

# 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: *Ann Berman*  
Date: 9/1/97

## MINUTES Scientific & Statistical Committee June 20-22, 1993

The Scientific and Statistical Committee of the North Pacific Fishery Management Council met June 20-22, 1993 at the Westmark in Kodiak. All members were present except for Doug Eggers:

William Aron	Larry Hreha	Phil Rigby
William Clark, Chair	Dan Huppert	Jack Tagart
Keith Criddle	Richard Marasco	Albert Tyler
F.H. Bud Fay	Marc Miller	

### Appointment of Dr. Anne Hollowed to Gulf Plan Team

The Alaska Fisheries Science Center nominated Dr. Anne Hollowed to replace Dr. Sandra Lowe temporarily on the Gulf Plan Team. The SSC reviewed Dr. Hollowed's qualifications and recommends her highly.

### **C-1 Scallop Management**

The SSC reviewed the draft proposed fishery management plan for the scallop fishery in the Gulf of Alaska and Bering Sea/Aleutian Islands and heard testimony from Teresa M. Kandianis about the fishery and Carl Ellis about the ADF&G scallop observer program. The draft is hindered by a shortage of data. The fishery is poorly described in terms of the actual participation, i.e. what is the actual effort by the boats, or are there a few boats doing most of the fishing with the others trying the fishery for a short term and dropping out? The document does not describe the fishery in terms of the species involved, their distribution and the catch composition, although testimony revealed the fishery is mostly on a single species, the weathervane. A strong case for a moratorium is not made in the draft analysis.

The drafters followed the request of the Council in detailing options, but this prevented consideration of two possible and important options:

- (1) ITQ system.
- (2) Full Council management, rather than shared management with the state.

The observer program is also poorly detailed both in terms of the data to be collected and the cost/benefit implications of the observer program, particularly the economic impacts of such a program on the scallop fleet.

The SSC believes, however, that timely action should be taken. We suggest that the drafters provide more details, as possible, on:

1. Fleet composition and fishing effort distribution.
2. Basic composition, by species, and geographic distribution of animals involved in the fishery, including their catches by weight.
3. The case for a moratorium. The case must be made, and if not possible it should be dropped.
4. An examination of the added options for ITQs and full Council management, either by an FMP or inclusion in the groundfish FMPs.
5. More details on objectives of the observer program, data to be collected and the costs of such an activity and its implication to the fleet.

## **C-2 Sablefish and Halibut IFQs**

Kurt Schelle and Ben Muse of the Alaska Commercial Fishery Entry Commission summarized the draft analyses of the Sitka block, full/partial block and 1,000 lb. minimum proposals.

The analyses deal almost entirely with the effects of the various proposals on the initial distribution of quota share. Effects on economic efficiency are considered only briefly and qualitatively. The SSC considered whether the analyses were adequate, given the lack of a cost/benefit analysis. The Committee concluded that a more detailed and quantitative cost/benefit analysis was not feasible and recommended releasing the draft for public review.

The SSC noted, as it has before, that the block proposals, like other restrictions on the transferability of quota share, are sure to entail some costs even if the costs cannot be estimated. Whenever the government limits the choices of vessel operators, the most efficient choices are ruled out for some operators. It is not possible to say who will be hurt - small operators or large - but there are sure to be some adverse effects because some operators will not be able to adjust their holdings of quota share quickly and easily to match the needs of their operations. As explained in the analyses, the block schemes will also carry substantial search and transaction costs for any transfer.

## **C-3 Comprehensive Planning**

Council staff presented a review of progress since the April meeting. This included the research on the linear programming model of the fishery, the secondary economic impact models, the social impact analysis. Further, staff summarized the status of the comprehensive data base, community profiles, and vessel profiles.

Regarding the social impact assessment, the SSC finds that the number of possible social impacts and related social-demographic variables is very large -- too large to be addressed satisfactorily with the time and budget constraints of the Comprehensive Planning work. To make a significant contribution to the decision process, the social research must be focused on issues of high priority to the Council. We recommend that the Social Science Steering Group seek to produce a selected list of items from which the Council could choose a subset to be researched for the Comprehensive Planning analysis.

## Vessel Profiles

Council staff provided summary information on the data collection and vessel class specification for the groundfish/crab fleet economic model. The intention is to collect a wide range of information concerning representative operators in each vessel and processor class. The set of vessel/processor classes seems adequate, but the list of data seems too extensive for a realistic collection effort in the near future. It is unclear which variables in that list are essential for the development of the economic model.

## Economic Model of the Fishery

Council staff provided a brief description of a linear programming model developed under contract by ISER, and a written statement regarding operation of the computer model was included in the briefing book. The SSC does not believe that the documentation presented to us adequately responds to our comments and suggestions at our April meeting. We repeat that statement:

The SSC has little doubt that, if implemented at reasonable cost, an IQ program covering the major groundfish species and prohibited species can lead to greater economic net returns ("rent") from the groundfish fishery. A relatively straight-forward economic model of the fishery should suffice to demonstrate the likely magnitude of these benefits. A simple linear programming model could be developed for this purpose without involving the staff in the more complex multi-stage models that were proposed. This approach would also address SSC concern that a complex, multi-stage model would have extraordinary data requirements and that it might not correctly predict actual developments in the fishery.

The SSC feels it necessary to obtain more explicit documentation of the model including the logical foundations for the model structure, a concise mathematical description of the model, the sources and magnitudes of key model parameters, and explanation of plans for addressing management issues with the model. We stand prepared to provide further guidance on this model development during the coming months.

## Economic Impacts

The structure of the "economic base models" was described briefly in the material presented to the SSC in April. We would like to review progress on this work, including documentation of the statistical procedures and underlying data. If generic models are developed for types of communities, we would like to review the basis for classification and characterization of small communities.

The economic research plan calls for further documentation and updating the Jensen-Radtke "Fishery Economic Assessment Model" (FEAM). This work is reportedly underway, and we look forward to providing additional review and guidance. In particular, we hope to review procedures used to address problems normally associated with application of IMPLAN based models to small, rural communities. These include tailoring of the sectoral total outputs, technical coefficients, and breakdown of demand and income flows into local and outside components.

## Staff Paper on IFQ and License Limitation Options

The SSC reviewed a staff paper laying out some important policy decisions to be made by the Council in the specification of an ITQ or license limitation system, such as what species are to be covered, which groups of people are to receive initial allocations, and how past and future bycatch will be treated including PSC.

These are policy issues rather than technical issues, but the Council will have to stay within some technical limits in making its choices.

As it has before, the SSC encourages the Council to narrow its options as much as possible now in order to keep the analytical task within feasible limits.

#### Paper on CRP by Professor Scott Matulich

The SSC heard public testimony from Scott Matulich regarding Comprehensive Planning. The public testimony discussed some of the potential economic consequences of a two-part allocation of property rights in the GOA and BS/AI fisheries. The two-part allocation would consist of harvest rights assigned to catcher and catcher-processors, and processing rights assigned to processors and catcher-processors. Scott's paper reinforces the importance of deciding which stakeholders to endow with quota shares or other property rights. This determination should be made early in the decision process, as recommended in the staff paper on elements of an IFQ program.

#### **D-2(a) Allocation of Pacific Cod TAC**

The SSC reviewed an initial draft EA/RIR/IRFA for Amendment 24 to the BS/AI fishery management plan during April 1993. The Committee determined then that the analysis was technically sound and should be released for public review and comment. We observed that the biological and economic effects of gear and season allocations of the Pacific cod TAC were not large and that the Council already had the ability to allocate catch between gear groups, through the allocation of PSC. We asked that the analysis be updated to include 1993 fishing season data.

In addition to incorporating data from the 1993 fisheries, the addendum to the draft EA/RIR/IRFA includes revised estimates of annual net benefits (ANB). The revised ANB estimates incorporate additional information about halibut yield loss and the price of H&G and fillet products. In addition, the addendum provides a description of the BS/AI Pacific cod jig fishery. Inclusion of the 1993 catch data, revised estimates of the price of cod products and revised estimates of halibut yield loss do not greatly affect the results.

**Biological Effects--**Yield per recruit is not expected to be increased by exclusive allocation of cod to trawl or longline fisheries or by a change in the seasonal distribution of catches. Exclusive allocation of cod to the pot fishery can be expected to result in a 10% increase in yield-per-recruit. However, the present pot fishery does not have enough capacity to harvest the entire cod TAC. Although halibut bycatch rates are lowest during the first trimester and for fixed gear, while crab bycatch rates are highest in the pot fishery and lowest in the longline fishery, these differences are not sufficient reason to implement gear specific or seasonal allocations of Pacific cod because the groundfish OY can be harvested within the present PSC limits.

**Economic Effects--**Because differences in estimated ANB between gear categories are small, and because variability within gear categories and between years is large, it is not possible to confidently predict the magnitude of the actual differences in ANB under gear specific allocations. The consequences of seasonally apportioned catches are less ambiguous. Shifting longline catches from the first trimester to the third is expected to reduce ANB. The jig fishery is not described in sufficient detail to permit direct comparison with the trawl, pot, or longline fisheries. It would be more efficient to allow harvest rights to be allocated to their highest valued use through a market mechanism than to guess at the 'best' gear/season allocation of cod TAC.

In addition to the direct economic impacts represented by ANB, there are secondary economic and social consequences of gear specific allocations such as differences in the location of processing and differences in the use of inputs such as labor. These economic impacts are briefly and qualitatively addressed in the analysis.

**Management Concerns--**The problem statement included in the public review draft EA/RIR/IRFA for Amendment 24 specifies five problems with the status quo fishery: compressed fishing seasons, periods of high bycatch, waste of resource, gear conflicts, and the overall reduction in the value of the fishery. The SSC does not believe that gear specific allocations will alleviate the problem of compressed fishing seasons. The presence of excess trawl capacity and the ease with which some trawlers could convert to longlining coupled with the incentive to race for harvest share ensure that any relief from season compression will be short-lived. Apportionment of the cod TAC across trimesters could result in some relief from season compression. One fortuitous consequence of the race for fish in conjunction with the current January 1 -- December 31 season is that catches are concentrated into the first trimester coincidentally reducing prohibited species bycatch. It is not evident that either gear or season allocations would eliminate all periods of high bycatch. It is not possible, based on the analysis included in the EA/RIR/IRFA, to determine how the waste of resource would be affected by gear or seasonal allocations of the cod TAC. Conflicts between the different gear categories in the cod fishery could be eliminated by the exclusive allocation of cod TAC to one of the gear categories. However, gear conflict may continue between cod fishermen and fishermen pursuing other species. Seasonal apportionment of the TAC would not necessarily reduce gear conflict. The EA/RIR/IRFA does not suggest that gear or season allocations would result in significant increases in ANB.

**Conclusion--**The SSC does not see any substantial benefits in terms of conservation or economic efficiency from a direct allocation among gears or a change in seasonal apportionments.

#### **D-2(b) Salmon Bycatch**

The SSC reviewed the addendum to the EA/RIR/IRFA for a plan amendment to implement a vessel incentive program to reduce salmon bycatch in the BS/AI trawl fisheries for pollock and also heard a presentation from industry representatives for a Salmon Foundation plan, in place of a VIP program.

The SSC is of the opinion that bycatch caps, time/area closures and the VIP proposal are not workable, primarily because of sampling problems and the inability to predict salmon interception volume by time or area.

The Salmon Foundation plan would require the retention of all bycaught salmon under a very stiff penalty for discarding, with a \$20 charge per fish retained to fund a research program.

The salmon would be donated to some good cause. The foundation would, in concert with interested agencies (NMFS, USFWS, ADF&G, NPFMC, etc.) conduct research on projects such as: (1) stock identification of intercepted salmon; (2) effect of interceptions on other fisheries; (3) collecting catch information to try to determine a better way to avoid interceptions in the future.

The SSC encourages industry efforts to try to resolve the salmon bycatch problem, and supports the effort to fund a research program to try to solve this problem.

**D-2(c) Establish Atka mackerel as a separate target species in GOA**

The SSC reaffirmed its position from the April meeting in support of the re-classification of Atka mackerel to the category of target species in the GOA. This action would be beneficial, in that it would allow a species-specific ABC and TAC and would relieve the problem of early attainment of the Other Species TAC in the Gulf.

The question of how the management of this stock can be dovetailed with that of the eastern BS/AI stocks will need to be addressed, as will the possible impact on Steller sea lions, since the present Atka mackerel fishery takes place within 10-20 miles of some of their major rookeries.

**D-2(d) Advancing the starting date for trawl closures around sea lion rookeries**

The SSC received a presentation on the proposed action to extend the 20-mile trawl closure around certain sea lion rookeries to November-December of the BS/AI pollock B season. Although, under present circumstances, the probability that this will ever need to be implemented seems low, because of the compression of the B season fishery into a period of about 2 months, there is a potential need for extended protection of the sea lions in the future.

The SSC agrees that either alternative 2 or 3 under this proposal would be operationally acceptable. The choice will be more a matter of policy than of scientific judgment.

**D-3(a) Total Weight Measurement in CDQ fisheries**

The SSC has often called for better estimates of total removals. In the Bering Sea estimates of both pollock and cod catches have differed by as much as 20% depending on the data and methods used to obtain the estimates. Uncertainties of this magnitude are a matter of serious concern for both stock assessment and fishery management.

The CDQ pollock fishery is an opportunity to develop and test methods of total weight measurement which will probably be needed in most groundfish fisheries before long. The SSC recommends that the Council allow vessels in the CDQ fishery a choice of using either surveyed bins or certified scales so that experience can be gained with both. The Committee also requests NMFS to conduct research on measuring the total weight and composition of mixed-species catches.

**D-3(b) Atka Mackerel - Aleutian Islands**

The SSC received a presentation from NMFS which addressed the allocation of 1993 Atka mackerel harvests among the three new districts to be created within the Aleutian Islands Subarea. The NMFS recommendations for regulating harvests during the remainder of the 1993 season were outlined in a May 21 letter from the Alaska Regional Director to the Council. The 1993 ABC adopted by the Council was very conservative and considered as the beginning of a stepwise increase in ABC as more information on stock conditions and marine mammal impacts were obtained. In December the SSC also strongly recommended that the Aleutian subarea be divided into smaller districts with harvests by district based on NMFS survey estimates. Amendment 28 to the BS/AI FMP established the western (W), central (C), eastern (E) districts (D) with TACs of 12,881 mt, 52,695 mt, and 51,524 mt, respectively.

Through May 8, 37,769 mt of Atka mackerel were harvested in the ED, 24,888 mt more than the district TAC being established under Amendment 28. NMFS proposed no further harvest from the ED and two alternatives depending on the amount of TAC requested by industry. These alternatives were: (1) If industry requests less than 32,000 mt: allow harvest to be taken from both the C and W districts; (2) If more than 32,000 mt: allow up to 51,524 mt from the WD, but only 27,807 mt from the CD. This alternative adds the TACs for the E & C districts and subtracts the overharvest that has occurred in the ED. The SSC supports the NMFS proposal.

Mike Szymanski, representing the Fishing Company of Alaska, testified on the small size of Atka mackerel in the C & W districts and the potential high discard which could result from further fishing in these districts. Although length frequency histograms tended to substantiate these concerns, not enough data were available to allow the SSC to make further harvest recommendations. However, the SSC did strongly recommend that expanded size, age and movement information (if available) be provided by district in September for the consideration of the initial ABC and TACs. The SSC noted that the SSC Atka mackerel ABC was very conservative based on the survey data and life history parameters.

#### **D-3(c) Pollock "A" Season**

The SSC reviewed the proposed regulatory amendment to change the starting date for the Bering Sea pollock "A" season. The draft analysis for this amendment was presented to the Council in April; however, no written document was available for SSC review at that time. Nevertheless, the Council sent the analysis out for public review and is scheduled to take final action at this meeting.

The regulatory amendment proposes 3 alternatives: (1) status quo, i.e. retain the January 20 starting date; (2) a framework procedure and (3) an opening date of February 1. In addition, the amendment proposes an option which prohibits vessels choosing to participate in the pollock roe ("A") fishery from entering other open groundfish fisheries prior to the start of the roe ("A") season. Changes from the status quo are presented as a means to increase the value of the retained catch by centering the fishing season around the peak in roe maturation.

The analysis is constrained by a limited amount of hard data on annual variability in pollock roe maturation and recovery rates. Roe prices vary within a season with highest prices for mature pollock roe and lowest prices for over-mature roe. Increased competition has resulted in increasingly shortened seasons reducing the overall revenues of the fishery.

Sally Bibb, NMFS, presented the analysis with an addendum which updated catch data and provided an example of expected changes in gross revenues which may occur as a result of a delay in opening dates. This example indicated significant potential to increase gross revenue with a two-week delay in the opening date. However, while the open access fishery benefits from this delay, gross revenues to vessels participating in CDQ fisheries are expected to decline. Actual impacts on CDQ partners are confounded by the variety of contractual arrangements between CDP's and participating vessels. There are no data to contrast expected changes in gross revenues between alternatives 2 (framework) and 3 (February 1). Procedurally, alternative 3 is much simpler to employ.

With respect to the options for preventing pre-emption, no data are presented to evaluate the likely or potential impacts of idled pollock roe vessels on other open groundfish fisheries, or the effect of these options on vessels that normally fish other species and then join the pollock fishery in progress.

In conclusion, the SSC notes that a delay in the pollock roe season is expected to increase gross revenues to the open access fishery and decrease revenues to vessels participating in CDQ fisheries.