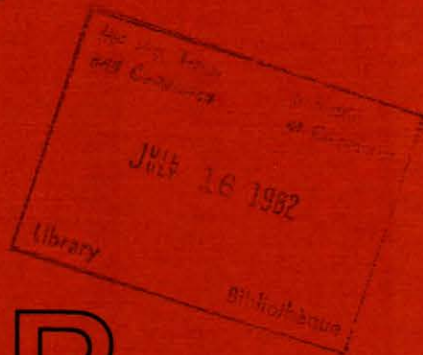


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ANNEX TO THE WORLDWIDE FISHERIES MARKETING STUDY: PROSPECTS TO 1985



U.S.S.R.



Government
of Canada

Gouvernement
du Canada

Fisheries
and Oceans

Pêches
et Océans

(This Report is one of a series of country and species annexes to the main study-entitled the Overview).

D R A F T

Annex to the
Worldwide Fisheries Marketing Study:
Prospects to 1985

UNION OF SOVIET
SOCIALIST REPUBLICS

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December, 1981.

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Specifically, this Report would not have been possible without the cooperation and assistance of fishermen, processors, brokers, wholesalers, distributors, retailers, consumers and their organizations as well as government officials with whom we visited and interviewed. Though too numerous to mention separately, we would like to extend our sincere gratitude and appreciation.

The views expressed in this Study, however, are ours alone and reflect the Canadian perception of worldwide markets.

With regard to the overall Study, we would like to acknowledge:

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- the advice of K. Campbell, Fisheries Council of Canada; and R. Bulmer, Canadian Association of Fish Exporters;
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To all of the above, we extend our thanks.

E. Wong
December, 1981.

FOREWORD

As a consequence of global extension of fisheries jurisdictions, a radical shift has taken place in the pattern of worldwide fish supply and demand. This change is still going on and will continue for many years before a new dynamic equilibrium situation is reached. However, in the midst of this re-adjustment, a new trade pattern is emerging -- some net exporting countries are now importing and vice versa. In the longer term, some countries will experience shortages of supply and others will have a surplus. Fortunately, Canada is amongst the latter group.

The implications for the marketing of Canadian fisheries products arising from the worldwide introduction of the 200-mile limit are extensive. With our vastly improved supply position relative to world demand, government and industry are understandably concerned about ensuring that the bright promise of increased market opportunities are real and can be fulfilled. One of the steps in this process is the publication of the Worldwide Fisheries Marketing Study which assesses the global potential on a country and species basis.

Specifically, the purpose of the Study is to identify the longer term market opportunities for selected traditional and non-traditional species in existing and prospective markets and to identify factors which may hinder or help Canadian fisheries trade in world markets. To date, over 40 country markets and 8 species groups have been analyzed. It should be noted that while the information contained in the Reports was up-to-date when collected, some information may now be dated given the speed with which changes are occurring in the marketplace. In this same vein, the market projections should be viewed with caution given the present and still evolving re-alignment in the pattern of international fisheries trade, keeping in mind the variability of key factors such as foreign exchange rates, energy costs, bilateral fisheries arrangements and GATT agreements which have a direct effect on trade flows.

Notwithstanding, the findings contained in these Reports represent an important consolidation of knowledge regarding market potential and implications for improvements in our existing marketing and production practices. The results of the Study should, therefore, usefully serve as a basis for planning fisheries development and marketing activities by both government and industry in order to capitalize on the identified market opportunities.

This draft report is published for discussion purposes and as such we invite your critical comments.

Ed Wong

Marketing Services Branch.
Marketing Directorate.
Fisheries Economic Development and Marketing.
Department of Fisheries and Oceans.
October, 1981.
Ottawa

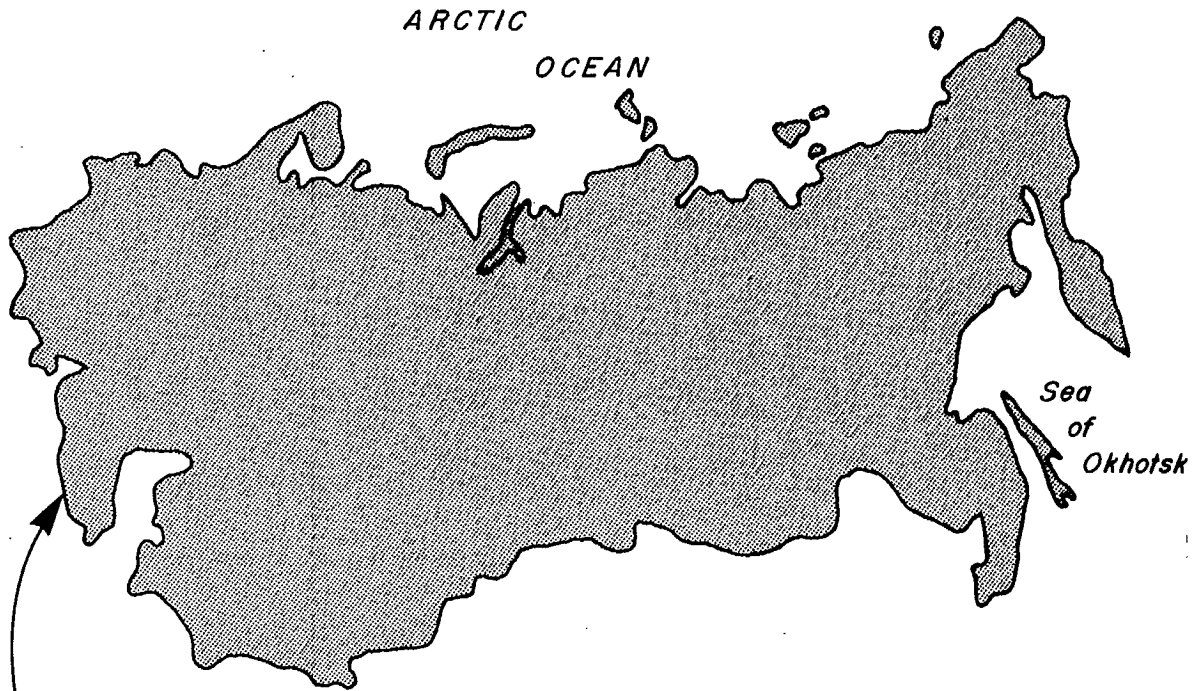
WORLDWIDE FISHERIES MARKETING STUDY

UNION OF SOVIET SOCIALIST REPUBLICS (USSR)

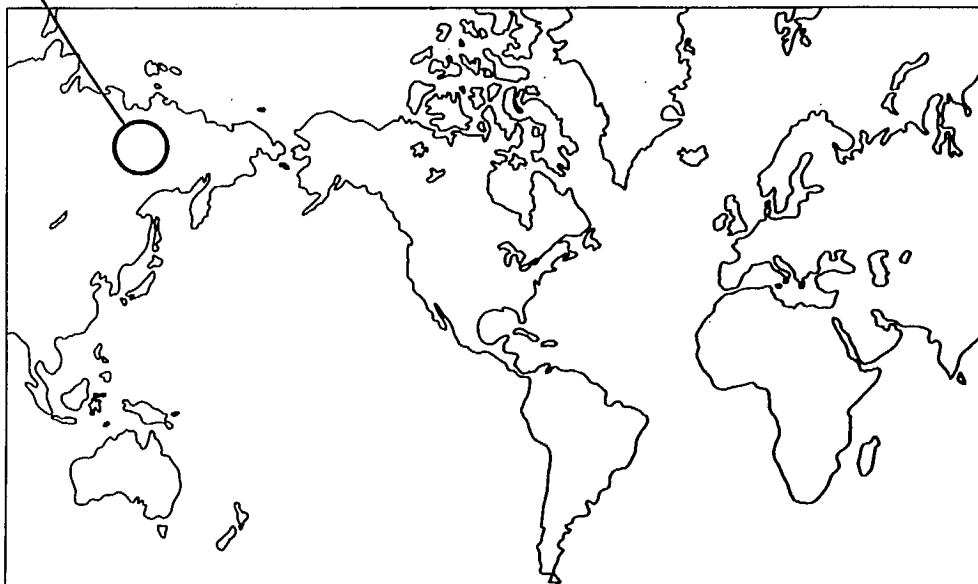
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U.S.S.R.



INDEX MAP



A. SUPPLY OF FISH

1. Domestic Production

The Soviet Union (USSR) has one of the world's largest fishing fleets, which the authorities are determined to keep occupied not only in territorial waters but as well through joint ventures with foreign interests.

Domestic landings were 10.13 million tonnes in 1976, declined to 8.93 million tonnes in 1978 and recovered slightly to 9.13 million in 1979. Appendix I gives complete data on USSR landings for the period 1973 to 1978, as recorded by the United Nations Food and Agriculture Organization (FAO). Appendices II through IV give a detailed breakdown for 1979 landings, according to Soviet statistics compiled by the state trading agency, PRODINTORG.

Production of fish and fish products amounted to slightly more than 4.5 million tonnes in 1978, and dropped to 4.3 million tonnes in 1979. By far the greatest volume of production was in fresh-frozen fish, which accounted for 3.056 million tonnes in 1978 and dropped to 2.8 million tonnes in 1979. Details of Soviet production are shown in the table that follows.

TABLE 1
Production of major fish products in the USSR
(tonnes)

<u>Types of products</u>	<u>1978</u>	<u>1979</u>
Total fresh-frozen fish production	3 056 349	2 885 100
Fillets (included in above)	50 608	32 243
Salted herring	20 195	27 395
Other salted fish	242 171	274 300
Smoked, dried fish and baleeks	366 784	370 482
Marinated and spiced/salted fish	172 414	154 845
Roe (caviar)	7 046	8 008
Canned products*	2 693.47	2 941.31
Including fish	2 676.74	2 924.43
Crabs	6.31	5.80
Fat of whales, marine mammals, fish	82 250	73 145
Fish meal for animal feed	503 359	510 669
Total	4 506 552.52	4 342 058.54

* includes sea-cabbage

Source: PRODINTORG.

Traditional species such as cod and herring are in very short supply on the Russian fish market, because prices for these species were set in 1947 and have remained at the same levels ever since. Substitutes offered include blue whiting, sand herring, horse mackerel, capelin, pollock, Antarctic ice fish and hake.

In the last few years, catches of whiting have increased from zero landings to 689 000 tonnes, while the Pacific sardine now accounts for 350 000 tonnes of the Soviet catch. These are just two of many species which were underutilized but now are harvested heavily for domestic consumption.

To cite some examples, blue whiting is produced as frozen, salted, smoked and canned products; Antarctic ice fish is canned, and capelin is grilled. Fish infected with parasites are used as mink food. Many other species, including cod, redfish and flounder are smoked or canned for marketing so as to provide a return as value-added products.

2. Imports

Soviet officials were very reluctant to provide hard facts concerning the market potential for imports, beyond the figures shown in Table 2, as supplied by PRODINTORG, the agency that controls imports.

The authorities indicated it is their policy not to make any cash imports of fish products, and they did not expect this policy to change. They prefer to make direct purchases from foreign fishermen, or to barter for imports. The figures set out in Table 2, indicate that imports have increased in the past two years, but these have resulted mainly from direct-sales arrangements.

TABLE 2

USSR imports of fish products, 1978-1979
(includes direct purchases from foreign fishermen)

	<u>1978</u>	<u>1979</u>
Chilled and frozen	71 425	101 969
Dried, salted, smoked	5 054	5 196
Canned and roe	<u>3 108</u>	<u>2 522</u>
Total	79 587	109 687

Source: PRODINTORG

Questioned about the source of imports, officials of PRODINTORG indicated Iceland was the only country from which fish was imported, and the remainder of the purchases were directly from foreign fishermen (e.g., mackerel obtained from British vessels).

Soviet imports from Iceland have been mainly herring, although some cod may have been included as well.

There are conflicting reports on the extent of Iceland's exports to the USSR. Soviet officials estimated the USSR absorbs 40% to 50% of Icelandic production of cod, herring and redfish. But statistics provided by Iceland indicate sales to the Soviets account for only 10% of production. The sales are part of a barter arrangement under which Iceland receives oil from the USSR at spot market prices, which are higher than OPEC prices.

One factor discouraging increased imports is the price level set in 1947 for many species traditionally consumed by Soviet citizens. Obviously the cost of importing these species has risen enormously, and state officials are reluctant to spend scarce foreign currency when cheaper species caught by Soviet fishermen are available.

B. DEMAND FOR FISH

1. Domestic Consumption

As can be seen from preceding sections, the Soviet Union cannot be regarded as a potential customer for Canadian fish products, but should in fact be considered a competitor, whose potential will be discussed in a later section.

According to Soviet Statistics, per capita consumption of fish averages 16.8 kilograms annually. State health officials have recommended that this be increased to 18.2 kilograms.

A new five-year plan was to be announced by the Soviet authorities early in 1981. Details were not available, but authorities emphasized that fish and the fishing effort were only a part of the overall food processing industry.

2. Exports

Once again, Soviet government officials would provide little detail on the extent of exports from the domestic catch and re-exports of imported products.

As shown in the table that follows, total exports increased slightly from 516 229 tonnes in 1978 to 526 194 tonnes in 1979.

TABLE 3
USSR exports of fish commodities, 1978-1979

	<u>1978 Tonnes</u>	<u>1979 Tonnes</u>
Chilled and frozen	445 658	453 454
Salted, dried and smoked	14 422	21 017
Canned fish and roe	32 164	29 278
Canned crab	1 236	1 332
Oil or fat	1 284	830
Fish meal	21 465	20 283
Total	<u>516 229</u>	<u>526 194</u>

Source: Investigations by study team.

C. USSR AS A COMPETITOR OF CANADA

The Soviet Union is probably the world's leading nation in seeking and establishing joint ventures to exploit fisheries. It has agreements in effect with several countries through the state agency, SOVRYBFLOT, representing Soviet interests.

Details differ within various agreements, but the principal objective is mutual benefit through catching, processing and marketing. All agreements are based on the leasing of Soviet vessels; the companies that use the vessels commit a part of their catch -- usually 83% to 85% to the Soviet Union, with the balance remaining in the country of origin.

A major exception is the arrangement with Marine Resources of Seattle, Washington, which has a 50-50 partnership between Bellingham Cold Storage and SOVRYBFLOT. US fishermen account for the major catch, with the Soviet partner providing the ships for processing. The products are then marketed worldwide.

Other joint ventures involve Spain, France, Sweden, Italy, Singapore, New Zealand, Angola, Guinea Bissau, Mauritania and Senegal.

SOVRYBFLOT has recently been negotiating an agreement with Argentina. Soviet experts estimate only 10% of the total allowable catch is being taken from Argentine waters, and they would like to see the resource exploited at its maximum sustainable level.

Japan has substantial fishing rights in Soviet waters, and has been catching more than 850 000 tonnes of salmon and squid annually. As well, the USSR sells Atlantic and Bering Sea squid to Japan.

PRODINTORG has developed markets in a number of West African countries, such as Nigeria, Ghana and the Ivory Coast. USSR officials make no secret of the fact that they supply some of these markets at a loss in order to maintain a "marketing presence" in the region.

USSR fisheries development strategy, including an expanded fleet with greater catching capacity, has reduced the country's reliance on imports from Western Europe. In response to the declaration of 200-mile economic zones, the Soviet Union has forged economic ties with a number of third-world nations, thus enabling it to keep its fleet occupied, develop new sources of supply, and nurture important political relations.

D. CONCLUSION

Based on the rather sketchy information provided, the Soviet Union cannot be regarded as a major potential market for Canadian fish products. Development of significant markets in the USSR will be very difficult, and may prove impossible.

The Soviets will continue to try to find more ways of utilizing their vessels. This could involve more joint ventures and other forms of cooperation with developing countries. Such cooperation could lead to successful new fisheries and ultimately increased competition for Canada. However, it should be stressed that as Soviet officials were not forthcoming with information, any conclusion must be regarded as speculative.

A P P E N D I C E S

APPENDIX I

USSR NOMINAL CATCHES BY COUNTRIES AND SPECIES, 1974-1978

Fish, crustaceans, molluscs, etc. Country Species	1974	1975	1976 (tonnes)	1977	1978
Freshwater bream	58 500	63 530	51 116	48 472	43 952
Common carp	91 700	114 163	108 306	110 794	110 365
Roaches	27 900	35 218	24 484	18 396	12 780
Grass carp	--	--	--	1 302	769
Sichel	--	--	--	286	169
Cyprinids Nei	4 400	2 972	28 092	27 450	30 535
Northern pike	16 500	16 964	13 293	13 120	10 357
Amur pike	100	148	81	78	93
"Som" catfish	16 200	18 112	16 986	15 154	15 074
Freshwater siluroids etc.	0	41	36	49	28
Pike-Perch	28 800	25 140	20 567	18 215	16 194
Freshwater gobies	2 100	1 193	1 649	281	2 402
Freshwater fishes nei	153 100	293 524	156 970	115 770	84 119
Sturgeons nei	21 700	24 832	28 177	29 138	24 958
European eel	1 229	748	394	986	1 578
River lamprey	--	--	--	217	94
Lampreys nei	--	--	--	578	249
Whitefishes nei	25 748	25 858	25 999	27 864	25 592
Atlantic Salmon	1 926	1 345	215	344	170
Pink (=humpback) salmon	32 100	88 415	53 748	107 496	53 413
Chum (=keta=dog) salmon	9 200	7 691	10 015	14 678	16 669
Sockeye (=redi) salmon	1 000	1 399	1 170	1 869	3 382
Chinook (=spring= king) salmon	1 800	2 229	1 956	3 099	2 948
Coho (=silver) salmon	3 900	3 310	3 556	4 009	2 384
European smelt	5 574	6 346	4 926	--	--
Rainbow smelt	100	83	3 170	3 051	4 440
Smelts NEI	11 500	5 518	4 848	7 630	10 001
Salmonoids NEI	5 500	2 898	4 036	5 774	16 828
Alewife	9 617	2 196	2 712	169	21
Black sea shad	1 700	1 538	515	46	62
Caspian shads NEI	7 400	416	868	788	1 318
Clupeonella	388 300	437 809	344 540	342 595	396 100
Flatfishes NEI	54 383	50 638	42 176	60 696	144 662
Atlantic halibut	218	272	327	31	26
Pacific halibut	100	190	86	--	--

APPENDIX I (Cont'd)

Country Species	1974	1975	1976 (tonnes)	1977	1978
Greenland halibut	54 791	64 075	51 368	23 709	20 283
Kamchatka flounder	20 900	22 278	18 646	21 176	9 526
Witch flounder	13 885	15 419	9 255	3 250	3 760
Amer. plaice (=long rough dab)	27 490	20 738	13 329	4 010	1 784
Yellowfin sole	--	--	--	284	50 047
Yellowtail flounder	7 353	4 561	342	97	--
Summer flounder	--	--	--	--	--
Winter flounder	1 631	1 091	377	10	--
Southeast Atlantic soles	237	16	47	745	149
Morid cods	--	--	--	44 416	47 993
Atlantic cod	726 878	531 195	467 534	426 861	318 348
Pacific cod	37 900	46 596	224 20	12 079	11 937
Ling	--	0	--	--	--
Red hake	32 837	29 023	24 940	5 225	2 527
White hake	590	1 931	917	326	39
Haddock	172 148	168 059	126 695	60 282	46 125
Wachna cod (=Navaga)	33 349	33 218	27 500	41 025	41 314
New Zealand red cod	--	655	2 080	2 198	953
Saithe (=pollock)	136 112	126 236	96 775	47 642	11 036
Alaska pollock	1 754 200	1 958 116	2 090 869	1 975 140	2 011 918
Polar cod	125 111	63 124	12 175	7 964	5 089
Norway pout	--	7 889	15 039	--	25
Blue whiting (=poutassou)	2 187	18 090	26 730	71 027	210 857
Southern poutassou	42 200	2 055	15 881	26 070	17 461
Whiting	2 985	5 169	5 614	2 413	531
European hake	368	146	-	245	3
Silver hake	208 317	204 942	134 988	86 362	57 259
Chilean hake	--	--	--	--	--
Argentine hake	2 100	--	74	23 515	--
North Pacific hake	158 500	158 898	158 047	100 489	70 251
Benguela hake	--	--	--	--	60 185
Cape hakes	298 408	209 125	296 645	222 156	133 290
Senegalese, mauritanian hakes	79 200	67 590	595 42	254 21	3 504
Blue grenadier	13 700	36 340	41 735	33 511	9 720
Roundnose grenadier	54 219	57 980	33 138	27 558	31 091
Grenadiers	400	937	43	2 214	2 853
Gadiformes NEI	--	--	--	2 286	2 799
Deepsea smelt	--	--	293	197	75
Argentines	37 172	16 052	6 895	4 040	2 940
Sea catfishes	8 400	1 515	1 195	928	3 254

APPENDIX I (Cont'd)

Country Species	1974	1975	1976 (tonnes)	1977	1978
Lizardfishes NEI	--	--	--	--	528
Conger eels NEI	700	824	1 169	498	708
Sticklebacks	5 612	9 144	--	7 528	7 859
Longspine snipefish	--	--	--	7 444	9 632
Alfonsinds	400	1 187	--	4 013	4 781
Atlantic John dory	1 997	1 051	1 268	680	589
Japanese John dory	900	--	1 571	11 513	28 119
Demersal percomorphs NEI	104 265	45 414	38 669	15 783	34 311
Groupers NEI	4 900	2 713	2 547	1 123	1 912
Seabasses, seaperches NEI	203	322	513	1 987	493
Snappers	1 500	1 253	931	--	--
Snappers NEI	2 300	262	422	998	509
Grunts (=grunters) NEI	43 500	85 834	13 110	--	1 244
West African croakers	7 203	6 520	4 740	6 104	20 314
Croakers, drums NEI	6 400	3 420	3 115	715	146
Porgies	800	5 842	4 708	--	--
Large eye dentex	5 709	8039	39 948	27 392	25 389
Dentex NEI	46 300	32 992	28 185	9 119	7 448
Scup	388	--	--	--	--
Porgies, seabreams NEI	53 668	52 644	47 532	18 338	10 200
Surmulletts (=red mulletts)	100	180	113	227	1 056
Marbled notothenia	24 100	7 800	15 700	43 155	14 155
Bumphead notcthenia	-	3 452	13 425	3 232	6 806
Scaled notothenia	31 000	7 200	5 800	25 700	13 049
Antarctic sidestripe Notothenids (=antarc- tic cods)	--	--	--	--	234
Antarctic icefish	47 100	9 900	29 800	2 226 161 190	-- 138 856
Atlantic wolffish (=catfish)	30 075	23 402	14 415	8 410	12 992
Wolffishes (=catfishes) NEI	2 936	4 546	820	567	351
Eelpout	18 615	13 003	12 043	8 465	7 602
Ocean pout	483	3	--	--	--
Pink cusk-eel	--	--	--	211	--
Kingklip	--	--	447	325	958
Cusk-eels NEI	--	--	--	--	400
Pacific sandlaunce	--	--	--	--	3 830
Sandeels (=sandlances)	--	--	--	1 519	298

APPENDIX I (Cont'd)

Country Species	1974	1975	1976 (tonnes)	1977	1978
South Pacific Breams	--	--	--	6 340	3 225
Atlantic gobies	8 288	8 671	3 428	2 732	2 278
Gobies NEI	26 400	21 265	30 305	28 551	--
Pacific ocean-perch	31 600	28 577	19 754	6 385	2 050
Atlantic redfishes	144 152	315 379	419 203	176 771	100 753
Scorpionfishes NEI	--	--	--	15	--
Atlantic searobins	17 197	7 372	2 021	2 745	40
Atka mackerel	62 700	123 435	88 749	64 488	59 636
Sablefish	2 300	1 194	961	229	19
Sculpins	1 349	293	472	--	--
Monk (=anglerfish)	--	--	--	--	3 949
American angler (=goosefish)	12 454	20 798	3 726	5 806	560
Capelin	378 838	708 686	895 153	997 546	813 404
Atlantic saury	1 551	--	--	--	--
Pacific saury	50 900	69 031	40 005	66 597	77 965
Barracudas	5 500	4 331	3 868	1 429	4 109
Mulletts NEI	1 100	1 102	1 107	2 515	2 347
Pelagic percomorphs NEI	5 800	4 924	2 293	8 212	6 785
Bluefish	7 027	4 787	1 464	3 200	2 213
Atlantic horse mackerel	120 264	122 014	188 803	50 810	524
Offshore jack mackerel	--	--	--	55	--
Japanese jack mackerel	800	71	447	1 088	1 216
Chilean jack mackerel	--	--	--	--	49 220
Pacific jack mackerel	--	--	--	--	1 376
Cape horse mackerel	115 072	179 192	410 261	436 108	271 769
Cunene horse mackerel	--	--	--	--	336 660
Greenback horse mackerel	--	--	--	710	254
Jack and horse mackerels NEI	365 200	348 683	384 141	399 129	210 953
Jacks, trevallies	2 500	1 021	988	1 236	20 772
Atlantic moonfish	15 900	7 128	--	26	--
Patagonian toothfish	--	--	--	2 176	391
Atlantic butterflyfish	1 372	789	420	419	14
Butterfishes, pomfrets NEI	--	43	238	229	19 617
Atlantic herring	212 254	205 458	155 693	133 562	132 641
Pacific herring	304 900	327 901	208 975	253 273	57 832
Round sardinella	100	59 388	55 482	84 806	96 860
Sardinellas NEI	500	--	215	86 612	194 487

APPENDIX I (Cont'd)

Country Species	1974	1975	1976 (tonnes)	1977	1978
Japanese pilchard (=sardine)	--	--	--	--	242 717
Chilean pilchard (=sardine)	--	--	--	--	25
South African pilchard	695	450	6 125	53 571	1 985
European pilchard (=sardine)	343 663	360 741	517 380	359 317	177 395
Sprat	183 985	164 580	166 620	130 500	98 336
European anchovy	264 900	201 886	274 694	177 447	156 805
Anchovies NEI	--	--	--	1 067	67 290
Clupeoids NEI	--	2	--	--	112
Atlantic bonito	1 400	1 542	1 281	4 164	1 602
Sailfish	100	7	1	18	27
Blue marlin	1 200	34	1	15	21
Swordfish	1 400	286	157	123	183
Tuna-like fishes NEI	7 974	6 745	11 225	15 424	13 201
Snoek (=barracouta)	--	--	--	--	64 322
Largehead hairtail	40 710	22 152	33 414	42 530	24 090
Silver scabbardfish	--	--	--	--	99
Chub (=spanish) mackerel	364 913	314 507	375 507	389 507	445 013
Atlantic mackerel	277 455	449 569	370 303	48 582	1 325
Indian mackerels NEI	1 300	919	321	3 938	51
Mackerel-like fishes NEI	800	228	76	660	5 386
Skates and rays NEI	14 275	24 825	10 216	3 530	13 317
Sharks, rays, skates, etc.	40 984	33 662	19 225	10 238	12 415
Marine fishes NEI	214 951	232 671	333 710	401 431	331 092
Freshwater crusta- ceans NEI	1 000	1 153	808	1 076	485
King crabs	17 900	15 796	19 559	16 419	17 632
Panulirid spiny lobsters NEI	1 700	2 670	5 183	1 795	564
Deepwater rose shrimp	--	--	--	--	289
Northern deepwater prawn	3 517	6 033	6 468	--	--
Pink (=pandalid) shrimps	--	--	--	--	11 322
Common shrimp	--	880	548	5 926	18 565
Antarctic krill	21 700	38 900	500	105 049	116 601
Marine crustaceans NEI	8 812	8 629	4 857	351	--
Cuttlefishes NEI	102	--	--	1 851	1 230

APPENDIX I (Cont'd)

Country Species	1974	1975	1976 (tonnes)	1977	1978
Long-finned squid	--	--	832	7	6
Short-finned squid	8 560	13 634	23 712	26 956	9 499
Octopuses NEI	--	--	--	7 811	6 037
Squid NEI	17 575	25 959	17 361	48 371	11 903
Marine molluscs NEI	40 903	35 232	16 831	15 953	14 548
Seaweeds NEI	1 785	4 526	1 960	1 520	1 574
Aquatic plants NEI	--	--	--	1	13 404
TOTAL	9 257 294	9 974 506	10 134 170	9 352 706	8 929 754

Source: FAO, Yearbook of Fishery Statistics, Vol. 48, Rome, Italy.

APPENDIX II

DISTRIBUTION OF USSR CATCHES

	1979
	(tonnes)
Total	9 132 970
Inland areas	807 710
Including: Caspian Sea	328 440
(other inland waters including the Aral Sea)	479 270
Sea areas	8 325 260
Atlantic Basin	4 173 671
NW Atlantic	125 193
NE Atlantic	1 937 430
Central eastern Atlantic	526 011
Black and Azov seas	326 060
SW Atlantic	2 166
SE Atlantic	850 664
Antarctic part of the Atlantic	406 147
Basin of the Indian Ocean	44 147
Western part of the Indian Ocean	11 844
Eastern part of the Indian Ocean	23
Antarctic part of the Indian Ocean	32 280
Pacific Basin	4 107 442
North-west Pacific	3 270 130
North-east Pacific	210 259
Central western Pacific	8 811
Central eastern Pacific	100
South-west Pacific	70 715
South-east Pacific	546 567
Antarctic part of the Pacific	800

Source: PRODINTORG

APPENDIX III

USSR CATCHES

	1979 (tonnes)
Total	9 132 970
including:	
Russian Soviet Federative Socialist Republic	6 638 412
Ukrainian SSR	920 472
Byelorussian SSR	9 603
Uzbek SSR	16 696
Kazakh SSR	88 024
Georgian SSR	80 332
Azerbaijan SSR	53 473
Lithuanian SSR	3 925 576
Moldavian SSR	7 321
Latvian SSR	473 852
Kirghiz SSR	1 129
Tadzhik SSR	1 643
Armenian SSR	3 370
Turkmenian SSR	58 251
Estonian SSR	387 816

Source: PRODINTORG

APPENDIX IV

SPECIES COMPOSITION OF USSR CATCHES

	1979 (tonnes)
Total	9 132 970
Cyprinidae	214 050
bream	38 814
vimba	2 725
shemaya	27
ide	142
wild carp	12 143
carp	111 589
tench	4 917
vobla, taran, roach	9 619
sabrefish	116
silver carp	32 069
grass carp	1 616
barbel	273
Other freshwater fishes	175 310
pike	13 406
catfish	13 534
pike-perch	14 088
lampreys	132
Others	134 150
Sturgeons	26 322
Freshwater eels	632
Salmonidae, whitefishes, smelts	861 203
whitefishes	27 954
Atlantic salmon	630
pink salmon	97 943
chum	23 191
sockeye	2 884
chinook salmon	2 408

APPENDIX IV (Cont'd.)

	1979 (tonnes)
coho salmon	4 060
trout	884
capelin	684 994
stint	2 702
smelt	8 234
argentine	278
char	2 551
peima	299
Others	2 191
Shads	400 643
alewife	12
Azov - Black Sea shads	82
Caspian shads	950
Caspian kilkas	325 677
tyulka	73 922
Pleuronectidae	145 070
flounders	69 016
long rough dab	12 571
flounders of the genus <u>Glyptocephalus</u>	7 796
yellowfin sole	40 268
plaice	2 670
halibut	30
Greenland halibut	13 259
Pacific halibuts	8 650
sole	775
Others	35
Gadidae (cod), Macruridae	3 417 691
Atlantic cod	207 674
Pacific cod	12 406
silver hake	45 677
Bengel hake	15 568

APPENDIX IV (Cont'd.)

	1979 (tonnes)
Cape hake	94 584
hake	3 767
white hake	23
red hake	443
Senegal, Mauritanian hake	2 746
Pacific hakes	101 070
Australian hake	1 805
haddock	26 795
navaga	38 135
greencod	3 043
walleye pollock	2 048 835
arctic cod	240
putassu	688 984
southern putassu	32 051
whiting	11 377
grenadier	16 163
Magellan hake	4 105
<u>Lemonema*</u>	58 627
Others	171
Sea basses, porgies, wolffishes and other similar species	390 729
sea bream	125
sea catfishes	1 905
Congridae	394
beryx	7 305
dory	6 103
sand lance	2 048
green <u>Notothania</u>	1 492
grey <u>Notothania</u>	2 499

* transliterated from the Russian.

APPENDIX IV (Cont'd.)

	1979 (tonnes)
marbled <u>Notothania</u>	47 695
yellow <u>Notothania</u>	15 011
sea basses of the genus <u>Epinephelus</u>	2 403
<u>Sulema</u> *	848
notched grunt	3 755
threadfin	1 699
snapper	362
captain	15 875
dogtooth	20 750
porgies	12 113
Anarhichadidge	16 842
eelpout	1 823
Azov gobies	1 085
drum	1 764
<u>Arioma</u> *	1 915
sea basses	101 409
searobin (W Atl.), gurnard (E. Atl.), etc.	356
anglerfish	105
greenling	41 816
<u>Stroma</u> *	587
sablefish	159
stickleback	18 832
snipe	16 748
green grunt	1 000
ice fish**	17 000
redeye	3 059
toothfish	192
greeneye	20 236
Others	4 199

* transliterated from the Russian.

APPENDIX IV (Cont'd.)

	1979
	(tonnes)
Carangidae, Mugilidae and other similar species	1 173 447
Pacific saury	68 900
mullet	712
bluefish	1 431
scad	681 495
kurene scad	215 657
Cape scad	150 746
Black sea scad	767
jack	8 561
garrick	687
surmullet	282
butterfish	3 788
barracuda	1 045
<u>Baurida*</u>	1 450
spoek	18 701
<u>Seriolella</u>	382
false scad	9 307
moonfish	4 807
Others	4 749
Clupeidae, Engraulidae	1 216 013
Barents Sea herring	6
White Sea herring	672
Pacific herring	72 916
sardine	112 425
ivasi	368 625
Baltic sprat	45 727
anchovy (Black Sea region)	147 403
Baltic herring	118 655
sprat	57 923

* transliterated from the Russian.

APPENDIX IV (Cont'd.)

	1979 (tonnes)
anchovy	20 368
<u>Biotsia*</u>	700
sardinella	266 780
Pacific or South African sardine (sometimes put in the genus <u>Sardinops</u>)	3 229
Others	584
Tunas, bonitos	9 197
tunas	6 992
bonitos	2 125
swordfish	80
Scombridae, sabrefishes and other similar species	309 409
sabrefish	21 202
mackerel (Russian "skumbriya")	286 450
sailfish	1
marlins	1
mackerel (Russian makrel)	1 705
Others	50
Sharks, skates	16 292
sharks	7 281
skates	9 011
Other unclassified fishes	298 904
Freshwater crustaceans (crayfish)	884
Crabs	17 997
Spiny lobsters	510
Shrimp	11 863
Krill	349 825
Other crustaceans (euphausids)	3 756
Mussels	13 414
Scallop	2 622
Teuthoidea, Oegopsida, Octopoda	56 744

* transliterated from the Russian.

APPENDIX IV (Cont'd.)

	1979
	(tonnes)
Teuthoidea, Oegopsida (squid)	46 500
<u>Illex</u>	9 313
<u>Loligo</u>	9
Myopsida	920
Other non-fish species	1 472
Phacophyceae (brown algae)	3 599
sea cabbage	1 471
<u>Fucus</u>	2 128
Rhodophyceae (red algae)	1 966
<u>Ahafeltia</u>	1 966
Other algae	13 406
<u>Furcellaria</u>	1 194
<u>Philippines*</u>	4 006
<u>Zoostera</u> and <u>Philospadex*</u>	8 206

Source: PRODINTORG

* transliterated from the Russian.

