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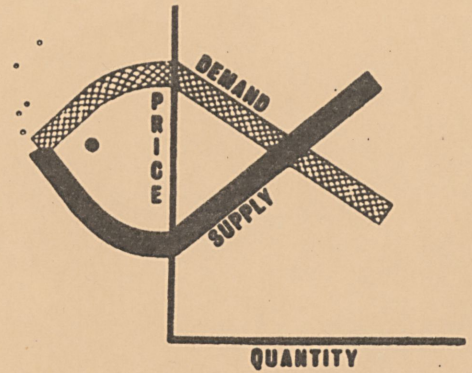
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BASIC ECONOMIC INDICATORS

SALMON

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May 1970

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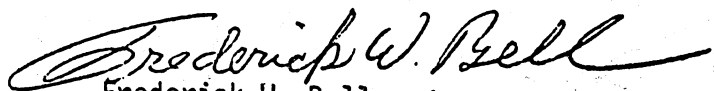


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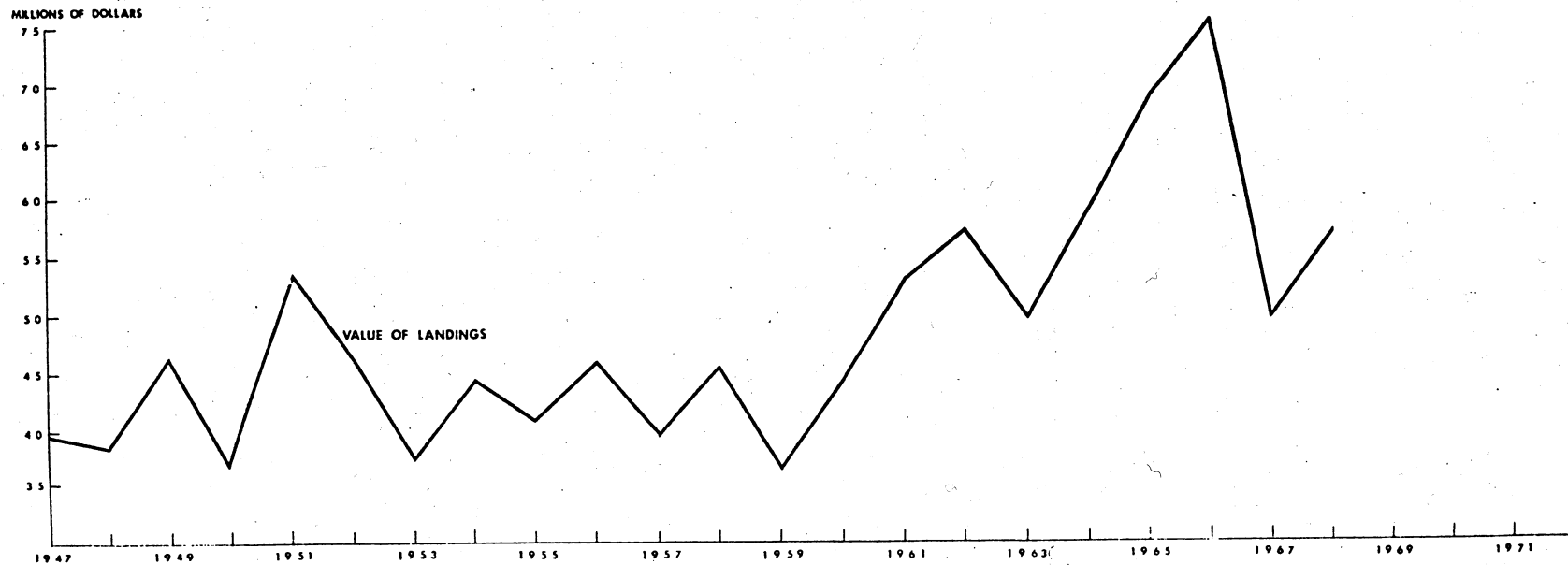
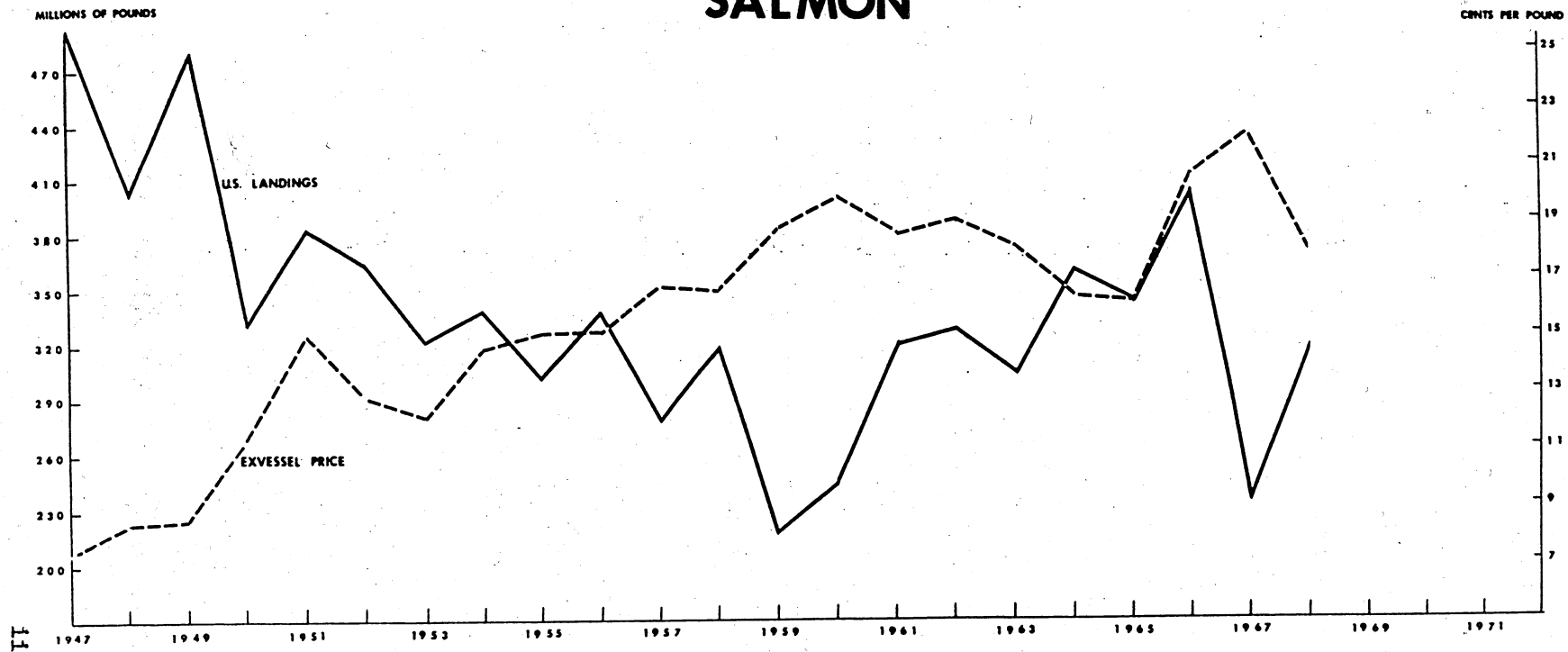
The purpose of "Basic Economic Indicators" is to bring together pertinent economic, technological and biological data for each Master Plan fishery. The Division of Economic Research of the Bureau of Commercial Fisheries has consolidated the basic variables which reflect the economic behavior of a fishery. Having this basic data set under one cover will materially aid research and development currently being conducted on each fishery and will serve as a helpful guide to policy decisions. In addition, Basic Economic Indicators reflect a major shift in thinking away from the separate discipline approach and to an interdisciplinary approach to solving many of the problems faced by the U.S. fishing industry. Hopefully, these data will be of great value in furthering quantitative analyses of the nation's fisheries.

It should be noted that data for 1967 and 1968 are preliminary. Some figures are approximations and are subject to revision. Comments and suggestions may be directed to the Division of Economic Research, 7338 Baltimore Avenue, College Park, Maryland 20740.

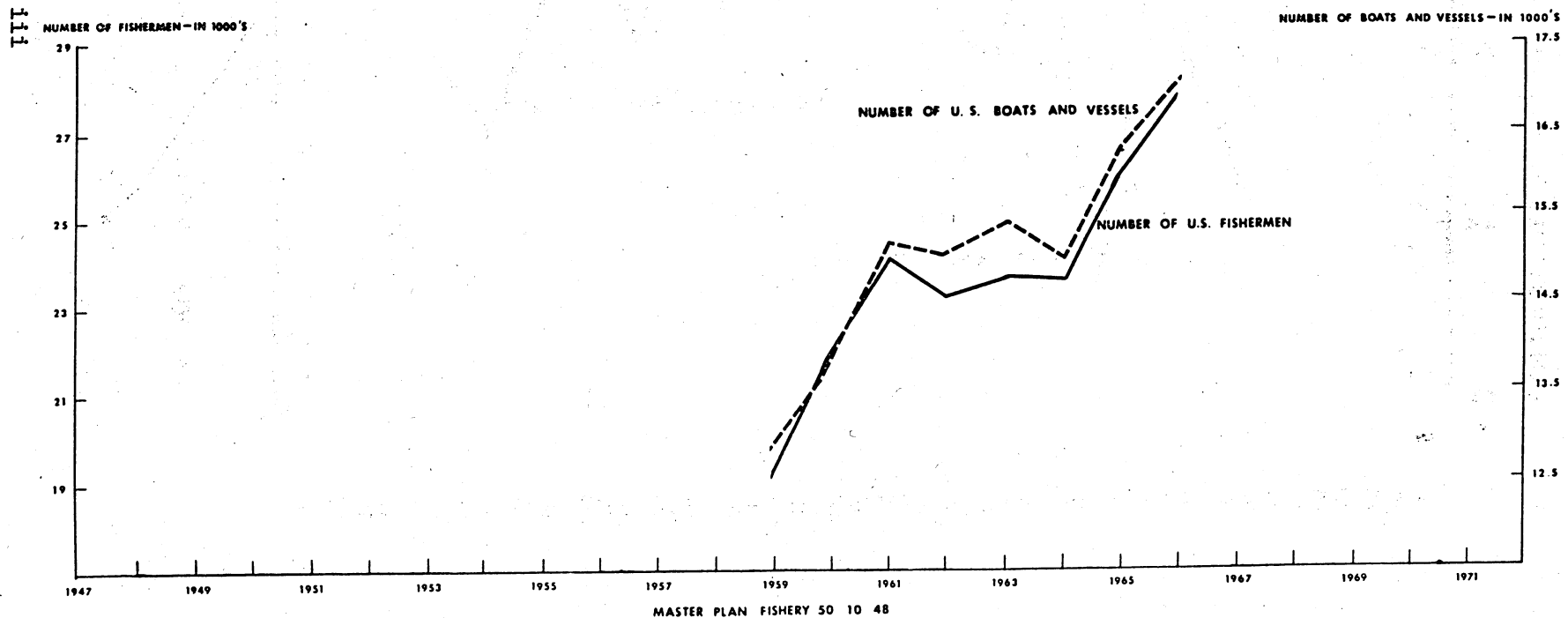
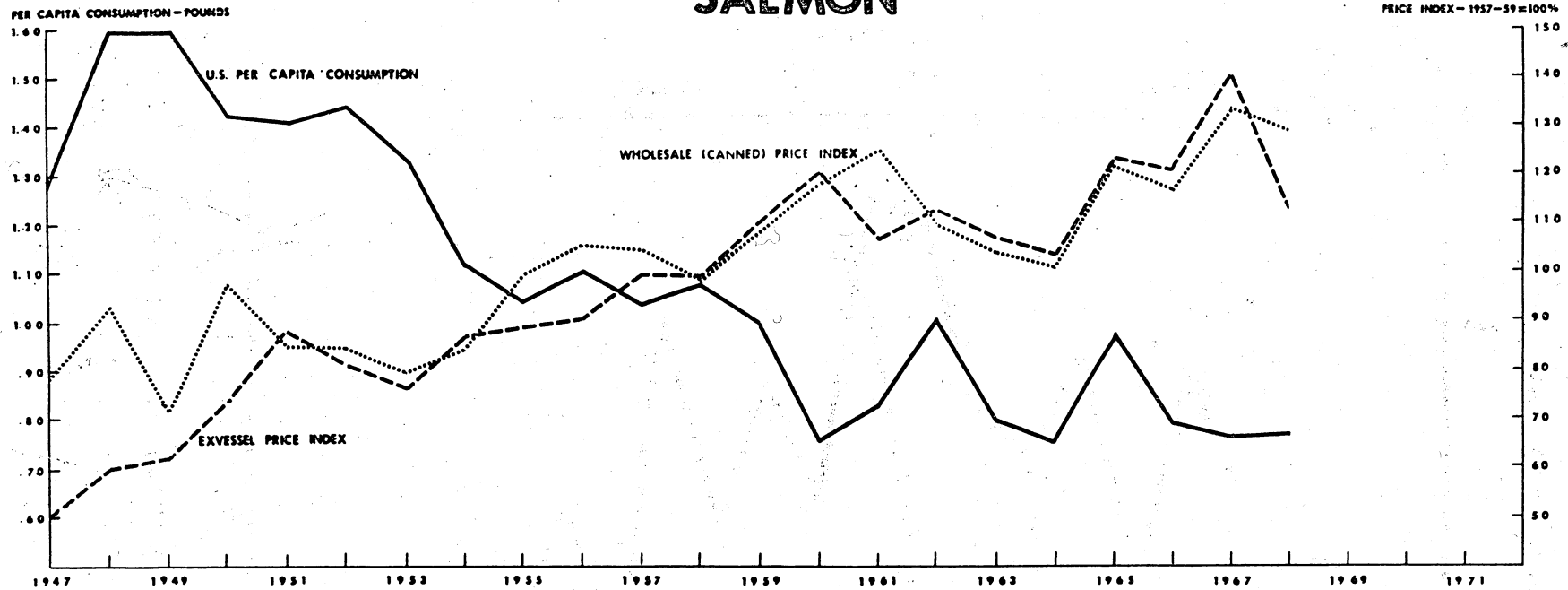
The "Basic Economic Indicators" were compiled and reviewed by the staff of the Division of Economic Research under the supervision of Richard K. Kinoshita with major contributions from Bruno G. Noetzel and Kenneth E. Koller.


Frederick W. Bell, Director
Economic Research Laboratory

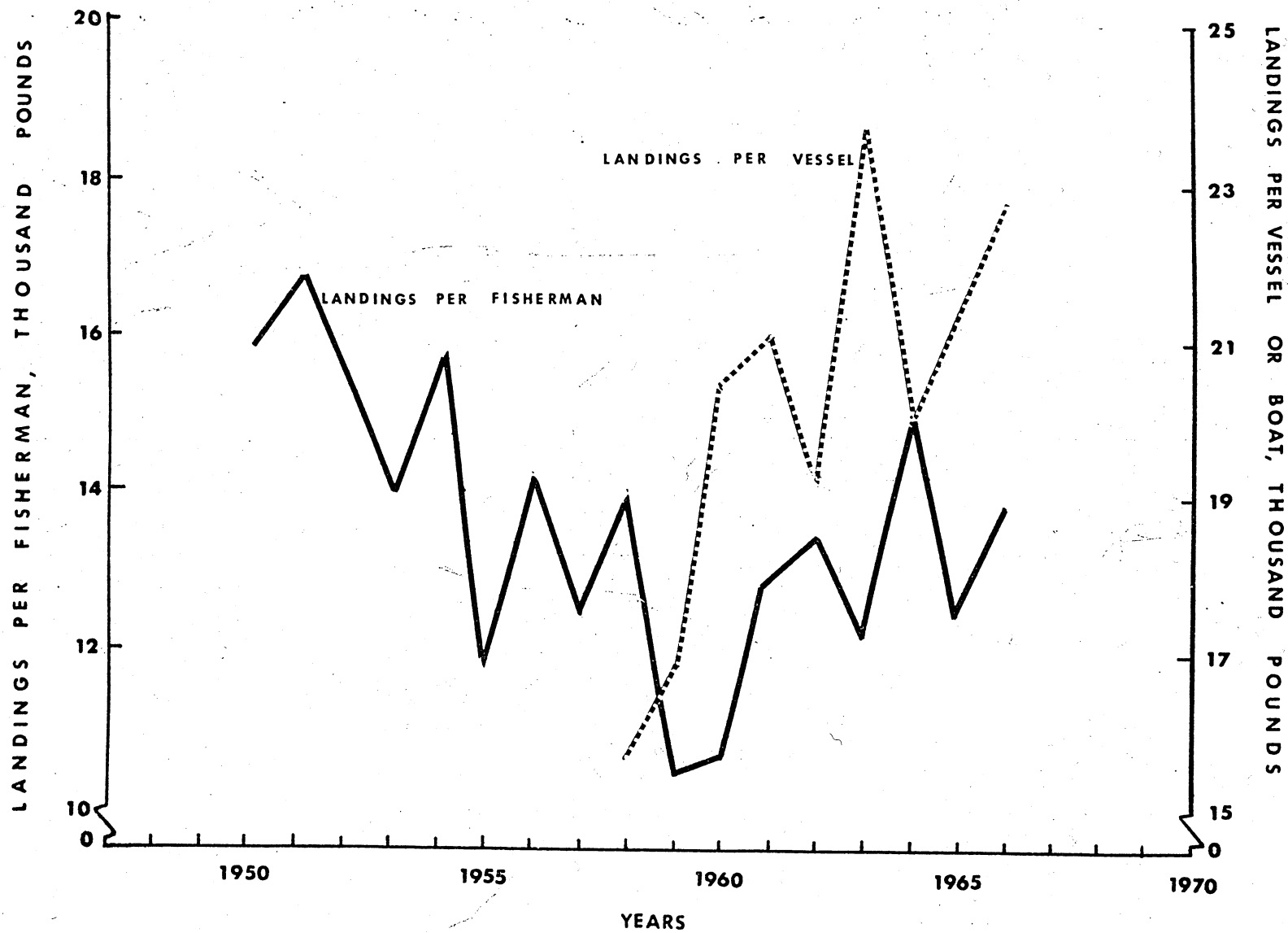
SALMON



SALMON



PRODUCTIVITY OF SALMON FISHERMEN AND VESSELS AND BOATS



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 - Fishermen
 - Fishing effort
- Costs per pound of fish landed
- Historical growth rates
 - landings
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 - vessels

Table I-1.--Average cost and earnings of vessels for salmon purse seiners,
1966-68

Item	1966	1967	1968
No. of vessels	7	9	10
Av. length of vessels	45.6	41.8	51.6
No. of trips	n.a.	n.a.	n.a.
Av. length of trip(days)	n.a.	n.a.	n.a.
Crew size	5.6	5.6	6.4
Man days at sea	n.a.	n.a.	n.a.
Landings ^{1/} pounds	163,000	194,800	344,200
Av. price ¢/pound	17.68	20.84	16.94
Gross receipts dollars	28,819	40,596	58,306
	-----Dollars per vessel, per year-----		
Trip expenditure			
Food	899	1,465	2,034
Fuel & lube	1,234	2,009	2,789
Ice & icing	n.a.	n.a.	n.a.
Other	437	711	988
Subtotal	2,570	4,185	5,811
Repair & maintenance			
Gear	1,664	1,573	2,237
Hull & engine	1,497	2,590	3,280
Subtotal	3,161	4,163	5,517
Fixed charges			
Interest	961	1,400	277
Insurance	1,871	2,484	2,730
Taxes (employee)	n.a.	n.a.	n.a.
Administrative	1,810	2,540	2,806
Subtotal	4,644	6,424	5,812
TOTAL CASH EXPENDITURES	10,375	14,772	17,140
TOTAL SHARE EXPENDITURES	18,445	25,831	41,166
Including:			
Wages ^{2/}	10,305	12,946	26,571
Captain's commission			
Owner's share	8,140	12,885	14,595
Depreciation	5,148	6,295	3,567
Net return before taxes	2,992	6,590	11,028

Source: Based on data collected from vessel owners or their accountants
(Alaska and Seattle, Washington).

^{1/} Landings are estimations based on average prices for salmon landed in
Alaska and Washington.

^{2/} Includes estimated crew share to vessel owner.

Table I-1(b).--Average cost and earnings for salmon trollers and gillnetters^{1/}
1962-68

Item	1962	1963	1964	1965	1966	1967 ^{4/}	1968 ^{4/}
No. of vessels	16	26	30	39	29	26	12
Av. length of vessels	37	38	37	38	38	38	39
No. of trips	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Av. length of trip(days)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Crew size	1.6	1.6	1.6	1.6	1.6	1.7	1.9
Man days at sea	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Landings pounds ^{2/}	31,600	43,500	44,500	43,100	42,800	48,600	53,500
Av. price \$/pound	27.58	24.71	24.12	26.05	27.78	29.16	29.26
Gross receipts dollars	8,704	10,752	10,729	11,234	11,893	14,166	15,652
-----Dollars per vessel, per year-----							
Trip expenditure							
Food	424	541	502	432	510	631	743
Fuel & lube	478	582	801	789	896	821	860
Ice & icing	185	230	267	267	352	350	352
Other							
Subtotal	1,087	2,235	1,570	1,488	1,758	1,802	1,955
Repair & maintenance							
Gear & supplies	1,139	983	855	923	1,066	1,195	1,327
Hull & engine	785	1,252	1,170	1,119	1,142	1,434	1,258
Subtotal	1,924	2,235	2,025	2,042	2,208	2,629	2,585
Fixed charges							
Interest	124	202	323	217	265	424	353
Insurance	417	409	479	430	565	619	690
Administrative	537	539	683	716	1,131	1,000	1,339
Subtotal	1,078	1,150	1,485	1,363	1,961	2,043	2,382
TOTAL CASH EXPENDITURES	4,089	4,738	5,080	4,893	5,927	6,474	6,922
TOTAL SHARE EXPENDITURES	4,615	6,014	5,649	6,341	5,966	7,692	8,730
Including:							
Wages ^{3/}	134	528	365	397	397	1,474	2,202
Owner's share	4,481	5,486	5,284	5,944	5,569	6,218	6,528
Depreciation	1,252	1,153	1,151	1,111	1,588	1,747	1,798
Net return before taxes	3,229	4,333	4,133	4,833	3,981	4,471	4,730

Source: Based on data from Division of Financial Assistance, BCF, and from vessel owners or their accountants (collected by Division of Economic Research personnel).

^{1/} Data for these two types of salmon vessels has been combined, because many vessels are equipped with gill nets and trolling gear.

^{2/} Landings are estimations based on average prices for king and silver salmons landed in Alaska and Washington.

^{3/} Payments for season only, paid to hired crew. Owner's share as a crew member is included in net income before taxes.

^{4/} The samples for 1967 and 1968 comprise a higher proportion of vessels with 2 and 3 crewmen, than the samples for 1962-1966 (vessels with 1 or 2 men).

Table I-2.--Earnings of fishermen of salmon purse seiner^{1/},
1966-68

Item	1966	1967	1968
No. of vessels	7	9	10
Av. crew size	5.6	5.6	6.4
Gross receipts \$	28,819	40,596	58,306
Share to labor	10,305	12,946	26,571
Av. share per man	1840.17	2311.78	4151.72
Food expenditures per man	160.53	261.61	317.81
Av. share per man including food	2000.70	2573.39	4469.53
Real share ^{2/}	1,769	2,213	3,688
Wage in U.S. manufacturing	5,842	5,975	6,371
Real wage in U.S. manufacturing ^{2/}	5,165	5,137	5,274

Source: Based on data from Table I-1

^{1/} Earnings per job site for the whole season.

^{2/} Deflated by CPI, 1957-59 = 100.

Table I-2(b).--Earnings of fishermen for salmon trollers and gillnetters,^{1/}
1962-68

Item	1962	1963	1964	1965	1966	1967	1968
No. of vessels	16	25	30	39	29	26	12
Av. crew size (hired)	0.6	0.6	0.6	0.6	0.6	0.7	0.9
Gross receipts \$	8,704	10,752	10,729	11,234	11,893	14,166	15,652
Share to labor	134	528	365	397	397	1,474	2,202
Av. share per man	223	880	608	662	662	2,105	2,447
Food expenditures per man	265	338	314	270	319	371	391
Av. share per man including food	488	1,218	922	932	981	2,476	2,838
Real share ^{2/}	463	1,142	853	848	867	2,129	2,342
Wage in U.S. manufacturing	5,504	5,181	5,354	5,592	5,842	5,975	6,371
Real wage in U.S. manufacturing ^{2/}	4,764	4,856	4,953	5,088	5,165	5,137	5,274

Source: Based on data from Table I-1 (b)

^{1/} Payments to hired labor only.

^{2/} Deflated by CPI, 1957-59 = 100.

Table I-3.--Productivity of salmon fishermen and vessels,
landings per fisherman and per vessel

	Landings per fisherman (pounds)	Landings per vessel pounds
1947	29,175	48,423
1948	34,183	58,180
1949	n.a.	n.a.
1950	n.a.	n.a.
1951	n.a.	n.a.
1952	n.a.	n.a.
1953	n.a.	n.a.
1954	n.a.	n.a.
1955	24,018	39,265
1956	32,443	48,223
1957	n.a.	n.a.
1958	n.a.	n.a.
1959	10,520	15,642
1960	10,685	16,969
1961	12,827	20,375
1962	13,550	21,005
1963	12,333	19,194
1964	14,858	23,644
1965	12,516	19,928
1966	13,392	22,693
1967		
1968		
1969		
1970		
1971		
1972		

Source: Fishery Statistics of the U.S.

Table I-4.--Costs per pound of fish landed for salmon purse seiners,
1966-68

Item		1966	1967	1968
Landings	pounds	163,000	194,800	344,200
Gross receipts	dollars	28,819	40,596	58,306
Average price	cents per lb.	17.68	20.84	16.94
		-----Cents per pound-----		
Trip expenditures		1.57	2.14	1.68
Repair & maintenance		1.93	2.13	1.60
Fixed charges		2.84	3.29	1.68
Share to labor		6.32	6.64	7.72
Depreciation		3.16	3.23	1.03
Cost per unit of output		15.82	17.43	13.71

Source: Based on data from table I-1

Table I-4(b).--Costs per pound of fish landed for salmon trollers and gillnetters, 1962-68

Item	1962	1963	1964	1965	1966	1967	1968
Landings	31,600	43,500	44,500	43,100	42,800	48,600	53,500
Gross receipts	8,704	10,752	10,729	11,234	11,893	14,166	15,652
Average price	27.58	24.71	24.12	26.05	27.78	29.16	29.26
-----Cents per pound-----							
Trip expenditures	3.44	3.11	3.53	3.45	4.11	3.71	3.65
Repair & maintenance	6.09	5.14	4.55	4.74	5.16	5.41	4.83
Fixed charges	3.41	2.64	3.34	3.16	4.58	4.20	4.45
Share to labor <u>1</u> /	.42	1.21	.82	.92	.92	3.03	4.12
Depreciation	3.96	2.65	2.58	2.58	3.71	3.59	3.36
Cost per unit of output	17.32	14.75	14.82	14.85	18.48	19.94	20.41

Source: Based on data from Table I-1(b)

1/ Payments to hired crew only. Does not include the share of the owner as a crew member.

Table I-5--Financial structure of fishing firms:
Salmon vessels ^{1/}

Item	All Assets Sizes		Under \$40,000		\$40,000 to \$60,000		\$60,000 to \$80,000	
	<u>Thou.</u> <u>dollars</u>	<u>Pct. of</u> <u>total</u>	<u>Thou.</u> <u>dollars</u>	<u>Pct.</u>	<u>Thou.</u> <u>dollars</u>	<u>Pct.</u>	<u>Thou.</u> <u>dollars</u>	<u>Pct.</u>
<u>Assets</u>								
Current assets	4.1	8.7	2.4	7.9	4.9	9.1	6.0	8.9
Net value of vessel	24.3	51.8	18.9	62.6	26.8	49.8	30.5	45.3
Other non- ^{2/} current assets	18.5	39.5	8.9	29.5	22.1	41.1	30.8	45.8
Total assets	46.9	100	30.2	100	53.8	100	67.3	100
<u>Liabilities</u>								
Total current liabilities	1.1	2.4	1.3	4.3	.9	1.7	1.2	1.8
Total long term liabilities	16.1	34.3	11.0	36.4	20.3	37.7	19.2	28.5
Capital stock and earned surplus	29.7	63.3	17.9	59.3	32.6	60.6	46.9	69.7
Total liabilities and capital	46.9	100	30.2	100	53.8	100	67.3	100

Source: Data Bank, Division of Economic Research, BCF

^{1/} A sample of 26 firms, for which data for 1968 was available (fairly representative for salmon vessels)

^{2/} Includes real estate property (home, land)

Table I-6(a).--Estimated market value of a salmon purse seiner, based on present value of future returns

Mean returns to vessel ^{1/}: \$14,578

Discount rate ^{2/} Percent:	Expected useful life - Years			
	5	10	15	20
	Market value in dollars:			
12	52,600	82,400	99,300	108,900
18	45,600	65,500	74,200	78,000
24	40,000	53,700	58,300	60,000

^{1/} Based on data from Table I-1: Net return before taxes, plus depreciation, plus interest paid; average value for 1967-68.

^{2/} Arbitrarily chosen.

Table I-6(b).--Estimated market value of a salmon troller and gillnetter, based on present value of future returns

Mean returns to vessel^{1/} : \$6,761

Discount rate ^{2/} Percent:	Expected useful life - Years			
	5	10	15	20
	Market value in dollars:			
12	24,400	38,200	46,000	50,500
18	21,100	30,400	34,400	36,200
24	18,600	24,900	27,000	27,800

^{1/} Based on data from Table I-1: Net return before taxes, plus depreciation, plus interest paid; average value for 1967-68.

^{2/} Arbitrarily chosen.

Table I-7.--Historical growth rate of salmon; landings, fishermen
vessels , 1959-66

Landings <u>1/</u>	+ 7.90 percent per year
Fishermen <u>2/</u>	+ 4.00 percent per year
Vessels <u>3/</u>	+ 3.32 percent per year

<u>1/</u> Log of landings	= 5.3212 + .0337 time (4.84)
<u>2/</u> Log of number of fishermen	= 4.2940 + .0176 time (5.02)
<u>3/</u> Log of number of vessels	= 4.1129 + .0142 time (5.45)

II DEMAND INDICATORS

-Consumption

Aggregate

Per capita

Socio-economic characteristics

-Prices

Exvessel

Wholesale

Retail

-Value

Landings

Wholesale

Retail

-Relative prices

-Seasonal demand

-Price and income elasticities

Table II-1.--U.S. salmon consumption: Aggregate and per capita

	Aggregate			1/	Per capita		
	Fresh & frozen	Canned	Total		Fresh & frozen	Canned	Total
	-----Million pounds-----				-----Pounds-----		
1947	74.8	318.1	391.5		.519	2,207	2.726
1948	56.6	349.4	410.4		.386	2.380	2.766
1949	68.3	385.0	453.8		.458	2.578	3.036
1950	60.7	312.5	372.6		.400	2.057	2.457
1951	70.5	336.7	407.8		.458	2.186	2.644
1952	66.5	338.1	406.4		.425	2.161	2.586
1953	71.1	300.4	371.7		.447	1.890	2.337
1954	68.2	310.0	373.4		.421	1.915	2.336
1955	66.4	246.3	307.5		.402	1.492	1.894
1956	48.8	291.6	341.3		.290	1.734	2.024
1957	54.1	260.9	317.9		.316	1.523	1.839
1958	60.0	302.7	361.5		.344	1.738	2.075
1959	49.5	206.2	254.4		.279	1.164	1.436
1960	38.8	217.7	257.8		.216	1.209	1.432
1961	54.5	269.7	321.3		.297	1.473	1.755
1962	43.5	274.1	317.6		.234	1.474	1.708
1963	60.6	226.7	285.8		.321	1.201	1.514
1964	57.1	242.8	299.2		.298	1.268	1.562
1965	61.0	270.5	331.3		.315	1.395	1.709
1966	55.5	238.3	296.4		.284	1.276	1.512
1967	56.4	218.6	276.5		.285	1.105	1.397
1968	38.3	198.1	245.7		.192	.991	1.229
1969							
1970							
1971							
1972							

Source: Fishery Statistics of the U.S.

1/ Includes fresh and frozen cured and smoked. Since these figures do not take into account yearly changes in cured and smoked stocks, the sum of the fresh and frozen and canned figures will vary slightly from the total consumption figures from year to year. On a continuous basis, however, these variations cancel each other out.

Table II-2(a).--U.S. consumption of salmon (pink, canned) by socio-economic characteristics, 1969^{1/}

(Retail Weight)

Socio-Economics Characteristics	1969				Total
	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	
	-----Pounds, per capita-----				
<u>RACE</u>					
Negro	.539	.428	.366	.469	1.802
White	.236	.201	.193	.211	.841
Other	.158	.091	.208	.000	.457
Not specified	.266	.000	.000	.000	.266
<u>RELIGION</u>					
Catholic	.185	.152	.140	.146	.623
Jewish	.196	.203	.188	.227	.814
Protestant	.274	.231	.219	.243	.967
Other	.058	.105	.071	.119	.353
Not specified	.052	.000	.000	.000	.052
<u>INCOME PER CAPITA</u>					
Under 1,000	.264	.274	.247	.251	1.036
1,000-1,999	.271	.233	.238	.246	.988
2,000-2,499	.199	.146	.142	.162	.649
2,500-2,999	.327	.242	.222	.285	1.076
3,000-3,499	.188	.133	.101	.152	.574
3,500 & over	.304	.204	.188	.218	.914
<u>OCCUPATION</u>					
Prof. & semiprofessional	.116	.077	.071	.086	.350
Proprietors, managerial	.172	.210	.166	.221	.769
Clerical & sales	.270	.205	.188	.177	.840
Craftsmen, foremen	.315	.191	.169	.227	.902
Head operative	.169	.240	.220	.233	.862
Service workers, & laborers	.434	.335	.381	.369	1.519
<u>EDUCATION</u>					
Less than 4 yr. high school	.349	.297	.313	.336	1.295
Less than 4 yr. college	.230	.197	.173	.204	.804
College grad.	.130	.080	.056	.067	.333
Head, not specified	.048	.104	.046	.051	.249
<u>REGION</u>					
New England	.102	.088	.057	.042	.289
Middle Atlantic	.227	.161	.146	.191	.725
E. North Cent.	.188	.170	.176	.193	.727
W. North Cent.	.208	.198	.143	.204	.753
South Atlantic	.360	.334	.250	.268	1.212
E. South Cent.	.562	.536	.644	.604	2.346
W. South Cent.	.330	.272	.282	.258	1.142
Mountain	.423	.161	.146	.237	.967
Pacific	.162	.105	.116	.132	.515

Source: Division of Economic Research, Bureau of Commercial Fisheries
^{1/} Purchases by households for home use.

Table II-2(b).---U.S. consumption of salmon (red, canned) by socio-economic characteristics, 1969¹/

(Retail Weight)

Socio-Economic Characteristics	1969				Total
	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	
	Pounds, per capita				
<u>RACE</u>					
Negro	.092	.073	.119	.040	.324
White	.168	.129	.118	.114	.529
Other	.000	.000	.083	.000	.083
Not specified	.066	.000	.000	.000	.066
<u>RELIGION</u>					
Catholic	.168	.127	.116	.122	.533
Jewish	.567	.477	.361	.471	1.876
Protestant	.150	.112	.109	.091	.462
Other	.135	.263	.238	.357	.993
Not specified	.000	.000	.000	.000	.000
<u>INCOME PER CAPITA</u>					
Under 1,000	.086	.101	.056	.056	.299
1,000-1,999	.129	.074	.100	.092	.395
2,000-2,499	.159	.089	.059	.084	.391
2,500-2,999	.188	.155	.129	.137	.609
3,000-3,499	.154	.102	.098	.112	.466
3,500 & over	.318	.219	.191	.157	.885
<u>OCCUPATION</u>					
Prof. & semiprofessional	.128	.104	.086	.069	.387
Proprietors, managerial	.142	.121	.127	.124	.514
Clerical & sales	.215	.173	.112	.118	.618
Craftsmen, foremen	.144	.093	.095	.087	.419
Head operative	.083	.140	.113	.091	.427
Service workers, & laborers	.276	.140	.167	.164	.747
<u>EDUCATION</u>					
Less than 4 yr. high school	.206	.152	.165	.141	.664
Less than 4 yr. college	.152	.116	.087	.100	.455
College grad.	.128	.107	.107	.082	.424
Head, not specified	.024	.038	.106	.059	.227
<u>REGION</u>					
New England	.176	.149	.130	.056	.511
Middle Atlantic	.182	.152	.124	.148	.606
E. North Cent.	.176	.119	.128	.107	.530
W. North Cent.	.190	.151	.133	.128	.602
South Atlantic	.100	.123	.083	.086	.392
E. South Cent.	.149	.056	.044	.066	.315
W. South Cent.	.086	.096	.105	.083	.370
Mountain	.331	.096	.118	.077	.622
Pacific	.200	.143	.159	.137	.639

Source: Division of Economic Research, Bureau of Commercial Fisheries
¹/ Purchases by households for home use.

Table II-2(c)--U.S. consumption of salmon (other, canned) by socio-economic characteristics, 1969^{1/}

Socio-Economic Characteristics	(Retail Weight)				
	1969				
	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Total
	Pounds, per capita				
<u>RACE</u>					
Negro	.033	.000	.007	.004	.044
White	.019	.013	.013	.009	.054
Other	.000	.000	.000	.000	.000
Not specified	.000	.000	.000	.000	.000
<u>RELIGION</u>					
Catholic	.018	.013	.009	.007	.047
Jewish	.064	.037	.049	.063	.213
Protestant	.019	.011	.012	.007	.049
Other	.000	.000	.000	.024	.024
Not specified	.000	.000	.000	.000	.000
<u>INCOME PER CAPITA</u>					
Under 1,000	.028	.010	.009	.009	.056
1,000-1,999	.026	.011	.010	.011	.058
2,000-2,499	.016	.011	.026	.001	.054
2,500-2,999	.006	.012	.010	.008	.036
3,000-3,499	.004	.012	.002	.004	.022
3,500 & over	.028	.015	.016	.011	.070
<u>OCCUPATION</u>					
Prof. & semiprofessional	.011	.007	.011	.004	.033
Proprietors, managerial	.010	.017	.013	.013	.053
Clerical & sales	.011	.005	.011	.006	.033
Craftsmen, foremen	.016	.009	.006	.006	.037
Head operative	.010	.015	.017	.007	.049
Service workers, & laborers	.061	.017	.018	.013	.109
<u>EDUCATION</u>					
Less than 4 yr. high school	.028	.016	.015	.010	.069
Less than 4 yr. college	.016	.010	.012	.008	.046
College grad.	.014	.009	.009	.007	.039
Head, not specified	.024	.000	.000	.000	.024
<u>REGION</u>					
New England	.014	.007	.011	.001	.033
Middle Atlantic	.026	.023	.023	.018	.090
E. North Cent.	.025	.006	.009	.007	.047
W. North Cent.	.009	.006	.010	.008	.033
South Atlantic	.011	.011	.006	.003	.031
E. South Cent.	.040	.019	.016	.010	.085
W. South Cent.	.036	.020	.009	.012	.077
Mountain	.008	.007	.009	.000	.024
Pacific	.004	.004	.014	.007	.029

Source: Division of Economic Research, Bureau of Commercial Fisheries

^{1/} Purchases by households for home use.

Table II-2(d)--U.S. consumption of salmon (pink, red, all canned) by socio-economic characteristics, 1969^{1/}

(Retail Weight)					
Socio-Economic Characteristics	1969				Total
	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	
	-----Pounds, per capita-----				
<u>RACE</u>					
Negro	.664	.501	.492	.513	2.170
White	.423	.343	.324	.334	1.424
Other	.158	.091	.291	.000	.540
Not specified	.332	.000	.000	.000	.332
<u>RELIGION</u>					
Catholic	.371	.292	.265	.275	1.203
Jewish	.827	.717	.597	.761	2.902
Protestant	.443	.354	.340	.341	1.478
Other	.193	.368	.309	.500	1.370
Not specified	.052	.000	.000	.000	.052
<u>INCOME PER CAPITA</u>					
Under 1,000	.378	.385	.312	.316	1.391
1,000-1,999	.426	.318	.348	.349	1.433
2,000-2,499	.374	.246	.227	.247	1.094
2,500-2,999	.521	.409	.361	.430	1.721
3,000-3,499	.346	.247	.201	.268	1.062
3,500 & over	.650	.438	.399	.386	1.873
<u>OCCUPATION</u>					
Prof. & semiprofessional	.255	.188	.268	.159	.870
Proprietors, managerial	.324	.348	.306	.358	1.336
Clerical & sales	.496	.383	.311	.301	1.491
Craftsmen, foremen	.475	.293	.273	.320	1.361
Head operative	.262	.395	.450	.321	1.428
Service workers, & laborers	.771	.492	.566	.546	2.375
<u>EDUCATION</u>					
Less than 4 yr. high school	.583	.465	.493	.487	2.028
Less than 4 yr. college	.398	.323	.272	.312	1.305
College grad.	.272	.196	.272	.156	.896
Head, not specified	.096	.142	.152	.110	.500
<u>REGION</u>					
New England	.292	.244	.198	.099	.833
Middle Atlantic	.435	.336	.293	.357	1.421
E. North Cent.	.389	.295	.313	.307	1.304
W. North Cent.	.407	.355	.286	.340	1.388
South Atlantic	.471	.468	.339	.357	1.635
E. South Cent.	.751	.611	.704	.680	2.746
W. South Cent.	.452	.388	.396	.353	1.589
Mountain	.762	.264	.273	.314	1.613
Pacific	.366	.252	.289	.276	1.183

Table II-3.--Salmon prices: Exvessel, wholesale and retail

	Exvessel	Wholesale ^{1/}	Retail ^{2/}
	-----Cents per pound-----		
1947	7.88	44.5	63.7
1948	9.46	52.0	82.4
1949	9.64	39.0	85.1
1950	11.58	52.9	75.4
1951	13.93	48.7	98.2
1952	12.70	45.9	88.9
1953	11.66	43.8	84.3
1954	13.13	46.2	83.1
1955	14.43	51.6	89.1
1956	15.55	56.5	96.7
1957	14.87	55.9	100.2
1958	14.92	51.8	100.5
1959	17.72	60.7	99.4
1960	18.99	64.9	106.1
1961	16.76	66.0	119.3
1962	17.91	58.5	122.6
1963	16.66	55.6	113.8
1964	15.88	53.1	97.8
1965	19.92	70.4	129.7
1966	18.95	64.6	119.0
1967	22.40	73.6	135.6
1968	18.21	72.0	132.6
1969			
1970			
1971			
1972			

^{1/} Average value of canned salmon pack.

^{2/} From 1947-63, Bureau of Labor Statistics; and from 1964 to date estimated by applying the average percent spread of the whole-sale and retail price for canned salmon.

Table II-4.--Value of salmon landings, at wholesale and retail

	Exvessel	Wholesale ^{1/}	Retail ^{1/}
	-----Thousand dollars-----		
1947	16,276	91,913	131,569
1948	24,853	136,614	216,481
1949	25,736	104,187	227,192
1950	27,313	124,774	177,844
1951	33,256	116,263	234,437
1952	33,050	119,449	231,352
1953	28,524	107,150	206,226
1954	27,613	97,160	174,762
1955	28,602	102,280	176,610
1956	33,195	120,612	206,427
1957	29,536	111,033	199,025
1958	32,403	112,500	218,267
1959	32,684	111,962	183,344
1960	27,703	94,678	154,782
1961	28,355	111,659	201,833
1962	32,554	106,332	222,843
1963	35,570	118,709	242,969
1964	23,133	77,352	142,468
1965	43,164	152,549	281,046
1966	35,575	121,276	223,402
1967	39,622	130,188	239,857
1968	27,865	110,176	202,907
1969			
1970			
1971			
1972			

^{1/} Estimated value.

Table II-5.--Retail price of salmon relative to the consumer price index and the consumer price index for meat, poultry, and fish. 1947-68

	Retail ^{1/}	Retail/CPI ^{2/}	Retail/CPImpf ^{3/}
	-----Cents per pound-----		
1947	63.7	81.9	75.1
1948	82.4	98.3	85.7
1949	85.1	102.5	93.4
1950	75.4	90.0	79.3
1951	98.2	108.5	92.4
1952	88.9	96.1	84.4
1953	84.3	90.5	84.6
1954	83.1	88.8	84.9
1955	89.1	95.5	96.7
1956	96.7	102.1	109.9
1957	100.2	102.2	105.0
1958	100.5	99.8	96.3
1959	99.4	97.9	99.0
1960	106.1	102.9	107.0
1961	119.3	114.5	120.1
1962	122.6	116.3	120.6
1963	113.8	106.7	113.6
1964	97.8	90.5	99.2
1965	129.7	118.0	123.4
1966	119.0	105.2	104.3
1967	135.6	116.6	121.9
1968	132.6	109.4	116.6
1969			
1970			
1971			
1972			

^{1/} From Table II-3.

^{2/} Deflated by Consumer Price Index, 1957-59=100.

^{3/} Deflated by Consumer Price Index for meat, poultry and fish, 1957-59=100.

Table II-6.--Index of seasonal demand for salmon by market
area

SEASONAL DEMAND INFORMATION FOR SALMON IS

NOT AVAILABLE AT THIS TIME

Table II-7. -- Price and income elasticities for salmon

	<u>Canned</u>	<u>Fresh and Frozen</u>
Price elasticity	-1.0	-1.297
Income elasticity	0.0	1.624

Demand equation for United States

$$C/N \text{ (canned)} = 1.8809 - 1.0 \text{ Log } \left[\frac{P}{CPI} \right] + 0.0 \text{ Log } \left[\frac{Y/CPI}{N} \right]$$

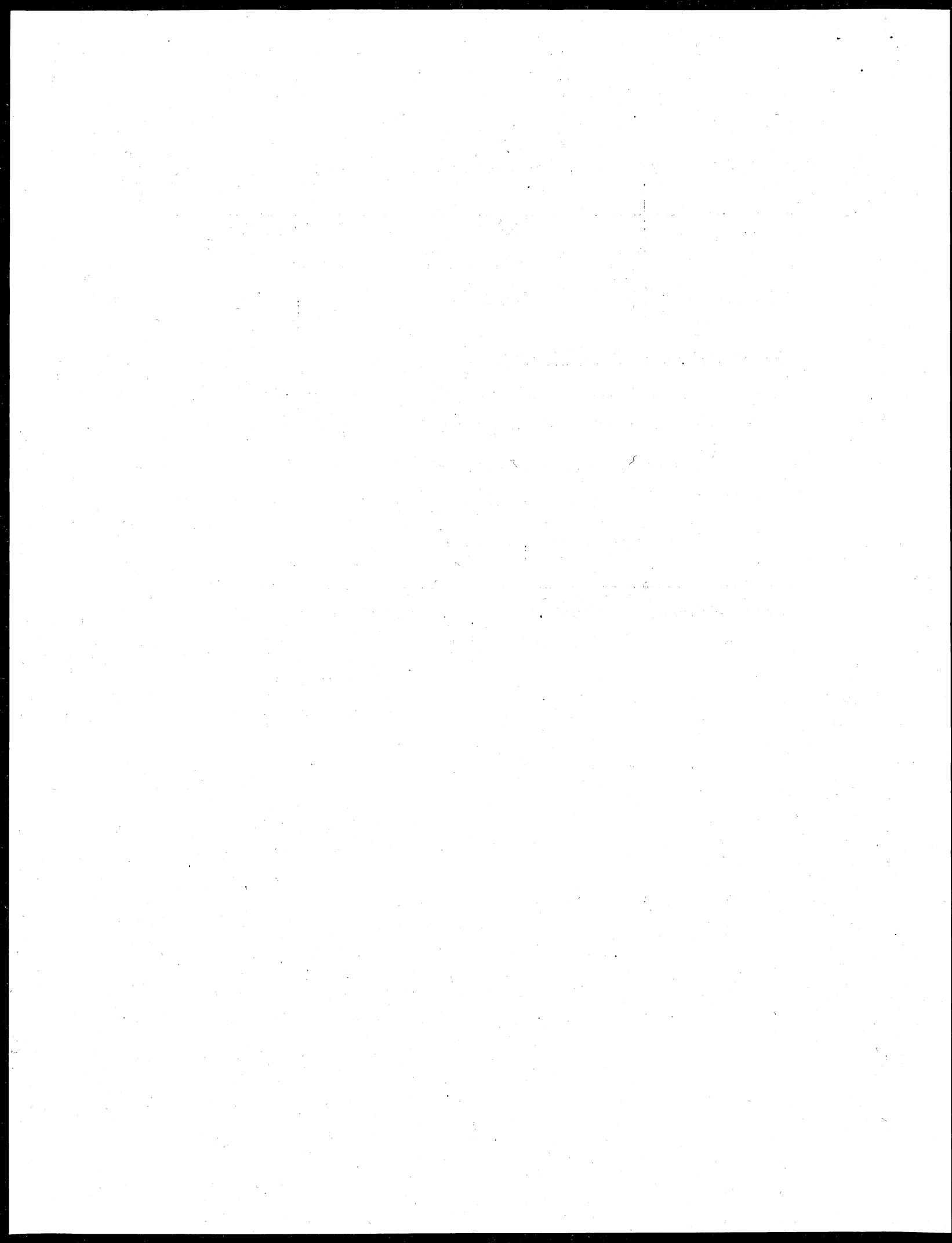
$$C/N \text{ (fresh and frozen)} = -3.5843 - 1.2971 \text{ Log } \left[\frac{P}{CPI} \right] + 1.624 \text{ Log } \left[\frac{Y/CPI}{N} \right]$$

C/N = per capita consumption of salmon

P/CPI = Price of Salmon divided by Consumer Price Index (CPI)

$\frac{Y/CPI}{N}$ = Per capital income deflated by CPI

Source: Division of Economic Research, Bureau of Commercial Fisheries



III DEMAND PROJECTIONS

-U.S. Consumption Aggregate Per capita

Table III-1.--Demand projections for salmon,
U.S. and world, to the year 2000^{1/}

Year	U.S. per cap. consumption	U.S. population	U.S. aggregate consumption	World aggregate consumption
	<u>Pounds^{2/}</u>	<u>Millions</u>	<u>-----Million pounds^{2/}-----</u>	
1967 (actual)	1.63	197.9	270	1,032
1970	1.50	206.0	310	1,040
1975	1.48	219.4	325	1,070*
1980	1.32	235.2	310	1,070
1985	1.19	252.9	300	1,070
1990	1.07	270.8	290	1,070
2000	1.06	307.8	325	1,070

- Assumptions:
- (1) Declining income elasticity over time;
 - (2) A Schaefer biological yield curve;
 - (3) Fishery management instituted when world fishery reaches maximum sustainable yield;
 - (4) Relative prices of fishery product variable over time (i.e., cost of production derived from (2) allowed to interact with demand);
 - (5) Projected per capita income and population given by U.S. Department of Agriculture by country;
 - (6) Constant technology; and
 - (7) Input prices to fisheries rise at approximately same rate as all consumer prices.

Source: For a fuller description of above assumptions and alternative projections see Working Paper No. 71, "Economic Projections of U.S. and World Demand for Major Fishery Projects," by F. Bell, D. Nash, F. Waugh, and E. Carlson.

^{1/} For annual projection between five year intervals the reader may interpolate.

^{2/} Round weight

* Reaches MSY

IV DOMESTIC PRODUCTION

-Landings

-Value

Table IV-1.--U.S. salmon landings and value

	<u>Landings^{1/}</u>	<u>Exvessel value^{2/}</u>
	<u>Thou. pounds</u>	<u>Thou. dollars</u>
1947	454,237	39,263
1948	378,580	38,229
1949	443,458	46,697
1950	323,325	37,450
1951	376,835	52,508
1952	356,007	45,241
1953	324,058	37,806
1954	334,683	43,948
1955	282,005	40,704
1956	297,151	46,220
1957	266,416	39,641
1958	307,499	45,903
1959	201,684	35,741
1960	235,447	44,730
1961	310,398	52,027
1962	314,566	56,353
1963	294,177	49,011
1964	352,246	55,958
1965	326,806	65,123
1966	387,512	73,465
1967	216,664	48,533
1968	301,400	54,900
1969		
1970		
1971		
1972		

Source: Fishery Statistics of the United States.

^{1/} Figures for the years 1947 to 1957 inclusive, are as revised in statistical digest number 60.

^{2/} No revised figures are available for salmon values from 1947 to 1957.

Table IV-2.--Salmon landings by major states

	Alaska ^{1/}	Washington	Oregon	California	U.S. Total
	-----Thousand pounds, round weight-----				
1947	338,000	84,121	20,631	11,484	454,237
1948	313,200	38,797	18,815	7,769	378,580
1949	347,600	76,591	12,838	6,430	443,458
1950	259,600	44,771	11,885	7,068	323,325
1951	279,200	76,535	13,907	7,193	376,835
1952	286,700	48,920	13,112	7,275	356,007
1953	231,400	74,475	10,194	7,989	324,058
1954	257,000	59,372	8,812	9,499	334,683
1955	195,800	61,754	12,471	11,980	282,005
1956	242,800	28,700	14,239	11,412	297,151
1957	204,700	44,847	11,370	5,499	266,416
1958	241,300	54,363	8,179	3,657	307,499
1959	147,278	42,308	5,329	6,769	201,684
1960	207,100	16,528	5,598	6,221	235,447
1961	264,814	29,898	7,048	8,638	310,398
1962	277,848	22,852	7,193	6,673	314,566
1963	223,063	54,993	8,262	7,859	294,177
1964	311,623	21,275	9,867	9,481	352,246
1965	274,844	30,418	11,806	9,738	326,806
1966	333,325	32,367	12,373	9,447	387,512
1967	138,516			7,393	216,664
1968				6,952	310,400
1969					
1970					
1971					
1972					

Source: Fishery Statistics of the U.S.

^{1/} Figures for the years 1947 to 1957 inclusive are as revised in Fishery Statistics of the United States, No. 60.

Table IV-3.--Landings of salmon by species

Year	Chinook or King		Chum or Keta	
	Quantity	Value	Quantity	Value
	<u>Thou.</u> <u>pounds</u>	<u>Thou.</u> <u>dollars</u>	<u>Thou.</u> <u>pounds</u>	<u>Thou.</u> <u>dollars</u>
1947	54,881	9,672	44,955	2,657
1948	46,669	9,853	70,509	5,588
1949	40,312	7,505	43,540	3,199
1959	37,361	8,329	70,587	5,920
1951	43,910	10,489	66,299	6,011
1952	38,691	9,824	83,299	6,494
1953	39,418	8,638	64,925	4,348
1954	36,607	8,983	83,849	5,703
1955	42,742	11,592	31,510	2,553
1956	38,397	11,354	54,859	4,230
1957	28,234	8,542	65,208	5,662
1958	27,593	9,034	68,047	5,023
1959	27,414	8,933	38,535	3,507
1960	24,057	9,323	49,811	4,371
1961	26,962	10,963	48,139	4,254
1962	25,111	10,595	60,345	5,308
1963	27,179	10,911	38,840	3,626
1964	28,732	11,455	65,842	5,235
1965	29,316	10,866	31,266	2,794
1966	27,223	10,989	56,506	6,674
1967	26,181	9,594	34,459	3,874
1968				
1969				
1970				
1971				
1972				

Table IV-3.--Landings of salmon by species (continued).

Year	Pink		Red or Sockeye		Silver or Coho	
	Quantity	Value	Quantity	Value	Quantity	Value
	<u>Thou.</u> <u>pounds</u>	<u>Thou.</u> <u>dollars</u>	<u>Thou.</u> <u>pounds</u>	<u>Thou.</u> <u>dollars</u>	<u>Thou.</u> <u>pounds</u>	<u>Thou.</u> <u>dollars</u>
1947	179,746	13,205	138,983	8,507	35,672	5,220
1948	97,001	7,115	125,362	9,523	39,009	6,150
1949	244,515	23,954	78,058	7,110	37,034	4,928
1950	81,445	6,773	93,079	9,277	40,883	7,151
1951	149,878	18,234	68,464	9,247	48,284	8,527
1952	87,111	7,503	105,500	14,400	41,406	7,020
1953	105,593	9,195	85,589	11,670	28,533	3,955
1954	85,602	7,908	95,369	17,047	33,256	4,307
1955	126,083	13,167	55,458	8,517	26,212	4,875
1956	88,205	9,257	86,517	15,267	29,173	6,112
1957	73,169	8,360	76,911	12,293	22,894	4,784
1958	120,723	11,059	67,825	15,590	23,311	5,197
1959	61,740	7,027	53,790	11,531	20,205	4,743
1960	52,588	6,817	95,326	20,434	13,665	3,785
1961	108,452	10,951	103,644	20,324	23,201	5,535
1962	143,309	20,302	58,049	12,828	27,752	6,956
1963	156,603	18,289	43,424	10,337	28,131	5,848
1964	162,325	17,182	57,350	13,464	38,071	8,659
1965	79,655	8,298	148,119	32,878	38,515	10,323
1966	163,016	22,124	102,012	22,930	38,755	10,748
1967	51,721	6,278	66,013	16,093	38,290	12,694
1968						
1969						
1970						
1971						
1972						

Source: Fishery Statistics of the United States, BCF.

Table IV.4--U.S. canned salmon production: Quantity and value

	Cases	Quantity	Value
	<u>Thousand</u>	<u>Thousand pounds</u>	<u>Thousand dollars</u>
1947	5,641	270,837	120,635
1948	4,825	231,598	120,537
1949	5,525	265,196	103,431
1950	4,310	206,871	109,541
1951	4,646	222,987	108,626
1952	4,464	214,289	98,264
1953	3,912	187,769	82,241
1954	4,163	199,824	92,255
1955	3,289	157,855	81,356
1956	3,505	168,250	95,101
1957	3,207	153,917	86,150
1958	3,732	179,134	92,822
1959	2,465	118,330	71,827
1960	2,834	136,049	88,197
1961	3,697	177,443	116,955
1962	3,801	182,435	106,712
1963	3,295	158,153	87,963
1964	3,759	180,442	95,761
1965	3,634	174,414	122,744
1966	4,358	209,161	136,075
1967	2,072	99,456	76,121
1968	3,390	162,738	117,199
1969			
1970			
1971			
1972			

Source: Canned Fishery Products
Fishery Statistics of the U.S.

Table IV-5.-- U.S. supply and disposition of salmon

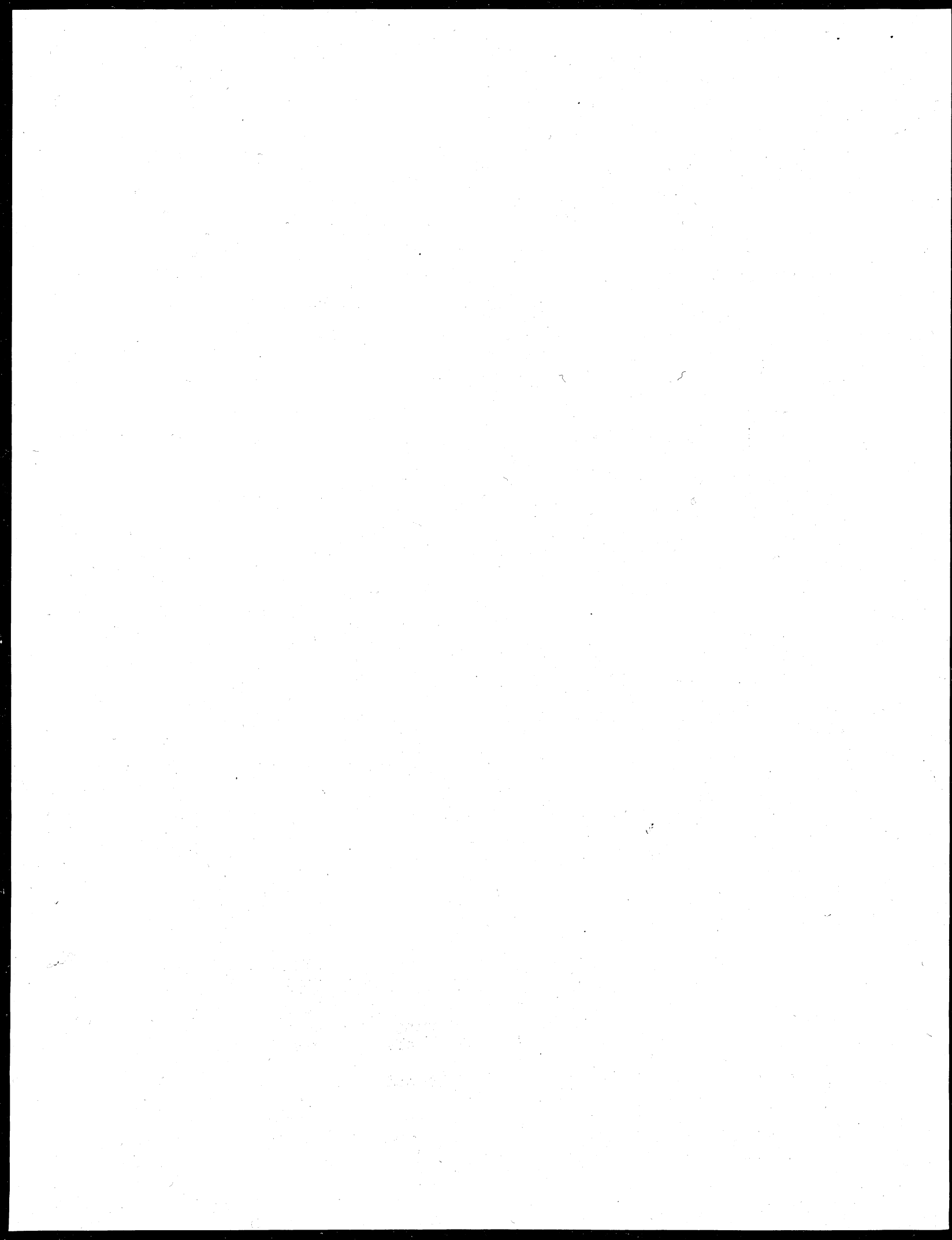
	Beginning ^{1/} stocks	Landings	Imports ^{3/}	Total Supply	Ending ^{1/} stocks	Exports ^{3/}	Apparent total consumption
-----Thousand pounds, round weight-----							
1947	30,934	454,237	27,223	512,394	25,371	95,479	391,544
1948	25,371	378,580	30,968	434,919	20,100	4,413	410,406
1949	20,100	443,458	31,760	495,318	19,162	22,308	453,848
1950	19,162	323,325	54,598	397,085	21,675	2,765	372,645
1951	21,675	376,835	34,020	432,530	20,553	4,172	407,805
1952	20,553	356,007	54,803	431,363	22,212	2,701	406,450
1953	22,212	324,058	51,303	397,573	21,033	4,825	371,715
1954	21,033	334,683	56,356	412,072	20,155	18,500	373,417
1955	20,155	282,005	42,372	344,532	19,362	17,658	307,512
1956	19,362	297,151	59,121	375,634	23,473	10,869	341,292
1957	23,473	266,416	55,747	345,636	15,857	11,921	317,858
1958	15,857	307,499	75,433	398,789	21,263	16,044	361,482
1959	21,263	201,684	70,687	293,634	15,751	23,488	254,395
1960	15,751	235,447	45,041	296,239	16,199	22,290	257,750
1961	16,199	310,398	25,485	352,082	17,612	13,185	321,285
1962	17,612	314,566	21,992	354,170	20,305	16,291	317,574
1963	20,305	294,177	12,614	327,096	19,132	22,187	285,777
1964	19,132	352,246	10,938	382,317	23,150	59,945	299,222
1965	231,078	326,806	9,639	567,523	185,907	50,296	331,320
1966	222,387	387,512	10,895	620,794	269,880	54,553	296,361
1967	269,880	216,664	10,685	497,229	167,217	53,540	276,472
1968	167,217	310,400	19,347	496,964	223,376	27,860	245,728
1969							
1970							
1971							
1972							

Source: Bureau of Commercial Fisheries Fishery Statistics of the United States. National Canner's Association (1965-1968 stocks data).

1/ Includes fresh and frozen and cured only to 1955. Beginning 1955 includes also filets and steaks. Beginning 1965 also includes canner's stocks of canned salmon. Beginning 1966 also includes distributor's stocks of canned salmon.

2/ Includes smoked cured, canned, and fresh and frozen all converted to round weights.

3/ Includes canned and fresh and frozen; also includes cured to 1965 after which cured figures are no longer reported separately. All forms are converted to round weight.



V DOMESTIC EMPLOYMENT, VESSELS AND EFFORT

- Fishermen
- Vessels
- Trips
- Days at sea
- Days fishing

Table V.1--Number of salmon fishermen, and vessels and boats

	Fishermen	Vessels and boats
	<u>Number</u>	
1950	11,082	6,677
1951	11,024	6,477
1952	n.a.	n.a.
1953	n.a.	n.a.
1954	n.a.	n.a.
1955	11,741	7,182
1956	9,159	6,162
1957	n.a.	n.a.
1958	n.a.	n.a.
1959	19,172	12,894
1960	22,036	13,875
1961	24,199	15,234
1962	23,216	14,976
1963	23,853	15,326
1964	23,708	14,898
1965	26,111	16,399
1966	27,814	17,076
1967		
1968		
1969		
1970		
1971		
1972		

Source: Fishery Statistics of the United States

Table V.2--Number of Pacific salmon vessels and boats, by fishery^{1/}

	Purse seines		Gill nets, anchor ^{2/}		Gill nets, drift	
	Vessels	Boats	Vessels	Boats	Vessels	Boats
	-----Number-----					
1950	286	321	-	447	66	2,615
1951	319	331	-	294	71	2,471
1952	280	348	-	366	n.a.	n.a.
1953	342	384	-	342	n.a.	n.a.
1954	322	330	-	336	n.a.	n.a.
1955	383	395	-	307	210	2,184
1956	223	229	-	337	201	2,116
1957	422	438	-	340	n.a.	n.a.
1958	424	430	-	352	260	2,027
1959	899	1,279	36	1,515	631	3,660
1960	1,023	2,029	50	1,970	681	3,775
1961	1,026	1,866	35	2,490	566	4,327
1962	1,060	1,868	9	2,754	573	4,327
1963	1,094	2,304	4	2,549	595	4,567
1964	979	1,921	-	2,882	580	4,308
1965	986	2,078	17	2,872	676	4,671
1966	865	2,059	28	2,908	767	4,951
1967						
1968						
1969						
1970						
1971						
1972						

Table V-2.---Number of Pacific salmon vessels and boats, by fishery^{1/}
(Continued)

	Troll lines		Grand total
	Vessels	Boats	Vessels & Boats
	-----Number-----		
1950	1,299	1,643	6,677
1951	1,432	1,559	6,477
1952	n.a.	n.a.	n.a.
1953	n.a.	n.a.	n.a.
1954	n.a.	n.a.	n.a.
1955	1,916	1,787	7,182
1956	1,689	1,367	6,162
1957	n.a.	n.a.	n.a.
1958	n.a.	n.a.	n.a.
1959	2,278	2,596	12,894
1960	2,045	2,302	13,875
1961	2,090	2,834	15,234
1962	1,951	2,389	14,976
1963	1,923	2,290	15,326
1964	1,968	2,260	14,898
1965	2,133	2,966	16,399
1966	2,257	3,241	17,076
1967			
1968			
1969			
1970			
1971			
1972			

Source: Fishery Statistics of the United States

^{1/} Does not include Alaska prior to 1959

^{2/} Set or stake

Table V-3.--Number of fishermen on vessels, boats and shore, by fishery,
Pacific salmon^{1/}

	Purse seines		Gill nets anchor 2/		Gill net, drift	
	Vessels	boats & shore	Vessels	boats & shore	Vessels	boats & shore
	-----Number-----					
1950	2,324	91	-	536	106	3,040
1951	2,548	26	-	332	112	2,838
1952	2,135	139	-	408	n.a.	n.a.
1953	2,394	85	-	382	n.a.	n.a.
1954	2,373	16	-	397	n.a.	n.a.
1955	2,807	24	-	369	282	2,435
1956	1,588	12	-	413	263	2,287
1957	2,920	34	-	414	n.a.	n.a.
1958	2,915	12	-	408	286	2,150
1959	5,088	639	63	1,678	916	4,068
1960	5,606	1,840	61	1,981	1,008	4,999
1961	5,622	1,640	72	2,500	872	5,972
1962	5,152	1,614	16	2,759	951	5,999
1963	5,142	1,669	10	3,038	1,059	6,635
1964	5,718	934	-	3,203	1,050	6,121
1965	5,571	1,144	34	3,322	1,174	7,162
1966	4,937	1,625	56	3,383	1,364	6,937
1967						
1968						
1969						
1970						
1971						
1972						

Table V-3.---Number of fishermen on vessels, boats and shore, by fishery, Pacific salmon^{1/} (Continued)

	Troll lines		Grand total
	Vessels	boats & shore	Vessels, boats & shore
	-----Number-----		
1950	2,718	2,267	11,082
1951	2,833	2,335	11,024
1952	n.a.	n.a.	n.a.
1953	n.a.	n.a.	n.a.
1954	n.a.	n.a.	n.a.
1955	3,511	2,313	11,741
1956	2,940	1,656	9,159
1957	n.a.	n.a.	n.a.
1958	n.a.	n.a.	n.a.
1959	3,643	3,077	19,172
1960	3,475	3,066	22,036
1961	3,623	3,898	24,199
1962	3,358	3,367	23,216
1963	3,277	3,023	23,853
1964	3,685	2,997	23,708
1965	4,115	3,589	26,111
1966	4,510	5,002	27,814
1967			
1968			
1969			
1970			
1971			
1972			

Source: Fishery Statistics of the United States

^{1/} Does not include Alaska prior to 1959

^{2/} Set or stake

VI BIOLOGICAL STOCK ASSESSMENT

Table VI-1.--Estimates of maximum sustainable yield from world stocks of salmon

Region	MSY
	<u>Thou. metric tons</u>
I. North Pacific	
A. North America ^{1/}	
1. Chinook salmon	22.5
2. Chum salmon	35.0
3. Coho salmon	35.0
4. Pink salmon	100.0
5. Sockeye salmon	<u>60.0</u>
Total	252.5
B. Japan ^{1/}	
1. Chum, chinook, coho, and sockeye salmon	80.1
2. Pink and cherry salmon	<u>53.4</u>
Total	133.5
C. Russia ^{1/}	
1. Chinook salmon	1.1
2. Chum salmon	31.5
3. Coho salmon	4.0
4. Pink salmon	27.2
5. Sockeye salmon	<u>4.0</u>
Total	67.8
Area Total	453.8 ^{2/}

Table VI-1.--Estimates of maximum sustainable yield from world stocks of salmon (Continued)

Region	MSY
	Thou. metric tons
II. North Atlantic ^{3/}	
A. Atlantic salmon	12.0 ^{4/}
B. Trouts, chars	17.5 ^{5/}
Total	29.5
III. West Central Pacific and Indian Ocean	
A. Trouts, chars	7.2 ^{6/}
B. Various salmonoids	37.0 ^{7/}
IV. Southwest Pacific ^{8/}	
A. Australian salmon	4.0
World Total	531.5

Source: FAO Indicative World Plan for Agricultural Development, Area Reviews on Living Resources of the Worlds Oceans

1/ Includes: Oncorhynchus tshawytscha, Oncorhynchus keta, Oncorhynchus kisutch, Oncorhynchus gorbuscha, Oncorhynchus nerka.

2/ These estimates for this country represent average annual landings, 1962-1966.

3/ Includes: Salmo salar.

4/ This represents the landings estimate for 1966.

5/ This represents the landings estimate of Canada (Atlantic), Greenland, Czechoslovakia, Denmark, Spain and the United Kingdom for 1966.

6/ Japanese figure for production, 1966.

7/ This represents the landings figure for 1966.

8/ Includes: Arripis trutta.

Table VI-2.--Estimate of maximum sustainable yield for salmon
in waters fished by U.S. fishermen

Region	MSY
	<u>Thous.</u> <u>metric tons</u>
I. North Pacific	<u>406.7</u>
Total	406.7

Source: Bureau of Commercial Fisheries, Division of Economic
Research.

VII INTERNATIONAL TRADE

— Imports
Quantity
Value
Price

Table VII-1.--Quantity and value of salmon imports to the U.S.

	Fresh and frozen		Canned ^{2/}	
	Quantity ^{1/}	Value	Quantity ^{1/}	Value
	<u>Thousand pound</u>	<u>Thousand dollars</u>	<u>Thousand pound</u>	<u>Thousand dollars</u>
1947	22,007	5,332	32	12
1948	23,952	7,159	882	299
1949	24,747	5,658	918	255
1950	44,975	10,920	419	113
1951	27,526	7,505	568	193
1952	33,587	8,241	9,544	3,215
1953	27,364	7,010	12,165	4,325
1954	32,902	7,402	11,371	3,723
1955	16,945	5,488	14,644	5,173
1956	12,940	5,427	28,802	11,650
1957	15,677	5,698	24,401	9,470
1958	26,180	9,389	29,226	11,271
1959	19,700	7,232	31,154	11,130
1960	13,472	6,340	19,113	7,541
1961	12,309	5,909	7,167	3,545
1962	9,735	5,539	6,843	3,436
1963	8,898	5,103	1,250	605
1964	8,818	5,560	236	128
1965	7,861	5,154	101	80
1966q	8,296	5,914	589	345
1967	8,815	6,502	121	106
1968	9,811	7,062	4,956	2,820
1969				
1970				
1971				
1972				

Source: Fishery Statistics of the U.S.

^{1/} Product weight.

^{2/} Includes in oil and not in oil canned salmon.

Table VII-2.--Imports of salmon to the U.S. by country of origin,
1947-68

	Canada			Japan		
	Fresh & frozen ^{1/}	Canned	Total	Fresh & frozen	Canned	Total
-----Thousand pounds, round weight-----						
1947	25,968	2/	25,968	-	-	-
1948	28,263	1,341	29,604	-	-	-
1949	29,201	1,395	30,596	-	-	-
1950	53,071	637	53,708	-	-	-
1951	32,481	863	33,344	-	-	-
1952	39,633	14,507	54,140	-	-	-
1953	32,809	18,450	51,259	40	-	40
1954	39,071	17,238	56,309	14	-	14
1955	20,041	12,762	32,803	9,486	83	9,569
1956	15,208	7,304	22,512	36,439	166	36,605
1957	18,571	2,589	21,160	34,484	6	34,490
1958	30,924	11,883	42,807	32,536	88	32,624
1959	23,284	1,789	25,073	45,564	2/	45,564
1960	15,949	1,567	17,516	27,479	8	27,487
1961	14,446	2,660	17,106	8,182	17	8,199
1962	11,044	3,678	14,722	6,722	252	6,974
1963	10,287	838	11,125	713	494	1,207
1964	10,519	2	10,521	347	12	359
1965	9,321	106	9,427	38	20	58
1966	9,978	93	10,071	774	20	794
1967	10,475	2/	10,475	157	2/	157
1968	11,590	6,208	17,798	1,286	239	1,525
1969						
1970						
1971						
1972						

Table VII-2.--Imports of salmon to the U.S. by country of origin, 1947-68
(Continued)

	Other	Total
	-----Thousand pounds, round weight-----	
1947	1,255	27,223
1948	1,364	30,968
1949	1,164	31,760
1950	890	54,598
1951	676	34,020
1952	663	54,803
1953	4	51,303
1954	33	56,356
1955	2/	42,372
1956	2/	59,121
1957	97	55,747
1958	2	75,433
1959	50	70,687
1960	38	45,041
1961	180	25,485
1962	296	21,992
1963	282	12,614
1964	58	10,938
1965	154	9,639
1966	30	10,895
1967	53	10,685
1968	24	19,347
1969		
1970		
1971		
1972		

Sources: 1947-1952 Data, FAO Yearbook
1953 and after, U.S. Department of Commerce. World
total is from Fishery Statistics of the United States.

1/ Includes some smoked and cured
2/ Less than 500 pounds

Table VII-3.--Quantity and value of U.S. salmon exports^{1/}

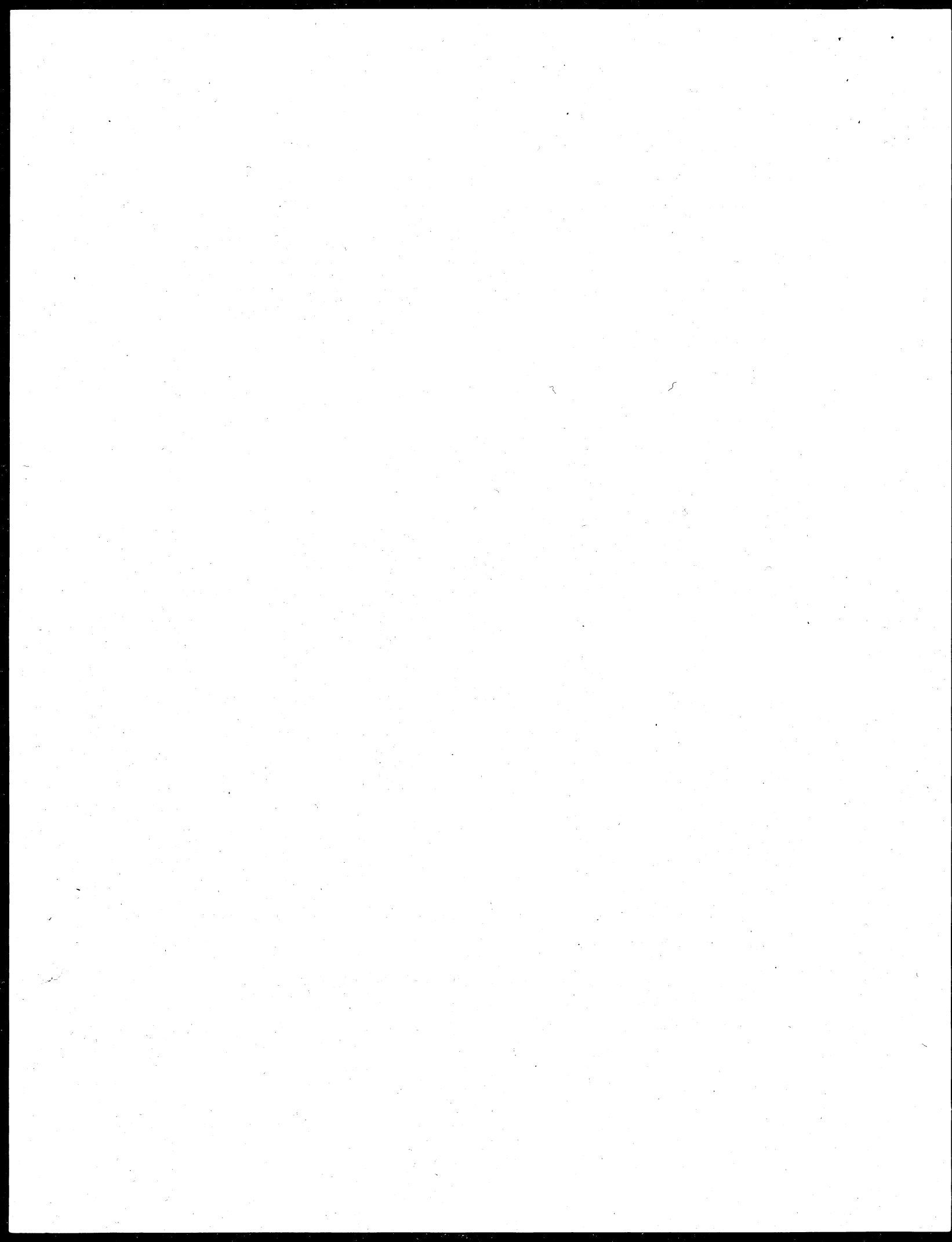
	Canned		Fresh & frozen		Cured	
	Quantity ^{2/}	Value	Quantity ^{2/}	Value	Quantity ^{2/}	Value
	<u>Thousand</u> <u>pounds</u>	<u>Thou.</u> <u>dollars</u>	<u>Thousand</u> <u>pounds</u>	<u>Thou.</u> <u>dollars</u>	<u>Thousand</u> <u>pounds</u>	<u>Thou.</u> <u>dollars</u>
1947	61,574	19,745	593	217	781	304
1948	2,641	1,305	130	58	162	63
1949	12,832	6,041	2,172	340	158	58
1950	1,681	811	52	23	98	50
1951	2,061	1,007	802	220	61	35
1952	1,427	820	268	97	162	87
1953	2,277	1,112	848	330	239	125
1954	7,227	3,715	1,780	583	388	225
1955	10,429	6,599	826	339	547	340
1956	5,213	3,606	1,676	694	636	399
1957	6,688	4,740	1,032	446	353	226
1958	9,227	6,669	1,083	476	491	357
1959	13,826	10,639	1,467	659	491	372
1960	11,924	9,830	2,849	1,677	529	435
1961	7,186	5,580	1,094	647	639	593
1962	8,978	7,292	1,508	872	569	528
1963	10,228	8,239	4,888	2,530	574	509
1964	20,924	14,852	22,560	5,371	1,000	743
1965	24,892	15,916	10,559	5,330	3/	3/
1966	20,484	14,561	19,845	10,626		
1967	20,543	15,593	18,911	11,846		
1968	5,726	4,604	16,234	10,076		
1969						
1970						
1971						
1972						

Source: Fishery Statistics of the U.S.

^{1/} Does not include exports of foreign fishery salmon.

^{2/} Product weight.

^{3/} No longer reported separately.



VIII FOREIGN PRODUCTION

—Landings

Table VIII-1.--World salmon landings by country

	U.S.	Canada	Japan	U.S.S.R.	Denmark	Other	Total ^{1/}
	-----Million pounds, round weight-----						
1947	454.2	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1948	378.2	139.6	19.2	301.2	4.9	91.5	935.0
1949	443.5	148.5	n.a.	n.a.	5.7	63.3	661.0
1950	323.3	186.8	35.3	n.a.	7.3	29.3	582.0
1951	376.8	199.7	55.4	n.a.	7.9	19.2	659.0
1952	356.0	155.3	77.6	n.a.	9.0	48.1	646.0
1953	324.1	198.3	100.1	433.9	8.4	35.2	1,100.0
1954	334.7	186.3	176.2	283.1	9.5	37.2	1,027.0
1955	282.0	138.9	395.1	392.9	9.3	51.8	1,270.0
1956	297.2	119.9	341.8	372.9	10.8	70.4	1,213.0
1957	266.4	138.2	411.5	383.3	11.7	0.9	1,212.0
1958	307.5	194.8	485.8	172.4	13.7	20.8	1,195.0
1959	201.7	115.4	447.2	220.5	15.9	24.3	1,025.0
1960	235.4	83.4	376.0	167.6	16.1	26.5	904.0
1961	310.4	132.1	405.5	189.2	23.8	19.0	1,080.0
1962	314.6	166.3	320.2	144.2	21.8	35.9	1,003.0
1963	294.2	124.1	395.6	189.0	21.4	44.7	1,039.0
1964	352.3	135.3	337.4	113.6	23.6	42.8	1,005.0
1965	326.8	101.6	406.8	209.2	31.5	40.1	1,116.0
1966	387.5	176.5	357.9	140.5	37.0	42.6	1,142.0
1967	216.7	145.5	357.2	194.0	41.9	76.7	1,032.0
1968	301.4						
1969							
1970							
1971							
1972							

Source: FAO Yearbook of Fishery Statistics and Fishery Statistics of the United States.

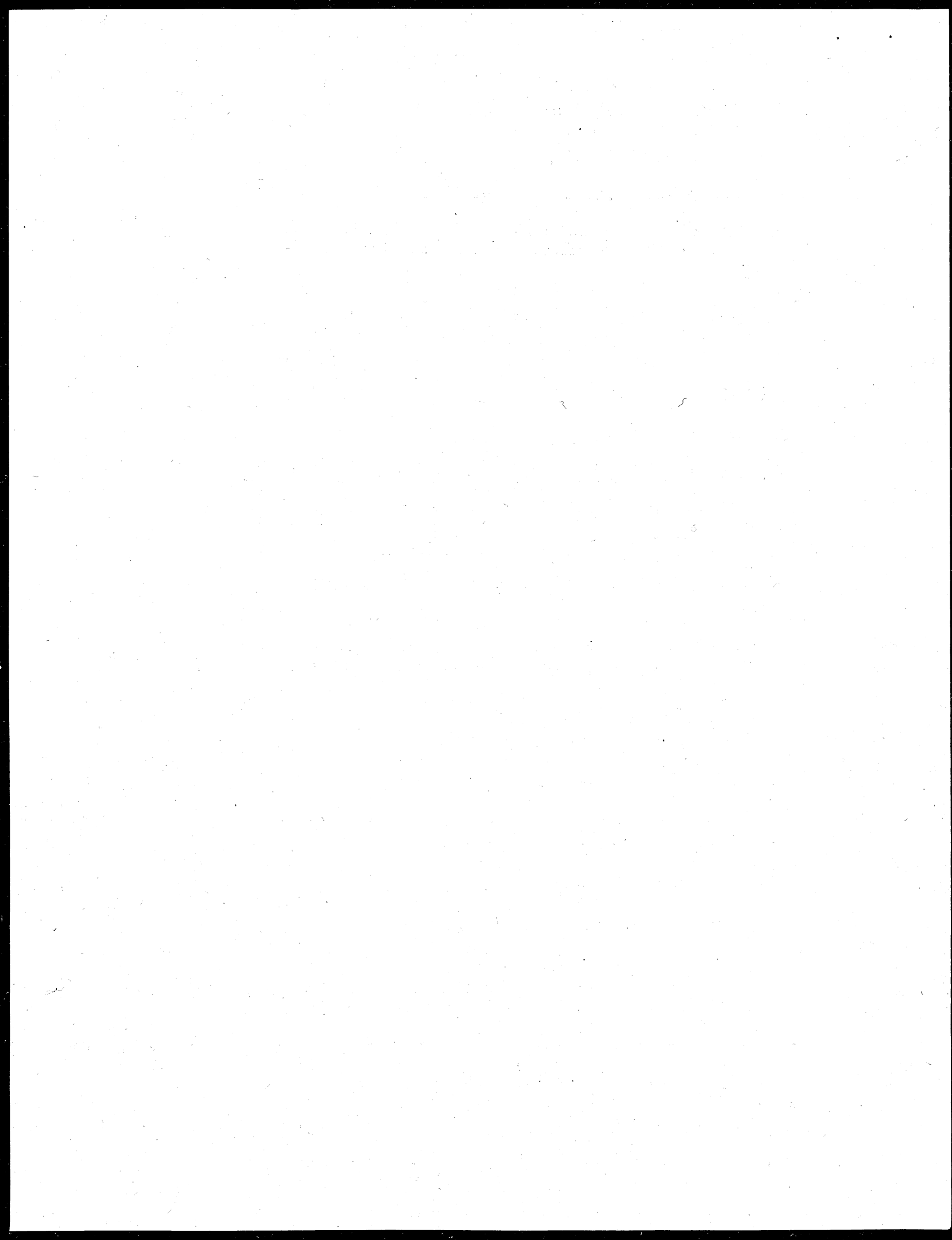
^{1/} Includes Atlantic salmon, cherry salmon, chinook salmon, chum salmon, coho salmon, pink salmon, sockeye salmon, trouts and various salmonoids. Canadian data does not include trouts and various salmonoids. U.S. data includes Pacific salmon catch only.

Table VIII-2.--World salmon landings, international trade and consumption, 1967

Country	Landings	Exports	Imports	Consumption
-----Million pounds, round weight-----				
U.S.	216.7	53.5	10.6	276.5 ^{1/}
Canada	145.5	94.6	3.8	54.7
Japan	357.1	98.3	4.4	263.2
U.S.S.R.	194.0	9.0	-	185.0
Denmark	41.9	27.3	-	14.6
Other	76.8	3.7	267.6	340.7
Total	1,032.0	286.4	286.4	1,134.7

^{1/} U.S. consumption figure includes 102.7 million pounds from changes in stocks.

Source: Bureau of the Census, U.S. Imports and U.S. Exports annuals for 1967; and FAO Yearbook, 1967.



IX FOREIGN CONSUMPTION

—Consumption
· Aggregate
Per capita

—Prices

Table IX-1.--World salmon consumption by major consuming countries

United States				Japan	Canada
Fresh & frozen ^{1/}	Canned	Total ^{1/}			
-----Million pounds, round weight-----					
1947	74.8	318.1	391.5	n.a.	n.a.
1948	56.6	349.4	410.4	18.7	n.a.
1949	68.3	385.0	453.8	n.a.	52.4
1950	60.7	312.5	372.6	33.5	79.7
1951	70.5	336.7	407.8	49.6	112.9
1952	66.5	338.1	406.4	75.0	64.6
1953	71.1	300.4	371.7	94.1	88.7
1954	68.2	310.0	373.4	149.7	38.0
1955	66.4	246.3	307.5	352.5	46.5
1956	48.8	291.6	341.3	200.0	67.5
1957	54.1	260.9	317.9	306.4	90.9
1958	60.0	302.7	361.5	279.8	73.6
1959	49.5	206.2	254.4	238.8	39.5
1960	38.8	217.7	257.8	241.0	42.1
1961	54.5	269.7	321.3	309.7	88.4
1962	43.5	274.1	317.6	128.1	114.4
1963	60.6	226.7	285.8	288.8	26.5
1964	57.1	242.8	299.2	265.9	54.1
1965	61.0	270.5	331.3	276.5	44.2
1966	55.5	238.3	296.4	280.0	119.0
1967	56.4	218.6	276.5	263.2	54.7
1968	38.3	198.1	245.7		
1969					
1970					
1971					
1972					

^{1/} Includes fresh and frozen cured and smoked. Since these figures do not take into account yearly changes in cured and smoked stocks, the sum of the fresh and frozen and canned figures will vary slightly from the total consumption figures from year to year. On a continuous basis, however, these variations cancel each other out.

Table IX-1.--World salmon consumption by major consuming countries
(Continued)

	U.S.S.R.	Denmark	Other	Total ^{2/}
	-----Million pounds, round weight-----			
1947	n.a.	n.a.	n.a.	n.a.
1948	301.1	4.9	205.2	940.3
1949	n.a.	0.2	155.5	661.9
1950	n.a.	0.7	94.0	580.5
1951	n.a.	0.2	90.6	661.1
1952	n.a.	0.2	98.2	644.4
1953	437.8	0.4	108.5	1,101.2
1954	283.1	0.4	183.2	1,027.8
1955	382.5	3/	181.8	1,270.8
1956	359.3	0.4	240.4	1,208.9
1957	326.7	0.2	177.5	1,219.6
1958	164.0	0.4	310.3	1,189.6
1959	205.0	0.7	292.1	1,030.5
1960	159.6	1.3	201.6	903.4
1961	176.8	5.3	177.9	1,079.4
1962	130.1	2.9	307.5	1,000.3
1963	175.3	2.6	292.2	1,071.2
1964	102.7	3.3	275.7	1,000.9
1965	197.1	2.6	309.3	1,161.0
1966	128.3	11.0	259.6	1,094.2
1967	185.0	14.6	340.7	1,134.7
1968				
1969				
1970				
1971				
1972				

Source: FAO Yearbook of Fishery Statistics and Fishery Statistics of the United States.

^{2/} Total consumption differs from reported total landings as reported by the FAO because the consumption figures reflect changes in U.S. stocks.

^{3/} Less than 50,000 pounds.

Table IX-2.--World salmon per capita consumption, by major consuming countries

	U.S.			Japan	Canada
	Fresh and frozen	Canned	Total		
	-----Pounds, round weight-----				
1947	.519	2,207	2.726	n.a.	n.a.
1948	.386	2,380	2.766	0.233	n.a.
1949	.458	2,578	3,036	n.a.	3.926
1950	.400	2.057	2.457	0.404	5.800
1951	.458	2.186	2.644	0.589	7.977
1952	.425	2.161	2.586	0.877	4.456
1953	.447	1.890	2.337	1.086	5.559
1954	.421	1.915	2.336	1.702	2.479
1955	.402	1.492	1.894	3.962	2.956
1956	.290	1.734	2.024	2.223	4.187
1957	.316	1.523	1.839	3.373	5.451
1958	.344	1.738	2.075	3.057	4.299
1959	.279	1.164	1.436	2.584	2.255
1960	.216	1.209	1.432	2.585	2.351
1961	.297	1.473	1.755	3.294	4.839
1962	.234	1.474	1.708	1.350	6.151
1963	.321	1.201	1.514	3.012	1.442
1964	.298	1.268	1.562	2.744	2.883
1965	.315	1.395	1.709	2.823	2.312
1966	.284	1.216	1.512	2.832	5.934
1967	.285	1.105	1.397	2.635	2.604
1968	.192	.991	1.229		
1969					
1970					
1971					
1972					

Table IX-2.--World salmon per capita consumption, by major consuming countries (Continued)

	U.S.S.R.	Denmark
	-----Pounds, round weight-----	
1947	n.a.	n.a.
1948	1.731	1.154
1949	n.a.	0.052
1950	n.a.	0.155
1951	n.a.	0.051
1952	n.a.	0.051
1953	2.290	0.101
1954	1.469	0.101
1955	1.950	n.a.
1956	1.800	0.101
1957	1.609	0.049
1958	0.793	0.049
1959	0.982	0.145
1960	0.745	0.289
1961	0.811	1.147
1962	0.587	0.617
1963	0.780	0.565
1964	0.451	0.701
1965	0.855	0.556
1966	0.551	2.298
1967	0.782	3.007
1968		
1969		
1970		
1971		
1972		

Source: Bureau of Commercial Fisheries and FAO Yearbook of Fishery Statistics.

Table IX-3.--World salmon prices by country

	Canada	Japan	Denmark	U.S.
	-----Cents per pound ^{1/} -----			
1947	n.a.	n.a.	-	10.132
1948	19.27	n.a.	98.80	11.298
1949	14.68	n.a.	63.40	11.619
1950	18.48	n.a.	60.50	13.598
1951	17.45	n.a.	54.61	15.504
1952	15.86	n.a.	63.57	13.884
1953	14.16	n.a.	67.47	12.962
1954	15.87	n.a.	64.85	14.459
1955	16.68	13.16	61.09	15.050
1956	21.95	16.59	61.56	15.052
1957	16.77	22.73	58.59	15.255
1958	22.77	17.90	60.81	14.826
1959	21.99	20.40	56.65	17.459
1960	27.44	27.49	60.64	18.427
1961	22.17	29.68	58.94	16.085
1962	18.40	25.46	58.04	16.997
1963	18.50	30.86	57.68	15.615
1964	22.86	26.75	58.65	14.702
1965	26.49	26.29	48.41	18.265
1966	21.04	27.90	39.98	14.677
1967	23.34		45.60	15.043
1968				
1969				
1970				
1971				
1972				

Source: Original data from FAO Yearbook of Fishery Statistics

^{1/} Deflated

X U.S. TRADE BARRIERS

Table X-1.--Present U.S. tariff structure for salmon

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Item	Stat. Suf- fix	Product Description	Rate of Duty			U.S. Imports-1968	
			June 30, 1967	Jan. 1, 1969	K-R Concession (Jan. 1, 1972)	Quantity	Value
		Fish, salted or pickled, whether or not whole, but not otherwise pre- pared or preserved, and not in air tight containers:					
111.48	00	Salmon	8.5% ad. val.	6.5% ad. val.	4% ad. val.	114,186	113,765
		Fish, smoked or kippered, whether or not whole, but not otherwise prepared or preserved, and not in air tight containers:					
111.88	00	Salmon	10% ad. val.	8% ad. val.	5% ad. val.	39,683	72,716
		Fish, prepared or preserved in any manner, not in oil, in air tight containers:					
112.18	00	Salmon	15% ad. val.	12% ad. val.	7.5% ad. val.	4,932,700	2,787,638
		Fish, prepared or preserved in any manner, in oil, in air tight containers:					
112.52	00	Salmon	25.5% ad. val.	20% ad. val.	12.5% ad. val.	22,200	32,179

Table X-2.--Historical synopsis of trade investigations for salmon

1. Section 9(b) of the Fish and Wildlife Act of 1956

None

2. Escape Clause under Executive Orders and the T.E.A. of 1951, as amended (T.C.)

None

3. Section 301 of the T.E.A. of 1962 (T.C.)

None

4. Section 332 of the T.E.A. of 1930 (Investigations by the Tariff Commission)

None

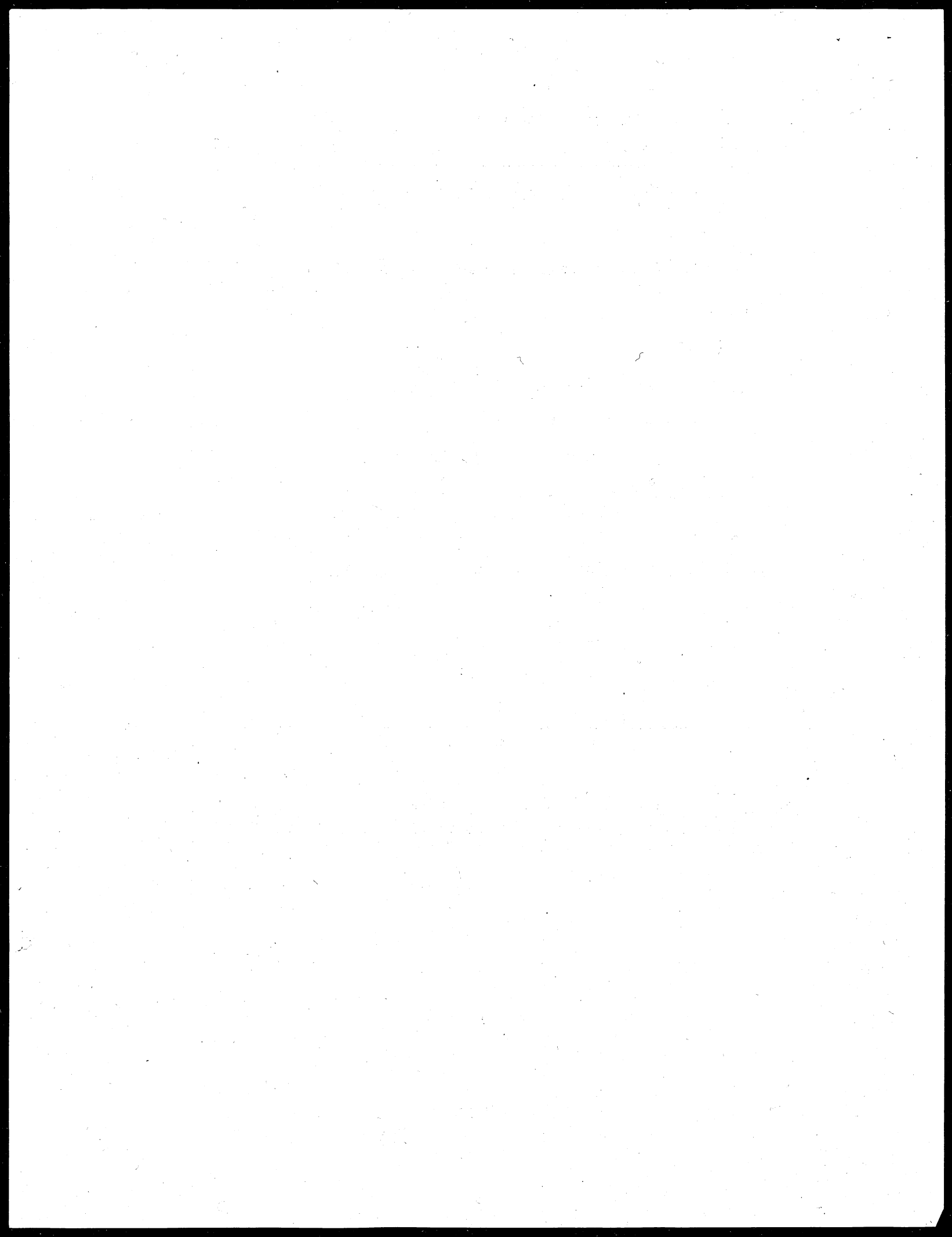
5. Antidumping under Antidumping Act of 1921 (Customs Bureau)

None

6. Countervailing (Section 303 of T.E.A. of 1930 Customs Bureau)

None

1/ Antidumping information checked since 1954; for Section 332 and countervailing, no summary lists available and an inquiry into a number of cases has not been completed.



. XI GOVERNMENT PROGRAMS

- Subsidies**
- Mortgage insurance**
- Loans**
- EDA projects**
- BCF expenditures**
- Federal aid to states**

Table XI-1.-- Bureau of Commercial Fisheries programs and expenditures on salmon, fiscal years 1960-69

Bureau of Commercial Fisheries Programs	1960	1961	1962	1963	1964
<u>1960 and 1964 Fishing Fleet Improvement Act</u>					
a) Number of Vessels Constructed	-	-	-	-	-
b) Total Government Subsidies to Vessels Constructed (dollars)	-	-	-	-	-
<u>Mortgage Insurance Program</u>					
a) Number of Vessels	-	-	14	1	3
b) Value of Mortgages (dollars)	-	-	105,546	19,500	54,774
<u>Fisheries Loan Fund</u>					
a) Number of Vessels Receiving Loans	45	36	29	16	57
b) Total Value of Loans (dollars)	296,479	193,196	190,465	100,320	323,853
Other BCF Programs ^{1/}	n.a.	n.a.	n.a.	n.a.	n.a.

Table XI-1.-- Bureau of Commercial Fisheries programs and expenditures on salmon, fiscal years 1960-69 (Continued)

Bureau of Commercial Fisheries Programs	1965	1966	1967	1968	1969
<u>1960 and 1964 Fishing Fleet Improvement Act</u>					
a) Number of Vessels Constructed	-	-	-	-	-
b) Total Government Subsidies to Vessels Constructed (dollars)	-	-	-	-	-
<u>Mortgage Insurance Program</u>					
a) Number of Vessels	1	7	-	-	-
b) Value of Mortgages (dollars)	10,000	76,239	-	-	-
<u>Fisheries Loan Fund</u>					
a) Number of Vessels Receiving Loans	28	42	24	25	20
b) Total Value of Loans (dollars)	250,731	310,383	301,792	354,825	232,025
Other BCF Programs ^{1/}	n.a.	n.a.	4,600,000	6,500,000	5,600,000

Source: Division of Financial Assistance, BCF

^{1/} 1971 Program Memorandum, U.S. Department of the Interior, Living Aquatic Resources.

Table XI-2.--Estimated Economic Development Administration
expenditures for salmon by program, May 1961-May 1969^{1/}

Program and Project	Amount
Public Works Grants and Loans:	
Cordova, Alaska - Public dock.	\$600,000
Yakutat, Alaska - Cold storage/dock/wholesale	290,000
Kuskokwin, Alaska - Floating freezer	255,000
Metlakatla, Alaska - Barge Pier/ramp	27,000
Crescent City, California - Industrial Park	40,000
Seward, Alaska - Harbor facilities	90,000
Seldovia, Alaska - Dock facilities	300,000
Astoria, Oregon - Marine Food Science Lab.	15,000
Homer, Alaska - Extension of water main	73,000
Metlakatla Indians (Alaska) - Harbor, etc.	146,000
Newport, Oregon - Expansion of facilities	53,000
Ft. Bragg, California - Mooring basin	468,000
Willapa Bay, Washington - Floating docks	2,000
Total Public Works	\$ 2,359,000
Business Loans:	
Alaska Ice and Cold Storage	
Kodiak - Plant expansion and Economic Development Administration	65,000
Technical Assistance Grants:	
Pacific County, Washington - Vocational training	6,000
Bayview Fish and Cold Storage Co.	
Seward, Alaska - Feasibility study	1,000
Kodiak, Alaska - Resource study	5,000
Katzebuc, Alaska - Feasibility study	6,000
Total Technical Assistant Grants	\$ 18,000
Grand Total	\$ 2,442,000

^{1/} Includes available information on expenditures under the predecessor agency, the Area Redevelopment Administration. Estimates represent an attempt to prorate the total amount of EDA funding applicable to the fishing industry in multi-industry projects and to a particular fishery in multi-fishery projects.



