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## SURIMI SUPPLY, DEMAND, AND MARKET OF JAPAN

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U.S. DEPARTMENT OF COMMERCE

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#### EXECUTIVE SUMMARY

Japan is the world's largest market for surimi, utilizing an average of 413,000 metric tons (mt) during 1990-2001. Supply for this market comes from both domestic production and imports. The share of the Japanese surimi market supplied by imports increased from 43 percent in 1992 to 61 percent in 2001.

Japan's surimi production increased rapidly from 43,000 mt in 1966 to 423,000 mt in 1973 and reached a record of 424,000 mt in 1976. Since 1977, however, surimi production has steadily declined, and the production in 2001 of 110,000 mt was less than 26 percent of the record production, and was the lowest production in 34 years.

Japan is a major importer of frozen surimi. In 2001, Japan's imports of frozen surimi were worth over \$571 million. Frozen Alaska pollock surimi was the dominant product imported into Japan, representing 46 percent in volume and 41 percent in value in 2001. Japanese imports of frozen Alaska pollock surimi came mostly from the United States.

Imports of frozen cod and Pacific whiting surimi, mostly surimi made from Pacific whiting, fluctuated between 17,000 and 26,000 mt from 1995 to 2000 The United States has consistently been the leading supplier of frozen Pacific whiting surimi to Japan, providing over 94 percent of the total

Prices of surimi are primarily determined by supply and demand, but quality, origin, and species are also important. Wholesale prices for frozen surimi generally fall during summer. In 2002, however, summer prices did not decline, due to reduced imports and low levels of inventory of frozen surimi. Average wholesale prices of frozen surimi in June 2002 were up 8-19 percent from prices for December 2001 and 4-15 percent higher than prices for the same period in 2001. Japanese imports of Alaska pollock surimi decreased from 10,663 mt in June 2001 to 1,371 mt in June 2002.

Japan regulates imports of surimi with import quota (IQ) and tariffs. To meet strong demand, the Japanese government increased the IQ for Alaska pollock surimi from 19,000 mt for 1986 to 140,000 mt for 1990, and then to 205,400 mt for 2002. As the United States and Japan are signatories to the World Trade Organization (WTO), WTO tariffs apply to U.S. exports of frozen surimi and frozen fish meat: 4.2 percent for frozen surimi and frozen fish meat of cod, pollack, hake; and 3.5 percent for frozen surimi of threadfin bream.

#### INTRODUCTION

Surimi, a refined form of minced fish meat, is the raw material used in making a wide range of finished products such as imitation crab meat, chikuwa (broiled surimi product), satuma-age (fried), itatsuki kamaboko (steamed), fish hams, fish sausages, and other seafood analogs (Sonu 1986).

Although the technique for making surimi has been practiced in Japan for many centuries, only during the past 40 years has the tradition evolved into a major industrial operation.

Before 1960, freeze denaturation of protein was a poorly understood phenomenon. When a protein becomes denatured, it loses its native structure and its ability to perform certain biochemical functions such as forming a gel, an important property in surimi.

A new technology for processing Alaska pollock into a stable frozen surimi, which is protected from freeze denaturation, was developed in the early 1960s in Japan. It allowed surimi manufacturing to evolve into an automated mass-production system to keep pace with expanding demand. Automation of surimi manufacturing procedures was essentially completed both on board and on shore within about 10 years following the introduction of frozen surimi.

Alaska pollock, Theragra chalcogrammus, is the most widely utilized species in the Japanese surimi industry because of its abundance, good gel-forming capability, year-round availability, white flesh, and reasonable price.

Japan was once the world's largest producer of surimi. Recently, however, the Japanese production of surimi has dropped significantly due mainly to shortage of supply of fish from domestic and foreign waters, and Japan has become increasingly more dependent on imports for its supply. This need is likely to remain because increased catches of fish in foreign waters by the Japanese fleet are not likely in the near future.

Japan is the major user of surimi and the most important export market for U.S. surimi, accounting for 51 percent of U.S. exports of surimi in 2001.

This report provides a detailed examination of the Japanese surimi production as well as its imports, exports, supply, demand, and market, in order to identify potential opportunities for export by U.S. surimi producers.

#### SURIMI PRODUCTION

The history of frozen surimi production in Japan from 1960 to 2001 is illustrated in Figure 1 and Table 1. Surimi production increased rapidly during the 6-year period between 1967 and 1973. This trend was facilitated by the advent of automated facilities for surimi production and by the introduction of factoryship operations. By 1973, total annual output of surimi rose to 423,000 mt, more than five times the 1967 production. From 1974 to 1984, the production of surimi hovered around 350,000 to 420,000 mt per year. From 1985 to the present, the production has steadily declined due mainly to shortage of supply of fish in domestic and foreign waters. The production was 413,000 mt in 1985 but only 110,000 mt in 2001.

Most of the Japanese on-shore surimi processing industry is located on Hokkaido Island, where domestic landings of Alaska pollock and Atka mackerel, the two major species used as raw material, take place. Of the 106,000 mt of land-processed frozen surimi processed in 2001, it is estimated that 73,000 mt were made from Alaska pollock, 21,000 mt from Atka mackerel, 3,000 mt from Japanese sardine and Pacific mackerel and 10,000 mt from other species.

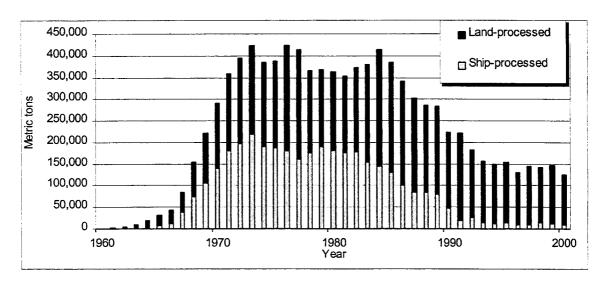


Figure 1. Japanese surimi production, 1960-2001 (metric tons).

Sources:

Japan Surimi Association 1984

Ministry of Agriculture, Forestry, & Fisheries

1974-2002

Suisan Tsushin Sha 2001 Minato Shinbun Sha 2002

Hokkai Keizai Shinbun Sha 2002

Table 1. Japan's frozen surimi production, 1960-2001 (metric tons).

		Land-pro	cessed sur	imi		Ship-	
Year	Alaska	Sardine/	Atka	Other	Sub-	processed	Total
	Pollock	mackerel	mackerel	fish	Total	surimi	
1960	_*		_	_	250	0	250
1961	_	_	_		2,500	Ö	2,500
1962	_	_	_	_	4,500	Ö	4,500
1963	_	_	_	_	9,282	0	9,282
1964		_	_	_	18,060	0	18,060
1965	_	_	_	_	23,639	8,184	31,823
1966	_	_	_	_	29,913	13,034	42,947
1967	<del></del>			_ _	44,869	39,283	84,152
	61,355	_	-	16,962	78,317	75,525	153,842
1968	99,140	_	_	15,955	115,095	105,297	220,392
1969		_	_	18,457	153,292	138,743	292,035
1970	134,834	_	_	13,264	179,159	180,138	359,297
1971	165,895	_	_	18,685	198,909	196,131	395,040
1972	180,223	-	4 607	9,938	·	217,891	423,082
1973	190,555	_	4,697	8,339	205,191		
1974	173,765	<del>-</del>	11,638	•	193,744	190,556 187,228	384,300 387,683
1975	193,978	-	2,908	3,569 3,223	200,455	181,243	
1976	233,406	-	6,361		242,990		424,233
1977	234,269	-	13,044	4,338	251,651	161,798	413,449
1978	177,655	-	5,669	6,406	189,730	175,853	365,583
1979	162,422	_	7,459	7,084	176,965	190,621	367,586
1980	165,818	-	10,353	8,744	184,915	179,331	364,246
1981	160,200	_	-	18,280	178,480	176,442	354,922
1982	178,941	-	2 1 4 1	17,013	195,954	177,095	373,049
1983	210,855	3,914	3,141	8,370	226,280	153,593	379,873
1984	248,186	5,463	3,975	11,300	268,924	144,440	413,364
1985	230,036	5,599	3,540	15,115	254,290	130,588	384,878
1986	205,074	5,481	4,451	25,773	240,779	101,053	341,832
1987	195,921	5,260	2,464	16,682	220,327	83,844	304,171 287,406
1988	177,887	4,471	5,286	14,434	202,078	85,328	
1989	180,305	3,215	5,973	13,435	202,928	80,415 47,962	283,343 223,945
1990	147,817	4,156	13,453	10,557	175,983		
1991	154,653	3,957	19,282	23,435	201,327	18,959	220,286 183,428
1992	130,797	3,813	9,276	14,092	157,978	25,450	
1993	108,528	3,496	13,734	15,251	141,009	14,812	155,821 149,304
1994	103,336	7,592	12,237	15,107	138,272	11,032	
1995	95,238	5,027 6,067	22,363	18,121	140,749	13,805	154,554 129,086
1996	69,553	6,067 5,260	29,825	13,833	119,278	9,808	143,623
1997	83,152		28,417	16,580	133,409	10,214	•
1998	84,196	4,331	26,775	11,784	127,086 134 563	14,730 11,373	141,816 145,936
1999	97,413	3,373	23,809	9,968 9,929	134,563 116,379	8,783	145,936
2000	84,508	1,747 2,845	20,195 20,632	9,929 9,745	106,481	4,000	110,481
2001	73,259	2,040	20,032	9,143	100,401	4,000	110,401

<sup>-\*....</sup>not available Sub-total may not add due to rounding

Sources: Japan Surimi Association 1984

Ministry of Agriculture, Forestry, & Fisheries 1974-2002

Suisan Tsushin Sha 2001 Minato Shinbun Sha 2002

Hokkai Keizai Shinbun Sha 2002

#### ALASKA POLLOCK

Alaska pollock, Theragra chalcogrammus, is the most widely utilized species in the Japanese surimi industry. Though almost any fish can be used to make surimi, no other species can match the combination of its abundance, good gel-forming capability, year-round availability, white flesh, and reasonable price (Sonu 1986).

Alaska pollock is widely distributed in the North Pacific, from Central California into the eastern Bering Sea, along the Aleutian arc, around Kamchatka, in the Okhotsk Sea and into the southern Sea of Japan (Cohen et al. 1990).

### World catch of Alaska pollock

Alaska pollock constitute one of the world's major fishery resources (Table 2). Total world catches of Alaska pollock ranged between 3.3 and 4.8 million mt annually in recent years. Alaska pollock are caught exclusively in the North Pacific (Table 3). Approximately two-thirds of the catch was taken in the Northwest Pacific in an area west of 175° which includes the coastal and offshore areas of Japan, the Republic of Korea, and Russia. The remaining one-third came from the U.S. Exclusive Economic Zone (EEZ) in the Northeast Pacific.

The development of Alaska pollock fisheries was stimulated in the early 1960s by successful implementation by Japan of mechanized processing of Alaska pollock into frozen surimi. By 1972, the fishery had expanded throughout the North Pacific, mostly by Japan and to a lesser extent by the former Soviet Union and the Republic of Korea. The combined harvests of Alaska pollock by these three countries increased ninefold, from 464,000 mt in 1961 to 4.2 million mt in 1972 (Figure 2).

Total world harvest of Alaska pollock reached a peak of 6.76 million mt in 1986 but have been on a downward trend since then, falling to 3.36 million mt in 1999 (Figure 2). The decrease in global landings of Alaska pollock was due mainly to sharply declined catches by Russia and Japan. Combined landings by these two countries declined from 5.01 million mt in 1986 to 1.88 million mt in 1999.

Of nine nations that reported Alaska pollock landings in 1999, Russia ranked highest with 45 percent of the total (Table 3). The United States was second with 31 percent, while Japan, the world's largest producer during 1951-1976, was in third place. Japan's share of the world catch decreased sharply from over 83 percent during the 1950s to 11 percent in 1999. China and the Republic of Korea respectively harvested 5 and 4 percent of the world total. The combined catch of other countries

including Taiwan, the Democratic People's Republic of Korea, Poland, and Canada accounted for under 4 percent of the total catch.

Russian annual harvest of Alaska pollock reached a high in 1986 at 3.58 million mt annually, but has since declined sharply (FAO 1988). The catch in 1999 of 1.5 million mt was about 42 percent of the record landings, and was the lowest catch in 26 year. The Total Allowable Catch (TAC) for Alaska pollock in the Russian Exclusive Economic Zone was reduced by 45 percent from 1,678,000 in 2000 to 929,600 mt in 2002 to protect the population (Hokkai Keizai Shinbun Sha 2002).

The U.S. fishing industry initially embarked on an exploratory Alaska pollock fishing venture in 1974 (Koslow 1976). The industry was stimulated by a strong domestic demand for Alaska pollock as an acceptable substitute for Atlantic cod (Gadus morhua) for breaded fish products. The Alaska pollock fishing operation, however, remained at a small scale, until the late-1980s (Figure 2).

Foreign access to U.S. waters was restricted following the establishment of the U.S. EEZ in 1977. The U.S. commercial fishery for Alaska pollock experienced a short period of joint venture operations in the mid-1980s and was fully a U.S. fishery by 1988, when foreign fishing was phased out. To fill the strong demand for surimi, the U.S. fishery expanded each year and the harvests of Alaska pollock continued to increase, reaching a peak in 1990 at 1.41 million mt. Catches have since remained relatively stable and averaged about 1.25 million mt during the period 1991-2000 (Figure 2).

Table 2. World landings of principal species, 1994-1999 (1,000 metric tons).

Species	1994	1995	1996	1997	1998	1999
Peruvian anchovy	12,521	8,645	8,864	7,685	1,729	8,723
Alaska pollock	4,375	4,809	4,549	4,487	4,049	3,362
Atlantic herring	1,930	2,353	2,329	2,534	2,422	2,404
Skipjack tuna	1,498	1,655	1,584	1,613	1,884	1,976
Chub mackerel	1,531	1,575	2,178	2,427	1,924	1,955
Japanese anchovy	821	972	1,254	1,667	2,094	1,820
Chilean			_,	_, _,	_,	_, -,
jack mackerel	4,262	4,955	4,379	3,597	2,026	1,423
Largehead hairtail	1,081	1,244	1,283	1,206	1,435	1,419
Blue whiting	495	544	631	712	1,185	1,323
Yellowfin tuna	1,107	1,115	1,083	1,213	1,252	1,258
Atlantic cod	1,249	1,271	1,341	1,375	1,213	1,093
Argentine					•	•
shortfin squid	506	521	656	980	665	1,091
Capelin	884	749	1,527	1,605	985	905
European pilchard	1,167	1,209	996	999	941	901
Araucanian herring	341	127	447	441	318	782
Gulf menhaden	767	472	492	598	497	694
European sprat	580	602	672	700	696	684
Atlantic mackerel	857	794	560	559	668	611
Akiami paste shrimp	345	406	461	496	587	599
European anchovy	523	619	528	501	499	598
Japanese						
Spanish mackerel	228	259	301	3,66	552	595
Japanese sardine	1,314	733	431	418	296	515
Japanese flying squid	504	513	716	603	379	498

Sources: FAO 1999, 2001

Table 3. World landings of Alaska Pollock by FAO fishing area and country, 1993-1999 (1,000 metric tons).

FAO fishing area/								
Country	1993	1994	1995	1996	1997	1998	1999	
Pacific ocean: Northwest:								
China China, Taiwan Japan Korea, D.P. Rp. Korea, Rep. Poland Russian Fed.	135 0* 382 ** 181 235 2,114	130 0 379 75 297 270 1,747	189 0 339 120 335 249 2,208	167 0 331 15 224 116 2,440	258 0 339 67 223 125 2,253	141 0 316 60 236 82 1,931	117 0 382 55 146 66 1,500	
Area total  Pacific ocean: Northeast:	3,048	2,898	3,441	3,294	3,265	2,766	2,266	
Canada China Japan Korea, Rep. Russian Fed. U.S.A.	8 40 0 45 **	5 40 0 15 * -	3 60 - 11 - 1,294	2 60 - 2 0 1,190	2 80 - - - 1,140	1 50 - - - 1,232	1 40 - - 1,055	
Area total	1,571	1,477	1,368	1,255	1,221	1,283	1,096	
Species total	4,619	4,375	4,809	4,549	4,487	4,049	3,362	

<sup>0\*</sup> More than zero but less than 500 metric tons

Source: FAO 2001

<sup>...\*\*</sup> Data not available

<sup>-\*\*\*</sup> Magnitude known to be nil or zero Total may not add due to rounding

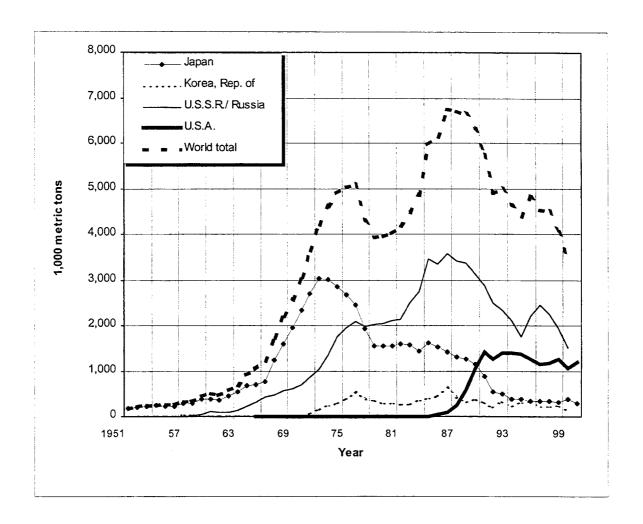


Figure 2. World landings of Alaska pollock by major countries, 1951-2001, (1,000 metric tons).

Sources: FAO 1955, 1957, 1962, 1966, 1974, 1977, 1978, 1982,

1983, 1989, 1992, 1995, 2001 Suisan Tsushin Sha 2001, 2002 U.S. Department of Commerce 2002

#### Japanese catch of Alaska pollock

Prior to 1959, Japanese harvests of Alaska pollock remained below 300,000 mt a year (Table 4), mostly caught in its coastal waters and off the Siberian coast. During the 1960s and the early 1970s Japanese harvests of Alaska pollock steadily escalated, reaching a peak in 1972 at over 3 million mt. The impetus for expanding the Alaska pollock fishery was the development of automated processing of Alaska pollock into frozen surimi and the introduction of factoryship operations in the 1960s. By 1972, Japan expanded its Alaska pollock fishing fleet as well as its range of operations throughout the North Pacific Ocean (Sonu 1986). At that time, Alaska pollock was Japan's major fishery, accounting for about one-third of its total marine fisheries catch (Table 4). The majority of the catch took place in U.S. waters (Figure 3).

The long period of steady growth in catch was followed by a downturn which came mainly as a result of the oil shock in 1974, which made fishing operations very expensive, but also because of restrictions on Japanese catches in the U.S. and the former Soviet EEZs, instituted in 1977. From 1978 through 1985, annual Japanese catches of Alaska pollock fairly stabilized at about 1.5 million mt. Since 1986, however, Japan's total catch of Alaska pollock has declined sharply as Japanese catch allocations within the U.S. and the former Soviet EEZs were greatly reduced. In 1987, the fishery was completely stopped off the United States. The total catch in 2001 of 242,000 mt was less than 8 percent of the record landings, and was the lowest catch in 45 years.

Alaska pollock is taken mostly by trawl, gillnet and longline. In 1999, about 58 percent of Alaska pollock were caught by trawl, 28 percent by gillnet, 4 percent by longline, and the rest by hook and line, dragnet, purse seine, and set net (Table 5). Annual catches for the trawl fishery decreased notably from 1987 to 2000 as Japanese trawling was prohibited in U.S. waters and significant catch restrictions were imposed in Russia waters.

### Total allowable catch

In January 1997, Japan began implementing TAC levels for several species including Alaska pollock, Japanese sardine, Pacific saury, jack mackerel, chub mackerel, Tanner crab, and Japanese flying squid (Ministry of Agriculture, Forestry, and Fisheries 1999). The TAC is set by the Ministry of Agriculture, Forestry, and Fisheries together with prefectural governments (Ministry of Agriculture, Forestry, and Fisheries 1998).

The TAC for Alaska pollock was set at 374,000 mt in 2000, but due to low catches and abundance, it was decreased to 363,000

mt in 2001, and to 325,000 mt in 2002 (Table 6). Only about 56 percent of the 2001 TAC was landed.

### Japanese catch in U.S. waters

The Japanese Alaska pollock fishery in Alaskan waters began in 1958 in the Bering Sea and in 1961 in the Gulf of Alaska (Suisan Sha 1969). The fishery grew rapidly in these areas and catches peaked in 1972 at 1.65 million mt, about 54 percent of its total landings of Alaska pollock for that year (Figure 3).

Since then, the Japanese harvest of Alaska pollock in U.S. waters has declined, following catch restrictions implemented after passage of the Magnuson Fishery Conservation and Management Act (MFCMA) in 1976 (Table 7). The Alaska pollock catch allocation to Japan in U.S. EEZ was reduced from 942,572 mt in 1980 to only 3,950 mt in 1987. Japanese Alaska pollock fishing was phased out in 1987 in the Gulf of Alaska and in 1988 in the Bering Sea and Aleutian Islands.

#### Japanese catch in Soviet/ Russian waters

Prior to 1977, Japanese fishermen caught large amounts of Alaska pollock off the former Soviet Unions's coast (Table 8). The Soviet Union, however, implemented its EEZ in 1977 and government representatives of Russia and Japan have met annually in recent years to determine catch quotas in their respective 200-mile fishing zones.

Japan's mutual catch quota which is "free-of-charge" for Alaska pollock in Soviet (now Russian) waters was significantly reduced from 370,000 mt in 1977 to 51,300 mt in 1986 and to 3,204 mt in 2002 (Table 8). To supplement Japan's declining Alaska pollock allocation, the Soviets have provided an additional feebased catch allocation since 1987. However, this was also reduced steeply from 73,000 mt in 1987 to 11,500 mt in 1992, and to only 3,250 mt in 2002. The 2002 combined mutual and fee-based catch quota in Russian waters for Alaska pollock was about 6,000 mt.

Table 4. Japanese landings of fish used for surimi materials by species of fish and total annual catch of marine fishes, 1951-2001 (1,000 metric tons).

	Sardine	Jack	Chub	Alaska	Atka		Marine fishes
ear		mackerel	mackerel	pollock	mackerel	Croaker	Total
951	368	87	151	184	_*	•••	3,774
52	258	187	287	206	_	_	4,646
53	344	239	235	225	_	_	4,387
22			297	242	_	_	4,304
54	246	251			_	_	4,304
55	211	238	244	231	101	-	4,658
56	206	246	266	235	121	98	4,488
57	212	313	276	281	106	112	5,067
58	137	324	268	285	48	107	5,198
59	120	432	295	376	100	115	5,568
60	78	596	351	380	116	129	5,817
961	127	542	338	353	185	116	6,287
62	108	518	409	453	122	102	6,397
63	56	463	465	532	150	103	6,200
64	16	520	496	684	205	74	5,868
			669	691	107	101	6,382
65	9	560					
66	13	514	624	775	106	98	6,558
67	17	423	687	1,247	82	85	7,241
68	24	358	1,015	1,606	87	71	7,993
69	21	341	1,011	1,944	103	66	7,976
70	17	269	1,302	2,347	147	64	8,598
971	57	315	1,254	2,707	147	50	9,149
72	58	194	1,190	3,035	181	42	9,400
73	297	183	1,135	3,021	115	45	9,793
74	352	216	1,331	2,856	144	52	9,749
75	526	236	1,318	2,677	115	45	9,753
76	1,066	207	977	2,445	229	39	9,605
			1,355	1,931	235	40	9,688
77	1,420	187					
78	1,637	154	1,626	1,546	135	37	9,683
79	1,817	185	1,414	1,551	119	39	9,477
80	2,198	147	1,301	1,552	117	32	9,909
981	3,089	125	908	1,595	123	33	10,143
82	3,290	178	718	1,567	103	30	10,231
83	3,745	179	805	1,434	56	27	10,697
84	4,179	238	814	1,621	66	24	11,501
85	3,866	225	773	1,532	66	21	10,877
86	4,210	186	945	1,422	89	20	11,341
87	4,362	258	701	1,313	99	19	11,129
88	4,488	297	649	1,259	104	17	11,259
89	4,099	286	527	1,154	115	14	10,440
			273	871	134	13	
90	3,678	337					9,570
991	3,010	321	255	541	130	13	8,511
92	2,224	293	269	499	98	11	7,771
93	1,714	368	665	382	136	8	7,256
94	1,189	380	633	379	153	8	6,590
95	661	390	470	339	177	9	6 <b>,</b> 007
96	319	392	760	331	182	7	5,974
97	284	373	849	339	207	6	5,985
98	167	370	511	316	241	6 5	5,315
99	351	258	382	382	169	5	5,239
		238 246			165	) [	
000 001	150 179	246 212	346 371	300 242	165 161	5 4	5,022 4,730

<sup>-\*....</sup>not available

Sources: Ministry of Agriculture, Forestry & Fisheries 1967-2002 Suisan Tsushin Sha 2002

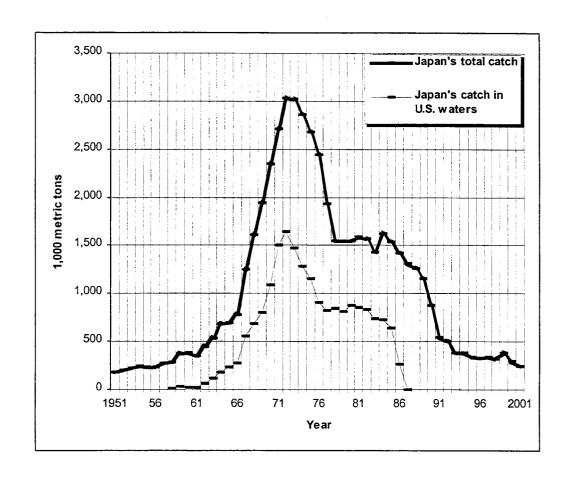


Figure 3. Japan's total catch of Alaska pollock and catch of Alaska pollock in U.S. waters, 1951-2001 (1,000 metric tons).

International North Pacific Fisheries Commission 1969 Sources: Japan Food Economy Company 1978

Suisan Sha 1974

Ministry of Agriculture, Forestry & Fisheries 1967, 1970, 1978, 1983, 1999, 2002 Suisan Tsushin Sha 2002

Table 5. Japanese landings of Alaska pollock by fishery type, 1987-2000 (metric tons).

		<u> </u>		•			
<u>Year</u>	Distant	Offshore	Small	Gillnets	Longlines	Others	Total
1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000	840,572 784,178 676,518 417,050 144,068 140,639 118,419 121,068 71,640 83,104 81,8916 49,516	221,014 267,366 240,620 235,615 223,701 214,856 147,705 149,959 162,199 156,596 158,117 151,242 177,927 160,501	10,421 9,628 8,091 5,832 5,760 4,103 2,958 2,349 2,453 2,098 1,831 1,595 1,563 1,466	202,192 154,310 179,574 169,469 132,418 101,870 86,566 70,368 71,255 58,694 53,195 70,856 107,650 63,200	28,056 30,981 33,036 28,114 27,940 25,405 19,916 18,802 16,095 16,136 20,811 13,795 14,291 12,979	10,254 9,632 15,911 15,328 7,059 11,883 6,744 16,805 14,535 22,933 28,933 37,939	1,312,509 1,259,095 1,153,750 871,408 540,946 498,756 382,308 379,351 338,507 331,163 338,507 331,63 315,987 315,987 315,987 300,001

Others include hook and line, dragnet, purse seine, and set net Sources: Ministry of Agriculture, Forestry, & Fisheries 1999-2002

Table 6. Total allowable catch (TAC) and actual landings of Alaska pollock, 1997-2002.

Year	TAC1,000	Landings* metric tons	Percent of TAC
1997 1998 1999 2000 2001 2002	267 311 374 374 363 325	246 259 343 245 205	92 83 92 66 56

<sup>\*...</sup>Japanese catch in foreign waters are not included

Sources: Suisan Tsushin Sha 2000, 2001, 2002

Ministry of Agriculture, Forestry and Fisheries 1999,

2002

Suisan Sha 1999, 2000, 2001, 2002 Hokkai Keizai Shinbun Sha 2002

Table 7. Japan's Alaska pollock catch allocations and the actual catch in the U.S. Exclusive Economic Zone by region, 1977-1988 (metric tons)

	Gulf of		Bering Sea/Alu			_
Year	(Allocation)	(Catch)	(Allocation)	(Catch)	(Allocation)	(Catch)
1977	44,100	42,415	792,300	782 <b>,</b> 419	836,400	824,834
1978	40,740	26,093	792,300	821 <b>,</b> 307	833,040	847,400
1979	38,279	31,920	774,630	779,050	812,909	810,970
1980	46,745	37,897	895,827	832,993	942,572	870,890
1981	82,385	51,885	859,502	803,461	941,887	855,346
1982	90,907	55,046	845,064	780,351	935,971	835,397
	/			•	•	
1983	58 <b>,</b> 992	47,725	738,313	684,424	797,305	732,149
1984	77,821	57,864	693,031	665 <b>,</b> 672	770 <b>,</b> 852	723,536
1985	25,000	22,937	640,601	620,112	665,601	643,049
1986	140	114	298,013	262,423	298,153	262,537
1987	0	0	3,950	3,283	3,950	3,283
	0	0		0	0,000	0,200
1988	U	U	0	U	O	U

Source: U.S. Department of Commerce 1978-1989

Table 8. Japan's Alaska pollock catch allocations in the Soviet/Russian waters, 1974-2002 (metric tons)

1974       855,000*       0       855,000*         1975       652,000*       0       652,000*         1976       617,000*       0       370,000         1977       370,000       0       370,000         1978       345,000       0       345,000         1979       300,000       0       300,000         1980       290,000       0       290,000         1981       290,000       0       290,000         1982       290,000       0       290,000         1983       290,000       0       290,000         1984       270,000       0       290,000         1985       250,000       0       250,000         1986       51,300       0       51,300         1987       51,300       73,430       124,730         1988       53,860       73,740       127,600         1989       53,480       67,000       120,480         1990       25,736       15,000       40,736         1991       25,727       16,000       41,727         1992       25,732       11,500       37,232         1994       21,726       7,100
2002 3,204 3,250 6,454

<sup>\*...</sup>Actual catch

Source: Suisan Sha 1975-2002

#### IMPORTS

Japan is the world's largest importer of frozen surimi. In 2001, Japan imported 309,312 mt of frozen surimi valued at \$571 million (Tables 9 and 10). Frozen Alaska pollock surimi was the dominant product imported into Japan in recent years, representing as much as 46 percent in volume and 41 percent in value in 2001. Frozen threadfin bream surimi was 19 percent in volume and 15 percent in value, while imports of frozen cod surimi, frozen Pacific whiting surimi, and frozen croaker surimi were minor, with combined shares of about 4 percent in volume and 5 percent in value. Frozen surimi made with other species accounted for 31 percent in volume and 39 percent in valued.

Japanese imports of frozen surimi from Alaska pollock came mostly from the United States, with lesser quantities imported from Russia, the Republic of Korea, China, Argentina, Hong Kong, Spain, and Thailand (Tables 11 and 12). Supplies of Alaska pollock surimi from the United States increased in 2001 to a record level, while shipments of this product from Russia, the Republic of Korea, and China decreased sharply. Imports of Alaska pollock surimi, however, decreased sharply from 72,499 mt in January-July 2001 to 56,834 mt in January-July 2002 due to decreased production and exports of surimi by the United States (Suisan Keizai Sha 2002).

Imports of frozen cod and Pacific whiting surimi, fluctuated between 17,000 and 26,000 mt from 1995 to 2000 (Table 13). The United States has consistently been the leading supplier of frozen Pacific whiting surimi to Japan, providing over 94 percent of the total (Tables 13 and 14). Imports in 2001 declined sharply from 2000 due mostly to decreased production and exports by the United States and Canada of Pacific whiting surimi. Supply of cod and Pacific whiting surimi for January-July 2002 was only 1,999 mt compared with 3,868 mt for the same period a year earlier. The United States supplied 96 percent of the total (Suisan Keizai Sha 2002).

Imports of frozen threadfin bream surimi rose sharply from 29,000 mt in 1995 to 59,000 mt in 2001 (Table 15). The products came mostly from Thailand, Hong Kong, and India (Tables 15 and 16). Since 1998, India replaced Hong Kong as the second leading supplier of this product to Japan. Significant quantities were also imported from Indonesia, Viet Nam, and Myanmar. Japan imported 79 mt of this product from the United States in 2001.

Imports of frozen croaker surimi increased sharply from 1995 to a high in 1997, but have since shown a downward trend (Tables 17 and 18). Supplies of frozen croaker surimi from Hong Kong, India, and Venezuela to Japan have declined since 1997, while shipments of this product from Myanmar have increased sharply.

Total imports of other frozen surimi have remained fairly stable since 1995, ranging between 83,000 and 103,000 mt (Tables 19 and 20). Thailand and Argentina continued to dominate the supplies of other frozen surimi. Supplies of frozen surimi from

the Republic of Korea to Japan have declined sharply since 1995.

#### Trade barriers

Japan regulates imports of surimi with import quota (IQ) and tariffs. Import quotas are set once a year, with new quotas announced each year. To meet strong demand, the Japanese government increased the IQ for Alaska pollock surimi from 19,100 mt for fiscal year (FY) 1986 to 126,200 mt for FY 1988, and then to 205,400 mt for FY 2002 (Table 21).

While the Japanese Ministry of International Trade and Industry is the lead agency in administering the quota system, it coordinates its actions closely with the Fisheries Agency of the Ministry of Agriculture, forestry, and Fisheries (FAJ). In addition to setting quotas for imports, the government also controls the allocation among the following recipient groups:

- A. Traders: Trading companies with past import history;
- B. Users: Processors' associations, which usually hire traders to perform import functions on their behalf;
- C. Fishermen: Fishermen or fishery organizations fishing in foreign waters and designated by FAJ Director General, or those who received import orders from such fishermen or fishery organizations;
- D. Overseas fishery development: Companies which received import orders from the Overseas Fishery Cooperation Foundation;
- E. First-Come-First-Served: Companies which have import contract for Alaska pollock surimi (more than 10 mt) signed after the date of this IQ announcement.

There is a great deal of variation in the amount of quota held by recipient groups (Table 21) and individual importers. Japanese importers holding surimi import quota allocations are listed in Appendix 1.

Imports of frozen surimi are subject to tariffs. As the United States and Japan are signatories to the World Trade Organization (WTO), WTO tariffs apply to U.S. exports of frozen surimi and frozen fish meat: 4.2 percent for frozen surimi and frozen fish meat of cod, pollack, hake; and 3.5 percent for frozen surimi of threadfin bream (Japan Fish Traders Association 2002).

Tariff rates are calculated as percentage of cost, insurance, and freight (CIF) value.

Table 9. Japanese annual imports of frozen surimi by products and volume, 1986-2001 (metric tons).

Year	Alaska pollock	Cod/ Pacific whiting	Threadfin bream	Croaker	Other surimi	Total
1995	149,165	19,487	33,592	5,404	82,679	290,327
1996	126,750	17,228	28,507	6,431	87,073	265,989
1997	125,011	26,285	37,319	10,408	103,007	302,030
1998	108,221	17,700	36,365	7,608	84,149	254,043
1999	103,740	20,121	45,098	8,326	88,309	265,594
2000	106,505	17,577	49,741	7,951	87,474	269,248
2001	142,213	6,034	59,131	7,365	94,569	309,312

Source: Japan Fish Traders Association 1996-2002

Table 10. Japanese annual imports of frozen surimi by products and value, 1986-2001 (U.S. \$1,000).

	Alaska		Threadfin		Other	
Year	pollock	Cod	bream	Croaker	surimi	Total
1995	411,316	52,428	84,848	17,054	285,756	851,402
1996	268,285	28,814	64,478	19,776	292,780	674,133
1997	322,832	66,675	86,755	31,503	331,191	838,956
1998	209,569	24,722	56,473	15,759	203,008	509,531
1999	259,175	41,208	83,880	20,140	239,375	643,778
2000	207,465	29,881	86,506	22,013	231,950	577,815
2001	233,284	9,213	86,020	18,042	224,463	571,022

Table 11. Japanese imports of frozen Alaska pollock surimi by country of origin and volume, 1995-2001 (metric tons).

Country of origin	1995	1996	1997	1998	1999	2000	2001
U.S.A. Russia Korea, rep. China Argentina Hong Kong Spain Thailand	124,074 22,071 1,764 1,256 0	110,480 15,715 211 339 0 0	110,957 12,650 1,039 349 0	93,719 13,315 999 0 0 188	89,745 13,697 298 0 0	99,118 7,387 0 0 0 0	137,193 4,676 278 48 18 0
Total	149,165		125,011	108,221	103,740	106,505	142,213

Source: Japan Fish Traders Association 1996-2002

Table 12. Japanese imports of frozen Alaska pollock surimi by country of origin and value, 1995-2001 (U.S. \$1,000).

Country of origin	1995	1996	1997	1998	1999	2000	2001
U.S.A. Russia Korea, rep. China Argentina Hong Kong Spain Thailand	343,153 60,295 4,660 3,208 0 0	231,919 35,280 459 611 0 0	283,638 35,909 2,457 786 0 0 42		223,460 34,880 835 0 0 0		225,370 7,287 472 122 33 0 0
Total	411,316	268,285	322,832	209,569	259,175	207,465	233,284

Total may not add due to rounding

Table 13. Japanese imports of frozen cod and Pacific whiting surimi (excluding Alaska pollock surimi) by country of origin and volume, 1995-2001 (metric tons).

Country of origin	1995	1996	1997	1998	1999	2000	2001
U.S.A. Chile Canada Russia Argentina Thailand	18,738 688 20 0 41	16,407 624 19 50 128	24,838 544 903 0	17,010 0 646 0 26 18	19,077 0 1,044 0 0	16,519 100 796 142 20 0	5,918 95 21 0 0
Total	19,487	17,228	26,285	17,700	20,121	17,577	6,034

Source: Japan Fish Traders Association 1996-2002

Table 14. Japanese imports of frozen cod and Pacific whiting surimi (excluding Alaska pollock surimi) by country of origin and value, 1995-2001 (U.S. \$1,000).

Country of origin	1995	1996	1997	1998	1999	2000	2001
U.S.A. Chile Canada Russia Argentina Thailand	50,872 1,468 45 0 42	27,169 1,353 28 127 136	63,099 1,380 2,195 0	23,708 0 921 0 63 30	39,320 0 1,889 0 0	28,048 205 1,321 265 41 0	8,964 218 32 0 0
Total	52,428	28,814	66,675	24,722	41,208	29,881	9,213

Total may not add due to rounding

Table 15. Japanese imports of frozen threadfin bream surimi by country of origin and volume, 1995-2001 (metric tons).

Country of	1995	1996	1007	1000	1000	2000	2001
<u>origin</u>	1995	1996	1997	1998	1999	2000	2001
Thailand India Indonesia Viet Nam Myanmar U.S.A. Singapore China Malaysia Hong Kong Korea, Rep.	24,167 478 0 138 34 0 201 154 8,419	21,582 277 86 5 4 0 0 125 54 6,351 24	24,547 2,786 836 179 119 0 34 71 8,748	31,167 3,375 600 191 163 0 8 5 96 747	38,076 5,857 822 74 132 24 24 50 40 0	40,689 7,436 1,178 39 356 0 18 24 0	40,909 14,835 2,707 309 220 79 54 18 1
Taiwan	0	0_	0	14	0	0	0
Total	33,592	28,507	37,319	36,365	45,098	49,741	59,131

Source: Japan Fish Traders Association 1996-2002

Table 16. Japanese imports of frozen threadfin bream surimi by country of origin and value, 1995-2001 (U.S. \$1,000).

						*******	
Country of	7.005	1006	1005	1000	1000		
<u>origin</u>	1995	1996	1997	1998	1999	2000	2001
-1 17 1	60 505	16 066			50 500		
Thailand	62 <b>,</b> 507	46,266	56,966	48,556	72,589	71,670	60 <b>,</b> 455
India	1,306	469	5,232	4,731	9,739	12,667	21,062
Indonesia	0	202	2,028	862	939	1,504	3,632
Viet Nam	209	8	383	397	141	70	346
Myanmar	85	8	216	252	197	519	289
U.S.A.	0	0	0	0	40	0	121
Singapore	0	0	0	11	48	0	84
China	526	352	85	7	105	40	25
Malaysia	328	89	152	136	82	36	7
Hong Kong	19,886	17,027	21,693	1,509	0	0	0
Korea, Rep.	0	57	. 0	. 0	0	0	0
Taiwan	0	0	0	13	0	0	Õ
Total	84,848	64,478	86 <b>,</b> 755	56 <b>,</b> 473	83,880	86,506	86,020

Total may not add due to rounding

Table 17. Japanese imports of frozen croaker surimi by country of origin and volume, 1995-2001 (metric tons).

~					***************************************	*****	
Country of							
<u>origin</u>	1995	1996	1997	1998	1999	2000	2001
Thailand	3,528	3,448	4,273	4,435	4,938	4,409	4,543
China	1,251	902	1,976	1,511	1,765	1,507	1,509
India	49	630	1,167	915	1,127	1,089	613
Myanmar	108	62	141	150	263	390	406
Mexico	154	206	153	75	179	195	125
Venezuela	108	216	528	125	20	284	76
Indonesia	0	40	89	40	5	0	72
Taiwan	17	15	18	25	16	18	17
Viet Nam	103	10	17	3	0	0	5
Korea, Rep.	0	2	1	Ö	Ō	Ō	Ō
Hong Kong	65	901	2,047	328	Ō	Ô	Ô
Malaysia	21	0	0	0	10	60	Ô
Panama	0	Ō	0	Ö	2	0	Ö
Total	5,404	6,431	10,408	7,608	8,326	7,951	7,365
10041	3, 104	, 101	10,400	., 300	0,320	,, , , , , ,	,,505

Source: Japan Fish Traders Association 1996-2002

Table 18. Japanese imports of frozen croaker surimi by countries of origin and value, 1995-2001 (U.S. \$1,000).

Country of							
Country of origin	1995	1996	1997	1998	1999	2000	2001
<u>OIIGIII</u>		1330		1000	1000	2000	2001
Thailand	11,316	9,589	12,938	9,113	11,986	13,039	11,012
China	3,808	2,789	4,967	4,102	4,440	4,123	4,125
India	89	1,386	2,693	1,450	2,321	2,095	1,199
Myanmar	328	158	373	278	469	782	765
Mexico	730	935	654	331	799	855	559
Venezuela	304	624	1,486	359	28	927	234
Indonesia	0	90	232	47	6	0	100
Taiwan	57	46	55	63	41	44	42
Viet Nam	180	46	52	10	0	0	7
Korea, Rep.	0	3	2	0	0	0	0
Hong Kong	212	4,109	8,050	5	0	0	0
Malaysia	50	0	0	0	44	149	0
Panama	0	0	0	0	5	0	0
Total	17,054	19,776	31,503	15,759	20,140	22,013	18,042

Total may not add due to rounding

Table 19. Japanese imports of frozen other surimi by major countries of origin and volume, 1995-2001 (metric tons).

Country of							
origin	1995	1996	1997	1998	1999	2000	2001
Thailand	32,644	28,433	35 <b>,</b> 190	32,329	34 <b>,</b> 358	34,587	40,798
Argentina	21,502	19,905	23,201	21,107	22,356	22,407	16,654
Chile	4,527	7,937	8,469	9 <b>,</b> 736	8,200	6,613	9,887
China	8,440	10,525	13,007	8,994	10,014	10,424	9,706
Panama	0	0	0	2	350	1,992	3,286
Denmark	29	114	70	35	156	595	2,809
Korea, Rep.	8,175	6,782	6,077	5,517	4,048	2,702	2,171
Viet Nam	795	1,266	1,695	1,301	1,467	1,716	1,976
Peru	698	618	1,122	981	1,705	1,518	1,931
U.S.A.	2,169	1,632	2,935	1,152	1,585	1,063	1,528
India	1	144	811	91	474	653	1,019
Norway	205	207	139	392	910	1,021	855
Indonesia	139	528	2,243	782	225	343	535
New Zealand	59	109	86	45	637	23	328
U.K.	20	0	16	46	280	229	214
Venezuela	0	0	4	3	236	56	168
Philippine	525	635	474	388	201	174	82
Iceland	200	81	61	107	50	558	65
Myanmar	341	50	24	17	29	32	42
Taiwan	665	554	2,123	359	183	144	41
Hong Kong	976	6,913	4,625	271	21	0	2
Malaysia	350	91	55	24	0	18	0
Others	219	549	580	470	824	606	472
Total	82,679	87,073	103,007	84,149	88,309	87,474	94,569

Table 20. Japanese imports of frozen other surimi by major countries of origin and value, 1995-2001 (U.S. \$1,000).

Country of							
origin	1995	1996	1997	1998	1999	2000	2001
Thailand	92,467	78,901	94,021	60,615	74,021	75,164	77,670
China	36,147	46,453	60,134	36,469	40,972	48,522	48,203
Argentina	59,908	40,099	56,456	36,468	50,013	44,172	28,982
Chile	11,778	19,156	23,637	20,682	20,544	16,015	22,957
Korea, Rep.	57,073	47,902	42,637	27,863	23,995	19,592	15,779
Viet Nam	2,612	4,044	5,650	4,985		4,833	5,937
Peru	1,889	1,784	3,378	2,957		3,722	5,072
Denmark	98	306	172	72	786	1,144	4,271
Norway	937	1,067	558	2,382	4,118	4,467	4,154
U.S.A.	5,194	2,948	5,475	1,652	3,530	2,124	2,497
India	2	237	1,345	112	585	738	1,092
Indonesia	535	1,227	5,245	1,324	419	543	1,031
Panama	0	0	0,210	4	109	584	985
New Zealand	165	242	246	145	1,554	91	707
Philippine	5,472	6,679	3,294	1,883	1,157	1,278	540
U.K.	37	0,0.5	23	170	766	622	489
Iceland	1,418	1,006	808	1,026	770	1,194	478
Venezuela	0	1,000	5	4	338	81	250
Myanmar	1,000	116	70	40	300	343	191
Taiwan	1,717	1,413	3,674		890	430	70
Hong Kong	4,517	34,054	21,106	161	24	0	, 7
	726	138	98	35	0	81	,
Malaysia Others	2,064				-		3,101
Orners	2,004	3,000	3,133	3,014	3,243	0,210	3,101
m - +	005 756	202 700	221 101	202 000	220 275	221 050	224 462
Total	285,156	292,180	221,191	203,008	239,3/3	231,950	224,403

Table 21. Allocation of Japanese import quotas for Alaska pollock and Alaska pollock surimi by recipient groups for Japan's fiscal years\* 1986-1988 and 1998-2002 (metric tons).

Fiscal year	Total	Traders	Users	Fishermen	Overseas	First-come- First-served
Alaska	pollock	(round weig	ht) and	Alaska poll	ock surim	<u>i</u> **
1986	95,500	_* * *	_	_		-
1987	147,000	_	-	_	_	_
1988	631,000	-	-	-	-	_
1998	1,027,000	91,500	55,500	180,000	700,000	0
1999	1,027,000	91,500	55,500	180,000	700,000	0
2000	1,027,000	100,940	63,060	160,000	700,000	3,000
2001	1,027,000	100,940	63,060	160,000	700,000	3,000
	1,027,000	100,940	63,060	160,000	700,000	3,000

<sup>\*....</sup> Japan's fiscal year extends from April 1 through March 31 of the following year.

-\*\*\*..not available

Source: U.S. embassy, Tokyo 1989, 1998-2002

<sup>\*\*..</sup> If imported as surimi, fish weight shall be calculated by multiplying surimi weight by 5.

#### EXPORTS

Japanese exports of frozen surimi from 1988 through 2001 are summarized in Table 22. In 2001, Japan exported 3,749 mt, amounting to \$9.85 million worth of frozen surimi, a decrease of 18 percent in volume and in value from the 2000 level.

Japan's export of frozen Alaska pollock surimi hovered near a meager 700 mt until about 1980 (Table 23). Exports began to rise sharply in 1981 and continued the trend through 1986. Total exports of surimi increased almost 10 times, from 709 mt in 1980 to 6,676 mt in 1986. The U.S. share of the exports was about 91 percent in 1986.

The sudden surge in the Japanese sale of frozen Alaska pollock surimi to the United States from 1981 to 1986 stemmed from the interest shown by the U.S. food industry in producing imitation crab meat in this country. Exports of Alaska pollock surimi to the United States began to decline in 1987.

In 2001, Japan exported only 309 mt of frozen Alaska pollock surimi, a decrease of 53 percent from the 660 mt exported during 2000. Taiwan was the major market taking 41 percent in volume of Japanese exports of frozen Alaska pollock surimi in 2001. Other important buyers in 2001 were the Republic of Korea (34 percent), China (15 percent) and New Zealand (11 percent). The United States has not purchased frozen Alaska pollock surimi since 2000.

Exports of frozen other surimi in 2001 also showed a decrease from 2000 (Table 24). Much of the decrease was due to lower exports to New Zealand. New Zealand was by far the largest market purchasing 74 percent in volume of Japanese exports of this product. Other important buyers for frozen other surimi in 2001 were the Republic of Korea (17 percent) and the United States (4 percent).

Table 22. Japan's annual exports of frozen surimi by volume and value, 1988-2001.

Year	Alaska pollock		Other	surimi	Total		
	Volume*	Value**	Volume*	Value**	Volume*	Value**	
1988	724	207	163	60	887	267	
1989	398	115	272	75	670	190	
1990	707	246	77	48	784	294	
1991	1,486	763	160	83	1,646	846	
1992	1,155	465	424	133	1,579	598	
1993	70	22	126	35	196	57	
1994	163	44	1,161	314	1,324	358	
1995	39	14	5,028	992	5,067	1,006	
1996	843	188	3,805	776	4,648	964	
1997	2,627	1,449	2,788	1,218	5,415	2,667	
1998	1,085	436	639	202	1,724	638	
1999	596	125	292	317	888	442	
2000	660	108	3,892	1,346	4,552	1,454	
2001	309	46	3,440	1,145	3,749	1,191	

volume\* in metric tons
value\*\*in million yen

Sources: Ministry of Finance 1989-2002

Japan's exports of frozen Alaska pollock surimi by major countries of destination and volume, Table 23. 1974-2001 (metric tons)

Year	Total	U.S.A.	Taiwan	China	Korea, Rep. of	Hong Kong	New Zealand	Australia
1974	603	599	<b></b> *	_	_	_	_	<del>-</del>
1975	695	686	_			-	_	-
1976	489	488	-	_	_	-	-	-
1977	793	771	_	_	-	-		-
1978	661	655	_	_	_	-	_	-
1979	693	681	-	-	_	-	-	-
1980	709	703	_	_	-	-	-	-
1981	928	829	-	-	-	-	-	-
1982	1,276	1,114	-	_				-
1983	1,963	1,708	_	_	-	-	_	-
1984	2,580	2,306	-	_	-	-	-	-
1985	5,158	4,801			-	-	-	_
1986	6,676	6,056	-	-	-	-	-	-
1987	1,233	_	_	-	-	_	_	-
1988	724	13	65	115	230	0**	0	1
1989	398	12	90	173	20	16	0	33
1990	707	3	77	22	514	17	0	1
1991	1,486	6	79	63	1,186	1	0	2
1992	1,155	60	16	0	692	1	0	31
1993	70	2	0	0	0	1	0	64
1994	163	2 3 1	0	23	0	0	Ō	90
1995	39	1	0	1	36	1	0	1
1996	843	1	100	19	395	111	214	0
1997	2,627	2 1	110	14	0	2,329	145	0
1998	1,085	1	217	7	0	678	163	0
1999	596	1	144	20	347	1	80	1
2000	660	0	253	117	290	0	0	0
2001	309	0	126	45	105	0	33	0

<sup>-\* ....</sup>not available
0\*\* ...no exports

Sources: Japan Frozen Foods Inspection Corporation 1975-1988 Ministry of Finance 1988-2002 Sonu 1975-1991

Total may include other countries not listed

Table 24. Japan's exports of frozen other surimi by major countries of destination and volume, 1988-2001 (metric tons)

Year	Total	U.S.A.	Taiwan	China	Korea, Rep. of	Hong Kong	New Zealand	Australia
1988	163	47	1	1	1	5	100	0*
1989	272	34	Ô	10	ī	1	205	Õ
1990	77	15	18	11	3	ī	0	Ō
1991	160	38	0	1	61	1	0	1
1992	424	43	24	0	334	1	21	1
1993	126	11	28	0	83	3	0	0
1994	1,161	43	1	1	65	191	834	0
1995	5,028	15	18	15	1,533	2,427	1,012	0
1996	3,805	8	3	7	672	3,100	0	1
1997	2,788	61	113	124	1,109	1,365	0	0
1998	639	42	45	99	400	47	0	1
1999	292	109	26	50	25	32	1	0
2000	3,892	119	180	537	49	16	2,945	18
2001	3,440	154	11	111	599	1	2,542	1

0\* ...no exports

Total may include other countries not listed

Sources: Ministry of Finance 1989-2002

### COLD STORAGE HOLDINGS

Table 25 shows Japan's monthly inventories of frozen Alaska pollock surimi, frozen surimi (excluding Alaska pollock surimi), and total frozen surimi between 1987 and 2002. Monthly average inventories of Alaska pollock surimi, frozen surimi, and total frozen surimi for May, June, and July 2002 were lower than the level in the same period a year earlier due mainly to decreased supply from imports.

From the January 1999 to July 2002, Japanese inventories of frozen surimi had been lower than the level in the preceding year.

Japanese monthly cold storage holdings of frozen Alaska pollock surimi, frozen surimi (excluding frozen Alaska pollock surimi), and total frozen surimi, 1987-2002 (metric tons). Table 25.

	Feb.	March	April	Мау	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
SK	a poll	ock sur	imi								
	140, 394 142, 440 129, 902 110, 919 78, 158 92, 150 107, 931	154,720 147,256 125,917 110,202 83,706 108,585 117,508	162,640 136,325 115,753 101,692 80,601 119,633 117,653	166,783 138,682 109,638 104,417 76,518 119,650 109,860	167,716 135,355 101,494 106,474 72,574 112,455 101,768	152,711 118,941 90,018 99,686 68,353 110,464 93,955 73,381	140,781 110,544 82,884 99,073 77,114 117,593 86,056 659	128, 781 104, 170 79, 172 97, 961 83, 336 122, 914 88, 603 68, 603	118,281 99,005 85,149 99,970 83,250 124,085 106,011	114,192 94,580 91,088 93,059 77,986 120,249 101,829 89,295	116,590 101,220 95,875 87,266 76,976 113,647 93,775
	0,760 0,760 0,760 0,810 0 0,810 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3,08 3,08 3,09 7,09 0,95 0,95 4,18	74,126 47,126 47,125 57,125 54,730 58,131 64,954	6,49 6,49 6,49 6,01 6,01 1,61 9,78	42,49 44,49 44,49 44,49 52,53 55,05 58,35 55,38	3,71 3,71 3,72 6,83 6,83 6,83 7,78	66,888 11,288 1,75 144 16,76	22,43 26,43 4,563 6,564 7,564	11,37 11,37 11,37 13,36 13,36 15,36 15,36 15,36	9,01 9,01 9,01	3,55
ı	15,237 20,569 29,569 26,268 20,785 40,982 39,237 38,500 38,500 38,518 47,861 41,912 29,484 24,450	18,647 22,376 32,349 25,201 26,659 45,644 42,227 42,227 43,569 38,840 48,419 45,751 31,881	18,280 21,205 31,155 31,155 23,861 25,037 45,284 41,751 42,307 42,307 44,460 44,667 30,893 28,718	23,691 22,135 32,072 22,837 23,918 43,148 47,163 42,786 41,888 43,675 37,419 47,389 47,389 47,389 42,545 31,464 29,159	23,546 22,091 29,965 24,982 26,010 41,599 45,185 43,576 42,092 40,842 31,888 27,712	21,859 21,450 30,730 25,936 27,820 39,748 47,315 45,778 43,233 43,354 46,435 31,082 25,762	22,203 23,704 31,031 26,891 29,584 41,923 46,776 44,279 45,356 40,218 44,657 46,010 38,844 37,472	21, 431 26, 465 33, 711 27, 750 35, 474 45, 629 48, 156 41, 426 41, 426 41, 731 38, 114 28, 257	20,215 29,061 32,669 29,921 37,410 46,703 48,128 48,443 51,523 46,418 56,916 56,916 58,081 47,244 32,003	18,862 32,681 28,029 39,450 45,200 43,913 40,136 47,505 44,640 54,210 57,870 34,770	19, 352 28, 069 22, 566 39, 298 41, 722 39, 913 36, 548 46, 430 40, 087 49, 878 50, 425 33, 273 30, 453

(continued). Japanese monthly cold storage holdings of frozen Alaska pollock surimi, frozen surimi (excluding frozen Alaska pollock surimi), and total frozen surimi, 1987-2002 (metric tons). Table 25

Total frozen su 1987 134,658 155, 1988 142,544 162, 1989 146,687 159, 1990 132,321 137, 1991 103,166 98, 1992 120,031 133, 1993 153,673 147, 1994 123,290 123, 1995 113,057 111,	ren.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
al frozen 134,658 142,544 142,544 132,321 103,166 120,031 153,673 113,057 113,057 119,523 119,523											
134,658 142,544 146,687 103,166 120,031 153,290 113,057 119,523	surimi										
134,658 142,544 146,687 103,166 120,031 153,290 113,057 119,523											
142,544 146,687 103,321 103,166 120,031 153,290 113,057 119,523	631	173,367		190,474	191,262	174,570	162,984	150,212	138,496	133,054	135,942
146,687 132,321 103,166 120,031 153,673 123,290 113,057	940	169,632	157,530	160,817	157,446	140,391	134,248	130,635	128,066	121,946	129,289
132, 321 103, 166 120, 031 153, 673 123, 290 113, 057 119, 523	471	158,266		141,710	131,459	120,748	113,915	112,883	117,818	123,769	125,841
103,166 120,031 153,673 123,290 113,057 119,523	187	135,403		127,254	131,456	125,622	125,964	125,711	129,891	121,088	109,832
120,031 153,673 123,290 113,057 119,523	943	110,365		100,436	98,584	96,173	106,668	118,813	120,660	117,436	116,274
153,673 123,290 113,057 119,523	132	154,229		162,798	154,054	150,212	159,516	168,259	170,788	165,449	155,369
123,290 113,057 119,523	168	162,735		157,023	151,113	141,270	132,832	135,484	154,139	145,742	133,688
113,057 $119,523$	805	144,224		130,452	127,048	119,159	109,908	114,192	129,137	122,985	114,010
119,523	200	134,349		138,061	136,382	129,211	123,725	127,740	147,379	136,800	126,870
	640	116,651		113,348	107,681	96,946	87,099	83,859	97,793	98,943	89,025
79,787	084	82,938		83,914	83,779	87,081	85,942	87,678	114,245	111,283	106,299
99,326	671	108,162		106,520	94,386	93,273	87,761	89,187	103,644	107,909	99, 615
99, 525	740	99,704		100,657	98,851	94,344	86,230	83,879	101,099	109,632	109,164
98,411	503	93,705		100,188	95,901	90,429	82,921	87,680	95,067	91,965	86,828
82,691	424	86,064		93,074	90,239	85,442	79,854	83,160	90,153	93,780	83, 595
74,702	481	81,101		88,942	83,097	73,542			•	•	

Ministry of Agriculture, Forestry, & Fisheries 1989-2002 Hokkai Keizai Shinbun Sha 2002 Suisan Tsushin Sha 2002 Sources:

## SUPPLY

The annual supply of frozen surimi for the Japanese market and for export is comprised of the cold storage inventory on January 1, plus domestic production and imports. The annual supply reached a record high in 1986 due to sharply increased imports (Figure 4). Total annual supply decreased steadily from 1987 to 1991 because imports did not make up for decreased domestic production. In 2001, however, sharply increased imports of frozen surimi helped avert a large deficit in supply, as the production was at a 34-year low (Tables 1 and 9).

Between 1992 and 2001, annual frozen surimi supplies ranged between 502,000 and 567,000 mt, averaging 527,699 mt. During this period Japanese production averaged 143,921 mt per year, about 27 percent of the total supply. The January inventory averaged 113,714 mt (22 percent), and imports 270,699 mt (51 percent). The percentage of the market supplied by imports increased from 43 percent in 1992 to 61 percent in 2001.

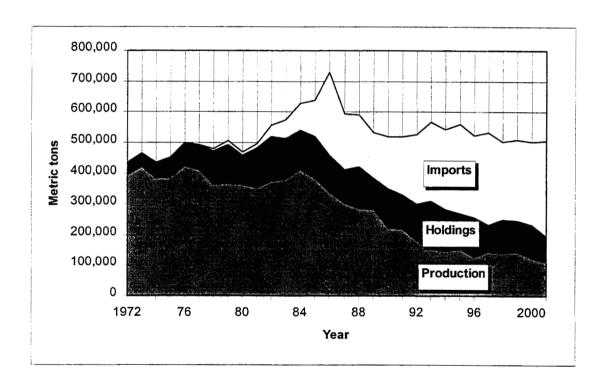


Figure 4. Japanese annual supply of frozen surimi , 1972-2001 (metric tons).

Sources: Japan Surimi Association 1984

Hokkai Keizai Sha 2002

Ministry of Agriculture, Forestry, & Fisheries 1974-2002; Suisan Tsushin Sha 2002; Minato Shinbun Sha 2002; Japan Fish Traders Association 1996-2002

Sonu 1986

# DEMAND

Japanese demand of frozen surimi (supply minus exports and the cold storage inventory on December 31) was 418,977 mt in 2001, an increase of 2 percent compared with 2000 (Table 26). Between 1990 and 2001, annual demand of frozen surimi averaged 413,088 mt per year.

Table 26. Japanese demand for frozen surimi, 1972-2001 (metric tons)

Year	Supply	Exports	Inventory	Demand
1972 1973 1974 1975 1976 1977 1978	436,042 466,082 435,405 452,683 499,233 493,932 480,642 505,928	-* 603 692 489 793 661 693	43,000 51,105 65,000 75,000 80,483 106,080 124,735 95,598	393,042 414,977 369,802 376,991 418,261 387,059 355,246 409,637
1980 1981 1982 1983 1984 1985 1986 1987 1988	469,190 494,827 556,116 573,549 629,265 638,388 730,731 593,249 590,087 562,632	709 928 1,276 1,963 2,580 5,158 6,676 1,233 887 670	127,384 146,882 134,834 125,860 133,481 117,855 108,708 135,942 129,289 125,841	341,097 347,017 420,006 445,726 493,204 515,375 615,347 456,074 459,911 436,121
1990 1991 1992 1993 1994 1995 1996 1997 1998 1999	521,484 521,021 526,515 567,375 544,090 558,891 521,945 534,678 502,158 511,145	784 1,646 1,579 196 1,324 5,067 4,648 5,415 1,724 888	109,832 116,274 155,369 133,688 114,010 126,870 89,025 106,299 99,615 109,164	410,868 403,101 369,567 433,491 428,756 426,954 428,272 422,964 400,819 401,093
2000 2001	503,574 506,621	4,552 3,749	86,828 83,895	412,194 418,977

-\*....not available

Japan Surimi Association 1984 Sources:

Hokkai Keizai Sha 2002

Ministry of Agriculture, Forestry, & Fisheries 1974-2002

Suisan Tsushin Sha 2002; Minato Shinbun Sha 2002

Sonu 1986

Japan Fish Traders Association 1996-2002

Japan Frozen Foods Inspection Corporation 1975-1988

Ministry of Finance 1988-2002 Sonu 1975-1991

### MARKETS

Surimi is usually sold with a set price at consumer wholesale markets located in consumption areas, and at production wholesale markets located at Japanese ports of landings. Surimi is also sold directly to processors and representatives of supermarket chains. There are about 270 consumer and 340 production wholesale markets for fish and fishery products in Japan (Suisan sha 1993 and 1995). The largest consumer wholesale fish market is the Tokyo Central Wholesale Market. In 2001, this market handled about 718,000 mt of fish and fishery products valued at about \$5.1 billion (Tokyo Metropolitan Government 2002). It therefore plays an important role in providing indicators about supply and demand of fishery products in Japan. Wholesale prices at the Tokyo Central Wholesale Market generally serve as price indices for fishery products throughout the world.

Wholesale prices for surimi vary widely, depending on quality, origin, species, supply and demand, and other factors.

Tables 27-31 show monthly average wholesale prices of frozen surimi in Japan between 1987 and January-June 2002. Figures 5-9 compare monthly cold storage holdings and wholesale prices of surimi in Japan from 1987 through January-June 2002. Monthly average wholesale prices for frozen surimi fluctuated considerably during that period. The fluctuations were influenced mainly by the quantities in cold storage holdings; usually, the lower the cold storage holdings, the higher the prices and vice versa.

Wholesale prices for frozen surimi generally fall during summer. In 2002, however, summer prices did not decline, due to reduced imports and low levels of inventory of frozen surimi. Average wholesale prices of frozen surimi in June 2002 were up 8-19 percent from prices for December 2001 and 4-15 percent higher than prices for the same period in 2001. Japanese imports of Alaska pollock surimi decreased from 10,663 mt in June 2001 to 1,371 mt in June 2002 (Suisan Keizai Shimbun Sha 2002).

Figure 10 shows annual average wholesale prices of frozen surimi including all species and grades at 10 central wholesale markets in major cities in Japan between 1983 and January-June 2002, in comparison with annual average wholesale prices of Alaska pollock at 59 markets in major landing ports for the same period. The price trends of wholesale prices of frozen surimi at 10 major markets and wholesale prices of Alaska pollock at 59 markets in landing ports showed similar patterns. Informed sources cite price of Alaska pollock as an additional important factor affecting the price of surimi.

Monthly average wholesale prices of frozen Alaska pollock surimi for on-shore processed, grade 2, 1987-2002 (yen/kg). Table 27.

Year	Jan.	Feb.	March	April	Мау	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
98	$\sim$	സ		4	235	$\sim$	3	220	$\sim$	210	<del></del> 1	
1988	210	230	230	220	210	210	210	205	200	195	180	185
98	9	9		9	200	0	0	205	0	200	0	
99	9	9		9	260	9	7	270	7	270	7	
99	$^{\circ}$	α		$\vdash$	510	0	$^{\circ}$	520	$\sim$	520	2	
99	9	ω		5	400	$\mathcal{C}$	$_{\infty}$	270	9	250	4	
99	5	$\infty$		$\infty$	280	$\infty$	7	270	9	250	4	
99	$\mathcal{C}$	$^{\circ}$		9	260	8	9	260	9	280	9	
99	6	$\circ$		9	290	9	9	280	ω	270	9	
99	<b>5</b>	S		2	250	9	5	240	5	250	5	
99	7	$\infty$		$\sim$	330	4	4	340	4	320	0	
99	$\infty$	7		2	250	2	5	250	5	250	5	
99	4	4		4	240	4	4	240	4	200	$_{\infty}$	
00	0	٦		$\sim$	240	$\mathcal{C}$	$\mathcal{S}$	230	$\sim$	210	$\sim$	
0	$\sim$	$\sim$		230	230	4	4	240	4	240	4	
00	5	2		250	250	9						
					,							

Sources: Minato Shinbun Sha 1987-2002

Monthly average wholesale prices of frozen Alaska pollock surimi for off-shore processed, SA grade, 1987-2002 (yen/kg). Table 28.

1987         480 <th>Year</th> <th>Jan.</th> <th>Feb.</th> <th>March</th> <th>April</th> <th>Мау</th> <th>June</th> <th>July</th> <th>Aug.</th> <th>Sept.</th> <th>Oct.</th> <th>Nov.</th> <th>Dec.</th>	Year	Jan.	Feb.	March	April	Мау	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
988         480 <td>98</td> <td>480</td> <td><math>\infty</math></td> <td>8</td> <td><math>\infty</math></td> <td>480</td> <td>480</td> <td>480</td> <td><math>\infty</math></td> <td>480</td> <td>480</td> <td><math>\infty</math></td> <td><math>\infty</math></td>	98	480	$\infty$	8	$\infty$	480	480	480	$\infty$	480	480	$\infty$	$\infty$
989         480         480         477         470         420         420         470         470         420         420         470         470         420         420         620         670         620         670         690         750         800         830         410 <td>98</td> <td>480</td> <td><math>\infty</math></td> <td>8</td> <td><math>\infty</math></td> <td>480</td> <td>480</td> <td>480</td> <td>ω</td> <td>480</td> <td>480</td> <td><math>\infty</math></td> <td><math>\infty</math></td>	98	480	$\infty$	8	$\infty$	480	480	480	ω	480	480	$\infty$	$\infty$
990         470         450         425         410         410         410         405         385         380         390         410           991         420         477         560         620         620         670         690         750         800         80           992         820         780         470         620         620         610         580         540         520         80           993         820         770         720         670         650         620         610         580         540         520         80           993         820         470         450         450         450         450         370         370         370         370         370         380         <	98	480	$\infty$	$_{\infty}$	$\infty$	477	470	470	~	470	470	7	9
991         420         477         560         620         620         670         690         750         800         800           992         820         780         770         720         670         650         620         610         580         540         520           993         500         470         450         450         430         390         380         370         420	99	470	7	5	$\sim$	410	410	410	0	385	380	9	$\vdash$
992         820         780         770         720         670         650         620         610         580         540         540         540         350         350         350         370         420 <td>99</td> <td>420</td> <td>7</td> <td>9</td> <td><math>\sim</math></td> <td>620</td> <td>620</td> <td>670</td> <td>9</td> <td>750</td> <td>800</td> <td>0</td> <td><math>^{\circ}</math></td>	99	420	7	9	$\sim$	620	620	670	9	750	800	0	$^{\circ}$
99350047045045045045043039038037037037037037037037037037038038099434034035037037037037037037037037037037099535035037040040040040038037042042042099635035037037037042046046046046046046099742042042042042042046046046046046046046046046099945047047047047046045045045042041040000400380380370370370360360360360360360001330370340400400400400360360360360360	99	820	ω	7	$\sim$	019	650	620	$\vdash$	580	540	Ą	$^{\circ}$
994340350370370370370370370380380380380350350350350350350350350350350350350350350350350350350370420420420420420420420420420420420420420420420420420420420460460450360360340340360360360360360360360360360360360360360360360360002360370370370360360360360360360360360	99	500	7	5	5	450	430	390	$\infty$	370	370	9	S
9953703804004004004003803703503503503503703703703703703703704204604204204204604604504504504704704704604504504504204204104099945045047047047046045045045042041040000400390380370370370360360360360360360001330370370400400400400400360360360360360	99	340	Ţ	2	7	370	370	370	$\Gamma$	370	380	$\infty$	$\infty$
996     350     350     370     370     370     370     370     420     420     420     450     460     450     420     410     40       999     450     450     470     470     470     460     450     450     420     410     40       900     400     330     330     340     340     360     360     360     360     360       902     360     370     360     360     360     360     360     360       902     360     370     400     400     400     400     400     360     360     360     360	99	370	ω	$\infty$	0	400	400	400	$\infty$	370	350	5	Ω
997     420     420     450     450     460     460     460     440     440       998     420     420     420     420     420     460     460     460     460       999     450     450     470     470     470     460     450     450     420     420     460       909     450     450     470     470     470     460     450     450     420     410     40       900     400     380     370     370     370     360     360     360     360       902     360     370     380     400     400     400     400	99	350	5	5	7	370	370	370	7	370	420	$\sim$	2
998     420     420     420     420     420     420     460     460     460     450     450     450     460     460     460     450     450     450     420     410     40       000     400     390     380     370     370     370     370     360     360     340     34       001     330     330     340     340     350     360     360     360     360     36       002     360     370     400     400     400     400	99	420	$\sim$	$\sim$	5	450	460	460	9	460	440	4	$\sim$
999 450 450 470 470 470 460 450 450 450 420 410 40 000 400 390 380 370 370 370 370 370 360 360 340 340 001 330 330 340 340 350 360 360 360 360 360 360 002 360 370 370 400 400 400	99	420	$^{\circ}$	$\sim$	$^{\circ}$	420	420	420	$^{\circ}$	420	460	9	9
000 400 390 380 370 370 370 370 370 360 360 340 34 001 330 330 330 340 340 350 360 360 360 360 36 002 360 370 380 400 400 400	99	450	5	7	7	470	460	450	5	450	420	Н	0
001 330 330 330 340 340 350 360 360 360 360 360 36 002 360 370 380 400 400 400	00	400	9	$\infty$	7	370	370	370	7	360	360	4	4
002 360 370 380 400 400 4	00	330	3	$^{\circ}$	4	340	350	360	9	360	360	9	9
	00	360	7	$\infty$	0	400	400						

Sources: Minato Shinbun Sha 1987-2002

Monthly average wholesale prices of frozen Alaska pollock surimi for off-shore processed, FA grade, 1987-2002 (yen/kg). Table 29.

ear	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
991	390	430	520	590	600	600	0.50	099	720	760	760	700
1 (	) (	0 (	) (	0 0		0 6			140	0 ,	00/	007
286	08/	750	/30	00/	650	610	280	260	550	510	200	500
993	450	400	400	400	400	390	370	350	320	320	320	320
994	300	300	310	320	330	330	340	340	340	350	350	350
1995	350	350	350	370	370	370	370	360	350	330	320	330
966	310	310	300	320	320	320	320	320	340	370	370	370
661	370	390	390	430	430	440	440	440	440	420	420	400
866	400	400	370	360	360	360	360	360	360	420	420	420
666	420	420	450	450	440	400	400	400	400	380	360	360
000	360	350	340	340	330	330	330	330	320	320	300	300
001	290	280	280	300	310	320	320	320	320	320	320	330
002	330	340	350	360	370	380					i	! !

Source: Minato Shinbun Sha 1992-2002

Monthly average wholesale prices of frozen surimi\* at 10 central wholesale markets in major cities in Japan, 1987-2002 (yen/kg). Table 30.

362         366         353         344         354         325         348         354           351         339         320         333         313         335         337         344           519         524         544         568         609         701         719         693           576         555         504         438         443         438         445         415           364         350         367         326         332         295         295         309           311         320         309         316         310         319         333         357           353         346         353         363         347         342         327           374         388         383         381         402         391         401         402           379         339         333         328         313         313         319         334           389         339         333         323         329         351         339           370         375         289         276         286         294           271         275         267	Feb. March	April May June July A	Aug. Se	Sept. (	Oct.	Nov.	Dec.
1       339       320       333       313       335       337       34         9       524       544       568       609       701       719       69         6       555       504       438       443       438       445       41         4       350       367       326       332       295       295       30         1       320       309       316       310       319       333       35         3       346       353       383       363       347       342       32         3       342       334       286       308       302       335       32         4       388       383       381       402       391       401       40         9       339       333       328       313       313       319       33         3       297       275       289       276       286       29         1       272       275       268       290       297       29         1       317       275       268       290       297       29	30 395 373 3	2 366 353	44	54	$\sim$	4	5
19       524       544       568       609       701       719       69         76       555       504       438       443       438       445       41         64       350       367       326       332       295       295       30         11       320       309       316       310       319       33       35         53       346       353       383       363       347       342       32         03       342       286       308       302       335       32         74       388       383       381       402       391       401       40         29       339       333       328       313       313       319       33         40       346       337       323       339       351       339       33         40       346       337       323       339       351       339       33         40       346       337       275       289       276       286       290       297       297         71       272       275       268       290       297       297       297 </td <td>48 355 349</td> <td>51 339 320</td> <td>33</td> <td>13</td> <td>3</td> <td><math>^{\circ}</math></td> <td>4</td>	48 355 349	51 339 320	33	13	3	$^{\circ}$	4
76     555     504     438     4443     438     445     41       64     350     367     326     332     295     295     30       11     320     309     316     310     319     33     35       53     346     353     338     363     347     342     32       53     342     286     308     302     335     32       74     388     383     381     402     391     401     40       29     339     333     328     313     319     33       40     346     337     323     339     351     339       40     346     337     275     289     276     286     29       71     272     275     267     268     290     297     29       11     317     317     20     297     29	387 446 488	19 524 544	89	60	0	Ţ	9
64     350     367     326     332     295     295     30       11     320     309     316     310     319     333     35       53     346     353     388     363     347     342     32       03     342     334     286     308     302     335     32       74     388     383     381     402     391     401     40       29     339     333     328     313     319     33       40     346     337     323     339     351     339       03     297     204     275     289     276     286     29       71     272     275     268     290     297     29       11     317	24 591 54	76 555 504	38	43	3	4	$\vdash$
11     320     309     316     310     319     333     35       53     346     353     388     363     347     342     32       03     342     334     286     308     302     335     32       74     388     383     381     402     391     401     40       29     339     333     328     313     319     33       40     346     337     323     339     351     339     33       03     297     204     275     289     276     286     29       71     272     275     268     290     297     29       11     317	40 347 34	64 350 367	26	32	9	9	0
53       346       353       338       363       347       342       35         03       342       334       286       308       302       335       32         74       388       383       381       402       391       401       40         29       339       333       328       313       319       33         40       346       337       323       339       351       339       33         03       297       304       275       289       276       286       29         71       272       275       267       268       290       297       29         11       317	15 309 30	11 320 309	16	10	$\vdash$	$^{\circ}$	5
03     342     334     286     308     302     335     32       74     388     383     381     402     391     401     40       29     339     333     328     313     319     33       40     346     337     323     339     351     339     33       03     297     304     275     289     276     286     29       71     272     275     267     268     290     297     29       11     317	51 344 34	53 346 353	38	63	4	4	$\sim$
74     388     383     381     402     391     401     40       29     339     333     328     313     319     33       40     346     337     323     339     351     339     33       03     297     304     275     289     276     286     29       71     272     275     267     268     290     297     29       11     317	19 314 33	03 342 334	98	80	0	$^{\circ}$	$^{\circ}$
29     339     333     328     313     319     33       40     346     337     323     339     351     339     33       03     297     304     275     289     276     286     29       71     272     275     267     268     290     297     29       11     317	45 340 35	74 388 383	81	02	$\circ$	0	0
40     346     337     323     339     351     339     33       03     297     304     275     289     276     286     29       71     272     275     267     268     290     297     29       11     317	39 354 33	29 339 333	28	13	$\leftarrow$	$\vdash$	3
03 297 304 275 289 276 286 29 71 272 275 267 268 290 297 29 11 317	31 328 3	40 346 337	23	39	$\mathbf{c}$	$^{\circ}$	$\mathcal{C}$
71 272 275 267 268 290 297 29 11 317	12 298 30	03 297 304	75	89	7	$_{\infty}$	$\mathcal{O}$
11 31	81 282 2	71 272 275	29	89	$\circ$	9	9
	99 303 2	11 31					

<sup>\*....</sup>includes all grades, all species of surimi

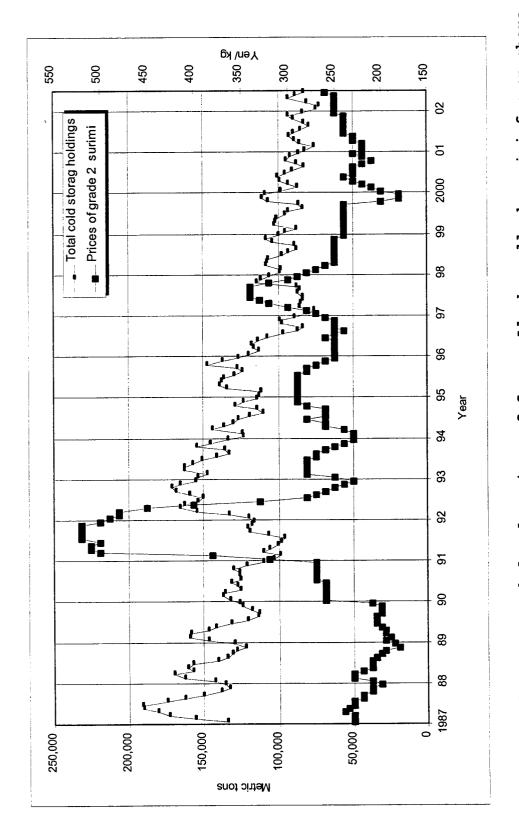
Ministry of Agriculture, Forestry and Fisheries 1991-2002 Suisan Tsushin Sha, 2001, 2002 Suishan Keizai Shinbun Sha 2001, 2002 Sources:

Monthly average wholesale prices of frozen Surimi\* at Tokyo Central Wholesale Market, 1988-2001 (yen/kg). Table 31.

Year	Jan.	Feb.	March	April	Мау	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
98	$\sim$	5	5	7	9	9	~	5	9	$\sim$	<del></del>	4
1989	336	330	355	390	373	353	372	334	357	354	377	366
99	0	9	9	0	7	7	$\sim$	5	<b>P</b>	9	9	S
99	7	0	$\infty$	7	7	7	$\sim$	Ą	9	4	5	9
99	$\infty$	$\sim$	4	$\sim$	$\vdash$	0	0	Ţ	7	S	5	Н
99	$_{\infty}$	$\mathcal{C}$	5	4	9	0	$\mathcal{C}$	4	4	$\sim$	3	$^{\circ}$
99	$\sim$	$\mathcal{C}$	5	4	$^{\circ}$	$\mathcal{S}$	0	$\vdash$	$\vdash$	4	4	$\infty$
99	4	5	$_{\infty}$	9	5	7	4	_	7	9	7	2
99	σ	0	9	$\sim$	9	4	9	9	$\infty$	9	5	$\sim$
99	9	7	$\infty$	$\infty$	$\varphi$	$\overline{}$	9	~	9	$\mathcal{E}$	$\leftarrow$	9
99	$\vdash$	5	4	$\sim$	$\sim$	$\sim$	$\overline{}$	7	9	$\sim$	4	4
99	9	$\sim$	4	$^{\circ}$	9	9	9	$\leftarrow$	9	4	$\infty$	$\sim$
00	9	9	5		$\sim$	0	$\sim$	$\leftarrow$	_	0	4	ω
00	3	0	9	7	$\infty$	5	9	9	0	$\infty$	5	8

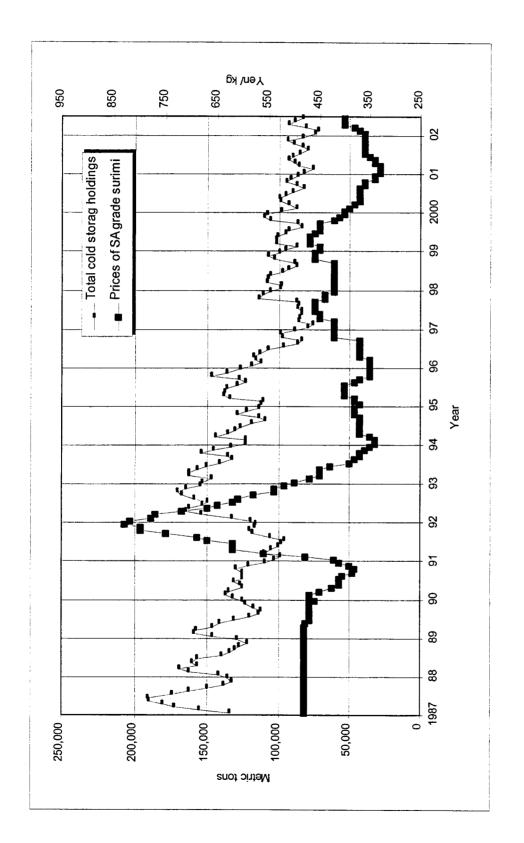
<sup>\*.....</sup>includes all grades, all species of surimi

Source: Tokyo Metropolitan Government 1989-2002

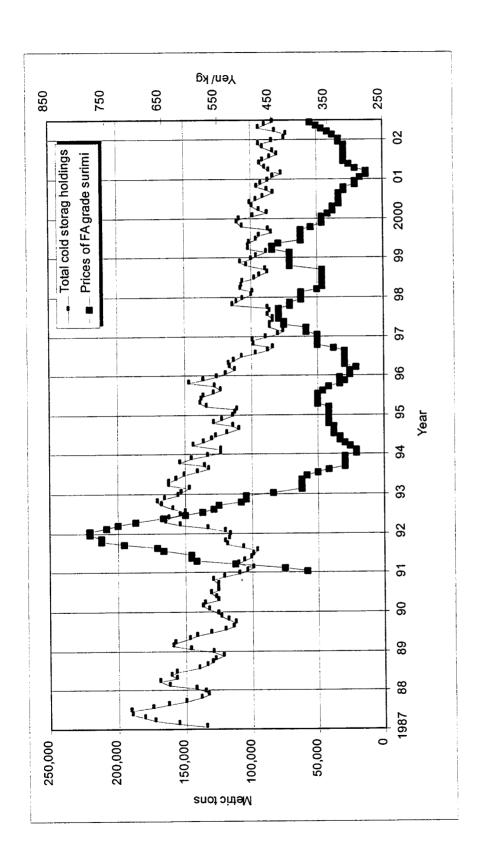


Monthly average wholesale prices of frozen Alaska pollock surimi for on-shore processed, grade 2 and monthly cold storage holdings of total frozen surimi in Japan, 1987-2002 Figure 5. Sources:

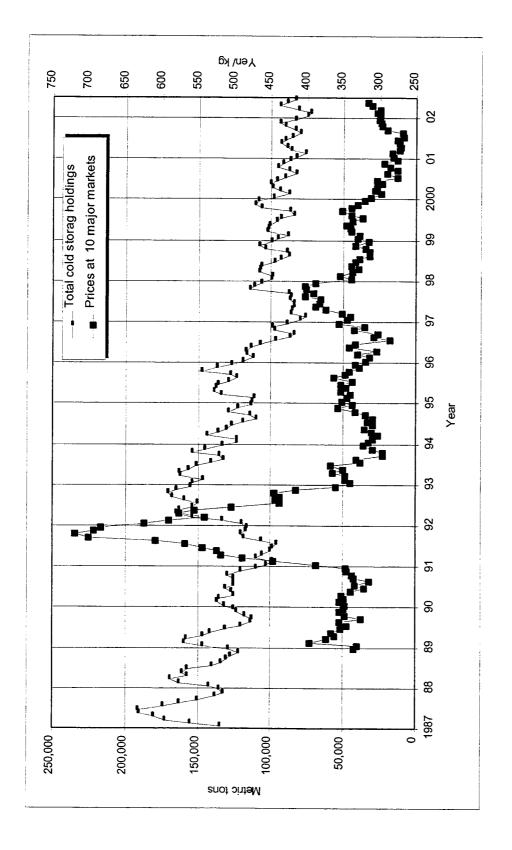
Ministry of Agriculture, Forestry, & Fisheries 1989-2002 Hokkai Keizai Shinbun Sha 2002 Suisan Tsushin Sha 2002 Minato Shinbun Sha 1987-2002



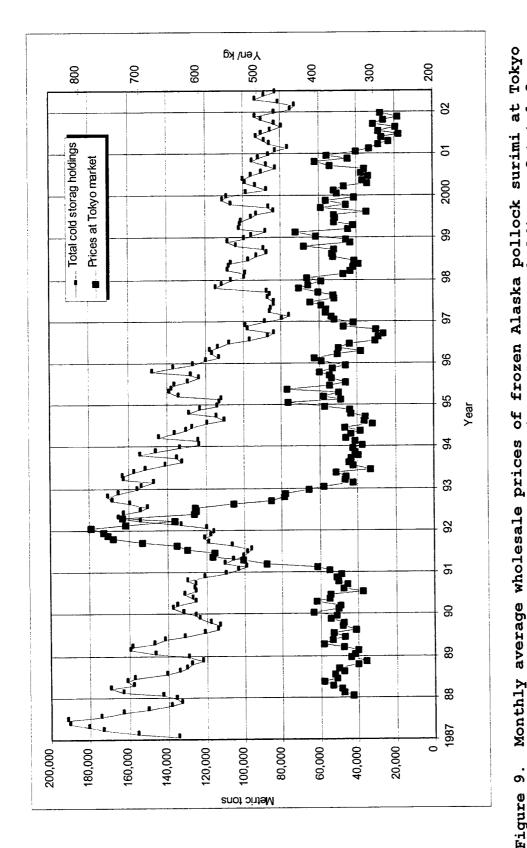
processed, SA grade and monthly cold storage holdings of total frozen surimi in Japan, 1987-2002. Monthly average wholesale prices of frozen Alaska pollock surimi for off-shore Ministry of Agriculture, Forestry, & Fisheries 1989-2002 Hokkai Keizai Shinbun Sha 2002 Suisan Tsushin Sha 2002 Minato Shinbun Sha 1987-2002 Figure 6. Sources:



processed, FA grade and monthly cold storage holdings of total frozen surimi in Monthly average wholesale prices of frozen Alaska pollock surimi for off-shore & Fisheries 1989-2002 Ministry of Agriculture, Forestry, Hokkai Keizai Shinbun Sha 2002 Suisan Tsushin Sha 2002 Minato Shinbun Sha 1987-2002 Japan, 1987-2002. Figure 7. Sources:



markets in major cities in Japan and monthly cold storage holdings of total Monthly average wholesale prices of frozen surimi at 10 central wholesale & Fisheries 1989-2002 Forestry, Hokkai Keizai Shinbun Sha 2002 Suisan Tsushin Sha 2001, 2002 Suisan Keizai Shinbun Sha 2001, frozen surimi, 1987-2002. Ministry of Agriculture, ω . Sources: Figure



Central Wholesale Market and monthly cold storage holdings of total frozen & Fisheries 1989-2002 Ministry of Agriculture, Forestry, surimi in Japan, 1987-2002. Figure 9. Sources:

Tokyo Metropolitan Government 1989-2002 Hokkai Keizai Shinbun Sha 2002 Suisan Tsushin Sha 2002

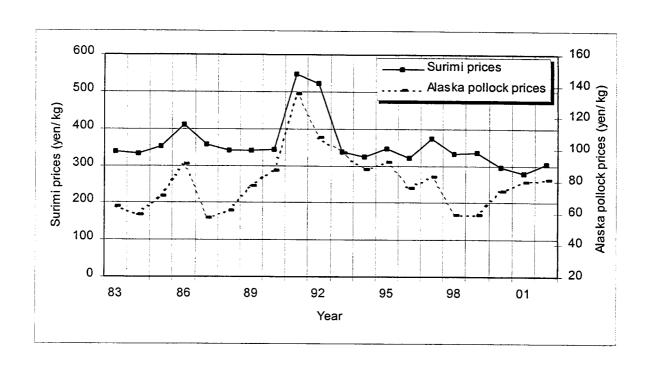


Figure 10. Annual average wholesale prices of surimi at 10 central wholesale markets in major cities and annual average wholesale prices of Alaska pollock at 59 markets in major landing ports in Japan, 1983-2002\*(yen/kg)

2002\*...January-June 2002

Sources: Ministry of Agriculture, Forestry and Fisheries

1985-2002

Suisan Tsushin Sha, 2001, 2002

Suishan Keizai Shinbun Sha 2001, 2002

# SURIMI-BASED PRODUCTS

For many centuries, the Japanese have practiced the art of manufacturing surimi-based products. Traditional methods consisted of processing the fish into raw surimi and then kneading it immediately into a finished product. Since both fish and raw surimi would denature quickly, the entire process had to be performed without much delay after the fish was landed (Okada 1981).

The advent of stable frozen surimi in 1960 revolutionized the traditional methods for making surimi-based products. With year-round availability of frozen surimi, manufacturers of surimi-based products were no longer dependent on unstable local fish catches and fresh surimi. The tremendous expansion of the surimi-base product industry was made possible by this important change.

The majority of surimi-based products, approximately 70 percent, is comprised of various types of fish cake called "kamaboko". About 30 percent of surimi-based products are represented by yaki-chikuwa (broiled surimi product), fish sausage, and fish ham (Table 32).

Kamaboko products are divided among three major categories: steamed kamaboko, fried kamaboko, and boiled kamaboko. Typical steamed kamaboko is called itatsuki (board-mounted) kamaboko, but the variety also includes imitation shellfish. Typical fried kamaboko (age-kamaboko) products are satuma-age and tempura. Typical boiled kamaboko is hampen, a spongy marshmallow-like product which contains entrapped air. Yaki-chikuwa is broiled surimi product which has the shape of a hollow bamboo stem.

In Table 32 the production of imitation crab meat has been listed under the category of "flavored" kamaboko only since 1987. Until that time, it was included in the category of "other kamaboko".

The main ingredient of surimi-based products is a homogeneous gel of ground fish muscle, obtained by kneading the thawed frozen surimi or raw surimi into a paste with salt. It also contains other ingredients such as sugar, starch, sweet sake, and monosodium glutamate.

Table 32 and figure 11 summarize annual production of surimi-based products by Japan since 1957. The production peaked at 1,185,100 mt in 1973, but decreased continuously, to 702,920 mt in 2001.

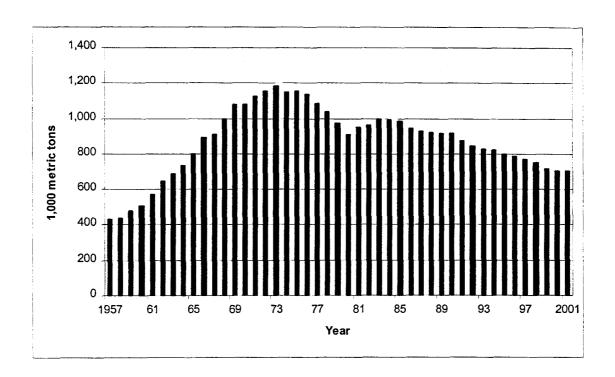
Japan's Production of Surimi-based Products, 1957-2001, (metric tons). Table 32.

Year	In casings	Steamed	Kamaboko Fried	Boiled	Flavored	Others	Sub-total	Yaki- chikuwa	Fish ham/ Sausage	Total
1957 1958 1959 1960	*	136,368 149,762 152,171	122,092 141,221 153,266	1 1 1 1	1 1 1 1	9,548 6,080 5,691	268,008 297,063 311,128	108,980 107,650 96,841	35,895 59,604 71,516 101,438	434,152 436,592 476,229 509,407
1961 1962 1963 1964	1 1 1 1 1	187,965 214,406 205,144 219,874 245,116	155,700 179,712 196,437 205,129 234,004	1 1 1 1 1	1 1 1 1 1	7,869 8,338 15,243 14,317 8,190	351,534 402,456 416,824 439,320 487,310	98,230 104,748 112,564 119,455 121,774	123, 681 142, 441 158, 666 175, 864 188, 094	573,445 649,645 688,054 734,639
1966 1967 1968 1969	23,451 23,078 25,873	270,214 294,782 259,599 283,917 277,483	283, 616 267, 549 289, 501 319, 191 313, 552	- 61,021 53,041	1 1 1 1 1	7,644 13,380 71,039 16,915 6,363	561,474 575,711 643,590 704,122 676,312	157, 636 171, 745 194, 035 204, 290 221, 484	176,026 164,431 161,753 168,778 183,515	895,136 911,887 999,378 1,077,190 1,081,311
1971 1972 1973 1974	31,500 30,032 32,039 85,461 90,786	291,927 305,984 317,423 275,264 271,683	322, 161 326, 623 329, 692 324, 149 327, 068	56,387 63,766 75,595 76,913 84,519	1 1 1 1 1	6,384 6,384 1,593 3,275 1,324	708,359 732,789 756,342 765,062	238, 539 244, 615 249, 172 250, 946 258, 882	180, 207 178, 801 179, 586 132, 693 120, 708	1,127,105 1,156,205 1,185,100 1,148,701 1,154,970
1976 1977 1978 1979 1980	82,010 77,651 75,039 73,827 58,342	285,588 266,216 258,951 252,035 230,578	316,929 303,224 289,481 272,175 269,211	83,897 84,304 93,110 76,558 73,184	1 1 1 1 1	9,931 16,086 16,615 17,589 18,037	778,355 747,481 733,196 692,184 649,352	235, 278 214, 393 190, 911 177, 192 174, 377	123, 114 125, 088 113, 109 106, 815 87, 412	1,136,747 1,086,962 1,037,216 976,191 911,141

Japan's Production of Surimi-based Products, 1957-2001 (metric tons). Table 32 (continued).

Total	948,882 960,876 996,171 990,449 983,765	945,300 925,933 920,533 915,831	873,707 845,356 829,770 822,772 800,916	790, 431 772, 901 754, 459 716, 718 706, 592	
Fish ham/ Sausage	91,865 95,152 98,098 94,688	90,732 89,146 84,304 85,345 85,653	78,331 70,884 66,828 66,059 66,196	65, 285 65, 282 62, 816 62, 306 60, 286	
Yaki- chikuwa	180,678 187,734 194,931 196,221	195, 351 189, 297 190, 451 184, 713	174,735 169,607 172,579 173,445 169,559	166,940 259,807 164,066 159,848 153,285	00/01
Sub-total	676,339 677,990 703,142 699,540 691,625	659, 217 647, 490 645, 778 645, 773	620, 641 604, 865 590, 363 583, 268 565, 161	558,206 547,812 527,577 494,564 493,021	6116
Others	25,350 36,555 150,220 155,747 158,977	154,658 18,311 19,754 26,037 25,382	27,604 26,719 26,194 26,153	26, 139 23, 668 18, 874 16, 115 15, 404	2,00
Flavored	1 1 1 1	68,952 60,688 58,011 65,270	59, 321 55, 493 57, 424 59, 365	58,136 26,544 52,292 50,980 50,451	000
laboko Boiled	74,051 83,539	59,797 56,307 55,152 54,148	49,991 47,541 47,487 45,918 44,837	43,818 44,333 42,445 38,213 40,394	, , , ,
Kamab Fried	291, 412 289, 361 297, 257 298, 063 290, 979	276, 209 271, 488 277, 618 273, 563 279, 607	270,459 265,960 264,952 265,346 258,698	258,927 258,110 252,899 235,835 232,121	
Steamed	227,694 212,171 195,120 188,100 184,340	175,600 170,952 172,766 169,784 165,177	155,619 158,173 146,271 142,218 135,633	132,743 129,703 125,648 119,773 119,950	F / 1 / 1
In casings	57,832 56,364 60,545 57,630 57,329	52, 750 57, 990 58, 645 63, 226 57, 844	57,647 50,979 48,035 44,268	38,443 35,454 35,419 33,648 34,701	ı,
Year	1981 1982 1983 1984	1986 1987 1988 1989	1991 1992 1993 1994 1995	1996 1997 1998 2000	T 0 0 7

-\* ....not available Sources: National Surimi Association 1984 Ministry of Agriculture, Forestry and Fisheries 1959-2001 Suisan Tsushin Sha 2001, 2002



Japanese Production of Surimi-based Products (1,000 metric tons), 1957-2001. Figure 11.

Sources:

National Surimi Association 1984

Ministry of Agriculture, Forestry and Fisheries 1959-2001

Suisan Tsushin Sha June 27, 2001

### REFERENCES

- Cohen, D.M., T. Inada, T. Iwamoto, and N. Scialabba. 1990. FAO species catalogue. Vol. 10. Gadiform fishes of the world. FAO, Rome. 442 p
- FAO. 1955-2001. [Annual report series]. FAO yearbook, fishery statistics, catches and landings. Food and Agriculture Organization of the United Nations, Rome.
- Hokkai Keizai Shinbun Sha. 2002, [Japanese daily fishery newspaper; in Japanese]. Nikkan Hokkai Keizai. Otaru, Japan. 2p.
- International North Pacific Fisheries Commission. 1967-1996. Statistical year book 1965-1992. Vancouver, Canada.
- Japan Food Economy Company. 1978. Shokuhin Sangyo sogo Tokei Nenpo [Annual statistics of food industry in Japanese]. Tokyo, Japan. 257 p.
- Japan Fish Traders Association. 1996-2002. Japanese imports of marine products (statistics). Tokyo, Japan.
- Japan Frozen Foods Inspection cooperation. 1975-1988. Japanese fishery exports by selected species. Tokyo, Japan.
- Japan Surimi Association. 1984. Reito surimi 25-nen. [Frozen surimi 25-years in Japanese] Tokyo, Japan. 508
- Koslow, J.A. 1976. Pacific Pollock-Already Overfished ? Sea Frontiers. 98-105 p.
- Minato Shinbun Sha. 1987-2002 [Japanese daily fisheries and food news in Japanese]. Shimonoseki, Japan. 4 p.
- Ministry of Agriculture, Forestry and Fisheries. 1967-2002.
  [annual report series]. Gyogyo yoshoku nenpo [Annual production of fisheries and culture in Japanese]. Statistics and Information Department. Tokyo, Japan.
- . 1974-2002. [Annual report series]. Gyogyo suisanbutsu ryutsu tokei nenpo [Annual statistics of fishery marketing in Japanese]. Statistics and Information Department. Tokyo, Japan.
- \_\_\_\_.1998-2000. Annual report on Japan's fisheries. Tokyo, Japan.
- Ministry of Finance. 1988-2002. Shuyo Suisan Yunyu Boeki Tokei [Fishery Import Statistics by Major Species in Japanese]. Trade Statistics Department. Tokyo, Japan.
- Nikkan Shokuryo Shinbun Sha. 2001 [Japanese daily fishery newspaper in Japanese]. Nikkan Shokuro Shinbun. Tokyo, Japan. 2 p.

### REFERENCES

- Okada, M., T. Imaki, and M. Yokozeki. 1981. Kneaded Seafood Products. Koseisha Koseikaku . Tokyo, Japan. 455 p.
- Sonu, C.S. 1986. Surimi. U.S. Department of Commerce. National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Southwest Region. Long Beach, CA. 122 p.
- \_\_\_\_\_. Foreign Fishery Information Release. 1975-1991 [Biweekly reports]. U.S. Department of Commerce. National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Southwest Region. Long Beach, CA. 4 p.
- Suisan Keizai Shinbun Sha. 2001, 2002. [Japanese daily fishery newspapers in Japanese]. Nikkan Suisan Keizai Shinbun. Tokyo, Japan. 4 p.
- Suisan Sha. 1969, 1974-2002. Suisan nenkan [Annual fishery statistics in Japanese]. Tokyo, Japan.
- Suisan Tsushin Sha. 2000, 2001, 2002. [Japanese daily fishery newspapers in Japanese]. Nikkan Suisan Tsushin. Tokyo, Japan. 4 p.
- Tokyo Metropolitan Government. 1989-2002 [Annual report series]. Tokyo to Chuo Oroshiuri Ichiba Nenpo [Tokyo central wholesale market, annual report]. Tokyo, Japan.
- U.S. Embassy, Fisheries. 2002. Major Japanese surimi importers. Commercial Service Section, Tokyo, Japan.
- \_\_\_\_. 1989, 1998-2002. Japanese import quota. Commercial Service Section, Tokyo, Japan.
- U.S. Department of Commerce. 2002. United States Exports.
  National Oceanic and Atmospheric Administration, National
  Marine Fisheries Service, Fisheries Statistics Division.
- \_\_\_\_. 1978-1989. Fisheries of the United States 1979-1990.
  National Oceanic and Atmospheric Administration, National
  Marine Fisheries Service, Fisheries Statistics and Economic
  Division.

# Appendix 1. Japanese Surimi Importers with Import Quota

COMPANY: Anyo Fisheries Co., Ltd. (Tokyo)

ADDRESS: 2-9-1 Shinbashi, Minato-ku, Tokyo 105-0004

PHONE: 81-3-3593-0669 FAX: 81-3-3593-0685

COMPANY: Azabu Shokuhin K.K.

ADDRESS: 2-2-1 Azabudai, Minato-ku, Tokyo 106-0041

COMPANY: Beniko K.K.

ADDRESS: 2-14-8 Ginza, Chuo-ku, Tokyo 104-0061

COMPANY: C and C, K.K.

ADDRESS: 3-11-12 Shinjuku, Shinjuku-ku, Tokyo

COMPANY: Chosen Sangyo K.K.

ADDRESS: 1-2-17 Higashi-shimbashi, Minato-ku, Tokyo

COMPANY: Co-op Trade Japan Ltd.

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PHONE: 81-832-66-5141 FAX: 81-832-66-5142

COMPANY: Toyokawa, K.K.

ADDRESS: 3-7-16 Edobori, Nishi-ku, Osaka, Osaka

PHONE: 81-6-6441-1072

COMPANY: Toyota Tsusho Corporation, Foods Dept. 2 ADDRESS: 2-14-9 Nihonbashi, Chuo-ku, Tokyo 103-8655

CONTACT: Mr. Masayuki Morita, General Manager

PHONE: 81-3-3242-8367 FAX: 81-3-3242-8528

EMAIL: MASAYUKI\_1 MORITA@gw.toyotsu.co.jp

COMPANY: Tsukasa Shoji, K.K.

ADDRESS: 1-18-6 Nishishimbashi, Minato-ku, Tokyo

COMPANY: Tsukiji Suisan, K.K.

ADDRESS: 3-11-18 Tsukuda, Chuo-ku, Tokyo 104-0051 CONTACT: Mr. Yoshihiro Enomoto, Managing Director

WEB SITE: <a href="http://www.tsukiji-suisan.com">http://www.tsukiji-suisan.com</a>

COMPANY: Tsukiji Toyo K.K.

ADDRESS: 2-13-40 Konan, Minato-ku, Tokyo

COMPANY: Umada Boeki K.K.

ADDRESS: 5-2 Bentencho, Kokurakita-ku, Kitakyushu, Fukuoka

COMPANY: Umimar, K.K.

ADDRESS: 2-2-7 Kudan-minami, Chiyoda-ku, Tokyo

COMPANY: Unicoop Japan (Kumiai Boeki, K.K.)

ADDRESS: 1-1-12 Uchikanda, Chiyoda-ku, Tokyo 101

PHONE: 81-3-3296-8983 FAX: 81-3-3219-1460

COMPANY: Union Foods K.K.

ADDRESS: 3-20-30 Kokubu-minami, Ebina, Kanagawa

COMPANY: Unique Trading K.K.

ADDRESS: Tsukiji SK Bldg., 2-1-16 Tsukiji, Chuo-ku, Tokyo

COMPANY: Yamasaki, K.K.

ADDRESS: 1484-1 Oaza-fukue, Shimonoseki, Yamaguchi

COMPANY: Yamawaki Shoten, K.K.

ADDRESS: 1-16-1 Yamatomachi, Shimonoseki, Yamaguchi

COMPANY: Yazawa Trading, K.K.

ADDRESS: 3-15 Hamacho, Kushiro, Hokkaido

COMPANY: Yokohama Tsusho K.K.

ADDRESS: 6-104 Aioi-cho, Naka-ku, Yokohama, Kanagawa

COMPANY: Zensui Co., Ltd.

ADDRESS: 1-10-3 Ginza, Chuo-ku, Tokyo 104 CONTACT: Mr. Taiga Nakano, Sales Section

PHONE: 81-3-5250-2411 FAX: 81-3-5250-2415

EMAIL: zensui@mb.kcom.ne.jp

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The U.S. Embassy Tokyo, USFCS Tokyo and the National Marine Fisheries Service cannot be responsible for the accuracy of this information nor do they endorse any companies listed herein.

Source: U.S. Embassy, Fisheries Commercial Service Section, Tokyo, Japan 2002