MEMORANDUM

TO: FILE

FROM: Jim H. Branson
Executive Director

DATE: November 4, 1987

SUBJECT: Meeting of BSAI Interim Action Committee on October 30, 1987

The Council received a request from the American High Seas Fisheries Assn. for immediate action to place a proposal to raise the upper limit of the OY in 1988 for the Bering Sea groundfish complex on the Council's December meeting agenda.

The Interim Action Committee met at the Northwest & Alaska Fisheries Center on October 30 to consider the request. Committee members present were: Jim Campbell (Chairman), Rich Marasco, Bob McVey, and Loh-lee Low. Committee member Don Collinsworth participated by telephone, and Nancy Munro was not available for the conference. Other Council members in attendance were Larry Cotter, John Peterson, Bob Mace, and Henry Mitchell. Jon Pollard attended for NOAA-General Counsel. Others in attendance were: Jim Branson, Clarence Pautzke, Denby Lloyd, Ron Miller, Terry Smith, and Helen Allen from NPFMC, Dale Evans and Jay Ginter from NMFS-Juneau, and approximately fifteen industry representatives.

Jon Pollard advised the Committee that the current OY range is defensible although the Council can change it through plan amendment if they wish to do so. Achieving a change through emergency action could be difficult based on the Council's previous action to delete it from Amendment 11 and their decision in September not to reconsider at that time.

Pete Granger, American High Seas Fisheries Assn., reviewed the reasons for their request and said they feel conditions warrant reexamination of the issue although they are not suggesting a specific cap at this time.

Bill Orr, Alaska Factory Trawlers, said they are opposed to an emergency rule to raise the OY at this time. The Council has already considered the same request and decided not to act on it. AFTA is concerned about the effects of the harvests in the international area of the Bering Sea and feel more information on those stocks is needed before any action can be taken. They are also concerned about the market impact of additional pollock production.

Thorne Smith, NPFVOA, said they feel that the information in the September BSAI RAD warrants reconsideration of the issue.

Committee members agreed that the request should be put on the December agenda for discussion, however they were concerned with current procedures used for such requests. Don Collinsworth suggested that requests to reconsider issues already discussed by the Council should only be put on the agenda if significant new information has become available subsequent to the original discussion/decision.

587/DE

AGENDA D-3(c)
SUPPLEMENTAL

AMERICAN HIGH SEAS FISHERIES ASSOCIATION

December 1, 1987

Mr. James Campbell
Chairman
North Pacific Fishery Management Council
P.O. Box 103136
Anchorage, AK 99510

Dear Jim:

This letter is to orient you and other Council members to the recent request submitted by AHSFA, Midwater Trawlers Coop., Pacific Independent Trawlers Ass'n, Marine Resources Co., NPFVOA, Alaska Draggers, and Alaska Groundfish Data Bank with respect to the possibility of emergency action to raise the Bering Sea OY above 2.0 mmt and to the proposed plan amendment on the same subject. It will also clear up some misconceptions as to what this group is proposing.

The recent letters you received from U.S. processors have commented on the emergency and plan amendment proposals and seem to be misconstruing the situation. Specifically,

1. "There are simply no new facts that were not available in May or June under which an emergency can be legally declared."

Our Response: There are new facts - the scientists have estimated acceptable biological catch at levels significantly higher than 2.0 mmt. These facts were not available in May and had just been released in Sept. to the Council, which had no time to properly evaluate them.

2. "There are some, however, who for obvious reasons wish to increase harvest levels immediately and ignore resource conservation and domestic development concerns expressed in the RAD."

Our Response: We have not advocated high harvest levels - only the ability of the Council to be able to flexibly consider them if the best scientific evidence available warrants,. This is something it cannot do now with the cap. We are concerned about the health of the resource and certainly do not advocate the kinds of ABCs that were put forward in the SSC's upper range of estimates (4.8 mmt).

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3. "Any increase in OY would have catastrophic effects on domestic processors."

Our Response: The kind of increase that one could reasonably expect above the 2.0 mmt. OY cap, given the latest Plan Team estimate of ABC = 2.88 mmt. is 2.5 or 2.6 mmt. This increase is certainly not going to adversely affect DAP markets. The economic hardship will occur to domestic catcher boats if the potential harvest above the current cap goes uncaught! We estimate the value of the forgone catch to be approximately $65,000,000 ex-vessel value to the fishermen.

4. "We strongly oppose including in the amendment cycle the proposal to increase the OY level to the level of ABC."

Our Response: We did propose in the Plan Amendment to set the OY equal to the sum of individual ABCs, but with the caveat that the OY could then be adjusted further up or down based on clearly defined and justified socio-economic data. We understand clearly that ABC is not meant to be a substitute for optimum yield.

We are simply advocating giving the Council more flexibility to make decisions based on the best scientific evidence available.

Sincerely,

Pete Granger
for: American High Seas Fisheries Association
North Pacific Fishing Vessel Owners Ass'n
Midwater Trawlers Coop.
Pacific Independent Trawlers Ass'n
Alaska Draggers Association
Alaska Groundfish Data Bank

PG:r

Put into record

D-3

NORTH PACIFIC FISHING VESSEL
OWNERS' ASSOCIATION
Building C-3, Room 218
Fishermen's Terminal
Seattle, Washington 98119
206-286-9332

December 9, 1987

Mr. James Campbell
Chairman, North Pacific Fishery Management Council
Anchorage, Alaska

Dear Mr. Campbell:

The North Pacific Fishing Vessel Owners' Association (NPFVOA) strongly supports the efforts by the consortium of domestic fishing organizations to raise the 1988 Oy Cap through emergency Council action.

Best scientific evidence recently made available by the Council's Plan Team and the SST clearly indicates that the 1988 Oy Cap could be safely increased to 2.8 (plus) mmt. Because this evidence became available only after Council action in May and September of 1987, the Council to date has failed to increase the Oy Cap beyond the 2.0 mmt level.

Only immediate action increasing the Oy Cap to 2.4/2.5 mmt will prevent the JV segment of the domestic fishing industry from experiencing a catastrophic economic loss of approximately $75 million for 1988.

That type of economic impact clearly warrants the taking of appropriate emergency action by the North Pacific Fishery Management Council during its December 1987 session.

With warm regards.

Sincerely,

Arnie Aadland, President
NPFVOA

AA/D

GREENPEACE U.S.A.

P.O. Box 104432
Anchorage, Alaska 99510

Tel. (907) 277-8234

TESTIMONY OF

CINDY LOWRY

BEFORE THE

79th PLENARY SESSION

NORTH PACIFIC FISHERY MANAGEMENT COUNCIL

December 9, 1987

MY NAME IS CINDY LOWRY AND I AM THE ALASKA FIELD REPRESENTATIVE FOR GREENPEACE. I APPRECIATE THIS OPPORTUNITY TO PROVIDE MY ORGANIZATION'S VIEWS ON A MATTER OF GREAT IMPORTANCE TO THE MARINE ECOSYSTEM OF THE BERING SEA AND ALEUTIAN ISLANDS AREA. GREENPEACE, AN ENVIRONMENTAL ORGANIZATION WITH 600,000 SUPPORTERS IN THE UNITED STATES, INCLUDING 1800 ALASKANS, OPPOSES THE REQUEST BY THE AMERICAN HIGH SEAS FISHERIES ASSOCIATION TO RAISE THE UPPER LIMIT OF THE OPTIMUM YIELD RANGE (OY) FOR BERING SEA/ALEUTIAN ISLANDS GROUNDFISH.

IT IS OUR POSITION THAT THE COUNCIL'S DECISION TO MAINTAIN THE STATUS QUO FOR GROUNDFISH OY DURING THIS YEAR'S AMENDMENT 11 DECISION-MAKING PROCESS SHOULD BE MAINTAINED. GIVEN THE AVAILABLE INFORMATION CONCERNING THE HARVESTING OF POLLOCK IN THE INTERNATIONAL WATERS OF THE BERING SEA, THE SO-CALLED "DONUT HOLE" AREA, IT IS EXTREMELY IMPORTANT THAT CAUTION BE EXERCISED AND THAT CRITICAL DECISIONS NOT BE MADE ON A FAST TRACK BASIS. THIS CAUTION IS NECESSARY IN ORDER TO PRESERVE THE ENVIRONMENTAL INTEGRITY OF THE DIVERSE BERING SEA/ALEUTIAN ISLANDS ECOSYSTEM IN FACE OF SUBSTANTIAL UNCERTAINTIES.

GREENPEACE OPPOSES THE UTILIZATION OF ANY EMERGENCY MEASURE MECHANISM TO INCREASE THE OY UPPER LIMIT ABOVE THE 2 MILLION METRIC TON LEVEL ALREADY ESTABLISHED DURING THE AFOREMENTIONED AMENDMENT 11 PROCESS. WHILE THE GROUNDFISH PLAN TEAM'S NEW ESTIMATES FOR ACCEPTABLE BIOLOGICAL CATCH (ABC) SUM TO 2.8 MILLION MT, AND THE SCIENTIFIC AND STATISTICAL COMMITTEE'S (SSC) FIGURES HAVE RUN EVEN HIGHER, THE IMPLICATIONS OF THE HIGH LEVEL OF POLLOCK CATCH IN THE "DONUT HOLE" MUST BE CAREFULLY ASSESSED BEFORE ANY DECISION COULD BE MADE TO INCREASE THE TOTAL ALLOWABLE CATCH (TAC) OF BERING SEA/ALEUTIAN ISLAND GROUNDFISH. THEREFORE, THE COUNCI SHOULD NOT INCREASE THE UPPER LIMIT OF OY, AND THE TAC, FOR 1988. IT MUST BE CONSIDERED POSSIBLE THAT HUNDREDS OF THOUSANDS OF METRIC TONS OF POLLOCK AND OTHER GROUNDFISH FROM THE U.S. BERING SEA/ALEUTIAN ISLANDS STOCKS ARE NOW BEING HARVESTED ANNUALLY BY FOREIGN FISHERIES IN THE UNREGULATED "DONUT HOLE" AREA.

FIGURES PRESENTED IN "PAST PROGRESS AND PRESENT CONDITION OF THE JAPANESE POLLOCK FISHERY IN THE ALEUTIAN BASIN," PUBLISHED BY THE FISHERIES AGENCY OF JAPAN DURING SEPTEMBER 1987, INDICATE THAT THE JAPANESE FISHERIES HARVESTED 702,662 METRIC TONS OF POLLOCK DURING 1986. IT IS ALSO KNOWN THAT THE REPUBLIC OF KOREA, POLAND, THE PEOPLE'S REPUBLIC OF CHINA, AND POSSIBLY OTHER NATIONS, ARE ENGAGING IN GROUNDFISH TRAWLING OPERATIONS IN THE

INTERATIONAL WATERS OF THE BERING SEA. THEREFORE, A CONSERVATIVE ESTIMATE OF THE TOTAL CATCH IN THE AREA IS 1 MILLION METRIC TONS PER YEAR. HOWEVER, IN LIGHT OF JAPAN'S UNDERREPORTING ACTIVITIES IN THE PAST, AND THE POSSIBILITY THAT THE OTHER FISHING FLEETS INVOLVED ARE HARVESTING HIGHER LEVELS OF FISH THAN ORIGINALLY CONJECTURED, IT IS POSSIBLE THAT A MUCH HIGHER LEVEL OF POLLOCK HARVEST IS TAKING PLACE IN THE "DONUT HOLE."

THEREFORE, IT MUST BE CONSIDERED POSSIBLE THAT 800,000 METRIC TONS, OR MORE, OF BERING SEA/ALEUTIAN ISLANDS GROUNDFISH FROM THE SAME STOCKS HARVESTED IN THE U.S. FISHERIES CONSERVATION ZONE (FCZ) ARE BEING TAKEN IN THE UNREGULATED "DONUT HOLE." SOME POLLOCK STOCKS MAY MIGRATE BACK AND FORTH BETWEEN THE FCZ AND INTERNATIONAL WATERS, AND SOME MAY PROVIDE RECRUITMENT FOR THE STOCKS HARVESTED IN THE FCZ.

AS A RESULT, GREENPEACE RECOMMENDS THAT THE BERING SEA/ALEUTIAN ISLANDS GROUNDFISH OY UPPER LIMIT NOT BE RAISED ABOVE THE CURRENT 2 MILLION CAP. WE FURTHER RECOMMEND THAT NO CHANGE BE MADE IN THE OY UPPER LIMIT UNTIL THE NATIONAL MARINE FISHERIES SERVICE (NMFS) COMPLETES HYDRO-ACOUSTIC SURVEY WORK AND POLLOCK STOCK ORIGIN ANALYSIS TO DETERMINE POPULATION LEVELS AND STOCK ORIGIN. IN THIS REGARD IT IS CRITICAL THAT A MECHANISM BE DEVELOPED TO GAIN ACCURATE DATA ON A RELIABLE BASIS ON THE HARVEST LEVELS IN THE UNREGULATED AREA OUTSIDE OUR FCZ. UNTIL ALL OF THIS INFORMATION IS GAINED, THERE IS NO JUSTIFICATION FOR PUTTING THE BERING SEA/ALEUTIAN ISLANDS ECOSYSTEM AT RISK BY ALLOWING INCREASED TRAWLING OPERATIONS WITHIN THE FCZ.

INCREASED TRAWLING ACTIVITIES WOULD HAVE SEVERE RAMIFICATIONS FOR MARINE MAMMAL SPECIES. INCREASES IN QUOTAS WILL LEAD TO AN INCREASE IN FISHING ACTIVITY, FURTHER LOSS AND DISCARD OF TRAWL PORTIONS, OTHER GEAR FRAGMENTS AND STRAPPING BANDS; AND HIGHER MORTALITY OF NORTHERN FUR SEALS AND STELLER SEA LIONS AS A RESULT OF ENTANGLEMENT IN MARINE DEBRIS. ADEQUATE RECEPTION FACILITIES ARE NOT PRESENTLY AVAILABLE AT ALASKAN AND WASHINGTON STATE PORTS TO HANDLE DEBRIS GENERATED BY THE CURRENT LEVEL OF TRAWLING ACTIVITY.

THE U.S. MARINE MAMMAL LABORATORY HAS ESTIMATED THAT AS MANY AS 50,000 FUR SEALS ALREADY DIE EACH YEAR DUE TO ENTANGLEMENT AND THAT THE PRIBILOF ISLAND POPULATION IS DECLINING AT A RATE OF APPROXIMATELY 6 PERCENT ANNUALLY. MOREOVER, AN INCREASE IN FISHING ACTIVITY WOULD CAUSE AN INCREASE IN INCIDENTAL TAKE OF MARINE MAMMALS, ESPECIALLY STELLER SEA LIONS, DURING ACTIVE TRAWLING OPERATIONS. THE NATIONAL MARINE FISHERIES SERVICE IS NOW REVIEWING THE STATUS OF THE STELLER SEA LION POPULATIONS AS A RESULT OF ITS CONTINUED POPULATION DECLINE.

STUDIES ON SEABIRDS IN THE BERING SEA/ALEUTIAN ISLANDS ECOSYSTEM SUGGEST ALARMING TRENDS. CONCERNS HAVE BEEN RAISED THAT NUMEROUS SEABIRD SPECIES, SUCH AS KITTIWAKES, MURRES, AND CORMORANTS, ARE EXPERIENCING POPULATION IRREGULARITIES. ALL OF THESE SPECIES DEPEND UPON POLLOCK AND OTHER GROUNDFISH SPECIES AS PREY SOURCES.

GIVEN THAT THIS ISSUE IS SO IMPORTANT AND COMPLEX, AND THAT THERE IS POTENTIAL FOR SERIOUS IMPLICATIONS TO THE MARINE DEBRIS CRISIS, GROUNDFISH STOCKS, NORTHERN FUR SEALS, STELLER SEA LIONS, OTHER MARINE MAMMALS, SEABIRD SPECIES, AND THE ENTIRE BERING SEA/ALEUTIAN ISLANDS ECOSYSTEM SHOULD THE UPPER YIELD LIMIT OF OY BE RRAISED AND TRAWLING OPERATIONS INCREASED; WE REQUEST THAT A FULL ENVIRONMENTAL IMPACT STATEMENT (EIS) PROCESS UNDER THE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) BE IMPLEMENTED BEFORE THE PRESENT STATUS QUO COULD BE CHANGED.

AGAIN, WITH RESPECT TO ANY EMERGENCY RULING THE COUNCIL MAY BE CONSIDERING, I MIGHT POINT OUT THAT UNDER THE ADMINISTRATIVE PROCEDURE ACT (APA), THERE IS A PRIOR PUBLIC COMMENT PERIOD REQUIRED AS WELL AS A 30-DAY DELAYED EFFECTIVENESS PERIOD AFTER THE FINAL PUBLICATION OF A REGULATORY CHANGE. CLEARLY, THERE WOULD NOT BE AMPLE TIME TO ACCOMPLISH THESE TASKS IN THE NEXT THREE WEEKS, LET ALONE PROVIDING ADEQUATE DOCUMENTATION TO FULFILL NEPA REQUIREMENTS.

THE AMERICANIZATION OF THE GROUNDFISH INDUSTRY IN THE BERING SEA/ALEUTIAN ISLANDS AREA HAS OCCURRED RAPIDLY. STRONG CONSERVATION MEASURES WILL BE NECESSARY TO SUSTAIN POLLOCK AND OTHER GROUNDFISH STOCKS IN THE FACE OF OVERCAPITALIZATION BY THIS INDUSTRY. THE FUTURE OF THE BERING SEA IS AT STAKE. THE FUTURE OF THIS ECOSYSTEM IS TOO IMPORTANT TO RISK THROUGH A SHOTGUN APPROACH IN THE FACE OF MANY SIGNIFICANT UNCERTAINTIES. THANK YOU FOR THIS OPPORTUNITY TO PRESENT GREENPEACE'S VIEWS.

AGENDA D-3(c)
SUPPLEMENTAL

TRIDENT SEAFOODS CORPORATION

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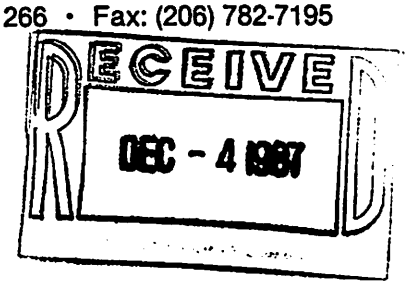

ACTION	ROUTE TO	INITIAL
	Exec. Dir.	
	Deputy Dir.	
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	Exec. Sec.	
	Staff Asst. 1	
	Staff Asst. 2	
	Staff Asst. 3	
	Economist	
	Sec./Bkkr.	
	Sec./Typist	

November 30, 1987

Mr. James Brennan
Deputy General Counsel
U.S. Department of Commerce/NOAA
Main Commerce Building
Washington, D.C. 20230

Dear Jim:

I am writing as a follow-up to our telephone conservation of last week. Trident Seafoods, and many others in the seafood industry, remain extremely concerned about the proposal to increase groundfish harvest levels in the Bering Sea/Aleutian Islands area. Ignoring of the adverse economic impacts that this increase would have on domestic processors, we believe that the proposed harvest level, and the new biological theory upon which it is based, may place the groundfish resource in jeopardy.

There are three issues the North Pacific Fishery Management Council (NPFMC) will consider during the December meeting which could play a critical role in the future of the groundfish fisheries:

1. Whether to recommend to the Secretary of Commerce that the Optimum Yield (OY) be increased to the level of ABC on an emergency basis;

2. Whether to amend the Fishery Management Plan to have the OY equal to the level of the ABC; and,

3. The overall groundfish ABC in the Bering Sea/Aleutian Islands area for 1988.

The Plan Team's revised Resource Assessment Document (RAD) recommends an Acceptable Biological Catch (ABC) of about 2.9 million metric tons. This level is even higher than the Plan Team's previous proposal, and much greater than any amounts previously harvested in the Bering Sea area. In fact, the proposed harvest level exceeds by over 500,000 metric tons the largest unregulated harvest of the foreign fishing fleets before passage of the Magnuson Fishery Conservation and Management Act.

Despite our public comments in November asking that the Plan Team complete a risk analysis, there is again no review of potential risks in the RAD and it is probably too late to have the RAD revised. Trident is urging members of the NPFMC to critically examine the basis upon which the new ABC is being determined. It is hard for Counsel members to argue against the figures that the Plan Team and Scientific and Statistical Committee (SSC) arrive at, however, because the harvest levels are arrived at through biological formulas which are difficult for laymen to completely understand.

I have met with numerous members of the Plan Team and SSC to ask how this high level can be explained. In summary, the biologists note that the newly adopted definition of ABC mandates this new level, despite the fact that when the NPFMC approved the new definition, it was made clear that the change was descriptive only and would not affect the calculation of ABC. Although this is not stated anywhere within the RAD, the new biological theory upon which the ABC estimates are based, proposes to fish down the pollock biomass. The proponents of this new theory support this reduction because the spawner/recruit relationship for pollock may be relatively constant regardless of the size of the biomass. (The precise spawner/recruit relationship appears difficult to determine because there is little empirical data showing recruitment at low biomass levels, and there is erratic spawner/recruit relationship at various times in the history of the pollock fishery.)

I can not say whether this new biological theory is accurate; however, there are some disturbing correlations between the proposed harvest levels and my understanding of the decline in the king mackerel fishery. As with king mackerel, there has been little explanation of the uncertainties inherent in the new ABC estimates, or the risks associated with the increased harvest. The biologists will privately acknowledge uncertainty and risks associated with the higher harvest level, but state that the proposed ABC is their "best estimate" of the appropriate number given the new definition. In addition, the inherent conflict between joint venture harvesters and domestic processors appears similar to the conflict in the Gulf and South Atlantic regions between recreational and commercial fishermen. Joint venture fishermen see the increased harvest as an opportunity to increase their current profitability while extending the life of joint venture operations for another two years. They are the sponsors of the proposals to increase the Optimum Yield (OY) to the level of the ABC.

In regard to increasing OY on an emergency basis, it was never intended by Congress that the emergency regulations be used to increase harvest levels. The Magnuson Act Conference Report clarified the intent of this section by noting that this provision "authorizes certain emergency actions *to save fishery resources* if the Secretary finds that an emergency involving any fishery resource exist." If harvest levels are to be increased, it must be through the plan amendment cycle where any socio-economic impacts can be fully analyzed. In addition, the NPFMC voted in May not to amend the Bering Sea/Aleutian Islands plan by having the OY equal to ABC, and declined to take action in September after reviewing the RAD and the SSC's recommendations. I question whether there is legal basis upon which an emergency can be declared.

We are also urging that a full Environmental Impact Statement (EIS) be completed if the proposed change in OY is sent through the plan amendment cycle. As you know, the National Environmental Policy Act (NEPA) requires that an EIS be prepared for actions significantly affecting the quality of the human environment. The revised NOAA regulations implementing NEPA and related laws requires that a EIS be prepared if the proposed action may reasonably be expected to adverse effects on the target resource, related stocks or even the marine mammal population. In addition the regulations state that "[a]lthough no action should be deemed to be significant based solely on its controversial nature, this aspect of an action should be used in weighing the decision on the proper type of analysis needed to ensure full compliance with NEPA. Socio-economic factors related to users of the resource should also be considered in determining controversy and significance." We believe that if the proposal to equate OY with ABC is sent through the amendment cycle, the NPFMC should complete a full EIS to assure compliance with NEPA and NOAA's regulations.

amendment cycle, the NPFMC should complete a full EIS to assure compliance with NEPA and NOAA's regulations.

Because of your participation in the King Mackerel Committee Report, I wanted you to be aware fo the proposals that were being considered in the North Pacific. Legal and policy questions involving NOAA and the National Marine Fisheries Service (NMFS) will likely present themselves during the December meeting of the NPFMC. I believe that the NPFMC votes on all of these issues will be very evenly divided and NMFS views will have a critical bearing on the final outcome. I would respectfully request that NMFS take an active role in the debate over these matters. Any assistance which you might make in this regard, of course, would be appreciated.

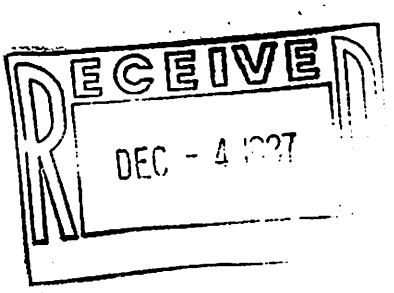
I have enclosed a summary of the Bering Sea/Aleutian Islands RAD for your information.

Sincerely,

Joe Plesha
Trident Seafoods Corporation

cc: Dr. William E. Evans
Mr. James O. Campbell
Mr. Robert W. McVey
Dr. William Aron
Mr. Rollie Schmitten
Mr. John Pollard

AGENDA D-2/3
SUPPLEMENTAL



ACTION	ROUTE TO	INITIAL
cc:gc		Rea

Murray L. Hayes, PhD
Fisheries Scientist-Consultant
20121 24th Avenue Northwest
Seattle, Washington 98177

December 3, 1987

Mr. James O. Campbell, Chairman
North Pacific Fishery Management Council
P.O. Box 103136
Anchorage, Alaska 99510

Mr. Chairman, Members of the Council:

INTRODUCTION

My name is Murray L. Hayes. I am a Fisheries Scientist and have spent my career studying the fisheries of the eastern North Pacific Ocean. In April 1987 I retired as Director of Resource Assessment from the Northwest and Alaska Fisheries Center - the Division which conducts the fishery-independent, at sea surveys from NOAA ships and chartered Commercial Fishing Vessels. My research on groundfish began in 1972 when we added groundfish data collection to our crab work in the eastern Bering Sea. My work under MFCMA began in 1976 when I coordinated the preparation of the Preliminary Fishery Management Plans for the North Pacific Management Area.

In its circular to reviewers dated October 6, 1987, the Council requested comments on ABCs, TACs and apportionment among user groups for each of the two Groundfish management areas. The ABCs sent out for review show large increases from 1987 for both Groundfish Management areas. The Table 1 for the BS/AI Area also lists separate ABCs from the PT and the SSC. These large increases in the ABCs have raised questions among some members of the Industry. The Pacific Seafood Processors Association (PSPA) and the Alaska Factory Trawler Association (AFTA) have retained me to review these changes and to provide comments to the Council.

ABSTRACT

Proposals to increase ABCs for 1988 have resulted from two causes: (1) incremental change and general improvement in stock conditions, and (2) application of a new method to calculate ABCs.

The incremental changes follow the pattern of past Resource Assessment Documents. Some of the individual changes are based on weak data and some of the ABC methods are questionable. The RADs generally reflect the past management approaches of the Council, however.

The proposal for large increases in the ABCs for pollock, Pacific cod, yellowfin sole and sablefish in the BS/AI area for 1988 resulted from application of the new definition for ABC that was adopted in January, 1987. In application the new definition of ABC includes a management strategy that is different from that the Council has used in the past.

I believe the new management strategy based on the new definition is dangerous conservation. It is an aggressive strategy to fish the stock down to a low level that inevitably leads to a recruitment fishery. In a recruitment fishery:

(1) The harvest takes a large proportion of the stock

(2) The average size of the fish is small

(3) The CPUE is low

(4) The annual harvest fluctuates with the strength of incoming year classes of recruits

(5) The underlying population is reduced and has little capacity to respond to environmental variation.

I believe the new definition of ABC implies a management strategy that is different from the more conservative management strategy that the Council has built into its plans and successfully applied in the past. In practice the Council has applied a strategy based on the "average largest catch" concept of MSY. This strategy has approximated a constant yield fishery. It is more conservative than one based on a recruitment fishery and preserves the option for flexible management with multiple objectives.

In order to continue the successful management strategy of the past I recommend that the Council not base the ABCs on the new definition.

INCREASES IN ABCs - CHANGE IN STOCKS AND CHANGE IN METHOD FOR ABC

In reviewing Tables 1 and the RADs it is evident that many ABCs have increased in response to improved stock conditions. Stock conditions reflect favorable environmental conditions and conservative management over the past 10 years. The RADs prepared by the Plan Teams have shown progressive improvement in the data base and in the analytical methods employed. Treatment of individual species, however, shows wide variations in both the data available and the methods employed.

Large increases in the ABCs which are proposed for pollock, Pacific cod, yellowfin sole and sablefish for the BS/AI area have resulted from application of a new definition of ABC. This new definition of ABC was adopted as Attachment A to the SSC minutes for the December 7-9 meeting dated 1/5/87. The differences between the (PT) and the (SSC) columns in the BS/AI Table are the result of the SSC having applied this new definition in cases where they found the rationale for ABC inadequate. But the new definition, or one similar to it, has also entered into some of the numbers from the Plan Teams.

One problem in the RADs is that they do not clearly separate the resource assessment phase from the prediction phase. The resource assessment phase deals with history of the fishery, its descriptive statistics and scientific analyses of independent data. The end point is essentially an inventory of facts concerning the stock on hand. The prediction phase uses these facts in simple extrapolations or in various theoretical models to estimate future yields. Uncertainty in prediction includes the error in both the facts and in the methods used for prediction. ABC is a prediction that may differ depending on the methods and assumptions chosen. Such differences may have major management implications.

In summary, the proposals for increased ABCs have resulted from two causes: (1) incremental change and general improvement in stock conditions as revealed in Resource Assessments, and (2) application of a new method to calculate ABCs. It should be clearly understood that the increases based on application of the new method are not the result of any change in stock condition. Since these new increases result from a different interpretation of the same data it is important to clearly understand the rationale and management implications of the new formula for ABC.

NEW DEFINITION FOR ABC INCLUDES NEW MANAGEMENT METHOD

The new definition of ABC specifies a management strategy that I believe is dangerous conservation and questionable management. It is dangerous conservation because it is an aggressive strategy to fish the stock down to result in a recruitment fishery. It ignores environmental variation and the benefits to be gained from fishing at higher stock levels. It is questionable management because it is a

short term approach that is inflexible. It suggests that yields can be greatly increased but does not specify the costs and risks that are included in a recruitment fishery.

The new definition states "ABC is defined as the MSY exploitation rate multiplied by the size of the biomass for the relevant time period." It is based on a particular interpretation of the MSY concept. The new concept implies that MSY is the yield obtained at a single population level. In the theory, MSY is the highest proportion of the population that may be taken from the population after it has been "fished down" to the "correct level". In application the new definition harvests a proportion or percentage of the stock in order to drive the stock to the level that produces MSY. This new method to specify ABC limits management options and flexibility. The king crab fishery in the Bering Sea provides a good example of a recruitment fishery.

The MSY Concept that is implied by the definition of MSY in the Council's Groundfish plans (see BS/AI Plan page 4-3) is different. The Plan defines MSY as "an average over a reasonable length of time of the largest catch which can be taken continuously from a stock under current environmental conditions." It is the "average largest catch" that can be taken over a range of population sizes that result from variation in nature. Generally the stock level will be greater resulting in higher CPUE. Larger fish will be available so fishermen may choose sizes that best meet market requirements. The stock will be larger to provide reserves to "smooth" environmental variation. The Plan definition of MSY allows flexible management with varied objectives. The Pacific halibut fishery provides an example of a fishery with selected objectives.

I believe the new definition of ABC implies a management strategy that is different from the management strategy that the Council has built into its plans and applied in the past. Consequently, I recommend that the Council should not opt for default ABCs that are based on the new definition until the Council has fully considered the management option they imply. Such consideration could be included in the next amendment cycle.

A FURTHER EXPLANATION

In what follows I will define these two MSY concepts in more detail and then outline two different management strategies that could result from their application. In addition, I have appended a graphical illustration of these two concepts based on the Spawner/Recruit figure from the BS/AI RAD for pollock.

(1) The new definition of ABC as the MSY exploitation rate multiplied by the biomass implies that MSY is the yield obtained at a single population level. In the theory, this is the single population point where a line parallel to the replacement line is tangent to the

production curve. The important idea in this definition is that MSY is the proportion of the stock that is "surplus production" at a single specific population level. This limiting concept of MSY, among other reasons, has led many scientists to question, or in some cases, discard the MSY concept.

The argument that the new definition of ABC is a default mechanism, in my opinion, is a danger to conservative management and is questionable science. MSY and the MSY exploitation rate are long range theoretical numbers that are difficult to estimate. The new ABC approach is dangerous because it provides a rationale to err on the side of overfishing in the absence of "adequate" knowledge. It is questionable, if not bad science, in that if knowledge is sufficient to estimate MSY and the MSY exploitation rate then knowledge is also sufficient to adopt a better ABC strategy.

(2) The definition in the Plan states that MSY "is an average over a reasonable length of time of the largest catch which can be taken continuously from a stock under current environmental conditions". The important point is that MSY is an average largest catch produced over a range of population levels. This concept of MSY reflects the view of many scientists that MSY is not a proportion produced at single population level but is an "average". That "average" yield results from variation in nature - including the fishing and pollution effects of man. The definition in the Plan was selected to avoid the more limiting interpretation implicit in the new definition.

The argument that a strategy of constant MSY yield is not compensatory is wrong. It is the harvest of "surplus production" that causes the fishery effect on the population. A harvest at levels "above" equilibrium population for the moment will take part of its harvest from the "surplus" and part of its harvest from the population.

These two definitions are different. Their application can result in different strategies and tactics to achieve MSY. In management based on the new definition, MSY is produced at a specific stock level. The strategy is to reduce the population to that level which produces MSY. The tactics are to harvest the proportion of the stock that would be harvested if the population were at MSY. This method is designed to drive the population to the level that would produce MSY. It is an indirect method to manage the underlying stock which I call the "population manipulation" approach.

In the strategy based on the Plan definition, MSY is the "average largest catch" which can be taken over a range of stock levels. The tactics are to harvest at a level that approximates MSY. There is no effort to control the underlying population. It is a direct method to manage harvests which I call the "harvest response" approach.

These two approaches are not a new discovery but form the basis for an "old argument" among fish managers. The "argument" concerns whether the "constant ratio" or "constant harvest" approach to fish management is better. It is my opinion that recruitment fisheries are the result of weak management and represent the last resort for conservation.

We can compare management based on these two MSY concepts as follows:

	POPULATION MANIPULATION	HARVEST RESPONSE
Concept	(1) MSY produced at single specific population level	(2) MSY produced over range of population levels
Strategy	Manage by manipulation-CONTROL POPULATION by harvest of constant proportion of stock	Manage by response-CONTROL HARVEST to average largest catch
Tactics	Set ABC equal to F(MSY) x Biomass and adjust for OY	Set ABC equal to best estimate of MSY and adjust for OY
Benefits	One time gain in "fishing down" stock	Higher CPUE at larger population - Choice of size at harvest - Safety/stability/ resiliency
Costs	Stock reduced toward recruitment fishery-Risk of environmental failure-	Sacrifice of "one-time gain"-Larger population may compete with other desirable stocks-
Result	Recruitment Fishery	Multiple Objective Fishery

I would recommend a management strategy of intelligent response to the natural and fishery induced variations in stock abundance. The tactics would be to set ABC at the recent level (last year or trend over last few years) adjusted for "stock condition." The adjustment would be based on: (1) the trend in stock abundance and recruitment from resource assessments, and (2) comparison of the present circumstances with biological reference points. The procedure in the GOA RAD for pollock approximates this strategy.

RECOMMENDATIONS

(1) FIRST I recommend that the Council reconsider those ABCs that are based on application of the new definition for ABC. This new definition is based on an MSY concept that is dangerous conservation and questionable management. The underlying concept of the new

definition is to take a constant proportion of the available stock. It is dangerous conservation because it is an aggressive strategy to fish down the stock that ignores environmental variation. It is questionable management because it is short-sighted and inflexible.

(2) SECOND I recommend that the Council continue its current management based on the "average largest catch" concept of MSY. This process could be refined to clearly specify the rationale that leads from the resource assessment (history and computational analyses of stock condition - the inventory phase) to the specification of ABC (the examination of alternate futures - the prediction phase or "what if" phase).

(3) THIRD I recommend that in the amendment process the Council include new language (a) to specify the management strategy and (b) to specify the method used to predict ABC.

A clear statement that the Council has selected a strategy based on the "average largest catch" concept of MSY would provide assurance to the Industry that long term viability and stability of the fisheries are among the Council's objectives.

A clear statement of method used to specify ABC for each component species in the management Plan would clarify the Council's action and, in the present case, would have avoided the controversy and uncertainty that has resulted from application of the new definition of ABC.

(4) FOURTH I recommend that any change in the OY level be made as a part of the amendment process. Such change should re-evaluate new data and improved analytical methods in light of the specific management strategy of the Council.

IN SUMMARY, two old adages come to mind: "You can't fool mother nature" by manipulation of stocks, and if the management system "ain't broke, don't fix it!"

Respectfully,

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Fisheries Scientist-Consultant

Appendix Attached

APPENDIX

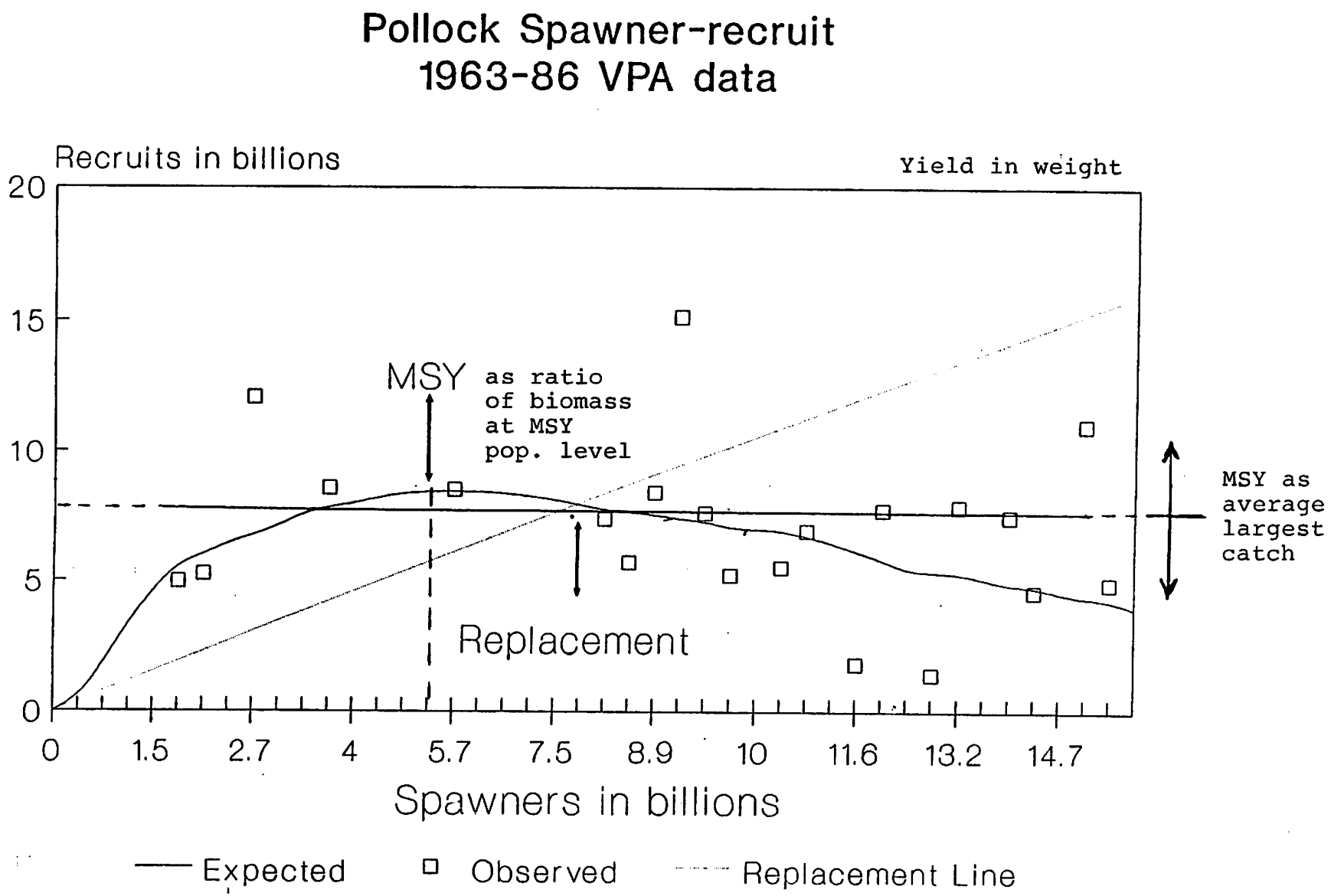
We can illustrate these two concepts of MSY using Figure 1.5 of the BS/AI RAD for Pollock. First let us multiply the vertical axis (recruits) by the yield per recruit. The result may be interpreted as a plot of "production" which has the same scatter and trend as the recruit distribution. This interpretation indicates that production from the stock as calculated from catch-at-age data has been about the same over a wide range of stock sizes. The production curve is flat-topped. We can now plot a horizontal line through this scatter plot, and its level above the horizontal axis can be interpreted as average production of the stock.

On this Figure the two definitions of MSY can be interpreted as: (1) by the vertical line at a population level of about 5.2 billion spawners, and (2) the horizontal line at about 7.5 billion age three recruits.

The first concept of MSY is the basis for the new definition of ABC. This definition states "ABC is defined as the MSY exploitation rate multiplied by the size of the biomass for the relevant time period". This definition requires that MSY occur at a single population level. In application, it mandates a ratio exploitation strategy to fish the stocks down to a low population level. The inevitable result of this "manipulative strategy" is a recruitment fishery.

The second concept of MSY is found in the plans and is the basis for the Council's past methods of selecting ABCs. The plans define MSY as "an average over a reasonable length of time of the largest catch which can be taken continuously from a stock under current environmental conditions." In application, the Council has selected a strategy that approximates a constant yield fishery. Such management is flexible and may be designed to respond to the variations in abundance that occur in nature.

APPENDIX FIGURE 1.5.



R=4.002 S exp -0.175 S

Figure 1.5. Spawner-recruit relationship for eastern Bering Sea pollock. Modified to illustrate two different interpretations of the MSY concept.