



NOAA Technical Memorandum NMFS-AFSC-21

# **Oregon, Washington, and Alaska Exports of Edible Fishery Products, 1992**

by  
Richard K. Kinoshita and Joseph M. Terry

**U.S. DEPARTMENT OF COMMERCE**  
National Oceanic and Atmospheric Administration  
National Marine Fisheries Service  
Alaska Fisheries Science Center

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## ABSTRACT

↙ Oregon, Washington, and Alaska (defined in this report as the Pacific Northwest) exports of edible fishery products in 1992 increased 6.5% in quantity over 1991 to 1.56 billion pounds (lb) or 709,750 metric tons (t). The value of these fishery exports increased by 15.9% to \$2.57 billion principally due to the 46% increase in salmon exports. In ,1992, groundfish exports of \$1.1 billion and salmon exports of \$891 million accounted for 43.3 and 34.7%, respectively, of the total value of Pacific Northwest fishery exports. The value of Pacific Northwest exports comprised 76.6% of total U.S. edible fishery exports, up slightly from 73% in 1991. In 1992, Pacific Northwest exports were shipped to 38 countries. The top five countries accounted for 95% of the total. Increased trade with Japan, the United Kingdom+ and France accounted for most of the gain. Exports to Japan totaled \$2.06 billion or 80.2% of the total, up 24%,in value from \$1.66 billion in 1991. The Republic of Korea remained in the second spot with \$127 million or 4.9% of the total exports, down 12.7% from \$146 million in 1991. Pacific Northwest exports to the United Kingdom increased to \$125.7 million or 4.9% of the total exports, while shipments to Canada were virtually unchanged at \$96.7 million from \$96 million in 1991 and accounted for 3.8% of the total.

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## INTRODUCTION

Exports of edible fishery products from Oregon, Washington, and Alaska continue to be a major contributor to both total U.S. fishery exports and to the economy of the Pacific Northwest. This report compares exports of edible fishery products from the Pacific Northwest to total U.S. fishery exports, examines fishery exports by product and major importing country, reviews changes in patterns in exports, and updates the report of Kinoshita and Terry (1993).

For purposes of these analyses, the Pacific Northwest is defined as the states of Oregon, Washington, and Alaska. The export data used in this report are from the U.S. Department of Commerce, Bureau of the Census. The database is maintained by the National Marine Fisheries Service (NMFS), Fishery Statistics Division, Silver Spring, Maryland.

Export data from the Oregon, Washington, and Alaska customs districts were used in this report. This method covers the major exports of salmon, groundfish, crabs, and herring. Also included are categories of exports not identified by species, but as whole or dressed fish, minced fish, fish balls, cakes and pudding, and fish sticks. This approach to assessing exports of fishery products is not without problems. First, species harvested in the Pacific Northwest may be exported from customs districts outside the region. Second, species harvested in other regions may be shipped from Oregon, Washington, and Alaska customs districts. However, both problems appear to be minor. There were 20 export items in 1992 that were likely to have originated from other parts of the United States. These 20 fishery products, mostly tropical tunas and lobsters, accounted for 0.15% of the total value of 1992 Pacific Northwest exports and were not included in this report. Most fishery products are shipped from the general area where they are harvested or processed, provided there are sufficient quantities to be shipped. Two major

products shipped from the Pacific Northwest , whole or dressed Pacific salmon and frozen crab accounted for 95.3 and 96.8%, respectively, of total U.S. exports of these two products in 1992. In recent years, much of the fish harvested in Alaska has been shipped directly to Pacific Rim countries. Other products may be first shipped to Washington State, then exported to their final destination.

The Harmonized System (HS) of coding imports and exports replaced the old Tariff Schedule of the United States (TSUSA) in 1989. The HS product codes, in most cases, provided greater detail by species, product, and condition. The HS in 1989 had 179 categories compared to only 62 under the old TSUSA. Since 1989, there has been numerous changes as products were added, while others were eliminated. In 1992, there were 201 export categories of edible fishery products. Five new categories were added in 1992, while one was dropped. After eliminating products not likely to originate from the Pacific Northwest and products not exported in 1992, there were 139 products recorded. The HS product codes appear in Appendix Table 1. Scientific names of species identified in this report are listed in Appendix Table 2. Note that totals and percentages in the tables may not always agree because of rounding, and that percentage changes may not agree because they were calculated from unrounded data.

#### PACIFIC NORTHWEST EXPORTS

The value of Pacific Northwest exports of edible fishery products in 1992 increased by 15.9% from 1991 to \$2.57 billion, and accounted for 76.6% of the total U.S. exports of edible fishery products (Table 1). The quantity of Pacific Northwest exports on a product weight basis amounted to 1.56 billion pounds (lb) or 709,750 metric tons (t), an increase of 6.5% over 1991 (Table 2 and Fig.1).

Table 1.--Pacific Northwest exports of edible fishery products (millions of dollars) excluding and including joint venture sales and percent of total U.S. exports of edible fishery products, 1981-92.

Year	9 Excluding			Including joint ventures		
	Pacific Northwest	Total U.S.	% Total U.S.	Pacific Northwest	Total U.S.	% Total U.S.
1981	\$ 805	\$1,073	75.0	\$ 818	\$1,094	74.8
1982	739	999	74.0	775	1,035	74.9
1983	668	908	73.6	715	959	74.6
1984	648	842	77.0	724	921	78.6
1985	837	1,010	82.9	940	1,115	84.3
1986	1,034	1,290	80.2	1,187	1,445	82.1
1987	1,232	1,578	78.1	1,432	1,792	79.9
1988	1,700	2,162	78.6	1,920	2,383	80.6
1989	1,747	2,277	76.7	1,872	2,395	78.2
1990	2,071	2,779	74.5	2,114	2,831	74.7
1991	2,218	3,037	73.0	2,218	3,041	72.9
1992	2,570	3,357	76.6	2,570	3,357	76.6

Note: Joint ventures off the Pacific Northwest ended in 1990 and ended off the East Coast in 1991.

Sources: U.S. Dep. Commer., Bureau of the Census; data base from Natl. Mar. Fish. Serv., Fish. Stat. Div., Silver Spring, MD 20910; Alaska Fish. Sci. Cent., 7600 Sand Point Way N.E., BIN C15700, Seattle, WA 98115-0070; and Natl. Mar. Fish. Serv., Fisheries of the United States, 1991, Silver Spring, MD 20910.

Table 2.- Pacific Northwest exports of edible fishery products, percent change in quantity (million lb) and value (million dollars) from 1991 to 1992.

Product	Quantity			Value		
	1991	1992	% change	1991	1992	% change
Fresh and frozen						
Salmon						
Chum	17.1	28.6	67.3	\$ 21.3	\$ 35.0	64.8
Pink	24.3	13.6	-43.8	25.5	16.1	-37.0
Sockeye	163.0	202.2	24.1	293.2	517.6	76.6
Coho	26.0	24.8	-4.5	45.9	48.5	5.6
Other	10.2	10.7	4.0	27.3	32.4	19.1
Subtotal	240.6	280.0	16.4	413.2	649.7	57.2
Groundfish						
Flatfish	164.0	121.3	-26.0	116.2	68.4	-41.1
Cod	177.2	125.0	-29.5	144.4	94.5	-34.5
Pollock	0.6	2.3	274.6	0.5	1.3	182.0
Mackerel	4.0	12.3	207.5	3.5	8.5	145.3
Hake	4.2	9.3	120.1	5.7	13.2	131.2
Sablefish	40.0	32.7	-18.2	95.2	77.0	-19.1
Other, nspf	95.1	190.1	99.9	81.6	140.9	72.8
Subtotal	485.1	492.9	1.6	447.0	403.9	-9.6
	72.2	107.4	48.7	54.5	67.1	23.3
Filletts						
Cod	2.2	3.2	43.0	2.6	3.2	21.0
Halibut	0.5	1.2	126.2	1.2	2.1	70.8
Other, nspf	25.7	14.1	-45.1	27.5	16.5	-39.8
Fish roe						
Pollock	39.8	38.7	-2.9	152.6	178.0	16.7
Herring	18.1	6.2	-65.7	21.3	21.6	1.6
Salmon	16.2	18.8	16.1	69.2	89.3	29.1
Other, nspf	10.7	7.8	-27.1	39.2	24.3	-38.1
Minced, meat, balls, cakes, & fish sticks						
	287.5	331.3	15.2	382.0	480.8	25.9
Cod, cured	15.0	1.7	-88.8	22.3	3.3	-85.3
Canned						
Salmon						
Pink	25.1	31.1	23.8	39.1	47.1	20.5
Sockeye	26.5	36.4	37.3	67.5	90.2	33.8
Other	11.6	8.3	-28.5	21.9	13.7	-37.3
Subtotal	63.2	75.7	19.9	128.5	151.1	17.6

Table 2.--Continued.

Product	Quantity			Value		
	1991	1992	% change	1991	1992	% change
Crab						
King	8.5	7.9	-6.6	\$ 53.7	\$ 58.5	9.0
Snow	71.0	128.9	81.5	153.5	284.8	85.6
Dungeness	0.4	0.7	100.9	1.0	2.4	135.7
Not specified	94.7	28.7	-69.7	201.9	81.2	-59.8
Subtotal	174.5	166.2	-4.8	410.1	426.9	4.1
Crabmeat	2.4	2.7	11.7	7.2	6.3	-12.0
Shrimp	3.4	5.8	67.9	12.8	19.3	50.2
Molluscs, total	7.3	7.2	-.9	17.2	15.8	-7.6
Not elsewhere specified	<u>4.6</u>	<u>3.9</u>	<u>-14.2</u>	<u>10.0</u>	<u>11.0</u>	<u>9.5</u>
Total	1,469.1	1,564.7	6.5	\$2,218.3	\$2,570.4	15.9

Note: Discrepancies in totals are due to rounding and percentages are based on unrounded numbers.

Sources: U.S. Dep. Commer., Bur. of the Census; data base from Natl. Mar. Fish. Serv., Fish. Stat. Div., Silver Spring, MD 20910; and Alaska Fish. Sci. Cent., 7600 Sand Point Way N.E., BIN C15700, Seattle, WA 98115-0070.

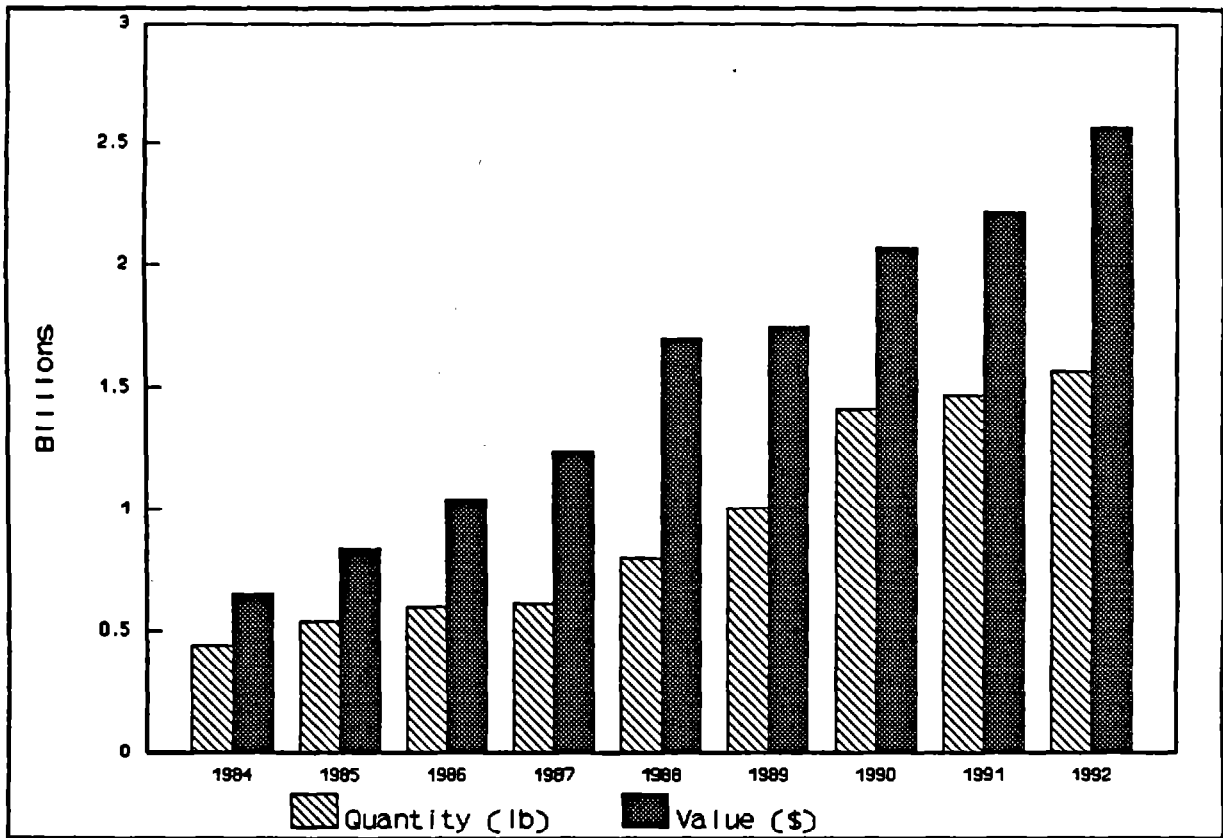


Figure 1. --Quantity and value of Pacific Northwest and Alaska exports of edible fishery products, 1984-92.



The upward trend, which started in 1985, continued into 1992 (Fig. 2). The change in 1992 resulted mostly from higher salmon exports (Table 2). Since 1984, Pacific Northwest fishery exports have increased by an average 17% in quantity and 18.8% in value per year.

From 1979 to 1990, there were joint venture sales (i.e., direct sales by U.S. fishing vessels to foreign processing vessels in the U.S. Exclusive Economic Zone (EEZ)) off Alaska and the Pacific Coast, but they were not included with Pacific Northwest exports in official U.S. merchandise trade data. To give a complete picture of exports, all joint venture sales were added to fishery exports from 1981 to 1991 (Gharrett 1992). Joint venture sales in the U.S. EEZ off Alaska and the Pacific Coast ended in 1990 and were terminated off the East Coast in 1991.

#### Major Products

The Pacific Northwest exports of edible fishery products, by major products and product groups for 1991 and 1992, are presented in Table 2. Table 3 and Figure 3 summarize Pacific Northwest exports in more general groups. A major change for 1992 was the new category for surimi exports. In previous years, surimi exports were reported in five different categories with minced fish, meat, fish balls, cakes, and minced fish sticks. Groundfish exports, including halibut increased 3.5% in value to \$1.1 billion or 43.3% of the region's exports of edible fishery products in 1992. The year was highlighted by the 45.6% increase of Pacific salmon products to \$891 million which accounted for 34.7% of fishery exports, up from the \$612 million exported in 1991. Prior to 1990, salmon exports had accounted for 50 to 76% of total exports. Crab products ranked third with a value of \$433 million or 16.8% of the total, followed by herring products with \$89 million or 3.5% of the total.

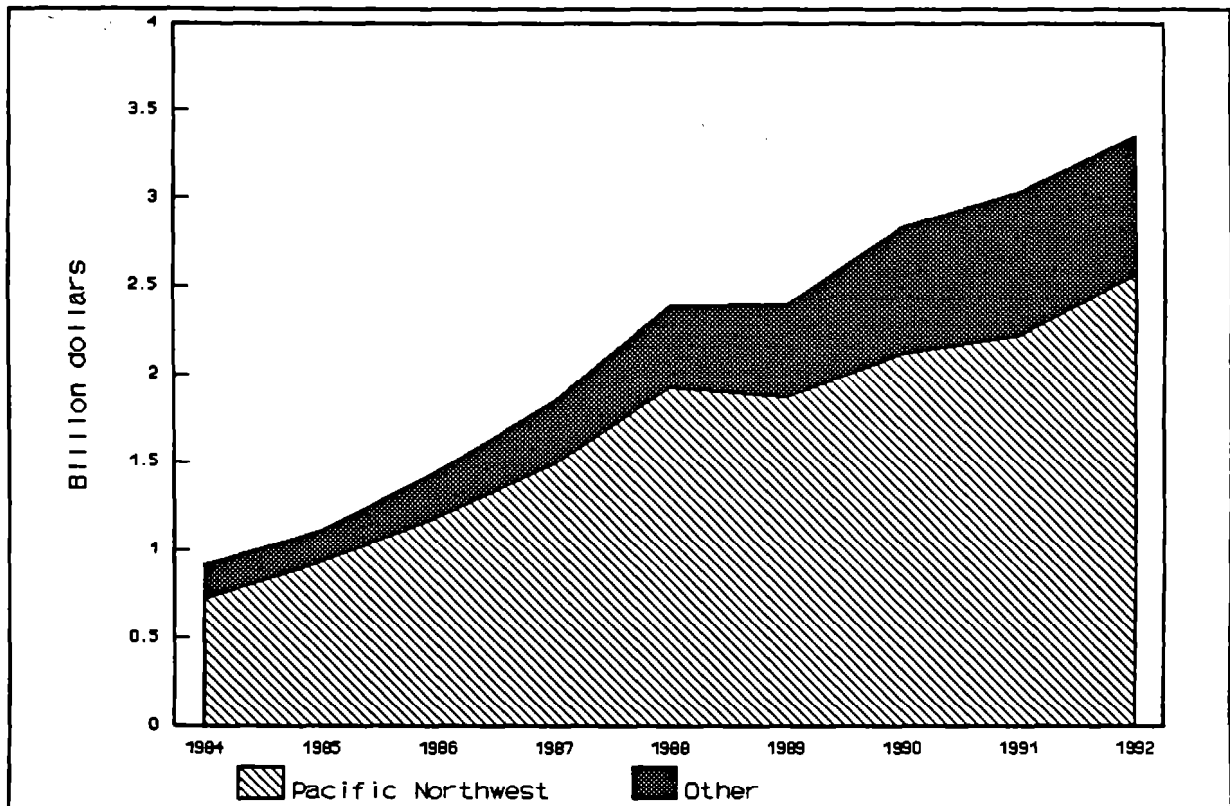


Figure 2. --Pacific Northwest and total U.S. exports of edible fishery products, 1984-92. Includes joint venture sales.

Table 3.--Pacific Northwest exports of edible fishery products or product groups (millions of dollars) and percent of total, 1981-92.

Year	Salmon	Herring	Ground- fish*	Crab	Other	Total
<b>Value</b>						
1981	\$572	\$ 57	\$ 30	\$106	\$40	\$ 805
1982	531	60	25	87	36	739
1983	510	67	23	40	29	668
1984	480	60	47	36	25	648
1985	597	104	66	53	17	837
1986	707	78	126	107	16	1,034
1987	728	93	204	184	24	1,232
1988	967	115	358	231	29	1,700
1989	878	59	531	242	37	1,747
1990	822	71	795	345	38	2,071
1991	612	76	1,074	417	39	2,218
1992	891	89	1,112	433	45	2,570
<b>Percent</b>						
1981	71.0	7.1	3.7	13.2	5.0	100.0
1982	71.9	8.1	3.3	11.8	4.9	100.0
1983	76.4	10.0	3.4	6.0	4.3	100.0
1984	74.1	9.3	7.2	5.5	3.9	100.0
1985	71.3	12.4	7.9	6.4	2.0	100.0
1986	68.4	7.5	12.2	10.4	1.5	100.0
1987	59.1	7.5	16.6	14.9	1.9	100.0
1988	56.9	6.8	21.0	13.6	1.7	100.0
1989	50.3	3.4	30.4	13.8	2.1	100.0
1990	39.7	3.4	38.4	16.7	1.8	100.0
1991	27.6	3.4	48.4	18.8	1.8	100.0
1992	34.7	3.5	43.3	16.8	1.7	100.0

\* Other fresh, frozen, cured, roe, and processed finfish excluding salmon, herring, and other nongroundfish species.

Note: Discrepancies in totals are due to rounding.

Sources: U.S. Dep. Commer., Bureau of the Census; data base from Natl. Mar. Fish. Serv., Fish. Stat. Div., Silver Spring, MD 20910; and Alaska Fish. Sci. Cent., 7600 Sand Point Way N.E., BIN C15700. Seattle, WA 98115-0070.

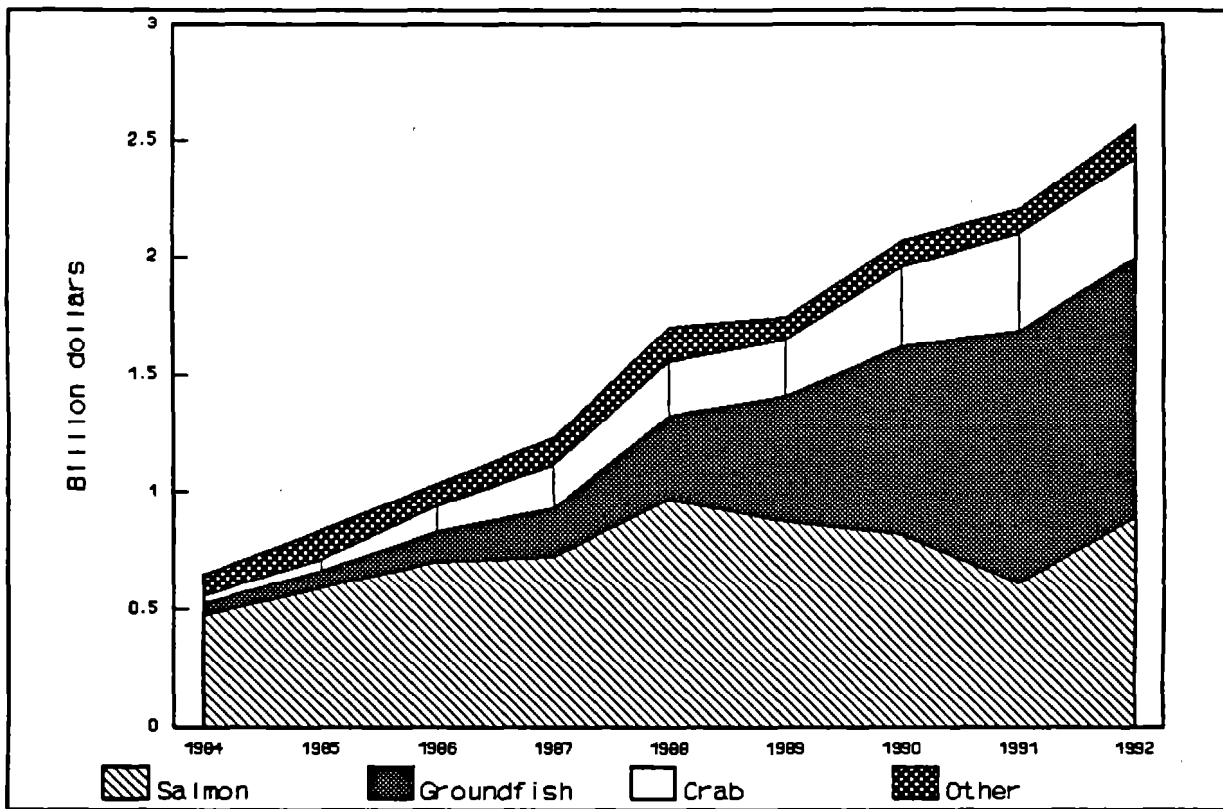


Figure 3. --Pacific Northwest exports of edible fishery products by major products groups, 1984-92.

Exports of fresh, frozen, cured, and processed groundfish increased by 2.8% in quantity, and the value increased by 3.5% from \$1.07 billion in 1991 to \$1.11 billion in 1992. Groundfish exports were made up of \$403.9 million of whole or dressed fish; \$21.8 million of fillets; \$202.3 million of fish roe; \$480.8 million of surimi and minced fish including meat, balls, cakes, and minced fish sticks; and \$3.3 million of cured fish (Table 4). The increase in groundfish exports primarily reflected higher surimi and roe prices in the first half of the year.

The catch and production of edible products in the groundfish industry in 1992 declined slightly from 1991. The Alaska catch of groundfish in 1992 was 7.7% below 1991 levels as catches were curtailed by established quotas. The catch of the most important species, walleye (Alaska) pollock, totaled 3.05 billion lb (1.39 million t) in 1992, down 11.3% from a year earlier. The decline in the groundfish catch would have been greater except for the increase of the Atka mackerel and rockfish catch. Production of a major export commodity, pollock surimi, was an estimated 359 million lb (162,786 t), up 16% from 1991 (Gharrett 1993). Exports of surimi and minced fish including meat, balls, cakes, and sticks rose 15.2% from 287 million lb in 1991 to 331.3 million lb in 1992, with the value increasing by 25.9% to \$480.8 million. Surimi exports totaled 231.8 million lb, valued at \$360 million. Exports of whole or dressed groundfish were up 1.6% to 492.9 million lb in 1992, however lower prices of cod and flatfish reduced the value by 9.6% to \$403.9 million. Groundfish exports by country of destination are shown in Appendix Table 3.

The quantity and value of total salmon exports in 1992 increased by nearly 17% to 374.8 million lb, and the value rose 45.6% to \$891 million. The 1992 Alaska salmon catch totaled 687 million lb, down slightly from the 715 million lb in 1991 (Bearden 1993). The 42% decrease of the pink salmon

Table 4.--Pacific Northwest exports of groundfish products including Pacific halibut, percent change in quantity in million lb and value in million dollars from 1991 to 1992.

Product	Quantity			Value		
	1991	1992	% change	1991	1992	% change
Whole or dressed						
Cod	177.2	125.0	-29.5	\$144.4	\$ 94.5	-34.5
Halibut	6.3	6.5	2.5	15.7	12.0	-23.2
Other flatfish	157.7	114.8	-27.2	100.5	56.4	-43.9
Subtotal	164.0	121.3	-26.0	116.2	68.4	-41.1
Pollock	0.6	2.3	274.6	0.5	1.3	182.0
Mackerel	4.0	12.3	207.5	3.5	8.5	145.3
Hake	4.2	9.3	120.1	5.7	13.2	131.2
Sablefish	40.0	32.7	-18.2	95.2	77.0	-19.1
Other, nspf	95.1	190.1	99.9	81.6	140.9	72.8
Subtotal	485.1	492.9	1.6	447.0	403.9	-9.6
Roe						
Pollock	39.8	38.7	-2.9	152.6	178.0	16.7
Other, nspf	10.7	7.8	-27.1	39.2	24.3	-38.1
Subtotal	50.6	46.5	-8.0	191.8	202.3	5.5
Fillets						
Cod	2.2	3.2	43.0	2.6	3.2	21.0
Halibut	0.5	1.2	126.2	1.2	2.1	70.8
Pollock	18.2	6.2	-65.8	17.9	4.3	-76.2
Other	7.5	7.9	5.5	9.6	12.3	28.4
Subtotal	28.4	18.4	-35.1	31.3	21.8	-30.4
Other						
Surimi	.	231.8	.	.	360.2	.
Minced, nspf	164.1	11.0	-93.3	228.7	12.6	-94.5
Meat, nspf	55.2	17.5	-68.3	65.5	16.0	-75.6
Balls, cakes, pudding	36.7	52.7	43.3	51.9	63.9	23.1
Sticks, minced	31.5	18.4	-41.7	35.8	28.1	-21.7
Subtotal	287.5	331.3	15.2	382.0	480.8	25.9

Table 4.--Continued.

Product	Quantity			Value		
	1991	1992	% change	1991	1992	% change
Cured Cod	<u>15.0</u>	1.7	<u>-88.8</u>	\$ 22.3	\$ 3.3	<u>-85.3</u>
Total	866.6	890.9	2.8	\$1,074.4	\$1,112.2	3.5

Note: Discrepancies in totals are due to rounding and percentages are based on unrounded numbers.

Sources: U.S. Dep. Commer., Bur. of the Census; data base from Natl. Mar. Fish. Serv., Fish. Stat. Div., Silver Spring, MD 20910; and Alaska Fish. Sci. Cent., 7600 Sand Point Way N.E., BIN C15700, Seattle, WA 98115-0070.

catch was nearly offset by the one-third increase of sockeye salmon to 343 million lb. In addition to the increase of the sockeye salmon catch, ex-vessel prices also advanced by 57% from 1991. Average ex-vessel prices of all species of salmon rose by 89% from a year ago, with the value of the catch totaling \$544 million, up from \$300 million in 1991. The quantity of whole or dressed salmon exported in 1992 increased by 16.4% from 1991, while the value jumped by 57% to \$649.7 million. The increase was due to a 24% increase in quantity of sockeye salmon exports in addition to a 42% jump in prices. At the same time, canned salmon exports were up by 20% in quantity and 17.6% in value from 1991. Exports by country of destination for total salmon, whole or dressed salmon, and canned salmon are presented in Appendix Tables 4, 5, and 6, respectively.

Exports of crab and crabmeat totaled 169 million lb in 1992 and were valued at \$433 million, down 4.5% by quantity and up 3.8% by value from 1991. Catches of snow crab (opilio) continued to be strong and amounted to 313 million lb in 1992 (Bearden 1993). The catch of king crab was down by nearly one-third to 19 million lb, and the snow crab (bairdi) catch increased by 16% from 1991. Exports of fresh and frozen whole crab as well as sections were grouped into one category beginning in 1989, but were again reported by species in 1991. The comparisons with 1991 by species may not reflect what actually took place as nearly one-half of crab exports in 1991 was reported in the not-specified category.

Exports of herring products in 1992 amounted to 113.6 million lb and was valued at \$88.7 million, up 25.9% by quantity and up 17% by value. Exports of whole herring were 48.7% higher by quantity from 1991, while herring roe exports were down by nearly two-thirds. By value, whole fish increased by 23%, and



herring roe was up slightly. The supply of herring was greater as the Alaska catch increased to 145 million lb, up 38% from 1991.

#### Major Importers

Pacific Northwest exports of edible fishery products were sold to 38 countries in 1992, with Japan being the leading buyer. The top five countries purchased 95% of the total (Tables 5 and 6, and Fig. 4). There were significant increases in the value of exports to Japan (24%), the United Kingdom (10.5%), and France (11.4%) in 1992. At the same time, exports declined to the Republic of Korea (12.7%), the Federal Republic of Germany (81%), Norway (87%), and Portugal (39%).

Japan's imports of edible fishery products from the Pacific Northwest increased by 24% to \$2.06 billion and accounted for 80.2% of the total value of the Pacific Northwest's fishery exports in 1992. Purchases by Japan in the 1984-91 period have ranged from 70 to 82% of Pacific Northwest fishery exports and have increased by 20% a year in value. In 1992, the Japanese were the leading buyers of whole or dressed Pacific salmon (88%), whole Pacific herring (91%), sablefish (98%), crab (94%), minced fish (87%), and total fish roe (93%) (Appendix Table 7). Exports of the most important category sold to Japan, whole or dressed salmon, increased by 16.5% in quantity and by 64% in value to \$574 million. Other products that increased in value were fish roe (15.9%), crab (4.2%), and minced fish (43.7%).

A distant second was the Republic of Korea with 4.9% of total exports. While exports increased 10% in quantity, the value declined 12.7% from 1991 to \$127 million in 1992. Increased purchases of whole or dressed groundfish could not offset the decline in higher valued minced fish and fish roe exports (Appendix Table 8).

Table 5.--Quantity (million lb) and value (million dollars) of Pacific Northwest edible fishery products exported to the leading countries for 1991 and 1992 and percent change, 1991-92.

Country	Quantity			Value		
	1991	1992	% change	1991	1992	% change
Japan	1,019.2	1,140.2	11.9	\$1,660.4	\$2,060.9	24.1
Rep. of Korea	156.3	172.0	10.0	145.9	127.4	-12.7
United Kingdom	64.8	72.1	11.3	113.8	125.7	10.5
Canada	52.9	55.9	5.8	96.0	96.7	.7
France	21.2	22.2	5.0	32.5	36.2	11.4
People's Republic of China	11.1	14.0	25.8	12.4	17.9	44.0
Portugal	25.7	20.4	-20.5	28.4	17.3	-39.1
Australia	5.9	8.2	40.1	11.8	15.7	32.5
Netherlands	6.3	9.0	42.0	10.6	13.5	26.5
Sweden	4.7	5.8	23.3	6.4	8.8	38.8
Denmark	7.7	5.0	-35.0	6.9	7.9	14.4
Belgium	2.0	4.1	101.4	3.9	7.1	81.8
Federal Republic of Germany	40.0	5.6	-86.1	38.1	7.1	-81.3
Thailand	8.6	13.8	60.3	6.6	7.0	7.4
Taiwan	2.4	5.2	116.3	2.6	5.1	95.9
Norway	33.3	3.6	-89.1	30.9	4.0	-87.2
Hong Kong	1.4	1.2	-13.7	3.6	2.9	-20.1
Ireland	0.7	1.3	75.1	1.1	2.0	89.0
Italy	0.9	0.6	-26.5	1.0	1.6	60.8
South Africa	0.4	0.7	83.1	0.5	1.1	117.3
New Zealand	0.3	0.6	90.0	0.5	1.0	90.7
Russia	1.6	0.7	-58.2	2.0	0.3	-85.8
Other	1.7	2.5	47.8	2.3	3.3	40.3
	1,469.1	1,564.7	6.5	\$2,218.3	\$2,570.4	15.9

Note: Discrepancies in totals are due to rounding.  
Percentages are based on unrounded data.

Sources: U.S. Dep. Commer., Bureau of the Census, data base from Natl. Mar. Fish. Serv., Fish, Stat, Div., Silver Spring, MD 20910; and Alaska Fish. Sci. Cent., 7600 Sand Point Way N.E., BIN C15700, Seattle, WA 98115-0070.

Table 6.--Value (million dollars) and percent of Pacific Northwest edible fishery products exported to major countries, 1984-92.

Country	1984	1985	1986	1987	1988	1989	1990	1991	1992
Value									
Japan	\$451.2	\$639.9	\$ 776.8	\$ 936.7	\$1,401.3	\$1,426.1	\$1,608.1	\$1,660.4	\$2,060.9
Rep. of Korea	10.1	18.0	26.7	31.5	35.9	52.5	94.4	145.9	127.4
United Kingdom	51.1	43.5	71.1	58.4	66.0	56.5	80.5	113.8	125.7
Canada	54.4	60.8	71.6	92.5	90.4	124.8	100.6	96.0	96.7
France	25.1	24.1	34.4	48.9	31.2	18.0	29.8	32.5	36.2
Australia	13.2	11.9	12.5	14.3	15.3	16.2	14.4	11.8	15.7
Other	<u>42.7</u>	<u>38.5</u>	<u>40.7</u>	<u>49.5</u>	<u>60.0</u>	<u>53.2</u>	<u>142.7</u>	<u>157.9</u>	<u>107.8</u>
Total									
Percent									
Japan	69.6	76.5	75.1	76.0	82.4	81.6	77.7	74.9	80.2
Rep. of Korea	1.6	2.1	2.6	2.6	2.1	3.0	4.6	6.6	4.9
United Kingdom	7.9	5.2	6.9	4.7	3.9	3.2	3.9	5.1	4.9
Canada	8.4	7.3	6.9	7.5	5.3	7.2	4.8	4.3	3.8
France	3.9	2.9	3.3	4.0	1.9	1.0	1.4	1.5	1.4
Australia	2.0	1.4	1.2	1.2	0.9	0.9	0.7	0.5	0.6
Other	<u>6.6</u>	<u>4.6</u>	<u>3.9</u>	<u>4.0</u>	<u>3.5</u>	<u>3.1</u>	<u>6.9</u>	<u>7.1</u>	<u>4.2</u>
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Discrepancies in totals are due to rounding.

Sources: U.S. Dep. Commer., Bur. of the Census; data base from Natl. Mar. **Fish. Serv.**, Fish. Stat. Div., Silver Spring, MD 20910; and Alaska Fish. Sci. Cent., 7600 Sand Point Way N.E., BIN C15700, Seattle, WA 98115-0700.

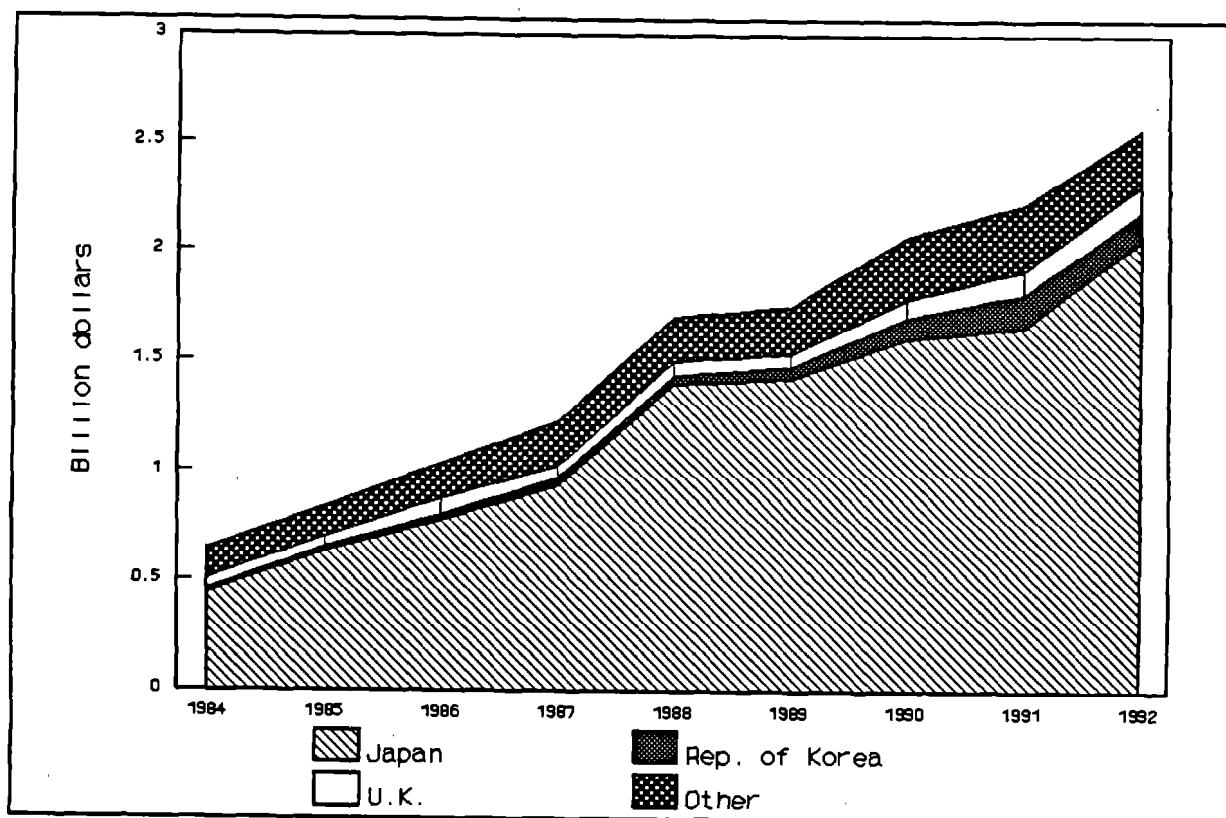


Figure 4.-- Pacific Northwest exports of edible fishery products by country of destination, 1984-92.

The United Kingdom was third with purchases of \$125.7 million or 4.9% of the total (Appendix Table 9). The quantity increased by 11.3%, while the value advanced by 10.5% from 1991. Canned salmon exports increased 18% in 1992 to 50 million lb, and the value increased by almost 15% to \$105 million. The United Kingdom was the 'leading buyer of canned salmon, with 69.5% of the canned salmon exports. Purchases of whole or dressed cod fell 8% to \$8.9 million, and whole or dressed salmon was up 20.8% to \$5.8 million from the previous year.

Canada ranked fourth with purchases of \$96.7 million or 3.8% of the total Pacific Northwest fishery exports, up slightly from \$96 million in 1991. Increased purchases of canned salmon, herring, and shrimp were offset by the drop in purchases in whole or dressed salmon and halibut (Appendix Table 10).

Exports to France ranked fifth, increasing 5% in quantity and 11.4% in **value** to 22 million lb and \$36 million, respectively (Appendix Table 11). The increase was attributed to the rise of whole or dressed salmon and fillets. Whole or dressed salmon totaled \$26.5 million, up 27% from 1991 and comprised 73% of fishery exports to France.

Advancing to the sixth spot was the People's Republic of China, with purchases of \$17.9 million, up 44% from the \$12.4 million in 1991. The People's Republic of China purchases were mainly of snow crab (Appendix Table 12). Fishery exports to this country began in 1990 with only \$132,000.

Rounding out the top 10 leading importers were Portugal, Australia, the Netherlands, and Sweden with purchases of \$17.3, \$15.7, \$13.5, and \$8.8 million, respectively. Exports to Portugal amounted to \$17.3 million, down 39% from the \$28.4 million in the previous year. Exports of salted cod from the Northwest declined by 82% to \$3.1 million in 1992 from \$17.3 million in 1991 (Appendix Table 13). The loss was partially offset by the 31% increase of whole or dressed cod to \$14.2 million in 1992. The drop in salted cod exports to

Portugal from the Pacific Northwest does not include 4.7 million lb of salted cod valued at \$7.7 million that was shipped overland to New York, then to Portugal. Australia was in the eighth spot with \$15.7 million, up 32.5% from 1991, with only exports of canned salmon (Appendix Table 14). Australia was the second leading buyer of canned salmon, with 10.4% of the total canned salmon exports from the Pacific Northwest.

Two countries that dropped out of the top 10 were the Federal Republic of Germany and Norway. The supply of groundfish in the European market was greatly influenced by higher catches of cod by Norway and Russia in the Barents Sea (FAO/Globefish 1993). Consequently, purchases of cod and pollock by the Federal Republic of Germany and Norway from the Pacific Northwest were down drastically from 1991. The Federal Republic of Germany dropped from fifth place in 1991 to 13th in 1992, down 81% from \$38.1 million in 1991 to \$7.1 million in 1992 (Appendix Table 15). Shipments of groundfish products to Germany declined by 90% from 1991. Norway slipped from the seventh position to 16th, purchasing only \$4 million in 1992, down 87% from \$30.9 million in 1991 (Appendix Table 16). Exports of whole or dressed cod to Norway went from 29.2 million lb in 1991 down to 2.4 million lb in 1992.

#### Exports by Customs District

Pacific Northwest fishery exports by the Alaska, Washington, and Oregon customs districts for 1991 and 1992 are presented in Tables 7 and 8, respectively. Table 9 presents the percentage distribution by customs district from 1977. By quantity, 1.2 billion lb or 78.1% of exports in 1992 were shipped from the Alaska customs district, compared with 326 million lb or 20.8% from

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<sup>1</sup>Steven P. Freese, Natl. Mar. Fish. Serv., Northwest Regional Office, 7600 Sand Point Way N.E., BIN C15700, Seattle, WA 98115-0070. Pers. commun., October 1992.

Table 7.- -Quantity (thousands of pounds), value (thousands of dollars), and percent of total 1991 value of Pacific Northwest edible fishery products exported by customs district to area or country of destination, 1991.

District	Asia*	Europe	Canada	Other	Total
Quantity					
Alaska	996,110	114,047	8,712	--	1,118,868
Washington	199,426	95,262	44,123	387	339,201
Oregon	9,908	924	43	117	10,994
Total	1,205,444	210,233	52,878	504	1,469,062
Value					
Alaska	\$1,423,261	\$107,321	\$12,231	--	\$1,542,813
Washington	398,951	169,346	83,631	\$511	652,439
Oregon	22,147	706	120	67	23,040
Total	\$1,844,359	\$277,373	\$95,982	\$578	\$2,218,292
Percent of total value					
Alaska	64.2	4.8	0.6	--	69.6
Washington	18.0	7.6	3.8	0.0	29.4
Oregon	1.0	0.0	0.0	0.0	1.0
Total	83.1	12.5	4.3	0.0	100.0

\* Includes Australia and New Zealand.

Note: Discrepancies in totals are due to rounding.

Sources: U.S. Dep. Commer., Bureau of the Census; data base from Natl. Mar. Fish. Serv., Fish. Stat. Div., Silver Spring, MD 20910; and Alaska Fish. Sci. Cent., 7600 Sand Point Way N.E., BIN C15700, Seattle, WA 98115-0070.

Table 8.--Quantity (thousands of pounds), value (thousands of dollars), and percent of total 1990 value of Pacific Northwest edible fishery products exported by customs district to area or country of destination, 1992.

District	Asia*	Europe	Canada	Other	Total
Quantity					
Alaska	1,172,289	41,246	8,165	--	1,221,699
Washington	167,264	110,355	47,750	752	326,121
Oregon	16,137	755	10	--	16,901
Total	1,355,690	152,356	55,935	752	1,564,722
Value					
Alaska	\$1,841,473	\$31,135	\$11,349	--	\$1,883,959
Washington	363,359	202,025	85,292	\$1,182	651,858
Oregon	33,899	678	23	--	34,599
Total	\$2,238,731	\$233,838	\$96,664	\$1,182	\$2,570,416
Percent of total value					
Alaska	71.7	1.2	0.4	--	73.3
Washington	14.1	7.9	3.3	0.0	25.4
Oregon	1.3	0.0	0.0	--	1.3
Total	87.1	9.1	3.8	0.0	100.0

\* Includes Australia and New Zealand.

Note: Discrepancies in totals are due to rounding.

Sources: U.S. Dep. Commer., Bureau of the Census; data base from Natl. Mar. Fish. Serv., Fish. Stat. Div., Silver Spring, MD 20910; and Alaska Fish. Sci. Cent., 7600 Sand Point Way N.E., BIN C15700, Seattle, WA 98115-0070.



Table 9.--Pacific Northwest exports of edible fishery products by customs districts in percentage of the total for each year from 1977 to 1992.

Year	Quantity (%)			Value (%)		
	Oregon	Washington	Alaska	Oregon	Washington	Alaska
1977	2.1	83.3	14.6	2.2	81.6	16.2
1978	2.5	68.3	29.3	2.4	65.1	32.5
1979	2.8	51.6	45.6	1.9	51.6	46.5
1980	1.4	55.4	43.2	1.4	59.5	39.1
1981	1.4	53.9	44.7	1.5	57.5	41.0
1982	2.0	42.4	55.6	2.3	50.1	47.6
1983	1.3	40.6	58.1	1.6	48.8	49.6
1984	1.8	43.8	54.4	1.8	53.9	44.3
1985	1.7	39.5	58.8	1.7	45.6	52.7
1986	1.5	45.5	53.1	1.9	49.0	49.2
1987	1.6	46.4	52.0	1.8	51.6	46.6
1988	1.6	34.5	63.9	2.2	44.3	53.5
1989	1.1	31.7	67.2	1.4	38.2	60.4
1990	0.6	21.9	77.5	1.0	30.7	68.3
1991	0.7	23.1	76.2	1.0	29.4	69.6
1992	1.1	20.8	78.1	1.3	25.4	73.3

Note: Discrepancies in percentages not adding to 100% are due to rounding.

Sources: U.S. Dep. Commer., Bureau of the Census; data base from Natl. Mar. Fish. Serv., Fish. Stat. Div., Silver Spring, MD 20910; and Alaska Fish. Sci. Cent., 7600 Sand Point Way N.E., BIN C15700, Seattle, WA 98115-0070.

Washington, and 16.9 million lb or 1.1% from Oregon. By value, \$1.88 billion or 73.3% of the total was from Alaska, \$652 million (25.4%) was from Washington, and \$34.6 million **or** 1.3% was from Oregon (Fig. 5).

Pacific Northwest fishery exports in 1992 destined for Pacific Rim countries increased to \$2.2 billion or 87.1% of total compared to the \$1.84 billion or 83.1% in 1991, with \$1.8 billion shipped from Alaska and \$363 million from Washington in 1992. Exports to Europe fell as lower sales of groundfish to the Federal Republic of Germany and Norway led to a 15.7% decline. Exports to Europe totaled \$233.8 million in 1992, or 9.1% of the total, down from \$277.4 million or 12.5% of total exports **in** 1991, with \$202 million shipped from Washington and \$31 million from Alaska in 1992.

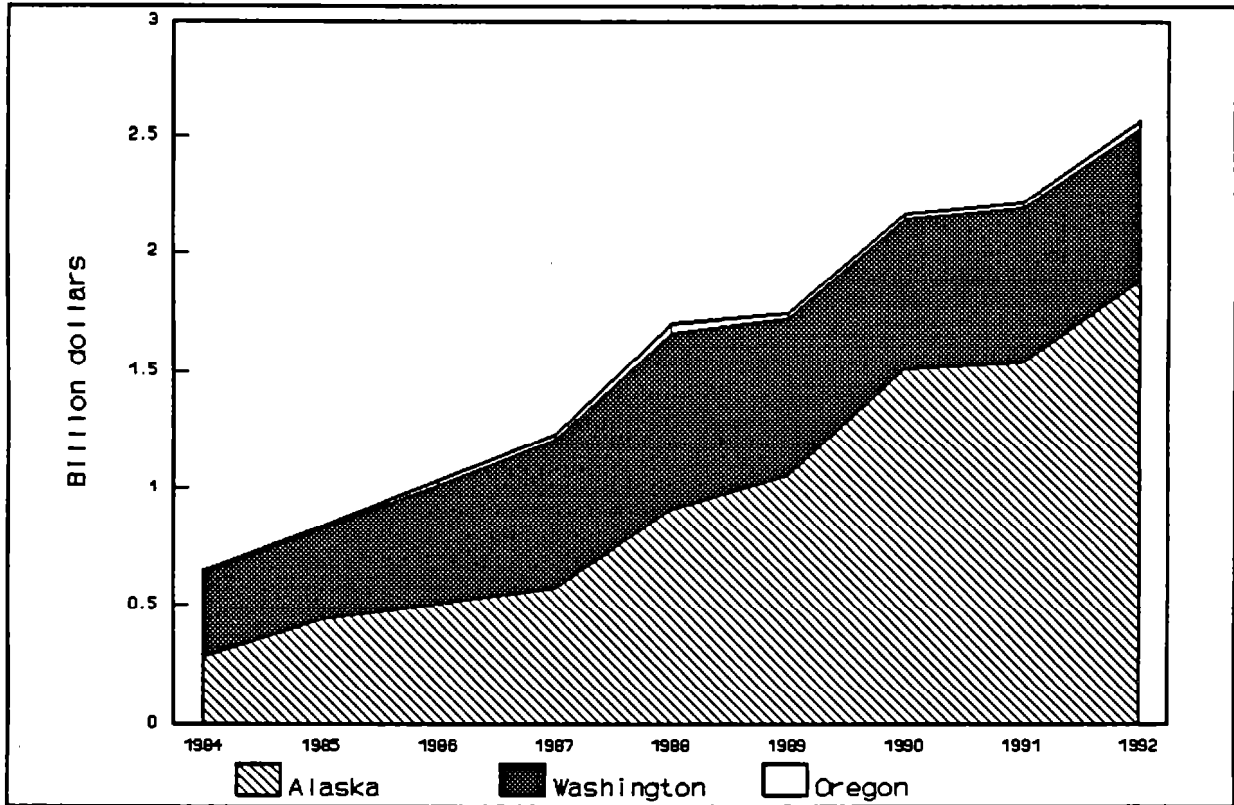


Figure 5. --Pacific Northwest exports of edible fishery products by customs districts, 1984-92.

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APPENDIX

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Appendix Table 1. --Export categories of edible fishery products for 1992.

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Product description

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Trout, rainbow, fresh, farmed  
fresh  
Salmon, Atlantic, fresh, farmed  
Atlantic, fresh, wild  
chinook, fresh  
chum, fresh  
pink, fresh  
sockeye, fresh  
coho, fresh  
Danube, fresh  
Salmonidae, nspf, fresh  
Flatfish, halibut, Greenland turbot, fresh  
plaice, fresh  
sole, fresh  
nspf, fresh  
Tuna, albacore, fresh  
Herring, fresh  
Groundfish, cod, nspf, fresh  
Groundfish, pollock, Atlantic, fresh  
Mackerel, fresh  
Shark, dogfish, fresh  
Eels, fresh  
Sablefish, fresh  
Lingcod, fresh  
Fish, nspf, fresh  
Fish, nspf, liver and roe, fresh  
Salmon, chinook, frozen  
chum, frozen  
pink, frozen  
sockeye, frozen  
coho, frozen  
Pacific, nspf, frozen  
Trout, frozen  
Salmon, Atlantic, Danube, frozen  
Salmonidae, nspf, frozen  
Flatfish, halibut, Atlantic, Pacific, frozen  
turbot, Greenland, frozen  
plaice, frozen  
sole, frozen  
nspf, frozen  
Tuna, albacore, frozen  
Herring, frozen  
Groundfish, cod, nspf, frozen  
Groundfish, pollock, Atlantic, frozen  
Mackerel, frozen  
Shark, dogfish, frozen



Appendix Table 1.--Continued.

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Product description

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Eels, frozen  
Sea bass, frozen  
Groundfish, hake, whiting, frozen  
Sablefish, frozen  
Fish, nspf, frozen  
Sturgeon roe, frozen  
Herring roe, frozen  
Salmon, nspf, roe, frozen  
Groundfish, pollock, Alaska roe, frozen  
Fish, nspf, liver and roe, frozen  
Fish, nspf, fillet, fresh  
Groundfish, cod fillet, frozen  
Flatfish, halibut, nspf, fillet, frozen  
Groundfish, pollock, Alaska fillet, frozen  
Fish, nspf, fillet, frozen  
Surimi  
Groundfish, cod, nspf, minced, frozen > 6.8 kg  
Fish, nspf, minced, frozen > 6.8 kg  
Fish, nspf, meat, frozen  
Salmon, nspf, roe, cured  
Herring roe, cured  
Fish, nspf, liver and roe, cured  
Fish, nspf, fillet, dried/salted/brined  
Salmon, smoked  
Herring, smoked  
Fish, nspf, smoked  
Groundfish, cod, dried  
Fish, nspf, dried  
Herring, salted  
Groundfish, cod, salted  
Fish, nspf, salted  
Shrimp, shell-on, frozen < 15 count size  
    shell-on, frozen 15/20 count size  
    shell-on, frozen 21/25 count size  
    shell-on, frozen 26/30 count size  
    shell-on, frozen 31/40 count size  
    shell-on, frozen 41/50 count size  
    shell-on, frozen 51/60 count size  
    shell-on, frozen 61/70 count size  
    shell-on, frozen > 70 count size  
    peeled, frozen  
Crabmeat, nspf, frozen  
Crab, king, frozen  
    snow, frozen  
    Dungeness, frozen  
    nspf, frozen

Appendix Table 1.--Continued.

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Product description

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Crawfish, freshwater, frozen  
Crustaceans, nspf, frozen  
Shrimp, live/fresh/dried/salted/brined  
Crabmeat, nspf, fresh/dried/salted/brined  
Crab, nspf, live/fresh/dried/salted/brined  
Crustaceans, nspf, live/fresh/dried/salted/brined  
Oysters, live/fresh/frozen/dried/salted/brined  
Scallops, live/fresh  
Scallops, frozen/dried/salted/brined  
Mussels, live/fresh, farmed  
    live/fresh, wild  
    frozen/dried/salted/brined  
Squid, (Loligo), live/fresh  
    nspf, live/fresh  
    nspf, and cuttlefish, live/fresh  
    nspf, fillet, frozen  
    (Loligo opalescens), frozen/dried/salted/brined  
    (Loligo pealei), frozen/dried/salted/brined  
    (Loligo, nspf), frozen/dried/salted/brined  
    nspf, frozen/dried/salted/brined  
    and cuttlefish, frozen/dried/salted/brined  
Octopus, live/fresh  
    frozen/dried/salted/brined  
Snail, other than sea snail, live/fresh/frozen/salted  
Sea urchin, roe, fresh  
    live/fresh  
Molluscs, nspf, live/fresh  
Clam, frozen/dried/salted/brined  
Molluscs, nspf, frozen/dried/salted/brined  
Fish, shellfish, nspf, juice  
Salmon, nspf, canned in oil  
    chum, canned not in oil  
    pink, canned not in oil  
    sockeye, canned not in oil  
    nspf, canned not in oil  
    nspf, prepared/preserved not in airtight container  
Herring, prepared/preserved  
Mackerel, prepared/preserved  
Sticks, type products, coated, not minced  
    type products, not coated, not minced  
Fish, nspf, prepared meals containing shellfish  
Fish balls, cakes, pudding, prepared/preserved  
Sticks, type products, coated of minced  
    type products, not coated of minced  
Caviar, caviar substitute, prepared/preserved

Appendix Table 1.--Continued.

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Product description

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Crab product prepared meals containing fish  
Crabmeat, king in airtight container  
    snow (opilio) in airtight container  
    snow, other in airtight container  
    Dungeness in airtight container  
    nspf, in airtight container  
    king, frozen  
    snow (opilio), frozen  
    snow, other, frozen  
    Dungeness, frozen  
    nspf, frozen  
    nspf, other preparations  
Crab, nspf, other preparations  
Shrimp, products prepared meals containing fish  
    frozen in airtight containers  
    frozen  
    canned  
    other preparations  
Crustaceans, nspf, products prepared meals containing fish  
    nspf, prepared/preserved  
Molluscs/other, nspf, products prepared meals containing fish  
Clam, prepared/preserved  
Abalone, prepared/preserved  
Scallops, prepared/preserved  
Squid (Loligo), prepared/preserved  
Squid, nspf, prepared/preserved  
Molluscs, nspf, prepared/preserved  
Soups, broths, based on fish or other seafood

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nspf - Not specifically provided for.

Sources: U.S. Dep. Commer., Bur. of the Census; U.S. Dep. of Treasury, Bur. of Customs; and available from Alaska Fish. Sci. Cent, 7600 Sand Point Way N.E., BIN C15700, Seattle, WA 98115-0070.

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Appendix Table 2. --Scientific names of species identified in this report.

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Common name	Scientific name
<b>FISH</b>	
Cod, Pacific	<u>Gadus macrocephalus</u>
Flounders and soles	<u>Pleuronectidae</u> family
Halibut, Pacific	<u>Hippoglossus stenoleois</u>
Herring, Pacific	<u>Clupea pallasii</u>
Mackerel, Atka	<u>Pleuroerammus monopecterygius</u>
Perch, Pacific ocean	<u>Sebastes alutus</u>
Pollock, walleye	<u>Theragra chalcogramma</u>
Rockfish	<u>Sebastes</u> and <u>Sebastolobus</u> species
Sablefish	<u>Anoplopoma fimbria</u>
Salmon, Pacific	<u>Oncorhynchus</u> species
Chinook	O <u>tshawytscha</u>
chum	O. <u>keta</u>
Coho	O. <u>kisutch</u>
Pink	O. <u>gorbuscha</u>
Sockeye	O. <u>nerka</u>
Turbot, Greenland	<u>Reinhardtius hippoglossoides</u>
Whiting (hake), Pacific	<u>Merluccius productus</u>
<b>CRUSTACEANS</b>	
Crab, Dungeness	<u>Cancer magister</u>
Crab, king	<u>Lithodes</u> and <u>Paralithodes</u> species
Crab, snow (Tanner)	<u>Chionoecetes bairdi</u> and <u>opilio</u>
Shrimp	<u>Pandalus</u> , <u>Pandalopsis</u> , and <u>Crangon</u> species

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Appendix Table 3.--Pacific Northwest exports of groundfish products including halibut by country of destination, quantity (million lb), value (million dollars), and percent change from 1991 to 1992.

Country	Quantity			Value		
	1991	1992	% change	1991	1992	% change
Japan	550.4	624.2	13.4	\$ 763.9	\$ 893.5	17.0
Rep. of Korea	151.7	168.9	11.3	139.3	121.9	-12.5
Canada	21.8	22.1	1.4	38.7	33.7	-13.0
Portugal	25.6	20.4	-20.6	28.4	17.3	-39.1
United Kingdom	16.5	17.8	7.4	13.8	13.8	-0.1
France	6.4	5.3	-16.6	9.1	8.7	-5.0
Federal Republic of Germany	38.9	4.1	-89.3	35.9	4.8	-86.7
Thailand	5.9	12.4	110.8	2.5	4.6	84.8
Taiwan	2.1	4.7	122.8	1.9	3.9	103.3
Norway	33.3	2.8	-91.6	30.9	2.2	-92.8
People's Republic of China	5.1	3.6	-28.6	1.7	1.6	-6.0
Sweden	0.9	0.8	-6.8	1.5	1.3	-14.5
Hong Kong	0.2	0.6	237.5	0.3	1.2	258.9
Denmark	6.4	0.7	-89.1	5.1	0.9	-82.8
Other	<u>1.4</u>	<u>2.4</u>	<u>75.1</u>	<u>1.4</u>	<u>2.8</u>	<u>106.8</u>
Total	866.6	890.9	2.8	\$1,074.4	\$1,112.2	3.5

Note: Discrepancies in totals are due to rounding and percentages are based on unrounded numbers.

Sources: U.S. Dep. Commer., Bur. of the Census; data base from Natl. Mar. Fish. Serv., Fish. Stat. Div., Silver Spring, MD 20910; and Alaska Fish. Sci. Cent., 7600 Sand Point Way N.E., BIN C15700, Seattle, WA 98115-0070.

Appendix Table 4.- Pacific Northwest exports of salmon products (fresh, frozen, canned, cured, and roe) by country of destination, quantity (million lb), value (million dollars), and percent change from 1991 to 1992.

Country	Quantity			Value		
	1991	1992	% change	1991	1992	% change
Japan	216.8	253.8	17.1	\$419.1	\$665.4	58.8
United Kingdom	48.0	54.0	12.3	99.5	110.9	11.4
Canada	15.1	13.6	-10.3	28.1	28.1	0.0
France	14.4	16.7	16.1	22.0	27.1	23.3
Australia	5.8	8.2	42.8	11.7	15.7	33.9
Netherlands	6.3	8.4	34.2	10.5	12.6	20.1
Belgium	2.0	3.7	89.1	3.8	6.5	73.6
Denmark	1.4	3.9	187.5	1.8	6.1	231.6
Sweden	3.6	4.3	20.7	4.3	5.5	26.9
Rep. of Korea	1.2	1.2	-5.5	2.5	2.3	-7.9
Federal Republic of Germany	0.9	1.2	37.8	1.6	2.1	26.6
Ireland	0.7	1.3	77.1	1.1	2.0	83.3
Italy	0.2	0.4	85.0	0.5	1.3	176.3
South Africa	0.4	0.7	84.9	0.5	1.1	116.0
New Zealand	0.3	0.6	76.1	0.5	1.0	84.6
Hong Kong	0.5	0.5	-0.5	0.8	0.9	12.9
Switzerland	0.3	0.2	-44.0	0.6	0.5	-26.1
Other	<u>2.7</u>	<u>2.1</u>	<u>-21.6</u>	<u>3.3</u>	<u>2.4</u>	<u>-27.7</u>
Total	320.6	374.8	16.9	\$612.3	\$891.4	45.6

Note: Discrepancies in totals are due to rounding and percentages are based on unrounded numbers.

Sources: U.S. Dep. Commer., Bur. of the Census; data base from Natl. Mar. Fish. Serv., Fish. Stat. Div., Silver Spring, MD 20910; and Alaska Fish. Sci. Cent., 7600 Sand Point Way N.E., BIN C15700, Seattle, WA 98115-0070.

Appendix Table 5.--Pacific Northwest exports of fresh and frozen salmon by country of destination, quantity (million lb), value (million dollars), and percent change from 1991 to 1992.

Country	Quantity			Value		
	1991	1992	% change	1991	1992	% change
Japan	200.5	233.6	16.5	\$349.8	\$574.1	64.1
France	13.4	16.4	22.4	20.8	26.5	27.3
Canada	10.7	9.2	-14.4	18.9	16.9	-10.8
Denmark	1.3	3.9	193.1	1.8	6.1	240.0
United Kingdom	5.2	3.8	-27.5	7.3	5.8	-20.8
Sweden	3.6	4.3	20.7	4.3	5.5	26.9
Belgium	1.1	2.2	96.5	2.3	4.1	73.4
Rep. of Korea	1.2	1.2	-5.5	2.5	2.3	-7.9
Federal Republic of Germany	0.8	1.1	29.7	1.4	1.8	22.9
Netherlands	0.4	0.8	119.5	0.7	1.3	82.2
Italy	0.1	0.4	147.7	0.3	1.2	314.4
Hong Kong	0.5	0.5	1.8	0.7	0.9	26.0
People's Republic of China	0.0	0.3	779.0	0.0	0.5	922.6
Other	<u>1.7</u>	<u>2.5</u>	<u>47.7</u>	<u>2.1</u>	<u>2.8</u>	<u>30.5</u>
Total	240.6	280.0	16.4	\$413.2	\$649.7	57.2

Note: Zero indicates less than 50,000 lb or \$50,000.  
Discrepancies in totals are due to rounding and percentages are based on unrounded numbers.

Sources: U.S. Dep. Commer., Bur. of the Census; data base from Natl. Mar. Fish. Serv., Fish. Stat. Div., Silver Spring, MD 20910; and Alaska Fish. Sci. Cent., 7600 Sand Point Way N.E., BIN C15700, Seattle, WA 98115-0070.

Appendix Table 6. --Pacific Northwest exports of canned salmon by country of destination, quantity (million lb), value (million dollars), and percent change from 1991 to 1992.

Country	Quantity			Value		
	1991	1992	% change	1991	1992	% change
United Kingdom	42.4	50.2	18.3	\$ 91.5	\$105.0	14.8
Australia	5.8	8.2	42.8	11.7	15.7	33.9
Netherlands	5.9	7.6	29.0	9.7	11.3	15.8
Canada	4.3	4.3	-0.6	8.9	10.7	19.5
Belgium	0.9	1.5	79.2	1.4	2.4	71.5
Japan	0.2	1.5	768.9	0.3	2.3	652.2
Ireland	0.7	1.3	77.1	1.1	2.0	83.3
New Zealand	0.3	0.6	66.8	0.5	1.0	78.5
France	0.9	0.2	-78.3	1.0	0.2	-76.7
Other	<u>1.8</u>	<u>0.4</u>	<u>-79.3</u>	<u>2.3</u>	<u>0.6</u>	<u>-74.3</u>
Total	63.2	75.7	19.9	\$128.5	\$151.1	17.6

Note: Discrepancies in totals are due to rounding and percentages are based on unrounded numbers.

Sources: U.S. Dep. Commer., Bur. of the Census; data base from Natl. Mar. Fish. Serv., Fish. Stat. Div., Silver Spring, MD 20910; and Alaska Fish. Sci. Cent., 7600 Sand Point Way N.E., BIN C15700, Seattle, WA 98115-0070.



Appendix Table 7. --Pacific Northwest exports of edible fishery products to Japan by product, quantity (million lb), value (million dollars), and percent change from 1991 to 1992.

Product	Quantity			Value		
	1991	1992	% change	1991	1992	% change
Whole or dressed						
Salmon						
Chinook	4.5	5.7	25.0	\$ 16.2	\$ 20.6	27.4
chum	7.5	14.0	86.9	8.0	14.9	86.7
Pink	12.7	1.8	-85.7	10.8	2.1	-80.9
Sockeye	157.0	197.7	25.9	282.6	508.9	80.1
Coho	17.4	13.3	-23.9	28.8	23.9	-17.1
Other	1.4	1.1	-16.8	3.4	3.7	7.1
Subtotal	200.5	233.6	16.5	349.8	574.1	64.1
Groundfish						
Cod	71.0	60.4	-14.9	66.0	50.9	-23.0
Flatfish	8.6	1.7	-80.8	10.2	2.8	-72.8
Oth. flatfish	103.2	51.6	-50.0	76.7	32.2	-58.0
Mackerel	3.8	6.1	58.0	3.4	5.2	53.2
Sablefish	38.9	31.5	-19.2	93.7	75.8	-19.2
Other	61.8	147.8	139.1	57.6	123.5	114.3
Subtotal	287.4	299.0	4.0	307.7	290.3	-5.6
Herring	66.3	96.9	46.1	52.0	61.3	17.8
Roe						
Pollock	33.2	34.9	5.4	129.3	161.0	24.5
Herring	17.5	5.9	-66.2	20.8	21.3	2.4
Salmon	16.1	18.6	15.7	68.8	88.7	28.9
Other	9.1	6.8	-26.0	31.6	19.5	-38.3
Subtotal	75.9	66.3	-12.7	250.5	290.4	15.9
Fillets	2.9	3.3	13.6	3.6	3.6	-.1
Other						
Surimi	.	208.1	.	.	328.6	.
Minced	135.0	6.7	-95.0	190.2	7.4	-96.1
Meat, nspf	40.7	12.1	-70.3	48.6	9.9	-79.7
Ball, cakes, and pudding	26.2	43.9	67.3	34.5	57.0	65.3
Sticks, minced	15.8	9.3	-41.0	18.4	16.2	-11.9
Subtotal	217.8	280.1	28.6	291.8	419.1	43.7
Fish, other	2.0	2.6	32.4	3.6	3.9	9.9

Appendix Table 7.--Continued.

Product	Quantity			Value		
	1991	1992	% change	1991	1992	% change
Crab						
King	8.5	7.7	-9.5	\$ 53.6	\$ 56.8	5.9
Snow	68.4	120.4	75.9	149.0	267.8	79.7
Dungeness	0.4	0.4	3.3	1.0	1.0	-7.7
Other, nspf	85.9	27.0	-68.5	182.1	76.4	-58.0
Subtotal	163.2	155.4	-4.7	385.8	402.0	4.2
Crabmeat	1.6	1.4	-14.9	5.9	4.7	-20.8
Sea urchin	1.0	0.7	-34.6	7.7	5.5	-28.1
Caviar	0.1	0.4	260.7	0.8	4.8	472.8
Shellfish, other	<u>0.5</u>	<u>0.5</u>	<u>-7.9</u>	<u>1.4</u>	<u>1.2</u>	<u>-13.1</u>
Total	1,019.2	1,140.2	11.9	\$1,660.4	\$2,060.9	24.1

nspf - Not specifically provided for.

Note : Discrepancies in totals are due to rounding and percentages are based on unrounded numbers.

Sources: U.S. Dep. Commer., Bur. of the Census: data base from Natl. Mar. Fish. Serv., Fish. Stat. Div., Silver Spring, MD 20910; and Alaska Fish. Sci. Cent., 7600 Sand Point Way N.E., BIN C15700, Seattle, WA 98115-0070.

Appendix Table 8. --Pacific Northwest exports of edible fishery products to the Republic of Korea by product, quantity (million lb), value (million dollars), and percent change from 1991 to 1992.

Product	Quantity			Value		
	1991	1992	% change	1991	1992	% change
Whole or dressed						
Groundfish						
Cod	36.3	25.5	-29.7	\$ 20.6	\$ 13.9	-32.3
Flatfish	34.0	45.9	34.8	11.3	17.7	56.4
Other	23.5	55.1	134.3	16.4	29.8	82.2
Subtotal	93.9	126.5	34.8	48.3	61.4	27.2
Herring	0.7	0.2	-65.3	0.0	0.1	308.4
Salmon	1.2	1.2	-5.5	2.5	2.3	-7.9
Fillets						
Cod	0.4	1.2	219.6	0.4	0.8	96.2
Other	1.4	1.6	14.6	1.4	0.5	-61.6
Subtotal	1.8	2.8	57.8	1.8	1.3	-27.4
Roe						
Pollock	6.5	3.7	-43.7	22.9	16.5	-28.1
Other	1.7	0.4	-76.3	4.1	0.8	-81.2
Subtotal	8.1	4.0	-50.3	27.0	17.2	-36.2
Other						
Surimi	--	21.1	--	--	29.3	--
Minced, nspf	20.4	3.6	-82.6	28.2	4.3	-84.8
Meat, nspf	8.8	2.0	-77.3	9.1	1.5	-83.0
Balls, cakes, pudding	9.9	8.0	-19.3	16.9	5.9	-65.1
Sticks, minced	9.3	0.8	-91.3	8.4	0.9	-89.1
Subtotal	48.3	35.4	-26.7	62.5	41.9	-32.9
Crab						
Snow	0.4	0.8	115.3	0.6	1.5	153.6
Other	1.5	0.3	-82.1	2.7	0.9	-67.4
Subtotal	1.9	1.0	-43.8	3.3	2.3	-28.8
Crabmeat	--	0.1	--	--	0.1	--

Appendix Table 8.--Continued.

Product	Quantity			Value		
	1991	1992	% change	1991	1992	% change
Fish, other	0.2	0.6	200.4	\$ 0.3	\$ 0.5	53.5
Shellfish, other	<u>0.2</u>	<u>0.0</u>	<u>-80.5</u>	<u>0.2</u>	<u>0.1</u>	<u>-42.8</u>
Total	156.3	172.0	10.0	\$145.9	\$127.4	-12.7

nspf - Not specifically provided for.

Note : Zero indicates less than 50,000 lb or \$50,000.  
Discrepancies in totals are due to rounding and percentages are based on unrounded numbers.

Sources: U.S. Dep. Commer., Bur. of the Census; data base from Natl. Mar. Fish. Serv., Fish. Stat. Div., Silver Spring, MD 20910; Alaska Fish. Sci. Cent., 7600 Sand Point Way N.E., BIN C15700, Seattle, WA 98115-0070.

Appendix Table 9. --Pacific Northwest exports of edible fishery products to the United Kingdom by product, quantity (million lb), value (million dollars), and percent change from 1991 to 1992.

Product	Quantity			Value		
	1991	1992	% change	1991	1992	% change
Whole or dressed						
Salmon						
Chum	1.5	1.6	7.1	\$ 2.1	\$ 2.6	22.5
Pink	1.1	0.4	-58.5	1.6	0.6	-63.3
Sockeye	0.7	0.3	-62.5	1.5	0.4	-71.1
Coho	0.6	0.6	12.0	1.0	1.2	20.1
Other	1.4	0.8	-40.0	1.1	1.0	-7.2
Subtotal	5.2	3.8	-27.5	7.3	5.8	-20.8
Cod	12.4	13.2	6.7	9.7	8.9	-8.0
O t h e r	1.8	1.1	-37.6	1.6	1.6	-1.8
Filletts	0.4	0.8	94.2	0.2	1.0	349.2
Minced, meat, balls, cakes, sticks, and surimi	1.9	2.6	34.3	2.3	2.3	2.5
Canned						
Salmon						
chum	1.5	1.8	19.5	2.1	2.7	27.8
Pink	12.5	16.0	28.1	20.7	25.3	22.2
Sockeye	20.6	28.1	36.3	53.1	69.8	31.6
Other	7.9	4.4	-44.5	15.6	7.2	-53.6
Subtotal	42.4	50.2	18.3	91.5	105.0	14.8
Fish, other	0.6	0.1	-91.4	1.1	0.1	-90.5
Shellfish, all	<u>0.1</u>	<u>0.4</u>	<u>232.8</u>	<u>0.2</u>	<u>1.0</u>	<u>405.5</u>
Total	64.8	72.1	11.3	\$113.8	\$125.7	10.5

Note: Discrepancies in totals are due to rounding.  
Percentages are based on unrounded numbers.

Sources: U.S. Dep. Commer., Bur. of the Census; data base from Natl. Mar. Fish. Serv., Fish. Stat. Div., Silver Spring, MD 20910; Alaska Fish. Sci. Cent., 7600 Sand Point Way N.E., BIN C15700, Seattle, WA 98115-0070.

Appendix Table 10. --Pacific Northwest exports of edible fishery products to Canada by product, quantity (million lb), value (million dollars), and percent change from 1991 to 1992.

Product	Quantity			Value		
	1991	1992	% change	1991	1992	% change
Whole or dressed						
Salmon						
Chinook	0.1	0.3	83.1	\$ 0.3	\$ 0.6	83.4
chum	1.4	1.9	35.0	2.1	2.6	21.2
Pink	2.6	2.5	-2.9	4.5	4.0	-11.2
Sockeye	3.7	2.6	-29.9	5.9	5.1	-13.7
Coho	1.9	1.2	-36.0	3.6	2.6	-26.1
Not specified	1.0	0.8	-26.7	2.5	2.0	-21.5
Subtotal	10.7	9.2	-14.4	18.9	16.9	-10.8
Cod	2.2	2.2	0.4	2.3	2.8	20.8
Halibut	4.2	3.0	-29.4	11.3	5.5	-51.7
Flatfish, other	0.3	1.1	313.7	0.5	1.6	203.6
Herring	4.8	7.6	57.7	2.2	4.7	119.7
Other	2.6	1.8	-29.1	3.2	2.4	-26.0
Filletts						
Cod	0.5	0.4	-25.6	0.9	0.6	-33.8
Halibut	0.3	0.7	174.4	0.7	1.3	97.0
Other	3.5	4.6	28.7	6.3	6.2	-2.5
Roe	0.2	0.4	87.7	0.6	0.7	15.2
Minced, meat, balls, cakes, and stick						
Fish sticks	2.2	1.7	-22.2	4.3	2.7	-37.8
	6.0	6.7	11.5	8.7	9.9	14.3
Canned						
Salmon						
Pink	1.7	1.2	-31.0	3.0	2.2	-28.1
Sockeye	2.2	2.4	7.8	5.0	7.2	44.5
Other	0.4	0.7	82.4	1.0	1.3	38.7
Subtotal	4.3	4.3	-0.6	8.9	10.7	19.5
Fish, other	1.0	1.2	16.6	1.5	2.2	45.1

Appendix Table 10.--Continued.

Product	Quantity			Value		
	1991	1992	% change	1991	1992	% change
Crab	1.3	1.4	9.6	\$ 6.0	\$ 5.9	-1.5
Crabmeat	0.4	0.6	47.7	0.9	1.0	17.2
Shrimp	3.1	3.7	18.4	11.9	13.7	14.7
Shellfish, other	<u>5.2</u>	<u>5.8</u>	<u>10.9</u>	<u>6.8</u>	<u>7.9</u>	<u>17.0</u>
Total	52.9	55.9	5.8	\$96.0	\$96.7	0.7

Note: Discrepancies in totals are due to rounding.  
Percentages are based on unrounded numbers.

Sources: U.S. Dep. Commer., Bur. of the Census; data base from Natl. Mar. Fish. Serv., Fish. Stat. Div., Silver Spring, MD 20910; Alaska Fish. Sci. Cent., 7600 Sand Point Way N.E., BIN C15700, Seattle, WA 98115-0070.

Appendix Table 11. --Pacific Northwest exports of edible fishery products to France by product, quantity (million lb), value (million dollars), and percent change from 1991 to 1992.

Product	Quantity			Value		
	1991	1992	% change	1991	1992	% change
Whole or dressed						
Salmon						
chum	3.3	5.2	56.4	\$ 3.9	\$ 6.2	60.2
Coho	4.5	6.3	40.1	9.4	13.9	48.4
Pink	4.2	3.9	-8.3	4.8	4.2	-12.5
Sockeye	0.4	0.3	-17.0	0.7	0.6	-11.9
Not specified	1.0	0.7	-28.3	2.1	1.6	-24.4
Subtotal	13.4	16.4	22.4	20.8	26.5	27.3
Other	0.4	0.7	92.7	0.2	1.0	514.4
Roe	0.4	0.3	-19.6	2.3	2.1	-7.8
Filletts	3.6	3.6	1.3	3.9	5.2	31.9
Minced, <b>meat</b> , balls, cakes, sticks, and surimi	1.9	0.7	-64.9	2.7	0.7	-73.4
Crab	0.9	0.2	-78.3	1.0	0.2	-76.7
Fish, other	0.2	0.0	-94.4	0.3	0.0	-90.6
Shellfish, other	<u>0.4</u>	<u>0.2</u>	<u>-38.8</u>	<u>1.3</u>	<u>0.5</u>	<u>-65.2</u>
Total	21.2	22.2	5.0	\$32.5	\$36.2	11.4

Note: Zero indicated less than 50,000 lb or \$50,000.  
Discrepancies in totals are due to rounding.  
Percentages are based on unrounded numbers.

Sources: U.S. Dep. Commer., Bur. of the Census; data base from Natl. Mar. Fish. Serv., Fish. Stat. Div., Silver Spring, MD 20910; Alaska Fish Sci. Cent., 7600 Sand Point Way N.E., BIN C15700, Seattle, WA 98115-0070.



Appendix Table 12. --Pacific Northwest exports of edible fishery products to the People's Republic of China by product, quantity (million lb), value (million dollars), and percent change from 1991 to 1992.

Product	Quantity			Value		
	1991	1992	% change	1991	1992	% change
Whole or dressed						
Flatfish	5.0	3.5	-30.7	\$ 1.6	\$ 1.0	-38.3
Herring	.	2.6	.	.	1.0	.
Other	0.1	0.3	366.8	0.1	0.5	763.4
Crab						
Snow	1.5	6.5	338.1	2.5	12.3	389.9
Other, nspf	4.4	0.8	-80.9	8.0	2.4	-69.8
Other	<u>0.1</u>	<u>0.2</u>	<u>66.5</u>	<u>0.2</u>	<u>0.6</u>	<u>217.3</u>
Total	11.1	14.0	25.8	\$12.4	\$17.9	44.0

Note: Discrepancies in totals are due to rounding.  
Percentages are based on unrounded numbers.  
nspf - not specifically provided for.

Sources: U.S. Dep. Commer., Bur. of the Census; data base from Natl. Mar. Fish. Serv., Fish. Stat. Div., Silver Spring, MD 20910; Alaska Fish Sci. Cent., 7600 Sand Point Way N.E., BIN C15700, Seattle, WA 98115-0070.

Appendix Table 13. --Pacific Northwest exports of edible fishery products to Portugal by product, quantity (million lb), value (million dollars), and percent change from 1991 to 1992.

Product	Quantity			Value		
	1991	1992	% change	1991	1992	% change
Whole or dressed Cod	13.5	18.8	39.0	\$10.8	\$14.2	31.3
Cod, salted	11.4	1.5	-87.0	17.3	3.1	-82.2
Other	<u>0.7</u>	<u>0.1</u>	<u>-85.8</u>	<u>0.3</u>	<u>0.1</u>	<u>-82.8</u>
Total	25.7	20.4	-20.5	\$28.4	\$17.3	-39.1

Note : Discrepancies in totals are due to rounding.  
Percentages are based on unrounded numbers.

Sources : U.S. Dep. Commer., Bur. of the Census; data base from Natl. Mar. Fish. Serv., Fish. Stat. Div., Silver Spring, MD 20910; Alaska Fish Sci. Cent., 7600 Sand Point Way N.E., BIN C15700, Seattle, WA 98115-0070.

Appendix Table 14. --Pacific Northwest exports of edible fishery products to Australia by product, quantity (million lb), value (million dollars), and percent, change from 1991 to 1992.

Product	Quantity			Value		
	1991	1992	% change	1991	1992	% change
Canned						
Salmon						
Pink	3.4	5.4	61.0	\$ 5.3	\$ 8.5	61.7
Sockeye	1.9	2.3	24.6	5.3	6.2	16.9
Other	0.5	0.5	-8.0	1.2	1.0	-14.7
Subtotal	5.8	8.2	42.8	11.7	15.7	33.9
Other	<u>0.1</u>	<u>—</u>	<u>—</u>	<u>0.1</u>	<u>—</u>	<u>—</u>
Total	5.9	8.2	40.1	\$11.8	\$15.7	32.5

Note: Discrepancies in totals are due to rounding.  
Percentages are based on unrounded numbers.

Sources: U.S. Dep. Commer., Bur. of the Census; data base from Natl. Mar. Fish. Serv., Fish. Stat. Div., Silver Spring, MD 20910; Alaska Fish. Sci. Cent., 7600 Sand Point Way N.E., BIN C15700, Seattle, WA 98115-0070.

Appendix Table 15. --Pacific Northwest exports of edible fishery products to the Federal Republic of Germany by product, quantity (million lb), value (million dollars), and percent change from 1991 to 1992.

Product	Quantity			Value		
	1991	1992	% change	1991	1992	% change
Whole or dressed						
Salmon	0.8	1.1	29.7	\$ 1.4	\$1.8	22.9
Cod	5.9	1.1	-81.8	4.4	0.8	-81.3
Other	12.4	1.5	-87.9	10.4	1.1	-89.4
Roe	0.1	0.2	36.0	1.4	1.6	12.3
Filletts						
Pollock	12.5	0.8	-93.4	11.2	0.7	-93.6
Other	0.7	0.1	-88.6	0.8	0.2	-73.4
Subtotal	13.2	0.9	-93.0	12.0	0.9	-92.3
Minced, pollock, meat, balls, cakes,, pudding	7.2	0.6	-92.4	8.0	0.5	-93.2
Fish, other	0.0	0.0	14.9	0.3	0.1	-66.1
Shellfish, all	<u>0.1</u>	<u>0.2</u>	<u>54.9</u>	<u>0.2</u>	<u>0.2</u>	<u>-0.9</u>
Total	40.0	5.6	-86.1	\$38.1	\$7.1	-81.3

Note: Zero indicates less than 50,000 lb or \$50,000.  
Discrepancies in totals are due to rounding.  
Percentages are based on unrounded numbers.

Sources: U.S. Dep. Commer., Bur. of the Census; data base from Natl. Mar. Fish. Serv., Fish. Stat. Div., Silver Spring, MD 20910; Alaska Fish Sci. Cent., 7600 Sand Point Way N.E., BIN C15700, Seattle, WA 98115-0070.

Appendix Table 16. --Pacific Northwest exports of edible fishery products to Norway by product, quantity (million lb), value (million dollars), and percent change from 1991 to 1992.

Product	Quantity			Value		
	1991	1992	% change	1991	1992	% change
Whole or dressed						
Cod	29.2	2.4	-91.8	\$25.5	\$1.7	-93.3
Other	0.1	0.7	390.4	0.2	0.9	277.0
Cod, salted	3.2	.	.	4.4	.	.
Other	<u>0.8</u>	<u>0.6</u>	<u>-23.2</u>	<u>0.7</u>	<u>1.4</u>	<u>98.3</u>
Total	33.3	3.6	-89.1	\$30.9	\$4.0	-87.2

Note: Discrepancies in totals are due to rounding.  
Percentages are based on unrounded numbers.

Sources : U.S. Dep. Commer., Bur. of the Census; data base from Natl. Mar. Fish. Serv., Fish. Stat. Div., Silver Spring, MD 20910; Alaska Fish Sci. Cent., 7600 Sand Point Way N.E., BIN C15700, Seattle, WA 98115-0070.

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