Table 6. Derivation of total groundfish taken in target fisheries that incidentally catch sablefish (revised at December 1988 meeting).

(Rates taken from text and Table 4, DAPs from Council meeting)

GEAR	SPECIES	1989 Estimated DAP (mt)	DAP taken with gear type rate (%)	DAP taken with gear type amount (mt)	Amount taken in Directed Fisheries rate (%)	Amount taken in Directed Fisheries amount (mt)	Amount of Direct Fishery with sablefish bycatch rate (%)	Amount of Direct Fishery with sablefish bycatch amount (mt)	Expansion to Total groundfish caught rate 1/ (%)	Expansion to Total groundfish caught amount 2/ (mt)
Bottom Trawl	Pollock	1,280,100	67	857,667	98.66	846,174	12.67	107,210	94.59	113,342
Bottom Trawl	Pacific Cod	190,425	80	152,340	60.70	92,470	31.55	29,174	65.23 R	44,725
									70.24 C	41,535
Bottom Trawl	Greenland Turbot	7,970	74	5,898	85.35	5,034	100.00	5,034	56.64 R	8,887
									64.73 C	7,777
Bottom Trawl	POP	5,000	100	5,000	49.12	2,456	100.00	2,456	33.51	7,329
Longline	Pacific Cod	190,025	20	38,005	96.49	36,671	99.27	36,403	87.11	41,790
Longline	Greenland Turbot	7,970	26	2,072	96.39	1,997	85.03	1,698	89.66	1,894

1/ The two rates shown for P. cod and G. turbot trawl fisheries reflect regular (R) and cleaner (C) fishing rates (see Table 4).
2/ To derive total groundfish taken in target fisheries: target catch must be divided, not multiplied, by ratio of target catch to total groundfish taken in target fishery.

Projected sablefish bycatch in 1989 in the Bering Sea management area based on directed fishery definition of 2% as baseline and 10% for Greenland turbot and POP, using Council recommended groundfish apportionments.

GEAR	SPECIES	Total groundfish caught (mt)	Sablefish bycatch rate (%)	Sablefish bycatch amount (mt)
Trawl	Pollock	113,342	0.20	227
Trawl	Pacific Cod	44,725	2.00	895
Trawl	Greenland Turbot	8,887	10.00	889
Trawl	POP	7,329	10.00	733
Longline	Pacific Cod	41,790	2.00	836
Longline	Greenland Turbot	1,894	10.00	189
Overall		217,967		3,768
If 1989 Bering Sea sablefish DAP equals 2,800 mt, then remainder after bycatch equals				(968)

We agree with the recommendation of the Gulf of Alaska Plan Team to use bottom trawl bycatch rates gathered by the domestic observer programs to estimate halibut bycatch in Gulf bottom trawl fisheries in 1989. The rates formerly used in predicting halibut bycatch in these fisheries were based on the 1982-1986 foreign and joint venture fisheries and may misrepresent current conditions. The use of bycatch rates from the 1987 and 1988 observer data can only serve to more reliably predict halibut bycatch in 1989.

Sincerely,

Donald A. McCaughran
Director

cc: IPHC Commissioners

AGENDA D-2(d)(2)
DECEMBER 1988

INTERNATIONAL PACIFIC HALIBUT COMMISSION

ESTABLISHED BY A CONVENTION BETWEEN CANADA
AND THE UNITED STATES OF AMERICA

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November 21, 1988

Dr. Clarence Pautzke, Executive Director
North Pacific Fishery Management Council
P.O. Box 103136
Anchorage, Alaska 99510

Dear Clarence:

The Staff of the IPHC has reviewed your letters requesting recommendations for groundfish harvests and related items for the Gulf of Alaska and Bering Sea/Aleutian Islands fisheries in 1989. Our comments will be limited to the effects of the groundfish harvest on halibut. We recommend that the Gulf of Alaska halibut bycatch mortality limit remain at 2,000 mt, on the assumption that Bering Sea bycatch mortality will be set at about 3,900 mt. This would result in a total of 5,900 mt of halibut bycatch mortality for 1989.

We have recommended in previous correspondence that groundfish harvests be managed such that halibut bycatch mortality remains at status quo levels until objective criteria are developed to justify an increase or decrease. For the past five years, total halibut bycatch mortality in Alaskan waters has averaged about 4,200 mt, and averaged about 6,000 mt for the past 10 years. Of this mortality, the Bering Sea has accounted for 2,400 mt to 3,100 mt for the five and 10 year averages, respectively, with the Gulf of Alaska accounting for 1,800 mt and 2,900 mt.

We believe that 6,000 mt of halibut bycatch mortality for Alaskan waters is too high, and that in no case should the total Alaskan halibut bycatch mortality upper limit be higher than 6,000 mt. The halibut resource was rebuilt and the directed fishery was able to grow at this level of bycatch. Further, adequate bycatch is available for the domestic groundfish fisheries under the aforementioned bycatch ceilings. Bycatch in the Gulf of Alaska and the Bering Sea is linked in its effect on the directed halibut fishery. Increases in one area should be balanced by reductions in the other, not to exceed whatever total bycatch cap the Council may set.

We caution against using the present high harvest of halibut as justification for increasing bycatch. Halibut bycatch occurs on juvenile animals prior to recruitment to the commercial fishery. We are seeing evidence that halibut recruitment is entering a period of decline. If the declining pattern continues, bycatch will occur on a smaller abundance of juvenile halibut that is not comparable to the current high abundance of adult halibut. A further reduction in recruitment will only serve to curtail the directed commercial longline fishery in years to come.

Table 9. Projected sablefish bycatch in the Bering Sea for 1989 based on a 1% bycatch maximum in all fisheries plus an additional sablefish bycatch allowance based on round weight of the turbot and POP concurrently retained.

HIGH ESTIMATES

GEAR	SPECIES	DAP Target (mt)	Target caught with sablefish (mt)	Total groundfish caught (mt)	Sablefish bycatch rate (%)	Sablefish bycatch amount (mt)
Trawl	Pollock	900,000	75,376	79,687	1	797
Trawl	Pacific Cod	87,416	16,239	23,119	1	231
Trawl	Greenland Turbot	9,520	6,013		15	902
Trawl	POP	4,250	2,088		15	313
Longline	Pacific Cod	87,416	2,512	2,884	1	29
Longline	Greenland Turbot	9,520	2,029		15	304
Overall		1,001,186	104,257			2,576
1989 Bering Sea sablefish directed fishery:			if TAC = 1,500 mt			(1,076)
			if TAC = 2,800 mt			224

LOW ESTIMATES

GEAR	SPECIES	DAP Target (mt)	Target caught with sablefish (mt)	Total groundfish caught (mt)	Sablefish bycatch rate (%)	Sablefish bycatch amount (mt)
Trawl	Pollock	900,000	75,376	79,687	1	797
Trawl	Pacific Cod	87,416	16,239	23,119	1	231
Trawl	Greenland Turbot	9,520	6,013		8	481
Trawl	POP	4,250	2,088		8	167
Longline	Pacific Cod	87,416	2,512	2,284	1	29
Longline	Greenland Turbot	9,520	2,029		8	162
Overall		1,001,186	104,257			1,867
1989 Bering Sea sablefish directed fishery:			if TAC = 1,500 mt			(367)
			if TAC = 2,800 mt			933

Table 8. Projected sablefish bycatch "needs" in 1989 in the Bering Sea management area based on observered 1988 catcher/processor rates.

HIGH ESTIMATES

GEAR	SPECIES	DAP Target (mt)	Target caught with sablefish (mt)	Total groundfish caught (mt)	Sablefish bycatch rate (%)	Sablefish bycatch amount (mt)
Trawl	Pollock	900,000	75,376	79,687	0.20	159
Trawl	Pacific Cod	87,416	16,239	24,894	3.74	931
Trawl	Greenland Turbot	9,520	6,013	10,616	10.19	1,082
Trawl	POP	4,250	2,088	6,230	9.46	589
Longline	Pacific Cod	87,416	2,512	2,884	6.59	190
Longline	Greenland Turbot	9,520	2,029	2,263	7.90	179
Overall		1,001,186	104,257	126,574		3,130

1989 Bering Sea sablefish directed fishery: if TAC = 1,500 mt (1,630)

if TAC = 2,800 mt (330)

LOW ESTIMATES

GEAR	SPECIES	DAP Target (mt)	Target caught with sablefish (mt)	Total groundfish caught (mt)	Sablefish bycatch rate (%)	Sablefish bycatch amount (mt)
Trawl	Pollock	900,000	75,376	79,687	0.17	135
Trawl	Pacific Cod	87,416	16,239	23,119	1.39	321
Trawl	Greenland Turbot	9,520	6,013	9,289	3.73	346
Trawl	POP	4,250	2,088	6,230	7.68	478
Longline	Pacific Cod	87,416	2,512	2,884	6.59	190
Longline	Greenland Turbot	9,520	2,029	2,263	7.90	179
Overall		1,001,186	104,257	123,472		1,651

1989 Bering Sea sablefish directed fishery: if TAC = 1,500 mt (151)

if TAC = 2,800 mt 1,149

Note: High estimates are based on the reports of all catcher/prcessors vessels which caught sablefish. Low estimates are from all catcher/processors except those four trawlers identified as "targeting" sablefish (see Table 4). The low estimate for POP is derived from shore-based trawlers (see Table 5). Lower estimates also include "cleaner fishing" percentages for P. cod and G. turbot (Table 4).

Table 7. Amounts of sablefish available for directed fishing in the Bering Sea in 1989 using 20%, 4%, 2%, and 1% bycatch rates.

Target Fishing	Total groundfish caught (mt)	Sablefish Bycatch (mt) at four bycatch rates			
		20%	4%	2%	1%
Trawl Pollock	79,687	15,937	3,187	1,594	797
Trawl P. cod	24,894	4,979	996	498	249
Trawl G. Turbot	10,616	2,123	372	212	106
Trawl POP	6,230	1,246	249	125	62
Longline P. cod	2,884	577	115	58	29
Longline G. Turbot	2,263	453	91	45	23
Total	126,574	25,315	5,010	2,532	1,266
Sablefish Directed Fishery if:					
TAC = 1,500 mt		(23,815)	(3,510)	(1,032)	234
TAC = 2,800 mt		(22,515)	(2,210)	268	1,534

Note: If the four vessels with high bycatch rates described in Table 4 are dropped from the analysis, the directed sablefish fisheries under the 2% and 1% bycatch regimes can be augmented by 61 mt and 31 mt respectively.

Table 6. Derivation of total groundfish taken in target fisheries that incidentally catch sablefish.

(Rates taken from text and Table 4)

GEAR	SPECIES	1989 Estimated DAP (mt)	DAP taken with gear type rate (%)	DAP taken with gear type amount (mt)	Amount taken in Directed Fisheries rate (%)	Amount taken in Directed Fisheries amount (mt)	Amount of Direct Fishery with sablefish bycatch rate (%)	Amount of Direct Fishery with sablefish bycatch amount (mt)	Expansion to Total groundfish caught rate 1/ (%)	Expansion to Total groundfish caught amount 2/ (mt)
Bottom Trawl	Pollock	900,000	67	603,000	98.66	594,920	12.67	75,376	94.59	79,687
Bottom Trawl	Pacific Cod	87,416	97	84,794	60.70	51,470	31.55	16,239	65.23 R	24,894
									70.24 C	23,119
Bottom Trawl	Greenland Turbot	9,520	74	7,045	85.35	6,013	100.00	6,013	56.64 R	10,616
									64.73 C	9,289
Bottom Trawl	POP	4,250	100	4,250	49.12	2,088	100.00	2,088	33.51	6,230
Longline	Pacific Cod	87,416	3	2,622	96.49	2,530	99.27	2,512	87.11	2,884
Longline	Greenland Turbot	9,520	26	2,475	96.39	2,386	85.03	2,029	89.66	2,263

1/ The two rates shown for P. cod and G. turbot trawl fisheries reflect regular (R) and cleaner (C) fishing rates (see Table 4).
2/ To derive total groundfish taken in target fisheries: target catch must be divided, not multiplied, by ratio of target catch to total groundfish taken in target fishery.

Example: If the Council sets the pollock DAP for 1989 at 900,000 mt, it is assumed that 67% or 603,000 mt of the DAP will be taken by bottom trawls. The analysis in Table 4 indicates that 98.66% of the 603,000 mt taken by bottom trawls will be caught by operations defined to be targetting on pollock because the catch was more than 20% pollock. Of the 98.66% or 594,920 mt caught in the target fishery, Table 4 also shows that only 12.67% or 75,376 mt of the pollock will have some sablefish bycatch. Finally, Table 4 shows that the amount of pollock in the directed fishery for that species is 94.59% of the total catch. Therefore, a total groundfish catch of 79,687 mt is associated with a pollock catch of 75,376 mt. The 79,687 mt is used in subsequent tables to calculate sablefish bycatch needs.

AGENDA D-2(d)
DECEMBER 1988

MEMORANDUM

TO: Council, SSC and AP Members

FROM: Clarence G. Pautzke
Executive Director

DATE: November 30, 1988

SUBJECT: Bering Sea/Aleutian Islands Groundfish Fishery Management Plan

ACTION REQUIRED

Review and approve revised definition of directed fishing for sablefish in the Bering Sea.

BACKGROUND

At the September meeting the Council acknowledged that an emergency exists regarding the bycatch of sablefish in the expanding domestic fisheries for other species of groundfish. The combination of high bycatch and reduced TACs for sablefish may limit or eliminate directed fishing for sablefish; left uncontrolled the bycatch alone may exceed TACs, leading to discard and wastage. An analysis of various options to redefine directed fishing for sablefish and limit bycatch was sent to you last week. Item D-2(d)(1) has Tables 6-9 from that study.

For retainable harvests of sablefish to remain within the anticipated TACs, the current 20% definition of directed fishing will need to be changed. The Council may choose a lower, uniform, bycatch rate or tailor rates to individual groundfish fisheries based upon their susceptibility to harvest sablefish incidentally.

To be effective for 1989 any changes must be made by emergency action, followed by a regulatory amendment to be effective for more than 90 to 180 days.

Item D-2(d)(2) is a comment from the International Pacific Halibut Commission.

588/DY