

North Pacific Fishery Management Council

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MINUTES Scientific and Statistical Committee April 18-20, 1994

The Scientific and Statistical Committee of the North Pacific Fishery Management Council met April 18-20, 1994 at the Anchorage Hilton. All members were present:

Terrance Quinn, Chair
Doug Eggers
Rich Marasco
Albert Tyler
Harold Weeks
Marc Miller

Keith Criddle, Vice-Chair
Susan Hills
Phil Rigby
Jack Tagart
Bill Aron
Dan Huppert

C-2 COMPREHENSIVE RATIONALIZATION PROGRAM (CRP)

Council staff presented a review of progress on the CRP analysis. In addition to staff presentations, the SSC heard public testimony concerning the CRP from Bob Michael, Paul Seaton, Peter Van Thyne, and Fran Bennis (Alaska Marine Conservation Council), Brent Paine (United Catcher Boats), John Gauvin (Alaska Factory Trawlers Association), and Arni Thomson (Alaska Crab Coalition).

The SSC believes that CRP represents the Council's most significant management initiative to date. Council decisions on this plan will greatly affect individuals, communities, and possibly the ecosystem in fundamental ways. The significance of these actions dictates that they receive more careful analysis and review than the SSC could provide for the many new proposals from Council staff and the public in the few hours available to us.

During our meeting on Monday, April 18, the SSC received the following documents and reports:

- A report from Ron Berg (AKR) concerning progress on the Council's Moratorium regulations;
- The Draft Environmental Assessment/Regulatory Impact Review (EA/RIR) for License Limitation Alternatives for the Groundfish & Crab Fisheries in the Gulf of Alaska and Bering Sea Aleutian Islands (200 PAGES);
- A letter from Regional Director Pennoyer to Council Chairman Lauber (dated April 13, 1994) outlining his reservations regarding the Council's decision to pursue license limitation rather than individual quotas as a short-term program;
- A proposal from the Alaska Marine Conservation Council elaborating on the Harvest Priority

- system which had been discussed by the Council in January;
- A Council staff document concerning the various Harvest Priority/Full Utilization issues and options; and,
 - A proposal from ADF&G for a specific, staged license limitation/individual quota system, which included a specific harvest priority allocation procedure.
 - A letter from John Gauvin (AFTA) to Terry Quinn suggesting that the CDQ fishery experience be examined as an indication of how the fishery might behave under an ITQ system.

1. Status Report on Moratorium

The SSC heard a presentation from Ron Berg (NMFS) regarding the status of the moratorium on vessel entry. The moratorium amendment should not be regarded as a stand-alone solution to the problem of overcapitalization. Experience in other fisheries suggests that when a cap is placed on the number of vessels allowed to participate in the fishery, harvesting and processing capacity will continue to expand through vessel upgrades and the expansion of other inputs to production. As a general rule, restricting inputs is an ineffectual means of regulating production. At best, the moratorium will preserve the status quo. In practice, because of the possibility for vessels to crossover from the halibut and sablefish fisheries, the number of vessels fishing groundfish and crab could be expected to increase. This increase is particularly likely if the Council moves forward with license limitation or quota share management systems and extends the qualifying period.

2. Review of License Limitation Analysis

A draft EA/RIR for License Limitation was presented to the SSC by Council staff. We appreciate the substantial effort expended by the authors of the report since the January council meeting. Because some of the research necessary for evaluation of the socioeconomic impacts will not be completed before the end of May, it does not seem likely that a complete draft EA/RIR will be available before the June meeting. Because of the complexity of the analysis and the importance of the fisheries that will be affected, it is imperative that the EA/RIR be subjected to a rigorous technical review prior to public release. Therefore the SSC recommends that the EA/RIR not be released at this time. Like the moratorium on entry, license limitation is a particular means of capping the number of participants not the level of effort or capitalization.

3. Letter from Director Pennoyer to Chairman Lauber re. License Limitation

The SSC concurs with Regional Director Pennoyer's recommendation that the license limitation options considered by the Council be directed toward resolution of specific problems identified in the Problem Statement. The Problem Statement for the CRP clearly indicates that the open access fishery leads to a race for fish, over-building of fleet capacity, and ancillary effects such as excessive discards, congestion, preemption of local fisheries, and hazardous fishing conditions.

4. Harvest Priority/Full Utilization

The SSC was briefed by Clarence Pautzke on the status of analyses of the harvest priority incentive plan for bycatch reduction and full utilization of groundfish catches. In addition, the SSC heard public testimony regarding the harvest priority incentive plan. There is growing national concern about incidental mortality of non-target species and about the discard of usable fish. Measures to address these concerns could be examined alone, or integrated into the CRP. While bycatch reduction and full utilization are combined in this agenda item, they are really two separate issues: (a) bycatch reduction involves avoidance of unwanted species, for example through improved gear

selectivity; (b) full utilization involves processing and marketing all fish that are caught. Most of the discussion at this meeting seem focused on harvest priority, and particularly on measures that re-shape incentives of fishing vessel operators. There may be little direct connection between license limitation and bycatch reduction. However, an IFQ system could deal with some bycatch problems, for example, by including individual quotas for prohibited species.

The Alaska Marine Conservation Council has developed a framework of the "harvest priority" system. The SSC notes that this program will require intensive monitoring on board participating vessels and by NMFS AK region. Although the proposal contains provisions for increased observer coverage on participating vessels, it does not include a similar provision for non-participating vessels. Because vessel specific bycatch rates will be required to determine eligibility for participation in the incentive fishing period, the statistical validity of vessel specific bycatch rate estimates will be subject to intense scrutiny. Although specific versions of the harvest priority system may make special provisions for small vessels, small vessels may be unable to accommodate the expanded observer coverage required to be eligible to participate in the incentive fishery. Thus an inadvertent consequence of the harvest priority incentive program is that it imposes disproportionate costs on smaller vessels.

5. ADF&G's Groundfish License System (GLS) as a Transition to IFQs

The SSC has not evaluated the proposal from ADF&G. The ADF&G proposal is a specific selection from the alternatives included in the Council's broad license limitation proposal, augmented by a harvest priority system, full utilization, enforcement monitoring requirements, and a progression to ITQ management. The progressive nature of the State's proposal, dependent on options selected, will affect the behavior of the groundfish fleet as it reacts to the plan to determine initial allocation of QS under the eventual ITQ. It is unclear precisely how the distribution of QS may be affected by this proposal, but any analysis of the proposal will have to take these distributional effects into consideration.

Suggestions for Further Progress on the CRP Analysis

Additional SSC review of the CRP regulatory analysis will focus on whether the identified problems are resolved and whether the analysis uses the best scientific information available. Besides overcapitalization and related problems, the CRP regulatory amendment has implication for such major issues as: (a) the effect of the regulations on utilization and discard of commercial fish, (b) economic and social impacts on fishing communities and user groups, and (c) ecosystem concerns (e.g. effects of fishing on birds, mammals, and the benthic habitat).

Another issue which seems to pervade the set of options being considered under CRP is the technical feasibility and cost of information needs associated with management options. Accordingly, the SSC recommends that the Council and/or the staff compare the approaches to understand the key differences in problems solved and implementation viability. We note further that there are myriad of other options for CRP, and that these options may not be mutually exclusive.

C-3 SCALLOP MANAGEMENT

(a) Review recent State action on scallop management

ADF&G staff described the current status of the fishery and management.

(b) Scallop FMP

Council staff provided the SSC with a brief description of the contents of the draft Fishery Management Plan for scallop fisheries in the Exclusive Economic Zone of Alaska. The following individuals provided comments: Teresa Kandianis, Bill Wells, Mark Ireland and John Bryson.

The SSC believes that harvest capacity, habitat and bycatch issues associated with the scallop fishery warrant implementation of a Fishery Management Plan. The following comments are offered for consideration.

1. Optimum Yield (OY) in the draft is specified as a range 0 to 2.7 million pounds of shucked scallop meats. Historical catches were used to derive this range. The low end of the range is the lowest catch on record (0 pounds - 1978). The high end was defined as the highest catch recorded since the "fishing up" period (1.8 million pounds - 1992) plus 50% to account for future landings from undeveloped fisheries for scallop species other than weathervane scallops. The SSC believes that a more appropriate approach would be to set the upper end of the range equal to the catch of record, 1.8 million pounds. The basis for reducing the OY is predicated on the fact that the fishery has a long catch history with attendant peaks and valleys in landings. The opportunity for development of pink scallop fisheries has existed for some time without substantial catch. The catch of record is not regarded as a sustainable long-term catch. Furthermore, since we have little knowledge of absolute abundance or population dynamics of these stocks, prudent management suggests the OY not exceed the catch of record.

2. The SSC is concerned over the lack of a specific statement describing how Guideline Harvest Levels (GHL) will be calculated. It is recognized that limited information is available to calculate GHLs. Given this situation, the SSC would like to have the opportunity to review and comment on them as they are developed.

It is noted that Appendix C in the November 30, 1993 EA/RIR is not consistent with the Guideline Harvest Range Section of the State's February 24, 1994 Fishery Management Plan for Commercial Scallop Fisheries in Alaska. It is recommended that the contents of Appendix C be replaced with the discussion in the State's Plan.

3. While the SSC believes that setting the overfishing level equal to the upper end of the OY range is acceptable at this time, research is needed to improve the scientific basis for this value.

4. The purpose of the break-even analysis was to illustrate the number of vessels that would be able to cover fixed and operating costs given:

- i. total landings of 1.3 million pounds,
- ii. exvessel price of \$4.50 per pound, and
- iii. the fishery occurs year-round.

Results of this type of analysis are sensitive to changes in any of these assumptions. Therefore, the results should be used with caution. In open access fisheries, in the short-run vessels will enter the fishery until the point where gross returns equal operating costs. This may result in the entry of more vessels than the resource can support in the long run.

Given what is currently known about the abundance of the scallop resource and harvest potential of the fleet, the SSC believes that serious consideration of a moratorium is warranted.

5. Numerous research topics requiring attention were identified in the draft FMP. Estimation of population abundance and size/age structure; scallop biology, life history and stock production parameters; analyses of reproductive potential, population thresholds and recruitment; and investigations of exploitation rates are of paramount importance. All of these issues are important to the determination of GHs. Neither ADF&G nor NMFS have funds to initiate a comprehensive scallop research program. It is recommended that ADF&G, NMFS and members of industry begin discussions of alternative strategies that could be used to address important research needs.

C-5 EXPERIMENTAL PERMIT REVIEW

(a) Terra Marine Research and Education application for an experimental permit.

The SSC heard a presentation by Tuck Donnelly of Terra Marine, the applicants were forced to change the goals of the project due to a determination of the NOAA General Council that PSC catch cannot be retained for charitable distribution. The original goals of this study included a management question: Will the bycatch be reduced if vessels were required to process prohibited species catch (PSC) at the fishing companies' expense, given that the product would then be made available free to food banks. The program would explore the possibility that the procedure would provide an incentive for vessels to avoid areas of high bycatch.

The second question of the experiment is: would enough product be available from such a voluntary program to make it worth while for a non-profit company to continue deliveries to food banks? Would such a program be feasible for reducing fish waste?

The third question is: when faced with a series of difficulties and costs, at what point would a fishing company wish to abandon the effort of volunteer processing for charitable reasons? The first question has been abandoned by Terra Marine. The second and third questions are still being pursued by the applicant.

The SSC would like to comment on the proposal from the standpoint of statistical validity and the achievement of goals. The proposal would be much improved if the goal of question two were clarified in a quantitative manner. In particular the proposal must define what volume of product is needed to insure feasibility for continuance of delivery to food banks? What are the variables associated with the continued success of the delivery operations? The intended analyses associated with the third question are also not defined and should be clearly written out. What factors will be considered or measured to answer the question that has been posed: "at what point would a volunteer vessel wish to abandon the effort?" How will the data be treated statistically? After one year of operation is there preliminary information on the amount of sampling necessary to answer these questions? The SSC recommends that the permit be reconsidered only after the applicant files an suitable description of its analytical intentions.

(b) Coastal Villages Fishing Corporation Permit Application

John Henderschedt provided information to the SSC on this experimental fishing permit request. The objective is to determine if groundfish abundance in the Kuskokwim Bay/Etalin Strait area is adequate to support a commercial fishery. The endeavor will provide information on the abundance of groundfish species in an area that is not surveyed by NMFS. Data also will be provided on PSC bycatch rates.

C-6 PACIFIC PELAGICS

The SSC received the briefing material provided, and agrees that data collection and dissemination for Pacific pelagic fisheries will require inter-Council coordination. The Committee would like to review proposed reporting requirements, but has no recommendation to offer on the apportionment of responsibility to develop proposed requirements.

D-2 CRAB MANAGEMENT

Ken Griffin, ADF&G, reported on meetings of the Board of Fish and the Crab Consultation Group (CCG). The Board addressed regulations dealing with pot limits, definition of crab pots, tunnel height opening and tank inspections. Detailed minutes of both meetings are summarized in the Council briefing books. Mr. Griffin's report was presented as an information item, no actions were required by the SSC, but the SSC wishes to note the role of the CCG in improving coordination between the managers and industry, including the development of the Bering Sea Crab Industry Advisory Group.

D-3(a) PRIBILOF ISLAND TRAWL CLOSURE 21(a)

The SSC heard a presentation from Dave Ackley (ADF&G) describing the revised Amendment 21a to the Fishery Management Plan for the groundfish fishery of the Bering Sea and Aleutian Islands. The purpose of the amendment is to eliminate bottom trawl activities in areas of importance to blue king crab stock so that bycatch would be reduced and the stock rebuilt and maintained at exploitable levels. Other goals relate to the reduction of bycatch of Korean hair crab and Pacific halibut, and interference with seabird and marine mammal populations.

The SSC commends the authors for an excellent analysis of effects of trawling on blue king crabs in the Pribilof region. In addition to the seven previously considered options, the authors analyzed four new options. While only light analytical treatment was given to halibut, marine mammals, and seabirds in the area, reduced trawling in the area could produce benefits for these and other species.

Alternative 1 was the status quo. Alternatives 2 - 7 did not focus on the main habitat area for blue king crab in the Pribilof area, and were less effective at reducing bycatch.

The boundaries of Alternative 8 were selected to include the main habitat of blue king crab while allowing bottom trawl access to the 100 m edge. The boundaries are drawn as simple straight lines to facilitate enforcement. As a consequence the analysts could show that there would be little interference with the pollock and cod fisheries. Some interference would occur with the flatfish fishery since as much as 10% of the Bering Sea flatfish fishery, and 17% of the "other flatfish" fishery is taken within the proposed protected area. However the catch per tow in the flatfish fishery was similar within and outside the proposed protected area, therefore, we would not anticipate foregone catch as a result of transferred effort.

Alternatives 9 and 10 do not provide sufficient protection for blue king crabs because they involve a bycatch cap that must be reached before the trawling closure occurs. The result would be interference with the trawl fishery in addition to minimum protection for the blue king crab stock.

Alternative 11 is a compromise between Alternative 8 and 9, or 8 and 10, depending on which cap is chosen. A choice is proposed between a cap of 1% of the previous year's estimated king crab abundance or else 20,000 crabs. At the same time a permanently closed area is proposed that is smaller than the closed area in Alternative 8, and that would allow access to the flatfish stocks. The

area is designated with straight lines to simplify enforcement. However, the area defined for permanent closure accounted for only half of the crabs taken in the larger area defined for closure in Alternative 8. As a consequence crab protection would not be as great. Data do not allow projection of the extra time required for rebuilding of the crab stock or an estimate of the fishery income lost.

The SSC notes that Alternative 8 gives maximum chance for rebuilding the Blue Crab Stock. However, flatfish trawlers would have to relocate to make up catch otherwise taken in the protected area. As noted previously we do not expect foregone catch as a result of this relocation.

D-3(c) TOTAL WEIGHT MEASUREMENTS

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-3(h) SALMON BYCATCH

Area 517 and CVOA Observer Requirements

The SSC reviewed the EA/RIR for increased observer coverage to monitor salmon bycatch for trawl vessels fishing during the BSAI pollock "B" season in area 517 and the CVOA.

Alternative 2 which requires two observers for all vessels greater than 125 feet and 100 percent coverage for vessels less than 125 feet, more than doubles the observer requirements and costs relative to the status quo. In addition NMFS staff reported that Alternative 2 is not feasible to implement for the 1994 season, due to extensive lead time required for training and deploying observers.

Alternative 3 requires all motherships and shorebased processors which receive pollock harvested in the Area 517 and CVOA during the pollock "B" season to have 2 observers. This alternative provides more opportunity to directly monitor the "B" season catch from Area 517/CVOA and is more focused on the problem. Alternative 3 is substantially less costly to implement than alternative 2. Since Alternative 3 requires only 10 additional observers NMFS reports it is feasible to implement for the 1994 season. The increased observer coverage under alternative 3 provides additional resources to implement the mandatory retention requirement for Area 517/CVOA. The increased observer resources are necessary to process the retained salmon bycatch which are required to be delivered to certified observers. The additional observers will reduce the opportunity for vessels to discard salmon and ensure compliance with the mandatory retention requirement.

The SSC recommends that alternative 3 be implemented.

Hotspot Closure Authority.

The SSC reviewed the draft discussion document, *Salmon Bycatch in the Bering Sea Trawl Fisheries and Alternatives for Hot-Spot Closure*. The SSC notes that the document is spatial analysis of chinook and "other" salmon bycatch in the BSAI trawl fisheries. As such it is a update and expansion of earlier analyses of Amendment 21b. The document provides substantial new information on distribution and timing of chum salmon bycatch as well as an update on the timing and distribution of chinook salmon bycatches. In addition, the document defines a series of alternative areas for closure based upon existing management area coincidental with high chum salmon bycatch.

Salmon Retention, Processing, and Delivery to Food Banks

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-3(j) ELECTRONIC REPORTING

Sue Salvesson (NMFS) reported on a proposal regulatory amendment to require electronic reporting of production and observer data. If approved by the Council, the system could be implemented in 1995. Under Alternative 2 of the discussion paper, electronic reporting would be implemented in three phases. In Phase 1 all processors shoreside and at-sea would be required to report weekly production data in electronic format via satellite communications. Presently, these data are faxed by processors to NMFS. Phase 2 would include all observer reports with 100% observer coverage, and Phase 3 would extend these reporting requirements to vessels subject to 30% observer coverage. In addition, Phase 2 will address the maintenance of electronic logbooks by both processors and catcher

vessels. The SSC believes that such a system could improve both quality and timeliness of data collection and encourages NMFS to proceed with the development of the EA/RIR.

D-3(k) TRAWL MESH RESTRICTIONS

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.