

North Pacific Fishery Management Council

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Certified Don Rosenberg
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Date 1/5/87

Minutes
Scientific and Statistical Committee
December 7-9, 1986
Anchorage, Alaska

The Scientific and Statistical Committee of the North Pacific Fishery Management Council met in Anchorage on December 7-9, 1986 at the Anchorage Sheraton. Members present were:

Donald Rosenberg, Chairman	William Aron
Richard Marasco, Vice-Chairman	Larry Hreha
Don Bevan	Tom Northup
Doug Eggers	John Burns
Phil Mundy	Terry Quinn

C-1 Team Appointment

The SSC reviewed the proposed changes in the plan teams. Our recommendation are provided in Table 1. Comments are as follows:

Troll Salmon Team - The Columbia River Inter-Tribal Fish Commission has recommended that Dr. Howard Schaller be appointed to the team in place of Mr. Phil Rogers. Dr. Schaller is currently a biologist/biometrician with the Commission. The SSC supports this nomination.

King Crab and Tanner Crab Teams - The SSC reviewed the proposed changes of Alaska Department of Fish and Game representatives on the teams. The SSC supports these nominations. Additionally we would like to recommend that the Council also appoint Dr. Gordon Kruse from ADF&G to the team if the agency agrees to his participation. The SSC feels that his participation will provide the team with additional quantitative expertise.

Additionally the SSC recommends that the Council combine these teams, creating one Crab Plan Team.

Groundfish Plan Teams - The SSC reviewed the proposed additions to the groundfish teams. We understand that Dr. Robert Fagen (U.A) will not be able to continue on the Gulf Team, and therefore should not be appointed. In light of the rockfish issues in the Gulf, the SSC recommends that Dr. Lew Haldorsen who has been nominated to the Bering Sea Team be appointed to the Gulf Team instead. The SSC would like to continue to encourage the participation of the

University of Alaska fisheries scientists in Council activities. We therefore recommend that Dr. Ole Mathisen be appointed to the Bering Sea Team.

The SSC had extensive discussion on consolidating the groundfish teams. The SSC notes that we are moving toward consolidation of these plans and that we have terminology and consistency problems between our plans which need to be solved. At the current time we do not support full consolidation of the teams, but instead encourage the teams to meet jointly during the next year to work toward solving the terminology and consistency problems and to discuss consolidation of the plans. The SSC will draft a memo to the teams outlining our areas of concern. Some SSC members felt that the Council should formally combine the teams at this time.

C-8 Other Business

The SSC has considered the terms and definitions adopted by the Pacific Council. With modification the SSC submits these terms and definitions for consideration in the next plan amendment cycle (Attachment A). With the attention paid to some of these definitions in the recent "Blue Ribbon" management study, the SSC suggests that there is merit in the Pacific and North Pacific Councils adopting identical definitions.

The SSC would like to extend our thanks to Jim Glock for his participation and assistance to the SSC and Plan Teams over the past six years. We only remind him that he has not totally escaped the reach of some of our members.

Additionally this will be the last meeting for SSC member Tom Northup. We wish to thank Tom for his participation in the committee.

D-2 Gulf of Alaska Groundfish FMP

The SSC reviewed the "Resource Assessment Document for the Gulf of Alaska Groundfish Fishery" dated November 21, 1986 and had discussion with the team and the public regarding the stocks.

With regard to the Acceptable Biological Catch (ABC) the SSC provides the following comments:

Pollock - The SSC concurs with the team's recommendation that the ABC for the Western and Central Regulatory Areas be set at 95,000 mt and at 16,600 for the Eastern Area.

Pacific Cod - The SSC concurs with the recommendation that ABC is set at 125,000 mt with the distribution 38,000 mt in Western area, 77,000 mt in Central area, and 10,000 mt in Eastern area.

Flatfish (Flounders) - The SSC concurs with the team's recommendation that the ABC be set at 537,000 mt to be apportioned as follows: 101,000 mt to the Western area, 346,000 mt to the Central area, and 90,000 mt to the Eastern area.

Pacific Ocean Perch Complex - The SSC concurs with the team's recommendation that the ABC be set at 10,500 mt to be apportioned according to the biomass distribution: 2,800 mt in the Western area, 3,300 mt in the Central area, and 4,400 mt in the Eastern area.

Sablefish - The SSC concurs with the team's recommendation that the ABC be set at 25,000 mt. The distribution of this ABC among management areas is dependent upon the depth zone at which the fishing activity occurs. Table 12 of the RAD provides the Council with information on biomass distribution for two different depth ranges for 1985 and 1986. The SSC concurs with the team's recommendation that the apportionment of harvest among regulatory areas should not vary drastically from the distribution of biomass in regulatory areas at depths at which the fishery takes place.

Atka mackerel - The SSC concurs with the team's recommendation that ABC be set equal to zero.

Other rockfish - The SSC concurs with the team's recommendation that the ABC for shelf demersal species in the Southeastern Outside District is 1,250 mt. This ABC is based upon estimated yield from the area by comparison of outside rockfish habitats with those areas of rockfish habitat in the Central Southeast Outside Management area. The ABC would be distributed 500 mt for the Southern Southeast Outside area and 600 mt in the Central Southeast Outside area.

The SSC had extensive discussion regarding this category in the other areas of the Gulf. Biomass estimates are not available. The 1984 Triannual Survey did not provide good coverage of this resource. The team has recommended an ABC for this area of 2,100 mt. The SSC does not concur with the recommendation. The data is not sufficient for us to recommend an ABC.

Thornyhead rockfish - the SSC concurs with the team's recommendation that ABC be set at 3,750 mt Gulfwide.

Squid and Other Species - The SSC concluded that there is not sufficient information to allow the determination of an ABC for these resources.

The SSC provided the following comments for Council consideration in setting the TQs:

Pollock - The SSC concludes that the Gulfwide TQ could be set at 162,000 mt with the condition that 50,000 mt of this TQ is available only for harvest outside the Shelikof Strait area during the period of January 15 through April 10. This would allow for an exploratory fishery to take place as we recommended last year.

Pacific cod - In setting a TQ the Council needs to consider the incidental catch of halibut.

Flatfish (Flounders) - The team indicated that if TQ is set at ABC the exploitation rate is not sustainable. The SSC concurs. Additionally, the Council needs to consider the incidental catches of halibut, sablefish and POP when setting the TQ.

Other Rockfish - The SSC concurs with the team's recommendation that TQ can be set equal to ABC for the Shelf demersal species in Southeastern Outside district. Within the other areas of the Gulf the team has recommended that the TQ for the slope assemblage not exceed the recent year's average harvest (2,100 mt). The SSC is concerned that this recommendation may be too conservative in light of the lack of information on the resource. Data on species composition from the fishery is lacking and it is unclear how much overlap there is between this harvest and the POP complex. The SSC has identified a reporting problem between these two resources. The SSC felt that the TQ could be set as high as 4,000 mt assuming that sufficient data programs can be developed to ensure that the Council does have data in the future. In the event that data is not gathered the SSC will no doubt take a much more conservative position in the future.

D-2(c) Halibut PSC's

The SSC reviewed three documents that relate to this issue: Pacific Halibut Population Assessment, 1985 by Richard B. Deriso, the Final Resource Assessment Document for the Gulf of Alaska Groundfish prepared by the plan team, and Prediction of Halibut Bycatch in the Gulf of Alaska groundfish fisheries by Terrence Smith.

With respect to the population assessment report supplied to the SSC, we would like to express our appreciation to the International Pacific Halibut Commission for making this information available and look forward to receiving similar reports in the future. The SSC noted that the document states that:

"Overall, the Pacific halibut stock continued to grow in 1985, increasing coastwide abundance by 8% from 1984. Abundance increases occurred principally in Area 2C and 3A, with only a minor increase in other areas. Age classes of eight and nine-year-old halibut are in high abundance, which should add support to the exploitable adult stock over the next three years as they become fully recruited into the fishery."

In the Final Resource Assessment Document, halibut PSCs are discussed in Part 2. The SSC wishes to caution the Council in its use of monetary values estimated for each metric ton of halibut bycatch mortality (\$3,700) and the value associated with a metric ton of halibut mortality to the groundfish fishery (\$7,300). While the method used to calculate these estimates is correct, they represent biased estimates of the values desired. This presence of bias was recognized by the Plan Team (page 59).

The SSC does not wish to expand further on this issue in these minutes because of the complexity of the topic and the amount of time required to thoroughly discuss the appropriate concepts and procedures. It is felt that a more appropriate way of addressing this issue would be to have the Council staff economist, with the assistance of National Marine Fisheries Service and University economists, prepare a document outlining procedures to calculate benefits and costs associated with the bycatch. Once the document has been prepared and reviewed, it will serve as a guide for calculation of benefits and costs. Given the complexity and economic and political significance of bycatch, it is important that the Council be made aware of procedures that will be used and consistency in methods used to minimize confusion.

D-3 Bering Sea/Aleutian Islands Groundfish

D-3(a) Review of status of stocks and ABCs

The SSC reviewed the supplement to the 1986 RAD which was prepared by the plan team and dated November 1986. After hearing a presentation from the team and discussing the status of these resources, we have the following comments to offer.

With respect to the ABCs recommended for the species contained in this complex, the SSC concurs with the team's recommendations for all species except Pacific ocean perch.

The SSC brings to the attention of the Council the procedure used to calculate ABCs for Pacific cod and Greenland turbot. In the case of Pacific cod, ABC was set equal to annual surplus production (400,000 mt). In the supplement to the RAD, the team provided ABCs for an F-0.1 management strategy given two sets of natural mortality rates and groundfish coefficients. The ABCs corresponding to these two sets of parameters range from 241,000 mt to 332,630 mt for the eastern Bering Sea. The combined ABC for the eastern Bering Sea and Aleutian Islands was reported to range from 260,500 mt to 359,600 mt.

A consideration in the team's recommendation of ABC for Greenland turbot was the desire to assure a reasonable size adult population to support a viable fishery in the near future. It is difficult to determine what this population size is given data currently available. An alternative to the team's method for determining ABC is the selection of a conservative exploitation rate and application of the rate to the estimated current biomass. Historically, the exploitation rate for this species has been 8%. Given estimates of the abundance of the juvenile part of this stock, a reduction in this rate is considered appropriate. An exploitation rate of about 4.6% would produce the ABC recommended by the team.

To maintain consistency between the Gulf and eastern Bering Sea, it is suggested that the ABCs for the POP complex be set at 75% of the values proposed by the team to promote rebuilding.

<u>Area</u>	<u>Team ABC</u>	<u>SSC</u>
BS	3,800 t	2,800 t
AI	10,900 t	8,200 t

Initial TAC

The SSC notes that the ABC for the groundfish complex is approximately 2.2 million mt based upon our species and species group. The plan provides that the OY can range from 1.4 million mt to 2.0 million mt. The SSC assumes that OY will be set by the Council near the upper end of the range.

Thus, based upon an OY for the complex of 2.0 million mt, the SSC reviewed the TAC proposed by the Council at the September meeting. The SSC would like to provide the following comments.

12/10/86

TABLE 1
SSC RECOMMENDATIONS FOR PLAN TEAMS

Plan	Plan Team	Plan	Plan Team
<u>GOA</u> <u>Groundfish</u>	Ron Berg (NMFS) Barry Bracken (ADF&G) Steve Davis (NPFMC) Jeffrey Fujioka (NWAFC) Fritz Funk (ADF&G) Bob Trumble (IPHC) (Hoag) Pete Jackson (ADF&G)+ Jim Balsiger (NWAFC) Sandra McDevitt (NWAFC) Jack Tagart (WDF) (New) Lew Haldorsen (UA) (New)	<u>Crab</u>	Ray Baglin (NMFS) Dana Schmidt (ADF&G) Jim Glock (NPFMC) Bob Otto (NWAFC) Ken Griffin (ADF&G) Jerry Reeves (NWAFC) Tom Shirley (UA) Steve Davis (NPFMC) Bill Donaldson (ADF&G) Gordon Kruse (ADF&G) (New)**
<u>BS/AI</u> <u>Groundfish</u>	Jay Ginter (NMFS) Bob Trumble (IPHC) Abby Gorham (UA) Pete Jackson (ADF&G) Loh-Lee Low (NWAFC) Jim Glock (NPFMC) Vidar Wespestad (NWAFC) (New) Ole Mathisen (UA) (New)	<u>Troll Salmon</u>	Aven Anderson (NMFS) Mike Fraidenburg (WDF) Jim Glock (NPFMC) Steve Ignell (NWAFC) Rod Kaiser (ODFW) Paul Larson (ADF&G) Howard Schaller (CRITFC) Mel Seibel (ADF&G)+

*Chairman
+Primary ADF&G contact

**If agency concurs.

SCIENTIFIC AND STATISTICAL COMMITTEE (SSC) DEFINITION OF
ACCEPTABLE BIOLOGICAL CATCH (ABC) AND OTHER TERMS

ABC

A seasonally determined catch or range of catches that may differ from maximum sustainable yield (MSY) for biological reasons. Given suitable biological data and justification by the plan team and/or the SSC, ABC may be set anywhere between zero and the current biomass less the threshold value. The ABC may incorporate safety factors and risk assessment due to uncertainty. Lacking other biological justification, the ABC is defined as the MSY exploitation rate multiplied by the size of the biomass for the relevant time period. The ABC is defined as zero when the stock is at or below its threshold.

Threshold

The minimum size of a stock that allows sufficient recruitment so that the stock can eventually reach a level that produces MSY.

Implicit in this definition are rebuilding schedules. They have not been explicitly specified since the selection of a schedule is a part of the OY determination process. Interest instead is on the identification of a stock level below which the ability to rebuild is uncertain. The estimate given should reflect use of the best scientific information available. Whenever possible, upper and lower bounds should be given for the estimate.

(ACTION DEFERRED PENDING REWRITE)

Overfishing

As defined in "Guidelines for Fishery Management": "Overfishing" is a level of fishing mortality that jeopardizes the capacity of stock(s) to maintain or recover to a level at which it can produce maximum biological yield or economic value on a long-term basis under prevailing biological and environmental conditions (50 CFR part 602, p. 27228).

This definition does not provide criteria for a determination of the level of population that might threaten the capacity of the stock to recover. We retain part of this definition, "striking 'or economic value,'" and add the concept of biological overfishing. Biological overfishing is the application of exploitation rates that drive the stock below its threshold. Exceeding ABC need not result in overfishing, unless the excess is ~~carried-out~~ taken over sufficient time ~~at high enough exploitation rates~~ to reduce the population below the threshold.

Annual Surplus Production (ASP)

The excess of exploitable biomass from one year to the next beyond what is required to maintain the population at current levels. In practice harvesting ~~below~~ less than the ASP usually leads to an increase in population biomass. ASP is a positive or negative number, estimated by adding the catch in a year to the estimated change in biomass.

Equilibrium Yield (EY)

The long-term average annual or seasonal harvest which allows the stock to be maintained at approximately the same level of abundance. EY is the long-term average annual surplus production at a given level of biomass.

Total Allowable Catch (TAC)

An annually determined retainable catch for each species or aggregate of species managed as a unit. ~~based--on--biological--and--socio-economic considerations.~~

Allocate

To apportion the OY or TAC among categories of use or fishermen.

Optimum Yield (OY)

The term "optimum yield," with respect to the yield from a fishery, means the amount of fish.

- (a) which will provide the greatest overall benefit to the nation, with particular reference to food production and recreational opportunities.
- (b) which is prescribed as such on the basis of the MSY from such fishery, as modified by any relevant economic, social, or ecological factor.

PFMC
11/19/86

(modified by NPFMC SSC, 12/9/86)

Pollock - The SSC notes that the team identified a potential problem associated with the pollock harvest in the "donut area." Council staff document recommends that the Council determine whether or not to adjust the Bering Sea and/or Aleutian Island TAC to account for this harvest. The SSC recommends that at this time the Council not consider a reduction in TAC due to this harvest. If the Council were to consider a reduction for catches outside the U.S. EEZ, it should also consider additions to the biomass and ABC for three stocks not measured by our current surveys. With the information available to us at the present time on migration and stock status in the eastern Bering Sea and western Bering Sea, it is impossible to estimate the amount of exchange and whether catches should be decreased or increased to reflect the impact of removals or contributions from outside the U.S. EEZ.

Other Flatfish - In setting the TAC for other flatfish the Council will need to take into consideration a potential high bycatch of crab.

E. Proposals and Funding

Joint Venture Logbook - The SSC reviewed the request by the Pacific Marine Fisheries Commission to reprogram \$3,000 in their current contract to support the printing and distribution of joint venture logbooks. The SSC supports this request.

PacFIN Operations - The SSC reviewed the request for continuing support of North Pacific Fisheries data collection and reporting by PacFIN. The SSC notes that the Council has made extensive use of the PacFIN data base and recommends that the Council support this request.

Proposals - The SSC reviewed a proposal entitled "A Baseline Survey of Endemic Diseases in Walleye Pollock (Theragra Chalcogramma) from Auke Bay, Alaska. The proposed study is a continuation of work started under the APPRISE project which is looking at the walleye pollock population in Auke Bay. The SSC reviewed this project in relation to Council policy on research funding and in relation to the scientific needs of the Council. We do not see the information as high priority at this time and therefore do not recommend funding. The SSC does request that the Council encourage the APPRISE project to continue its funding of the project.