

North Pacific Fishery Management Council

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MINUTES Scientific and Statistical Committee September 22-24, 1997

The Scientific and Statistical Committee of the North Pacific Fishery Management Council met September 22-24, 1997 at the Double Tree Hotel in Seattle, WA. All members were present with the exception of Marc Miller:

Keith Criddle, Chair	Jack Tagart, Vice-Chair	Doug Larson
Harold Weeks	Dan Kimura (Alt.)	Steve Klosiewski
Doug Eggers	Sue Hills	Richard Marasco
Terry Quinn	Al Tyler	Seth Macinko

B-2 CRAB FISHERIES REPORTS

The SSC received presentations from Peggy Murphy (ADF&G) and Bob Otto (NMFS) regarding the status of BS/AI crab stocks, the results of recent stock surveys, and anticipated management actions for 1998.

C-1 INSHORE/OFFSHORE 3

The SSC received a staff presentation of the "sector profiles" document. The SSC also received public testimony from Ed Richardson, Stephen Taufen, Ken Stump, and Rebecca Baldwin. From the SSC's perspective, little has changed since the June meeting, and we refer the Council to our June minutes on this item. Once the Council specifies alternatives for analysis, the SSC suggests that the staff convene a conference call with the SSC to discuss the analytical outline and methodological approach. As the analysis proceeds, the SSC requests that data sources be clearly documented. The components of various industry sectors incorporated in the data being discussed should be made clear. The SSC notes that any set of alternatives may change location and timing of fishing effort relative to marine mammal and seabird feeding areas. Therefore, any analysis of specific alternatives should also include examination of potential impacts to other marine resources.

Deviations from present conditions may affect, positively or negatively, net national economic benefits, they will probably affect the distribution of net revenues between competing sectors of the affected fisheries, and may have spill-over impacts on other fisheries. There are many potential bases for a Council decisions. Due to data limitations and the inability to predict responses to regulatory changes, the SSC does not believe that estimation of net economic benefits will provide a defensible justification for choosing amongst alternative inshore/offshore allocations.

C-3(c) SABLEFISH ROLLING CLOSURES

The SSC reviewed the draft EA/RIR on measures to avoid fishery interference with the sablefish longline stock assessment survey. These measures were designed to eliminate potential bias in estimates of sablefish abundance from the survey, due to interference by commercial fishing vessels fishing in the survey area at the time of the survey. The longline survey is an important component of the stock assessment program for sablefish. Maintaining the scientific integrity of the survey is critical to conservation and management.

The draft EA/RIR is a modest revision of the draft reviewed by the SSC in June. The SSC notes that the survey has been effectively restructured based on discussions with affected user groups in a way that eliminates potential interference from non sablefish-targeted fisheries while maintaining temporal and area coverage consistent with historical surveys. The document details a system of rolling time closures of deepwater fishing areas, which eliminates potential interference with the survey.

The SSC suggests that a table be provided that shows the history of survey timing, and estimated mean and variance of abundance indices. This information would facilitate evaluation of the costs and benefits of the proposed measures. The SSC also notes that the claim of “no additional enforcement” costs is likely incorrect and should be modified. The SSC recommends that the EA/RIR be sent out for public review.

C-4(a) HALIBUT CHARTERBOAT MANAGEMENT

The SSC received a staff update on this issue. Public testimony was received from Mike Bethers, Barry Bracken, Gale Vick, and Tim Evers. Doug Vincent-Lang (ADF&G), Ed Dersham (Alaska Board of Fisheries), and Bob Trumble (IPHC) also provided comments to the SSC.

The condensed draft EA/RIR generally addresses the concerns and requests expressed by the SSC after review of the earlier EA/RIR. However, the SSC believes that the quantitative analyses still warrant further qualification. While there are many potential bases for Council decisions, the SSC wishes to reemphasize our assessment that the quantitative analyses have sufficient uncertainty with respect to both magnitude and direction of changes in net benefits that they should not be used to provide justification for a Council decision.

C-4(b) LOCAL AREA MANAGEMENT PLANS

The SSC received a staff presentation on local area management plans for halibut.

C-4(d) HALIBUT POSSESSION LIMITS

The SSC received to a staff report on the proposed draft EA/RIR for changing the sport fish bag and possession limits for halibut. Public testimony was offered by Mike Bethers, Barry Bracken, and Seth Bowen. Doug Vincent-Lang (ADF&G) also provided comments.

Two problems were identified, the first dealing with the definition of “in possession” addresses an apparent loophole between federal and state regulations. The second problem was not very well articulated but appeared to address the allocation of halibut between recreational and commercial harvesters. Specifically, it is suggested that existing daily bag and possession limits constrain recreational harvesters access to halibut. The SSC finds that the problem associated with the definition of “in possession” is well stated and the alternative proposed addresses the problem. However, we do not find a clear problem associated with the bag and possession limits,

nor do we recognize a set of alternatives that address the supposed problem. With respect to both problems, we find the EA/RIR deficient in its evaluation of the potential social and economic impacts under the proposed alternatives.

Shortcomings of the draft document include: 1) failure to model changes in catch-per-angler-day; 2) failure to model the effect of regulatory changes on the demand for halibut sport fishing trips; 3) the assumption that angling does not contribute to the consumer surplus of Alaskan residents belies common sense and economic theory; 4) the document relies on questionable quantitative analyses drawn from the Halibut Charterboat EA/RIR which were criticized for inadequacy in previous SSC minutes.

We recommend that this analysis not be distributed for public review at this time.

C-5(d) MAGNUSON STEVEN ACT PROVISIONS

It was brought to the SSC's attention that NMFS plans to release final guidelines for implementation of the MSFCMA in October. Examination of the draft guidelines sent out for public review indicated that there are features, such as the proposed overfishing definitions, that require careful analysis to determine if the Council's FMPs comply. The SSC looks forward to participating in this analysis.

Dave Witherell presented an initial draft of the essential fish habitat reports for the Bering Sea and Gulf of Alaska groundfish resources. Tom Okey of Center for Marine Conservation provided public testimony. The drafts present EFH descriptions based on our knowledge of distribution from resource surveys and fishery activities. Available information is categorized by life history stage based on quality and quantity.

The SSC commends the technical team for their approach to capturing and presenting the available information in a readily understandable format. We appreciate the technical teams' creativity and responsiveness to the intent of the Sustainable Fisheries Act. Designating level 0 distribution information captures opportunistic observations and complementary criteria for EFH emphasize habitats and ecological processes to supplement distribution information. It is important for the Council and the public to realize that our understanding of habitat and ecological processes influencing and limiting groundfish production is general rather than detailed and specific. This area of science is not well formed, and basic questions have no clear answers at present. Sustainable fisheries are just as dependent on productive high quality habitat as they are on healthy spawning stocks. The documents represent a significant first step in characterizing our understanding. As such, we expect that they will serve as guides for further efforts in habitat related data collection and presentation.

Solicitation and incorporation of local and traditional knowledge into EFH identification and description will be an important but difficult task. The schedule mandated by Congress for identification and description of EFH is very tight. Therefore, we suggest that development of appropriate contacts and mechanisms for collection of local and traditional knowledge be developed on a parallel track. Clearly the EFH documents will evolve over time and knowledge from other sources will be welcomed during the process. The Council's Ecosystem Committee has discussed this issue in a related context. We encourage the technical teams to share thoughts and work with the Ecosystem Committee toward this common goal.

C-7 OBSERVER PROGRAM

The SSC received a presentation from Dr. Bill Karp (NMFS) and Al Didier (PSMFC) describing the options being considered for the third party procurement system. This system will be managed jointly by the NMFS and PSMFC under a joint project agreement (JPA). Options being considered address (1) the role PSMFC plays and

(2) the method of assigning coverage among observer contractors. The SSC suggests that in selecting among the various options constructed to address these issues, the impacts on data quality need to be carefully examined and heavily weighted. The SSC believes the retention of high quality observers is essential to maintaining a reliable program. The SSC recommends that observer program staff work with PSMFC to identify criteria for rating observer performance.

D-3 INITIAL GROUNDFISH SPECIFICATIONS FOR 1998

Most initial 1998 groundfish specifications represent roll-overs of 1997 final specifications. We expect changes in many assessments as data from 1997 surveys are incorporated into the final SAFE document in December. Therefore, we offer specific comments on a limited number of species or assessments; otherwise we concur with the Plan Teams' preliminary recommendations without further comment. We look forward to the chapter authors' responses to the general SAFE issues we listed in the December 1996 SSC minutes:

- (1) Biomass and yield projections for an $F_{40\%}$ harvest strategy under varying assumptions regarding recruitment and for other relevant exploitation rates.
- (2) Standard errors or confidence intervals for key parameters.
- (3) Sensitivity analyses for key parameters and input assumptions.
- (4) Weightings given to individual data components should be reported and justified.
- (5) Risk analyses.

We recognize that many assessments already incorporate these elements, and that some (e.g., standard errors and confidence limits) may not be possible for some assessments. However, to the extent practicable, such efforts should be continued and expanded.

D-3 (a, b) Bering Sea/Aleutian Islands

Walleye Pollock

The SSC concurs with the Plan Team's proposed ABC for EBS and AI pollock; we have amended the proposed ABC for the Bogoslof area. The 1997 Bogoslof survey estimate of biomass continues the downward trend that has persisted since 1991. The Plan Team has recommended an ABC of 58,800 mt based on $F_{40\%}$ applied to the projected 1998 biomass. The SSC recommends that the Bogoslof ABC be adjusted downward following the principles we applied in December 1996. Specifically, the ABC should be reduced by the ratio of current biomass to target biomass, where target biomass is taken to be the biomass required to open a directed fishery. Based on that adjustment, the SSC recommends an ABC of 8,445 mt ($F_{40\%} = 0.27$, $M = 0.20$, $\mu = 0.21542$, $B_{98} = 280,000$ mt, $B_{\text{target}} = 2,000,000$ mt, $ABC = (\mu)(B_{98})(B_{98} / B_{\text{target}})$). The OFL associated with the SSC's ABC recommendation is $(8,445 * (78,968/60,319)) = 11,056$. (SSC ABC * (Plan Team OFL / Plan Team ABC)).

We understand that the final 1997 chapter will also include several models. It will facilitate comparison and evaluation of the models if they are based on comparable data. In addition, the SSC has requested evaluation of methods of forecasting recruitment, especially the utility of ancillary environmental variables such as sea surface drift. Recruitment is especially important because the EBS stock is supported by a limited number of year classes. Therefore, the SSC is particularly interested in a more detailed analysis of recruitment.

Much of the public testimony at the December 1996 meeting focused on how the issue of uncertainty is addressed in the SAFEs in general and in the BS/AI pollock chapter in particular. The SSC drafted the five general SAFE issues (listed at the beginning of section D-3) to address those concerns, among others. Therefore, the SSC feels it is especially important that the final BS/AI pollock assessment address those issues.

In 1996, we were presented with results from an age-structured assessment of AI pollock. However, the SAFE lacked detailed description of the model, model inputs, sensitivity analysis, or detailed outputs. If the model is used to recommend ABC in 1998, the SSC requests an expanded report with details of the model, inputs and outputs.

Greenland Turbot

The SSC's preliminary 1998 ABC recommendation is 12,350 mt ($F_{40\%} = 0.253$), the amount proposed at the Council's December 1996 meeting. The recommendation was based on a stock synthesis analysis of the status of this resource and the assumption that the catch is split equally between trawl and longline gear types. The Team used a 20/80 percentage split between trawl and longlines and a corresponding $F_{40\%} = 0.35$. The SSC decided to be more conservative because it is difficult to predict the percentage of total catch that will be harvested by the different gear types.

Sablefish (BS/AI and GOA)

Dr. Mike Sigler (NMFS-Auke Bay) presented the preliminary assessment, which incorporates additional age data from the 1996 long-line survey, annual estimates of catch under-reporting during 1986-1990, and estimates of variability in survey age and abundance indices. These modeling changes do not create substantial differences in the values used to calculate ABC. A revised assessment incorporating 1997 longline survey data is expected in December. We concur with the Plan Teams in encouraging assessment authors to present fishery catch and bycatch information which may provide insights on incoming year class strength. We also request a table of fishery and survey age-distribution data. While the preliminary 1998 ABC is the same as that for 1997, we note that the sablefish resource continues to decline due to low recruitment and we anticipate the final 1998 ABC to be lower than the 1997 ABC.

D-3 (d, e) Gulf of Alaska

Walleye Pollock

The SSC concurs with the Plan Teams recommended ABC and supports the Plan Teams request to evaluate age specific rates of natural mortality in the main model used to estimate ABC. The SSC applauds the clarity of the model presentation and the analysts' efforts to explicitly include estimates of predation mortality. We encourage continued work in this area.

Pacific Cod

The Pacific cod fishery in State waters has developed to represent a significant portion of the total catch, and is particularly focused in some GOA regions. The SSC recommends that the State data be incorporated in the assessment. In particular, the length frequency and catch data must be used as stratified by Eastern, Central and Western regions for the jig and pot fisheries.

Flatfish

The SSC recommends that the 1997 ABCs be used as the preliminary 1998 ABCs for species in this complex. Apportionment among the three management areas should continue to be based on the trawl survey biomass distribution.

Arrowtooth

The SSC was informed that the 1996 catch and corresponding length composition were used to update the length-based synthesis model employed last year. This analysis produced an exploitable biomass estimate of 2,062,740 for 1998. The $F_{40\%}$ fishery mortality rate, 0.189, was applied to the exploitable biomass estimate to determine ABC, 208,340 mt.

It is recommended that the ABC be apportioned among the three regulatory areas in proportion to biomass distribution as determined in the 1996 NMFS trawl survey. The resulting ABCs for the Western, Central and Eastern management areas are 33,010 mt, 149,640 mt, and 25,690 mt, respectively. The overfishing level, 295,970 mt, was determined by applying $F_{30\%} = 0.276$ to the exploitable biomass.

The SSC also took public testimony from Ken Stump. He suggested that differential harvesting of groundfish species in the GOA could be altering groundfish composition and ecosystem processes to the detriment of marine mammals. The SSC supports continued research on predator/prey interactions and ecosystem processes that will contribute to understanding of this issue.

Sablefish - see BS/AI section.

Pacific Ocean Perch

The ABC(15,840 mt) and OFL (22,590 mt) for POP were based on Tier III-b criteria and apportioned according to the distribution of survey biomass. ABC and OFL were set at 2,230 mt and 3,109 mt for the Western Gulf, 8,160 mt and 11,630 mt for the Central Gulf, and 5,450 mt and 7,770 mt for the Eastern Gulf. The ABC and OFL were based on a revised biomass estimate that incorporated updated catch data. Chris Blackburn (AGDB) offered public testimony suggesting that constant catch harvest policies be evaluated. Specifically, constant catch policies could smooth the year to year variability in harvest during intervals between strong recruitment events and provide increased predictability and stability to harvesters and processors. The SSC encourages the exploration of alternative harvest strategies from both biological and economic perspectives.

D-3(other) Ecosystems (BS/AI & GOA)

The current ecosystem concerns segment is an abbreviated listing of issues raised in previous years with no new information. We look forward to the expanded ecosystem chapter of the final SAFE. With the increased interest and emphasis on ecosystem-related fisheries management issues, we expect the ecosystem chapter to become increasingly valuable as a synthesis and update for the Council and the public. This chapter should continue to be a forum for important issues that fall outside the present scope of the Stock assessments.

The SSC received a report from Dr. Richard Merrick (NMFS) regarding the status of Steller sea lion stocks. The 1997 assessment suggests a continuation of the stock decline. In addition to identifying a decline, the researchers found evidence suggesting that El Nino related oceanographic effects have adversely affected sea lion stocks. Because these effects are likely to be more pronounced in 1998, it is anticipated that the Steller stock will face increased stress in 1998.

D-3(other) Economic SAFE

The SSC received a presentation from Dr. Joe Terry (AFSC) regarding efforts to develop ongoing fishery performance and cost data. Data collection is expected to begin in early 1998, with initial results anticipated for inclusion in the 1998 Economics SAFE. Initial efforts are expected to focus on the BS/AI pollock and H&G factory trawl fisheries. The SSC is encouraged by the progress being made to address this perennial research priority.

JOINT MEETING WITH PACIFIC FISHERY MANAGEMENT COUNCIL SSC MEMBERS

The SSC held an informational meeting with several members of the PFMC SSC, including Gary Stauffer (NMFS-AFSC), Kit Rassin (Tualip Tribes), Cindy Thompson (NMFS-SWC), and Pat Sullivan (IPHC). The discussions were informal and ranged over several areas of mutual concern and interest including stock assessment procedures, characterization and representation of uncertainty, overfishing definitions, and constraints to economic analyses.