

North Pacific Fishery Management Council

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MINUTES Scientific Statistical Committee April 20-23, 1992 Anchorage, Alaska

The Scientific and Statistical Committee of the North Pacific Fishery Management Council met April 20-22 at the Anchorage Hilton. All members except John Burns, Bill Clark and Dan Huppert were present, namely:

Terry Quinn, Chair
Don Rosenberg
Jack Tagart
Richard Marasco
Marc Miller

Larry Hreha
Bill Aron
Doug Eggers
Phil Rigby (alternate for Gordon Kruse)

General Remarks: The SSC commends the Council staff and other preparers on their excellent work which was accomplished over a very short period of time. The SSC also thanks the Council staff for their help in organizing presentations, for logistical support and for being well prepared.

C-2 Inshore/Offshore

The SSC received a presentation describing the contents of a report titled, "A cost-benefit analysis of pollock and cod quota allocations in the Bering Sea/Aleutian Islands." This paper presents a conceptual framework for conducting the cost-benefit analysis which the SSC identified as missing during our earlier review. As noted in previous SSC minutes, input/output analysis provides information on how various industry sectors, communities and regions will be affected by different allocations, while cost-benefit analysis provides estimates of net benefits.

This cost-benefit framework provides a basis for examining alternative inshore/offshore allocations. Future applications of this methodology would benefit from refinements of estimates of several key model inputs, for example, harvesting and processing costs (particularly, the inshore sector), discard rates, product recovery rates, and markets (particularly prices, exports and market access).

C-3 Moratorium on the Entry of New Vessels

The SSC reviewed the April 6, 1992 draft moratorium document. Specific comments have been provided to the staff. The SSC recommends that the document be released for public review.

C-4 North Pacific Fisheries Research Plan

The SSC received a report on the revised North Pacific Fisheries Research Plan. Plan objectives, options for observer program funding, and an analysis of observer coverage were discussed by the SSC. Necessary levels of coverage to meet plan objectives are different. Recent analyses by NMFS indicate that relatively low levels of coverage, say between 10% and 30%, are often adequate to estimate target fishery catches. For estimating bycatch rates of prohibited species, necessary coverage can be as high as 70% to 80%. For purposes of an incentive program, necessary coverage approaches 100%. Annual analysis and evaluation of observer coverage and sampling methods is anticipated in the plan in order to successfully implement plan objectives.

The SSC was particularly concerned about the difficulty in estimating bycatch in some components of the groundfish fishery regardless of the level of observer coverage (e.g. salmon); bycatch rates for some prohibited species are highly variable due to infrequent occurrence or clustered distribution. Another key problem is that under a fee collection system, estimated revenues are not adequate to fund complete coverage for all fisheries addressed by the research plan.

During its January meeting the SSC recommended that several issues be addressed in the research plan. The April 1992 revision of the research plan has met SSC concerns by:

1. adding the halibut fishery as an observed fishery;
2. NMFS providing an analysis which documents expected levels of precision at varying levels of observer coverage for many components of the groundfish fishery; and
3. accommodating the SSC's January recommendation to address statistical power.

SSC recommendations still not addressed are:

1. the determination of which fisheries are most in need of full observer coverage; and
2. completion of a qualitative assessment of the possible effect of observers on bycatch.

The SSC suggested the design of the observer program include further work on the comparison of whole haul versus basket sampling in future evaluations. This work would require more complete observer documentation for each subsample. The SSC recommends that the plan be released for public review.

C-4(c) 1993 Observer Coverage

The SSC received a report on the need for 1993 observer program changes contained in the Regional Director's letter of April 17, 1992 and endorsed the preparation of a regulatory amendment to implement the recommended changes.

C-5 International Fisheries

The SSC received a report on the results of workshops and a meeting dealing with the pollock problem in the Central Bering Sea. Two workshops were held in Seattle in February attended by China, Korea, Japan, Poland, Russia and the U.S.:

1. to develop an observer program to cover the pollock fisheries of the international zone of the Central Bering Sea. A consensus was reached regarding levels of initial observer coverage, training of observers, observer qualifications, data collection, and analysis of data;
2. to further develop analyses of the status and population dynamics of pollock. VPA and stock synthesis models were applied and each clearly demonstrated the decline of pollock in the Central Bering Sea. The models worked better if they were fitted to an assumption that there was a 60-40 split in the contribution of fish to the "Doughnut hole" from the U.S.-Russia zones, rather than the 80-20 split that had been previously hypothesized. The absence of age/length information from the Western Bering Sea pollock catch is a major barrier to furthering our understanding of the stock composition and dynamics.

The workshops were followed by plenary sessions in Washington D.C. in April. The plenary approved the report of the observer workshop, thus committing each fishing country to implement an observer program. The countries all agreed that the pollock situation in the "Doughnut hole" was serious and while each of the fishing nations agreed to reduce fishing effort, no agreement on the Russian-U.S. moratorium proposal could be reached. There was tentative agreement for the group to meet again in August in Petropavlosk, Kamchatka.

The Alaska Fisheries Science Center also reported that preliminary analysis of the Bogoslov hydro-acoustic survey, just completed, indicated little change from last year and appears to be in the 600,000 to 800,000 t range.

C-6 Comprehensive Rationalization

The SSC discussed the Council staff's "Comprehensive Rationalization Program" paper (C-6), the NMFS Special Studies Team's cost-benefit analysis, and preliminary NMFS guidance concerning socioeconomic research requirements (Fricke, draft report). The SSC also received public testimony which echoed points in these documents that trade-offs between efficiency and equity will shape the future nature of managed fisheries. Recent Council deliberations over inshore/offshore pollock allocations and sablefish and halibut individual transferable quota programs underscore the desirability of formal analytical treatment of the social and economic impacts of NPFMC policies. Although the Council receives valuable input on the human dimension in fisheries through public testimony and Advisory Panel advice, Fishery Impact Statement requirements in the amended Magnuson Fishery Conservation and Management Act would appear to compel systematic and integrated socioeconomic analysis.

The Council has the opportunity to define the situation by identifying the key issues which bear on the rationalization of fisheries. The SSC recommends that the Council take the initiative by organizing a retreat where individuals from the Council family (including the Advisory Panel, SSC, and Council staff) can reach agreement about appropriate management alternatives and priorities, and research topics and methods. Outside experts may be invited as necessary. The purpose of the retreat would be to build a template to structure the necessary research tasks.

In constructing this template, the SSC recommends that the design combine: (1) input/output analyses (addressing distribution effects), (2) cost-benefit analyses (addressing efficiency and, possibly, extending to mathematical programming/optimization analyses), and (3) social impact analyses. For example, the following social data needs merit attention:

1. demographic/sociological profiles of NPFMC fishing communities (this inventory might be organized along the lines of the inshore/offshore profiles),
2. measures of community dependency on commercial, subsistence, and recreational fishing (this would include documentation of marine mammal and wildlife interactions with fishing activities),
3. measures of the consequences of policy alternatives on the diversity and flexibility of fishing patterns,
4. community stability and fishery development trade-offs, and
5. the effect of NPFMC policies on Pacific Fishery Management Council fisheries.

The above list may be refined by: (1) further guidance for the preparation of social and economic impact analyses being developed by NMFS, and (2) results of a recent Sea Grant conference held in Washington, D.C. concerning the investigation of social and economic phenomena in fisheries.

As stated in January, the SSC believes it important to consider narrowing the comprehensive analysis by eliminating some of the seven major alternatives listed in the Council staff's rationalization paper. This could be accomplished via a quick, qualitative evaluation. The analytical resources of the Council could then be directed toward evaluating the few most likely alternatives.

D-1 Crab Management

Members of the Crab Plan Team provided an overview of the crab SAFE, the 1991-1992 snow crab fishery, and the possible recalculation of Bering Sea crab optimum yields.

The SSC noted that the OY for C. opilio is currently limiting harvests. The GHL (guideline harvest level) for the 1991-1992 fishery was 70 million pounds above the OY. The SSC discussed the limited and dated biological basis on which the C. opilio OY was originally calculated. Other current issues pertinent to the OY include handling mortalities of bycaught crab, the harvest of hybrid crab, and the importation of crab from the western Bering Sea.

The SSC suggests that it would be appropriate for the crab plan team to meet specifically to address the need to redetermine crab optimum yield levels. The crab SAFE was reviewed and no deficiencies were noted.

D-2 GOA and BS/AI Groundfish

D-2(c) Total Catch Estimation and Reporting

The SSC heard a report from Ron Berg, Alaska Regional Office, on continuing efforts to research methods of obtaining direct weights of catch at-sea. Technologies investigated to date have not been able to demonstrate acceptable levels of precision, but work is continuing to reduce the relative error. Despite the desire to adopt rules promoting direct methods of weighing catch at-sea, Ron acknowledged that enforcement requirements will always depend on product recovery rate conversion factors.

D-2(d) Trawl Test Fishing Zones

The SSC reviewed the draft EA/RIR for a GOA plan amendment to establish pelagic and bottom trawl test fishing areas. This proposal creates three test fishing areas, one off northeast Kodiak Island, one near Sand Point and another near Dutch Harbor. The SSC recommends that the amendment go out for public review subject to the following considerations:

1. a systematic review of each test fishing area for conformance to the five proposed test fishing area criteria;
2. a summary list of species likely to be encountered in the test fishing area;
3. a review of the accessibility of these areas, i.e., the convenience of access;
4. an analysis of the necessary size of a test fishing area;
5. a review of enforcement requirements, e.g., check-in and check-out requirements;
6. a review of potential impacts on crab resources in each test fishing area.

D-2(f) Groundfish Amendments

The SSC notes that neither Amendment 21 nor Amendment 26 received Plan Team review, which deprives the Council of their expertise in caretaking of the respective FMPs. The SSC recommends that the amendment packages receive Team review whenever possible.

Amendment 21: BS/AI Bycatch

Three proposals are included in the package that the SSC reviewed and we heard presentations from staff and authors of the proposals.

1. Establish trawl and non-trawl fishery halibut PSC limits. The bycatch model used to estimate the effects of the options considered is a revised version of the model previously used for bycatch, and many of the shortcomings and limitations of that model previously identified by the SSC are still present. However, these limitations are clearly stated in the package. The SSC notes that generally speaking, the result of reduced bycatch is the reduction of groundfish catch and in most cases the costs exceed the benefits.
2. Improve chinook salmon bycatch management in the BS/AI. Because catches for certain western Alaska chinook salmon fisheries have been constrained while generally achieving desired escapement levels, the declining trend in western Alaska chinook salmon catches in figure 3.1-9 overestimates the recent decrease in western Alaska chinook salmon abundance. The SSC suggests that chinook salmon escapement estimates which are available for the Yukon, Togiak and Nushagak Rivers be included in Figure 3.1-9.
3. Prohibit bottom trawling in IPHC Area 4-C adjacent to the Pribilof Islands. The SSC recommends that a statement be included in the text for the IPHC Area 4-C closure that describes why under scenario 1, Alternative 2, the "Groundfish Adjusted Net Value" decreases relative to Alternative 1 and increases under the more stringent Alternative 3. An explanatory statement also is needed for the behavior of Scenario 2 groundfish net values.

The text states that the effect of Alternative 2 and 3 on birds and marine mammals should be positive. The SSC believes that the current understanding of bird/marine mammal/fishery interactions does not warrant such a strong statement. It is recommended that this section be changed to reflect this lack of understanding. Further, the "+" and "++" in bird and marine mammal population rows of Table 4.3 should be replaced with a symbol representing uncertainty ("?").

The SSC recommended several editorial changes and additions to the document as presented. Two additional chapters are being prepared by the Team. The SSC has appointed a subcommittee (Rich Marasco, Gordon Kruse, Bill Clark) to review the completed document with the suggested changes and recommends that it go out for public review after this review.

Amendment 26: GOA

Two proposals are included in the package that the SSC reviewed and we heard presentations from staff and authors of the proposals.

1. Prohibit trawl gear east of 140° W. in the eastern GOA. The prime objective of the amendment is to provide protection to coastal communities in the face of a concern for a perceived expansion of a trawl fleet, that both preempts fishing grounds and TACs. The document analyzing the amendment proposal contains considerable biological and economic analyses, but no social analysis. This absence is largely the result of the lack of sociological data combined with the very short time (6 weeks) allowed for the analysis.

While there have been additional concerns for possible damage to the benthic communities caused by trawling, high bycatch rates of salmon, and the potential decline of marine mammals and birds, these concerns could not be substantiated with available data.

The SSC provided the analysts with several suggested clarifying comments, including:

- a. There is a need to provide some insight on bycatch from the longline fleet. Data from observers aboard factory longliners or IPHC data from the halibut fleet might be used to address this issue. These analyses should address the possibility that non-observed vessels, which would make up the bulk of the catches if trawling is banned, could generate some unexpected bycatch problems.
- b. Regardless of Council action on the proposed amendment, there is a need to examine catch reporting requirements, possibly requiring daily reporting, to eliminate the problem of harvests exceeding TACs and ABCs (e.g. sablefish, rockfish in Table 7 and Table 13).
- c. The document should be modified to eliminate hypothetical ABC revisions for 1992 and report only the actual 1992 ABCs. The distributions of the current TACs should simply rely upon the biomass distributions.
- d. A statement in section 2.8.1.2 that indicates that there is the possibility for fixed-gear net revenues and the economic base of coastal communities to erode with the expansion of trawl fishery removals should be expanded.

- e. A summary statement of benefits that would accrue with implementation of alternative 2 should be added to section 2.8.2.2.
 - f. In the view of the Alaska Region, a proposed rule change to alter DSR take by trawlers would effectively permit trawl fishing for deep-water rockfish while protecting the DSR fishery and prevent grounds pre-emption by trawlers. The consequences of this rule change should be clarified.
2. Re-establish crab closure around Kodiak. The SSC heard a staff presentation and comments from the public.

The SSC recommends that once the issues summarized above for the eastern Gulf trawl closure have been addressed by the drafters, the document be sent out for public review.

D-2(g) Individual Bycatch Quotas

The SSC was told that the Bycatch Team met to discuss the feasibility of using individual quotas in bycatch management. Monitoring and verification were identified as critical issues. Further progress on the development of an IBQ program awaits resolution of these problems.

D-2(h) Preferential allocation of Pacific cod to fixed gear fisheries that have low halibut bycatch

An analysis of this issue is underway at the Alaska Fisheries Science Center. An attempt will be made to have a draft report available for review by the June Council meeting.

D-2 Miscellaneous: SAFE and Overfishing Issues

The Team was not at the April meeting, so could not comment on SSC recommendations from the January meeting regarding SAFE preparation.

The subcommittee on overfishing (Clark, Quinn, Thompson, Methot) met in March to consider alternatives to the current overfishing definition. The Committee is leaning toward using analysis of spawning stock biomass to specify default values of overfishing and ABC, with the possibility of adjustments for current biomass level. The subcommittee will meet in May to prepare a proposal to submit to the SSC at its June meeting.