


M E M O R A N D U M

TO: Council, SSC and AP Members

FROM: Clarence G. Pautzke 
Executive Director

DATE: December 1, 1988

SUBJECT: Gulf of Alaska Groundfish Fishery Management Plan

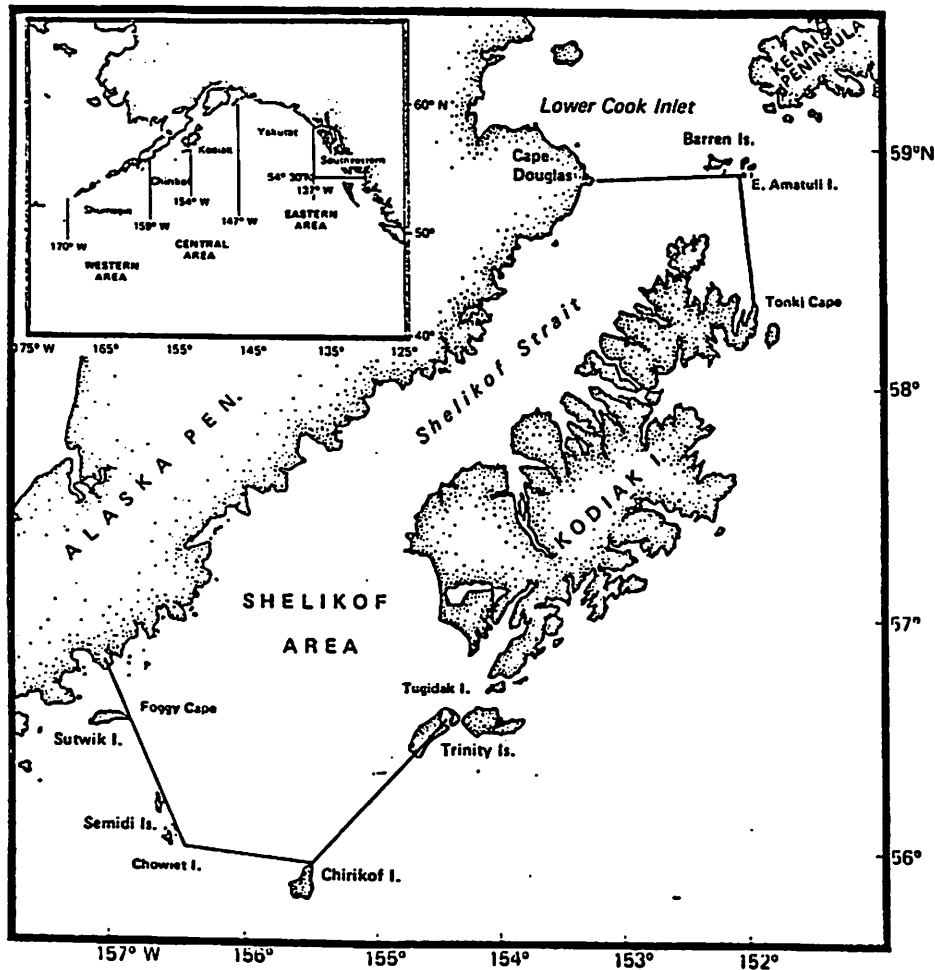
ACTION REQUIRED

Consider emergency action to establish a Shelikof District for managing pollock.

BACKGROUND

The Plan Team was unable to recommend a pollock ABC for 1989 due to conflicting evidence on the health of this resource, but did suggest that the Council consider setting a small TAC in Shelikof Strait for purposes of data collection. With the apparent decline in Shelikof spawning pollock biomass, and the limited evidence of spawning concentrations outside the Strait, it may be appropriate to encourage domestic fishing effort in other areas of the central Gulf and to limit pollock fisheries within the Shelikof area during the spawning period. Such effort may produce valuable biological information on pollock outside Shelikof Strait which can be used in future pollock stock assessments. A Shelikof District would provide the management flexibility to set TACs appropriate for the status of the stock both within and outside Shelikof Strait.


The Council could establish a district for the domestic fishery in 1989 by emergency rule followed by a plan amendment. A similar district was used in the 1986 and 1987 joint venture fisheries when the Council designated a portion of the pollock JVP for "outside Shelikof" during January 15-April 10. A chartlet showing the boundary of the area which encompasses most of the Shelikof Strait spawning biomass during the January to April period is provided as item D-1(d)(1). The area was implemented in 1986 and 1987 by permit conditions placed on the foreign processing vessel. However, permit conditions are not a legal option in the wholly domestic fisheries, and a change to the domestic regulations (by emergency rule/plan amendment) is the only method of implementation.



The "Shelikof District" is enclosed by line segments beginning to the north at Cape Douglas (58 degrees 51'N. latitude; 153 degrees 15'W. longitude), to East Amatuli Island (58 degrees 55'N. latitude; 152 degrees 00'W. longitude), to Tonki Cape (58 degrees 21'N. latitude; 151 degrees 59'W. longitude); includes the waters north and northwest of Kodiak Island and to the west and southwest waters shoreward of line segments connecting Tugidak Island (56 degrees 30'N. latitude; 154 degrees 40'W. longitude) to Chirikof Island (55 degrees 50'N. latitude; 155 degrees 37'W. longitude) to Chowiet Island (56 degrees 02'N. latitude; 156 degrees 42'W. longitude) in the Semedi Islands; and through Foggy Cape (56 degrees 32'N. latitude; 156 degrees 58'W. longitude) to the Alaska Peninsula (56 degrees 49'N. latitude; 157 degrees 06'W. longitude.)

M E M O R A N D U M

TO: Council, SSC and AP Members

FROM: Clarence G. Pautzke 
Executive Director

DATE: November 29, 1988

SUBJECT: Gulf of Alaska Groundfish Fishery Management Plan

ACTION REQUIRED

Receive year-end report on Bycatch Committee activities.

BACKGROUND

Since the last Council meeting, the Bycatch Committee has met on October 17-21 and November 7-10 to conclude its 1988 effort on bycatch issues. In January the Council deferred several amendment proposals to the Committee for development. Specifically, a time/area closure amendment to protect king crab around Kodiak Island and a revised directed fishing definition headed the list of Committee projects. The Committee has completed its work and has submitted developed proposals into the 1989 amendment cycle. A written report summarizing the Committee's activities will be provided as a supplemental document. An oral report is also available from Larry Cotter, Committee chairman.

An ad hoc industry workgroup studying Bering Sea herring bycatch met on December 4 in Anchorage. A status report on their progress may also be available.

**REPORT
OF THE
NORTH PACIFIC FISHERY MANAGEMENT
COUNCIL'S
BYCATCH COMMITTEE**

DECEMBER, 1988

INTRODUCTION

During 1988, the Council's Bycatch Committee was composed of:

Larry Cotter, Chair	Chris Blackburn	Harold Thompson
Arni Thomson	Bill Orr	Ed Fugulvog
Bill Jacobsen	Bill Woods	Rich White
Barry Fisher	Dave Frazier	Jeff Stephans
Dan O'Hara	Sam Wright	Bob Alverson
George Anderson	John Peterson	

For 1988, the committee focused on the following activities:

- Developing a replacement for the crab closures around Kodiak Island which expire December 31, 1989.
- Developing a directed fishing definition.
- Developing a comprehensive bycatch management regime for the Gulf of Alaska.

The committee also addressed the issue of herring bycatch in the Bering Sea. This was primarily accomplished through the development of an ad hoc industry work group representing both trawl and Western Alaska interests. Lastly, the committee spent considerable time addressing concerns related to its 1987 recommendations which were incorporated into BS/AI Amendment 12, Bycatch Controls.

This report is intended to serve as an explanation of the committee's recommendations. In dealing with the BS/AI Amendment 12 crab and halibut issues, the committee attempted to develop a consensus approach on all issues. We did not attempt to do that with the issues contained in this report. Instead, the committee attempted to identify pragmatic options which have merit in terms of dealing with the issues at hand, and to submit them to the Council as our best effort to identify the various realistic approaches to dealing with those problems.

The Council and the public should bear in mind that none of the options identified are necessarily supported for implementation by the committee or by any member of the committee.

SUMMARY OF BYCATCH COMMITTEE RECOMMENDATIONS

1.) CRAB CLOSURES AROUND KODIAK ISLAND

a.) Extend Amendment 15 in its current form for an additional three years, except define a new group of areas as Type III areas. Type III areas are located immediately adjacent to Type I and II areas, and represent areas where juvenile king crab would be expected to habituate in the event a large year class of king crab occur. The occurrence of a large year class of king crab would be determined by the declaration of a "recruitment event". Recruitment event criteria have been defined and would be made a part of the amendment.

b.) When a recruitment event has been declared for a particular area, the Type III area immediately adjacent to the Type I or II area in which the event has occurred would be closed to trawling in the same manner as which trawling is closed in the Type I or II area.

2.) DIRECTED FISHING DEFINITION

a.) The committee recommends the directed fishing definition and its subsequent amendments be established through the regulatory amendment process. Therefore, the committee recommends the Council consider requesting NMFS develop a regulatory amendment for presentation to the Council which sets, for illustrative purposes, the directed fishing definition rates at:

20% Pollock, Pacific cod and flounder.

4% Sablefish and rockfish, except for 10% sablefish in the turbot fishery (the amount of sablefish to be measured against the amount of turbot and rockfish on board).

___% Sablefish trawl in the Gulf of Alaska.

All other rates currently in the directed fishing definition to remain the same.

In the case of sablefish trawl in the Gulf, the committee did not develop a number, although both 10% and 15% were suggested.

b.) The committee recommends the Council consider both retention and catch as enforcement/management alternatives, particularly for high value/low volume species.

c.) The committee recommends the Council consider an option to prohibit the discard of species, particularly high value/low volume species such as sablefish, after they have been designated bycatch only. The purpose is to minimize bycatch and waste. The committee recognizes that mortality will increase to a certain extent since fish which might survive if they were released will not survive since they won't be released. However, that additional mortality should be reduced as a result of the

minimization of bycatch which should occur since a fishermen will be in violation if the amount he has caught (and is now forced to retain) is in excess of the allowable rate.

d.) The committee recommends the Council consider a regulatory amendment to relate the amount of a bycatch species allowed to be retained within the directed fishing definition to the amount of other groundfish harvested since the vessel last offloaded. There are concerns that some vessels load up with low value species, target on sablefish to the extent they can under the 20% retention rule, offload only the sablefish while retaining the low value species on board, and return to target on sablefish again.

3.) COMPREHENSIVE GULF OF ALASKA BYCATCH REGIME

a.) The committee recognizes that maintenance of the status quo is an option and incorporates that into our recommendations to the Council without specifying our support or lack thereof for any deviation from the status quo.

b.) The committee recommends the Council consider setting Gulf TACs independent of halibut bycatch considerations.

c.) The committee recommends that pots be designated legal gear for groundfish within the GOA FMP, but that the definition of what constitutes legal pots for fishing purposes be defined by NMFS through the regulatory amendment process. It is the committee's intent that only those pots which are capable of fishing with little or no halibut bycatch be designated as legal gear.

d.) The committee recommends the Council consider separating the halibut PSC cap into a longline component and a trawl component. In regards to this recommendation, the committee has identified two options:

Option 1: Establish a separate halibut PSC mortality cap for trawl and longline fisheries within the existing PSC cap structure (i.e., the Council establishes the PSC cap on an annual basis as is currently done).

Option 2: Establish a separate halibut PSC mortality cap of 2,000 MT for the trawl component and 750 MT for the longline component. The caps would be fixed in the FMP and could only be changed by plan amendment.

e.) The committee recommends the Council consider apportioning the longline portion of the PSC by area: when the longline PSC in a certain area is reached, the longline Pacific cod fishery in that area would be closed although the other longline fisheries would be allowed to continue.

f.) The committee recommends the Council consider apportioning the trawl PSC between bottom trawl pollock, bottom trawl Pacific cod, bottom trawl flatfish, and bottom trawl rock fish. Once a target fishery reaches its individual PSC it would shut itself (but no other trawl fishery) down.

g.) The Committee recommends the Council consider setting aside 20% of the PSC into a reserve. The PSC could either be the apportioned amount by target fishery (as proposed in e.) above for the trawl fisheries), or the aggregate amount as reflected in the status quo.

The operational portion of the PSC (the first 80%) would be accessible to any vessel. (If the Council establishes a separate PSC cap for trawl and longline, the "vessel" would be either a trawler or a longline as appropriate.) Once the operational PSC has been taken, access to the remaining 20% reserve would be limited to those vessels which 1.) take an observer on board the vessel at their own expense (unless they can find someone else to pay for it), and 2.) can prove, on a weekly fishing basis, that their halibut bycatch is below the bycatch rate established by the Council. (The "rate established by the Council" is the assumed rate which is normally used by the Council, NMFS, and the IPHC to determine halibut bycatch.)

If, following any week of fishing, a vessel's bycatch rate is above the established bycatch rate, that vessel must cease fishing for the remainder of the year on that species. If, following any week of fishing, a vessel's bycatch rate is below the established bycatch rate, that vessel may continue fishing until the TAC is exhausted, the PSC is taken, or the vessel's bycatch rate is above the established rate at the end of any subsequent fishing week.

The committee recommends two independent variations of this program be considered. Both variations retain the observer requirement and the requirement that each vessel be able to show that its bycatch rate for any week of fishing is below the established rate as a prerequisite to continued fishing.

Variation 1: At the start of the PSC reserve fishery, a determination of the number of vessels which are going to participate is made and the PSC is allocated to each vessel individually. Should a vessel subsequently have a dirty week and be forced out of the fishery, its PSC allocation would then be reallocated to the remaining vessels.

Variation 2: When 50% of the PSC reserve has been taken, the average bycatch rate for the remaining vessels would be determined. Those vessels which have rates above the average would cease fishing on that species for the remainder of the year. Those vessels which have a lower rate would be allowed to continue.

h.) The committee recommends the Council consider allowing retention of incidentally caught halibut by longline fisheries in an amount equal to 1% to 1.5% of the total catch since the vessel last offloaded.

4.) OTHER ISSUES

a.) The committee recommends the Council communicate with both NMFS and the IPHC to urge them to develop consistent management boundaries for the Gulf of Alaska.

b.) The committee recommends the Council send a letter to the IPHC recommending that studies be initiated during 1989 on the mortality rates associated with the use of Tara hooks and the proper use of strippers.

c.) The committee wishes to express its concern with the bycatch implications of a proposed deepwater shrimp fishery in the Gulf, particularly on sablefish.

REVIEW OF ISSUES AND COMMITTEE'S RECOMMENDATIONS

CRAB CLOSURES AROUND KODIAK ISLAND

In 1986, the Council adopted GOA Amendment 15 which implemented a series of time/areas closures to bottom trawl fishing in areas around Kodiak Island. The primary purpose of the closures was to protect Kodiak Island king crab stocks which were severely depressed.

Amend 15 identifies Type I and II areas. Type I areas are closed to bottom trawling year-round and Type II areas are closed to bottom trawling during certain times of the year. Amendment 15 is scheduled to sunset at the end of 1989.

To address this issue, the committee met in joint session with the Kodiak Groundfish Committee, a sub-committee of the Kodiak ADF&G Advisory Committee. Both the Kodiak Groundfish Committee and the Kodiak Advisory Committee have endorsed the recommendation. The recommendation consists of the following:

Extend Amendment 15 in its current form for an additional three years, except define a new group of areas as Type III areas. Type III areas are located immediately adjacent to Type I and II areas, and represent areas where juvenile king crab would be expected to habituate in the event a large year class of king crab occur. The occurrence of a large year class of king crab would be determined by the declaration of a "recruitment event". Essentially, a recruitment event occurs when the number of king crab present in a year class is sufficiently large enough to generate a commercial harvest in the future. Recruitment event criteria has been defined and would be made a part of the amendment.

When a recruitment event has been declared for a particular area, the Type III area immediately adjacent to the Type I or II area in which the event has occurred would be closed to trawling in the same manner as which trawling is closed in the Type I or II area. For example, if the Type III area is next to a Type I area, the Type III area would be closed to bottom trawling year-round. If the Type III area is adjacent to a Type II area, the Type III area would only be closed during identical times of the year. In the event the Type III area is immediately adjacent to both a Type I and a Type II area, the Type III area would be closed to bottom trawling year-round. Utilization of the Type III area(s) (one actuated by a recruitment event) would last until the amendment sunsets on December 31, 1992.

DIRECTED FISHING DEFINITION

The use of the phrase "directed fishing definition" is really a misnomer since what is being defined is not really the amount of the directed catch but the amount of the bycatch. There are two types of bycatch: constrained and economic.

Constrained bycatch reflects the bycatch rate which is experienced in a fishery when that fishery has to maintain its bycatch rate at or below the natural (or unconstrained)

bycatch rate which otherwise would be experienced. With few exceptions, the Council uses constrained bycatch management.

Economic bycatch reflects a bycatch rate which is higher than the natural bycatch rate. Trawl sablefish in the Gulf is the best current example of economic bycatch. The purpose of economic bycatch is to provide economic assistance to a developing or low value fishery by allowing that fishery to augment its low value harvest with a higher value harvest, or to reflect an allocative decision as is the case with sablefish trawl in the Gulf.

A key issue in the management of a directed fishing definition is the enforcement technique. The existing directed fishing definition manages on the basis of retention: with limited exceptions, a fisherman is in violation of the definition if he retains in excess of 20% of the species on board when directed fishing for that species is prohibited.

For economic bycatch management, this appears to be an appropriate approach since the bycatch rate is above the natural rate. Therefore, one assumes a fisherman will retain his natural bycatch of a species and, at some point later on, target on the remaining amount less than 20%. As a result, the total bycatch of that species should not, in most cases, exceed 20%.

In the case of the constrained bycatch approach, however, one could question the soundness of using retention as the management technique since the established bycatch rate is at or below the natural rate. Presumably, the reason to use the constrained bycatch technique is to discourage the bycatch of that species. If the enforcement approach utilized is retention and a fisherman is only in violation if he retains an amount in excess of the constrained bycatch rate, what real inducement is there to the fisherman to seek to avoid excess bycatch? For some fishermen, the economic cost associated with the extra time spent sorting on deck and/or lost productivity serves as an adequate inducement. For others, that answer will fall short.

The alternative to enforcement on the basis of retention is enforcement on the basis of catch: a fisherman would be in violation if his bycatch rate exceeds the rate defined in the directed fishing definition. Some argue that the catch approach is more consistent with the presumed management desire to discourage bycatch. The catch approach does have at least two flaws, one of which can possibly be solved given our management abilities today and the other of which cannot.

The first flaw, and the one which might be solvable, concerns the fact that a fisherman will inevitably have dirty tows -- regardless of how clean he is attempting to fish. Is it reasonable then to subject a fisherman to prosecution on the basis of one tow which results in a bycatch rate for that tow in excess of the defined rate? The committee's answer is no. The question then becomes how many tows, or how many days fishing, constitute a reasonable period of time to serve as an average? Further, what type of log book program would be necessary to properly document directed catch and bycatch under this approach, and could enforcement do the job?

The committee did not attempt to answer these questions except to agree that the need for enforcement on the basis of catch may exist more for the high value/low volume species than for the low value/high volume species. Some committee members believe the problems associated with enforcement on the basis of catch are too great to allow this approach to be implemented. Nevertheless, the committee does recommend the Council consider both enforcement alternatives in the case of constrained bycatch species.

The second flaw, and the one which we do not believe is currently solvable, reflects the fact that bycatch rates for certain species change during the course of the year by area. If enforcement is managed on the basis of catch as opposed to retention, and the constrained bycatch rate is not modified throughout the year to reflect the changing natural bycatch rates, then fishermen harvesting those species will inevitably find themselves fishing illegally or forced to suspend their fisheries during the high bycatch periods. Unfortunately, the current state of our management capability does not provide us with the flexibility to establish seasonal bycatch rates by area and species.

Since flexibility in establishing and modifying rates is so important, and because the plan amendment process is so lengthy, the committee recommends the directed fishing definition and its subsequent amendments be established through the regulatory amendment process. With this approach it is possible to modify the definition within a 6 month or less time period. In the event a grievous problem develops, the Council could take emergency action in the interim while the regulatory process unfolds.

The committee recommends that NMFS develop a regulatory amendment for presentation to the Council which sets, for illustrative purposes, the directed fishing definition rates at:

20% Pollock, Pacific cod and flounder.

4% Sablefish and rockfish, except for 10% sablefish in the turbot fishery (the amount of sablefish to be measured against the amount of turbot and rockfish on board).

___% Sablefish trawl in the Gulf of Alaska.

All other rates currently in the directed fishing definition to remain the same.

In the case of sablefish trawl in the Gulf, the committee did not develop a number, although both 10% and 15% were suggested. The committee recognizes this fishery is managed as an economic bycatch, and hopes that the rate finally chosen will reflect a rate which will avoid having sablefish treated as a prohibited species at any time of the year. The committee believes that waste resulting from the treatment of a species as PSC should be avoided whenever possible.

In practice, some species will start off the year as directed fisheries and will not become bycatch species until later in the fishing year. The committee recommends that an option prohibiting the discard of those species, particularly for high value/low

volume species such as sablefish, after they have been designated bycatch only be presented to the Council. The purpose of this option is to minimize bycatch and waste. The committee recognizes that mortality will increase to a certain extent since fish which might survive if they were released will not survive since they won't be released. However, that additional mortality should be reduced as a result of the minimization of bycatch which should occur since a fishermen will be in violation if the amount he has caught (and is now forced to retain) is in excess of the allowable rate.

Finally, the committee has heard rumors of some vessels loading up with low value species, targeting on sablefish to the extent they can under the 20% retention rule, offloading only the sablefish while retaining the low value species on board, and returning to target on sablefish again. The committee emphasizes that these are only rumors and that it may not make economic sense for a vessel to engage in such an operation. Regardless of whether or not this is an actual practice, this potential loophole should be closed.

COMPREHENSIVE GULF OF ALASKA BYCATCH REGIME

The major bycatch management issue in the Gulf of Alaska concerns the incidental take of halibut. Halibut are present in large numbers in virtually every portion of the Gulf currently utilized by commercial fishermen and are taken as bycatch by every gear group. Because of their wide distribution, time/area closures as a bycatch management tool in the Gulf are not practical. Further, although seasonal migrations of halibut from deeper waters during the winter to shallower waters during the summer do occur, management by depth contours is not currently practical for a variety of reasons.

The committee recognizes that maintenance of the status quo is an option and incorporates that into our recommendations to the Council without specifying our support or lack thereof for any deviation from the status quo.

The Council currently manages the incidental catch of halibut in the Gulf by annually determining a halibut PSC mortality cap. Since 1985 the Council has consistently set that cap at 2,000. The Council manages fisheries which take halibut incidentally by setting the TAC for each of those fisheries at a level which reflects the overall PSC mortality cap and each fishery's halibut bycatch/mortality rate. As a result, some fisheries, notably Pacific cod and flatfish, have been constrained since the TAC for those species has been set below ABC for the purpose of halibut bycatch management.

During the course of the fishing year, the amount of halibut PSC taken is determined by simply applying each gear group's assumed halibut bycatch/mortality rate against its harvest. When the PSC is reached, only the trawl fisheries are shut down -- the longline fisheries are allowed to continue.

There are a number of problems associated with this type of a system. The problems and the committee's recommendations follow:

1.) The committee believes it is inappropriate for one gear group to shut down another. The longline fleet and the trawl fleet should bear the consequences of their own actions. This would necessitate the separation of the PSC cap into a longline component and a trawl component. In regards to this recommendation, the committee has identified two options:

Option 1: Establish a separate halibut PSC mortality cap for trawl and longline fisheries within the existing PSC cap structure (i.e., the Council establishes the PSC cap on an annual basis).

Option 2: Establish a separate halibut PSC mortality cap of 2,000 MT for the trawl component and 750 MT for the longline component. The caps would be fixed in the FMP and could only be changed by plan amendment.

In determining the numbers associated with Option 2, the committee reviewed the amount of the current cap which has been taken during recent years by the trawl component and similarly for the longline component. On the average, the trawl component has taken approximately 75% or more of the PSC cap. DAP longline fisheries, on the other hand, have taken less than 25% on the average, primarily because they have not yet developed a longline Pacific cod fishery.

The committee's recommendation on this option is designed to allow both the trawl and the longline industry the opportunity for growth in those fisheries for which high bycatch rates of halibut currently exist.

In determining the proposed longline PSC mortality cap, the committee assumed the longline component would take 75,000 MT of Pacific cod in the Gulf. The Committee made this assumption while recognizing the industry is still a few years away from this type of harvest level. The Committee then apportioned the 75,000 MT assumed Pacific cod harvest by area and applied the current halibut bycatch and mortality rates against each area to determine total mortality:

Area	TAC	Bycatch Rate	Total Bycatch	Mortality Rate	Total Mortality
Eastern Gulf	5,000	9.15%	458	25%	114
Central Gulf	55,000	9.15%	5,033	25%	1,258
Western Gulf	15,000	5.23%	785	25%	196
Total	75,000		6,276		1,568

The committee discussed the political ramifications of a 1,568 MT PSC cap for the longline sector and decided instead to recommend a longline halibut PSC mortality cap of one-half the 1,568 MT, or 750 MT. The committee recognizes this represents an increase in the overall PSC cap from what has been experienced during the past few years and a direct reallocation of halibut in the directed longline fishery to other longline fisheries. The committee believes, however, that no longline Pacific cod fishery of any consequence will occur until sufficient halibut from the directed fishery is reallocated to serve as bycatch.

2.) It is expected that the Pacific cod pot fishery will continue to develop. It is also acknowledged that some types of pots do take halibut incidentally. The committee understands that certain types of pots have been developed which result in little or no halibut bycatch.

The committee recommends that pots be designated legal gear for groundfish within the GOA FMP, but that the definition of what constitutes legal pots for fishing purposes be defined by NMFS through the regulatory amendment process. It is the committee's intent that only those pots which are capable of fishing with little or no halibut bycatch be designated as legal gear. The regulatory approach is necessary to provide rapid flexibility to modify the definition to include new types of pots which may subsequently be developed and which also have little or no halibut bycatch

With this approach, and given the low mortality rates of halibut taken incidentally in a pot fishery, the committee does not believe it is necessary to count halibut taken as bycatch in the pot fishery toward the overall PSC cap(s). The committee does believe that pot bycatch should be fully accounted for and monitored.

3.) The committee recommends the Council consider setting Gulf TACs independent of halibut bycatch considerations. TACs should be set at levels which reflect the Council's harvest desires: if the industry can reduce their bycatch or mortality rates, the industry should have access to a larger harvest if one is biologically available. This would not mean the halibut PSC cap(s) would be exceeded, but that vessels or fisheries which can establish lower bycatch/mortality rates than what is assumed could harvest a larger TAC than they have been able to in the past. The method for accomplishing this is outlined in #5.

4.) The committee recommends the Council consider closing the longline Pacific cod fishery once the longline portion of the PSC has been reached. The other longline fisheries would be allowed to continue fishing. The committee also recommends the Council consider apportioning the longline portion of the PSC by area: when the longline PSC in a certain area is reached, the longline Pacific cod fishery in that area would be closed.

For trawl fisheries, the committee recommends the Council consider apportioning the PSC between bottom trawl pollock, bottom trawl Pacific cod, bottom trawl flatfish, and bottom trawl rock fish. Once a target fishery reaches its individual PSC it would shut itself (but no other fishery) down.

This is an important consideration in the Gulf given our earlier recommendation on how TACs are set and the potential for high halibut incidental catches in each of the defined fisheries. If the Council does choose to set TACs independent of halibut bycatch, the PSC apportionment approach is necessary to guarantee that at least minimal fisheries will occur for each of the defined species. The committee understands the difficulties NMFS currently has with managing specific target fisheries; however, the committee notes the current version of BS/AI Amendment 12 references four fishery groups and, further, the committee anticipates NMFS may have developed the capability to manage these four groups in the Gulf by January, 1990.

5.) In order to encourage clean fishing and make a larger target harvest accessible, the Committee recommends the Council consider setting aside 20% of the PSC into a reserve. The PSC could either be the apportioned amount by target fishery as proposed in #4, or the aggregate amount as reflected in the status quo. In either case, the system would operate the same.

The operational portion of the PSC (the first 80%) would be accessible to any vessel. (If the Council establishes a separate PSC cap for trawl and longline, the "vessel" would be either a trawler or a longline as appropriate.) Once the operational PSC has been taken, access to the remaining 20% reserve would be limited to those vessels which 1.) take an observer on board the vessel at their own expense (unless they can find someone else to pay for it), and 2.) can prove, on a weekly fishing basis, that their halibut bycatch is below the bycatch rate established by the Council. (The "rate established by the Council" is the assumed rate which is normally used by the Council, NMFS, and the IPHC to determine halibut bycatch.)

If, following any week of fishing, a vessel's bycatch rate is above the established bycatch rate, that vessel must cease fishing for the remainder of the year on that species. If, following any week of fishing, a vessel's bycatch rate is below the established bycatch rate, that vessel may continue fishing until the TAC is exhausted, the PSC is taken, or the vessel's bycatch rate is above the established rate at the end of any fishing week.

The committee recommends two independent variations of this program be considered. Both variations retain the observer requirement and the requirement that each vessel be able to show that its bycatch rate for any week of fishing is below the established rate as a prerequisite to continued fishing.

Variation 1: At the start of the PSC reserve fishery, a determination of the number of vessels which are going to participate is made and the PSC is allocated to each vessel individually. Should a vessel subsequently have a dirty week and be forced out of the fishery, its PSC allocation would then be reallocated to the remaining vessels.

The committee acknowledges it may not be practical to make the determination of the number of vessels which would participate in advance of the reserve fishery, thereby rendering this variation inappropriate.

Variation 2: When 50% of the PSC reserve has been taken, the average bycatch rate for the remaining vessels would be determined. Those vessels which have rates above the average would cease fishing on that species for the remainder of the year. Those vessels which have a lower rate would be allowed to continue.

The committee realizes that the ability to carry, and the cost associated with, an observer varies with the type and size of the fishing vessel. It may be that smaller shoreside trawlers and smaller longliners do not have the capability to finance and carry an observer to the same extent a factory trawler or larger shoreside vessel can.

Therefore, it is possible the phrase "approved data gathering program" could be inserted in place of "observer".

Regardless of the phrase used, it is important to ensure that the verification component of this program is incorporated if this approach is implemented. First and foremost, this system is designed and intended to encourage and reward clean fishing. As a result, we hope to develop new fishing techniques and approaches which will result in the reduction of bycatch and mortality rates, thereby allowing fuller utilization of currently constrained fisheries. Additionally, of course, the data gained through this type of system would be extremely beneficial to fishery managers.

6.) The committee recommends the Council consider allowing retention of incidentally caught halibut in longline fisheries in an amount equal to a certain percentage of the fisherman's trip harvest. The Committee recognizes that allowing retention above the bycatch/mortality rate would serve to increase overall longline halibut incidental catch mortality, thereby decreasing the amount of the Pacific cod harvest available to the longline fleet or increasing the PSC limit above the proposal. The Committee also recognizes that setting a retention rate above a certain level would encourage targeting.

In developing an appropriate retention rate, the committee multiplied the Pacific cod longline fishery bycatch rate times the mortality rate minus 25%. (The reason to reduce the mortality rate by 25% is to account for the inevitable discard of flee bitten, dead halibut which have no market value and would be thrown overboard anyway.) Using the existing bycatch/mortality rates in the longline Pacific cod fishery, a retention rate of 1.715% would be allowed in the Eastern and Central Gulf while a rate of .98% would be allowed in the Western Gulf. The Committee recommends the adoption of a single, consistent retention rate for the entire longline sector in the Gulf of 1% to 1.5%.

OTHER ISSUES

1.) The committee recommends the Council communicate with both NMFS and the IPHC to urge them to develop consistent management boundaries for the Gulf of Alaska. This would greatly assist the application of various management techniques and approaches.

2.) The committee spent considerable time discussing possible gear restrictions intended to reduce the halibut mortality rate associated with the longline fisheries. Although there appears to be some evidence that certain types of hooks (Tara Hook) and/or handling methods (the proper use of strippers) could substantially reduce halibut mortality, committee members felt gear restrictions at this time are premature. The committee believes studies should be initiated to determine whether or not these and other approaches could reduce halibut mortality. The committee recommends the Council send a letter to the IPHC recommending the pursuit of such studies.

3.) The committee reviewed the possible development of a deep water shrimp fishery in the Gulf of Alaska. According to the information contained in newspaper articles, the fishery would be prosecuted on the bottom at depths of 300 fathoms. The

committee wishes to express its concern with the bycatch implications of such a fishery, particularly on sablefish, and bring this to the attention of the Council.