


MEMORANDUM

TO: Council, SSC and AP Members

FROM: Clarence G. Pautzke 
Executive Director

DATE: September 18, 1990

SUBJECT: Gulf of Alaska Groundfish Fishery Management Plan

ACTION REQUIRED

- A. Review draft preliminary Stock Assessment and Fishery Evaluation (SAFE) report. Approve for public review.
- B. Set initial 1991 Total Allowable Catches and apportionments for 1991 and public review.
- C. Set initial 1991 halibut PSC allowances by gear, fisheries, areas, and seasons for public review.

BACKGROUND

This meeting begins the Council's annual groundfish cycle with review and release to the public of preliminary estimates of 1991 groundfish total allowable catch (TAC), the apportionment of TAC to domestic annual processed catch (DAP) or joint venture processed catch (JVP), and halibut prohibited species catch mortality limits (PSC) for fisheries, gear groups, areas, and seasons. The preliminary SAFE document, groundfish specifications, and PSC limits need to be released for public review and comment so that the Council can set final specifications for the 1991 fishing year at its December meeting.

A. SAFE Document

The Gulf of Alaska Groundfish Plan Team met in Seattle the week of September 4 - 7 to prepare the draft preliminary Stock Assessment and Fishery Evaluation (SAFE) which was sent to you on September 12, 1990. The preliminary 1990 SAFE is a modified executive summary of the 1989 final SAFE document. The comprehensive triennial trawl survey of the Gulf of Alaska ended only last week. Consequently, scientists at the Alaska Fisheries Science Center and the Plan Teams have not had the opportunity to analyze the new stock survey data needed to develop biomass estimates. Therefore, the 1989 SAFE document represents the best information currently available. The 1990 survey data will be analyzed this fall and incorporated into the final 1990 SAFE documents which will be prepared in November.

An additional chapter to the draft preliminary SAFE addressing bycatch considerations under the GOA halibut PSC framework is attached as item D-3(a)(1).

B. Set Initial ABC, TAC and Apportionments for 1991

Attached as item D-3(b)(1) is a table presenting 1989 and 1990 ABCs, TACs, and apportionments, by species. Item D-3(b)(2) is a worksheet on which initial 1991 specifications can be filled in. A electronic worksheet is also available. These worksheets will be updated with recommendations of the SSC and AP during the meeting. Under Amendment 21, adopted by the Council in June, 25% of the initial specifications will go forward as interim specifications for management of the 1991 groundfish fisheries until superceded by publication of the Council's final specifications in the FEDERAL REGISTER. While this amendment is still undergoing Secretarial review, it would be appropriate to proceed assuming its implementation.

C. Set Initial PSC Limits for Halibut

The FMP requires that initial DAP and JVP PSC limits for halibut and fully utilized species also be sent out for public review. The fixed halibut limits of 2000 mt for trawl gear and 750 mt for fixed gear adopted under Amendment 18 expire at the end of 1990; the halibut PSC framework comes back into effect for 1991. Amendment 21, adopted by the Council in June, clarifies the halibut PSC framework to permit the Council to specify PSC limits by season and to provide separate PSC caps for groundfish pots and longlines within the fixed gear category. In addition, the Council requested a regulatory amendment to allow the longline PSC cap to be apportioned among the sablefish, Pacific cod, and other target fisheries. While the plan amendment is under Secretarial review, and the regulatory amendment is in preparation, it would be helpful if the Council indicated its preferences for the apportionment of halibut PSC caps among gear groups, fisheries, and seasons.

The draft preliminary SAFE chapter at item D-3(a)(1) will assist the Council in its deliberations. Item D-3(c)(1) is a halibut PSC worksheet which will be updated during the meeting. All halibut bycatch specifications are subject to revision in December following the preparation of the final SAFE reports, determination of final 1991 TAC's and apportionments, and public comment.

PART B. 1991 PROHIBITED SPECIES CATCH MORTALITY LIMITS FOR PACIFIC HALIBUT IN THE GULF OF ALASKA

The Plan Team reviewed requirements for establishing prohibited species catch (PSC) mortality limits for Pacific halibut in the Gulf of Alaska for the 1991 fishing year. The Council must provide recommendations at its September meeting and final recommendations at its December meeting. The Council's recommendations will pertain to (1) bycatch limits, (2) apportionments of bycatch limits among gear types, seasons, and management areas, and (3) assumed mortality rates. Once approved by the Secretary of Commerce (Secretary), the Regional Office, NMFS will use the PSC limits to manage certain segments of the groundfish fisheries during 1991. A framework process for establishing these PSC limits is provided by regulations implementing the FMP. Through August 25, 1990, total halibut bycatch mortality attributed to trawl, hook-and-line, and pot gear is 1,493 mt, 954 mt, and 22 mt, respectively.

The Framework Process

Regulations require the Secretary of Commerce, after consultation with the Council, to propose the PSC limits as soon as practical after October 1 of a current fishing year. Thus, when the Council meets during September 1990, it must decide what recommendations it will provide to the Secretary.

The Council should make recommendations for PSC mortality limits as follows:

1. Between DAP and JVP fisheries. [Note: JVP fisheries are not likely; the Council could stipulate that all of the PSC be allocated to DAP unless it recommends a JVP groundfish specification].
2. Among trawl, hook-and-line, and pot gear. [Note: Proposed regulations implementing Amendment 21 to the FMP would provide the authority to allocate PSC to pot gear. Although the Secretary has not yet made a decision on Amendment 21, the Council should prepare for affirmative action and recommend a 1991 halibut PSC apportionment to pot gear for public review and comment.]
3. By season, which may be quarterly, semiannually, or any other reasonably configured period. [Note: Authority for allocating halibut PSC limits by season is now being reviewed by the Secretary as part of Amendment 21].
4. Gulfwide or between the Western and Central Regulatory Areas and among the Districts of the Eastern Regulatory Area. [Note: For the past three years, the Council has recommended that the PSC should be allocated Gulfwide, rather than among the management areas.]

The Secretary will propose the PSC mortality limits in the FEDERAL REGISTER and request comment for 30 days from the date of filing with the Office of the Federal Register. The Council will review comments and will make final recommendations on PSC mortality limits at its December 1990 meeting. Should the Secretary approve the Council recommendations, they will be published again in the FEDERAL REGISTER and will be used to manage halibut bycatch mortality in the bottom trawl, hook-and-line, and/or pot fisheries in the Gulf of Alaska during 1991.

The Framework Process Compared to Procedures Used During 1990

The above framework process is different from that in effect for the 1990 fishing year. As part of Amendment 18 to the FMP, numerical PSC mortality limits were fixed in the FMP for trawl gear and fixed gear. Two thousand (2,000) metric tons (mt) were allocated to trawl gear and 750 mt were allocated to fixed gear, i.e., hook-and-line and pot gear, combined. The framework process that would have been used to establish PSC limits was set aside by Amendment 18. Now that the 1990 fishing is coming to an end, the Council will use the framework process again, as potentially modified by Amendment 21. Amendment 21 authorizes establishment of PSCs for hook-and-line and pot gear separately.

The Council is not constrained to any particular PSC limit. The International Pacific Halibut Commission (IPHC) recommends that halibut bycatch mortality not exceed 6,000 mt in the North Pacific, and has further recommended that halibut bycatch mortality in the Bering Sea and Aleutian Islands Area and the GOA be limited to 4,000 mt and 2,000 mt, respectively. During each year from 1986 through 1989, the Council has recommended a 2,000 mt bycatch mortality limit in the GOA. Only fishing with bottom trawls would have been affected if this limit had been reached in those years. In 1990, however, the Council recommended an additional bycatch mortality limit of 750 mt for fixed gear. Under an emergency rule that is in effect until November 12, 1990, halibut bycatch mortality exempted pot gear from the fixed gear PSC, because observer data indicated that bycatch rates in groundfish pot fisheries were very low. Accordingly, all of the 750 mt was allocated to hook-and-line gear.

The Council may wish to consider results from the 1990 groundfish fisheries in the GOA. All information on halibut bycatch rates used in managing these fisheries are from the NMFS observer program.

Halibut Bycatch Management in the Gulf of Alaska During 1990

During 1990, the Alaska Region managed the groundfish fisheries using halibut bycatch rates from the Alaska Fishery Science Center's Observer Program Office. The Alaska Region also used assumed bycatch mortality rates, which were approved by the Secretary after being recommended by the Council at its December 1989 meeting and subsequently modified by the Secretary. Assumed bycatch mortality rates were the following:

Trawl gear	0.50 (i.e. 50% of the total halibut bycatch were assumed to die)
Hook-and-line gear	0.13
Pot gear	0.12

On the basis of the observed bycatch rates, assumed mortality rates, and reported groundfish catches, total halibut mortality was calculated as follows:

Halibut bycatch rates X groundfish catch (by trawl or hook-and-line gear) = Halibut bycatch

Halibut bycatch X assumed mortality rates = Halibut mortality

During 1990, halibut PSC mortality pertained to the trawl fisheries and to the hook-and-line fisheries. The pot fishery (primarily for Pacific cod) has been exempt from closures with respect to halibut bycatch mortality. Descriptions of halibut bycatch management in the trawl and hook-and-line fisheries during 1990 follow.

The 1990 Gulf of Alaska Trawl Fisheries

Through August 25, 1990, trawl gear was used to harvest pollock, flatfish, rockfish, Pacific cod, sablefish, and arrowtooth flounder. The 2,000 PSC bycatch mortality limit was apportioned quarterly under authority of an emergency rule such that 30, 30, and 40% or 600 mt, 600 mt, and 800 mt were apportioned during the first, second, and combined third/fourth quarters, respectively. The emergency rule was subsequently modified to reduce the amount of halibut PSC that would be available on July 1 from 800 mt to 400 mt. The remaining PSC allocation of 400 mt would then be available on when the emergency rule expired on August 13, 1990 to support trawl groundfish fisheries until the end of the fishing year.

Trawling with bottom trawls was prohibited on May 29 when the available data indicated that the cumulative first and second quarter allowances of 1,200 mt had been reached. The closure was rescinded on July 1, the start of the third quarter.

Through August 25, 1990, total calculated halibut bycatch mortality from trawl gear is 1,493 mt (Appendix 1). Highest bycatch mortality (665.8 mt) resulted from the rockfish fishery. This amount represents 44% of the halibut bycatch mortality resulting from the trawl fishery even though rockfish constituted only 21% of the total groundfish trawl harvest. The next highest bycatch mortality (444.9 mt) resulted from the Pacific cod fishery. About 29% of the halibut mortality is attributed to this fishery even though Pacific cod constituted about 41% of the total groundfish trawl harvest.

The arrowtooth flounder fishery resulted in 73.6 mt of halibut mortality. This fishery resulted in the highest halibut bycatch rate (about 37%) even though the amount of arrowtooth harvested (1,966 mt) was only 4.9% of the total groundfish harvest.

The following average bycatch mortality rates (kilograms/mt) were calculated from observer data from the trawl fisheries, using 50% assumed mortality (Appendix 1):

<u>Fishery</u>	<u>Bycatch mortality rate</u>
Pollock (bottom)	1.47
(pelagic)	0.03
Flatfish (deep & shallow water)	16.07
Rockfish, including thornyheads	21.65
Pacific cod	7.44
Arrowtooth flounder	37.45

The 1990 Gulf of Alaska Hook-and-Line Fisheries

The hook-and-line fisheries are directed primarily at sablefish and Pacific cod. The PSC mortality limit of 750 mt for the hook-and-line fisheries was apportioned quarterly such that 20, 60, and 20%, or 150 mt, 450 mt, and 150 mt were apportioned during the first, second, and third/fourth (combined) quarters, respectively.

Fishing with hook-and-line gear was prohibited on May 29 for the remainder of the fishing year when available data indicated that the entire 750 mt of halibut PSC bycatch mortality had been reached.

Through August 25, 1990, total calculated halibut bycatch mortality from hook-and-line gear is 954 mt (Appendix 2). Highest bycatch mortality resulted from the sablefish fishery. About 92% of the halibut mortality is attributed to this fishery. Sablefish constituted about 77% of the total groundfish

hook-and-line harvest. The next highest bycatch mortality resulted from the Pacific cod fishery. About 6% of the halibut mortality is attributed to this fishery. Pacific cod constituted about 19% of the total groundfish hook-and-line harvest.

The following average bycatch mortality rates (kilograms/mt) were calculated from observer data for the hook-and-line fisheries, using 13% assumed mortality (Appendix 2):

<u>Fishery</u>	<u>Bycatch Mortality Rate</u>
Pacific cod	9.76
Sablefish	35.20

The Gulf of Alaska Pot Fishery

Through August 25, 1990, pot gear was used to harvest mostly Pacific cod. Total mortality attributed to pot gear is 22 mt. Pot gear was exempt from any PSC mortality limit under an emergency rule through November 12, 1990 when the emergency rule would expire absent an extension.

The following average bycatch mortality rates (kilograms/mt) were calculated from observer data for the pot fishery, using 12% assumed mortality (Appendix 3):

<u>Fishery</u>	<u>Bycatch Mortality Rate</u>
Pacific cod	6.00

Harvests Foregone During 1990

Trawl fisheries are still continuing as is the pot fishery for Pacific cod. Trawl fisheries were closed on May 29 until July 1 when NMFS projected the second quarter PSC allowance for trawl gear to have been reached. NMFS projection was premature, which imposed some operating costs on the fishing industry. About 400 mt of the trawl PSC allowance remains as of August 25, 1990, whereas about 50% of the Pacific cod quota remains unharvested. Should bottom trawling be prohibited as a result of reaching the trawl PSC allowance prematurely, additional amounts of revenue would be foregone.

As of August 25, only the hook-and-line fisheries have been closed as a result of reaching the halibut PSC mortality allowance. Because the hook-and-line fisheries for sablefish harvested all the amounts available to hook-and-line gear in the Eastern and Central Regulatory Areas prior to the PSC for hook-and-line gear being achieved, no sablefish was foregone in those areas. In the Western Regulatory Area, however, 1,497 mt of sablefish remain unharvested. Expressed in pounds and using a recovery rate of 0.63 for eastern cut product, the resulting shortfall is 2,078,614 pounds. At \$1.50 per pound, fishermen might have lost about \$3.1 million in gross revenue.

Because pot gear is exempt from closures when the PSC mortality is reached, this gear will likely fish for Pacific cod during 1990, subject only to constraints other than bycatch limitations.

Hook-and-line fishermen would have continued to harvest Pacific cod if the closure had not occurred. The additional harvest amount is not known. This amount might be estimated, however, by using the proportion of the total Pacific cod catch that hook-and-line vessels had harvested prior to the closure. This proportion is 8.8%. Given the amount of Pacific cod unharvested through August 25 of 30,473 mt, hook-and-line fishermen might have forgone about 2,600 mt if they would have harvested cod in the same proportion through the remainder of the year. Expressed in pounds and using a

recovery rate of 0.64 for headed and gutted, Western cut the unharvested share might have been about 3.7 million pounds. At \$1 per pound, hook-and-line fishermen might have lost about \$3.7 million.

Seasonal Apportionments

Under authority of Amendment 21, should it be approved by the Secretary, the halibut PSC limits can be apportioned on a seasonal basis. As discussed above, halibut PSC mortality limits were apportioned quarterly to trawl gear and hook-and-line gear during 1990. The Council could consider seasonal allocations to some or all gear types. Halibut are expected to be in shallow water during summer months (June through September). Fisheries for Pacific cod and shallow water flatfish will need larger shares of the PSC mortality limit during this time. Fisheries for sablefish and deepwater flatfish will need larger shares of the PSC mortality limit during January through May and during October through December.

In recommending any seasonal allocations, the Council will consider objectives to be accomplished. One objective is to promote harvest of as much of the groundfish optimum yield as possible with a given amount of halibut PSC. If some gear types have excessively high bycatch rates during a given season, the Council may consider withholding halibut PSC in order to promote other gear types, which otherwise might be closed prematurely, thereby promoting harvest of the OY. Presently, regulations do not authorize allocating PSC by fisheries, although the Council has requested a regulatory amendment be implemented to provide this authority.

Halibut bycatch rates observed during 1990 varied, possibly as a result of the seasonal distribution of halibut. Calculating bycatch rates for four-week periods for trawl, hook-and-line, and pot gear (see Appendix 4) provide results shown below.

Gulf of Alaska Trawl Fisheries

Pacific cod - bycatch rates appear to be low during February through mid April and are high during late April through early August (and likely later).

Pollock - Bycatch rates are low during the roe fishery when pelagic gear is used.

Flatfish - Bycatch rates appear to be low during February and high during late March through mid May. However, differences in rate may be due to species composition. Dover sole, rex sole, and flathead sole are considered deep water flatfish species. Others are considered to be shallow water flatfish species. High rates show during March through mid May might be the result of trawling in shallower water.

Rockfish - Bycatch rates appear to be high during March through mid May and lower during late May through mid August. If trawling for rockfish were directed at slope species, then the lower rates during summer may be the result of halibut moving into shallower water, thereby escaping the deep water rockfish fishery.

Sablefish - No conclusions are made. Sablefish was intended to be a bycatch species for trawl gear. NMFS assumes that any catches occurred as a result of bycatches with other groundfish species.

Arrowtooth flounder - This species is considered to be a shallow water flatfish species, although they may occur in deep water, also. Few data exist to indicate a trend. High bycatch rates shown for late June through mid August may be the result of trawling for arrowtooth in shallow water.

Gulf of Alaska Hook-and-Line Fisheries

Pacific cod - bycatch rates appeared to be low during January - through mid April and were relatively high during late April through May, likely as a result of halibut moving into shallow water where Pacific cod are found.

Sablefish - bycatch rates remained high during the fishery, which started April 1 and continued through most of May.

Gulf of Alaska Pot Fishery

Pacific cod - bycatch rates were low during March through mid May but were relatively high during late May through August, likely as a result of Pacific halibut moving into shallow water where Pacific cod are found.

Appendix 1. Amount of Trawl Halibut Mortality in metric tons through August 25, 1990.

Mortality rate: 50%

Target Trawl Fishery **

ZONE	A	B	F	K	O	P	S	T	
610			0.6	76.8	126.2	0.0	1.9	3.6	
620			124.0	56.6	97.6	0.0	9.2	45.9	
621					26.9	0.0			
630		17.0	129.2	412.2	186.6	0.8	12.5	24.0	
631		0.0	0.0		7.4	0.0		0.2	
640				94.6			8.0		
650			1.1	10.9	0.2		3.1		
680		0.0		14.7			1.2		
									GRAND
									TOTALS
HAL TOT	0.0	17.0	254.9	665.8	444.9	0.8	36.0	73.6	1493
% TOT HAL	0.00	1.14	17.08	44.59	29.80	0.05	2.41	4.93	100
GF TOT	0	11624	15869	30755	59836	23641	2226	1966	145918
% TOT GF	0.00	7.97	10.88	21.08	41.01	16.20	1.53	1.35	100
RATE KG/MT	0.00	1.47	16.07	21.65	7.44	0.03	16.16	37.45	

** TARGETS:
 F = Flatfish other than arrowtooth flounder
 A = Atka Mackerel
 B = Pollock (bottom trawl)
 K = Rockfishes, incl. thornyheads
 O = Pacific cod
 P = Pollock (pelagic trawl)
 S = Sablefish
 T = Arrowtooth Flounder

Appendix 2. Amount of Hook-and-line Halibut Mortality in metric tons through Aug. 25, 1990

Mortality rate: 13%

Target Fishery **

ZONE	A	B	F	K	O	P	S	T	
610					27.2		44.2	0.0	
620				0.0	11.4		52.0		
621					0.1		0.0		
630		0.1	0.1	9.1	18.8		484.7		
631					0.4		0.0		
640				0.1	0.2		64.0		
650				4.0	2.9		207.3		
680				0.4			27.2		
									GRAND TOTALS
HAL TOT	0.0	0.1	0.1	13.6	61.0	0.0	879.4	0.0	954
% TOT HAL	0.00	0.01	0.01	1.43	6.39	0.00	92.16	0.00	100
GF TOT	0	8	11	962	6247	0	24982	2	32212
% TOT GF	0.00	0.02	0.03	2.99	19.39	0.00	77.55	0.01	100
RATE KG/MT	0.00	12.84	5.27	14.13	9.76	0.00	35.20	12.84	

** TARGETS:
 F = Flatfish other than arrowtooth flounder
 A = Atka Mackerel
 B = Pollock (bottom trawl)
 K = Rockfishes, incl. thornyheads
 O = Pacific cod
 P = Pollock (pelagic trawl)
 S = Sablefish
 T = Arrowtooth Flounder

Appendix 3. Amount of Pot Halibut Mortality in metric tons through August 25, 1990

Mortality rate: 12%

Target Trawl Fishery **

ZONE	A	B	F	K	O	P	S	T
610					0.65			
620					0.95			
621					0.07			
630					20.22			
631					0.63			

HAL TOT 22.5
 % TOT HAL 100.0

GF TOT 3,782
 % TOT GF 100.0

RATE KG/MT 6.0

- ** TARGETS:
- F = Flatfish other than arrowtooth flounder
 - A = Atka Mackerel
 - B = Pollock (bottom trawl)
 - K = Rockfishes, incl. thornyheads
 - O = Pacific cod
 - P = Pollock (pelagic trawl)
 - S = Sablefish
 - T = Arrowtooth Flounder

Appendix 4. Seasonal (4-week periods) distribution of halibut bycatch rates in the trawl, hook-and-line, and pot fisheries, Gulf of Alaska-wide.

Trawl Gear Bycatch rate (kg halibut/mt groundfish)

<u>4-Week Period</u>	<u>Target Fishery</u>				
	Pacific Cod	Pollock	Flatfish	Rockfish	Arrowtooth Flounder
JAN 6- 27	0.000	0.000	0.000	0.000	0.000
FEB 3- 24	6.142	0.000	10.004	0.000	0.000
MAR 3- 24	9.354	0.000	57.072	158.153	0.000
MAR 31-APR 21	11.469	5.913	32.041	41.389	0.000
APR 28-MAY 19	44.609	0.000	42.927	32.061	0.000
MAY 26-JUN 16	51.500	0.000	16.400	17.496	0.000
JUN 23-JUL 14	22.926	0.000	12.354	17.533	246.454
JUL 21-AUG 11	22.159	0.000	17.932	16.008	23.055
AUG 18- SEP 8	0.000	0.000	0.000	0.000	0.000

<u>4-Week Period</u>	<u>Hook-and-line Gear</u>		<u>Pot Gear</u>
	<u>Target Fishery</u>		<u>Target Fishery</u>
	Pacific Cod	Sablefish	Pacific Cod
JAN 6- 27	63.027	0.000	0.000
FEB 3- 24	43.056	0.000	0.000
MAR 3- 24	86.360	0.000	0.527
MAR 31-APR 21	67.662	307.193	3.637
APR 28-MAY 19	535.260	405.259	11.404
MAY 26-JUN 16	199.943	153.745	55.203
JUN 23-JUL 14	86.341	0.000	53.635
JUL 21-AUG 11	0.000	0.000	164.205
AUG 18- SEP 8	0.000	0.000	62.803

GULF OF ALASKA GROUND FISH: Council recommendations for 1990 ABC, TAC, DAP, and JVP (in metric tons)

TABLE 1

Species	Area	1989				1990 Council Recommendations			
		ABC	TAC	DAP	JVP	ABC	TAC	DAP	JVP
Pollock 1/	W/C	72,000	65,750	65,750	0	63,750	63,750	63,750	
	Shelikof		6,250	6,250	0	6,250	6,250	6,250	
	E	3,375	200	200	0	3,400	3,400	3,400	
	Total	75,375	72,200	72,200	0	73,400	73,400	73,400	0
Pacific cod	W	13,500	13,500	13,500	0	29,500	29,500	29,500	
	C	52,000	52,000	52,000	0	59,500	59,500	59,500	
	E	5,700	5,700	5,700	0	1,000	1,000	1,000	
	Total	71,200	71,200	71,200	0	90,000	90,000	90,000	0
Flatfish/ deep 2/	W	111,500	3,200	3,200	0	16,300	3,650	3,650	
	C	384,300	31,800	21,800	10,000	77,700	15,300	15,300	
	E	58,900	1,000	1,000	0	14,400	3,050	3,050	
	Total	554,700	36,000	26,000	10,000	108,400	22,000	22,000	0
Flatfish/ shallow 3/	W					30,200	3,570	3,570	
	C		Not specified in 1989			52,200	6,180	6,180	
	E					2,100	250	250	
	Total					84,500	10,000	10,000	0
Arrowtooth flounder	W					27,000	4,450	4,450	
	C		Not specified in 1989			141,000	23,170	23,170	
	E					26,600	4,380	4,380	
	Total					194,600	32,000	32,000	0
Sablefish	W	4,900	3,770	3,770	0	3,800	3,770	3,770	
	C	13,900	11,700	11,700	0	11,800	11,700	11,700	
	W. Yakutat	5,300	4,550	4,550	0	4,600	4,550	4,550	
	E. Yak/SE Out	6,800	5,980	5,980	0	6,000	5,980	5,980	
	Total	30,900	26,000	26,000	0	26,200	26,000	26,000	0
Slope rockfish 4/	W	5,774	5,774	5,774	0	4,300	4,300	4,300	
	C	8,452	8,452	8,452	0	7,700	7,700	7,700	
	E	5,774	5,774	5,774	0	5,700	5,700	5,700	
	Total	20,000	20,000	20,000	0	17,700	17,700	17,700	0
Pel.shelf rckfsh.	W	1,000	500	500	0	1,400	1,400	1,400	
	C	4,800	2,400	2,400	0	5,800	5,800	5,800	
	E	800	400	400	0	1,000	1,000	1,000	
	Total	6,600	3,300	3,300	0	8,200	8,200	8,200	0
Dem.shelf rckfsh.	SE Outside	Unknown	420	420	0	unknown	470	470	0
Thomyheads	GW	3,800	3,800	3,800	0	3,800	3,800	3,800	0
Other species	GW	n/a	11,646	11,146	0	30,340	14,179	14,179	0
GULF OF ALASKA TOTAL		762,575	244,566	234,066	10,000	637,140	297,749	297,749	0

1/ Council's intent is quarterly apportionment of W/C pollock TAC, January-June 1990, with Shelikof TAC part of first quarter.

2/ Deep water flatfish are flathead, rex, and Dover sole.

3/ Shallow water flatfish include rock sole, yellowfin sole, butter sole, starry flounder, and other flatfish not specifically defined.

4/ Plan Team and SSC note that 1990 ABC would be 35,100 mt if apportioned as roughey and shorttraker rockfish at 5,000 mt, POP at 15,700 mt, and other pelagic shelf rockfish at 14,400 mt, and only with observers.

Halibut Mortality Limit for 1990: 2,000 mt trawl, 750 mt pot and longline.

TABLE 2
GULF OF ALASKA GROUND FISH
Preliminary 1991 SSC recommended ABC, AP recommended TAC and apportionments (metric tons)

19-Sep-90

Species	Area	1990		SSC	Advisory Panel		
		TAC	Catch *	ABC	TAC	DAP	JVP
Pollock	W/C	52,500 **	45,057	63,750	63,750	63,750	0
	Shelikof		n/a	6,250	6,250	6,250	0
	E	3,400	277	3,400	3,400	3,400	0
	Total	55,900	45,334	73,400	73,400	73,400	0
Pacific Cod	W	29,500	29,528	29,500	19,831	19,831	0
	C	59,500	31,379	59,500	39,997	39,997	0
	E	1,000	309	1,000	672	672	0
	Total	90,000	61,216	90,000	60,500	60,500	0
Flatfish, Deep	W	3,650	278	16,300	3,650	3,650	0
	C	15,300	6,028	77,700	15,300	15,300	0
	E	3,050	497	14,400	3,050	3,050	0
	Total	22,000	6,803	108,400	22,000	22,000	0
Flatfish, Shallow	W	3,570	391	30,200	3,570	3,570	0
	C	6,180	2,893	52,200	6,180	6,180	0
	E	250	174	2,100	250	250	0
	Total	10,000	3,458	84,500	10,000	10,000	0
Arrowtooth	W	4,450	735	27,000	4,450	4,450	0
	C	23,170	12,715	141,000	23,170	23,170	0
	E	4,380	1,547	26,600	4,380	4,380	0
	Total	32,000	14,997	194,600	32,000	32,000	0
Sablefish	W	3,770	1,826	3,800	3,770	3,770	0
	C	11,700	12,016	11,800	11,700	11,700	0
	W. Yakutat	4,550	5,177	4,600	4,550	4,550	0
	E. Yak/S.E. Out.	5,980	5,666	6,000	5,980	5,980	0
	Total	26,000	24,685	26,200	26,000	26,000	0
Rockfish (Slope)	W	4,300	3,730	4,300	4,300	4,300	0
	C	7,700	9,505	7,700	7,700	7,700	0
	E	5,700	6,130	5,700	5,700	5,700	0
	Total	17,700	19,365	17,700	17,700	17,700	0
Rockfish (Pelagic Shelf)	W	1,400	132	1,400	1,400	1,400	0
	C	5,800	1,002	5,800	5,800	5,800	0
	E	1,000	524	1,000	1,000	1,000	0
	Total	8,200	1,658	8,200	8,200	8,200	0
Rockfish (Demersal Shelf)	S.E. Out.	470	256	unknown	470	470	0
Thornyhead	G W	3,800	1,517	3,800	3,800	3,800	0
Other Species	G W	14,179	4,916	30,340	14,179	14,179	0
GULF OF ALASKA TOTAL		280,249	184,205	637,140	268,249	268,249	0

* Catch through September 8, 1990.

** Western/Central TAC and catch numbers include Shelikof. The 4th quarter allowance of 17,500 mt will be released October 1, 1990.

TABLE 3
GULF OF ALASKA GROUND FISH
 Preliminary 1991 Council Recommendations for
 ABCs, TACs and Apportionments (metric tons)

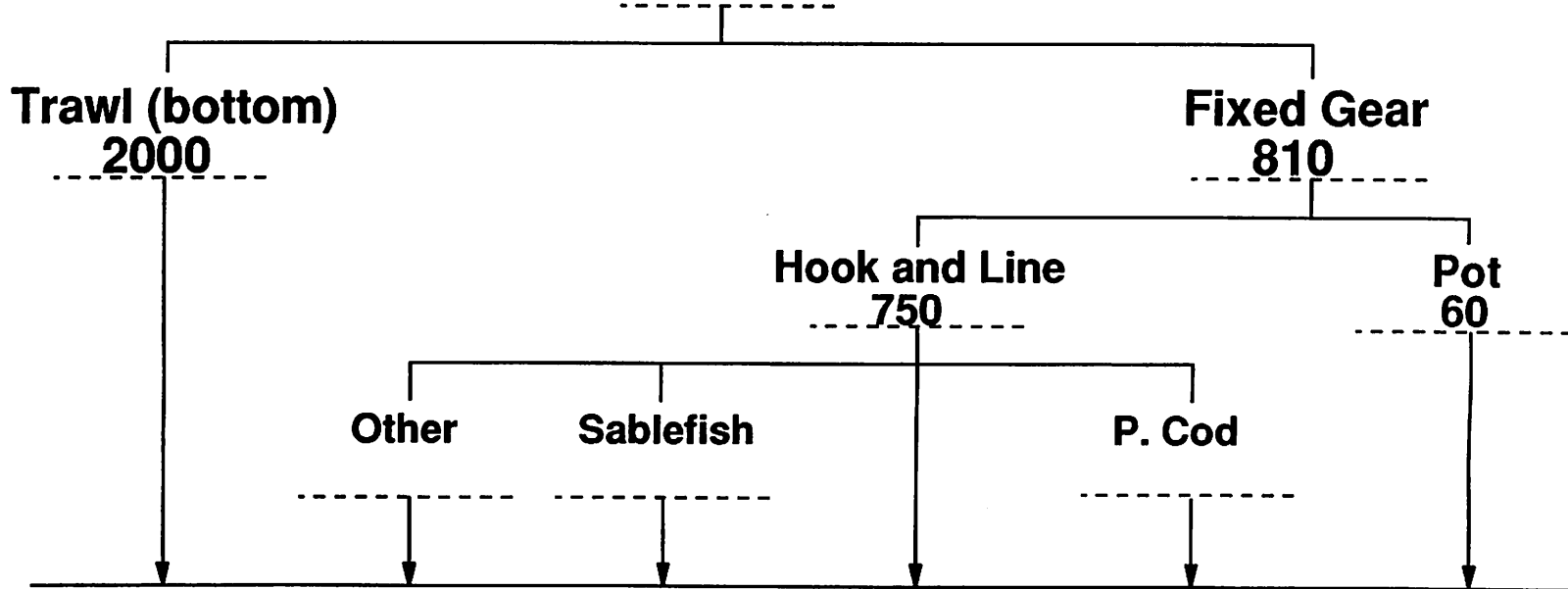
19-Sep-90

Species	Area	Council Recommendations			
		ABC	TAC	DAP	JVP
Pollock	W/C Shelikof E Total				
Pacific Cod	W C E Total				
Flatfish, Deep	W C E Total				
Flatfish, Shallow	W C E Total				
Arrowtooth	W C E Total				
Sablefish	W C W. Yakutat E. Yak./S.E. Out. Total				
Rockfish (Slope)	W C E Total				
Rockfish (Pelagic Shelf)	W C E Total				
Rockfish (Demersal Shelf)	S.E. Out.				
Thornyhead	G W				
Other Species	G W				
GULF OF ALASKA TOTAL					

Gulf of Alaska Halibut Bycatch Worksheet

AP Recommendation

Total Limit
2810



	Trawl (bottom)		Other		Sablefish		Hook and Line		P. Cod		Pot	
	mt	%	mt	%	mt	%	mt	%	mt	%	mt	%
1st Qrt.	600	30					150	20			30	50
2nd Qrt.	600	30					225	30			↓	↓
3rd Qrt.	800	40					150	20			30	50
4th Qrt.	↓	↓					225	30			↓	↓