meeting. In addition Dr. Spencer provided a review of the state of knowledge of rockfish populations throughout the BSAI and GOA, including a discussion of the evidence for stock structure. Dr. Spencer reports that although sample size was small, results from genetic analyses showed little evidence of pronounced northern rockfish stock structure among the regions tested. The Council requested abundance estimates of EBS northern rockfish biomass, based on analysis of commercial fishing data, suggest that biomass is likely in the range of 5,900 to 37,500 mt. The analyst caution against blind acceptance of these figures as factual representations of actual stock size due to the nature of the critical assumptions required in the analysis. Nevertheless, the authors advised the SSC

that these results support the notion that harvests as large as the tier 6 recommended OFL are unlikely to pose any substantive conservation risk to this population of fish.

Having received the reports mentioned above, the SSC is persuaded that our historic approach of aggregating the independent regional estimates of allowable catch and overfishing levels is appropriate for this stock. Therefore the revised ABC and OFL values apply to the aggregate BSAI northern rockfish and are 7,101 mt and 9,468 mt respectively.

#### **D-1(d) DSR Retention**

The SSC received a presentation of the EA/RIR/IRFA on “Full Retention of Demersal Shelf Rockfish in Longline Fisheries in the Southeast Outside District” from Ben Muse and Nina Mollet from NMFS AKR Sustainable Fisheries. The SSC found the presentation to be clearly written and included necessary information for evaluating alternatives.

Unfortunately, NOAA GC has expressed legal concerns that Alternative 2 would likely exceed NMFS’ authority under the Magnuson Stevens Act concerning disposition of legally caught fish. Although Alternative 3 is acceptable to NOAA GC, it differs from Alaska state regulations. State regulations allow the sale of DSR over 10% with the forfeiture of revenues to the State. Alternative 4 would require 30% coverage of halibut hook and line and non-target hook and line fisheries in the SEO management districts. The EA/RIR/IRFA concludes that an observer program could provide good data, however, the costs of carrying observers for small vessels may be high. The SSC notes that coverage problems associated with the existing 30% program may also be an issue.

Howard McElderry, from Archipelago Marine Research, Canada, described how Canada is approaching a rockfish bycatch problem using a flexible landing regulations and electronic monitoring. The SSC notes that the Pacific Council manages 100% rockfish retention in arrowtooth and dogfish fisheries using Experimental Fishing Permits. These might be useful areas to explore.