

North Pacific Fishery Management Council

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Agenda Item #7
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SCIENTIFIC & STATISTICAL COMMITTEE MEETING October 25, 26 and 27, 1978 Seattle, Washington

The SSC met in Seattle at the Northwest and Alaska Fisheries Center on October 25, 26 & 27, 1978

Present were:

Steve Pennoyer, Chairman
Jack Robinson, Vice Chairman
George Rogers
Don Bevan
Jack Lechner
Frank Fukahara (October 26 and 27 only)
Don Rosenberg
Chuck Woelke sitting in for Al Millikan

Absent was Ed Miles

The meeting was attended by Vice Chairman Harold Lokken, Council staff Irma Nelson and Mark Hutton and approximately 30 others, including a 15 member Japanese delegation.

The SSC wishes to express its appreciation to Mrs. Nelson who worked long hours and took arduous notes and prepared on-the-spot minutes for review.

SSC MEMBERSHIP

The Committee discussed the single vacancy on the SSC and the past recommendation of the Council that a marine mammal specialist be considered rather than an economist to fill this position in lieu of Committee expansion to eleven members.

The SSC, however, recommends to the Council that an economist be appointed as the 10th member as the expertise of a marine mammal specialist can be called upon from time to time.

Pending approval of the Council for this approach the SSC recommendations, for an economist member, will be forthcoming in December.

PANDALID SHRIMP WORKSHOP

Jerry McCrary presented a progress report on the Pandalid Shrimp Workshop which dealt with the preliminary agenda (attached), the letters/questionnaires, participants, speakers and budgets.

The SSC felt the Committee should follow-up with specific countries, Norway, Iceland/Greenland, Soviet Union and England, in an attempt to get firm commitments.

Regarding finances, it appears that all contributions have been secured to bring the budget to \$14,000:

NPFMC	\$3,500
NMFS	4,000
ADF&G	2,500
Sea Grant	4,000

The Subcommittee will meet again before the next Council meeting to discuss this matter further.

PRESENTATION ON GOA GROUND FISH (by Bert Larkins)

Bert Larkins (NMFS) presented information on the 1977 blackcod catch rate of the North Pacific Longline Gillnet Association.

In pointing out the relationships used (in the past) to incorporate CPUE data trends in the derivation of ABC and OY, Larkins told the Committee continuing declining trends evidenced in the 1977 data would indicate the stocks were not capable of producing the 1978 PMP ABC of 17,400 m.t.

Larkins told the Committee that the information should be used to amend the 1978 PMP and the 1979 FMP ABC downward by possibly 5,100. The OY is dependent on rate of rebuilding desired and will have to be reconsidered by the Council.

The SSC reviewed the data and concurred with the recommendation by Larkins noting emergency regulations and amendments could be used to implement the action, thereby not effecting the implementation of the elusive FMP. The Committee emphasized the fact that they recommended no action be taken that would slow or delay implementation of the plan.

FISHING AS A WAY OF LIFE (Proposal by Dr. Charles Konigsberg)

The SSC reviewed an unsolicited research proposal by Dr. Charles Konigsberg and recommends no action at this time. The Committee noted that the proposal had no direct relationship to a Council FMP and should be considered a low priority.

INCIDENTAL SPECIES WORKING GROUP REPORT

The SSC has considered the second draft on the Management of Mixed Species and has the following recommendations:

1. An additional category is needed for plants and animals with no-value (now or in the foreseeable future). This group will not have an OY or be included in the "other" category.
2. Further explanation is needed on handling of reserves, i.e., will a halibut plan have an OY to include incidental catches taken with groundfish, shrimp and crab with a reserve withheld to accommodate the incidental catches.
3. Requirements for retention must permit the discard of illegal catches, i.e., female crab, undersized salmon, etc.
4. More definitive statements are needed as to the intent of the Council in closing fisheries. Will quotas be set for landing of prohibited species? Will a target fishery on one species be closed when the incidental catch quota is reached?
5. We concur with the continuation of non-retention of prohibited species as a temporary expedient. We suggest the Incidental Species Committee continue to study this question and elaborate on the alternatives that might be available. We support the suggestion of experimental retention of prohibited species in joint venture operations.

PRESENTATION BY JAPANESE LONGLINE/GILLNET ASSOCIATION

The Committee heard testimony/comments from Mr. Nakamura of the Japanese Longline/Gillnet Association in which he presented 5 points:

1. A request for a longline quota of 8,000 mt of sablefish and 12,000 mt for Pacific cod in the GOA FMP for 1979.
2. A request to relax the sablefish depth limit from the 500 to the 400 meter isobath.
3. A request to open Davidson Bank area to longlining.
4. Restated previous request to keep statistical areas to a minimum of two.
5. Requested longline provision for Pacific cod east of 157° West to 140° West longitude in off-season for halibut.

He will provide more statistical information and present it to the Council at the November 2-3 meeting. The SSC had no comment pending receipt of further data.

CONTRACT REPORTS

The SSC reviewed contract reports on the troll logbook program and troll observer program.

The reports presented were information reports and although several comments were made and points brought out, no action was taken. Certain data omissions were pointed out including the need to comparatively analyze data from observer, logbook and fish ticket sources.

SHRIMP FMP

The SSC received copies of the Shrimp FMP on the afternoon of October 25th. However, due to the late arrival and a heavy agenda, did not have time to review the plan and delayed the matter until the next meeting.

KATZ PROPOSAL

The SSC recommends that the Council endorse the proposal submitted by Dr. Philip Katz entitled "Projection of Biological and Economic Impacts of Alternative Management Strategies for the Alaska King Crab Fishery." The SSC considers that the probable outputs of such a project will prove useful in the further development of the management plan for Alaska King Crab. The Committee is not convinced that the economic component of the model can be accomplished within the time frame proposed nor with the economic data available but are recommending proceeding with the model development as it will assist in the identification of economic data gaps. To insure that these data gaps are identified we are recommending that Dr. Katz include a section in the proposal discussing the identification and dissemination of information on data needs as identified. We have also recommended to Dr. Katz that he address, in Section VII of the proposal, the economic data available and to be made available before he submits the final proposal to the National Sea Grant College Program. We have also recommended that he include letters of cooperation from ADF&G and NMFS in the final proposal. The Committee recommends that the proposal more specifically detail the deliverables expected as a result of this research before the proposal is finally submitted.

TANNER CRAB FMP

The SSC again considered proposed amendments to the Tanner Crab FMP for 1979. Apparently the only significant modifications bearing on management strategy were a change in the OY for Kodiak and a request by the Japanese for fishing south of 58° N in the Bering Sea.

Present interpretation of the law is that the OY is a quota limiting maximum harvest. Given the annual variability of natural population abundance and the lack of precision in preseason estimates of this abundance, the Committee does not consider a quota as a viable management tool in most cases and therefore, OY should be set high enough to allow for anticipated harvest variability. The Committee reviewed the data presented by ADF&G on Kodiak Tanner crab and considering the 1978 harvest level, the indications of strong recruit year class abundance and the expansion of the fishery to new areas, agrees that the OY range should be raised to an upper figure of 35,000,000 pounds. The Committee noted that appropriate changes to MSY and ABC would be required.

Regarding the Japanese request, the Committee reviewed information presented to it by the Japanese industries on size of bairdi and opilio crab in the area south of 58° North and west of 171° West. It is apparent that bairdi crab are smaller west of 173° West and are roughly comparable to opilio crab in weight although somewhat larger in shell width. The question of allowing Japanese harvest west of 171° West south of 58° seems to be an OY consideration based on anticipated performance of the U.S. fleet. Based on the 1978 fishery, U.S. effort west of 173° West, particularly in March and April, appears unlikely.

JUSTIFICATION FOR INCREASE OF THE KODIAK AREA TANNER CRAB OY

The Kodiak management area for Tanner crab has sustained an average commercial harvest of 25.9 million pounds annually since the more full utilization of the stocks during the 1972-73 season. This average included a reduced harvest of 13.6 million pounds which resulted from a lengthy price negotiation which delayed the 1974-75 season. The historic performance of the fishery suggests an MSY of 25 million pounds.

A decline in CPUE rates during the 1976-77 season prompted a more conservative allowable harvest of 20,720,000. This resulted in establishing a 15 to 25 million pound harvest range for the 1977-78 fishing season by the Alaska Board of Fisheries that was subsequently included in the draft of the Tanner Crab Management Plan as an OY harvest range.

The performance of the 1977-78 fishing season indicated an excellent population of available legal size crab and distribution of harvest of these crab depicted an expansion of fishing effort to previously under-utilized fishing grounds. The increase of the Kodiak area Tanner crab OY level from 15 to 25 million pounds to 20 to 35 million pounds is required to provide for the possible occurrence of a harvest similar to the 33,281,000 pounds 1977-78 fishery.

Factors which support this increase are as follows:

1. Commercial fishery catch per pot data indicates no signs of overharvest when comparing the trend compared to increase of effort level.
2. Expansion of the fishing effort to new grounds to more fully utilize available stocks.
3. Fishing mortality estimates have shown an exploitation rate of 18 percent by actual tag returns. When considering a tag loss estimate of 15 percent and unrecovered harvested tagged crab amounting to approximately 10 percent during the 1977-78 season from stocks surveyed would suggest an exploitation rate of less than 40 percent.
4. Width frequency sampling at the 1977-78 commercial harvest has been comparable to past years.

REPORT OF SUB-COMMITTEE ON "THE SOCIAL AND ECONOMIC IMPACTS OF A COMMERCIAL HERRING FISHERY ON THE COASTAL VILLAGES OF THE ARCTIC/YUKON/KUSKOKWIM AREA"
(By Dames & Moore)

The scope of this study is defined in the title of the project report. It is not concerned with objectives of management broader than minimizing adverse and optimizing beneficial impacts of the current domestic nearshore herring fishery on the welfare of the residents of the area villages. The analysis, conclusions and recommendations, relate primarily to the local subsistence fisheries, (their nature, extent and past and present local importance) and the potential for increased local residents' participation in the commercial fishery (nature of the commercial fishery, entry requirements, processor-harvester contractual relations, attitudes of villagers toward commercial fishery, etc.).

The report discusses results of archival research into the traditional subsistence fisheries of the area and recent studies and field investigation of the continuation of these activities. The sections dealing with the current commercial fishery are briefer, but deal adequately with the key characteristics relevant to potential local participation. High profits assure continuation of a high level commercial fishery subject to continued resource availability and management policy. Entry by independent fishermen is restricted by the institutional structure of the fishery and processor-harvester contracts. From the villagers' standpoint these factors pose a threat to survival of the resource itself and their subsistence and restrict their participation in the alternative commercial fishery. The survey of village attitudes is subject to the shortcomings stated in the introduction and discussion of findings in the report. These inadequacies are inherent in the subject itself (i.e., the very limited samples represented by small population groups, isolated or spread over a vast territory, language and cultural barriers, a not always congenial political climate, etc.), not in the performance of the contractor.

The conclusions and recommendations should be considered in the light of the specific management objectives to which the study has been limited, the need to protect the resource and subsistence activities and to expand entry into the commercial fishery to local residents. Further, we specifically noted some confusion and overlap in the recommendations between numbers 3 and 4 and a lack of specific support for conclusions given on roe on kelp harvest research and potential problems.

SALMON TROLL FMP

The Committee reviewed (1) the High Seas Salmon Fishery off the Coast of Alaska East of 175° East Longitude FMP, (2) public comments submitted on the plan, and (3) the specific management measures and options listed in the plan which must be finalized by the Council on November 2 and 3. The review generally dealt with the plans stated objectives, their relationship to the Council directives and proposed management solutions. The review also included a discussion of the draft comments received from NMFS Central Office in Washington, D.C., and a memo from John Harville.

The SSC recommends retaining the chinook minimize size limit of 28" (heads on) and 23" (heads off) and the "all other species" size limit of none. Difference in heads off measurement, from that in the Pacific Council plan, were shown to be simply a matter of difference in measurement method.

Additionally the Committee felt that the sex, landing requirements and commercial and sport seasons as specified in the plan should be retained.

The SSC recommends the sport bag limit consistent with the State of Alaska Southeast Alaska regulations be adopted as generally non-restrictive. Regarding the closure west of Cape Suckling, the SSC suggested additional information on the reason for Cape Suckling as the geographic boundary be included in the final draft plan.

The SSC carefully considered the gear measures and recommends adopting the plan's provisions prohibiting net fishing and the "no-line" limit with caveats acknowledging the special provisions in the plan for the net fisheries West of Suckling and a SSC position on the no-line limit that some methodology should be sought to standardize effort for management purposes, but at this time the subject had not been advertised for change and will be looked at in the future.

The SSC spent considerable time discussing the "power troll only" provision. The SSC endorsed the need to prevent further expansion of effort by new fleets or gear types onto already fully utilized outside stocks as expressed by the extension to the FCZ of the State ban on handtrolling from 0-3 miles. Due to possible legal problems, the SSC recommended that the Council consider taking up this problem at the December Fisheries Board Meeting.

The Committee discussed extensively the plan's proposals for quotas, area/trip registration and Federal Limited Entry. They noted that a scientific evaluation of these specific issues necessarily involved considerations of management/enforcement/surveillance possibilities as well as a basic reference to the plan and Council objectives. With regard to the quotas, the SSC felt that insufficient scientific data existed to justify management by quota for the FCZ. OY should be addressed as a total probable harvest level for all of S.E. Alaska with the entire OY and not just the subquotas proposed by the Plan. FCZ proportion should be specified only in general terms. Area/trip registration as a necessary tool to implement a quota regulation as proposed in the plan was not recommended.

Regarding Federal Limited Entry, the SSC concluded that if ultimate plan objectives are only achievable if they are shared by the State and that in essence the fishery from the coastline out to 200 miles must be regulated as a unit to achieve these objectives then the only feasible alternatives at this time would be to adopt the State's current system of limited entry for power trollers. If a power troller is fishing in the FCZ then he is not fishing in the area from 0-3 at the same time and vice versa. This should be regarded as a first step and future iterations of the plan may consider further effort limitations to truly limit fishing effort to protect stocks such as a limit on seasons or days fished applied by area if studies demonstrate differences in stock composition and presence of immatures. Limited entry by itself does not limit actual fishing effort.

The Committee reviewed a memo from John Harville on the High Seas Salmon Plan. Dr. Harville's recommendations generally coincide with those of the SSC. We note that the conclusion that the need to halt further expansion of new fleets and gear into the FCZ as expressed by extension of the State ban on handtrolling from 0-3 miles is the same as ours and subject to the some potential legal problems. We wholeheartedly endorse the recommendations that the ADF&G and Board of Fisheries initiate development of a comprehensive plan for coho and chinook fisheries in Southeastern Alaska to serve as a basis for management of these species both in State waters and the FCZ.

The questions raised in the NMFS, Washington, D.C. draft comments were felt to be mostly answered by the SSC report recommendations. Additionally, we felt it should be pointed out that the Council objectives could not be totally accomplished by any plan for the FCZ alone and simply were the Council's contribution to total objectives for the fishery to be accomplished in concert with actions taken by the State inside 3 miles of the coast. Most of the other criticisms seemed to be amenable to team clarification of the language in the plan.

P.L. 95-354, AMENDMENTS TO THE FCMA

The SSC has considered the guidelines for fishery management plans which require consideration of processing capacity.

The guidelines require that the processors submit data on, among other things, the prices paid for each species. However, the guidelines do not seem to indicate that prices paid to fishermen will be considered when the Council determines the extent to which processors will use their capacity.

We suggest the Council consider this question and enunciate a policy.

For example, if a joint venture indicates it will pay a price the Council considers too low to attract U.S. fishermen, will it reject or scale down a request by a joint venture and allocate to a foreign catch? If a joint venture will provide better return to U.S. fishermen will the Council determine that a domestic processor with adequate physical capacity will not utilize that capacity because his price offering is too low?

TETRA TECH REPORT

Tom Kawling (Tetra Tech) principle investigator of the research contract 78-10 "A Study of the Effects of Hydraulic Clam Harvesting in the Eastern Bering Sea", reviewed his data with the SSC. In general, no preliminary conclusions could be drawn from the presentation regarding potential benthic impacts. The Committee noted however, that any conclusions drawn from the data would have to be carefully studied in light of the uncertainty of some sampling not being accurate.

A planned review of the circumstantial video taped evidence was not possible as an airport x-ray machine apparently damaged the entire video tape.

In light of the possible problems of analysis, the SSC recommends adopting a revised events schedule as recommended by the Council staff. The SSC will review the Draft Final Report on November 28 and work with the contractor prior to a January 8 submission of the final report.

SSC MEETING SCHEDULE

The SSC will meet next on:

November 28, 29
January 21, 22 and 23
February 21, 22
March 21

The November agenda has been established and includes the following items:

1. Shrimp Workshop Discussion
2. Receipt and review of Bering Sea Shrimp FMP
3. Review of rewrite of Troll Salmon FMP
4. Review of King Crab management strategies
5. ADF&G Contracts Review
6. Consideration of Research Proposals:
 - a. Salmon Tag Recovery Program
 - b. Stream of origin of chinook stocks

January's agenda items have been identified and are:

1. First review of King Crab FMP
2. First rewrite and review of BS/AI Groundfish FMP following public comment.
3. Tetra Tech Final Report

Mr. Harold Lokken, Vice Chairman of the Council, attended the SSC meeting. He discussed briefly the relationship between the SSC and the Council and asked if it was acceptable to the SSC to have Council participation at their meetings. A discussion of procedures and policies standardization of the SSC discussion is being reviewed and will be discussed at the next meeting.

HALIBUT

The SSC reviewed the Draft Fishery Management Plan for Halibut off Alaska. Members of the Plan Drafting Team and IPHC staff were present and responded to questions.

The Committee agreed that criticism of the plan should be tempered by:

- 1) The realization that the present management regime is the result of years of research and management experience and any changes in existing regulations or programs other than those dictated by law should be considered only after careful deliberation over time; and
- 2) The need to implement a management regime in time for the 1979 season to effectively manage the fishery and conserve the resource which precludes any major modification to the plan if it is to be adopted at the November 2-3 Council meeting.

The only significant options presented in the draft plan for changes from the 1978 management regime concern quota levels by area, permit requirements and the termination of any foreign harvest off Alaska. Concerning FAC it was considered the product demand combined with U.S. processing and fishing capacity assured that no surplus beyond domestic anticipated harvest would remain for allocation to foreign nations.

The plan specifies an EY for halibut in three major statistical areas off Alaska. The Committee found no reason to dispute those estimates based on IPHC research. The ABC and OY considerations regarding rate of rebuilding and presented as an option to preserve the portion of the EY which would in past years have been taken by Canadian vessels to assist in stock rebuilding, generated a good deal of discussion. It was pointed out that the present estimate of harvestable biomass (mostly matures) in Area 3 is 100,000,000 pounds and in Area 2N is 40-50,000,000 pounds. The suggested exploitation rate to maintain the stock is only 10 percent based on the fact that stock recruitment levels continue to be low. The reasons for this poor production of juveniles are not known but it was stated that a really good year class has not been present in the fishery since the early 1960's. Strategy is to hold stock stable, if possible, to retain reproductive potential until survival conditions improve.

The plan recommends a reduction from EY to ABC and OY of 0.4 million pounds in 2N; 1 million pounds in Area 3 and 0.5 million pounds in Area 4 (Option A) to allow for some rate of rebuilding even without withholding the Canadian portion of the catch. When questioned about the effect of withholding an additional 4 million pounds previously harvested by the Canadians, (Option B) the IPHC representatives stated they did not think this would make much difference in rate of rebuilding since it was only about 3 percent of the harvestable biomass. How this stand relates to the proposed 1.9 million pound reduction below EY in Option A was not made clear nor was the staff able to give any estimate of the time difference in rate of rebuilding between the various options presented.

No data was presented on the potential effect on consumers of reducing the harvest to assist rebuilding. It was pointed out that about 45 percent of the total Canadian catch came back into the United States and plowing their average catch back into stock rebuilding would reduce supply to the consumer and probably increase price.

Based on the information presented it did not seem that a withholding of 3 percent of the harvestable biomass would have a significant effect on the reproductive capacity of the stock. Nevertheless, it bothered the Committee that it was felt worthwhile to hold harvest 10 percent below EY to assist rebuilding but that a harvest of 30 percent below EY could not be stated to significantly assist in rebuilding.

Two options are presented regarding permitting procedures for halibut fishing vessels. Presently IPHC licenses vessels over 5 tons and the State of Alaska issues permits to all vessels harvesting halibut off Alaska and fishing or landing in the State. Washington, Oregon and California do not license vessels from those states which may harvest but not land fish from off Alaska. There are probably very few, if any, vessels under 5 tons which are not licensed in some fashion. The SSC agrees that all vessels should have permits of some kind identifying those which are in the halibut fishery and pertinent information on size, type and capacity of vessel, but felt methods were up to decisions of convenience to fishermen, costs, etc.

Logbooks are required only for vessels over 5 tons but it was recommended that language be included indicating that voluntary logbooks from smaller vessels were of value to the proper management of the resource. It was pointed out by the Committee that EY in Alaskan waters may be dependent to some degree on management of the resource in Canadian waters and to a lesser degree off Washington and Oregon. This subject is treated only lightly in the present draft plan but will have to be worked out between the various management entities and addressed more fully in future plan amendments. It is understood that the Pacific Council Management Plan for Halibut will probably not be in effect until 1980.

The Committee reviewed a paper from the Fishermen's Marketing Association (Haugen's paper) and found it to contain some interesting concepts that should be the subject of future review and discussion. The present management regime, however, should not be disrupted without careful consideration and time will not permit such review at this time.

KING CRAB FMP

The Council had anticipated receiving a first draft of the FMP for Alaska King Crab at the December meeting. As the SSC, AP and Council would not have the plan in hand until the date of the meeting and due to its length and complexity, it seems unlikely that any recommendations for sending it out for public review would be possible until the January 26 meeting. The Committee discussed drafting progress with team members present and determined that there is a study nearing completion which may contribute substantially to the discussion of management strategies. This coupled with the need for more time to put the plan in final draft status, leads the Committee to recommend that the submission date be delayed until January when it would be mailed out. This will give the Council and its advisors adequate time to review the document prior to the January meeting.

PANDALID SHRIMP WORKSHOP:
A REVIEW OF RESEARCH AND MANAGEMENT

Suggested topics/presentations and speakers:

1. Worldwide review of Pandalid shrimp fisheries: catch histories - (Alverson, Robinson have volunteered).
2. History of Research and Management: Review by various principal investigators - (1) Norway, (2) Greenland, (3) Denmark, (4) Soviet Union, (5) England, (6) Canada, (7) Maine, (8) California, (9) Oregon, (10) Washington, (11) Alaska.
3. Panel discussion: Is there a need for management? Fishing industry - scientific community.
4. Panel discussion: Current stock assessment techniques - their strengths and weaknesses.
5. Hydroacoustic assessment possibilities (Mathisen).
6. Evolution of commercial fishing gear and fishing techniques - Panel discussion and series of individual papers.
7. Panel discussion: Implications of developing gear selective for larger shrimps.
8. History of Alaska's regulatory process: Board of Fisheries - study groups (Szabo).
9. Panel discussion: Developing quantitative year class abundance indices from research and commercial fishing data.
10. Panel discussion: Parent stock-recruitment relationships.
11. Panel discussion: Management implications of pandalid shrimp life histories.
12. Panel discussion: Current management strategies, then value, and alternatives.