


MEMORANDUM

TO: Council, AP, and SSC Members

FROM: Clarence G. Pautzke 
Executive Director

DATE: September 21, 1989

SUBJECT: Gulf of Alaska Groundfish Fishery Management Plan

ACTION REQUIRED

- A. Review draft Stock Assessment and Fishery Evaluation (SAFE) report and Plan Team recommendations for initial Acceptable Biological Catch.
- B. Set initial Total Allowable Catches and apportionments for 1990.
- C. Receive report from NOAA Fisheries on status of regulatory amendment to prohibit groundfish pot gear which does not minimize halibut bycatch.

BACKGROUND

A. SAFE Report and Plan Team Recommendations for Initial ABC

This meeting begins the Council's annual groundfish cycle with review and release to the public of preliminary estimates of 1990 groundfish total allowable catch (TAC), the apportionment of TAC to domestic annual processed catch (DAP) or joint venture processed catch (JVP), halibut prohibited species catch limit (PSC) or rates, and preliminary PSC limits or rates for fully U.S.-utilized groundfish species.

The Gulf of Alaska Groundfish Plan Team met in Seattle the week of August 28 to prepare this year's draft Stock Assessment and Fishery Evaluation (SAFE) report which was sent to you September 12, 1989. Item D-4(a)(1) summarizes the Team's findings and includes a review table of 1989 harvest levels and apportionments. An executive summary of the SAFE is provided as item D-4(a)(2).

The SAFE, a key element in the OY framework approved in Amendment 15, presents status of stocks information, the Plan Team's initial Acceptable Biological Catch (ABC) recommendations, and economic information on the Gulf of Alaska groundfish fisheries. The SAFE also contains information necessary to utilize the halibut and fully utilized species PSC frameworks, including the Team's initial halibut bycatch and mortality rates recommendations and a report on the status of the halibut resource.

Pollock stock assessments indicate a continued decline in the Gulf population for 1990 due primarily to the lack of any strong year class recruiting to the fishery. A stock synthesis approach was utilized to estimate abundance of pollock under various scenarios for recruitment and natural

mortality. The Plan Team believes that a conservative approach should be followed when setting the pollock quota for 1990. The Team also recommends that a TAC of 10,000 mt be provided for that portion of the Central Gulf from 151°30' to 147° west longitude [see item D-4(a)(3)] to encourage an exploratory fishery south of the Kenai Peninsula where industry indicates significant aggregations of pollock occur.

Pacific cod stocks appear healthy. The Team utilized a modified stock reduction analysis technique which fit the previous bottom trawl estimates of cod biomass more precisely than last year's model. As a result of the new technique, estimates for cod biomass are a little lower than last year.

Flatfish stocks are in good shape. Because of the differences in halibut bycatch between deep water and shallow water flatfish assemblages, the Team recommends for 1990 dividing the flatfish target category into deep water flatfish, shallow water flatfish, and arrowtooth flounders, each with its own quota. This could allow a larger harvest of the deep water assemblage while minimizing the incidental catch of halibut which is greater in the shallow water flatfish fishery.

Other groundfish stock projections show little change from 1989. Sablefish stock status cannot be fully evaluated until the Gulf longline surveys are completed this fall; however, the Team noted that catch per unit effort in inside waters of southeast Alaska has declined since last year. Exploitation rates for slope rockfish were reduced due to concern over high fishing mortality on the shorttraker and roughey rockfish components of the assemblage.

B. Set Initial TAC and Apportionments for 1990

The last table in item D-4(a)(1) is a worksheet with TACs and projected catches for 1989 and the Plan Team's initial 1990 ABC recommendations. It will aid in determining initial 1990 TAC projections for public review. The Council needs to keep in mind the potential bycatch of halibut and fully U.S.-utilized groundfish species as you set the TACs. The FMP requires that initial DAP and JVP PSC limits for halibut and fully utilized species (i.e., pollock, sablefish, rockfish), also be sent out to public review. The halibut mortality limit will be 2,000 mt for 1990.

There will be a new worksheet available when we discuss this agenda item. It will have any revisions to ABC suggested by the SSC or AP and some example TACs and projected PSCs for 1990.

C. Regulatory Amendment to Prohibit Pot Gear Which Does Not Minimize Halibut Bycatch

During its June 1989 meeting, the Council approved proceeding with a regulatory amendment in the Gulf which would prohibit the use of groundfish pots that are not configured to minimize halibut bycatch. The Council approved this measure among other management measures considered in the Amendment 18 package. The Council's intent was to implement a measure to minimize the incidental catch harvest of halibut yet not restrict the use of pots in the groundfish fisheries.

NOAA Fisheries intends to publish in the Federal Register a Notice of Proposed Rulemaking which would present to the public the Council's recommendations. The Notice will inform the Gulf fleet that NOAA Fisheries is preparing a rule and wants suggestions on pot design or other technology to minimize capture of halibut by pots while being enforceable.

After public input, NOAA Fisheries will proceed with publication of the proposed regulatory amendment.

Table 2. Exploitable biomasses, 1990 ABCs, and estimated trends and abundances of groundfish.

Species	Exploitable Biomass (mt)		1990 ABC	Abundance, trend
Pollock	721,000	W/C	10,000-37,500	Depressed, uncertain
		E	3,400	
		Total	13,400-40,900	
Pacific cod	498,044	W	11,500	High, declining
		C	44,200	
		E	4,800	
		Total	60,500	
Flatfish (deep water) (all flatfish)	2,110,900	W	26,200	High, stable
		C	122,100	
		E	22,900	
		Total	171,300	
Flatfish (shallow water)		W	73,200	High, stable
		C	128,800	
		E	5,100	
		Total	207,100	
Arrowtooth flounder		W	47,600	High, stable
		C	248,800	
		E	46,900	
		Total	343,300	
Sablefish	213,000- 312,000	W	3,600- 5,300	High, decreasing
		C	11,200-16,300	
		WYK	4,400- 6,400	
		SE/EYK	5,800- 8,300	
		Total	24,900-36,300	
Slope rockfish	702,200	W	1,500- 4,300	Low, increasing
		C	2,600- 7,700	
		E	1,900- 5,700	
		Total	6,000-17,600	
Pelagic shelf rockfish	164,000	W	600- 1,400	Relative abundance and trend unknown
		C	2,700- 5,800	
		E	500- 1,000	
		Total	3,800- 8,200	
Demersal shelf rockfish (SE Outside district)	Unknown		<600	Depressed, stable
Thornyhead rockfish	98,700	Gulfwide	3,800	Good, decreasing
Other species	NA	Gulfwide	NA	

899,100*

* Summed, using the high-end of the ABC ranges.

Table 1. Maximum sustainable yields (MSYs), comparisons of acceptable biological catches (ABCs) for 1989 and 1990 (rounded to nearest 100 mt), and catches through August 12, 1989 for groundfish.

Species	MSY (mt)	ABC (mt)		1989 Catch	1989 TAC		
		1989	1990				
Pollock	Unknown	W/C	72,000	10,000- 37,500	57,223	72,000	
		Shelikof*			6,250	6,425	
		E	3,375		3,400	63	200
		Total	75,375		13,400- 40,900	63,710	72,000
Pollock experimental fishery	(151°30'-147)			10,000	(TAC recommendation)		
Pacific cod	34,200	W	13,500	11,500	12,971	13,500	
		C	52,000	44,200	24,706	52,700	
		E	5,700	4,800	46	5,700	
		Total	71,200	60,500	37,723	71,200	
Flatfish** (deep water)	30,300	W	20,400	26,200	743	3,200	
		C	96,000	122,100	9,398	31,800	
		E	17,900	22,900	969	1,000	
		Total	134,300	171,300	11,111	36,000	
Flatfish*** (shallow water)	28,300	W	53,000	73,200			
		C	89,200	128,800			
		E	3,500	5,100			
		Total	145,700	207,100			
Arrowtooth flounder	63,000	W	38,100	47,600			
		C	199,100	248,800			
		E	37,500	46,900			
		Total	274,600	343,300			
Sablefish	29,600- 33,200	W	4,900	3,600- 5,300	4,096	3,770	
		C	13,900	11,200- 16,300	12,234	11,700	
		WYK	5,300	4,400- 6,400	5,319	4,550	
		SE/EYK	6,800	5,800- 8,300	6,016	5,980	
		Total	30,900	24,900- 36,300	27,666	26,000	

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Table 1 (cont.) Maximum sustainable yields (MSYs), comparisons of acceptable biological catches (ABCs) for 1989 and 1990 (rounded to nearest 100 mt), and catches through August 12, 1989 for groundfish.

Species	MSY (mt)		ABC (mt)		1989 Catch	1989 TAC
			1989	1990		
Slope rockfish	141,000- 28,700	W	5,774	1,500- 4,300	3,733	5,774
		C	8,452	2,600- 7,700	8,357	8,452
		E	5,774	1,900- 5,700	6,635	5,774
		Total	20,000	6,000- 17,600	18,725	20,000
Pelagic shelf rockfish	Unknown	W	1,000	600- 1,400	96	500
		C	4,800	2,700- 5,800	873	2,400
		E	800	500- 1,000	739	800
		Total	6,600	3,800- 8,200	1,707	3,300
Demersal shelf rockfish (SE Outside district)			Unknown	Unknown	312	420
Thornyhead rockfish	3,453- 4,934	Gulfwide	3,800	3,800	3,050	3,800
Other species	NA		NA	NA	1,560	11,046

1,077,585! 899,000! 165,565 231,966

* Shelikof Strait pollock is included within the W/C ABC range.

** "Deep water flatfish" means flathead sole, rex sole, and Dover sole.

*** "Shallow water flatfish" means rock sole, yellowfin sole, butter sole, starry flounder, and other flatfish not specifically defined.

! Summed, using high-end values in the ranges.

Table D-4(a)(1). GULF OF ALASKA GROUND FISH: 1990 ABC, TAC, DAP, and JVP and 1990 Plan Team ABC recommendations (in metric tons).

Species	Area	1989				1990				
		ABC	TAC	DAP	JVP	Plan Team ABC	SSC	TAC	DAP	JVP
Pollock	W/C	72,000	65,750	65,750	0	10,000-37,500	58			
	Shelikof 1/	n/a	6,250	6,250	0	(6,250)	"			
	E	3,375	200	200	0	3,400	"			
	Total	75,375	72,200	72,200	0	13,400-40,900				
						10,000	2/			
Pacific cod	W	13,500	13,500	13,500	0	11,500	22,800			
	C	52,000	52,000	52,000	0	44,200	87,600			
	E	5,700	5,700	5,700	0	4,800	9,600			
	Total	71,200	71,200	71,200	0	60,500	120			
Flatfish 3/ (deep water)	W	111,500	3,200	3,200	0	26,200	21,5			
	C	384,300	31,800	21,800	10,000	122,100	87,9			
	E	58,900	1,000	1,000	0	22,900	17,8			
	Total	554,700	36,000	26,000	10,000	171,200	129,20			
Flatfish 4/ (shallow water)	W					73,200	3012			
	C					128,800	52,2			
	E					5,100	2,150			
	Total					207,100	84,500			
Arrowtooth flounder	W					47,600	27			
	C					248,800	141			
	E					46,900	26			
	Total					343,300	194,200			
Sablefish	W	4,900	3,770	3,770	0	3,600-5,300	"			
	C	13,900	11,700	11,700	0	11,200-16,300	"			
	W. Yakutat	5,300	4,550	4,550	0	4,400-6,400	"			
	E. Yak./S.E. Out.	6,800	5,980	5,980	0	5,800-8,300	"			
	Total	30,900	26,000	26,000	0	24,900-36,300				
Rockfish (Slope)	W	5,774	5,774	5,774	0	1,500-4,300	6797			
	C	8,452	8,452	8,452	0	2,600-7,700	9983			
	E	5,774	5,774	5,774	0	1,900-5,700	6820			
	Total	20,000	20,000	20,000	0	6,000-17,600	23,600			
Rockfish (Pelagic Shelf)	W	1,000	500	500	0	600-1,400	1000			
	C	4,800	2,400	2,400	0	2,700-5,800	4800			
	E	800	400	400	0	500-1,000	800			
	Total	6,600	3,300	3,300	0	3,800-8,200	6600			
Rockfish (Demersal Shelf) S.E. Out.		n/a	420	420	0	Unknown	-			
Thornyhead	GW	3,800	3,800	3,800	0	3,800	3800			
Other Species	GW	n/a	11,646	11,046	0	n/a	"			
GULF OF ALASKA TOTAL		762,575	244,566	233,966	10,000	899,000	5/			

1/ Shelikof Strait pollock is included within the W/C ABC range.

2/ Pollock TAC recommendation for an experimental fishery between 151 degrees 30' and 147 degrees.

3/ "Deep water flatfish" means flathead sole, rex sole, and Dover sole.

4/ "Shallow water flatfish" means rock sole, yellowfin sole, butter sole, starry flounder, and other flatfish not specifically defined.

5/ Summed, using high-end values in the ranges.

DRAFT
STOCK ASSESSMENT AND FISHERY EVALUATION DOCUMENT
FOR THE
1990
GULF OF ALASKA GROUND FISH FISHERY

EXECUTIVE SUMMARY

Prepared by
Gulf of Alaska Groundfish Plan Team
North Pacific Fishery Management Council
P.O. Box 103136
Anchorage, Alaska 99510

September 1989

INTRODUCTION

This preliminary Stock Assessment and Fishery Evaluation report (SAFE) for the Gulf of Alaska groundfish resources is applicable for management of the 1990 fishery under Fishery Management Plan for Groundfish of the Gulf of Alaska (FMP). In this SAFE, the rationale and management recommendations are presented mainly from a biological perspective. These recommendations, together with socioeconomic considerations, will be used by the North Pacific Fishery Management Council to determine total allowable catch (TAC) and other management strategies for the fishery under the Magnuson Fishery Conservation and Management Act.

The SAFE is organized by topic. The first part is the biological section, which presents a Plan Team review of the condition of each target species or species group and recommendations for acceptable biological catch (ABC). The second part is the bycatch section which provides information needed to support development of prohibited species catch (PSC) mortality limits for Pacific halibut and those groundfish species that are fully utilized by U.S. fishermen delivering to U.S. processors. The Plan Team requests that the industry submit any pertinent information regarding bycatch rates to the Council.

The third part is an overview of the economic condition of the various Gulf of Alaska groundfish fisheries. This economic overview also includes a detailed description of all groundfish fisheries in the Gulf of Alaska and also in the Bering Sea, which is bound separately but is part of this SAFE.

The Plan Team for the Gulf of Alaska Groundfish FMP met in Seattle on August 28 - September 1, 1989 to review the status of stocks of ten species or species groups that are managed under the FMP. The Plan Team review and discussions were based on technical papers from the Alaska Department of Fish and Game and from the Alaska Fisheries Science Center, results from the NMFS 1984 and 1987 Gulf of Alaska trawl surveys, the 1988 longline survey, and presentations by NMFS scientists. Attendance at the August-September Plan Team meeting included:

Plan Team Members: J. Balsiger (Team Chairman), R. Berg,
B. Bracken, D. Carlile,
J. Fujioka, J. Hastie,
H. Lai, S. McDevitt,
B. Trumble, B. Wilson

NMFS or NPFMC
scientists
& managers P. Dawson, S. Davis, A. Hollowed,
B. Megrey, E. Nunnallee,
S. Salveson, G. Thompson,
J. Traynor, T. Wilderbuer,
N. Williamson, H. Zenger

NOAA General Counsel C. O'Connor

Public Attendance: V. Curry (Alaska Factory Trawlers Association),
C. Blackburn (Alaska Groundfish Databank)
G. Anderson (Fishing Co. of Alaska)
D. Johnson (Vessel captain)
C. Manger, J. Plesha

The FMP recognizes single species and species complex management strategies. Single species management is recommended for stocks which are easily targeted by the harvesting sector, and for which minimal mixing of other species occurs in the targeted catch. In the Gulf of Alaska, Pacific cod, pollock, and sablefish have been managed as single species. Other groundfish species that are usually caught in groups have been managed as complex assemblages. For example, rockfish, thornyheads, flatfish, and other groundfish have been managed as complexes. The FMP, however, authorizes splitting species, or groups of species, from the complexes if management can be enhanced. Acceptable biological catches (ABCs) for a species complex represent potential total yields for the species comprising that complex.

Harvesters do not always catch species in a complex in proportion to the species composition, i.e., certain segments of the complex may be more easily harvested than others, or they may be more valuable. Consequently, the implicit risk in species complex management is that one or more of the species in the complex may be over or underharvested. Recognition of this risk is important. Alternative management strategies can be imposed to limit the risk including removing a species from a complex and managing as a single species, or reducing the quota of the complex to protect the more vulnerable species. The Plan Team will give close scrutiny to the species composition of the catch from the species complex management units and make recommendations for adjustments as required.

NEW INFORMATION

Since the 1989 Resource Assessment Document was issued (NPFMC 1988), the following new information has become available:

1. Data from the 1989 hydroacoustic survey in Shelikof Strait conducted by the Northwest and Alaska Fisheries Center.
2. Data from the 1989 ADF&G port sampling program.
3. Data from the 1989 ADF&G observer program.

CURRENT STATUS OF STOCKS AND ACCEPTABLE BIOLOGICAL CATCHES

Tables 1-2 provide a summary of the current status of the groundfish stocks, including estimated maximum sustainable yields, catch statistics, the 1989 TACs, and preliminary recommendations for ABCs for 1990. Catch statistics, 1989 TACs and preliminary ABCs are divided among the Gulf of Alaska regulatory areas. These areas are illustrated in Figure 1. Pacific cod, flounders, sablefish, and slope rockfish remain in good condition. The biomass of pollock and demersal shelf rockfish continue to be at low levels. The sum of the preliminary 1990 ABCs is 899,000 mt. For the 1989 fishing year, the sum of the TACs mt for 1990 was 231,966 mt which was equal to the optimum yield (OY) for the entire groundfish complex.

Table 1. Maximum sustainable yields (MSYs), comparisons of acceptable biological catches (ABCs) for 1989 and 1990 (rounded to nearest 100 mt), and catches through August 12, 1989 for groundfish.

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		WYK	5,300	4,400- 6,400	5,319	4,550	
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Pelagic shelf rockfish	Unknown	W	1,000	600- 1,400	96	500
		C	4,800	2,700- 5,800	873	2,400
		E	800	500- 1,000	739	800
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Demersal shelf rockfish (SE Outside district)			Unknown	Unknown	312	420
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Other species	NA		NA	NA	1,560	11,046

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* Shelikof Strait pollock is included within the W/C ABC range.

** "Deep water flatfish" means flathead sole, rex sole, and Dover sole.

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Thornyhead rockfish	98,700	Gulfwide	3,800	Good, decreasing
Other species	NA	Gulfwide	NA	

899,100*

* Summed, using the high-end of the ABC ranges.

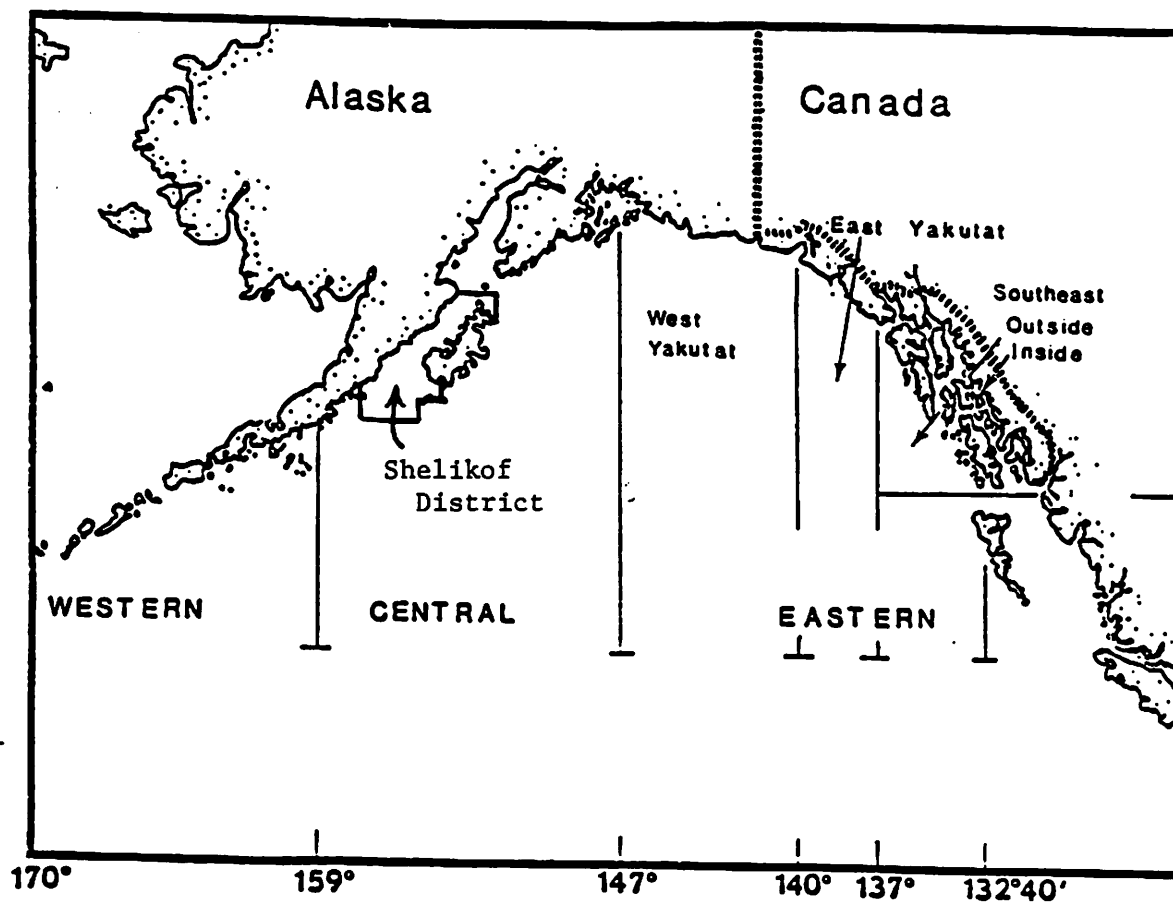


Figure 1. --Regulatory areas of the Gulf of Alaska FMP

PART A. STATUS OF STOCKS AND DETERMINATION OF 1989 ABCs

Pollock - Results from the stock assessment indicate a continued decline in the abundance of pollock in 1989. The continued decline is due to the lack of any strong year class recruiting to the fishery since the 1979 year class. Estimates of the 1989 biomass for ages 3+ to 10+ from 3 versions of the Stock Synthesis model are 197,000; 319,000; and 721,000 mt. A preliminary estimate of age 2+ from the 1989 hydroacoustic survey is 308,000 mt.

The stock assessment showed that given the range of recruitment possibilities, a quota of 10,000 to 65,000 mt could be taken in 1990. At this time only preliminary information is available on the abundance of the 1986-88 year classes. However, it is unlikely that the 1986 year class is average or above average, since year classes of that magnitude are recognized as age 2 and 3 in the hydroacoustic and fishery data.

Considering the uncertainty in the current condition of the stock in the Western/Central Regulatory Area, the Plan Team recommends an ABC range of 10,000 to 37,500 mt, of which no more than 6,250 mt should be allocated to the Shelikof Strait District. The Plan Team has no new information for pollock stocks in the Eastern Gulf of Alaska and suggests the 1990 ABC be set at the 1989 level of 3,400 mt. The Plan Team recommends that a TAC of 10,000 mt be established between 137°30' and 147° longitudes for data collection purposes.

Pacific cod - Pacific cod stock in the Gulf of Alaska are currently healthy. The best estimate of exploitable biomass is 498,044 mt. Although this value is about 11% less than the estimate of last year (558,700 mt), it is primarily due to changes made in stock reduction analysis and a new set of parameters, which in fact produce a better fit to the survey biomass estimates. The recommended ABC, which is calculated as the product of current exploitable biomass and exploitation rate (0.1015, corresponding to $F_{msy} = 0.124$), is 60,569 mt.

Flatfish - Flatfish stocks in the Gulf of Alaska are in good condition. Biomass estimates from 1984 and 1987 show that the resource is stable during this period. ABCs for flatfish stocks were estimated by applying F_{max} and $F_{0.1}$ levels to the 1987 biomass estimates resulting in an ABC for all flatfish species of 722,000 mt. Gulf-wide flatfish catches in 1988 were less than 2 percent of this amount.

The Plan Team recommends that the flatfish complex be separated into three groups with separate ABCs: deepwater flatfish at 171,300 mt; shallow water flatfish at 207,100 mt; and arrowtooth flounder at 343,300 mt. The Plan Team recommends that the ABC be apportioned to the individual management areas as the biomass is distributed.

Sablefish - Preliminary ABC's range from 24,900 to 36,300 mt, based on the F0.1 exploitation rate applied to pessimistic and point estimates of biomass, respectively. These values will be updated by results of sablefish longline surveys underway at this time. Preliminary results of a sablefish survey conducted by ADF&G in inside waters of Southeastern Alaska, indicate a significant decrease in catch per effort from 1988 to 1989.

Slope rockfish - The Plan Team recommends an ABC range of 6,000 to 17,600 mt for the slope rockfish assemblage. An Fmsy exploitation rate derived from a conservative recruitment function and an F=M exploitation rate used to obtain the range, were adjusted due to concern that the proportion of shortraker and roughey rockfish in the harvest is greater than their proportion in the assemblage biomass. Therefore, the assemblage exploitation rates have been adjusted downward accordingly to maintain exploitation rates of these species at the intended rates.

Pelagic shelf rockfish - Fishing rates obtained from POP analyses are applied to biomass estimates of the pelagic shelf rockfish to obtain an ABC range of 3,800 to 8,200 mt.

Demersal shelf rockfish - No new information exists to estimate total biomass, exploitable biomass, or ABC for demersal shelf rockfish in the Southeast Outside District. The State of Alaska has adopted a rockfish management plan that establishes directed fishing quotas for each of the five management areas used by the State of Alaska. This plan also provides for some retention of demersal shelf rockfish in fisheries for other species after the closure of the directed fishery.

A combined quota of 370 mt has been established for the directed fishery in the three State of Alaska management areas that make up the Southeast Outside District. Based on past harvest records, bycatch needs in other fisheries may be as high as 100 mt. The State of Alaska recommends, therefore, that a TAC of 470 mt is recommended for the Southeast Outside District for the 1990 fishing year.

Thornyhead rockfish - Longline and trawl surveys show somewhat conflicting information in thornyhead stock trends. Longline surveys suggest a decline while trawl survey data suggest an increase. However, the 1987 trawl survey provides the best estimate of current exploitable biomass - 98,700 mt. DAP catches continue to increase, with 1989 catches through August 12 being the highest recorded. An ABC of 3,800 mt equal to the lower end of the MSY range is recommended. However, a decline in the longline indices coupled with annual catches below the indicated ABC suggest that the current ABC value may not be sustainable.

Other species - No recommendations were made by the Plan Team for this group. FMP procedures define the reasonable quota for this category to be set at 5% of the sum of the TACs established for the other species categories.

PART B. BYCATCH IN GROUND FISH FISHERIES

Halibut

The plan team has recommended a continued evaluation of both bycatch rates and mortality estimates for incidentally-caught and released halibut from all Gulf of Alaska groundfish fisheries. The team further recommends a schedule of revised bycatch rates and mortality estimates which were derived from new data and analyses by the Alaska Dept. of Fish and Game and the International Pacific Halibut Commission. Table B-1 summarizes the bycatch rates used during the 1989 fishery and Table B-2 lists the proposed rates to be used in the 1990 fishery. Table B-3 shows the current (1989) and suggested (1990) halibut mortality rate assumptions which are used to determine the total mortality of halibut in each groundfish fishery.

Fully Utilized Species

For 1990, bycatch of fully U.S.-utilized species by joint venture or foreign fisheries may be an issue before the Council. At the time of the plan team meeting there were no estimates available for DAP, JVP, and TALFF groundfish requirements for 1990. Relying on the 1989 TAC and apportionments, the team assumes that there will be no joint venture or foreign fisheries in the Gulf of Alaska in 1990 and that all groundfish species managed under this plan are fully U.S.-utilized. Should during the year surpluses of groundfish be made available to joint venture or foreign fisheries, PSC limits of the remaining species will have to be provided. Since these incidentally-caught fish come from outside the TAC and OY, they are treated as a prohibited species and retention is prohibited. For 1990 the team recommends that the bycatch rates shown in Table B-4 be used in estimating joint venture and foreign bycatch requirements following a review of 1983-1987 foreign observer data. In instances where there is no observed bycatch, the team recommends that some nominal PSC (e.g., 10 mt) be provided to assure that the fishery won't close due to an inadvertent bycatch.

The rationale used in determining the joint venture and foreign bycatch rates was presented by gear type in the 1989 Resource Assessment Document.

Table B-1.--Assumed rates used in estimating 1989 Gulf of Alaska halibut bycatch by gear.

	Bottom Trawl - All Areas			Midwater Trawl		
				Western	Central	
DAP	4.50%			0.02%	0.06%	
JVP	5.15%			0.02%	0.06%	
TALFF	2.53%			0.02%	0.06%	

	Pacific Cod Longline			Sablefish Longline		
	Western	Central	Eastern	Western	Central	Eastern
DAP	5.23%	9.15%	9.15%	1.20%	1.20%	1.20%
JVP	5.23%	9.15%	9.15%	1.20%	1.20%	1.20%
TALFF	1.49%	4.97%	4.97%	1.20%	1.20%	1.20%

Source: NMFS Foreign Observer Program Data 1982-1988.
 ADF&G Domestic Observer Program Data 1987-1988.
 NPFMC Pilot Domestic Observer Program Data 1987-1988.

Table B-2. Summary of halibut bycatch rates in domestic groundfish fisheries in the Gulf of Alaska as observed by the Alaska Department of Fish and Game, by gear group and target species, 1987-1989.

Gear Group	Target Species	Bycatch Rate (%)	Appendix # (Attached)
Bottom Trawl	Mixed	4.7	A.1.
	Roundfish, Mixed	5.4	A.2.
	Pollock	5.3	A.3.
	Pacific cod	5.1	A.4.
	Flatfish, Mixed	3.1	A.5.
	Flatfish, Deep	2.6	A.6.
	Flatfish, Shallow	4.6	A.7.
Midwater Trawl	Pollock	0.01	D.1.
Longline	Sablefish	39.8	B.1.
	Pacific cod	22.0	B.2.
	Halibut *	14.3	B.3.
Pot	Pacific cod **	0.4	C.1.

* Halibut bycatch in the target halibut fishery are halibut that are caught but discarded (sub-legal size, damaged by predators, etc.). Data are for 1989 only.

** Pacific cod pot gear data base 1987-1988 only.

Source: Alaska Department of Fish and Game Groundfish Observer Database through August 15, 1989.

Table B-3. Current and suggested 1990 halibut mortality rate assumptions.

	Current	Suggested
Bottom Trawl		
DAP	50%	65% *
JVP	100%	100%
Longline		
DAP	25%	20%
Pot	---	**

* The team will be developing information with which to consider setting a different mortality rate estimate for the catcher/processor segment of the Gulf fleet. At the present time, the 65% rate is derived from the shorebased sector of the fleet.

** Little information is available from which to recommend a halibut mortality rate for pot gear. The team will further evaluate available data, including information from ADF&G, during their November meeting. The team notes that the Council has recommended a regulatory amendment to the Gulf groundfish FMP that prohibits the use of pot gear not rigged to minimize halibut bycatch.

Source: International Pacific Halibut Commission preliminary analyses of halibut discard mortality.

Table B-4.--Estimated Gulf of Alaska bycatch rates for fully utilized species that will be used in managing the 1990 groundfish fisheries.

	<u>Bottom Trawl - All Areas</u>		<u>Midwater Trawl - All Areas</u>		
	<u>Sablefish</u>	<u>All Rockfish</u>	<u>Sablefish</u>	<u>Slope</u>	<u>Pelagic Shelf</u>
JVP	1.99%	4.57%	0.04%	0.09%	0.02%
TALFF	1.99%	4.57%	0.04%	0.09%	0.02%

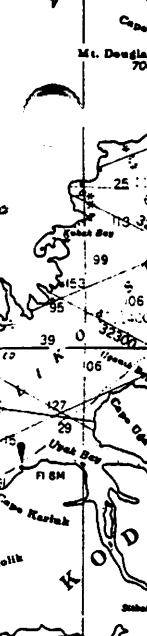
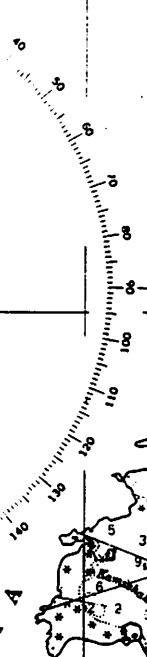
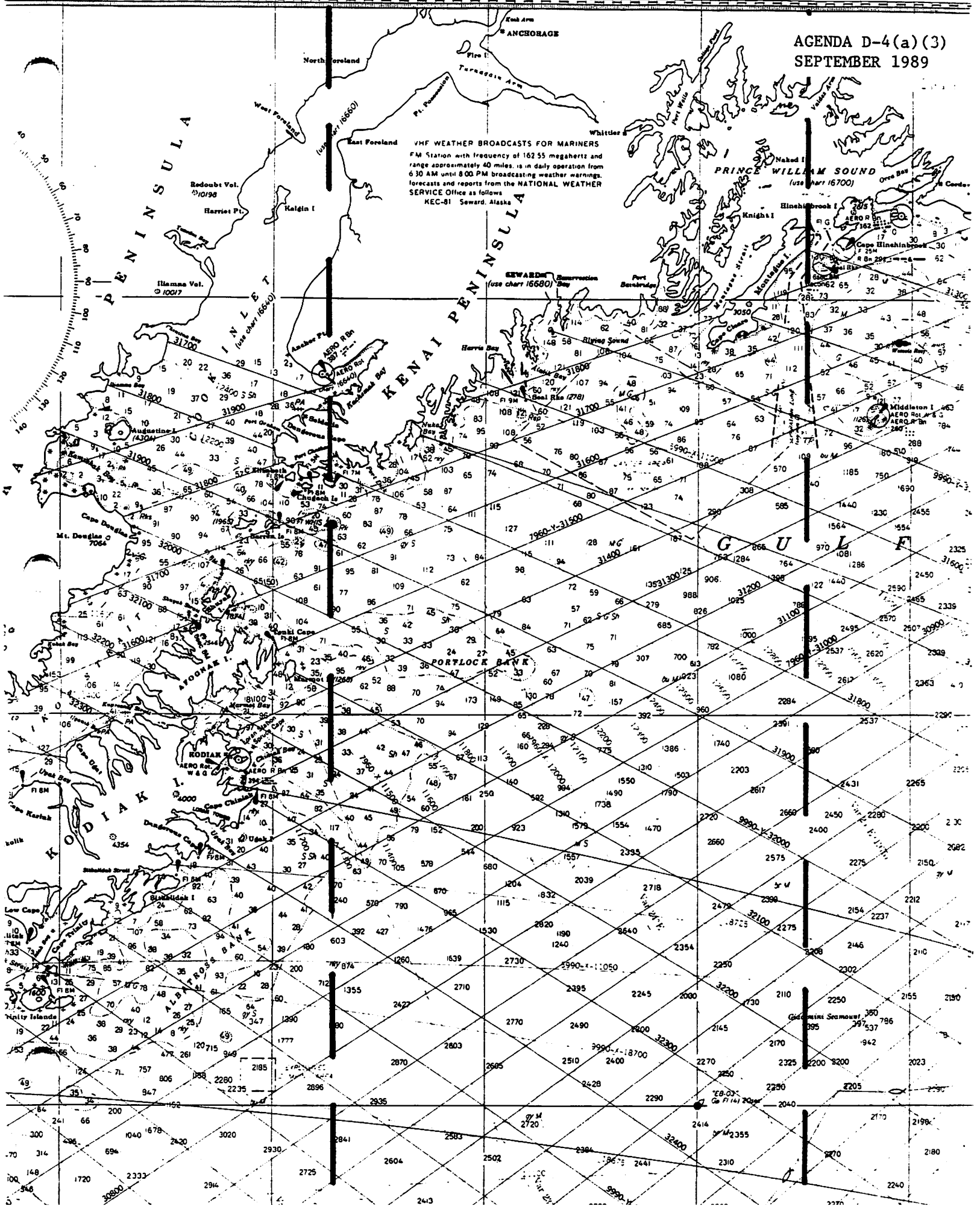
	<u>W. Gulf Pacific Cod Longline</u>		<u>C. Gulf Pacific Cod Longline</u>	
	<u>Sablefish</u>	<u>All Rockfish</u>	<u>Sablefish</u>	<u>All Rockfish</u>
JVP	6.91%	0.39%	8.41%	0.23%
TALFF	0.05%	0.02%	0.01%	0.02%

PART C. ECONOMIC OVERVIEW OF THE FISHERIES

Only domestic (DAP) groundfish fishing was permitted in the Gulf of Alaska during 1989. The most significant economic development in this fishery was the decline in sablefish prices. A 6% increase in the exchange rate contributed to a decline in longline price of 10%, and a drop in trawl price of 16 percent. Chiefly because of this price reduction, exvessel revenue from sablefish is expected by season's end to be \$8 to \$9 million below the DAP high of \$65 million in 1988. Roughly 60%-70% of this loss in revenue will be borne by longline fishermen. If the exchange rate continues to rise, sablefish prices could drop further in 1990. PacFIN data as of August 25, 1989 indicated revenue from rockfish was up \$5.3 million (43%) due to increased landings and prices in the trawl fishery. Revenue from pollock and Pacific cod are slightly higher in 1989 than in 1988, while flatfish revenue is slightly lower. Total DAP groundfish revenue in the Gulf of Alaska for 1989 will likely be lower than in 1988.

AGENDA D-4(a)(3)
SEPTEMBER 1989

VHF WEATHER BROADCASTS FOR MARINERS
FM Station with frequency of 162.55 megahertz and range approximately 40 miles, is in daily operation from 6:30 AM until 8:00 PM broadcasting weather warnings, forecasts and reports from the NATIONAL WEATHER SERVICE Office as follows
KEC-81 Seward, Alaska



Alaska Groundfish Data Bank

September 19, 1989



Clarence Pautzke, Executive Director
North Pacific Fishery Management Council
Anchorage, Alaska

SENT BY FAX

QUARTERLY ALLOCATION OF THE 1990 GULF OF ALASKA POLLOCK QUOTA

For the record, the members of the Alaska Groundfish Data Bank request that the 1990 Central/Western Gulf of Alaska pollock quota be allocated equally among the four quarters of 1990.

We request this action for several reasons:

1. To spread the effort out over time, and, presumably, over more segments of the stock than were fished in 1989;
2. To assist in better data collection. The plan team has noted that the data base is dwindling because of lack of observers and the reduction of the fishery to a narrow window of time and area.
3. To reduce the effort on the spawning pollock. Since the stocks are declining, this seems a prudent conservation measure.
4. To reduce the likelihood of overfishing. We note the spring quota was exceeded in 1989. Slowing down the fishery should assist management in tracking the catch and, quarterly allocations of the quota allow opportunity for adjustment if the quota is exceeded in a preceding quarter.

We also have requested quarterly allocations in our comments on Amendment 14/19, but, want to assure that whatever action the council takes on Amendment 14/19, the issue of quarterly allocations of the Gulf of Alaska pollock quota is also addressed.

We thank the Council for its attention to this matter.

Sincerely,

Chris Blackburn, Executive Director
Alaska Groundfish Data Bank

Table D-5(c). BERING SEA / ALEUTIAN ISLANDS GROUNDFISH: Current 1989 ABC, TAC, DAP, and JVP and 1990 Plan Team ABC recommendations (in metric tons) 1/

Species	Area	1989				1990 Plan Team ABC	1990 Recommendations <i>AP Recomm.</i>			
		ABC	TAC	DAP	JVP		TAC	DAP	JVP	
Pollock	BS	1,340,000	1,313,000	1,045,585	267,415	1,142,000 *	1142000	1142000	0	
	AI	117,900	11,432	11,432	0	149,400	11432	11432	0	
Pacific cod		370,600	226,079	158,613	67,466	209,200 *	209200	146771	62429	
Yellowfin sole		241,000	193,952	21,274	172,678	278,900	193952	21274	172678	
Greenland turbot		20,300	6,800	6,600	200	7,000 *	6800	6600	200	
Arrowtooth flounder		163,700	5,800	5,100	700	134,500 *	5800	5100	700	
Rock sole		171,000	77,148	42,543	34,605	222,500	77148	42543	34605	
Other flatfish		155,900	63,906	8,906	55,000	184,000	63906	8906	55000	
Sablefish	BS	2,800	2,380	2,380	0	2,400 *	2380	2380	0	
	AI	3,400	2,890	2,890	0	6,600	2890	2890	0	
Pacific ocean perch	BS	6,000	4,250	4,250	0	6,300	4250	4250	0	
	AI	16,600	5,100	5,100	0	16,600	5100	5100	0	
Other rockfish	BS	400	340	340	0	500	340	340	0	
	AI	1,100	935	935	0	1,100	935	935	0	
Atka mackerel		21,000	20,285	20,285	0	24,000	20285	20285	0	
Squid		10,000	875	850	25	10,000	875	850	25	
Other species		59,000	15,274	11,274	4,000	59,000	15274	11274	4000	
BS/AI TOTAL		2,700,700	1,950,446	1,348,357	602,089	2,454,000	1762567	1432930	329637	

1/ Figures as of September 15, 1989. TAC sum is less than 2,000,000 mt due to 49,554 mt remaining nonspecific reserves.
 * 1990 Plan Team ABC recommendation less than 1989 ABC.

22-Sep-89

BSA90.D-5(c)

*Obs mts 10-89
Obs mts. sec*