MEMORANDUM

TO: Council, SSC, AP Members

FROM: Jim H. Branson
Executive Director

DATE: December 1, 1983

SUBJECT: Incidental halibut catch by U.S. trawlers in the Gulf of Alaska

ACTION REQUIRED

1. *Approve an emergency regulation to exempt U.S. pelagic groundfish fishery from the halibut by-catch regulations.*

2. *Review Council policy concerning halibut by-catch in U.S. groundfish fisheries in the Gulf of Alaska.*

BACKGROUND

Joint ventures now fishing for flounders and Pacific cod could preclude all U.S. trawling in the Central Gulf of Alaska from sometime in December or January until June 1, 1984, because their potential halibut by-catch is restricted under current regulations.

The FMP limits the incidental halibut catch by U.S. trawlers from December 1 to May 31 to specific quotas, which when caught cause all U.S. trawling to shut down for the remainder of the period. The quotas are:

Western Area:	29 mt
Central Area:	52 mt
Eastern Area:	31 mt.

Joint ventures now operating in the Central area (Kodiak) could catch the quota in December if their current by-catch rates of halibut continue. If 52 mt is caught the Central area would close to further trawling, including the Shelikof Strait midwater fishery, until June 1.

In order to prevent this, NMFS has conditioned the permits for the joint ventures now operating for December 1983 restricting the allowed take of halibut by those two operations to something less than 52 mt. However, more halibut by-catch in 1984 could still close domestic groundfish fisheries until June 1. The Council staff suggests that the Council approve an emergency regulation to safeguard the midwater trawl fishery for pollock in Shelikof Strait.

I. The Council should approve an emergency regulation to exempt U.S. pelagic (off bottom) groundfish fishing from the halibut by-catch regulations.

The pelagic fishery for pollock in Shelikof Strait catches very small quantities of halibut (about 2 mt in 1983 in a directed catch of 133,000 mt). Approving such an emergency rule would not result in much halibut by-catch, and would allow the fishery that expects to take some 200,000 mt in 1984 to take place.

Under Section 305(e)(2) of the Magnuson Act, a unanimous vote by the Council compels the Secretary of Commerce to promulgate an emergency rule while a mixed vote in favor leaves the promulgation of the emergency rule to the Secretary's discretion.

If the Council would like to exempt domestic pelagic trawling from the halibut regulations, the following motion is suggested:

> "Because we find that without immediate action current regulations could shut down the U.S. 1984 Shelikof Strait pelagic trawl fishery for Alaska pollock, I move that an emergency regulation be promulgated by the Secretary of Commerce to exempt U.S. pelagic trawling from the provisions of 8.3.1.1.D of the FMP and 50 CFR Section 672.20(e) which limit the halibut by-catch in the Gulf of Alaska by U.S. trawlers."

Motion TH 4:45 pm

II. The Council should review its policy concerning incidental catch of halibut by U.S. Trawlers in the Gulf of Alaska.

A. History of the Current Regulation

The domestic halibut by-catch restrictions were developed in 1978 when the FMP was written. At that time, the halibut resource was depressed, the fishery resource in Shelikof Strait was unknown and contemplated domestic fishing operations were limited. The numbers for the halibut by-catch restriction were arrived at by taking 1% of the total DAH plus reserves estimated at that time.

B. Scope of the Problem

It is very difficult to apply the current halibut by-catch regulation fairly on all segments of the U.S. groundfish trawl fishery. For example, if one, or two fishing operations catch the whole by-catch quota, the entire trawl fishery must cease until June 1, shore-based operations as well as joint ventures. This will greatly inhibit development of a domestic processed groundfish industry. The 1984 estimates of DAP for all species in the Western and Central Areas is about 44,000 mt. Normally we could expect that roughly half of this would be caught from December through May. A shutdown of the fishery for most of that period would not allow processors or fishermen to market as much fish as they could by operating steadily through the year and may cause them to lose markets which must have a steady supply.

Estimated joint venture needs, excepting pollock, total 24,651 mt for the same two areas.

NMFS has placed restrictions on the two joint ventures now operating to limit their halibut by-catch to a total of 45 mt in the Central Area from December through May. Assuming the Council exempts pelagic gear, this leaves only 7 tons for other groundfish trawl fisheries during this period.

C. Possible Council Alternative Actions

1. Maintain the status quo.

If the Council maintains the status quo, the halibut limits should be applied fairly so that one "dirty" operation does not force the closure of others which may have low halibut by-catches. In order to do this, the 52 ton limit should be distributed to the operations in proportion to their expected harvest relative to total 1984 DAH. Using the numbers already established the rates needed to calculate distribution of the halibut quota would be as follows:

Western Area: $\frac{29}{3,990}$ = 0.007 mt halibut/mt groundfish

Central Area: $\frac{52}{63,648}$ = 0.008 mt halibut/mt groundfish

Halibut by-catch rates in the 1983 joint venture fisheries (other than pollock) have been between 0.012 to 0.033 mt halibut/mt of groundfish.

Clearly, this course of action would still shutdown groundfish trawling for everything but pollock long before June 1.

2. Raise the limits.

Raising the limit would allow bottom trawling to continue longer, if raised high enough there should be no closure. Unfortunately information on which to base a suggestion for a new, higher limit is scarce at the moment. If the Council used the same rationale as was used for the current numbers (1% of DAH plus reserves) the new limits would be as follows:

Western Area, DAH + Reserves = 27,067 x 0.01 = 270 mt

Central Area, DAH + Reserves = 76,812 x 0.01 = 768 mt

For any limit decided on, the halibut by-catch quota should be distributed fairly among the user groups, in the proportion of their intended catch to the total DAH.

3. Establish a halibut by-catch rate.

A halibut by-catch rate could be set which if exceeded would cause the offending operation to be terminated. Halibut by-catch rates known to date from joint ventures other than pollock are between 0.012 to 0.033 mt of halibut/mt groundfish. Halibut by-catch rates in the foreign fishery have been estimated to be between 0.009 and 0.012 mt halibut/mt groundfish.

If the Council were to choose the 0.01 rate already discussed, the halibut by-catch could be as high as 270 mt in the Western Area and 768 mt in the Central Area in 1984.

Under a rate-only regulation, as the groundfish fisheries for the "on bottom" species grow, so would the halibut by-catch.

4. Remove limit entirely.

Removing the limit entirely would allow bottom trawling to proceed unimpeded but could result in substantial halibut by-catches. Using the upper by-catch rate observed so far this year, the potential by-catch in 1984 is as follows:

Western Area, DAH + Reserves = 27,067 x 0.033 = 893 mt

Central Area, DAH + Reserves = 76,812 x 0.033 = 2,535 mt

5. Close halibut nursery areas.

Agenda item D-3D-1 is a map of critical halibut nursery areas determined by the IPHC. Closing these areas to bottom trawling would give some protection to the halibut resource.

The areas are also good flounder and cod grounds, so closing all three will force fishermen to go to areas where their catch rates may not be as high.

The areas are designated 1, 2, and 3, in terms of their importance as halibut nursery areas.

Two advantages of an area closure is that it would affect all segments of the domestic fleet equally, and would be relatively easier to enforce.

6. Close nursery areas and remove the limit entirely.

It is not possible to evaluate this alternative because we do not have information on halibut by-catch by specific areas. However, this alternative would give some protection to halibut and allow ADF&G and NMFS to collect information on halibut by-catch by area, which could be evaluated and used by the Council to refine the regulations later. + #7 See my notes

D. Staff Recommendations

The staff will have prepared for the meeting some comments on the costs and benefits of the suggested alternatives. We hope this information will help the Council arrive at a decision. It's apparent that any limit set, either a flat number or a rate, poses very difficult problems in monitoring and enforcing it -- except for joint ventures delivering codends to the processor. We have no effective way of monitoring catches sorted on deck, unless it would be to simply to assume their catch rates are the same as any "codend joint venture" working in the same area.

In the Bering Sea/Aleutian Islands groundfish FMP, the Council has decided not to impose prohibited species regulations on the domestic industry, rather, to allow them to develop methods to control their by-catch on their own. U.S. by-catch of halibut in the Bering Sea declined this year, although it is still greater than in the Gulf of Alaska -- comparative numbers are:

Bering Sea Joint Venture Halibut By-catch (through September)

1982	1983
562.5 mt	455.6 mt

Gulf of Alaska Joint Venture Halibut By-catch (through September)

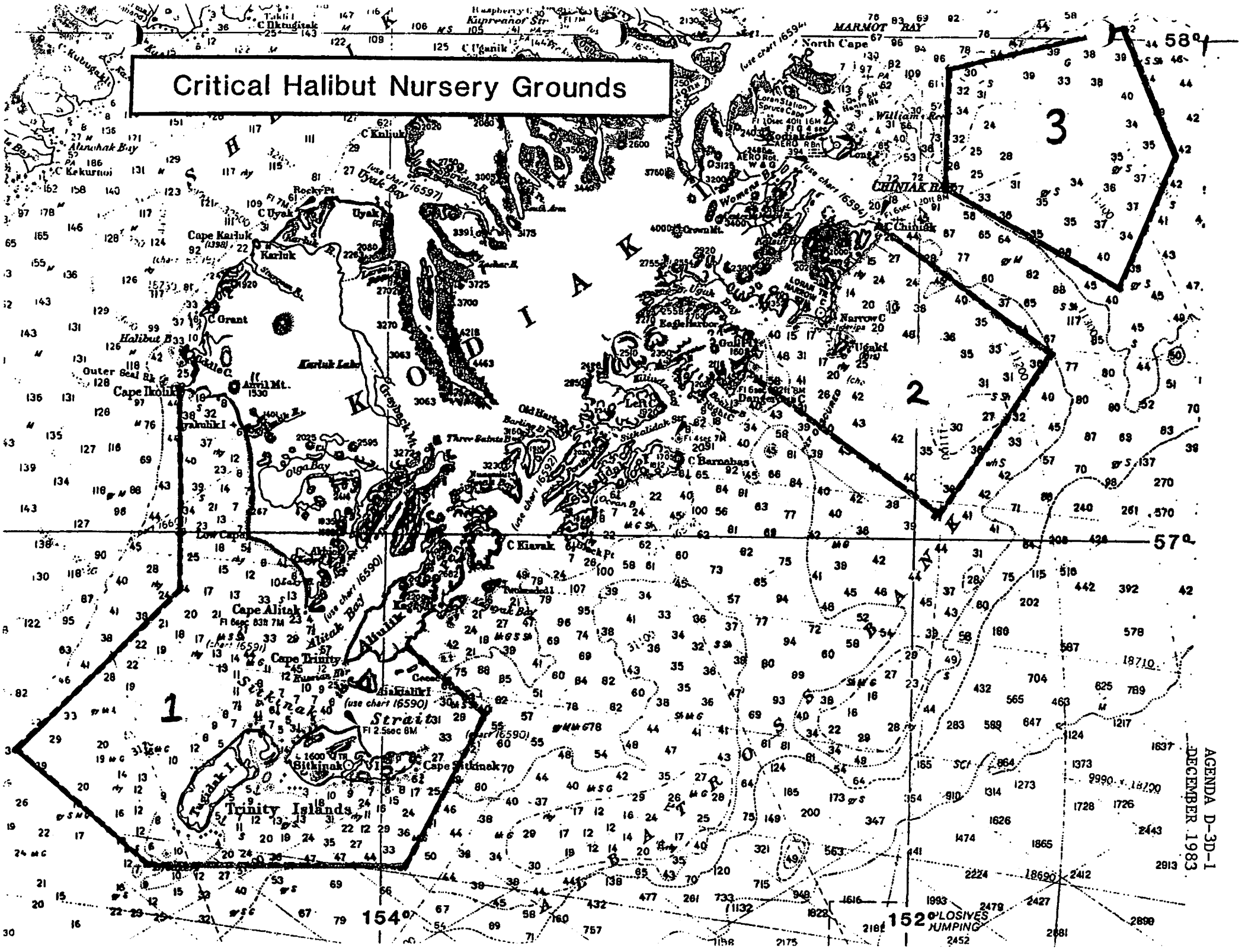
1982	1983
3.6 mt	151.6 mt

III. Other Items

Agenda item D-3D-2 is a report from the Gulf of Alaska Prohibited Species Working Group. They are on the threshold of analyzing various management strategies to control or reduce the by-catch of prohibited species in the Gulf of Alaska.

The Council should ask the group to proceed post-haste with its analysis of the current regulations in order to have information to use in resolving the domestic halibut by-catch issue.

Critical Halibut Nursery Grounds



DRAFT

AGENDA D-3D
SUPPLEMENTAL
DECEMBER 1983

INCIDENTAL HALIBUT BY-CATCH BY U.S. TRAWLERS
IN THE GULF OF ALASKA

Staff Comments on An Additional Alternative Action

7. Raise the domestic halibut by-catch limit and allow foreign trawling year-round with pelagic gear only.

This alternative trades off the foreign halibut by-catch for an acceptable level of domestic halibut by-catch and encourages the development of the U.S. groundfish industry.

Table 1 shows estimates of the halibut mortality in the foreign trawl and longline fisheries for the period 1977-82. These are based on an assumption that 50% of longline-caught and 100% of trawl-caught halibut fail to survive incidental capture.

Table 1
Central Gulf of Alaska
Halibut Mortality from Foreign By-Catch (mt)

	1977	1978	1979	1980	1981	1982	1978-82 Average
Trawlers	607	310	512	1,394	583	866	712
Longliners	--	23	61	449	458	531	304
TOTAL	607	333	573	1,843	1,041	1,397	1,037

A very rough calculation of the discounted present value of this loss to domestic fishermen is $800,000 - $1,700,000, based on a methodology developed by Marasco and Terry and used in the staff's May 1983 presentation on tradeoffs in increases in the pollock OY. A key variable is the size of halibut at incidental capture; for fish weighing 15 lbs and, on the average, four years away from capture in domestic fisheries, the discounted present value is estimated to be $1,300 - $1,600/mt, at real discount rates of 5 - 10%. For smaller fish, weighing 7 lbs and assumed to be six years away from directed capture, the range is $800 - $1,000/mt.

If the Council amends the FMP to allow foreign trawling year-round with pelagic gear only, the foreign fisheries would probably be able to catch their pollock allocation, but would likely be unable to catch their allocation of "on bottom" species. As a result, there would be a one-time loss to the U.S. in term of foregone foreign fishing fees due to the reduced foreign catch of the "on bottom" species. Using the average of the 1981 and 1982 catch of these species (everything except pollock) in the foreign trawl fisheries the loss would be in the neighborhood of $1.7 million calculated using proposed 1984 foreign fishign fees (see Table 2).

Thus, depending on how the foreign incidental halibut catch is valued, the one-time loss in foreign fishing fees could be fully offset by the discounted present value of gains in gross ex-vessel receipts to the halibut industry.

Another way to evaluate this alternative is to look at how much any increase in catch by U.S. fishermen of those species not susceptible to capture in foreign pelagic gear would have to be, to exactly equal the one time loss in foreign fees.

The projected 1983 ex-vessel values employed by NOAA in the Regulatory Impact Review for the 1984 foreign fee schedule and the 1984 estimates of DAH were used to estimate the weighted average value per mt of foreign and domestic groundfish catches. The weighted average ex-vessel value of U.S.-caught groundfish (except pollock) is $417/mt, while the foreign species mix resulted in a weighted value permit of $449. The 1981-82 weighted averaged foreign fee for the "on bottom" species is about $58/mt.

The ratio of U.S. value to foreign fee is about 7.5 to 1, which means that in order for the ex-vessel value of U.S. harvested groundfish to equal the one time loss in foreign fees, the U.S. catch of those species not harvested by foreign trawl and longline fleets would have to increase by only 13%, over what is predicted will be caught in 1984. These estimates disregard the issue of potential halibut savings.

With the foreign pelagic gear restriction, a small percentage of the non-pollock species will be necessary for foreign by-catch. There will be a savings of species like Pacific ocean perch and Pacific cod for the domestic

fishery. The foreign by-catch amounts would be on the order of 0.5% of the pollock allocations. Also, the halibut by-catch will be greatly reduced.

Using the average foreign halibut by-catch rates as a guide, the Council may be able to establish a new limit on the U.S. halibut by-catch. Under the conditions given in this discussion, a higher limit should encourage the development of the U.S. groundfish fishery, result in no increase in overall halibut by-catch if a pelagic gear restriction on foreign fishing is used, and depending on the limit the Council choses, could result in a net savings of halibut for the domestic longline fleet. Retaining the concept of an overall limit on halibut by-catch, while providing more breathing room for domestic fleets, will serve to allow domestic fishery development while signaling that there are limits to the acceptable "harm" that such development may cause the directed halibut fishery.

Table 2. Central Gulf of Alaska:
fee losses from a year-round pelagic restriction

Species	1981-82 Average Catch By Foreign Trawlers(mt)	Proposed 1984 Poundage Fee($/mt)	Potential Fee Losses	U.S. Ex-vessel Price($/mt)	Proposed 1984 DAH(mt)
Pacific cod	4,435	66	$ 292,710	$ 331 food 861 bait	26,582
Sablefish	380	150	57,000	1,080	1,651
Atka mackerel	8,775	42	368,550	267	1,500
POP and rockfish	6,683	69	461,127	882	3,095
Flounders	6,436	60	386,160	430	8,717
Squid	223	23	5,129	--	55
Other fish	1,774	57	101,118	--	250
TOTALS AND MEANS	28,706 mt	$58/mt	$1,671,794	$ 449/mt foreign $ 417/mt U.S.	41,850

Thus, if year-round pelagic gear restriction results in 28,706 mt lower foreign catch, domestic catches of 3,708 mt would generate ex-vessel revenues equalling the fee loss.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Northwest and Alaska Fisheries Center
Resource Ecology and Fisheries Management

November 23, 1983

TO: Members of the Gulf of Alaska Prohibited Species Working Group

FROM: Rich Marasco, Group Chairman

SUBJECT: Activities of the Work Group

The Council at its September 1983 meeting voted to continue with Phase II of the GOA prohibited study. On November 18, members of the technical subgroup met to develop a work plan for Phase II of the study. I have enclosed a copy of the meeting report and would appreciate receiving comments on the methodology proposed and work schedule suggested.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
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Northwest and Alaska Fisheries Center
Resource Ecology and Fisheries Management

November 23, 1983

TO: Gulf of Alaska Prohibited Species Working Group

FROM: Joe Terry JT

SUBJECT: Summary of Technical Planning Meeting

A technical planning meeting was held November 18, 1983 at the Northwest and Alaska Fisheries Center to allow the scientists who will prepare the Phase II report to discuss the Council's instructions for Phase II, feasible approaches and products, schedules, and individual assignments. The meeting was called on short notice to take advantage of Gulf of Alaska groundfish PMT members being in Seattle for a team meeting. The meeting was attended by Eric Anderson (NWAFC), Steve Hoag (IPHC), Russ Nelson (NWAFC), Jeff Povolny (NPFMC), Jerry Reevres (NWAFC), Phil Rigby (ADF&G), and Joe Terry (NWAFC).

The agenda was as follows.

A. Council Instructions

1. Evaluate current GoA groundfish FMP management measures to control bycatch, consider benefits and costs.

2. Develop methods for obtaining more accurate data on domestic bycatch.

3. Focus Phase II on foreign and joint venture fisheries.

4. Develop methods to control bycatch and analyze their impacts, costs, and benefits as outlined in the Phase I summary (Marasco, 9/19/83).

5. Include analysis of:
   a. economic disincentives and
   b. the feasibility of retention in both fisheries.

6. Analyze the effect of replacing all of the current measures with a yet to be developed Gulf-wide management strategy.

B. Feasible Approaches and Products

C. Schedule

D. Assignments

A summary of the meeting is presented below by agenda item. The Council instructions included in the agenda were taken from Jim Branson's October 5, 1983 letter to Rich Marasco.

A.1 Jeff Povolny (NPFMC) will extend the Phase I analysis of the effectiveness of current Gulf of Alaska groundfish FMP measures to control the incidental catch of prohibited species. The measures to be considered include pelagic gear restrictions, reductions in the OYs for cod and flounders, and time/area closures implemented for the expressed purpose of reducing incidental catch. Time/area closures imposed to reduce gear conflicts will not be considered.

A.2 It was decided that the development of methods to obtain more accurate domestic incidental catch information could be more adequately discussed by a subset of the working group that included representatives from the domestic fishing industry.

A.3 There was a discussion of the domestic cod and flounder fisheries that have begun to develop and whether Phase II would include such fisheries. To the extent that the same areas and gear are fished by these fisheries and joint venture fisheries for the same species, the observer data collected for the joint ventures may be applicable to the domestic fisheries.

A.4-6 A prerequisite for the analysis outlined under these items is a good description of the groundfish fishery that is expected to exist in the Gulf of Alaska during the next few years. The rapid development of the joint venture pollock fishery in Shelikof Strait and the potentially rapid displacement of the foreign cod, flounder, and sablefish fisheries by domestic fisheries suggest that the nature of both the groundfish fisheries and the associated incidental catch of prohibited species may change significantly in 1984 or 1985. Therefore, a subgroup led by Steve Hoag (IPHC) and including Russ Nelson (NWAFC) and Jeff Povolny (NPFMC) was assigned the task of describing the groundfish fishery that is expected to exist in 1984 and 1985. The description is to be based on the OYs and TALFFs set at the December 1983 Council meeting and discussions with industry sources. On the basis of this description, subgroups defined by species will: 1) estimate the level of incidental catch in the absence of new management measures to control incidental catch, 2) estimate the impact of that level of incidental catch on stocks and domestic catch, 3) evaluate the effectiveness of alternative control measures, and 4) analyze the feasibility of retention.

The control measures to be considered include:

1. economic disincentives,
2. quotas,
3. incidental catch rates,
4. gear restrictions,
5. time/area closures, and
6. voluntary restraints.

Although the analyses of time/area closures in the Bering Sea suggest that optimal time/area closures are very difficult to define and are not stable over time, it was decided that time/area closures would be considered for two reasons: 1) it is possible that for some species relatively sensitive times and areas can be defined in the Gulf of Alaska and 2) it may be very difficult or costly to enforce other control measure for a domestic fishery. However, the analysis of time/area closures is expected to be much less intensive than that for the Bering Sea.

B. The difficulty of estimating the effects, costs, and benefits of individual control measures was discussed. It appears that similar sets of benefits and costs cannot be readily determined for all of the alternative control measures. One reason for this is that the ability of fleets to reduce incidental catch in response to individual control measures is not known. The first round analysis of each control measure will consider one level of control and is intended to identify the types of costs and benefits that can be estimated for each control measure. Despite these problems, it is believed that sufficient information can be generated to allow the Council to make an informed decision concerning the incidental catch of prohibited species.

C. First drafts by species will be prepared by mid-January, 1984. These drafts will be reviewed by the Prohibited Species Working Gruop, additional control levels may be considered, the drafs and analyses will be integrated, a draft final rport will be prepared for review, and the final report will be prepared for distribution. The schedule beyond the first drafts was not set.

D. In addition to the assingments mentioned above, individuals were assigned to species subgroups as follows:

Halibut, Steve Hoag and Joe Terry
King and Tanner crab, Eric Anderson and Jerry Reeves
Salmon, Al Didier (ADF&G) and TBF

D-34 D
WRITTEN
TESTIMONY

Dec 8, 1983

Mr. Chairman:

We are sorry that this statement can not be given personally but we had to return to Kodiak before this issue was considered by the council.

I represent five Kodiak fishermen who have a direct economic interest in shore based bottomfish development in Kodiak. Three of the five people I represent fish halibut and have done so for five years or more. I currently fish crab (king, tanner, dungeness), halibut, shrimp, and am participating in the Taiwan JV. My family also has four Kodiak set net permits and fishes on the South end of Kodiak.

The halibut stocks in our opinion are far larger than the IPHC feels they are. Incidental catches in all of the fisheries we work in have risen uniformly as has our CPUE for halibut long lining.

Example: A 20,000 lb - 30,000 lb trip in 1978 was a good trip for 14 day trip. Now 80,000 - 100,000 trips are fairly standard for the three of us fishing now for only six days.

Incidental catches from our salmon set nets, crab pots and bottom fish trawlers have all risen perportionately.

We all feel that this regulation should be repealed as its potential impact on the developing Alaska

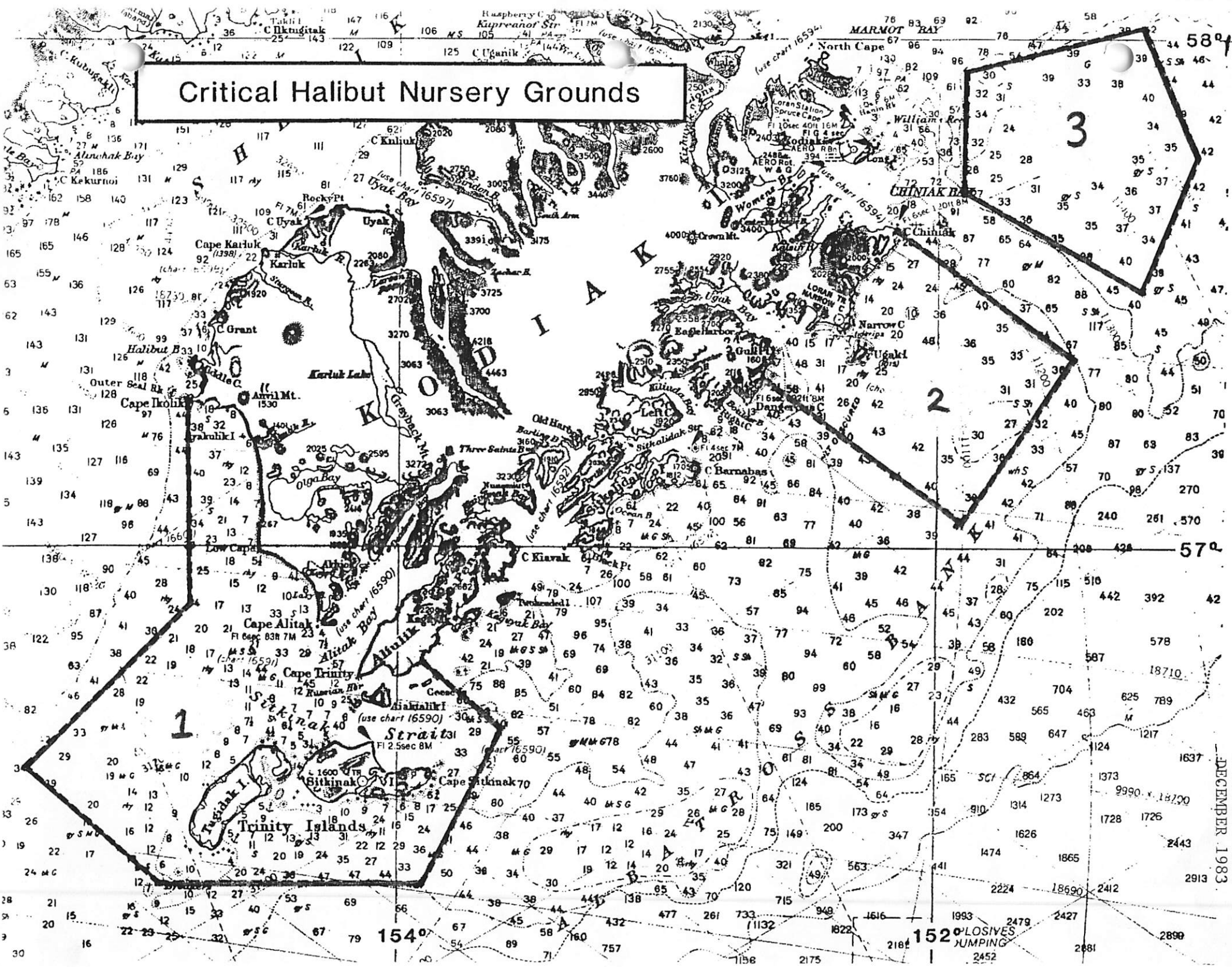
trawl industry would be desasterous.

If a total repeal is not possible then we feel the ~~[illegible]~~ shore based plants (shrimp, bait trawl, developing bottom fish), and pelagic fisheries both foreign and JV should be exempt. The directed foreign bottom fishery should be penalized first, and then, and only then, the codend transfer JV operations.

In conclusion we would like to say that we have a direct concern in protecting the halibut stocks and industry. In our other fisheries this concern has resulted in gear modifications, geographics area moves, adjusted towing speeds, and much more to protect the halibut. In short, we feel we are doing our best. To penalize one fishery so much to protect another is wrong especially when you look at the large halibut stock levels that seem so apparent to everyone except the IPHC.

Bernie Burkholder
Wayne Burkholder B.B.
Kent Hellgso
Tom Neikes
Jack Crawl

Critical Halibut Nursery Grounds



AGENDA D-3D-1
DECEMBER 1983