

North Pacific Fishery Management Council

Richard B. Lauber, Chairman
Clarence G. Pautzke, Executive Director

605 West 4th Avenue
Anchorage, Alaska 99501



Mailing Address: P.O. Box 103136
Anchorage, Alaska 99510

Telephone: (907) 271-2809
FAX: (907) 271-2817

Certified: Sue Bendixen
Date: 9/19/94

MINUTES Scientific and Statistical Committee June 6-9, 1994

The Scientific and Statistical Committee of the North Pacific Fishery Management Council met June 6-9, 1994 at the Anchorage Hilton. All members were present except Al Tyler:

Terrance Quinn, Chair
Doug Eggers
Rich Marasco
Jack Tagart
Jim Balsiger (Aron Alt.)
Dan Huppert

Keith Criddle, Vice-Chair
Susan Hills
Phil Rigby
Harold Weeks
Marc Miller

MARINE MAMMAL PROTECTION ACT

The letter from William Fox to Clarence Pautzke dated May 19, 1994 solicited nominations for regional scientific review groups from the Council. The SSC marine mammal expert Sue Hills is willing to be nominated and the SSC supports her nomination.

C-1 NORTH PACIFIC RESEARCH PLAN

The SSC received a presentation by Dr. Joe Terry of NMFS of estimated costs and proposed fees to be assessed for implementation of the Research Plan in 1995. We also heard public testimony from Chris Blackburn, Chairman of the Observer Oversight Committee, and John Gauvin, from AFTA. The analysis by Dr. Terry suggests that the Research Plan provides for sufficient collection of funds, unless the observer cost per day is at the upper end of the range considered. It should be noted that the costs for 1995 include amounts necessary to fund the program for the first 1.25 years. In subsequent years, only annual costs are necessary, and hence, the fee percentage for 1996 and later years could be lower if prices, costs, and observer coverage levels are stable.

In response to requests by the Observer Committee and the AP, the SSC focused its attention on the methods for determining standard ex-vessel prices used in the assessment of recoverable fees. If the Council prefers a more detailed determination of ex-vessel price to account for seasonal, or fishery differences, the data collection system needs to be enhanced and modified because of concerns over data quality. Furthermore, linkage of fees with prices could result in misreporting of price data. Reduced stratification of estimated ex-vessel prices could make administration of the program simpler, but may result in less equitable distribution of assessments among the fleet.

Regarding the imputation of value for fish delivered offshore for which there is no ex-vessel market, there is currently no strong technical basis for any procedure. In reality, the relationship between ex-vessel and first wholesale value is highly variable. To more accurately impute values to ex-vessel fish in the offshore sector, one could formulate an economic research program, but that effort would require individual processor cost and operational data. These data are not now available. As is true for price data, linkage with fees could result in collected cost data being misreported. An alternative would be to more thoroughly document prices paid by motherships to catcher vessels. This would be attractive for some species (yellowfin sole and rock sole, but not Atka mackerel). This approach has, in fact, been adopted in the proposed system.

C-3 COMPREHENSIVE RATIONALIZATION PROGRAM (CRP)

C-3(a) Review CRP Documents and Workplans

1. Economic Base Model Final Report

The SSC has reviewed Dr. Lee Husky's (University of Alaska Anchorage) final report on the economic base models (EBM). The report describes eight statistical models. There are statistical and theoretical problems with the four log-linear models (2, 4, 6, and 8) reported by Dr. Husky, therefore the SSC recommends that they be disregarded. The linear models (1, 3, 5, and 7) do not make efficient use of the available data and should be replaced by an encompassing multiple regression. The encompassing model should include all of the explanatory variables specified in regression model 1, and add binary variables to indicate whether the community is coastal or inland and whether the community population is greater than or less than 500. Additional variables should be introduced to account for reliance on subsistence activities and to test for regional differences and interactions between these categorical variables and the basic sector employment variable. The encompassing model can then be examined using t-tests and partial F-tests to determine the statistical significance of community location, population, etc. Given the data series already developed by Dr. Husky, these additional statistical analyses could be completed with minimal effort. Therefore, the SSC requests that Dr. Husky's data be included as an appendix to the EBM report. Additional statistical studies are required prior to use of the economic multipliers to evaluate CRP alternatives.

2. IMPLAN Model Documentation

The SSC acknowledges receipt of additional documentation on the IMPLAN input-output model used as a basis for the FEAM model.

3. Draft EA/RIR for License Limitation

The SSC reviewed the Draft EA/RIR for License Limitation Alternatives for the Groundfish & Crab Fisheries in the Gulf of Alaska and Bering Sea Aleutian Islands, received at the April meeting. The number of potential alternatives is exceedingly large. There is considerable redundancy among the elements and options for a license limitation program defined for analysis. Given the large number of alternatives defined, the Council staff was faced with the need to develop an analytical framework. The proposed framework will provide information about who will receive licenses under different alternatives. However, it will not provide estimates of the change in net benefits to individuals, communities, or to the nation.

4. License Limitation Study Plan

Council staff provided the SSC with a presentation on Agenda Item C-3(a)2, "Details on the License Limitation Analysis." The SSC also heard public testimony from Ron Rogness (Long John Silver). The alternatives included in the document are a collation of the options contained in the Draft EA/RIR and those contained in the ADF&G proposal. This collation greatly increases the number of alternatives to be considered. Many of these alternatives are redundant and should be eliminated. However, even if the redundancies were eliminated, the number of elements and options would still be excessive in terms of analysis. Council staff have indicated their intention to reduce the number of alternatives to be analyzed to 30-60. The SSC recommends that the Council specify three to four alternatives for detailed analysis in an EA/RIR. Each alternative should specify the nature of the license, who receives the license, eligibility criteria, ownership requirements, transferability restrictions, and other general provisions. Given the eligibility criteria, the nature of the license, ownership restrictions, and who receives the license that are characteristic of an alternative, data are available to describe distributional consequences. Theory suggests that there are no long-run net economic benefits to license limitation programs. It is for this reason that ITQ programs are preferred by economists. However, the Magnuson Act identifies multiple objectives for fisheries management. The extent to which license limitation addresses one or more of the Council's objectives should be clearly articulated. For example, an alternative could be motivated by the objectives of preserving fleet diversity and contributing to the economic and cultural stability of coastal communities.

5. CRP Study Plan

In addition to the license limitation options described in greater detail in Agenda Item C-3(a)2, Agenda Item C-3(a)1, "License Limitation Elements and Options," lists alternatives and options for an IFQ program. The list of alternatives, options, and elements for the implementation of an IFQ program suffers from the same dimensionality and redundancy problems that plague the study plan for license limitation. Therefore, it is again imperative that the Council specify a handful of alternatives for detailed analysis in an EA/RIR. Each alternative should specify the nature of the quota share program: that is, who will receive the quota shares, eligibility criteria, ownership requirements, transferability restrictions, and other general provisions. If there is to be a staged transition from the status quo to IFQs via a license limitation program, the EA/RIR for license limitation should address the relevant social and economic consequences.

In order to get measures of changes in net benefits to individuals or industry sectors associated with moving from open access to an ITQ fishery, accurate data on the cost of vessel and processor operations are imperative. If updated cost information cannot be obtained, it will be necessary to rely on previously collected data such as the OMB survey. Reliance on previously gathered data is unsatisfactory, because it is not sufficiently comprehensive and may not reflect current forms of organization or production. Furthermore, not all fleets were surveyed. Updated cost data can only be developed with the support and assistance of the industry. As noted in the January 1994 SSC Minutes:

"Analysis of the pecuniary benefits of plan amendments has been and continues to be crippled by the lack of accurate data regarding the costs and performance characteristics of fishing operations. Surveys and focus group interviews are a poor substitute for a comprehensive database. The SSC urges the Council to prepare an amendment to the Groundfish Data Plan to require annual submission of cost and

performance data for all sectors of the fishing industry. These data will enable Council and Center staff to predict the local, regional, and national impacts of plan amendments with much greater accuracy.”

More timely economic data could be used to estimate changes in net revenues. This information can in turn be used to examine community and national level impacts with the EBM or FEAM methodologies.

C-3(b) Moratorium Proposed Rule

The SSC did not address the proposed moratorium rules.

C-3(c) Inshore/Offshore/CDQ

The SSC also heard public testimony from Karl Ohls (Western Alaska Fisheries Development Association), and Richard Caulfield and Mary Pete (University of Alaska Fairbanks). Caulfield and Pete described research, funded by WAFDA and the Bering Sea Fishermen’s Association, to be conducted this summer. The research examines the community level impacts of the CDQ fisheries using survey and interview techniques. The study that they propose appears to complement Council staff analysis on Community Profiles and Social Impact Assessment. The development of a baseline analysis of these communities and the impact of the CDQ program could be useful for determining the benefits of the CDQ program.

D-2(a) DIRECTED FISHING STANDARDS

The SSC reviewed the EA/RIR for a Regulatory Amendment to revise Directed Fishing Standards (DFS). NMFS staff described the changes to existing regulations. The SSC believes that the revisions contained in Alternative 2 reduce complexity and inconsistency in the regulations defining directed fishing and establishing DFS. These modifications coupled with changes in several of the standards should be beneficial in understanding DFS and reducing discards in some fisheries.

D-2(b) POLLOCK 'A' SEASON

The SSC reviewed the EA/RIR/IRFA proposal to change the start date for the Bering Sea pollock 'A' season and received public testimony from Paul McGregor and Vince Curry. In addition, the SSC received a recent, preliminary quantitative analysis from Sally Bibb. During the discussion of this issue, questions surfaced concerning source, variability and interpretation of roe quality data, roe yields, and prices. Nevertheless, roe quality and recovery data suggests that the value of the offshore roe fishery would increase with some delay of the 'A' season. Similar data for the onshore sector are more variable and less indicative of a trend.

Regulatory action that delays the offshore 'A' season may have countervailing effects. The value of pollock CDQs depends on access to fish during the peak roe production period. This access could be reduced with the delay. In addition, a shift of the opening date for the offshore fleet may be detrimental to the onshore segment of the fishery because the marketing system for pollock roe involves competition between various suppliers. While the relationship between roe price and quantity has not been explored, it was indicated that changes in the temporal pattern of production impacts roe prices. Hence, we are unable to conclude with certainty that a delay in the season for only the offshore roe fishery will entail an overall economic improvement.

Because questions of timing and location of open access fisheries can have important implications for optimum yield for the fishery, the SSC believes that there is a need for better information on temporal and spatial distribution of pollock maturation and economic impacts.

D-2(c) TOTAL WEIGHT MEASUREMENT

The SSC understands that there is no new information or analysis to consider on this issue. Hence, we repeat our April 1994 report to the Council:

APRIL 1994 minutes:

The SSC received a draft EA/RIR and a report from Sally Bibb (NMFS - AKR) on a proposed regulatory amendment to require total weight measurement of groundfish catch on processors with 100% and 30% observer coverage. The draft has an option to include catcher vessels with 100% observer coverage. The analysis clearly articulates the expected costs to fishing vessels of purchase and installation scales. Other costs associated with reduced product throughput and changed operating procedures are only qualitatively discussed. The Committee heard public testimony from Laura Janssen (Arctic Alaska) and John Gauvin (AFTA) indicating that such costs could be substantial. The increased accuracy and/or confidence in total catch estimates cannot be determined from the analysis; however total catch weighing should improve the accuracy and precision of our estimates.

The SSC continues to support the investigation of techniques which will lead to more accurate methods for estimating total removals from the ocean ecosystem. There will be increasing demand for higher quality estimates, even under open access management. Management at the vessel level, such as under individual vessel quotas, will require greatly improved accuracy and precision.

The accuracy and/or precision of current catch data is unknown, i.e., there are no data regarding independent tests of the reporting accuracy of catch data. Since this is the case, we can not evaluate the benefits of improved accuracy which may accrue through total weight measurement. Neither can we tell whether the assumed benefits justify the costs. Under these circumstances, all else being equal, total weight measurement could be justified by its elimination of a controllable source of error. If the Council really wants to know total catch weight with the least possible error, additional alternatives need to be added to the current proposal. The SSC recommends the following:

- I. Status quo
- II. All catch must be weighed on a scale
 - a. if weighed at sea, all catch must be taken with an observer on board the vessel,
 - b. otherwise, vessels must retain all catch, including usual discards except for prohibited species, for subsequent weighing at an observed processor.
- III. Same as Alternative II, but weight may be determined within a specified range of accuracy by any approved procedure, e.g., using volumetric methods.

D-2(d)(1) EMERGENCY RULE FOR BYCATCH CAP OF 42,000 OTHER SALMON IN THE CVOA

The SSC received a status report on the emergency rule to establish a bycatch cap and associated closure for 'other' salmon, and to require additional observer for mothership and to require satellite communication capability for motherships and shorebased processors receiving product from the CVOA.

The SSC heard public testimony from Jim Salisbury, expressing concern that under the emergency rule, there may be potential for significant chum salmon bycatch to be in areas outside the 5-block area. The SSC notes that although this is a possibility, the selection of the 5-block area is generally consistent with the distribution of chum salmon bycatches in the B season in years 1991-1993. The SSC also notes that information on the origin of chum salmon in the trawl bycatches is lacking, and recommends that research be conducted to determine the origin of chum salmon bycatches.

D-2(d)(2) SALMON RETENTION

The SSC understands that there is no new information or analysis to consider on this issue and we repeat our statement from the April 1994 minutes.

April 1994 minutes:

The SSC heard a report on initial review of alternatives for salmon retention and delivery to food banks. The SSC notes that this is a policy issue and has no additional comments on the document.

D-2(e) HALIBUT BYCATCH/SORTING

The SSC reviewed a document prepared by the IPHC entitled "Methods to Improve Survival of Pacific Halibut Bycatch Discarded from a Factory Trawler." A presentation supplementing the document was received from Don McCaughran (IPHC) and Steve Hughes (Highliners Association). The SSC believes that the experimental design for the study was statistically valid and that the results are straightforward. Minor comments on presentation of results were given to the presenters, which are to be incorporated into the final report of this study.

The major implication of this study is that the sorting methods examined could provide significant halibut savings if adopted by the trawl fleet. The SSC recommends that a amendment package be developed in response to the request by the IPHC.

D-2(h) TRAWL MESH RESTRICTIONS

The SSC considered this topic in April and received no new information on this topic. While we understand that there is industry interest in establishing a standard minimum mesh size, results of the AFDF selectivity study will not be available until later this year. Additionally, we understand that AFDF will begin a trawl mesh escapement and mortality study later this year. We repeat our April 1994 minutes below, and recommend that the Council await the results of the AFDF studies which may provide essential data on which to base mesh size requirements.

APRIL 1994 minutes:

The SSC received a progress report from Paula Cullenberg of the Alaska Fisheries Development Foundation on the 1993 fishery codend mesh study. Preliminary results suggest that codend mesh size and configuration influences selectivity for pollock size classes. This study will continue in 1994 to refine selectivity estimates. If the Council wishes to pursue consideration of mesh sizes outside the range of existing information, additional research will be required.

The SSC understands that there is interest in investigating eight inch mesh for the Pacific cod trawl fishery. Information in NMFS data sets does not address performance of this mesh size.

Multivariate statistical methods should be used to isolate factors responsible for the variability across vessels.