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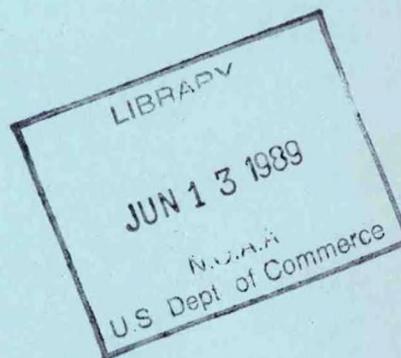


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Pacific Northwest and Alaska Exports of Edible Fishery Products, 1988

by
Richard K. Kinoshita,
Katina Landen, and
Joseph M. Terry

June 1989



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
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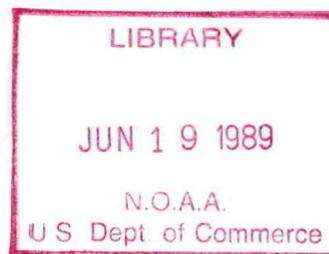
PACIFIC NORTHWEST AND ALASKA EXPORTS OF EDIBLE FISHERY PRODUCTS, 1988

by

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ABSTRACT

In 1988, Pacific Northwest and Alaska exports of edible fishery products scored an impressive 31% increase in quantity from 1987 to 795.7 million pounds (lb) or 360,944 metric tons (t); the value of these fishery exports increased by 38% to \$1.7 billion. Northwest and Alaska exports comprised 78.6% of total U.S. edible fishery exports, up slightly from 78.1% in 1987. A substantial rise in exports of whole or dressed salmon, other finfish, and snow crab contributed to the increase. In 1988, Pacific Northwest and Alaska exports were shipped to 33 countries. The top six countries accounted for over 96% of the total. Increased trade with Japan accounted for most of the gain, as exports to Japan totaled \$1.4 billion or 82% of the total, up from \$936.7 million and 76% in 1987. Canada was a distant second with \$90.4 million or 5.3% of the total, down from \$92.5 million and 7.5% in 1987. Pacific Northwest and Alaska exports to the United Kingdom and the Republic of Korea registered increases to \$66 million or 3.9%, and \$35.9 million or 2.1%, respectively. Exports to France fell drastically, with lower sales of whole or dressed salmon contributing to the decrease.

Over-the-side deliveries by U.S. fishing vessels to foreign processing vessels, commonly called joint venture sales, off the Pacific Coast amounted to 3.15 billion lb or 1.43 million t, with an estimated value of \$220 million. These sales are not included in U.S. trade statistics; if they were included, Pacific Northwest and Alaska exports of edible fishery products would equal \$1.9 billion and comprise 80% of U.S. fishery exports.

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INTRODUCTION

Exports of edible fishery products from the Pacific Northwest and Alaska continue to make major contributions to both total U.S. fishery exports and earnings of the fishing industry of the Pacific Northwest and Alaska. This report compares exports of edible fishery products from the Pacific Northwest and Alaska to total U.S. fish exports, examines major fishery products and major countries purchasing fishery products, examines changes in patterns in exports, reviews joint ventures sales, and updates Kinoshita (1988).

For the remainder of this report, the Pacific Northwest will be defined as the states of Oregon, Washington, and Alaska. The export data utilized in this report are from the U.S. Department of Commerce, Bureau of the Census, and were extracted from the National Marine Fisheries Service (NMFS) data base maintained by the Fishery Statistics Division, Silver Spring, Maryland.

Exports from the Pacific Northwest consist of shipments through the Oregon, Washington, and Alaska customs districts. These shipments include some products that are not caught and processed in the Pacific Northwest, and exclude some that are. It is possible to ascertain a product's approximate location of origin by checking its species; for example, king crab could not come from Atlantic waters. Most fishery products are shipped from the general area where they are harvested or processed. However, it is not possible to identify a product's state of origin by checking the customs district from which it is shipped, because fish harvested off Alaska could be shipped from Alaska or exported from Washington. Therefore, identifying exports by customs districts does not accurately reflect exports of fishery products harvested off each state, particularly when the products are sold to European countries. Another problem is that the large quantities of whole or dressed groundfish

harvested off Alaska are not identified by species, but are included in an "other" category. The "other" finfish category was changed in this year's report to include all identified groundfish species, including halibut, roe, other categories of whole, dressed, filleted, canned, cured, and processed fish, and excluding Pacific salmon, herring, and other nongroundfish species.

Some export categories are fairly specific as to species, product form, and condition. Other categories include several closely related genera, several unrelated species, or a family (Appendix Table A1). Scientific names of species identified in this report are listed in Appendix Table A2. Note that totals in tables and percentages may not always add because of rounding, and that percentage changes may not agree because they may have been calculated from unrounded data.

PACIFIC NORTHWEST AND ALASKA EXPORTS

Pacific Northwest exports of edible fishery products in 1988 were worth \$1.7 billion, an increase of 38% from 1987, and contributed 78.6% of the total U.S. exports of edible fishery products (Table 1). On a product weight basis, the quantity of Pacific Northwest fishery exports amounted to 795.7 million pounds (lb) or 360,944 metric tons (t), an increase of 31% from 1987 (Table 2).

An upward trend in exports started in 1985, with a strong recovery of salmon stocks in Alaska and an emerging domestic groundfish fishery in the North Pacific waters off Alaska (Fig. 1). Since 1984, Pacific Northwest fishery exports have increased by 79% in quantity, 162% in nominal value, and 136% in constant dollar value.

Table 1.—Pacific Northwest exports of edible fishery products in millions of dollars excluding and including joint venture sales and percent of total U.S. exports of edible fishery products, 1981-88.

Year	<u>Excluding joint ventures</u>			<u>Including joint ventures</u>		
	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

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, 1988, Silver Spring, MD 20910.

Table 2.—Pacific Northwest exports of edible fishery products in quantity (millions of pounds) and value (millions of dollars), and percent change in quantity and value from 1987 to 1988.

Product	Quantity			Value		
	1987	1988	% change	1987	1988	% change
FRESH & FROZEN						
Whole/dressed						
Salmon						
Chum	37.9	54.3	+43	\$ 54.4	\$ 101.2	+86
Pink	34.1	50.7	+48	45.5	86.3	+90
Sockeye	135.9	136.8	+1	362.7	490.5	+35
Other	46.4	38.0	-18	111.3	110.8	0
Subtotal	254.3	279.7	+10	573.9	788.8	+37
Herring	81.0	66.8	-18	70.4	69.8	-1
Sablefish	40.9	41.0	0	68.6	86.4	+26
Other whole/dressed						
Halibut	6.6	5.4	-19	12.9	10.0	-23
Other	58.5	144.1	+146	69.7	146.7	+110
Subtotal	65.2	149.4	+129	82.7	156.7	+90
Fillets & steaks						
Herring	2.6	18.8	+635	2.4	17.5	+624
Salmon	1.6	1.3	-21	3.3	3.0	-11
Other fillets						
Cod	7.6	10.4	+36	12.1	15.9	+31
Halibut	1.1	1.5	+39	2.0	2.6	+29
Other	18.3	27.9	+52	22.1	30.2	+37
Subtotal	27.1	39.9	+47	36.3	48.8	+34
King Crab	8.0	4.9	-38	58.6	44.3	-24
Snow Crab, <i>opilio</i>	30.4	44.3	+46	75.6	124.0	+64
Snow Crab, other	11.6	12.5	+8	38.2	49.0	+28
Shrimp	3.1	4.0	+30	9.6	13.5	+40
Fish balls, cakes, puddings	6.4	46.4	+627	5.4	40.5	+649
CANNED						
Salmon						
Pink	16.3	12.9	-21	29.1	29.2	0
Sockeye	10.6	11.4	+7	36.2	36.3	0
Other	6.7	6.7	0	14.7	20.3	+38
Subtotal	33.6	31.0	-8	80.0	85.8	+7
ROE						
Herring	5.6	13.0	+130	20.0	27.5	+37
Salmon	16.6	17.4	+5	70.3	88.2	+25
Other	2.1	4.8	+128	4.6	12.7	+175
N.E.S.	23.4	67.1	+187	37.3	83.9	+125
TOTAL	606.8	795.7	+31	\$1,231.8	\$1,700.1	+38

N.E.S. - Not elsewhere specified.

Note: Discrepancies in totals are due to rounding.

Percentages are based on unrounded numbers.

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.

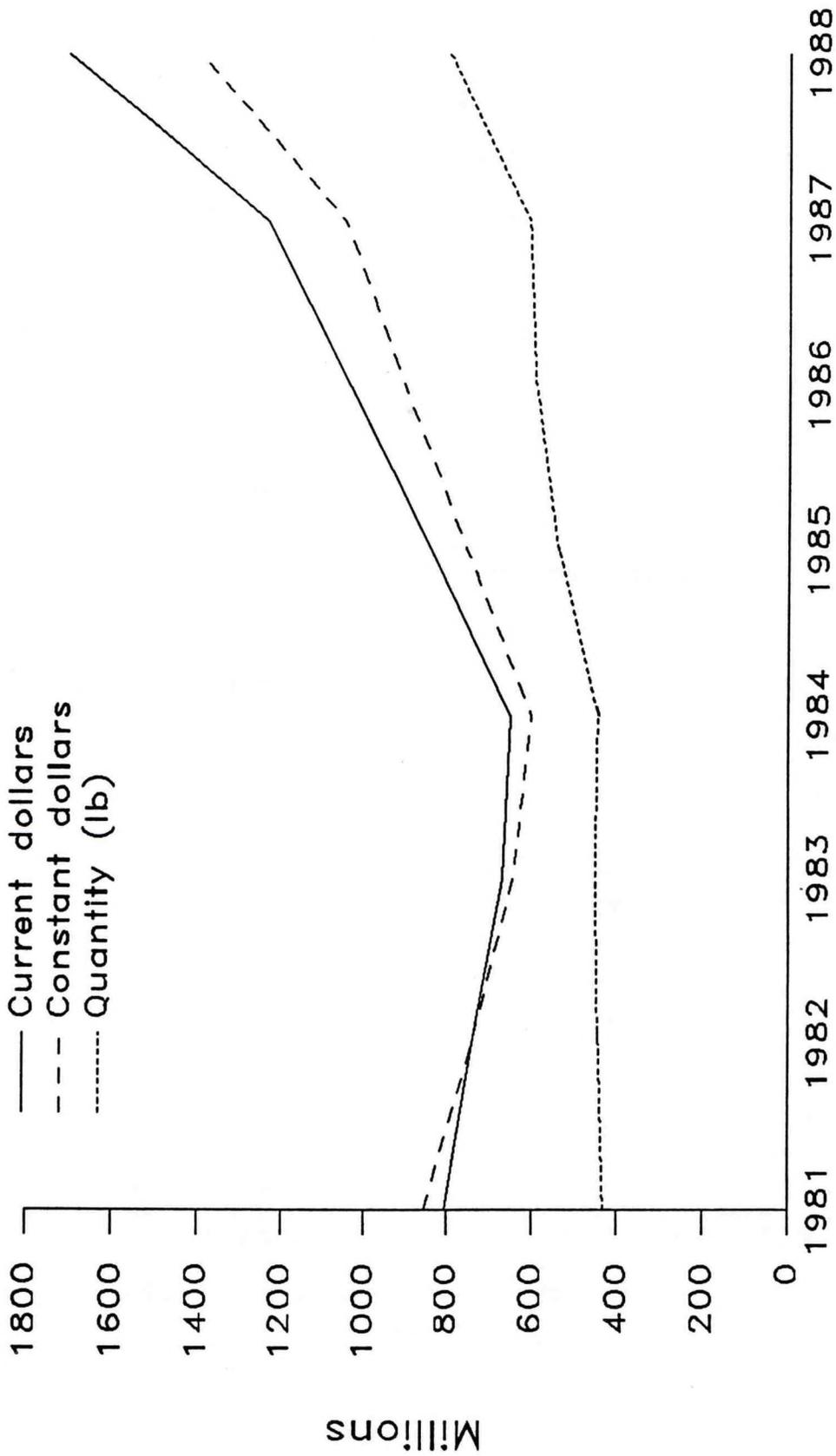


Figure 1.--Quantity and current and constant dollar values of Pacific Northwest exports of edible fishery products, 1981-88.

Sales by U.S. fishing vessels to foreign processing vessels in the U.S. exclusive economic zone (EEZ), commonly known as joint venture sales, have not been included in official U.S. merchandise trade statistics. If joint venture sales of fish caught off the Pacific Coast are added to other fishery exports, the 1988 Pacific Northwest exports would total \$1.92 billion and account for 80.6% of total U.S. exports of edible fishery products (Fig. 2). Joint venture sales have enjoyed an amazing rise between 1979 and 1987; however, the catch fell slightly in 1988, and is expected to drop drastically in 1989 as the domestic fishery continues to expand and replace the joint venture fishery.

Major Products

The major products and product groups for 1987-88 are listed in Table 2, and Table 3 summarizes Pacific Northwest exports in more general product groups. Salmon products accounted for \$967 million or 56.8% of fishery exports, followed by other finfish (\$358 million or 21.1%), snow crab (\$173 million or 10.2%), Pacific herring (\$115 million or 6.8%), and king crab (\$45 million or 2.6%). The quantity of Northwest salmon exports increased by 7.6%; higher prices accounted for much of the 33% increase in value. The quantity of whole or dressed salmon in 1988 increased 10% from 1987, while the value increased by 37% as average prices were 24% above a year earlier. In 1988, canned salmon exports were down by 8% in quantity, but the value rose by 7% from 1987. Lower exports of canned salmon resulted from a 22% decline in quantities canned. Although the total Alaska salmon catch increased by 4.6% to 512 million lb, a larger portion of the catch was sold fresh or frozen, rather than canned. Export data on total salmon, whole or dressed salmon, and canned salmon by country of destination are shown in Appendix Tables A3, A4,

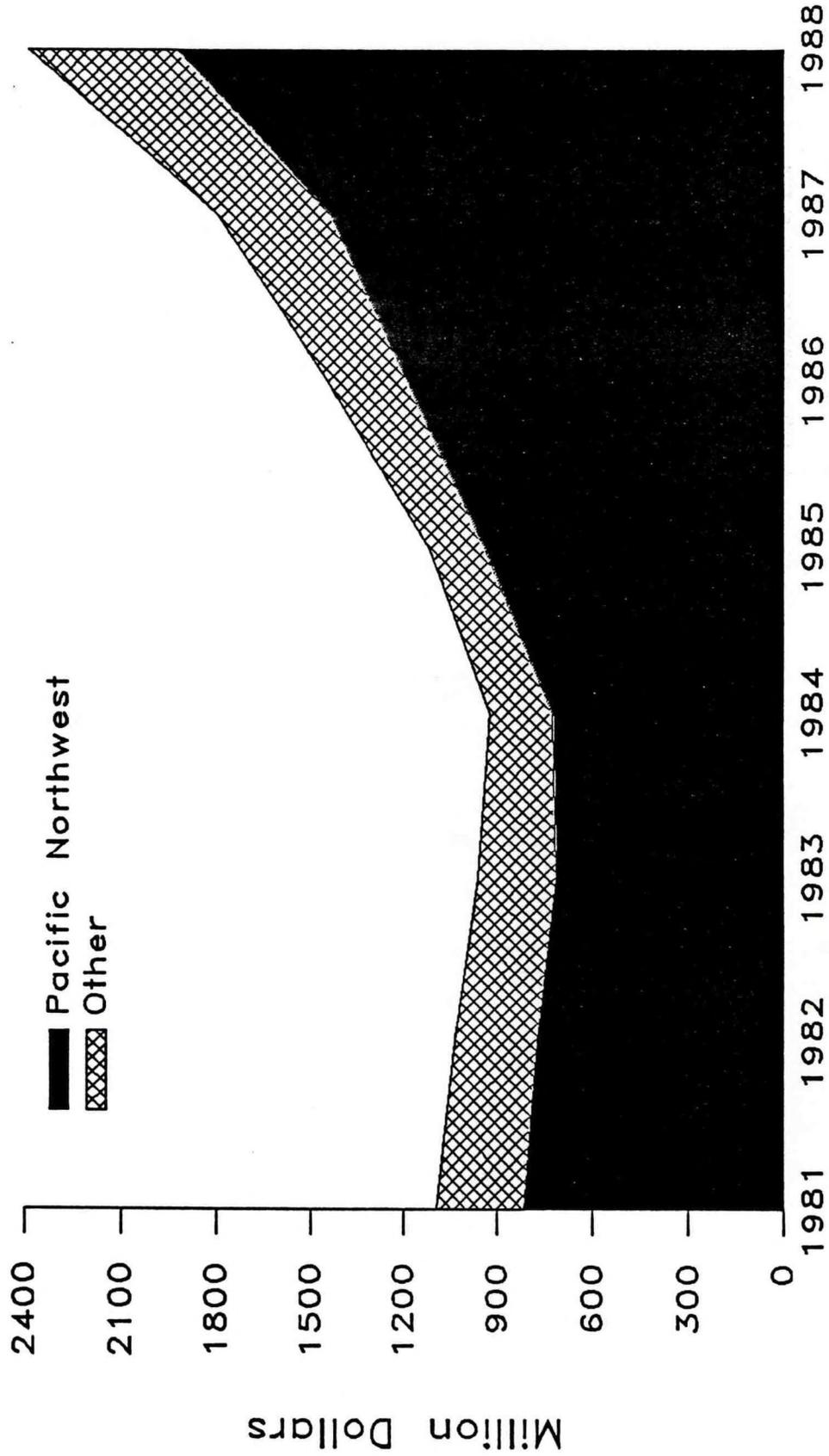


Figure 2.--Pacific Northwest and total U.S. exports of edible fishery products, 1981-88. Includes joint venture sales.

Table 3.—Pacific Northwest exports of edible fishery products or product groups in millions of dollars and percent of total, 1981-88.

Year	Salmon	Herring	Other finfish*	King crab	Snow crab	Other	Total
Value							
1981	\$572	\$ 57	\$ 30	\$52	\$ 53	\$41	\$ 805
1982	531	60	25	25	62	36	739
1983	510	67	23	7	32	29	668
1984	480	60	47	10	26	25	648
1985	597	104	66	9	36	25	837
1986	707	78	126	24	68	31	1,034
1987	728	93	204	59	114	35	1,232
1988	967	115	358	45	173	43	1,700
Percent							
1981	71.0	7.1	3.7	6.5	6.6	5.1	100.0
1982	71.9	8.1	3.3	3.4	8.4	4.9	100.0
1983	76.4	10.0	3.4	1.1	4.8	4.3	100.0
1984	74.1	9.3	7.2	1.5	4.0	3.9	100.0
1985	71.3	12.4	7.9	1.1	4.3	3.0	100.0
1986	68.4	7.5	12.2	2.3	6.6	3.0	100.0
1987	59.1	7.5	16.6	4.8	9.3	2.8	100.0
1988	56.9	6.8	21.0	2.6	10.2	2.5	100.0

* Other fresh, frozen, canned, 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.

and A5, respectively. Figure 3 illustrates Northwest exports by product groups and includes joint venture sales.

The exports of other fresh, frozen, canned, cured, and processed finfish (other than salmon, herring, and nongroundfish species) increased from \$204 million in 1987 to \$358 million in 1988. This category is made up of \$86 million in sablefish, \$147 million in "other" whole or dressed finfish, \$49 million in fillets, and \$40 million in fish cakes, etc. The increase in the group indicates the rapid expansion of the domestic catcher/processor fleet operating in waters off Alaska. Another outgrowth of the increase in the groundfish fleet is the explosive growth of U.S.-produced surimi. Only a portion of the exports of surimi is recorded in a category listed as fish cakes, balls, pudding, etc., and the remainder in an "other" fish category. Quantities of fish cakes, balls, and pudding increased from 6.3 million lb in 1987 to 46.4 million lb in 1988 and are valued at \$40.5 million. A NMFS survey indicated that exports of surimi in 1988 were 67 million lb (30,500 t) (Milazzo 1989).

Exports of snow (Tanner) crab totaled 56.8 million lb in 1988 and were valued at \$173 million, up 35% by quantity and 52% by value compared to 1987. Reduced stocks of king crab continued to plague the harvest and exports, and exports of king crab amounted to 4.9 million lb and valued at \$44.3 million, down 38% and 24%, respectively.

Major Importers

Pacific Northwest exports of edible fishery products were sold to 33 countries in 1988, with Japan dominating the export market and the top six countries purchasing over 96% of the total (Tables 4 and 5, and Fig. 4).

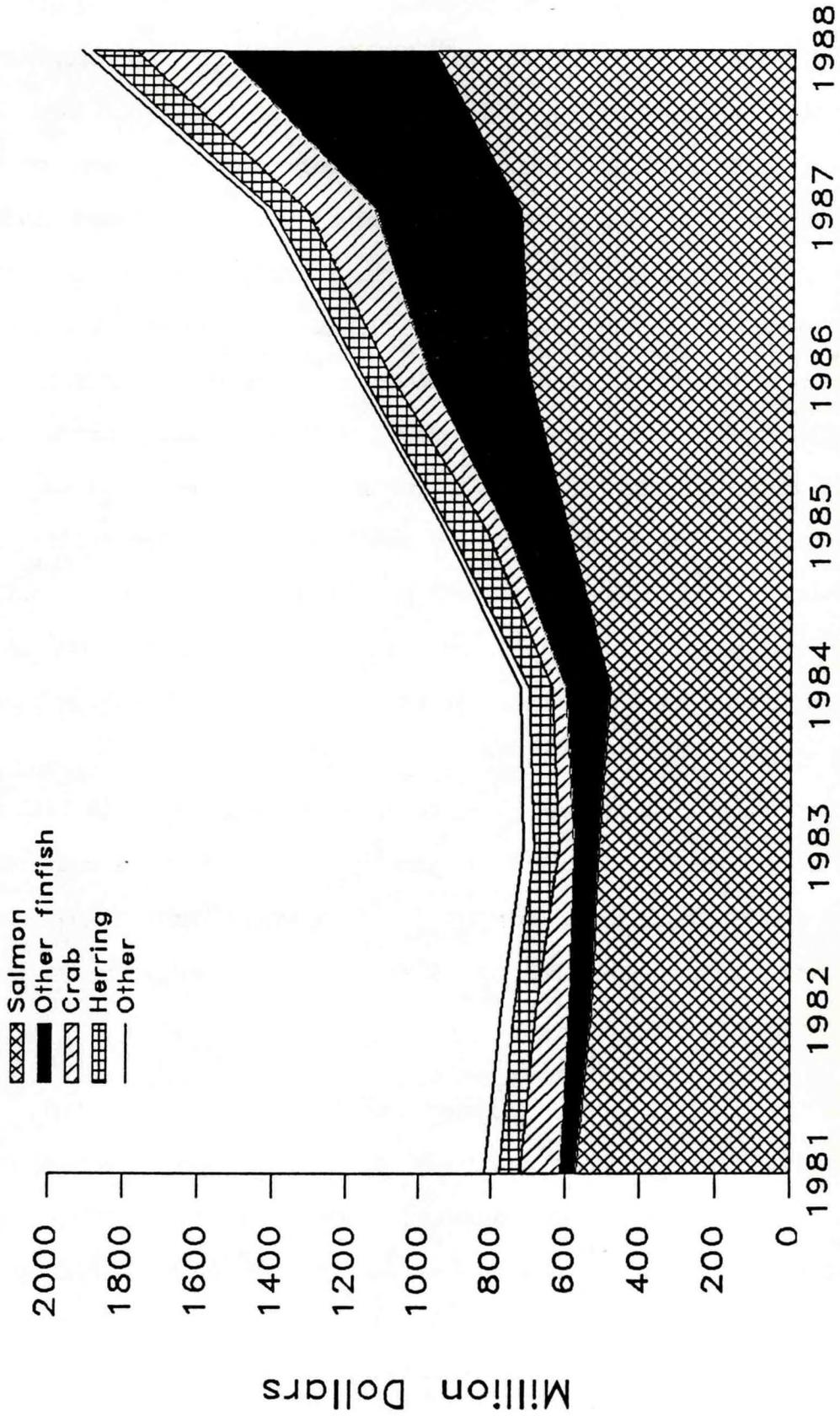


Figure 3.--Pacific Northwest exports of edible fishery products by major product groups, 1981-88. Includes joint venture sales.

Table 4.—Value (in millions of dollars) and quantity (in millions of pounds) of Pacific Northwest edible fishery products exported to the top 15 countries for 1987 and 1988, and percent change.

Country	Quantity			Value		
	1987	1988	% change	1987	1988	% change
Japan	449.6	648.2	+44	\$ 936.7	\$1,401.3	+50
Canada	52.9	44.6	-16	92.5	90.4	-2
United Kingdom	27.1	26.8	-1	58.4	66.0	+13
Rep. of Korea	24.5	25.9	+6	31.5	35.9	+14
France	20.4	12.2	-40	48.9	31.2	-36
Australia	7.0	6.2	-12	14.3	15.3	+7
Portugal	1.0	7.2	+613	1.4	9.5	+591
Netherlands	3.6	2.9	-18	9.2	7.6	-17
Fed. Rep. of Germ.	4.3	3.7	-16	8.6	7.5	-13
Sweden	4.4	3.4	-23	7.0	7.3	+4
Denmark	3.1	3.2	+1	5.6	6.7	+21
Belgium & Lux.	3.5	2.6	-27	8.4	6.6	-21
Taiwan	0.9	3.9	+355	0.6	4.3	+630
Thailand	0.3	1.4	+554	0.5	2.1	+359
Hong Kong	0.7	0.8	+25	1.3	1.8	+40
Other	3.5	2.7	-24	7.0	6.5	-8
Total	606.8	795.7	+31	\$1,231.8	\$1,700.1	+38

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 5.—Value (in millions of dollars) and percent of Pacific Northwest edible fishery products exported to the top six countries, 1982-88.

Country	1982	1983	1984	1985	1986	1987	1988
Value							
Japan	\$540.8	\$455.5	\$451.2	\$639.9	\$ 776.8	\$ 936.7	\$1,401.3
Canada	55.3	62.0	54.4	60.8	71.6	92.5	90.4
United Kingdom	30.9	52.6	51.1	43.5	71.1	58.4	66.0
Rep. of Korea	13.1	12.5	10.1	18.0	26.7	31.5	35.9
France	40.4	24.8	25.1	24.1	34.4	48.9	31.2
Australia	8.2	12.5	13.2	11.9	12.5	14.3	15.3
Other	<u>50.1</u>	<u>48.0</u>	<u>42.7</u>	<u>38.5</u>	<u>40.7</u>	<u>49.5</u>	<u>60.0</u>
Total	\$738.8	\$667.9	\$647.8	\$836.7	\$1,033.7	\$1,231.8	\$1,700.1
Percent							
Japan	73.2	68.2	69.6	76.5	75.1	76.0	82.4
Canada	7.5	9.3	8.4	7.3	6.9	7.5	5.3
United Kingdom	4.2	7.8	7.9	5.2	6.9	4.7	3.9
Rep. of Korea	1.8	1.9	1.6	2.1	2.6	2.6	2.1
France	5.4	3.7	3.9	2.9	3.3	4.0	1.9
Australia	1.1	1.9	2.0	1.4	1.2	1.2	0.9
Other	<u>6.8</u>	<u>7.2</u>	<u>6.6</u>	<u>4.6</u>	<u>3.9</u>	<u>4.0</u>	<u>3.5</u>
Total	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., 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.

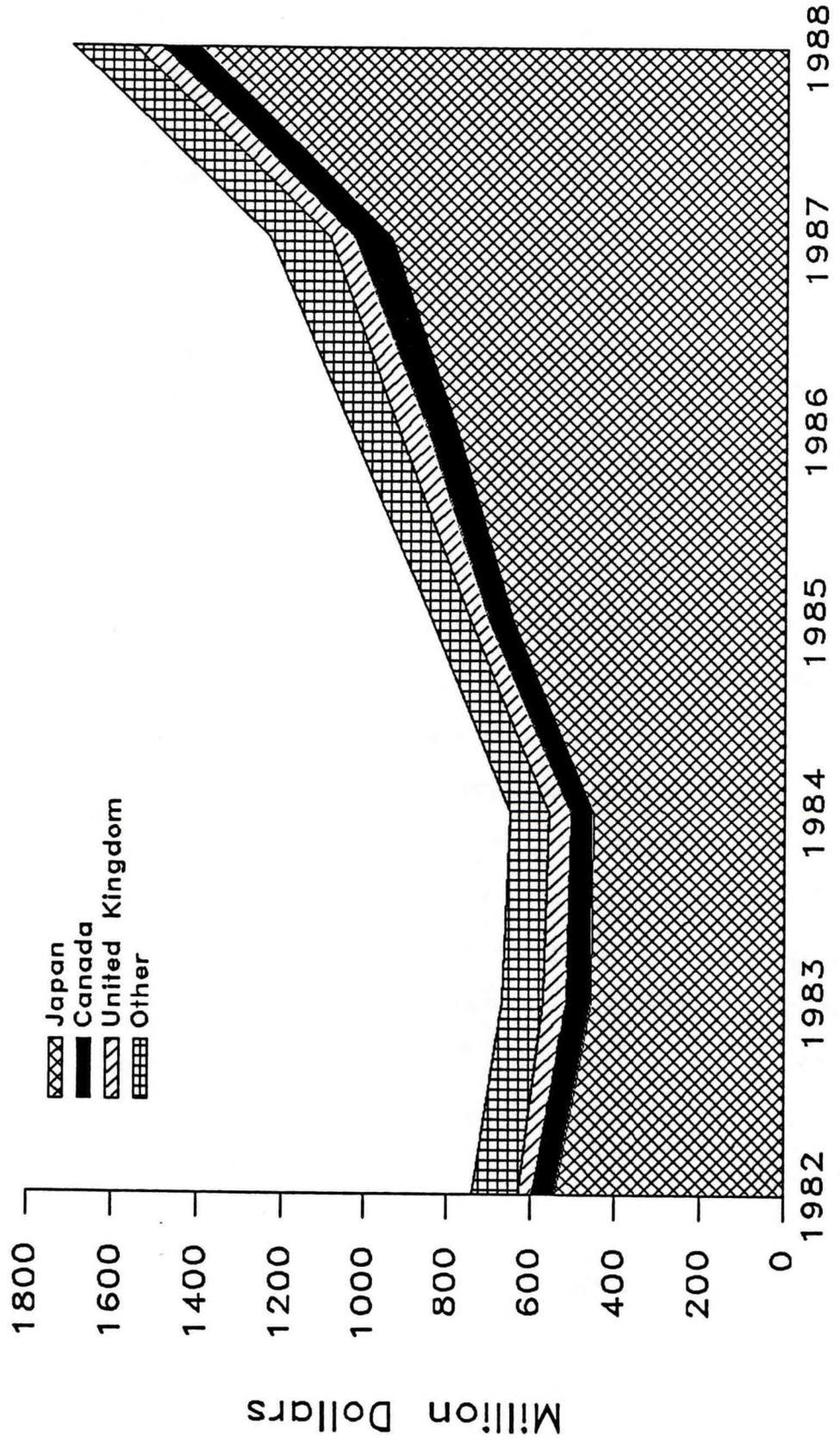


Figure 4.—Pacific Northwest exports of edible fishery products by country of destination, 1982-88.

Japan was the major buyer of fishery products, importing \$1.4 billion or 82.4% of the total value, up 50% from 1987. In the 1980-87 period, purchases by the Japanese ranged from 63 to 77% of Pacific Northwest fishery exports. In 1988, the Japanese were leading buyers of whole or dressed salmon (88%), whole herring (93%), sablefish (99.9%), snow crab (93%), king crab (90%), salmon roe (95%), and herring roe (95%) (Appendix Table A6). Export of the single most important category to Japan, whole or dressed salmon, rose by 23% in quantity, but increased by 54% in value to \$692 million in 1988. Other products that contributed to the overall increase were "other" whole or dressed finfish, herring fillets, fish balls, and snow crab.

The 50% increase in the value of exports to Japan was in part the result of the decrease in the yen value of the U.S. dollar. The value of the U.S. dollar fell 13% in 1988 to 128 from 145 yen in 1987. The value of Pacific Northwest exports was 179.3 billion yen in 1988, up 32% from 1987.

Canada was a distant second, with purchases of \$90.4 million or 5.3% of the total Pacific Northwest fishery exports. Reduced purchases of whole or dressed herring and salmon were primarily responsible for the 16% decline in quantity and 2% drop in value (Appendix Table A7).

The United Kingdom (U.K.) was the third largest importer at \$66 million, an increase of 13%, solely based on higher prices for their purchases of canned salmon (Appendix Table A8). Canned salmon exports amounted to 16 million lb, down 3% from 1987, while the value increased by 15% to \$47.9 million. The U.K. was the leading buyer of canned salmon, with 56% of the canned salmon exports.

Following the U.K., Pacific Northwest fishery exports to the Republic of Korea (ROK) were fourth, advancing one place from 1987. Fishery trade with

ROK increased by 6% in quantity and 14% in value from 1987 (Appendix Table A10). Increased shipments of whole or dressed salmon and fish balls contributed to the gain, while lower exports of herring and snow crab offset some of the increase.

Exports to France ranked fifth, down one spot from 1987. Exports to France fell 40% in quantity and 36% in value. This drop was due to the 46% decline in exports of whole or dressed salmon, with a 40% drop in value (Appendix Table A9). Whole or dressed salmon still comprised 87% or \$27.2 million of fishery exports to France.

The sixth ranking country was Australia with \$15.3 million in export purchases, up 7% from 1987 in spite of a 12% decline in the quantity (Appendix Table A11). Nearly 97% or \$14.8 million was exports of canned salmon. Australia was the second leading buyer of canned salmon with 17% of total canned salmon exports from the Pacific Northwest.

Exports by Customs District and Season

Pacific Northwest fishery exports by customs districts of Alaska, Washington, and Oregon are shown in Tables 6 and 7. By volume, 508 million lb or 64% of exports in 1988 went through the Alaska customs district, compared to 275 million lb or 34.5% from Washington, and 13 million lb or 1.6% from Oregon. By value, exports differed as \$910 million or 53.5% of the total exited from Alaska, \$752 or 44.3% from Washington, and \$38 million or 2.2% from Oregon (Fig. 5).

Table 6 shows that \$1.46 billion or 86% of Pacific Northwest fishery exports were headed for the Pacific Rim countries with over 80% going to Japan. Exports to Europe totaled \$147 million or 8.6% of total exports with 87% shipped from Washington.

Table 6.—Quantity (thousands of pounds), value (thousands of dollars), and percent of total 1988 value of Pacific Northwest edible fishery products exported by customs district to area or country of destination.

District	Asia*	Europe	Canada	Other	Total
Quantity					
Alaska	495,615	7,180	5,472	—	508,266
Washington	181,447	53,684	39,105	547	274,783
Oregon	9,907	2,753	—	33	12,693
Total	686,969	63,617	44,577	580	795,742
Value					
Alaska	893,828	9,678	6,273	—	909,779
Washington	538,949	128,034	84,088	1,043	752,114
Oregon	28,783	9,220	—	168	38,171
Total	1,461,570	146,932	90,361	1,211	1,700,064
Percent of total value					
Alaska	52.6	0.6	0.4	—	53.5
Washington	31.7	7.5	4.9	0.1	44.3
Oregon	1.7	0.5	—	0.0	2.2
Total	86.0	8.6	5.3	0.1	100.0

* Includes Australia.

Note: Minor discrepancies may be 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 7.—Pacific Northwest exports of edible fishery products by customs districts in percentage of the total for each year from 1977 to 1988.

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

Note: Minor discrepancies may 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.

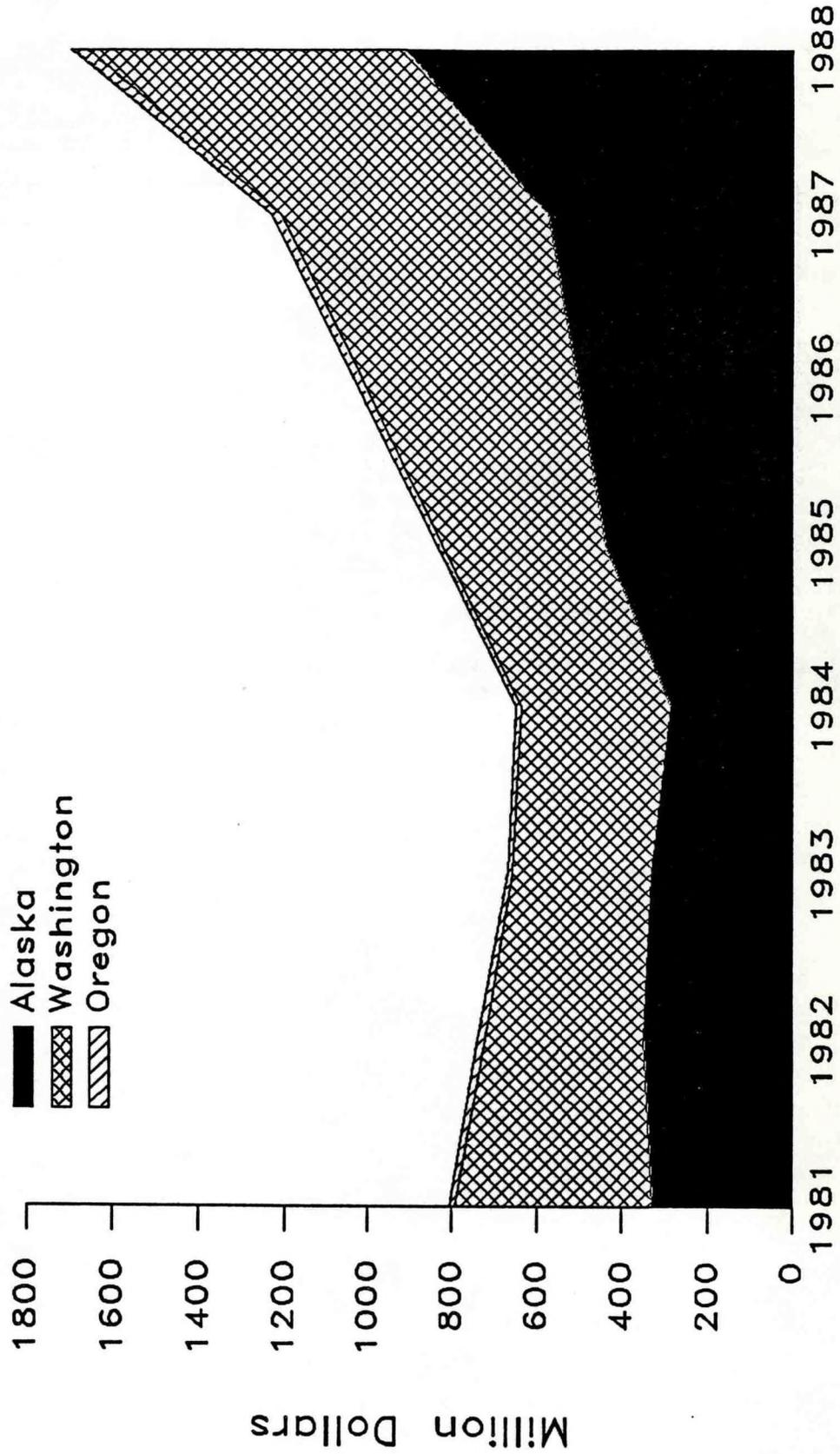


Figure 5.—Pacific Northwest exports of edible fishery products by customs district, 1981-88.

The seasonality of exports reflects the seasonality of the fisheries. The percentages of exports by month and customs district are shown in Table 8. Figure 6 illustrates the impact of salmon exports on the seasonal pattern, particularly the large volumes of July and August. Salmon exports increased earlier in the year compared to 1987; increased exports of other finfish and snow crab occurred in the first half of 1988, influencing this change.

JOINT VENTURES

Joint venture sales are currently classified as imports by most countries, but they are not classified as fishery exports in official U.S. trade statistics. Joint venture sales are catches by U.S. fishermen that are transferred on the fishing grounds to foreign processing vessels. Joint venture catch and value in the U.S. EEZ off the Pacific Coast increased annually from 553 million lb (250,975 t) and \$35.6 million in 1982 to 3.29 billion lb (1.49 million t) and \$200 million in 1987. The catch declined slightly in 1988 to 3.15 billion lb (1.43 million t) as the result of the expansion of the wholly domestic fisheries (Table 9 and Fig. 7). The estimated value of the catch increased to \$220 million because of the increased catch of higher valued Pacific cod and flatfish, and higher prices. The pollock catch declined 23% from a year earlier to 1.8 billion lb and represented 58% of the joint venture catch and 53% of the total value. Deliveries of Pacific cod, flatfish, and Pacific whiting increased by 85, 48, and 19%, respectively. Large reductions are expected in 1989 as domestic at-sea and shore-based processor capacity increases.

Table 8.—Monthly percentages by quantity and value of Pacific Northwest edible fishery products exported by customs districts and districts combined, 1987-88.

Month	Oregon		Washington		Alaska		Combined	
	1987	1988	1987	1988	1987	1988	1987	1988
Quantity								
January	9.7	2.8	5.2	4.5	1.4	2.5	3.3	3.2
February	7.2	2.7	6.3	4.2	3.8	7.6	5.0	6.3
March	5.4	6.8	5.1	6.6	6.0	7.2	5.5	7.0
April	1.5	5.8	6.2	6.7	4.4	6.8	5.2	6.8
May	2.9	6.1	6.8	8.7	15.5	9.1	11.3	8.9
June	3.0	9.3	4.7	5.6	14.4	12.1	9.7	9.8
July	7.3	17.5	9.9	14.3	10.7	22.9	10.3	19.9
August	13.5	13.2	18.8	17.9	30.2	13.4	24.7	15.0
September	10.7	17.2	10.6	11.0	5.2	7.1	7.8	8.6
October	16.5	12.2	10.0	9.5	4.1	4.3	7.0	6.2
November	8.8	4.6	8.7	5.2	2.7	4.3	5.6	4.6
December	13.5	1.8	7.7	5.8	1.6	2.7	4.6	3.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Value								
January	8.1	3.0	4.3	3.6	1.7	1.9	3.2	2.7
February	6.5	1.9	5.8	4.2	4.1	7.2	5.0	5.7
March	7.7	4.9	4.5	6.0	5.1	6.7	4.9	6.3
April	2.1	6.0	4.4	5.3	3.8	4.8	4.1	5.0
May	1.9	5.8	5.1	6.0	10.1	6.7	7.4	6.4
June	2.0	8.1	5.0	4.9	10.8	11.0	7.6	8.2
July	7.0	17.8	11.1	17.0	13.1	33.8	11.9	26.0
August	14.8	15.0	19.5	20.0	35.2	14.1	26.7	16.8
September	10.5	18.2	10.9	11.6	4.7	5.9	8.0	8.8
October	15.1	13.1	11.3	11.1	8.0	4.1	9.8	7.4
November	10.5	5.1	10.6	5.5	2.3	2.4	6.7	3.8
December	13.8	1.1	7.6	4.8	1.1	1.4	4.7	2.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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.

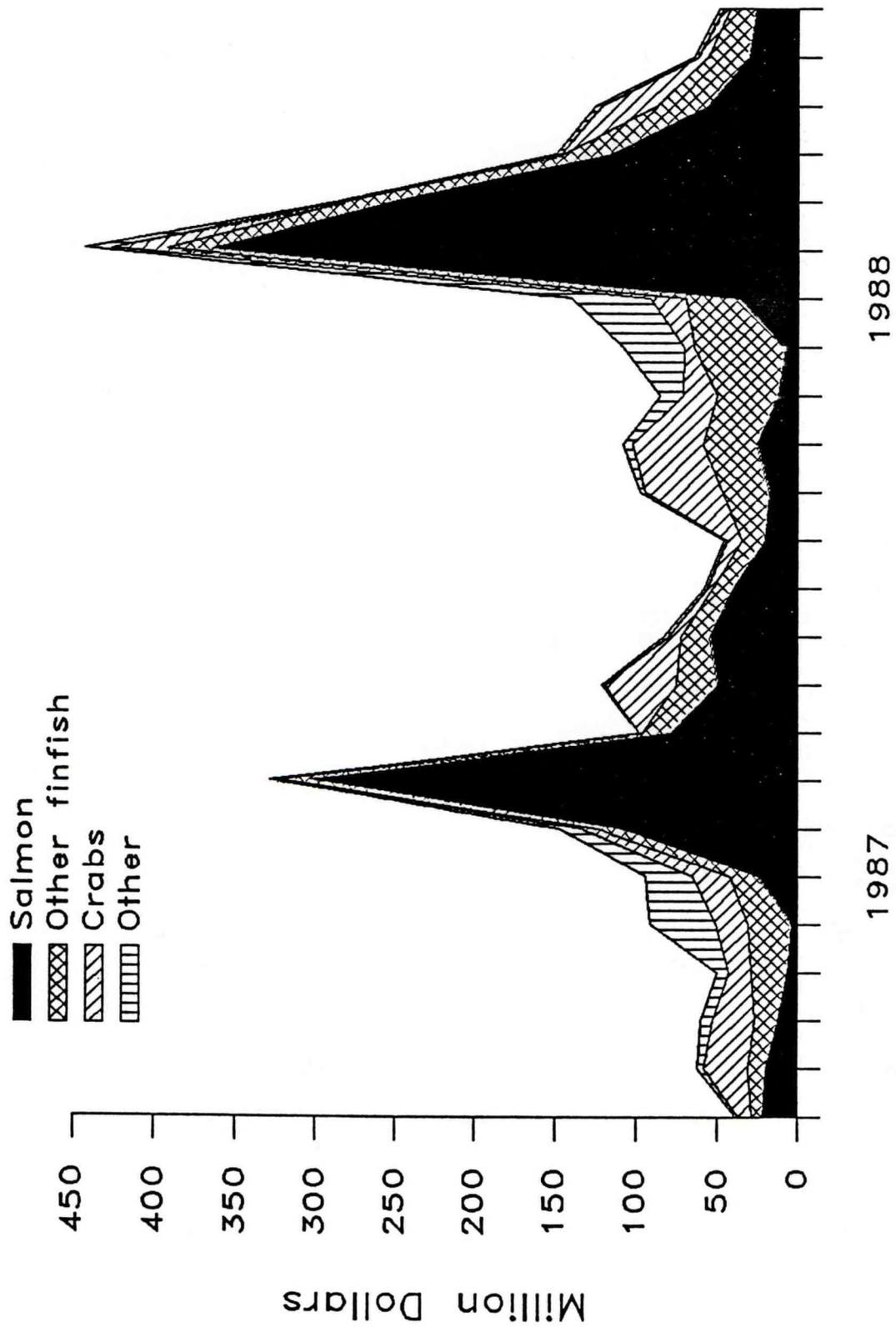


Figure 6.—Monthly Pacific Northwest exports of edible fishery products by major product groups, 1987-88.

Table 9.—Pacific Coast joint venture catch by species, quantity in millions of pounds, value in millions of dollars, and percentage of the value, 1982-88.

Species	1982	1983	1984	1985	1986	1987	1988
Quantity							
Atka mackerel	27.5	24.9	80.5	87.5	70.5	66.3	43.2
Pacific cod	30.1	37.0	78.1	96.0	144.0	132.6	245.7
Flatfish	58.8	81.6	118.2	386.2	480.2	491.2	728.3
Walleye pollock	284.1	624.2	979.1	1,356.7	1,979.1	2,353.0	1,821.9
Rockfish	0.1	5.3	6.2	1.8	1.7	2.4	4.6
Sablefish	0.3	0.9	1.9	0.7	1.1	0.7	0.1
Pacific whiting	148.7	159.0	173.9	69.9	180.0	233.7	277.3
Other	<u>3.7</u>	<u>4.4</u>	<u>8.8</u>	<u>19.1</u>	<u>17.4</u>	<u>13.9</u>	<u>26.4</u>
Total	553.3	937.3	1,446.6	2,017.9	2,873.9	3,293.8	3,147.7
Value							
Atka mackerel	\$ 1.9	\$ 1.5	\$ 5.6	\$ 6.1	\$ 4.8	\$ 4.8	\$ 3.6
Pacific cod	3.0	3.5	8.5	9.3	14.5	15.3	30.4
Flatfish	4.0	5.3	7.6	24.2	28.9	33.3	53.8
Walleye pollock	16.0	26.1	41.6	59.8	95.3	134.3	116.1
Rockfish	0.0	0.0	0.1	0.1	0.1	0.3	0.7
Sablefish	0.0	0.1	0.4	0.1	0.1	0.0	0.0
Pacific whiting	10.4	10.2	11.4	3.8	8.8	11.7	14.6
Other	<u>0.3</u>	<u>0.3</u>	<u>0.7</u>	<u>1.1</u>	<u>0.8</u>	<u>0.6</u>	<u>1.1</u>
Total	\$35.6	\$47.0	\$75.9	\$104.5	\$153.2	\$200.4	\$220.3
Percentage of value							
Atka mackerel	5.3	3.2	7.4	5.8	3.1	2.4	1.7
Pacific cod	8.4	7.5	11.2	8.9	9.5	7.6	13.8
Flatfish	11.2	11.3	10.0	23.2	18.8	16.6	24.4
Walleye pollock	45.0	55.5	54.8	57.2	62.2	67.0	52.7
Rockfish	0.0	0.0	0.1	0.1	0.1	0.2	0.3
Sablefish	0.0	0.2	0.5	0.1	0.1	0.0	0.0
Pacific whiting	29.2	21.7	15.0	3.6	5.7	5.8	6.6
Other	<u>0.9</u>	<u>0.6</u>	<u>0.9</u>	<u>1.1</u>	<u>0.5</u>	<u>0.3</u>	<u>0.5</u>
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Discrepancies in totals are due to rounding.

Sources: Pacific Marine Fisheries Commission, Pacific Fisheries Information Network, 7600 Sand Point Way N.E., BIN C15700, Seattle, WA 98115-0070; and Natl. Mar. Fish. Serv., Fisheries of the United States, 1988, Silver Spring, MD 20910.

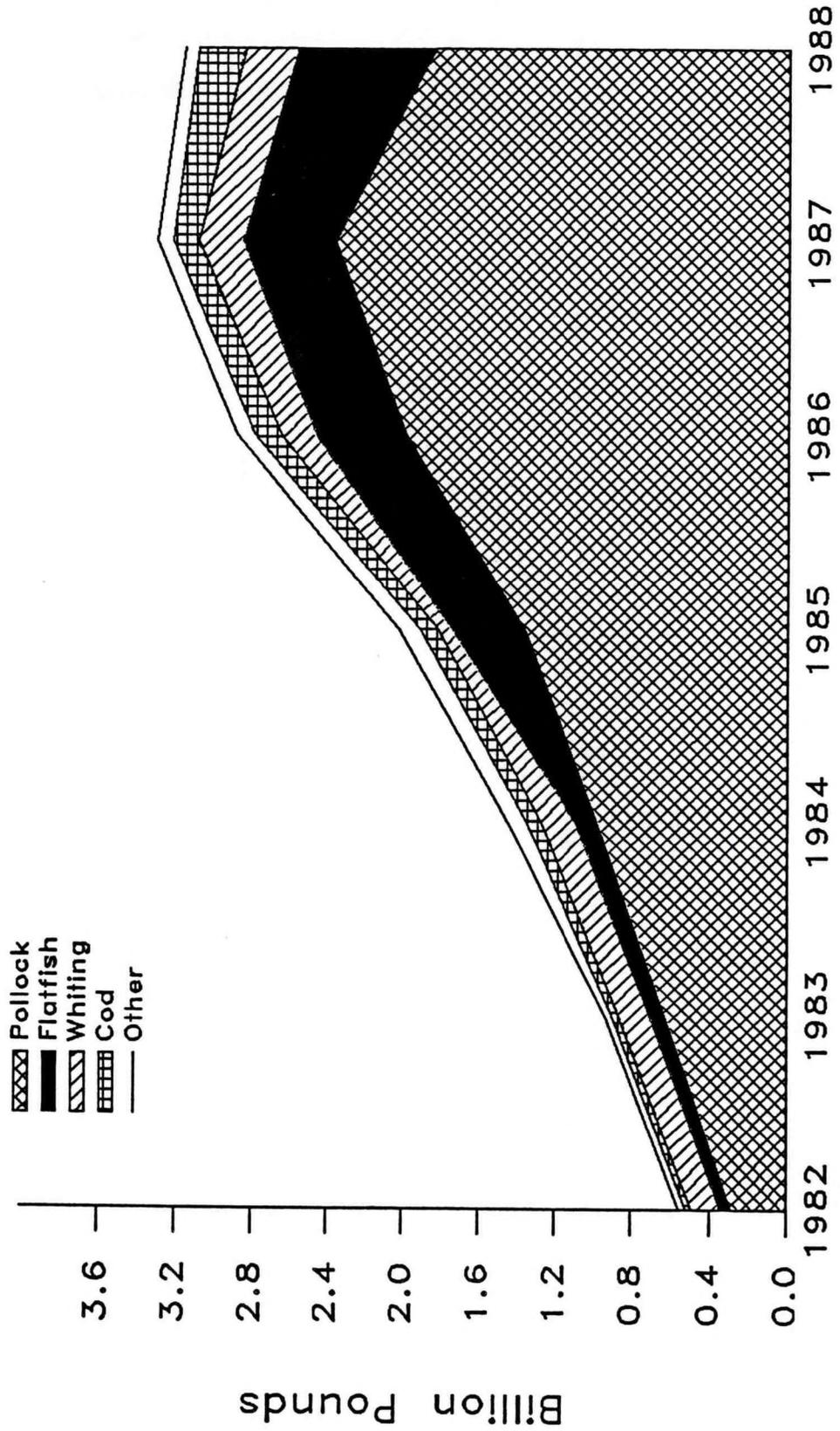


Figure 7.--Pacific Coast joint venture catch by species, 1982-88.

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APPENDIX

Table A1.--Export categories of edible fishery products from the Pacific Northwest for 1987-88, and the years for which data have been collected for that category.

Product description	Year
Herring, whole or dressed, fresh or frozen	1981-88
Pollock, whole or dressed, fresh or frozen	1981-88
Sablefish, whole or dressed, fresh or frozen	1981-88
Salmon, Chinook, whole or dressed, fresh or frozen	1981-88
Chum, whole or dressed, fresh or frozen	1981-88
Pink, whole or dressed, fresh or frozen	1981-88
Silver, whole or dressed, fresh or frozen	1986-88
Sockeye, whole or dressed, fresh or frozen	1981-88
Unclassified, whole or dressed, fresh or frozen	1986-88
Unclassified, whole or dressed, fresh or frozen	1986-88
Halibut, whole or dressed, fresh or frozen	1986-88
Other fish, whole or dressed, fresh or frozen	1986-88
Salmon fillets, steaks, portions, fresh or frozen	1978-88
Herring fillets, steaks, portions, fresh or frozen	1981-88
Halibut fillets, steaks, portions, fresh or frozen	1986-88
Cod fillets, steaks, portions, fresh or frozen	1986-88
Other fish fillets, steaks, portions, fresh or frozen	1986-88
Cod, dried, salted, or smoked	1986-88
Salmon, dried, salted, or smoked	1986-88
Other fish, dried, salted, or smoked	1986-88
Salmon, canned, Chum	1981-88
Pink	1981-88
Sockeye	1981-88
Other	1981-88
Other canned fish	1978-88
Fish in airtight containers but not canned	1978-88
Fish sticks and portions, breaded or batter coated	1978-88
Herring roe	1981-88
Salmon roe	1981-88
Other fish roe	1981-88
Fish balls, cakes, pudding, etc., fresh or frozen	1978-88
Shrimp, fresh or frozen	1985-88
Scallops, fresh or frozen	1986-88
King crab, frozen	1978-88
Snow crab, <u>opilio</u> , frozen	1986-88
Snow crab, other, frozen	1986-88
Dungeness, crab, frozen	1986-88
Crabs, other, frozen	1986-88
Shellfish, other, fresh or frozen	1986-88
Shellfish, other, canned	1985-88
Shellfish, other, includes cured not canned	1978-88

Sources: U.S. Dep. Commer., Bureau of the Census; U.S. Dep. of Treasury, Bureau of Customs.

Table A2.—Scientific names of species identified in this report.

Common name	Scientific name
FISH	
Cod, Pacific	<u>Gadus macrocephalus</u>
Flounders and soles	<u>Pleuronectidae</u> family
Halibut, Pacific	<u>Hippoglossus stenolepis</u>
Herring, Pacific	<u>Clupea harengus pallasii</u>
Mackerel, Atka	<u>Pleurogrammus monopterygius</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	<u>O. tshawytscha</u>
Chum	<u>O. keta</u>
Coho	<u>O. kisutch</u>
Pink	<u>O. gorbuscha</u>
Sockeye	<u>O. nerka</u>
Whiting (hake), Pacific	<u>Merluccius productus</u>
CRUSTACEANS	
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

Table A3.—Pacific Northwest exports of all product forms of salmon by country of destination, quantity (millions of pounds), value (millions of dollars), and percent change from 1987 to 1988.

Country	Quantity			Value		
	1987	1988	% change	1987	1988	% change
Japan	208.9	253.4	+21	\$519.6	\$778.3	+50
United Kingdom	24.3	23.2	-4	55.5	62.0	+12
Canada	24.5	17.8	-27	48.5	39.1	-19
France	19.4	10.8	-44	47.0	29.7	-37
Australia	6.9	6.1	-12	14.1	15.1	+7
Rep. of Korea	4.6	5.7	+23	5.4	9.4	+76
Netherlands	3.5	2.7	-22	9.0	7.5	-17
Denmark	3.1	2.9	-6	5.5	6.3	+13
Belgium & Luxembourg	3.0	1.7	-44	7.7	5.7	-26
Fed. Rep. of Germany	2.2	1.5	-29	6.1	5.1	-16
Sweden	3.6	1.2	-67	5.0	2.4	-52
Italy	0.2	0.4	+79	0.6	1.4	+128
Switzerland	0.5	0.5	-3	1.1	1.3	+22
Hong Kong	0.5	0.5	+3	0.9	1.2	+33
South Africa	0.1	0.5	+266	0.2	1.0	+480
Ireland	0.2	0.1	-22	0.3	0.3	-14
Taiwan	0.1	0.1	+28	0.1	0.2	+59
New Zealand	0.3	0.1	-66	0.7	0.2	-74
Israel	0.2	0.1	-56	0.3	0.2	-43
Other	0.2	0.1	-53	0.8	0.3	-66
Total	306.3	329.5	+8	\$728.4	\$966.6	+33

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

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.

Table A4.--Pacific Northwest exports of whole or dressed salmon by country of destination, quantity (millions of pounds), value (millions of dollars), and percent change from 1987 to 1988.

Country	Quantity			Value		
	1987	1988	% change	1987	1988	% change
Japan	191.4	235.5	+23	\$449.8	\$691.7	+54
France	18.9	10.3	-46	45.1	27.2	-40
Canada	18.1	12.2	-33	33.4	24.7	-26
United Kingdom	7.7	7.2	-6	13.7	14.1	+3
Rep. of Korea	4.6	5.7	+24	5.3	9.4	+79
Denmark	3.0	2.9	-3	5.2	6.2	+18
Belgium & Luxembourg	2.0	0.9	-55	5.9	3.6	-40
Fed. Rep. of Germany	1.7	1.3	-23	3.3	3.2	-5
Sweden	3.6	1.2	-67	5.0	2.4	-52
Switzerland	0.5	0.5	+2	1.0	1.3	+27
Netherlands	1.4	0.4	-70	3.3	1.2	-64
Hong Kong	0.5	0.5	-1	0.9	1.1	+30
Italy	0.2	0.2	+20	0.6	1.1	+96
South Africa	0.1	0.5	+263	0.2	1.0	+484
Ireland	0.0	0.1	+165	0.1	0.2	+134
Israel	0.2	0.1	-56	0.3	0.2	-44
Other	<u>0.3</u>	<u>0.1</u>	<u>-44</u>	<u>0.8</u>	<u>0.4</u>	<u>-52</u>
Total	254.3	279.7	+10	\$573.9	\$788.8	+37

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

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.

Table A5.—Pacific Northwest exports of canned salmon by country of destination, quantity (millions of pounds), value (millions of dollars), and percent change from 1987 to 1988.

Country	Quantity			Value		
	1987	1988	% change	1987	1988	% change
United Kingdom	16.5	16.0	-3	\$41.6	\$47.9	+15
Australia	6.9	6.0	-12	14.1	14.8	+5
Canada	6.0	5.0	-16	14.2	12.7	-11
Netherlands	2.1	2.3	+11	5.7	6.3	+11
Belgium & Luxembourg	1.0	0.7	-28	1.6	1.8	+8
Japan	0.3	0.5	+56	0.8	1.6	+91
Italy	0.1	0.2	+256	0.1	0.4	+363
New Zealand	0.3	0.1	-66	0.7	0.2	-74
Ireland	0.1	0.0	-88	0.2	0.0	-78
France	0.2	0.0	-100	0.5	0.0	-100
Other	0.2	0.1	-70	0.5	0.1	-70
Total	33.6	31.0	-8	\$80.0	\$85.8	+7

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

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.

Table A6.—Pacific Northwest exports of edible fishery products to Japan by product, quantity (millions of pounds), value (millions of dollars), and percent change from 1987 to 1988.

Product	Quantity			Value		
	1987	1988	% change	1987	1988	% change
Herring whole or evis.	63.6	60.1	-5	\$ 55.5	\$ 64.9	+17
Sablefish whole or evis.	40.3	40.9	+1	68.1	86.3	+27
Salmon chinook	6.7	6.6	-2	22.7	24.1	+6
Salmon chum	18.0	36.3	+102	23.2	65.2	+182
Salmon pink	20.8	38.5	+85	25.8	63.5	+146
Salmon coho	9.3	12.9	+40	18.8	40.6	+116
Salmon sockeye	128.4	133.9	+4	342.0	481.9	+41
Salmon unclassified	8.2	7.2	-12	17.4	16.3	-6
Subtotal	191.4	235.5	+23	449.8	691.7	+54
Halibut whole or evis.	2.6	0.9	-66	5.2	1.6	-69
Other fish fresh/frz.	55.4	138.9	+151	66.6	140.5	+111
Salmon fillets steaks	1.0	0.5	-53	2.1	0.9	-57
Herring fillets steaks	1.9	17.9	+851	1.9	16.8	+797
Halibut fillets fresh	0.5	0.2	-62	1.0	0.4	-61
Cod fillets steaks	6.8	8.7	+28	11.3	13.8	+22
Other fish fillets stk.	8.1	14.5	+79	9.6	14.4	+49
Salmon dried salted	0.0	0.1	+252	0.1	0.4	+227
Fish dried salted smok.	0.3	0.1	-58	0.2	0.3	+58
Salmon canned	0.3	0.5	+67	0.8	1.6	+100
Other canned fish	0.1	0	-100	0.1	0	-100
Fish in airtight cont.	0	0	—	0	0.1	+2833
Herring roe	4.8	11.6	+140	19.1	26.0	+36
Salmon roe	16.1	16.8	+4	66.7	83.7	+25
Other fish roe	1.9	3.4	+80	4.1	9.7	+134
Fish balls cakes pud.	6.1	35.8	+482	5.1	30.2	+494
King crab frozen	7.1	4.2	-41	54.3	39.7	-27
Snow crab, <u>opilio</u>	26.4	43.1	+63	66.0	120.7	+83
Snow crab, other	9.2	9.4	+3	31.6	39.7	+26
Crabs other	3.4	3.5	+4	11.6	12.4	+7
Shellfish other	2.2	1.7	-24	5.9	5.6	-6
Total	449.6	648.2	+44	\$936.7	\$1,401.3	+50

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

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.

Table A7.—Pacific Northwest exports of edible fishery products to Canada by product, quantity (millions of pounds), value (millions of dollars), and percent change from 1987 to 1988.

Product	Quantity			Value		
	1987	1988	% change	1987	1988	% change
Herring whole or evis.	9.5	4.3	-55	\$ 7.4	\$ 2.5	-67
Halibut	2.9	3.8	+29	5.5	7.1	+28
Salmon chinook	0.3	0.6	+79	0.9	1.8	+102
Salmon chum	4.3	6.0	+40	6.2	10.6	+70
Salmon pink	2.4	1.3	-46	4.0	2.0	-51
Salmon coho	2.0	1.4	-31	3.3	3.3	-2
Salmon sockeye	3.9	1.7	-56	10.0	4.5	-55
Salmon unclassified	5.2	1.2	-78	8.9	2.6	-70
Subtotal	18.1	12.2	-33	33.4	24.7	-26
Other fish fresh/frzn.	2.3	3.6	+58	3.1	5.0	+61
Fish fillets steaks	6.4	7.4	+14	9.6	11.6	+21
Salmon canned chum	0.8	0.3	-60	1.0	0.6	-42
Salmon canned pink	2.7	2.1	-21	4.8	4.6	-3
Salmon canned sockeye	2.0	2.0	+4	7.0	5.9	-15
Salmon canned other	0.5	0.6	+6	1.4	1.5	+11
Other fish can roe etc.	2.8	2.8	-1	3.8	5.6	+47
King crab Frozen	0.8	0.7	-15	3.9	4.4	+13
Shrimp frozen	2.2	2.2	+2	7.3	8.0	+10
Snow crab frozen	0.6	0.7	+17	1.2	1.7	+40
Shellfish other	<u>1.3</u>	<u>2.0</u>	<u>+57</u>	<u>3.1</u>	<u>7.1</u>	<u>+126</u>
Total	52.9	44.6	-16	\$92.5	\$90.4	-2

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

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.

Table A8.—Pacific Northwest exports of edible fishery products to the United Kingdom by product, quantity (millions of pounds), value (millions of dollars), and percent of change from 1987 to 1988.

Product	Quantity			Value		
	1987	1988	% change	1987	1988	% change
Salmon chum	2.7	1.0	-65	\$ 4.3	\$ 1.9	-57
Salmon other	5.0	6.2	+26	9.4	12.2	+31
Other fish fresh frozen	1.5	0.9	-42	1.4	1.0	-30
Other fish fillet steak	1.4	2.5	+76	1.6	2.3	+47
Salmon canned chum	1.2	0.5	-58	1.7	1.2	-26
Salmon canned pink	7.2	4.6	-36	13.7	11.2	-18
Salmon canned sockeye	5.5	7.5	+35	19.5	23.8	+22
Salmon canned other	2.5	3.4	+35	6.7	11.6	+73
Subtotal	16.5	16.0	-3	41.6	47.9	+15
Other fish & shellfish	<u>0</u>	<u>0.3</u>	<u>+605</u>	<u>0.1</u>	<u>0.7</u>	<u>+556</u>
Total	27.1	26.8	-1	\$58.4	\$66.0	+13

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

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.

Table A9.—Pacific Northwest exports of edible fishery products to France by product, quantity (millions of pounds), value (millions of dollars), and percent change from 1987 to 1988.

Product	Quantity			Value		
	1987	1988	% change	1987	1988	% change
Salmon chinook	1.2	0.6	-47	\$ 2.7	\$ 1.8	-35
Salmon chum	5.9	3.8	-35	9.5	9.0	-6
Salmon pink	1.6	2.1	+26	2.5	4.7	+87
Salmon coho	5.3	2.2	-59	15.5	6.1	-60
Salmon sockeye	1.7	0.2	-90	5.6	0.8	-86
Salmon unclassified	3.3	1.4	-57	9.3	4.8	-49
Subtotal	18.9	10.3	-46	45.1	27.2	-40
Other fish fresh/frz.	0.4	0.2	-55	1.1	0.4	-65
Salmon fillet steak	0.1	0.2	+79	0.2	0.5	+130
Other fish fillet stk.	0.5	1.0	+125	0.6	1.0	+62
Salmon canned	0.2	0	-100	0.5	0	-100
Salmon roe	0.1	0.3	+91	1.1	2.0	+78
Other fish roe	0	0	0	0	0	0
N.E.S.	<u>0.1</u>	<u>0.2</u>	<u>+192</u>	<u>0.2</u>	<u>0.2</u>	<u>-35</u>
Total	20.4	12.2	-40	\$48.9	\$31.2	-36

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

N.E.S. - Not elsewhere specified.

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.

Table A10.—Pacific Northwest exports of edible fishery products to the Republic of Korea by product, quantity (millions of pounds), value (millions of dollars), and percent change from 1987 to 1988.

Product	Quantity			Value		
	1987	1988	% change	1987	1988	% change
Herring whole or evis.	7.2	2.4	-67	\$ 6.7	\$ 2.5	-64
Salmon chinook	0.0	0.1	—	0.0	0.2	—
Salmon chum	0.3	1.5	+432	0.4	2.6	+606
Salmon pink	3.6	3.7	+2	3.8	5.2	+36
Salmon coho	0.0	0.2	—	0.0	0.5	—
Salmon sockeye	0.6	0.1	-74	1.0	0.8	-20
Salmon other	0.1	0.1	-26	0.1	0.2	+101
Subtotal	4.6	5.7	+24	5.3	9.4	+79
Other fish fresh/frzn.	4.5	1.9	-59	2.8	1.1	-61
Other fish fillet stk.	1.8	3.4	+89	1.1	3.6	+227
Fish balls cakes pud.	0.1	7.8	+9742	0.1	6.7	+7022
Herring roe	0.2	0.0	-100	0.2	0.0	-100
Pollock roe	0.0	1.2	—	0.0	1.6	—
Snow crab, <u>opilio</u>	3.5	0.8	-77	8.7	2.1	-76
Snow crab, other	2.2	2.7	+23	6.0	8.5	+42
Shellfish other	0.3	0.1	-66	0.4	0.4	-13
N.E.S.	<u>0.0</u>	<u>0.0</u>	<u>-100</u>	<u>0.1</u>	<u>0.0</u>	<u>-100</u>
Total	24.5	25.9	+6	\$31.5	\$35.9	+14

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

N.E.S. - Not elsewhere specified.

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.

Table A11.—Pacific Northwest exports of edible fishery products to Australia by product, quantity (millions of pounds), value (millions of dollars), and percent change from 1987 to 1988.

Product	Quantity			Value		
	1987	1988	% change	1987	1988	% change
Salmon canned pink	4.0	4.3	+6	\$ 6.3	\$ 9.2	+47
Salmon canned sockeye	2.2	1.0	-54	6.7	3.2	-52
Salmon canned other	0.6	0.7	+17	1.1	2.4	+115
Other	<u>0.2</u>	<u>0.2</u>	<u>+10</u>	<u>0.2</u>	<u>0.5</u>	<u>+120</u>
Total	7.0	6.2	-12	\$14.3	\$15.3	+7

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

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.