

FINAL

Preliminary TACs and Apportionments for the Bering Sea
and Aleutian Groundfish Fishery in 1987 (all in metric tons).

12-Dec-86
10:30 am

Species	Area	ABC	TAC	Initial TAC	Initial DAP	Final DAP	Initial JVP	Final JVP	DAH	Initial TALFF
Pollock	BS	1,200,000	1,200,000	1,020,000	189,987	189,987	830,013	1,010,013	1,200,000	0
	AI	100,000	88,000	74,800	57,210	57,210	17,590	30,790	88,000	0
Pacific ocean perch	BS	2,850	2,850	2,423	2,423	2,850	0	111	2,961	0
	AI	8,175	8,175	6,949	6,786	6,786	163	163	6,949	0
Rockfish	BS	450	450	383	383	450	0	62	512	0
	AI	1,430	1,430	1,216	1,002	1,002	214	214	1,216	0
Sablefish	BS	3,700	3,700	3,145	3,145	3,700	0	340	4,040	0
	AI	4,000	4,000	3,400	3,317	3,317	83	83	3,400	0
Pacific cod	BSAI	400,000	280,000	238,000	111,767	111,767	94,938	94,938	206,705	31,295
Yellowfin sole	BSAI	187,000	187,000	158,950	100	100	158,850	173,683	173,783	0
Greenland Turbot	BSAI	20,000	20,000	17,000	15,213	15,213	37	37	15,250	1,750
Arrowtooth Flounder	BSAI	30,900	9,795	8,326	830	830	3,363	3,363	4,193	4,133
Other flatfish	BSAI	193,300	148,300	126,055	23,103	23,103	88,472	88,472	111,575	14,480
Atka mackerel	BSAI	30,800	30,800	26,180	250	250	25,930	30,550	30,800	0
Squid	BSAI	10,000	500	425	4	4	48	48	52	373
Other species	BSAI	49,500	15,000	12,750	500	500	10,000	10,000	10,500	2,250
TOTAL		2,242,105	2,000,000	1,700,000	416,020	417,068	1,229,701	1,442,867	1,859,935	54,281

M E M O R A N D U M

TO: Council, AP and SSC Members
FROM: Jim H. Branson
Executive Director
DATE: December 3, 1986
SUBJECT: Bering Sea/Aleutian Islands Groundfish FMP

ACTION REQUIRED

Finalize TACs and DAP, JVP, and TALFF apportionments

BACKGROUND

OY is set by the BSAI FMP as a range of 1.4 - 2.0 million metric tons, and OY is not adjusted each year. Instead, harvest guidelines (i.e. TACs) are established for each species or species complex and the total of these must fall within the OY range. If the total of the TACs falls outside the range they must be adjusted or else OY must be revised by FMP amendment.

A. For species where DAH is less than TAC.

Staff will prepare a computer spreadsheet with your preliminary TAC and apportionment figures. Apportionments are made according to the following procedure:

- (1) Deduct 15% from each species TAC for the reserve;
- (2) Subtract the DAP requirements for each species;
- (3) If any TAC remains, JVP = TAC - (DAP + reserve) or the actual JVP request, whichever is less; and
- (4) If any TAC remains, TALFF = TAC - (reserves + DAH).

Although the reserve must be deducted from TAC prior to apportioning to DAH and TALFF, in the case of the fully U.S. species the reserve may be transferred immediately to DAP or JVP.

At least 50% of the TALFF (if any) will be withheld at the beginning of the year in accordance with the MFCMA. Releases of TALFF and reserves are made periodically throughout the year.

B. For species where DAP or DAH exceeds TAC: Bycatch Allowances.

The 1987 estimated DAH requirements for the following species exceed the Plan Team recommended ABCs:

Bering Sea - POP, Rockfish, and Sablefish
Aleutians - Rockfish, Sablefish, and probably POP
BSAI - Atka mackerel

During your discussions it may become apparent that additional species also fall into this category. You need to determine what if any bycatch allowances to make for TALFF and JVP. In the past either of two approaches has been used in determining bycatch allowances in the Bering Sea: (1) reduce DAP (or JVP) to provide for joint venture and/or foreign bycatch needs, and (2) provide the bycatch needs from the reserve, which has the effect of increasing TAC. If TAC is equal to ABC a cautious decision to exceed ABC must be made.

In the past the team has calculated bycatch requirements using bycatch rates in the various JV and foreign fisheries. JV bycatch allowances have been adjusted inseason as necessary (by NMFS) to prevent closures. The calculated TALFFS have not been approved by the Council because foreign nations have complained of operational problems. Very small bycatch TALFFs make it difficult for foreign fisheries to apportion enough fish to each vessel. This may not be as difficult this year as in the past due to the greatly reduced potential for TALFF. On the other hand, establishing zero TALFFs would preclude all foreign fisheries which are likely to take any of that species.

AN ASSESSMENT OF CURRENT WORLD COD RESOURCES
AND MARKETS, WITH AN EMPHASIS ON
JAPAN AND THE UNITED STATES

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and

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December 3, 1986

INTRODUCTION

At the September 1986 meeting of the North Pacific Fishery Management Council, a request was made by representatives of the Japanese Longline Association that allocation of additional Pacific cod resource be made to TALFF. While the request was denied by the Council, expectations were that the issue of Pacific cod allocations, in the 1987 fishery, would reemerge at the December 1986 Council meeting. In an effort to provide the Council with background material upon which to consider this issue, the following analysis of the worldwide status of trade in cod and cod-like products, and more focused examination of the U.S. and Japanese markets, was conducted.

THE COD RESOURCE

Recent trends in world production of true cod, as reported by FAO, suggest that many North Atlantic stocks are in poor condition, primarily as a result of over exploitation. Cod production among the major fishing nations of the North Atlantic has been on the decline, and expectations are that these production shortfalls will persist, at least with respect to many of the major Atlantic stocks. Closer to home, total U.S. commercial landings of Atlantic cod in 1985, the latest year for which complete data are available, were approximately 37,500 mt. This catch was down by nearly 15 per cent from 1984 landings, and more than 22 per cent below the five year average harvest level, 1980-1984, (Fisheries of the United States, 1985, NMFS, April, 1986).

The principal Atlantic cod stocks in the U.S. EEZ, found off the New England coast, are in a serious state of decline, according to sources in the Northeast Region, NMFS. In these fisheries, the "catch per unit effort of Atlantic cod is at historic low levels", domestic commercial landings of cod in the Northeast have steadily declined over the last five to six years, and prospects for the near term are not encouraging, (Personal Communication, Pete Colosi, Northeast Region, NMFS).

This situation is in marked contrast to the condition of Pacific cod stocks, particularly those found off the coast of Alaska, (Table 1). Recent INPFC Status of Stock documents have presented estimates of Acceptable Biological Catches (ABC) for Pacific cod, for the Bering Sea - Aleutian Islands (BS/AI) management areas, which reflect increasing surpluses of this species, over the period 1981 through 1985. Beginning with an estimated 1981 ABC of 168,000 mt, the projected Pacific cod surplus increased to more than 347,000 mt in 1985. In 1986, the model used to calculate ABC was modified. The resulting ABC for that year was estimated to be 249,300 mt. For 1987, the model was changed still again, resulting in an estimated EY for Pacific cod in the BS/AI region. This 1987 figure has been established at 400,400 mt. Some part of the ABC/EY estimate is a function of the changes made in the model, and some portion the change in the physical biomass itself.

In addition to the BS/AI stock assessments, "mean yield estimates" have been made for Pacific cod stocks in the Gulf of Alaska, by NWAFC scientists. These estimates have been developed from Gulf of Alaska triennial groundfish trawl survey data and, because of the relative infrequency of these surveys, are expressed as ranges. Over the period 1979 through 1981 the surplus was estimated at 88,000 - 177,000 mt. Between 1982 and 1985 the range was 95,000 - 190,000 mt. The 1985 estimated range was 87,079 - 154,195 mt. In consultations with NWAFC scientists,

a single annual surplus figure of 115,025 mt for the period 1981 through 1984 was assumed. For 1985 and thereafter a mean yield of 125,000 mt for the Gulf was determined to be appropriate. The sum of the Bering Sea-Aleutian Islands ABC/EY estimate and the Gulf "mean yield estimate" suggests that the total harvestable surplus of Pacific cod in the U.S. EEZ off Alaska has increased from a 1981 level of approximately 283,025 mt to more than 472,000 mt in 1985. The projected 1987 "surplus", as defined here, is estimated to be in excess of 525,000 mt.

Acceptable Biological Catch has been interpreted to be equivalent to harvestable surplus for purposes of this paper. Historically, OY/TAC's have been set below ABC's. One reason for this has been to reduce incidental bycatches of prohibited species. Therefore, the difference between ABC and DAH could overstate the actual surplus available to foreign fishermen.

Table 1. Estimated Harvestable Surplus of Pacific Cod, 1981-1987

	(mt)		
	Bering Sea/ Aleutian Islands	Gulf of Alaska	Total
1981	168,000	115,025	283,025
1982	168,000	115,025	283,025
1983	298,200	115,025	413,225
1984	291,300	115,025	406,325
1985	347,400	125,000	472,400
1986	249,300*	125,000	374,300
1987**	400,400	125,000	525,400

* In the 1986 calculation, the model used to derive ABC was changed, resulting in a lower figure than would have derived from the original model.

** Preliminary estimate, INPFC Status of Stocks Doc., 1986.

Source: Dr. Loh-Lee Low, Dr. Grant Thompson, Mr. Allen Shimada, NWAFC, NMFS.

The OY/TAC for Pacific cod is apportioned among domestic annual processing (DAP), which is available for harvest by U.S. vessels for delivery to domestic processors; joint venture processing (JVP), which is available for harvest by U.S. vessels for delivery to foreign processors; and total allowable level of foreign fishing (TALFF), which is available for foreign vessels. The sum of DAP and JVP equals domestic annual harvest (DAH).

Over the period 1981 through 1986, the Pacific cod OY/TAC, for all areas under the jurisdiction of the North Pacific Fishery Management Council (NPFMC or Council), was increased by the Council from 148,700 mt to 304,000 mt, with only a single year in which the aggregate OY/TAC declined, that being 1982 when it was set at 138,700 mt, (Table 2). During this period, the commercial fishery for Pacific cod evolved from a foreign dominated fishery to an increasingly domestic industry.

Table 2. Pacific Cod OY/TAC (mt), By Areas.

	<u>BS/AI</u>	<u>Gulf</u>	<u>Total</u>
1981	78,700	70,000	148,700
1982	78,700	60,000	138,700
1983	120,000	60,000	180,000
1984	210,000	60,000	270,000
1985	217,310	60,000	277,310
1986	229,000	75,000	304,000

Source: Janet Smoker, Alaska Region, NMFS.

For example, in 1981 Total Allowable Foreign Fishing (TALFF) accounted for 75.2 per cent of the total cod harvest taken from the EEZ off Alaska, (Table 3). By 1985, TALFF accounted for less than 42 per cent of the total cod harvest. Preliminary data, through October, indicate that TALFF represented only about 26.5 per cent of the total Pacific cod catch, to that point, in 1986. Thus, for the last complete year, Domestic Annual Harvest (DAH) accounted for just over 58 per cent of the total Pacific cod harvest from these waters, and through October 1986, over 73 per cent of total cod catch.

DAP as a proportion of DAH, for this species, has fluctuated over the period 1981 through late 1986, but has been on the decline since its high of 73.3 per cent in 1983. In 1985 DAP had dropped to 52.7 per cent of DAH for Pacific cod, and through October 1986, DAP had fallen to 36.7 per cent of DAH, for this species. Over the period 1981 through 1985 DAP represented between 15.4 per cent and 34.4 per cent of the total Pacific cod harvest, with its peak share occurring in 1983. As a proportion of ABC, DAP increased from 5.4 per cent in 1981 to 10.5 per cent in 1985, but never accounted for more than 11.2 per cent of the ABC. Figure 1 depicts these relationships.

Therefore, despite the growth, both in the "Domestic Harvest", and in the "Total" Pacific cod catch, the proportion of Total Catch to Acceptable Biological Catch, represented only 34.5 per cent, on average, of the 1981 through 1986 surplus. Expressed another way, approximately two-thirds of the available harvestable surplus of Pacific cod present in the Gulf and BS/AI management areas, during this period, has not been harvested.

Cod in the North Pacific and Bering Sea EEZ

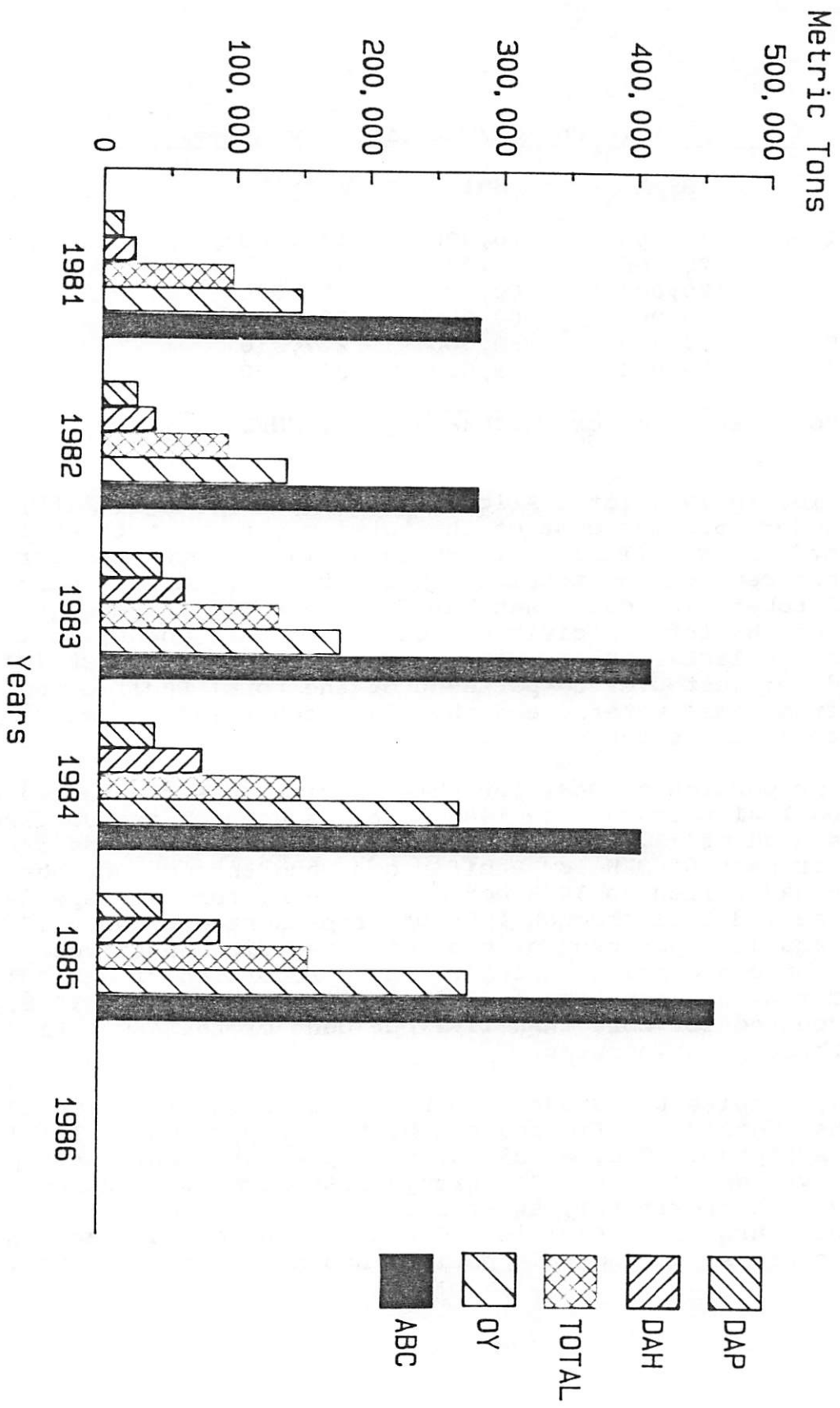


Fig. 1

Table 3. Proportional Pacific Cod Catch Data, 1981 - 1985.

	<u>DAP</u> <u>DAH</u>	<u>DAP</u> <u>TOTAL</u>	<u>DAP</u> <u>ABC</u>	<u>TOTAL</u> <u>ABC</u>	<u>TALFF</u> <u>TOTAL</u>	<u>TALFF</u> <u>ABC</u>
1981 -	62.2%	15.4%	5.4%	34.8%	75.2%	26.2%
1982 -	66.5%	28.3%	9.6%	33.9%	57.5%	19.5%
1983 -	73.3%	34.4%	11.2%	32.5%	53.1%	17.3%
1984 -	54.2%	27.6%	10.3%	37.3%	49.0%	18.3%
1985 -	52.7%	30.6%	10.5%	34.2%	41.9%	14.3%
1986*-	36.7%	27.0%	10.1%	37.3%	26.5%	9.9%

The Proportion of "Available" Cod Biomass Unharvested

1981 -	65.2%	1983 -	67.5%	1985 -	65.8%
1982 -	66.1%	1984 -	62.7%	1986*-	62.7%

"Available" implies estimated physical harvestable surplus.

* - Preliminary data through Oct. 1986, PACFIN Report #119.

- To the extent that OY/TAC's were less than ABC's, for bycatch conservation reasons, the ratios based on OY/TAC instead of ABC would necessarily be higher, although still well below 100%. For example, the ratio of Total Catch to OY/TAC in 1985, the latest complete data year, was 57.1%.

Source: INPFC Status of Stocks Doc., NWAFC, 1986; and PACFIN Landed Catch Statistics, Nov. 17, 1986.

The U.S. Cod Market

The United States is the world's largest importer of frozen processed groundfish products. According to a recent report by the NWAFC, NMFS, U.S. groundfish imports account for approximately 70 per cent of the total world volume of trade in these commodities, (Dae Kyum Kim, NWAFC, 1985). Traditionally, U.S. domestic consumer demand for cod, and other close substitute white fish fillets and blocks, has been almost exclusively supplied by imported product, except for a relatively small fresh fillet market. In 1984, for example, upwards of 99 per cent of the block product, and over 80 per cent of the white fish fillets, were supplied by imports.

Principal amongst the nations supplying the U.S. groundfish import market has been Canada. With respect to cod products, Canada has accounted for as much as 62 per cent of all imports into the U.S., over the period 1979 through 1986; averaging more than 57 per cent during this eight year period. Canada has supplied as much as 253.4 million pounds of cod product to the U.S. at its peak in 1984, (Table 4). The next largest source of supply has been Iceland, accounting for a maximum of 31 per cent of all U.S. cod imports in 1980, while averaging just over 14.5 per cent for the period 1979 through 1986. Imports of Icelandic cod products ranged from a high of 115.8 million pounds in 1979, to just over 52.3 million pounds in 1986, through August. The remaining 16 to 28 per cent of the U.S. import market was supplied by more than twelve other nations, (Figure 2).

Japan has historically been among those nations exporting cod to the U.S. However, the amounts have been relatively small and diminishing since 1979, and some of the product has included highly processed or specialty items such as whole pickled, salted, or smoked cod. As a percentage of total U.S. imports of all cod products, Japan has accounted for between just under 3 per cent in 1979 and less than .5 per cent in 1986. With respect to Japanese exports of cod fillets to the U.S., as a per cent of total U.S. cod fillet imports, the figures have ranged from 2.5 per cent in 1979 to a peak of 3.7 per cent in 1982, to less than 1 per cent in 1986. By weight, 1986 cod fillet imports from Japan were 1.25 million pounds, of a total U.S. fillet import of 130.98 million pounds, (Table 5 and Figure 3). In the case of the importation of cod blocks, the total U.S. purchases in 1986 were approximately 138.47 million pounds, through August. Canada accounted for 70.25 million pounds, Iceland 29.93 million pounds, and Japan 210.61 thousand pounds, or 51%, 15%, and .15%, respectively, (Table 6 and Figure 4).

Table 4. U.S. Imports of Cod* (all product categories)
[pounds]

YEAR	JAPAN	ICELAND	CANADA	TOTAL
1979	10,993,865	115,782,075	182,405,145	384,228,622
1980	6,256,714	103,131,736	173,862,258	330,845,844
1981	7,893,837	82,252,925	205,769,248	363,391,055
1982	7,500,255	64,853,919	225,160,966	370,724,285
1983	6,723,482	66,672,592	248,278,458	433,511,475
1984	3,901,689	67,140,950	253,384,022	424,862,250
1985	3,277,157	84,350,041	246,480,916	421,068,101
1986**	1,526,029	52,369,649	194,031,353	312,310,136

* - U.S. import categories included may contain unknown volumes of other cod-like species. (See Appendix for list of categories)

** - Preliminary data through August.

Source: National Marine Fisheries Service,
Office of Data and Information Management,
Washington, D.C.

U.S. Imports of Cod, (all product categories)

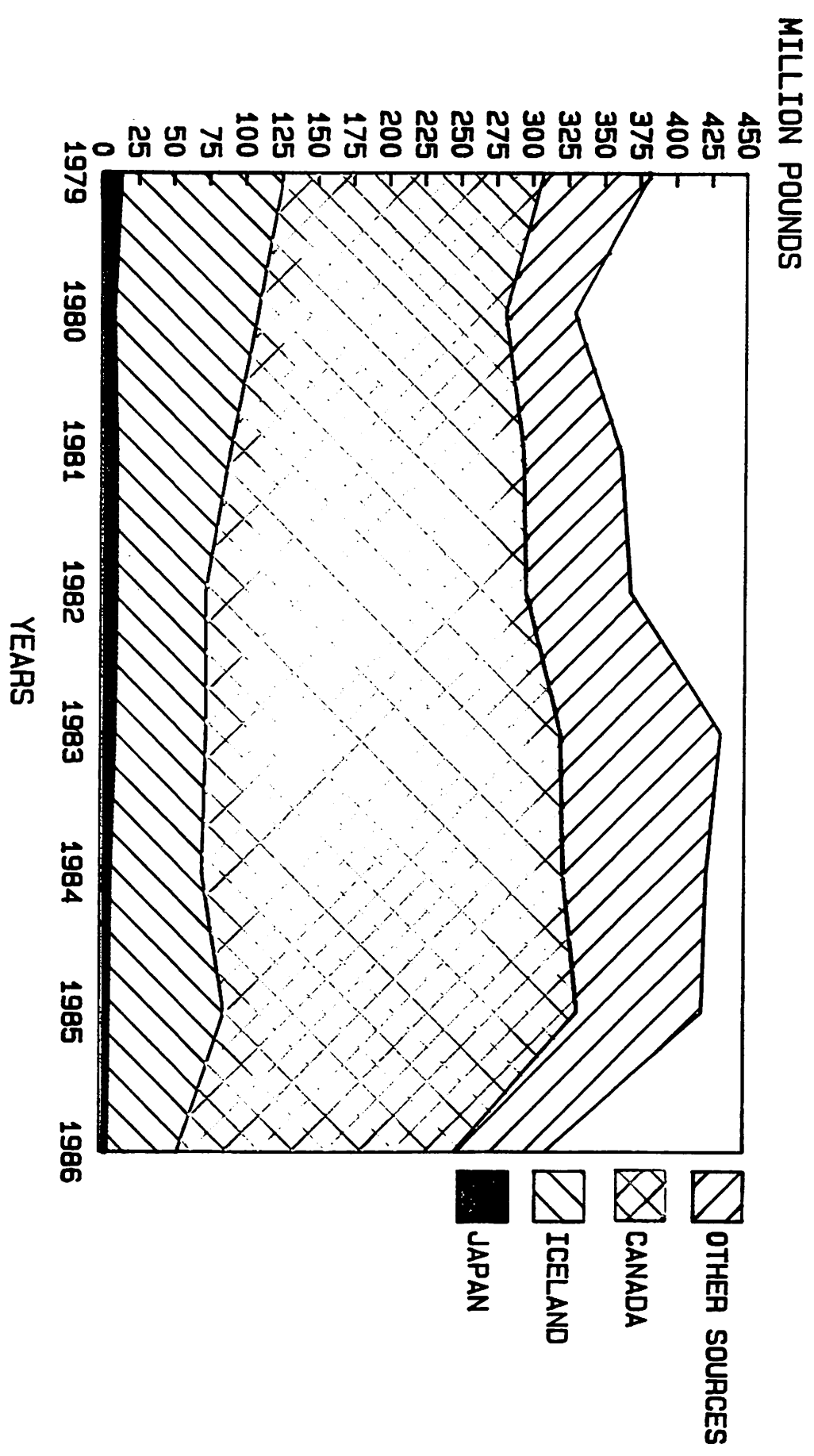


Fig. 2

Table 5. U.S. Imports of Cod* Fillets
[pounds]

YEAR	JAPAN	ICELAND	CANADA	TOTAL
1979	3,564,777	73,202,748	50,813,799	144,657,542
1980	2,153,377	65,460,847	50,601,080	131,411,491
1981	3,466,545	56,186,049	77,126,119	150,222,972
1982	6,283,812	44,070,268	98,564,945	169,045,040
1983	4,586,744	42,903,026	104,082,898	183,268,185
1984	2,561,086	44,476,397	118,340,148	190,033,994
1985	2,399,880	49,356,160	108,929,737	186,914,459
1986**	1,248,011	31,204,914	84,078,836	130,978,262

* - U.S. import categories included may contain unknown quantities of other cod-like species. (See Appendix for list of categories)

** - Preliminary data through August.

Source: National Marine Fisheries Service,
Office of Data and Information Management,
Washington, D.C.

U.S. Imports of Cod Fillets

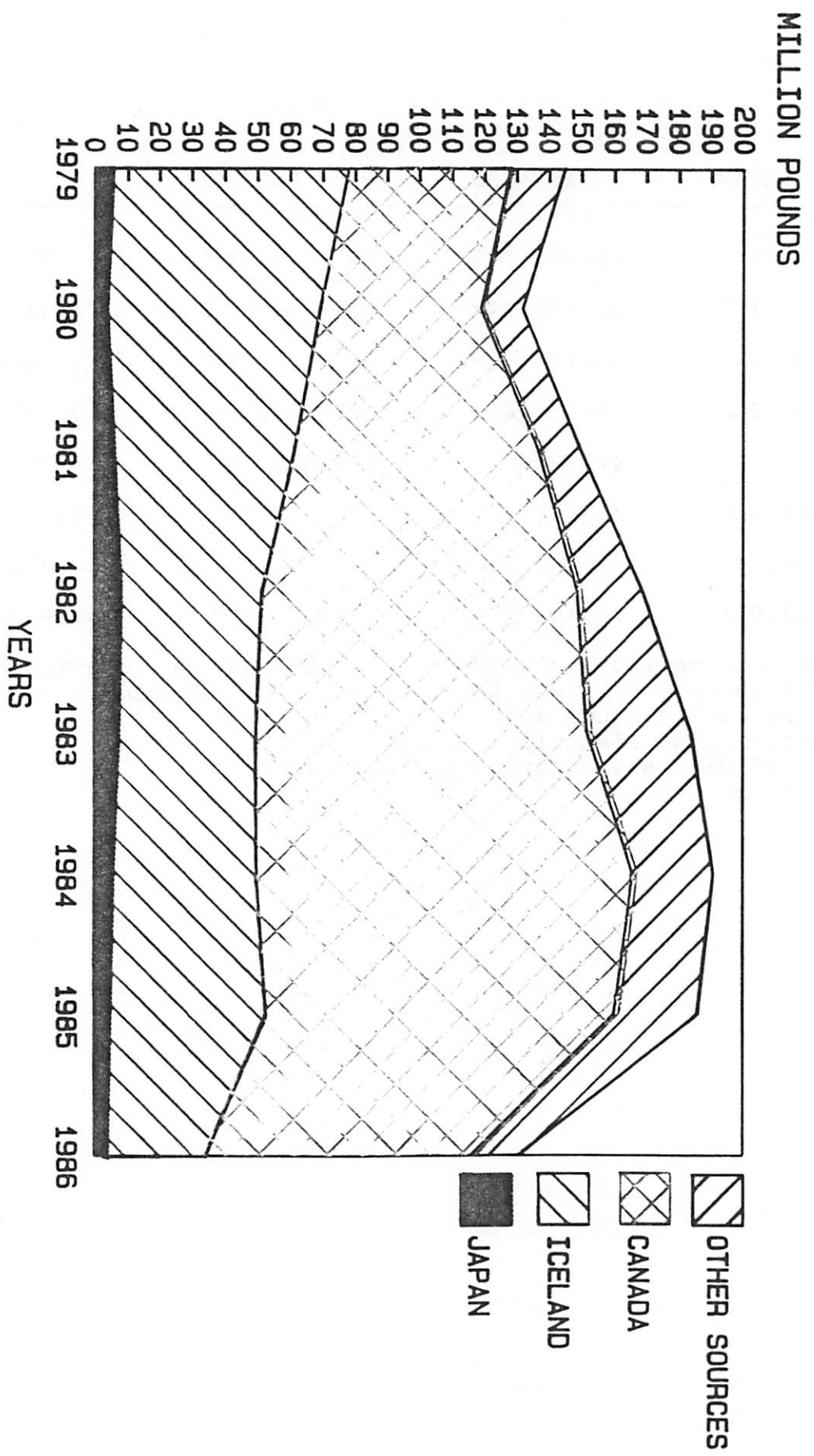


Fig. 3

Table 6. U.S. Imports of Cod Blocks over 10 lbs.
[pounds]

YEAR	JAPAN	ICELAND	CANADA	TOTAL
1979	7,414,230	42,454,112	88,875,284	192,953,567
1980	4,092,492	37,623,952	85,580,005	160,418,373
1981	4,395,465	25,980,400	75,191,675	157,919,429
1982	1,199,181	20,696,452	75,912,969	149,091,558
1983	1,990,579	23,716,423	94,086,138	197,978,775
1984	985,014	25,477,817	69,851,619	165,991,562
1985	487,938	34,648,264	73,527,315	164,457,510
1986*	210,614	20,929,143	70,254,912	138,468,637

* - Preliminary data through August.
Source: National Marine Fisheries Service,
Office of Data and Information Management,
Washington, D.C.

U.S. Imports of Cod Blocks over 10 lb.

MILLION POUNDS

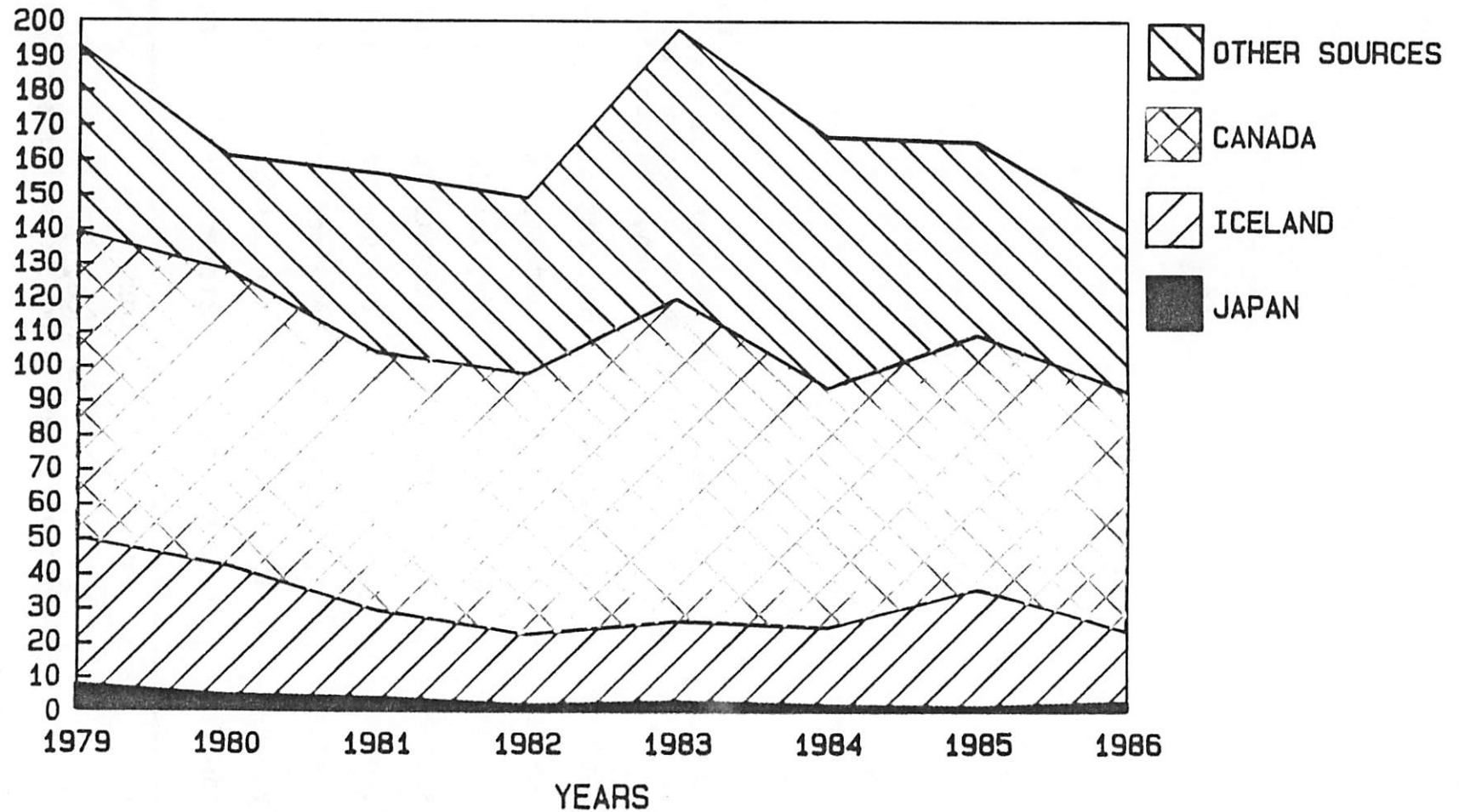


Fig. 4

Focusing on the U.S. market itself, total imports of all cod products had shown a relatively steady upward growth through the early 1980's, after a decline between 1979 and 1980, (Figure 5). Total quantity was on the order of 331 million to 433 million pounds during this period. Since 1983, cod imports of "all products", as a category, have shown a steady decline, at least through 1985. This decline, however, does not appear to be associated with a reduction in U.S. domestic demand for these products. Rather, it is a reflection of diminishing supplies from traditional source nations, and growing competition i.e., increasing demand, for cod products by other regions of the world.

This hypothesis is supported by information from several independent sources. For example, U.S. import data for 1985 show a precipitous decline in major cod commodity imports, (Figure 6). While 1986 data are incomplete, they do show a continuation of this trend during the first half of this year. When compared to the first seven months of 1985, U.S. imports of frozen cod fillets were down nearly 21 per cent, while cod blocks were off by 11 per cent, for the same period in 1986.

Industry trade journals and newsletters, which follow the cod fillet and block markets, indicate that, worldwide, production of cod is significantly down in 1986 relative to long term production averages. As noted earlier, this follows a series of five to seven consecutive years of steady decline in production in the principal Atlantic cod fisheries.

Cold storage holdings worldwide of cod fillets and blocks are at or near record low levels, with no immediate prospects for improvement reported, according to these same sources. Virtually all European markets are experiencing extremely short supplies of cod fillets and blocks, record high prices, and strong consumer demand. U.S. inventories are similarly depressed, indicating probable further tightening of product supplies and upward price pressure. U.S. Department of Commerce, NOAA, NMFS, Current Fisheries Statistics No. 8371, Frozen Fishery Products, September 1986 [Preliminary], reports that domestic cod block inventories were up 20 per cent in September, 1986, over the same period in 1985. However, holdings declined by 27 per cent between August, 1986 and September, 1986. Cod fillet cold storage holdings in the U.S. were down 72 per cent from a year ago, while the one month decline between August, 1986 and September, 1986, was 34 per cent.

The result of these conditions has been a significant reduction in product availability to the U.S. consumer. This has created what one industry analyst recently described as the worst seafood shortage in anyone's memory, and one which could become a "disaster" by the Spring of 1987. Domestic retail prices for cod, as well as for many close substitutes like pollock, flatfish, etc., have reached all time record heights, with no signs of subsiding, (Figure 7). This nominal retail price series for the U.S. cod market was obtained from the NMFS Operation Price Watch program and extends only through December, 1985.

U.S. Imports of Cod, (all product categories)

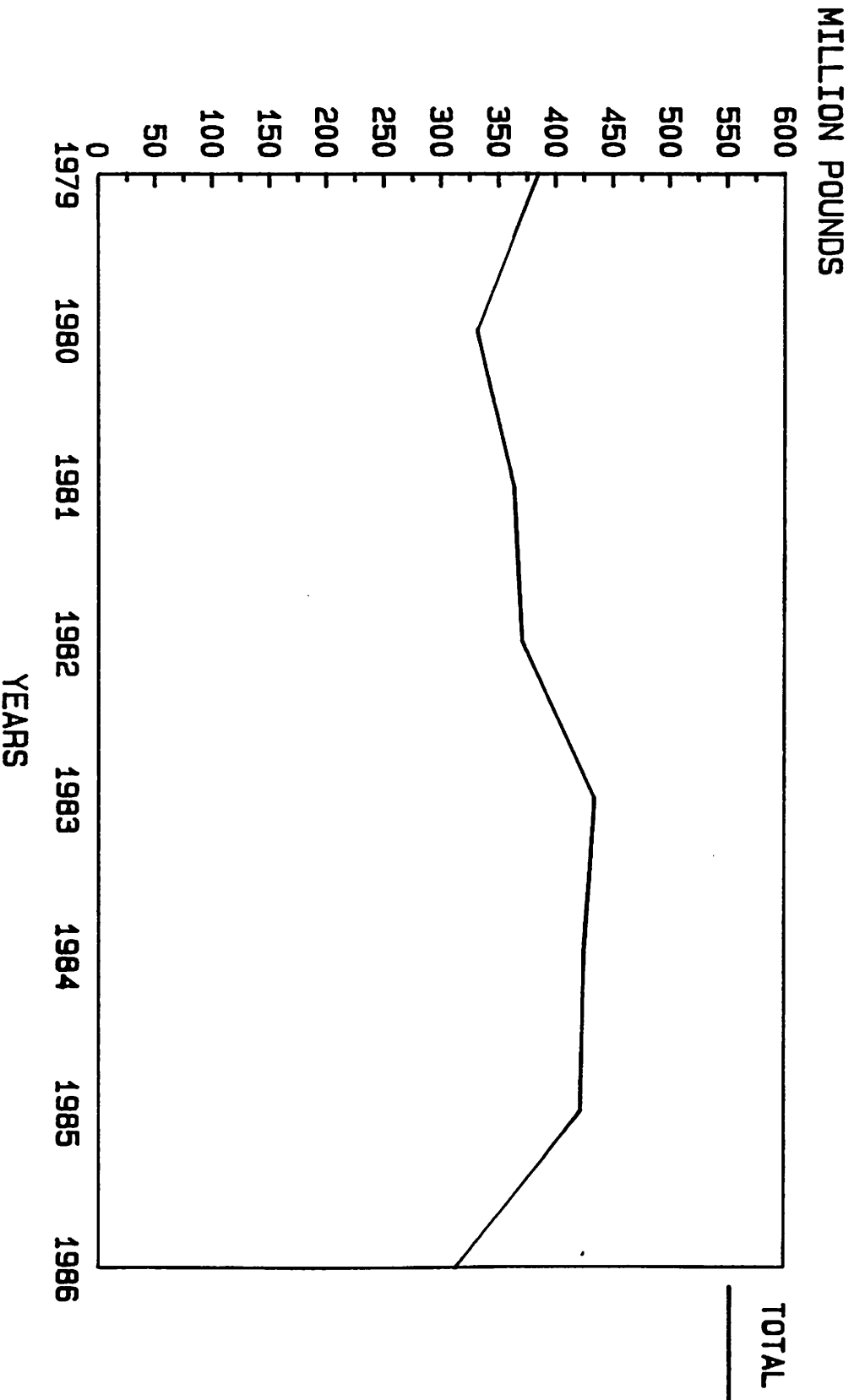


Fig. 5

U.S. Imports of Cod, Fillets and Blocks

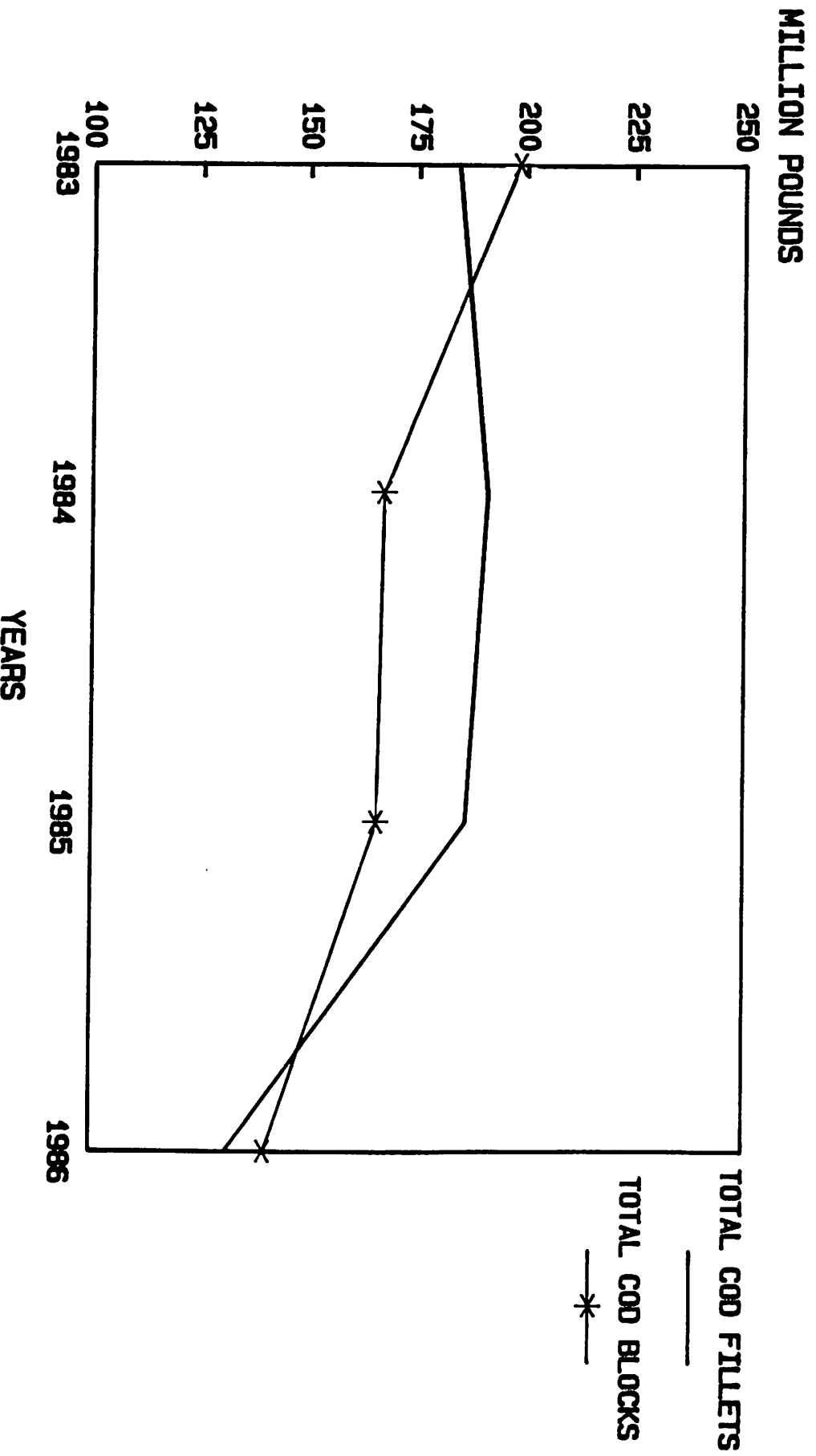


Fig. 6

COD FILLET RETAIL PRICES, 1973 - 1985

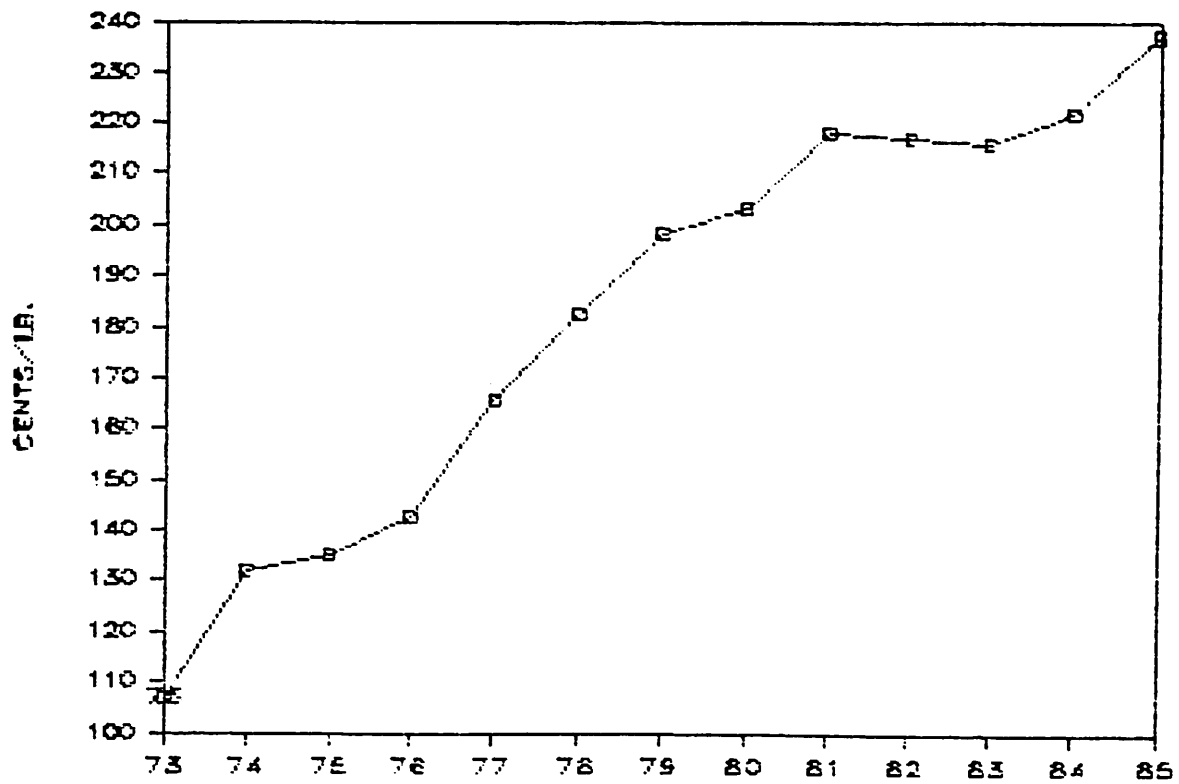


Figure 7.

The U.S. retail price trend for the months July through December 1985, are presented in Figure 8. Information obtained from industry trade sources confirms that the upward trend has actually accelerated through November, 1986. Wholesale prices for cod block and minced cod block demonstrate the same dramatic market trend, (Figure 9).

In the short term, these increased prices will result in gains in gross revenues by all suppliers of cod and cod-like products. There may even be short term improvements in net revenues to some firms.

The predicted "disaster" as a result of continued short supply and associated pressure on price, could, from the standpoint of the domestic fishery, come in the form of developing consumer price resistance and some reversal of the positive market trend toward substitution of fish, particularly groundfish, for beef, pork, and poultry in the American diet. These recent gains in the marketplace, if lost, could be difficult to reestablish. The implications of a market share loss of this kind could be significant for the developing U.S. domestic groundfish industry.

Alternatively, or simultaneously, supply shortages and record prices could invite new entrants and unfamiliar product forms into the U.S. market. These new sources of supply could gain a significant share of the U.S. market, replacing to some degree, traditional codfish products and reducing marketing options for U.S. Pacific cod and Alaska pollock producers.

There seems little doubt that the current U.S. domestic market is capable of absorbing significant amounts of cod fillet and block product, (Table 7). In 1985, the last year for which complete data are available, the U.S. imported more than 421 million pounds of groundfish fillets and blocks. In live weight equivalent, that represents over 600 thousand metric tons of landings, (Figure 10). It is also apparent that, at least initially, the U.S. market will absorb this product at historically high prices. Certainly, competition among European, Asian, and U.S. markets for the available product will sustain the prevailing "above average" prices in the near term. A survey of current world market prices, conducted by examining recent industry trade publications, reveals that U.S. domestic prices for cod fillets and blocks are higher, in most cases significantly higher, than those of either Asian or European markets, suggesting that the U.S. remains the most attractive, i.e., potentially profitable, market for suppliers of these codfish product categories.

Despite these facts, the reported uneconomically low CPUE associated with cod trawling, after spawning concentrations disperse, as well as the more profitable return associated with alternative groundfish species, e.g., sablefish, rockfish, etc., would seem to suggest that, at least for the short term, there

COD FILLET RETAIL PRICE

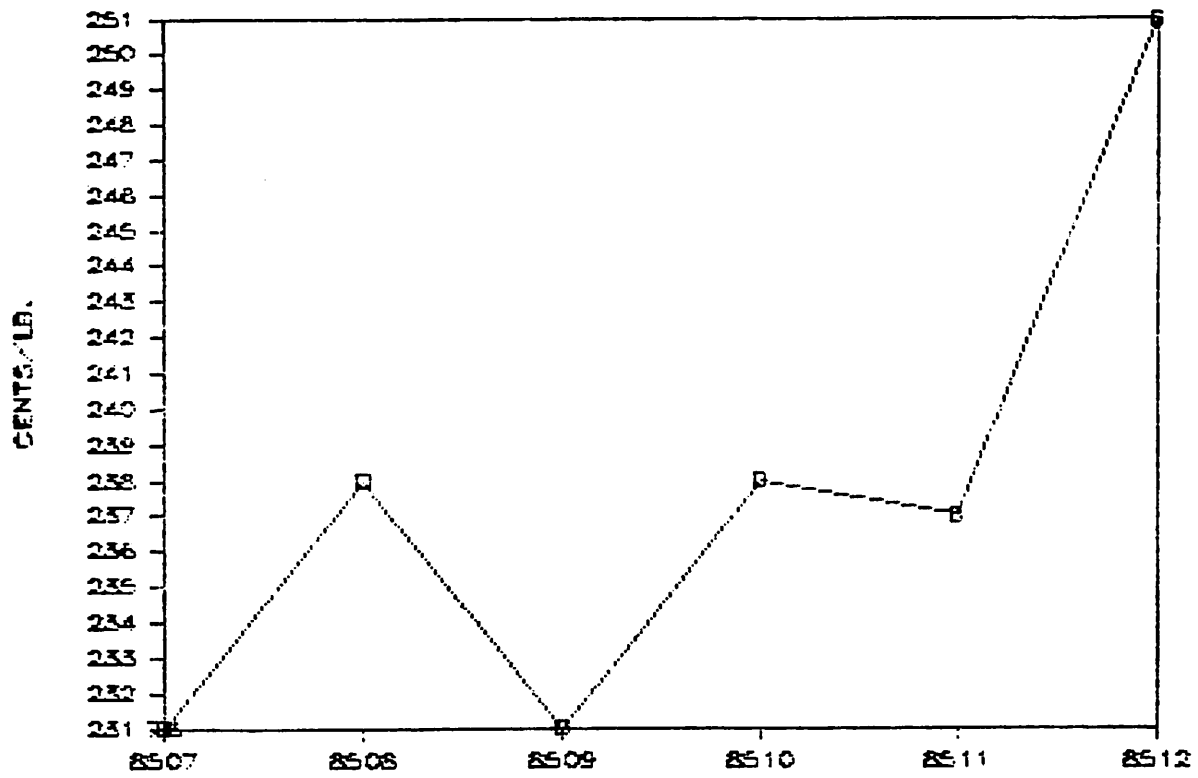
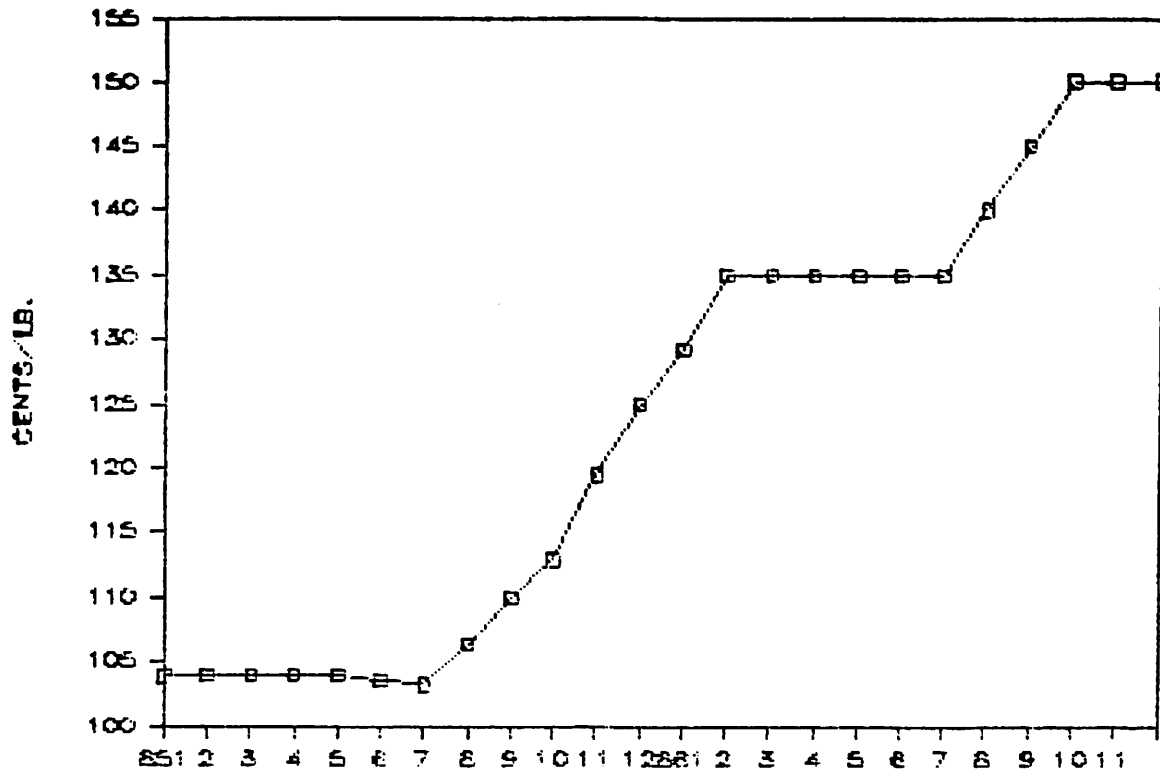


Figure 8.

COD BLOCK WHSLE PRICE



COD MINCED BLK. WHSLE PRICE

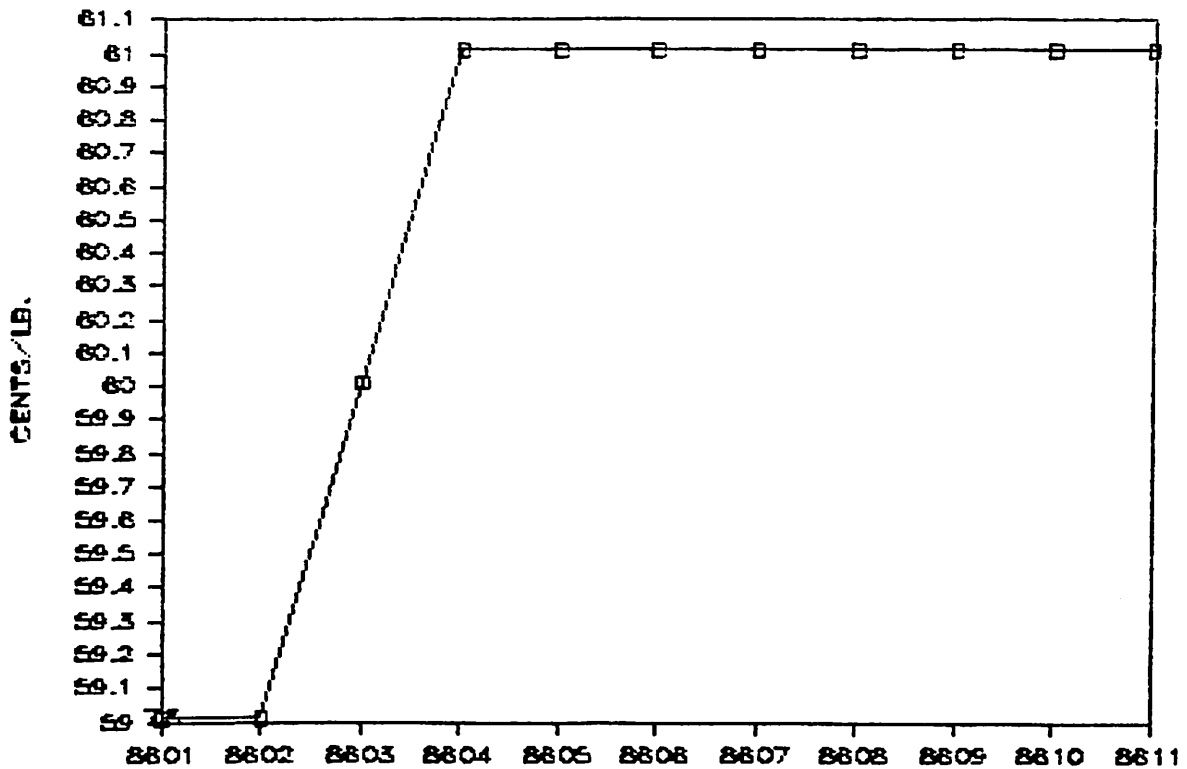


Figure 9.

Table 7. U.S. Imports of Cod
[pounds]

YEAR	PRODUCT WT	LIVE WT
1979	384,228,622	1,293,187,316
1980	330,845,844	1,109,988,920
1981	363,391,055	1,210,605,217
1982	370,724,285	1,220,503,443
1983	433,511,475	1,430,526,798
1984	424,862,250	1,358,684,260
1985	421,068,101	1,337,407,575
1986*	312,310,136	1,005,827,307

* - Preliminary data through August.

Source: National Marine Fisheries Service,
Office of Data and Information Management,
Washington, D.C.

U.S. Imports of Cod

MILLION POUNDS

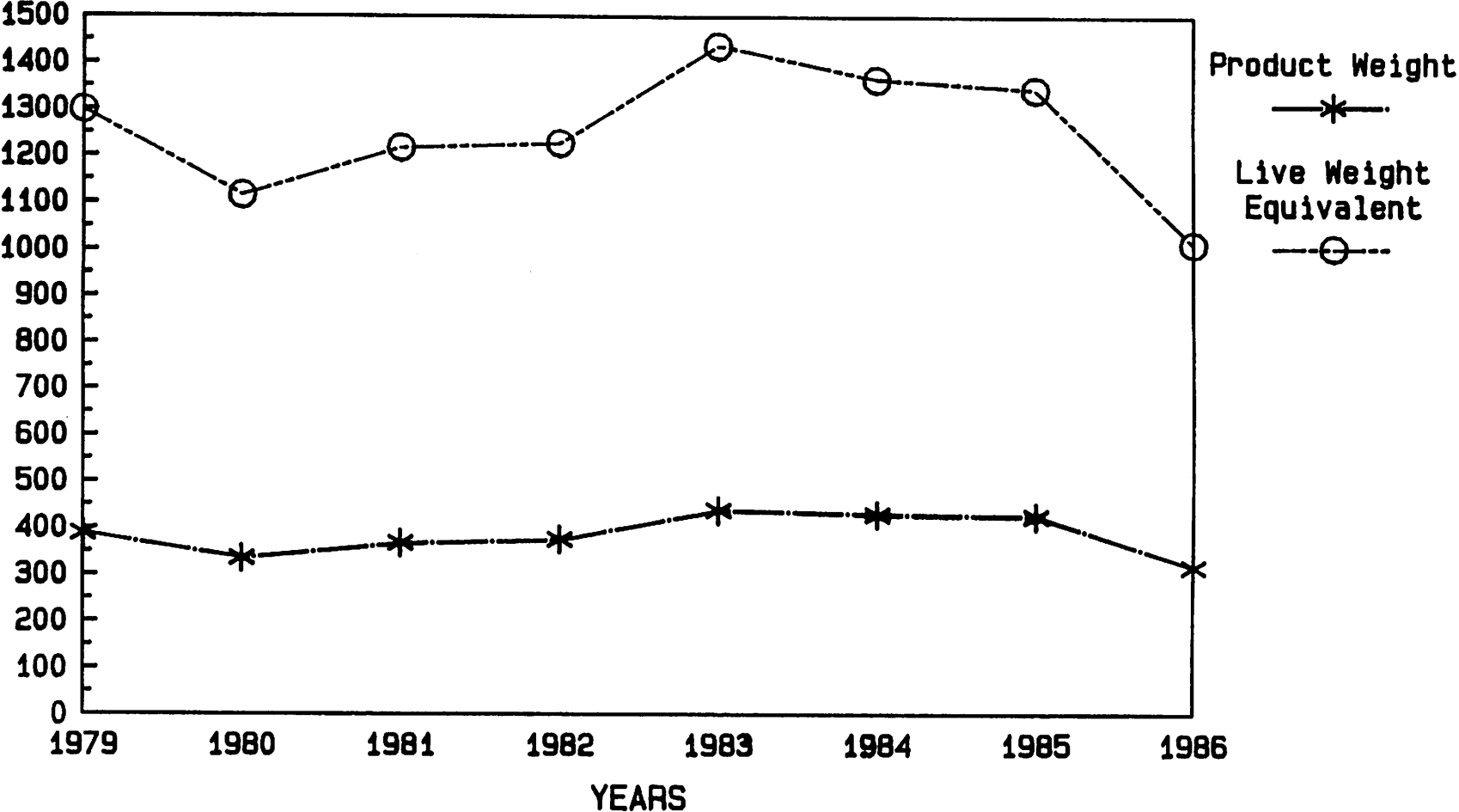


Fig. 10

probably will not exist the effective capacity within the U.S. groundfish fleet to harvest a substantial portion of the projected 525,400 metric ton 1987 Pacific cod surplus.

Reports of increased targeting of Pacific cod by domestic longliners, and the entry of additional U.S. factory trawlers, indicate that total U.S. landings of this species will expand in the immediate future. New DAP operations have recently emerged and others are expected in 1987. Among these new entrants are several firms with the expressed intent of supplying European salt cod markets. Domestic potential will, nonetheless, likely remain below the levels needed to fully utilize a majority of the available Pacific cod surplus. Limitations on processing capacity, necessary to produce the principal product forms demanded by U.S. consumers, may also constrain DAP operators, particularly from supplying the apparently lucrative domestic fillet and block market, at least in the immediate future, (Personal communication, Ted Evans, Alaska Factory Trawlers Assoc., Nov. 1986). Results of the recent NMFS DAP groundfish processor's survey, for operating year 1987, suggest that total "anticipated" DAP need could reach 125,500 mt. Projected 1986 DAP cod production will be approximately 51,500 mt. Thus, the 1987 DAP level, as reported by the domestic industry itself, represents a 144 per cent increase in cod production over the estimated actual 1986 DAP output.

The rate of growth of the DAP cod fishery will naturally be affected by the price domestic fishermen can obtain for their products. The following section provides information on the Japanese market, and its potential as an outlet for DAP headed and gutted product.

THE JAPANESE MARKET

Japan is the largest single importer of U.S. fisheries products in the world. In 1985, Japan imported more than 421 million pounds of edible fisheries products from the U.S., valued at over \$684 million, (Fisheries of the United States, 1985, NOAA, NMFS, April, 1986). In that same year, Japanese sources reported that frozen "TARA" imports (excluding fillets), totalled 112,226 mt, of which 96,925 mt were from the U.S., 8,231 mt were from the Soviet Union, 4,873 mt from the Republic of Korea, and the remaining amounts from several other sources, (Japan Export and Import Commodity By Country, Japan Tariff Assoc., 1986). The commodity "TARA" apparently include not only true cods, but also pollocks and hakes. It also includes both "round fish" and "surimi" product forms. Unfortunately, no single Japanese import category accounting exclusively for cods is available, (Personal communication, Sunee Sonu, SWR, NMFS). However, in 1986, Japan began reporting imports of "TARA" surimi separately from "TARA" round fish products. Through the first nine months of 1986, total Japanese imports of dressed cod and cod-like fishes were

10,832 mt, while cod-like surimi imports totalled 85,625* mt, (Table 8). Data from U.S. joint ventures indicate that 6,192 mt of cod were delivered to Japanese processing ships in 1985, off Alaska. In 1986, through September, sales were 10,062 mt, and by mid-November, the comparable figure was 12,379 mt, (Janet Smoker, AKR, NMFS).

Table 8. Japanese Imports of "Tara" (mt), 1986*.

	Dressed Tara	Surimi Tara
January	18	0
February	767	224
March	646	10205
April	681	N.A.
May	1544	21700
June	2094	1220
July	1248	3170
August	2133	22712
September	1701	26395
TOTAL	10,832	85,625**

* - Preliminary data through 1st nine months.

** - Incomplete total, April surimi imports not available.

Source: Bill Atkinson, Personal Communication, Dec. 1986.

While various sources of Japanese import, and U.S. export, data are available, differences in the way in which the data are compiled, characterized, and presented make it impossible to fully account for and track the Pacific cod taken from the U.S. EEZ and exported to Japan. It is clear, however, that Japan does import relatively large quantities of Pacific cod, originating in the U.S. EEZ. It is also clear, from the Japanese export data presented in Tables 4, 5, and 6, that Japan does not re-export any substantial amount of this cod to the U.S. or to any third country. For the first five months of 1986, total Japanese exports of cod (fresh, chilled, frozen), to all nations, were 4,101 mt. In 1985, the total annual exports of these commodities, by Japan, were 8,486 mt.

In that same year, Japan reported landings of "fresh cod", presumably from its nearshore commercial fisheries, of 63,686 mt, (Monthly Statistics of Agriculture, Forestry and Fisheries, Ministry of Agriculture, Forestry and Fisheries, Japan, 1986). This same data source indicates a 1985 "frozen cod landings" figure for Japan of 20,959 mt. The Japanese catch of cod in the Gulf and Bering Sea, in 1985, totalled more than 61,155 mt, (Fisheries of the United States, 1985, NOAA, NMFS, April, 1986).

Therefore, it seems readily apparent that most of the cod arriving on the shores of Japan, whether landed or imported by the Japanese, is consumed domestically. Relatively little detailed information on the Japanese domestic seafood market is available. However, some general market statistics do exist. These data confirm, for example, that the Japanese market for cod is experiencing the same product shortfall as that occurring in the markets of North America and Europe. Furthermore, a general upward trend in cod product prices has been observed in Japan recently. However, the Japanese market for cod exhibits apparent seasonality in demand, accompanied by marked cyclical price swings, (Figure 11). Over the period January 1984 through May 1986, the fresh cod price in Japan has shown a sharp decline during approximately the first quarter of the calendar year, followed by a period of relatively moderate price activity. During the third and early fourth quarters the price has moved strongly upward continuing through the end of the year, only to see the sharp first quarter decline repeated. These variations in price are reportedly associated both with traditional seasonality in consumer demand for cod, regarded as a "winter" food item, and annual patterns of cod fishing and shoreside delivery, (Personal communication, Bill Atkinson, Nov. 1986). Despite these cyclical price swings, the overall trend in price has been up.

While Figure 11 includes data only through May 1986, the "predicted" late year price rise in the third and fourth quarters of 1986 is strongly suggested by price reports taken from trade periodicals. These sources indicate that Japanese wholesale prices for Pacific cod have moved up strongly, beginning in late September, and have continued to rise through at least the first week of November. Tokyo Central Wholesale Market prices for dressed Pacific cod, as reported by Atkinson, ranged from Y420/kg. to Y470/kg. in late September 1986. By mid-October, the price had risen to Y480/kg. to Y550/kg., and by the end of that month the price was reported between Y500/kg. and Y550/kg.

In early 1986, port of landing price for Japanese longline caught cod, taken from the U.S. EEZ, was reportedly as low as Y295/kg. At the prevailing exchange rate, longlined cod was selling for approximately \$.84/lb., in Japan. By late October 1986, the price had risen to between Y393/kg. and Y431/kg., depending upon size, for joint venture longlined cod from the U.S. EEZ. Again, at prevailing currency exchange rates, the equivalent U.S. dollar price was \$1.15/lb. to \$1.26/lb., (Bill Atkinson's News Report, October 29, 1986). Expectations are that these prices will continue to increase as well, as supply tightens. As in the case of the U.S. market, sensitivity to potential consumer price resistance, and market share losses to substitute protein sources, characterize industry concerns in Japan. This points up the fact that there exists, in effect, a single, worldwide, interrelated market for codfish products which must be evaluated as a whole.

FRESH COD WHOLE PRICE, JAPAN

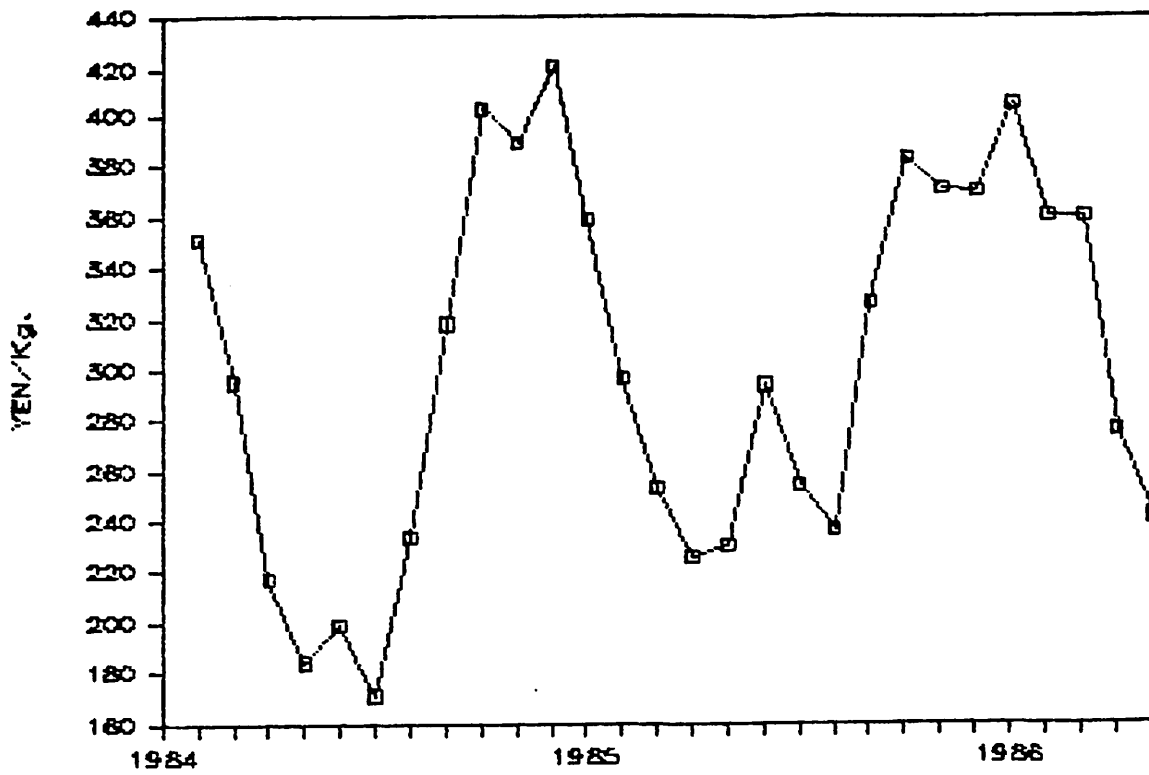


Figure 11.

The preceding discussion of the current Japanese market for headed and gutted cod is useful in at least beginning to answer the following critical questions. Does this market provide a better opportunity for the expansion of the DAP fishery than other alternative markets, for example the U.S. fillet market? And, to what extent is that opportunity affected by the amount of cod allocated to the Japanese longline fishery?

The first question is, in part, answered by considering the price domestic fishermen receive for headed and gutted (H&G) cod as compared to cod fillets, and relating this information to product recovery rates for these alternative product forms. With product recovery rates for H&G and fillets of approximately 50 per cent and 20 per cent, respectively, the H&G market would be more profitable if the exvessel price of fillets was not greater than 2.5 times the exvessel price of H&G cod, because the cost of producing H&G cod is presumably less than that of producing cod fillets, per unit of catch. Therefore, with a fillet price of \$2.25 and a H&G price of \$0.90 or more, H&G cod would represent the more profitable alternative.

Unfortunately for this comparison, the H&G price is reported to be, on average, considerably below \$0.90. Therefore, the relative profitability of H&G cod depends upon the relative cost of producing this product form. Such cost information is not readily available. There are, however, two "indications" that the H&G market may be more profitable under current price and cost structures. Some domestic freezer trawlers have reportedly switched from fillet production to H&G operations and some of the newer freezer trawlers were built with only H&G operational capability. On the other hand, at least some operations have switched away from H&G to filleting, and indications are that it was the prohibitively high capital cost of filleting equipment, relative to expected returns, that prevented its installation in some DAP trawlers. These investment decisions were made based upon a cod market structure which existed before the present "record price" environment.

Given these mixed signals from the domestic sector, it is not unambiguously clear whether the answer to this first question is "yes" or "no". However, if we assume for a moment that the answer is yes, that is, the Japanese market for H&G cod does currently provide a better opportunity for development than is found in the U.S. fillet market, then one can make the following observations and predictions. First, one would expect market forces to eliminate what in the short run appears to be higher profits in the Japanese H&G market as the DAP H&G fishery expands. One reason for this is that the Japanese H&G cod market appears to be much smaller than the U.S. fillet market. A second reason is that, as noted earlier, it appears that there is a well developed and integrated world market for cod which results in the market prices of similar products in different countries, and for different products, moving together after a relatively short period of time.

The second question is relevant if, as we have done, we assume the answer to the first is yes. Unfortunately, the second question is even more difficult to answer than the first. The data presented above indicate that in 1985 Japanese landings of fresh and frozen cod exceeded 84,600 mt, in product weight, and perhaps more than 160,000 mt in round weight equivalents, of which more than 61,500 mt were taken by Japan from the U.S. EEZ off Alaska. Japanese trade data are not available in sufficient detail to determine the remainder of the cod supply in Japan. However, export data from Canada suggest that Japan probably is not a major importer of Atlantic cod, at least at present. Similar data on exports of Pacific cod from the Soviet Union, and other potential exporters of Pacific cod are not available.

If it is assumed that Japanese imports of cod are minimal, Japanese landings from the U.S. EEZ are an important but not dominant source of cod for Japan. This would suggest that cod allocations to the Japanese longliner fishery can be used to affect the price offered to DAP fishermen for H&G cod if there are not close substitutes for the Japanese longline catch in the U.S.EEZ. It appears, however, that there are several competitive substitutes available to the Japanese, which would effectively ameliorate any price effect induced by withholding of U.S. cod TALFF. These include JVP cod catch from the U.S.EEZ, Atlantic cod from Canada, cod from the northeast Pacific, and other cod-like species from both the northern and southern hemispheres of the Atlantic and Pacific oceans. The availability of substitutes does not imply that there may not be a short term increase in the price offered to DAP fishermen if the Japanese cod allocation were suddenly reduced. What it does mean is that much of the increase would probably be short lived.

As noted above, there is not sufficient market information with which to make a sound quantitative estimate of what the short-term response of DAP prices to a change in the cod TALFF would be. However, because foreign cod catch from the U.S.EEZ is a smaller part of the supply in Japan than was foreign catch of other species for which TALFF has already been eliminated, and because there are better substitutes for TALFF cod than there were for these other species, the price of cod is not expected to be as responsive to a change in TALFF as the prices of crab and sablefish appear to have been.

APPENDIX

Tables 4 and 5 report U.S. import data for "all cod products" and "cod fillets". Unfortunately, in order to account for the majority of the cod imported in these commodity groupings it was necessary to utilize the available International Trade Commission's Tariff Schedules of the United States, Annotated. These commodity groupings are not entirely species specific. For the "all product categories" in Table 4, the following TSUSA codes were included:

1101585	COD FRESH
1101589	COD FROZEN
1101595	COD CUSK EELS HADDOCK POLLOCK HAKE ETC FRESH OR FROZEN
1104710	COD BLOCKS OVER 10 LB
1105000	COD CUSK HADDOCK ETC FILLETS UNDER QUOTA
1105545	COD FILLETS FRESH OVER QUOTA
1105550	COD FILLETS FROZEN OVER QUOTA
1111000	COD CUSK HADDOCK HAKE POLLOCK DRIED
1112200	COD CUSK HADDOCK HAKE POLLOCK SALTED OR PICKLED WHOLE
1116400	COD CUSK HADDOCK HAKE POLLOCK SMOKED WHOLE OR PROCESSED
1116800	COD CUSK ETC SMOKED & FURTHER PROCESSED

For the "fillet" category in Table 5, the following TSUSA codes were included:

1105545	COD FILLETS FRESH OVER QUOTA
1105550	COD FILLETS FROZEN OVER QUOTA
1105000	COD CUSK HADDOCK ETC FILLETS UNDER QUOTA

Table 6, summarizing Cod block imports includes only TSUSA category 1104710 COD BLOCKS OVER 10 LB.

The following individuals or NMFS offices made important contributions to the completion of this analysis:

Dr. Terry Smith, North Pacific Fishery Management Council
LCDR. Roger Mercer, NOAA Corps., NMFS, Alaska Region
Mr. Ron Rogness, North Pacific Fishery Management Council
Dr. Loh-Lee Low, NMFS, Northwest & Alaska Fisheries Center
Dr. Grant Thompson, NMFS, Northwest & Alaska Fisheries Center
Mr. Allen Shimada, NMFS, Northwest & Alaska Fisheries Center
Mr. Dick Kinoshita, NMFS, Northwest & Alaska Fisheries Center
Mr. Carl Rosier, NMFS, Alaska Region
Mrs. Janet Smoker, NMFS, Alaska Region
Mr. Jamie Brown, Alaska Commercial Fisheries Entry Commission
Mr. James Price, NMFS, Data & Information Mngm., Washington D.C.
Mr. Doug Lipton, NMFS, Data & Information Mngm., Washington D.C.
Mr. Bill Atkinson, The Bill Atkinson News Report, Seattle, WA
Mr. Ted Evans, Alaska Factory Trawler's Assoc., Seattle, WA
Mr. Paul MacGregor, N. Pac. Longline & Gillnet Fed., Seattle, WA
Ms. Robin Snyder, NMFS, Alaska Region
N.E. Office, Fisheries Market News, NMFS, Boston, Mass.
N.Y. Office, Fisheries Market News, NMFS, New York, NY
N.W. Office, Fisheries Market News, NMFS, Seattle, WA

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United States Senate

COMMITTEE ON COMMERCE, SCIENCE,
AND TRANSPORTATION

WASHINGTON, DC 20510

December 5, 1986

Mr. Jim Branson
Executive Director

Mr. James Campbell
Chairman

North Pacific Fishery Management Council
P.O. Box 103136
Anchorage, AK 99510

Dear Sirs:

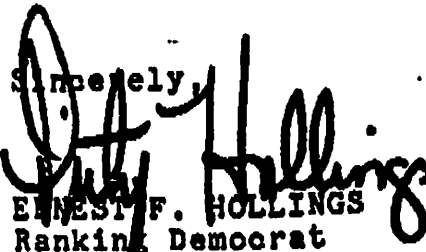
I understand that a serious situation exists for American shore-based cod and pollock processors in Alaska, especially in Dutch Harbor, due to the unavailability of harvesting capacity. Plant capacity has been idled because United States processors are unable to contract with harvesting vessels.

At your present North Pacific Fishery Management Council meeting to discuss joint venture allocations for 1987, I would appreciate your best efforts to develop a means to resolve this problem. In view of the United States fish processor preference stated in Section 204(b)(6)(B) of the Magnuson Fishery Conservation and Management Act (MFCMA), it seems that the Council should investigate the issue of access to harvesting vessels and work toward an equitable solution.

I would hope that there is a way to enable these shore-based processors to continue the development of the domestic United States fishing industry and would appreciate hearing the Council's views on means to aid them in this important endeavor.

With best regards, I am

Sincerely,


ERNEST F. HOLLINGS
Ranking Democrat

EFH:zar

PETITION TO THE NORTH PACIFIC FISHERIES MANAGEMENT COUNCIL TO ESTABLISH SEASONAL CLOSURE ON TRAWLING WITHIN BERING SEA STATISTICAL AREA 514

My name is Harold Sparck. I am before the Council to discuss a Petition from the Qaluyaat and Kokechik Fishermen's Association to enact a closure on trawling in Bering Sea Statistical Area 514 from May through July each year.

At the Council's September, 1986 meeting, Kokechik and Qaluyaat suggested a closure on all TALFF of Pacific Cod. These American fishermen are interested in entering the cod market. Local markets have been identified. From 1981 through 1984, co-incident with the start-up of the commercial halibut jig fishery, the CPUE of Cod to halibut was 20 to 1. In 1985, these villages were planning to open a commercial fishery on cod. For unexplained reasons at the time, in 1985 and 1986, the numbers of cod dropped off at a time when cod populations were reaching new biomass records in this recovery cycle.

With the assistance of observer data, we have been able to identify a possible reason for the decline of cod. The drop-off in cod population in the Etolin Straits is co-incident with the increased trawl activities by the yellow-fin sole trawl fishery operating in Bering Sea Statistical Area 514.

In 1983 and 1984, the yellow-fin sole fishery in Statistical Area 514 produced 40.7 and 144.2 tons respectively. Etolin Straits Cod CPUE was high in these years. As a result of increased fishing activity, 1985 by-catch of cod rose to 5,219 mt. In 1986, 8,215 mt of cod were harvested as by-catch. Both Kokechik and Qaluyaat believe that this heightened interception of cod in Statistical Area 514 is the reason for the drop-off in Etolin Strait Cod CPUE.

Establishing a trawl closure in this small area of the yellow-fin sole operation will not harm the yellow-fin sole target fishery in this marginal fishing area.

This Closure will improve the opportunity for commercial fisheries in the Nelson-Nunivak Islands and Hooper Bay area. These areas are economically depressed, and require this new marine fishery for self-sufficiency.

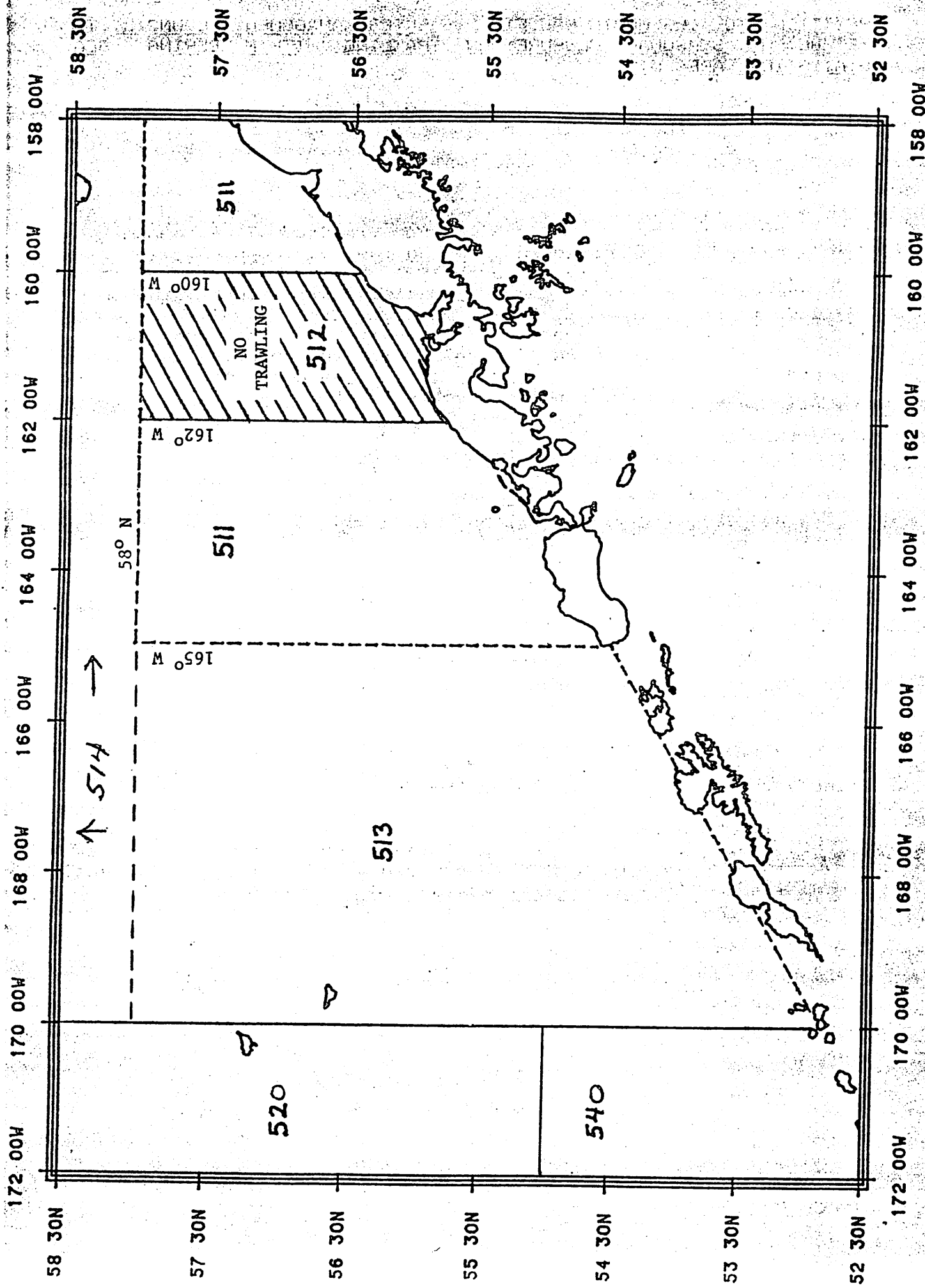


Figure 3. Observer reporting areas for the Bering Sea joint venture fisheries.

Lower Kuskokwim School District Resolution

86-18

USE OF LOCALLY PRODUCED SEAFOODS IN THE FOOD SERVICES PROGRAM

WHEREAS, the Lower Kuskokwim School District operates a food services program; and

WHEREAS, the Lower Kuskokwim School District wishes to provide each student served by the program a well balanced diet; and

WHEREAS, it would be appropriate for the Lower Kuskokwim School District to use locally produced seafoods in its food services program, and

WHEREAS, the Board is encouraged by efforts of Nelson Island to develop a cod fishery; and

WHEREAS, currently it is not cost effective to utilize such products in the food service program,

THEREFORE BE IT RESOLVED, that the Lower Kuskokwim School District Board of Education expresses its interest in purchasing locally produced seafood products for its food services program should they become available at a cost effective price; and

BE IT FURTHER RESOLVED, that the Lower Kuskokwim School District Board of Education requests that locally produced cod and other seafood products be made available to school districts through USDA in order for the purchase of them be cost effective.

Robert Nick
Robert Nick, LKSD Board Chairman

12/2/86
Date

Sue C. Hare
Sue C. Hare, Superintendent

12/2/86
Date

UNITED VILLAGES OF NELSON ISLAND

RESOLUTION NO. 09-86-02

WHEREAS THE UNITED VILLAGES OF NELSON ISLAND represent the resource interests of its member villages of Toksook Bay, Tununak, Nightmute, Newtok, and Chefornak; and

WHEREAS THE UNITED VILLAGES OF NELSON ISLAND has utilized cod fish by hook and line since ancient times based on the recovery of ivory cod hooks as identified by our elders from old village sites exposed by falling banks; and

WHEREAS THE UNITED VILLAGES OF NELSON ISLAND has once again begun to depend on the Arctic cod for subsistence utilization since 1980 when the benefits of the 200 nautical mile limit began to bring traditional marine fish back to our region; and

WHEREAS THE UNITED VILLAGES OF NELSON ISLAND has also developed markets within the region to take all of the cod that our growing day boat fishery can produce, thereby adding to the success of our new commercial fisheries, and promoting economic self-sufficiency in this poverty area; and

WHEREAS THE UNITED VILLAGES OF NELSON ISLAND soon lost its nearshore Arctic cod population since 1984 when trawl activities by joint venture fisheries in the shoals surrounding Nunivak Island started up; and

WHEREAS THE UNITED VILLAGES OF NELSON ISLAND believes that the Domestic Allocation Harvest (DAH) potential for Arctic Cod now exceeds the Optimum Yield (OY) for this species for 1987;

NOW THEREFORE BE IT RESOLVED BY THE UNITED VILLAGES OF NELSON ISLAND that the North Pacific Fisheries Management Council eliminate all Total Allowable Catch by Foreign Fisheries and all Joint Venture fisheries between American fishermen and foreign processors for Arctic Cod in 1987;

AND BE IT FURTHER RESOLVED BY THE UNITED VILLAGES OF NELSON ISLAND that a trawl prohibition be put in place for 100 miles in 1987 surrounding Nunivak Island to prevent trawl fisheries targeting non-cod species from intercepting Arctic cod as by-catch, and thereby preventing this important subsistence and commercial fishery to our day boat fleet from reaching this portion of its migratory range.

MOTIONED AND PASSED THIS 3rd DAY OF SEPTEMBER, 1986

Nick Sherchick Sr
Vice-Chairman

Paul John
Secretary