


MEMORANDUM

TO: Council, AP, and SSC Members

FROM: Clarence G. Pautzke 
Executive Director

DATE: December 3, 1992

SUBJECT: Groundfish Plan Amendments - Initial Review

ACTION REQUIRED

Initial review of the BSAI Chinook salmon bycatch analysis (Amendment 21b).

BACKGROUND

This item originally was part of Amendment 21 to the BSAI FMP. However, after a preliminary review of the document in April, 1992 by the Council, AP and SSC, additional analysis was requested. Specifically, the SSC suggested using 1990 and 1991 data separately for runs on the Bering Sea Bycatch Simulation Model, and including information on Chinook salmon escapement estimates for western Alaska stocks in the analysis. The Council requested expanding the alternatives to include analysis of time/area closures. Staff from ADF&G, the primary authors of the analysis, has incorporated these suggestions into the current draft analysis.

The Draft EA/RIR/IRFA for Amendment 21b to the BSAI FMP will be provided to you at this meeting. The Council can review the document for adequacy, hear public comment, and release it for public review prior to final action at the January meeting.

Three alternatives are considered:

Alternative 1: Status quo - no Chinook PSC limit for the groundfish fisheries in the BSAI.

Alternative 2: Close the BSAI or selected three digit statistical areas based on a PSC cap on Chinook salmon. The PSC options would be based on a range of annual Chinook salmon bycatch rates (annual rate of 0.004 - 0.024 Chinook per metric ton of groundfish). The caps would be apportioned to target fisheries.

Alternative 3: Based on historical Chinook bycatch patterns, which indicate high bycatch along the 200 meter contour line (shelf break), the Horseshoe area, and the area north of Unimak Island, monitor Chinook salmon bycatch and invoke a triggering mechanism that would close these areas to a fishery during certain times of the year which have historically exhibited high bycatch (January - April and September - December). The closures would be selectively applied to those fisheries that account for the vast majority of the salmon bycatch (i.e., midwater and bottom pollock and possibly Pacific Cod).

December 12, 1992

Richard Lauber, Chairman
North Pacific Fisheries Management Council
P.O. Box 103136
Anchorage, Alaska 99510

Re: Amendment 21A - Pribilof Trawl Closure Proposal

The undersigned organizations offer the following comments on the proposed Pribilof Islands trawl closure zones. We concur with conclusions reached by the Council's Advisory Panel and SSC regarding the proposed trawl closure proposal - justification does not exist for any of the proposed trawl closure options; the package should be sent back for development in several areas.

According to the EA/RIR the "purpose of the proposed action is to eliminate bottom trawl activities...in order that...crab stocks may build...and seabird and marine mammal populations may increase." The problem statement begs the question of the cause and effect relationship between bottom trawling as it is conducted in the Pribilof region, and its impact on crab, seabird and marine mammal populations. No cause and effect relationship is established by the analysis. This should be a requirement for any area closure applied to any gear type. We do not believe a negative relationship exists between trawling and Blue king crab, seabirds or marine mammals in this region, and it should not be assumed. Should some area restriction be justified in the future, the analysis should point the Council towards the most cost effective alternative for solving the problem addressed. The current analysis package fails to support any of the proposed trawl restrictions for additional reasons which can be summarized as follows:

1. None of the three proposed closed zones protect blue king crab stocks without adversely effecting trawl fisheries, yet this can be easily accomplished with a properly shaped closed zone.

2. The Council implemented marine mammal protective measures for this area last January. No new information has been offered in this analysis to indicate the need or efficacy of the proposed closure based upon marine mammal concerns.

3. No information was presented to indicate any positive effect of a closure on seabirds; in fact the analysis concludes the "effect of the alternatives on bird...populations in the BSAI were unknown."

4. The analysis neglected to explore in any depth the prey/predator interactions between the fishery, bottom fish, crab and seabirds. Trawl removals of the predator species of Blue king crab, as well as adult pollock which feed on juvenile pollock, is likely to be beneficial to the stocks of concern.

5. The analysis understates the impact and costs of the proposed closures on the trawl fishery due to:

- a. deficiencies in the model.
- b. restricting data to the years 89-91, when a broader range of meaningful data is available.
- c. insufficient examination of the geographic distribution of fishing effort relative to crab stocks.
- d. failing to incorporate the impact of the CVOA.
- e. not considering length frequency or average weight data available on trawl target species.

6. With respect to Blue king crab concerns, the analysis should incorporate the following information in order to appropriately define an effective protective zone which could be implemented for all fishing gear:

a. Separation and distribution patterns of adult males, females, and juvenile blue king crab in the Pribilof Island area should be included. This can be obtained through NMFS trawl survey data for 1982-1992 (summer season), together with available spring distribution data acquired during 1975 and 1985. This will improve specificity when defining any zone which may be needed.

b. Identify the directed catch and bycatch of all crab species in the Pribilof zone by all gear types. Data of this sort should be presented in chart form and be made available on computer disk in order to facilitate timely and adequate review of the analysis. Handling mortality of crab bycatch in directed crab fisheries and P. cod pot fisheries should be included with this information. Directed catch of target species and crab bycatch data in the Pribilof zone should be accumulated for the following fisheries: bottom trawl pollock, Pacific cod targeted by either trawl or pot gear, yellowfin sole, rocksole, other flatfish, and all directed crab fisheries.

c. Examine the economic impact expected by closing both directed trawl and directed crab fisheries in the proposed area. The economic model as applied to trawl fishing should not assume displaced effort can be completely made up in limited alternative areas. In reality existing restrictions including the CVOA, the winter herring savings area, as well as the scope of the proposed Pribilof zone, severely impact alternatives available for 65% of the "B" season pollock TAC. These restrictions should be acknowledged and accounted for when considering impacts of new restrictions.

d. Available predator/prey data for trawl target species should be focused on in the analysis. This will factor increased natural crab mortality resulting from localized increases in natural prey species where trawl effort is reduced. The analysis should quantify and consider the effects on localized removals of adult pollock which feed on juvenile pollock, thereby enhancing an important food source for mammals and seabirds.

e. Mortality impacts on Blue crab stocks which may result from handling mortality in the directed crab fisheries must be included in analysis of the problem under consideration. Recent information on "power sorting" techniques currently utilized in the crab fleet, as well as Council document #22, provide some insight into the issue.

These issues are examined in more detail below.

Prey/Predator

Pacific cod predation is significant and removals of cod should lessen natural mortality of juvenile crab within the localized fishing area. The results of observer sampling of trawl catch conducted in this region indicate numbers of king crab found within stomachs of Pacific cod exceed by orders of magnitude the crab bycatch taken in trawl gear. (e.g. 20 miles east of St. Paul, observed tows averaged 80% sole, 7% P. cod, 0.16% halibut, and king crab bycatch of 2 kg/mt. F/V Muir Milach, 9/86) This observer data is consistent with studies done by Pat Livingston at the AFSC, but is of particular note since it occurred in the heart of the proposed closure area. The analysis should consider the benefits to juvenile crab stocks when trawl fishing removes P. cod and other predators of crab from this region.

Seabirds and marine mammals utilize smaller size pollock than those taken by the fishery according to the analysis. Given the degree of cannibalism of juvenile pollock by adults documented by the AFSC, it is logical to assume that targeting on large pollock by the bottom trawl pollock fishery is likely to enhance the localized availability of juvenile pollock for other predators such as seabirds.

Model Deficiencies/CVOA

The model incorrectly assumes that trawl effort displaced from the relevant zone around the Pribilof Islands will always have someplace to go, and that redistribution will be accomplished

elsewhere in proportion to historic effort patterns. In reality the current management structure has already closed many fishing grounds necessary to supply the size of pollock suitable for product forms which the market currently demands. Some areas where pollock fishing was historically conducted are no longer available to harvest 65% of the B season pollock TAC, i.e. the CVOA. In addition there is a significant possibility the winter herring savings area will close in the fall. Unless these obvious impacts are incorporated into the analysis the Council's ability to consider these significant negative impacts on the trawl fleet will be impaired. The trawl fleet impacted by the Pribilof proposal cannot successfully make adjustments presumed within the analysis.

Spatial Distribution of Pollock Fishery vs Blue King Crab

In the draft analysis of Amendment 21b, David Ackerly has prepared an extensive set of figures (fig. 3-41 through 3-46 in particular) which show the distribution of the foreign, JV and domestic pollock fisheries during the past decade. (See attachments #1 & #2) These figures clearly demonstrate the importance of the area around St. George to the pollock fishery. They also show that there is very little effort for pollock in the area NE of St. Paul - the center of the Blue crab habitat. Unfortunately seasonality, fishing mode (bottom vs midwater), relative fish size by area, CPUE by area are not examined. Other data sources are available which could have been referenced.

The "Fishermen's Guide" for bottom trawl pollock (AFSC report 91-10, Norris, et al) shows how important the area is to the bottom trawl pollock fishery in the fall, based on CPUE analysis. This report also demonstrates that fishery is prosecuted with insignificant crab bycatch.

While the surimi fleet has harvested large amounts of pollock NW of the Pribilofs, the fillet fleet cannot consistently utilize this same area because of the requirement for large fish.

Survey Data

The EA/RIR made very limited use of the available BS trawl survey data; only 1979 and 1991 were examined, only with regard to Blue crab distribution. For purposes of these comments a review was made using the SeaState plotting program to examine the 1987 - 1992 BS trawl survey data on a station by station basis looking at:

1. Blue king crab distribution and CPUE,
2. pollock distribution , CPUE and average kg/individual,

3. herring distribution and CPUE,
4. rock sole distribution, CPUE and average kg/individual.

The result of the examination showed very clearly:

1. There is minimal overlap between the commercial pollock fishery and the vast majority of the Pribilof Blue crab population.

2. Aside from the CVOA, the area around the Pribilofs has the optimal combination of CPUE and average fish size for fillet operations.

3. Herring bycatch will likely increase as a result of displacing effort to the NW of the Pribilofs in a delayed "B" season.

4. The average weight of rock sole in this area is greater than in other areas.

Yields and Waste

The Council has made repeated statements of concern about utilization and waste. It would be inconsistent to close an area where recovery rate (as a function of fish size) are the best available.

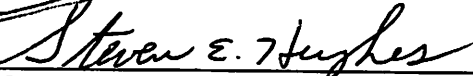
Conclusion

There is no clearly demonstrated justification for the proposed trawl closures. Other gear groups utilizing this area must be considered in any examination of proposed area restrictions. It cannot be predicted that benefits from the proposed closures will outweigh the very significant negative impacts to be expected on the trawl fisheries.

Thank you for reviewing these comments.




American Independent Fishermen



Midwater Trawlers Co-operative



American High Seas Fisheries



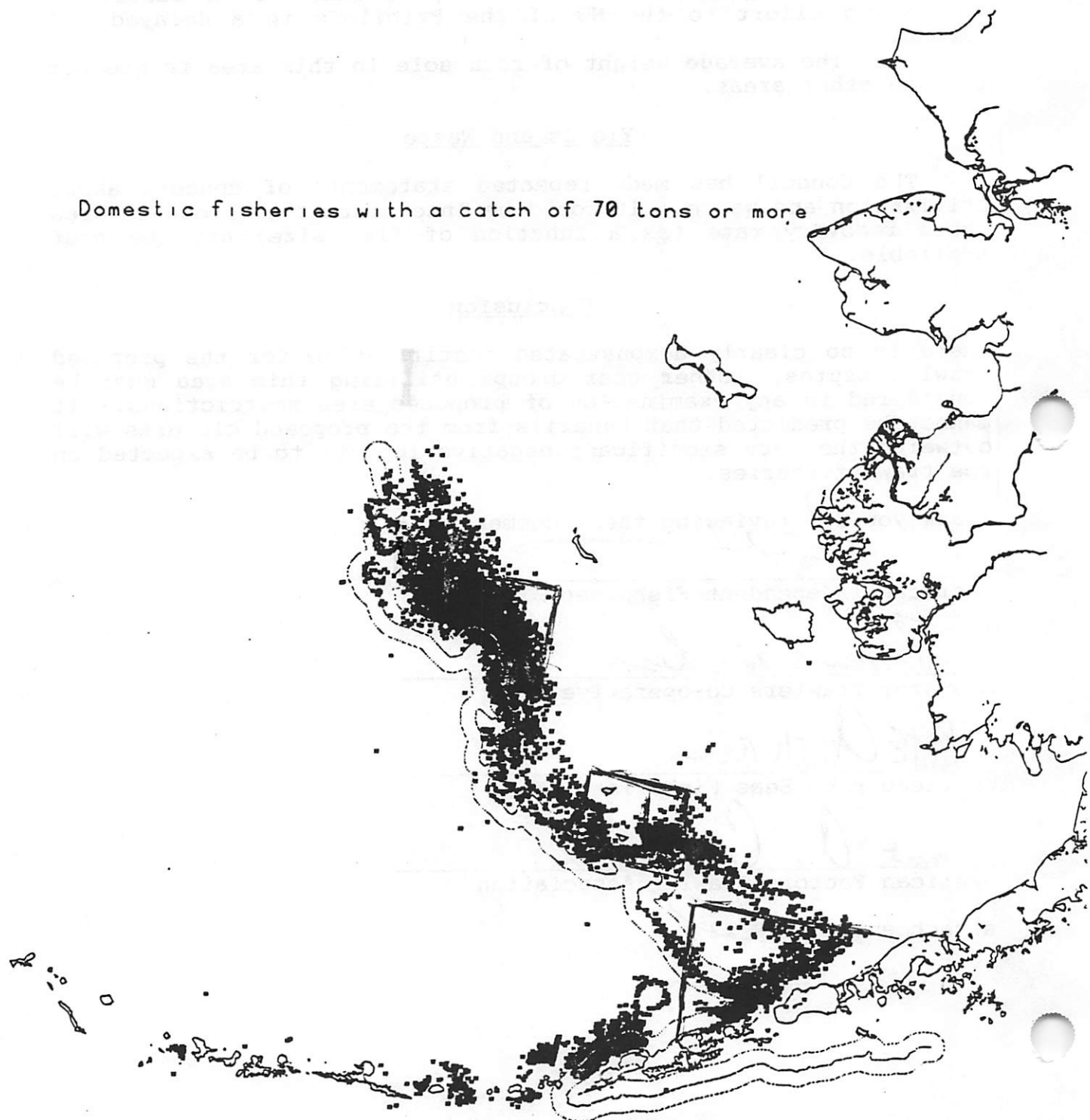
American Factory Trawler Association

attachments: #1 & #2

#1

History has been on and off
with some fluctuations. One and average
In result of the migration shown very clearly
is that in general there is a concentration
of the fishery in the western part of the
state from the V. The area of the fishery
is a concentration of fish and the area from the
western part of the state is a result of
the migration of the fishery in a general
direction.

Domestic fisheries with a catch of 70 tons or more



#2

Bering Sea Statistical Areas

