

North Pacific Fishery Management Council

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MINUTES Scientific and Statistical Committee April 15-17, 1996

The Scientific and Statistical Committee of the North Pacific Fishery Management Council met April 15-17, 1996 at the Hilton Hotel in Anchorage. All members were present except Richard Marasco and Marc Miller:

Keith Criddle, Chair
Sue Hills
Terrance Quinn II
Harold Weeks

Jack Tagart, Vice Chair
Doug Larson
Phil Rigby

Jim Balsiger
Seth Macinko (Alt.)
Al Tyler

C-1(a) Pacific Cod Allocation

The SSC heard staff presentations from Darrell Brannan and Marcus Hartley. Public testimony was given by Paul MacGregor, AFTA; John Gauvin, AFTA; Arni Thomson, ACC; Thorn Smith, NPLA; and Brent Paine, UCB.

The SSC did not receive the draft EA/RIR until minutes before it was scheduled to take up this topic. Accordingly, the SSC cannot provide the Council with any recommendation as to whether the draft EA/RIR is suitable for release for public review. This kind of problem results when the Council fails to allow sufficient time and resources to allow for preparation and review of amendment packages.

The SSC reiterates the advice it provided to the Council in both December and January that time and data limitations preclude the development of a quantitative analysis of net national benefits sufficient to provide a basis for choosing between alternative allocation splits. The SSC continues to believe that a qualitative assessment would be adequate for analysis of a simple rollover. The linear programming model in the EA/RIR is not sufficiently credible to serve as a basis for judgment of the relative merits of the alternatives the Council is considering. Limitations of the model are partly a reflection of what the LP modeling approach can do, partly a reflection of the current model specification, and partly a reflection of outstanding data limitations which cannot be resolved in the near term.

The SSC noted the following specific concerns:

- (1) There are difficulties in inferring what the gross revenue per ton of catch is from weekly processor reports (WPRs), particularly for the catcher-vessel segment of the fleet. This problem occurs because WPRs do not contain enough information on target fisheries and do not treat landings by individual vessels through processing to final product (see below).

- (2) The analysis evaluates gross revenue changes instead of changes in net benefit measures because there are no adequate data on how cost of production would change with different alternatives or on effects beyond the vessel level. Revenue maximization is not the same as net benefit maximization, and can lead to different choices.
- (3) The analysis depends heavily on differences in halibut bycatch rates (as noted, for example, in paragraph 2 of page 78). Halibut bycatch rates by different industry sectors appear to be fairly volatile over the 1992-95 period (e.g., Table 3.6(iv) on page 48), and model results are likely to depend significantly on which set of bycatch rates are chosen to parameterize the model.
- (4) The reported opportunity cost of bycatch estimates losses to other fisheries but may miss other, perceived costs of bycatch, such as the waste of edible fish..
- (5) The model does not recognize limitations on harvesting capacity in determining allocations to different industry sectors.
- (6) The Council's revised problem statement mentions several issues of concern that motivate possible action, including compressed fishing seasons, social aspects of the allocations, habitat, stability, and waste. Due to the limited time to review the document, the SSC doesn't know to what extent, if any, these issues are addressed in the analysis.

The SSC recommends the following revisions:

- (1) The LP model is miscast as the centerpiece and culmination of the analysis. The model results are illustrative of some of the tradeoffs that might be encountered and are helpful in developing intuition, but should be clearly labeled as illustrative. It is possible to develop a shorter, qualitative discussion of the likely effects of allocation alternatives using the intuition that the quantitative model provides: alternatives favoring sectors with higher revenues per ton will tend to be preferred, and sectors with higher prohibited species catches will tend to be closed prematurely. This type of discussion can be accompanied by the existing tables in the document which provide information on catches, revenues, and bycatch levels.
- (2) Provide the following summary table(s) or narrative:
 - (a) a summary snapshot of the current BSAI Pacific cod harvest broken down by gear type and operational mode, including total, retained and discarded amounts in both absolute and relative terms;
 - (b) how each alternative is likely to distribute overall catches, higher overall halibut bycatch, and other indicators thought to be important;
 - (c) a review of the elements of the problem statement relative to the analysis;
 - (d) a summary of the key factors (e.g., revenues, halibut bycatch) that are likely to "drive" the results.
- (3) Provide an executive summary and other missing elements of the draft of 4/15/96 (numbered and labeled tables, renumber pages, etc.).

Finally, the SSC offers two comments that are relevant beyond the context of the current analysis. First, there is a mismatch between the WPR and fish ticket/observer data which means that the subsequent determination of prices/revenues in specific fleets/fisheries is suspect. The data mismatch occurs because target fishery and landing vessel information are not reported on WPRs. The SSC has previously noted the lack of specificity in WPR data (see minutes of August, 1995 teleconference). The draft EA/RIR provides a dramatic illustration of the potential adverse analytical consequences associated with this data problem. Using the pot Pacific cod fishery as an example, the analysis notes that the WPR data produced a gross revenue estimate of \$4.97 million

compared to the \$15.6 million estimate produced from the blend data. The SSC believes that the underlying reason for this disparity should concern everyone involved in the Council process. To quote from the analysis: "We are unable to determine if the pot vessels catch of Pacific cod in the WPR data was processed into salt cod or an H&G product, *or even if the fishery should be classified as trawl catcher vessel or pot.*" The SSC foresees continued analytical difficulties as the Council pursues management measures with area, fleet sector, and/or vessel specific features. Quantitative analysis of these measures will obviously hinge on the availability of data that can be properly matched to the detail of the selected management measures.

Second, the SSC suggests that a generalized economic model be developed and annually maintained. The effort focused on development of this kind of model ought to be comparable to that devoted to stock modeling. Modeling efforts should include vessel/processor level economics and regional impacts. The lack of a maintained model places Council staff in the position of reinventing the wheel whenever they are called on to assess potential economic consequences. Development of such a model would require a commitment of ADF&G or NMFS personnel as well as cooperation from industry.

C-1(b) Ban on night trawling for P. Cod

The SSC received reports on this issue from Dave Witherell and Gregg Williams. There is no new analysis of the issue since it was last considered in 1993. It appears that previously articulated concerns about enforcement are still relevant and other mechanisms are available for achieving the goal of bycatch reduction. However, the previous analysis by Adlerstein and Trumble was based on a relatively small number of tows in 1990. It may now be possible to use a much larger observer data base to address this issue with the benefit of a data base.

C-2 Crab Bycatch

Reports Received

Written reports and staff testimony were provided during the April SSC meeting on:

- (1) April Crab Rebuilding Committee meeting.
- (2) April Crab Plan Team meeting;
- (3) March actions on Bering Sea crab management by the Alaska Board of Fisheries; and
- (4) Crab bycatch from the 1994 and 1995 GOA groundfish trawl fisheries. Chris Blackburn summarized the report of GOA crab bycatch prepared by the Alaska Groundfish Data Bank.

The SSC heard testimony about the possible need for additional crab protection in the form of either PSC caps or else additional closed areas in the Kodiak Area. Testimony was received from Chris Blackburn, who made a special presentation based on an extensive analytical document developed by the Alaska Groundfish Data Bank. The message she presented was that PSC caps were not useful, and that the closures in place now were adequate. She also stated that areas could be modified to protect any significant future crab recruitment. There was no agency testimony on this issue.

EA/RIR Review

The SSC commends the analysts on their document of the draft EA/RIR for proposed Amendment 41 and additional analysis of the Red King Crab Savings Area, Amendment 37. As a single package the EA/RIR provides a more comprehensive analysis of three possible management actions to protect Bering Sea crab. The SSC heard public testimony from the John Gauvin (American Factory Trawlers Association), Dave Fraser (United Catcher Boats), and Tom Casey representing several fishing companies.

The concerns of the SSC expressed in the January minutes have all been dealt with in a clear and comprehensive manner; and in addition, the analysts have developed important sections on background and management measures, including rebuilding of the Bristol Bay red king crab stock. The document also includes environmental impacts of the alternatives and a regulatory impact review of the economic and socioeconomic impacts. The document includes nine important appendices that explain details of earlier management actions, condition of stocks, and a description of the Bering Sea Bycatch model, the latter being one of the requests of the SSC. Several other concerns of the SSC were addressed: the report examines the cost to the C. bairdi directed fishery of increasing the bycatch; allocation of caps for PSC among alternative groundfish fisheries was analyzed; and a section was developed on potential trawling impacts on crucial benthic habitat of juvenile red king crab and Tanner crab. This latter section is particularly pertinent to management Measure 3, the nearshore Bristol Bay trawl closure.

In examining the alternatives for PSC limits that fluctuate with abundance (Measure 2: Alternative 3), the SSC discussed the recommendation made by the Crab Rebuilding Committee that a different "currency" be used in establishing caps (e.g., caps in terms of "large" crab rather than total number of crab may be more stable over time than the total number of crab due to recruitment fluctuation). The SSC believes that a change to a new "currency" system should be done carefully with requisite analyses, because the effects of using different measures may be complicated. If the Council wishes to move in this direction, the SSC suggests it be done as a separate amendment to avoid confusion.

The EA/RIR calculates savings of area closures in terms of adult equivalents that result from modeling analysis. The SSC recognizes that this is a commendable addition to the analysis that represents an important step forward in the evaluation of bycatch effects. The SSC recommends that the EA/RIR be released for public review.

Additional Items

The document identifies topics that are important for additional research. One critical issue that the SSC has emphasized many times is the need for a comprehensive treatment of bycatch control measures involving time-area closures. If one could start from scratch, a meaningful set of time-area closures might be developed that provides sufficient protection for prohibited species (halibut, crab, herring, and salmon) while allowing the groundfish fisheries to take relatively high amounts of groundfish efficiently. Necessary to this development would be a projection of how groundfish fisheries would respond to particular closures. A joint industry and agency group could probably develop such anticipated responses. These responses could then be incorporated into a modified Bering Sea bycatch model augmented with extended spatio-temporal distributions of catch and bycatch. The SSC recommends that the Crab Rebuilding Committee take up this comprehensive examination as a priority.

Another focus of the Crab Rebuilding Committee could be to provide projections of rebuilding that will occur as a consequence of various management measures including restriction of directed harvests and short-term and long-term bycatch control measures in the groundfish fleet. The length-based analysis model might provide a basis for such projections.

C-3 Observer Program

The current EA/RIR contains 4 alternatives: Alternative 1, Option 1 (Research Plan), Alternative 1, Option 2 (no observer coverage), Alternative 2 (current Pay-as-you-go), and Alternative 3 (modified Pay-as-you-go (PAYG)).

The most important issue here is to make sure that the current collection of data does not stop after 1996, so Alternative 1, Option 2 is clearly unacceptable. In previous testimony, the SSC has indicated that either the Research Plan or Modified PAYG solve problems found in the current PAYG system. In December, the Council decided to move forward with the Modified PAYG. In the staff presentation to the SSC at this meeting, it was revealed that there is great uncertainty in what observer costs and compensation will be under this system, and that ADF&G and NMFS have not yet developed a unified approach to utilizing observers. A third problem is that observer costs under Modified PAYG are not likely to be known until the bid process is completed. Resolution of some of these uncertainties may be helpful before the Council gives final approval to the Modified PAYG, and may require the Council to stay with the current PAYG for one more year. Nevertheless, the SSC reiterates that the current system is flawed (e.g., in the way observers are placed and the need for separation between operators and observer contractors), and movement toward a new system is urgently needed. The essential elements of a new system are outlined in the SSC's January 1996 minutes.

D-1 Groundfish Management

D-1(a) BSAI Pollock "B" Season Delay

Chris Oliver presented the staff report on the supplemental analysis which was done based on the 1993 EA/RIR. In general, the analysis was appropriately conceived and qualified. The SSC had some concerns about the use of a three-year old analysis, because structural conditions have changed to some degree and these changes could invalidate the inferences made in the analysis. In this case, the results of the analysis seem consistent with expectations, indicating some improvements in pollock revenues, some potential for adverse interactions with marine mammals, with possible decreases in chum salmon catch and slight increases in chinook salmon catch.

The SSC notes that it would have been useful to validate the predictions of the earlier analysis before it was used for evaluating this amendment. This validation could be performed by comparing the recent observations on observable variables such as bycatch quantities and pollock production with the predictions made by the earlier analysis.

The supplemental analysis invites speculation about the contribution of pollock vessels to halibut bycatch rates observed in the early portion of the yellowfin sole fishery (see Table 3.1 and associated discussion on page 15). However, the document goes on to note that the lower halibut bycatch rates observed after the opening of the pollock B season might be explained by seasonality in bycatch rates rather than by particular vessels exiting the yellowfin sole fishery. The SSC notes that the data presented in Table 3.1 possibly could have been broken down to distinguish between pollock vessels and dedicated yellowfin vessels, thereby providing a better understanding of fleet specific halibut bycatch rates.

D-1(b) Overfishing

Grant Thompson (AFSC) gave an overview of the EA/RIR that he authored to amend the overfishing definition. The SSC commends Grant for his fine work on this SSC-sponsored initiative and for taking into account SSC comments from the January meeting. The SSC recommends that the document go out for public review with some minor revisions. These revisions are:

- Wherever possible include verbiage clarifying differences between new and old versions and giving intuitive explanations of technical formulas which will make the document more "user-friendly".
- The document should emphasize that the $F_{40\%}$ cap for ABC in Tiers 3 and 4 will apply to about one-half of BSAI and GOA species. There should be stronger rationale for this cap; the December 1995 SSC minutes may be helpful in this regard.
- The document should also emphasize that the $F=0.75M$ cap for ABC in Tier 5 will apply to most of the remaining species and represents a departure from $F=M$, which remains the OFL. There should be a stronger rationale for this change based on the cited references of Deriso and Thompson which suggest that $F=M$ can exceed F_{MSY} .
- A paragraph explaining the effect of the new definitions on emerging fisheries is desirable.
- Table 2 should highlight which species would be affected by the new definitions.

D-1(d) Experimental Fishery Permit

The SSC reviewed a request for an Experimental Fishing Permit from Dave Fraser. The request is for determining the viability of a pelagic trawl fishery for rockfish in Area 650 of Southeast Alaska. The details of the experiment are contained in the letter of application.

With some additional requirements the SSC believes the project could provide valuable information. The SSC recommends the following be included in the permit language.

- (1) A specific sampling plan should be designed for the first week's hydroacoustic survey to ensure representation coverage of the entire experimental area.
- (2) A sampling plan should be designed to ensure all hauls are sampled during the experiment. Specifically hauls should be sampled for species composition, age structure, length, and sex.
- (3) Because abundance and distribution of the targeted rockfish species are poorly understood, some protection from localized depletion should be specified for fishing during the third phase.

The SSC recommends that the proposer work with AFSC staff to develop these plans. In addition, the proposer should consult with ADF&G and NMFS, to determine maximum bycatch amounts for species groups such as DSR, sablefish, and chinook salmon.

D-2 Halibut Sport (Charter) Management

Chris Oliver provided the staff report on a draft Request for Proposals (RFP) to assess possible future limitations on the halibut sport fishery. The SSC feels that the draft RFP calls for an overly ambitious effort given the time and funding which may be available. Reasons for this include:

- (1) The contractor will need to use data from several other agencies. It is possible that obtaining this data will involve significant time lags.

- (2) The RFP as currently written will require the collection of primary data through surveys of charter boat operators and halibut sport fishermen. Designing and implementing quality surveys, with subsequent analysis and report generation, can easily take several months to a year.

One way to better accommodate a short time frame would be to focus solely on the charter boat operators. Even so, six months is probably too short a time frame for a high quality analysis. If the Council wants a comprehensive analysis, it may be advantageous to divide the RFP into a couple of sub RFPs: i.e., one for the charter boats and another for the value of angling. The RFP will probably attract the highest caliber of researchers if it does not require the contractor to write the EA/RIR and if it is very specific regarding the nature of deliverables and the time frame for their delivery.

Other SSC comments are:

- (1) The Charter boat survey should collect data that will show both the current level of net revenue and how net revenue is likely to change with different allocations.
- (2) To provide comparable information on the commercial fleet, the Council staff should begin developing a systematic data base on IFQ transaction prices and transaction quantities, along with descriptive information such as the quota class, area fished, etc. This information can be used to help determine marginal net revenues in the commercial fishery which can be compared to the information generated for the sport sector.
- (3) Limitation of effort alternatives will likely require collection of a much larger and more detailed body of information.

Additional Items - Auke Bay Facility

The SSC heard a brief presentation from Terry Quinn (UAF) on a proposed fisheries facility at Auke Cape in Juneau. The facility would house the NMFS regional office, NMFS Auke Bay Lab and NOAA General Counsel, and provide a separate wing for the University of Alaska Fairbanks fisheries program. Planning for the facility is underway and efforts are being made to secure funding through Federal, State, University, and private sources. This facility would be the first academic/federal complex focused on fisheries and would enhance research and management efforts directed toward Alaska's fisheries.

The University is asking for a letter of support from the Council to Senator Stevens for the Auke Cape facility in general and the University's inclusion in the facility in particular. The SSC urges the Council to support this request and notes that synergistic benefits are likely to occur from this consolidation of federal and University fisheries forces.