

## U.S. Tuna Trade Summary, 1983

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### Introduction

The year 1983 showed some signs of a turnaround for the U.S. tuna industry, which experienced a substantial decline in canned tuna sales, cannery receipts<sup>1</sup> of domestically caught and imported raw tuna, and domestic production activity during most of 1982. By the end of 1983, there was overall improvement in U.S. canned tuna sales, deliveries of raw tuna to U.S. canneries, and domestic processing activity.

Buoyed by a recovering U.S. economy and declining shelf prices, overall volume of canned tuna sales at the retail level was reported to have increased 7 percent for all of 1983. Improved retail sales acted to reduce the buildup of canned inventories that plagued the industry in 1982, and stimulated the flow of raw tuna through U.S. canneries. Cannery receipts of imported and domestically caught albacore, *Thunnus alalunga*, and tropical tunas (skipjack tuna, *Euthynnus pelamis*; yellowfin tuna, *T. albacares*; blackfin tuna, *T. atlanticus*; bluefin tuna, *T. thynnus*; and bigeye tuna, *T. obesus*) were up 6 percent from 1982, but were still 11 percent below the 5-year (1978-82) average volume of annual cannery receipts (Table 1). Despite fierce com-

<sup>1</sup>Cannery receipts include only tuna destined for U.S. canneries. They exclude U.S.-caught tuna landed at foreign sites or U.S.-caught tuna landed at U.S. sites that is destined for foreign canneries, U.S.-caught tuna destined for the fresh-fish market; they also exclude tuna imported as flakes, imported tuna not fit for human consumption, and imported "sushi" grade tuna.

Table 1.—U.S. tuna cannery receipts and U.S. cannery production, 1982-83.

Item	Domestically caught			Imports			Total			Average	
	1982	1983	% Chg.	1982	1983	% chg.	1982	1983	% Chg.	1978-82	% Chg.
Cannery receipts <sup>1</sup>	228,156	285,554	+25	272,490	246,495	-9	500,646	532,049	+6	600,307	-11
Total pack <sup>2</sup>							27,088	28,382	+5	31,278	-9

<sup>1</sup>In short tons: Includes imports and domestically caught tuna.

<sup>2</sup>Thousands of standard cases. A standard case consists of 48 6.5-ounce cans of light meat tuna and 48 7-ounce cans of albacore or white meat tuna.

Source: Statistics and Market News, Southwest Region, NMFS, NOAA.

petition from foreign processors and record levels of canned tuna imports, overall canned tuna production rose 5 percent during 1983, though it was still 9 percent below the 1978-82 annual average (Table 1). These improvements in overall performance accompanied significant changes in the structures and operations of the U.S. tuna industry. These changes gained attention in 1982 and were heightened during 1983.

Due in part to the adverse effects of El Niño on tuna resources in the eastern Pacific Ocean<sup>2</sup> and continuing problems of access to traditional fishing grounds in this area, as well as the attraction of potentially more abundant tuna resources in the western Pacific Ocean, the movement of U.S. tuna purse seiners to the western Pacific accelerated during 1983. At least 60 of the 127 seiners comprising the U.S. tuna purse seine fleet operated in the western Pacific

<sup>2</sup>The eastern and western Pacific are distinguished at long. 150° W.

during 1983. U.S. seiners fishing in this area were quite successful, with regard to volume of catch, and for the first time, cannery receipts of domestically caught tuna from this area accounted for the greatest share of domestically caught cannery receipts by oceanic area: 171,153 short tons (tons), 60 percent of total domestically caught cannery receipts for 1983 (Table 2). Nevertheless, a significant portion of the U.S. tuna fleet—about 25 percent—was inactive all or part of 1983 for economical reasons. U.S. canneries continued to sell, or attempted to sell, interests they held in tuna purse seiners, reflecting the likelihood that tuna fishing under current conditions is more efficient or cost-effective when undertaken by independent vessels.

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Table 2.—U.S. tuna cannery receipts (short tons) by receiving site and ocean of origin, 1982-83.

Item	Domestically caught			Imports			Total		
	1982	1983	% Chg.	1982	1983	% Chg.	1982	1983	% Chg.
<b>Site</b>									
California	140,850	134,658	- 4	56,397	51,481	- 9	197,247	186,139	- 6
Am. Samoa/Hi	42,388	79,240	+ 87	41,180	35,983	- 13	83,568	115,223	+ 38
Puerto Rico	44,918	71,656	+ 60	174,913	159,031	- 9	219,831	230,687	+ 5
Total	228,156	285,554	+ 25	272,490	246,495	- 10	500,646	532,049	+ 6
<b>Ocean</b>									
Eastern Atlantic		21	+ 100	78,552	55,911	- 29	78,552	55,932	- 29
Western Atlantic	115	77	- 33	41,306	40,643	- 2	41,421	40,720	- 2
Eastern Pacific	159,618	115,303	- 28	31,164	12,237	- 61	190,782	127,540	- 33
Western Pacific	68,423	170,153	+ 149	102,086	118,663	+ 16	170,509	288,816	+ 69
Indian				19,382	19,041	- 2	19,382	19,041	- 2
Total	228,156	285,554	+ 25	272,490	246,495	- 10	500,646	532,049	+ 6

Source: Statistics and Market News, Southwest Region, NMFS, NOAA.

More than 75 percent of the domestically caught tuna from the western Pacific was delivered or transhipped to offshore canneries located in American Samoa, Hawaii, and Puerto Rico in 1983. That offshore processing sites are becoming more dominant in terms of U.S. tuna production is also reflected in the fact that in 1983, about 63 percent of the total U.S. pack of canned tuna was processed at offshore facilities. This compares with 61 percent of total production at offshore sites in 1982 and 58 percent in 1981. As a result of this continuing shift in canned production to offshore sites, employment at California canneries, which fell sharply in 1982, is reported to have decreased further during 1983, by the equivalent of about 1,250 full-time jobs.

In the sections that follow, information pertaining to the production of raw and processed tuna by the U.S. tuna industry during 1983, and the consumption of tuna products by U.S. consumers is reviewed in more detail. In the last section, several issues and events are discussed that affected the industry's performance during 1983.

#### U.S. Production of Albacore (White Meat Tuna)

While overall improvement in the performance of the U.S. tuna industry was observed in 1983, this was not entirely the case when production and consumption are distinguished by

Table 4.—U.S. albacore cannery receipts (short tons) by receiving site, 1982-83.

Site	Domestically caught			Imports			Total		
	1982	1983	% Change	1982	1983	% Change	1982	1983	% Change
Continental	5,099	9,434	+ 85	11,115	5,616	- 49	16,214	15,050	- 7
Am. Samoa/Hi	1,866	1,032	- 45	22,814	17,134	- 25	24,680	18,166	- 26
Puerto Rico	0	4	+ 100	60,670	50,105	- 17	60,670	50,109	- 17
Total	6,965	10,470	+ 50	94,599	72,855	- 23	101,564	83,325	- 18

Source: Statistics and Market News, Southwest Region, NMFS, NOAA.

fishery and product category. According to industry reports, consumption of canned white meat tuna, which is 100 percent albacore, increased almost 17 percent in 1983. On the other hand, total cannery receipts, 83,325 tons, and canned production of albacore, 5,105 thousand standard cases, were down 18 and 15 percent, respectively, for 1983 (Table 3). The fact that cannery deliveries and domestic production declined while sales showed an increase in 1983 probably reflects either a move to reduce canned white meat inventories on the part of processors or dominance of U.S. retail sales by imported canned white meat tuna, or both. In any case, retail sales were stimulated through significant albacore price adjustments at the ex-vessel, wholesale, and retail levels.

#### U.S. 1983 Cannery Receipts of Domestically Caught Albacore

In recent years the U.S. albacore fishery has had upwards of 750 vessels participating on a regular basis. The

Table 3.—U.S. albacore cannery receipts and U.S. white meat cannery production, 1982-83.

Item	1982	1983	% Chg.	1978-82	% Chg.
<b>Total cannery receipts<sup>1</sup></b>					
	101,564	83,325	- 18	103,815	- 20
<b>Total pack<sup>2</sup></b>					
	6,021	5,105	- 15	6,056	- 16

<sup>1</sup>In short tons: Includes imports and domestically caught tuna.

<sup>2</sup>Thousands of standard cases. A standard case consists of 48 7-ounce cans of white meat tuna.

Source: Statistics and Market News, Southwest Region, NMFS, NOAA.

majority of these vessels are in the 40-to 50-foot length range and use troll gear exclusively. There is also a number of larger baitboats that operate in the fishery, and more recently several vessels have started to fish albacore using drift gillnets. Many of the vessels are of a multi-purpose design, capable of fishing albacore using a variety of gears, as well as operating in a number of alternative fisheries (e.g., ocean salmon, crab, tropical tuna).

The U.S. albacore fishery occurs almost entirely in the Pacific Ocean north of the Equator and seaward from the west coast to about long. 180°. In 1983 all cannery receipts of domestically caught tuna, 10,470 tons, came from this area with the exception of 4 tons which came from the Atlantic Ocean. Cannery receipts of domestically caught albacore for 1983 were up 50 percent from 1982 (Table 4). This significant increase can largely be attributed to a combination of environmental and economic factors.

Albacore ex-vessel prices, which fell sharply in 1982, continued to decline in 1983. Early in the season a two-tiered price system paid fishermen \$1,250 per ton (not adjusted for fish quality) for albacore 9 pounds and over and \$975 per ton for albacore less than 9 pounds, a decrease of 12 and 32 percent, respectively, from 1982. These price reductions meant that fishermen would have to experience substantially greater success on the fishing grounds if they were to improve their collective economic performance from 1982. Such was the case, for the unusual warming of nearshore waters brought about by El Niño increased the availability of albacore to U.S. fishermen operating along the west coast.

However, while the effects of El Niño benefited the coastal albacore fishery, they tended to have an unfavorable impact on the offshore and mid-Pacific albacore fisheries. This is partly revealed in the 33 percent decline in cannery receipts of domestically caught and imported albacore from the western Pacific during 1983 (Table 5). Because of these factors, there was a ready market for relatively less expensive U.S.-caught albacore in 1983 which generated \$13 million in ex-vessel revenue, up 35 percent from 1982. Dividing 1983 albacore ex-vessel revenue by total cannery receipts yields a weighted ex-vessel price of \$1,248 per ton, down 10 percent from 1982.

#### U.S. 1983 Production of Canned White Meat Tuna

Albacore is consumed almost exclusively as canned white meat tuna by U.S. consumers. Traditionally, the most popular albacore product has been the 7-ounce (standard size) can of solid white meat tuna packed in water.

San Diego and San Pedro, Calif., Mayaguez and Ponce, Puerto Rico, Honolulu, Hawaii, and Pago Pago, American Samoa, are the major U.S. tuna receiving and processing sites. For reporting purposes, tuna receipts are combined for California and for

Table 5.—U.S. albacore cannery receipts (short tons) by ocean of origin, 1982-83.

Ocean	Domestically caught			Imports			Total		
	1982	1983	% Chg.	1982	1983	% Chg.	1982	1983	% Chg.
Eastern Atlantic	0	0	0	19,815	16,935	- 15	19,815	16,935	- 15
Western Atlantic	0	4	+ 100	21,129	16,127	- 24	21,129	16,131	- 24
Eastern Pacific	5,099	9,434	+ 85	48	243	+ 400	5,147	9,677	+ 88
Western Pacific	1,866	1,032	- 45	36,760	24,783	- 33	38,626	25,815	- 33
Indian	0	0	0	16,847	14,767	- 12	16,842	14,767	- 12
Total	6,965	10,470	+ 50	94,599	72,855	- 23	101,564	83,324	- 18

Source: Statistics and Market News, Southwest Region, NMFS, NOAA.

Table 6.—Preliminary U.S. imports as received (short tons) of fresh, frozen, and partially processed whole tuna by exporting country for the 10 leading exporters during 1982-83.

Source	Albacore		Skipjack tuna		Yellowfin tuna <sup>1</sup>		Unident. tuna		Total		
	1982	1983	1982	1983	1982	1983	1982	1983	1982	1983	% Chg.
Panama			10,321	4,728	12,683	7,218	910	501	23,914	12,447	- 48
Venezuela			5,482	5,647	4,742	4,134	375	535	10,599	10,316	- 3
Brazil	609	619	14,539	13,996	416	293	3	4	15,567	14,912	- 4
France	2,738	794	18,784	13,365	4,570	4,133	166	59	26,258	18,621	- 29
Singapore	1,990	2,114	2,555	3,281	353	205	63		4,961	5,600	+ 13
Philipp.	360	50	5,436	5,140	2,077	1,579	2	1	7,875	6,770	- 14
Rep. Korea	1,905	2,705	3,709	8,802	884	2,067	643	207	7,141	13,781	+ 93
Taiwan	27,434	17,829	2,062	3,842	767	1,976	36	41	30,299	23,688	- 22
Japan	21,308	22,826	19,412	29,450	2,902	844	55	26	43,677	53,146	+ 22
Ghana			13,602	22,198	1,066	1,162	41	53	14,709	23,413	+ 59
"Other"	37,349	25,224	35,900	29,750	20,151	13,948	872	973	94,272	69,895	- 26
Total <sup>2</sup>	93,693	72,161	131,802	140,469	50,611	37,559	3,166	2,400	279,272	252,589	- 10

<sup>1</sup>Includes bigeye and bluefin tuna.

<sup>2</sup>Individual species totals may not agree with those reported elsewhere due to unidentified category. Overall totals may not agree with those reported elsewhere because they can include tuna not destined for U.S. canneries and exclude foreign transshipments.

American Samoa and Hawaii (American Samoa/Hawaii). Of the total 1983 raw (whole and other than whole) albacore cannery supply (83,325 tons), 60 percent was delivered to Puerto Rico, 22 percent to American Samoa/Hawaii, and the remaining 18 percent to California. All three areas showed declines in total albacore receipts, 17, 26, and 7 percent, respectively, from 1982 (Table 4).

Of the total 1983 domestically caught, raw albacore cannery receipts, 90 percent was received in California. Virtually all of the remainder was received at American Samoa/Hawaii sites except for 4 tons delivered to Puerto Rico. Domestically caught albacore delivered to California rose 85 percent from 1982 to 1983, while receipts at American Samoa/Hawaii sites decreased 45 percent. There was no domestically caught albacore tuna delivered to Puerto Rico in 1982 (Table 4).

U.S. cannery receipts of imported raw albacore totaled 72,855 tons in 1983, down 23 percent from 1982. Imports composed 87 percent of the total 1983 cannery supply of albacore compared with 93 percent in 1982. Puerto Rico was the major receiving site for U.S. imports of raw albacore during 1983, with 50,105 tons or 69 percent of the total. American Samoa/Hawaii followed with 24 percent of the 1983 total, and California accounted for the remaining 7 percent. Albacore imports received in Puerto Rico during 1983 decreased 17 percent from 1982, while imports received at American Samoa/Hawaii and California declined 25 and 49 percent, respectively, from 1982 (Table 4).

Japan was the leading exporter of raw albacore to U.S. canneries during 1983 with about 22,826 tons or 31 percent of the total raw albacore imports. Taiwan was next with 17,829 tons, 24 percent of the total (Table 6).

Table 7.—U.S. production of canned tuna (thousand standard cases) by processing site, 1982-83.

Site	White meat			Light meat			Total		
	1982	1983	% Change	1982	1983	% Change	1982	1983	% Change
California	954.4	781.1	-18	9,427.4	9,190.5	-3	10,197.4	9,971.5	-2
American Samoa/HI	1,537.2	911.9	-41	3,004.2	5,482.3	+82	4,541.5	6,394.3	+41
Puerto Rico	3,529.1	3,412.2	-3	8,635.1	8,604.1	-	12,164.2	12,016.3	-1
Total	6,020.7	5,105.2	-15	21,066.7	23,276.9	+11	27,067.4	28,382.1	+5

Source: Statistics and Market News, Southwest Region, NMFS, NOAA.

Raw albacore imports received at U.S. canneries in 1983 were valued at about \$97 million, down almost 45 percent from 1982. Dividing this value by the corresponding volume results in a weighted average import price of \$1,335 per ton for raw albacore in 1983, almost 28 percent below that for 1982.

In 1983, the Pacific Ocean provided 43 percent of the total U.S. cannery supply of albacore. The Atlantic and Indian Oceans followed with 40 and 17 percent, respectively, of the total supply, almost all imports. This pattern was unchanged from 1982. Because of the significant increase in domestically caught albacore cannery receipts, the eastern Pacific was the only oceanic area from which an increase in supply (88 percent) was reported in 1983 (Table 5).

Of the three major U.S. canned tuna production centers, Puerto Rico was the primary U.S. albacore processing site during 1983 with 3,412,000 standard cases, 67 percent of the total white meat pack for 1983. This is a 3 percent decrease from 1982. American Samoa/Hawaii followed with 912,000 standard cases, 18 percent of the total 1983 white meat pack, down 41 percent from 1982. Continental sites produced 781,000 standard cases of white meat tuna in 1983, 15 percent of the total, and an 18 percent decrease from 1982 (Table 7).

Wholesale list prices for U.S. produced, advertised white meat tuna ranged from \$59.45 to \$62.50 per standard case at the beginning of 1983 and fell to \$53.17-60.63 per standard case by year's end, a decline of be-

tween 11 and 3 percent. Also, discounts further reduced the price to as low as \$40.20 for a standard case. In terms of total value, U.S. production of canned white meat tuna—advertised and private brands—generated \$196 million in 1983, down 29 percent from 1982. Based on total white meat volume, the weighted average price was \$38.40 per standard case compared with \$45.74 for 1982, a 16 percent decrease.

#### U.S. Production of Tropical Light Meat Tuna

U.S. tuna industry performance in terms of tropical or light meat tuna harvesting and production improved substantially in 1983. Consumption of canned light meat tuna reportedly rose 12 percent during 1983. There was a similar increase in total (U.S.-caught and imported) cannery receipts of tropical tunas, to 448,724 tons in 1983. However, the volume of 1983 tropical tuna cannery receipts was still 10 percent below the 1978-82, 5-year average (Table 8). Production of canned light meat tuna rose in 1983, to a total pack of 23,277,000 standard cases, which was up 10 percent from 1982 (Table 8). Declining prices at the ex-vessel, wholesale, and retail levels during 1982 and most of 1983 led to increased purchases of tropical tuna by both producers and consumers.

#### U.S. 1983 Cannery Receipts of Domestically Caught Tropical Tunas

In 1983, the U.S. tropical tuna fleet consisted of 146 vessels: 127 purse seiners and 19 bait boats (pofe and line gear). This compares with a total

Table 8.—U.S. tropical tuna cannery receipts and U.S. light meat cannery production, 1982-83

Item	1982	1983	% Chg.	1978-82	% Chg.
Total cannery receipts <sup>1</sup>	399,082	448,724	+12	496,492	-10
Total pack <sup>2</sup>	21,067	23,277	+10	25,222	-7

<sup>1</sup>In short tons; Includes imports and domestically caught tuna.

<sup>2</sup>Thousands of standard cases. A standard case consists of 48 6.5-ounce cans of white meat tuna.

Source: Statistics and Market News, Southwest Region, NMFS, NOAA.

fleet of 139 vessels in 1982: 127 purse seiners and 12 baitboats. Fleet carrying capacity was 129,126 tons in 1983, up 2 percent from 1982. However, by the end of 1983, there were about 30 inactive purse seiners in the U.S. tropical tuna fleet. Purse seiners account for by far the bulk of domestically caught tropical tuna cannery receipts, over 97 percent in 1983.

In 1983, domestically caught cannery receipts of tropical tunas were 275,084 tons, 24 percent above 1982 (Table 9). Practically all of this was taken from the Pacific Ocean. However, in 1983 more vessels, representing a disproportionately greater amount of carrying capacity, operated in the western Pacific than in the historically more popular eastern Pacific Ocean. U.S. vessels active in the western Pacific numbered 60 during 1983, an increase of 85 percent from 1982, while 57 vessels were active in the eastern Pacific, a 40 percent decrease from 1982. Carrying capacity of the vessels operating in the western Pacific was 73,395 tons in 1983, an average of 1,223 tons per vessel, compared with 30,986 tons, or an average of 544 tons per vessel, for the eastern Pacific. Fifty-nine of the vessels that operated in the western Pacific had carrying capacities of at least 1,000 tons as opposed to only 15 of the vessels operating in the eastern Pacific. Very little U.S. tropical tuna fishing occurred in the Atlantic Ocean during 1983.

Ex-vessel prices for domestically caught tropical tuna continued to fall

during 1983. At the close of 1983, the posted ex-vessel price (without quality adjustments) in effect for skipjack tuna in the 3.0-4.0 pound range was \$640 per ton, down 9 percent from the close of 1982. The posted ex-vessel price for yellowfin tuna in the 7.5-20.0 pound range (without quality adjustments) at the end of 1983 was

\$990 per ton, 6 percent below that at the close of 1982. The full range of skipjack and yellowfin tuna ex-vessel prices for 1983 is shown in Table 10.

Domestically caught skipjack tuna cannery receipts totaled 155,040 tons for 1983, up significantly, 51 percent, from 1982 (Table 11). Domestically caught skipjack tuna receipts were

valued at \$124 million ex-vessel in 1983, a 26 percent increase over 1982. This yields a weighted ex-vessel skipjack tuna price of \$800 per ton for 1983, down 16 percent from 1982. Cannery receipts of domestically caught yellowfin tuna (includes bigeye, bluefin, and blackfin tuna) totaled 120,044 tons in 1983, up slightly, 1 percent, from 1982 (Table 11). Domestic deliveries of yellowfin tuna generated about \$124 million in ex-vessel revenues during 1983, 7 percent below 1982. The weighted ex-vessel price for yellowfin tuna in 1983 was \$1,031 per ton, a decrease of 8 percent from 1982. Total ex-vessel revenues from domestically caught tropical tuna receipts were about \$248 million in 1983. This is a 7 percent increase over 1982, indicating that U.S. tropical tuna fishermen more than offset the loss in per unit revenue through increased cannery deliveries.

#### U.S. Production of Canned Light Meat Tuna

Skipjack and yellowfin tuna are blended together and canned as light meat tuna, the most popular tuna product consumed in the United States. The 6.5-ounce (standard size) can of chunk style, light meat tuna in water led light meat tuna sales in 1983.

Table 9.—U.S. tropical tuna cannery receipts (short tons) by ocean of origin, 1982-83.

Ocean and Species	Domestically caught			Imports			Total supply		
	1982	1983	% Chg.	1982	1983	% Chg.	1982	1983	% Chg.
<b>Skipjack tuna</b>									
Eastern Atlantic		21	+100	49,417	34,358	-30	49,417	34,379	-30
Western Atlantic		3	+100	17,119	18,070	+6	17,119	18,073	+6
Eastern Pacific	59,925	40,103	-33	11,916	4,502	-62	71,841	44,605	-38
Western Pacific	42,529	114,913	+182	46,892	75,066	+60	89,421	189,979	+112
Indian				1,763	3,312	+88	1,763	3,312	+88
Subtotal	102,454	155,040	+51	127,107	135,308	+6	229,561	290,348	+26
<b>Yellowfin tuna<sup>1</sup></b>									
Eastern Atlantic				9,320	4,618	-50	9,320	4,618	-50
Western Atlantic		115	-39	3,058	6,446	+111	3,173	6,516	+105
Eastern Pacific	94,594	65,766	-30	19,200	7,492	-61	113,794	73,258	-36
Western Pacific	24,028	54,208	+126	18,434	18,814	+2	42,462	56,092	+32
Indian				772	962	+25	772	962	+25
Subtotal	118,737						69,521	158,376	-7
<b>Total tropical tuna</b>									
Eastern Atlantic		21	+100	58,737	38,976	-34	58,737	38,997	-34
Western Atlantic		115	-37	20,177	24,516	+22	20,292	24,584	+21
Eastern Pacific	154,519	105,869	-31	31,116	11,994	-61	185,635	117,863	-37
Western Pacific	66,557	169,121	+154	65,326	93,880	+44	131,883	263,001	+99
Indian				2,535	4,274	+69	2,535	4,274	+69
Grand total	221,191	275,084	+24	177,891	173,640	-2	399,082	448,724	+12

<sup>1</sup>Includes bigeye, bluefin, and blackfin tuna.

Source: Statistics and Market News, Southwest Region, NMFS, NOAA.

Table 11.—U.S. tropical tuna cannery receipts (short tons) by receiving site, 1982-83.

Species and site	Domestically caught			Imports			Total supply		
	1982	1983	% Chg.	1982	1983	% Chg.	1982	1983	% Chg.
<b>Skipjack tuna</b>									
California	56,167	58,521	+4	37,108	41,450	+12	93,275	99,971	+7
Am. Samoa/HI	26,598	54,911	+106	8,729	9,182	-5	35,327	64,093	+81
Puerto Rico	19,689	41,608	+111	81,270	84,676	+4	100,959	126,284	+25
Subtotal	102,454	155,040	+51	127,107	135,308	+6	229,561	290,348	+26
<b>Yellowfin tuna<sup>1</sup></b>									
California	79,584	66,703	-16	8,174	4,415	-46	87,758	71,118	-19
Am. Samoa/HI	13,924	23,297	+67	9,637	9,667		23,561	32,964	+40
Puerto Rico	25,229	30,044	+14	32,973	24,250	-25	58,202	54,299	-7
Subtotal	118,737	120,044	+1	50,784	38,332	-25	169,521	158,376	-7
<b>Total tropical tuna</b>									
California	135,751	125,224	-8	45,282	45,865	+1	181,033	171,089	-5
Am. Samoa/HI	40,522	78,208	+93	18,366	18,849	+3	58,888	97,057	+65
Puerto Rico	44,918	71,652	+60	114,243	108,926	-5	159,161	180,551	+13
Grand total	221,191	275,084	+24	177,891	173,640	-2	399,082	448,724	+12

<sup>1</sup>Includes bigeye, bluefin, and blackfin tuna.

Source: Statistics and Market News, Southwest Region, NMFS, NOAA.

Table 10.—Posted ex-vessel prices (\$/ton), without quality adjustments, for skipjack and yellowfin tuna (includes bigeye, bluefin, and blackfin tuna), 1982-83.

Size (lb)	Skipjack tuna			Yellowfin tuna		
	1982	1983	% chg.	1982	1983	% chg.
< 3.0	\$500	\$400	-16	\$890	\$400	-55
		440				
3.0-4.0	\$700	\$640	-9	\$890	\$640	-28
> 4.0	\$890	\$800	-10	\$890	\$800	-10
< = 7.5						
> 7.5	\$890	\$900	+1			
> 7.5				\$1,050	\$990	-6
< = 20.0						
> 20.0				\$1,170	\$1,125	-4

Source: Statistics and Market News, Southwest Region, NMFS, NOAA.

The total supply of raw tropical tuna, 448,724 tons, was delivered to canneries in Puerto Rico, American Samoa and Hawaii, and California during 1983. Puerto Rico was the leading receiving site in 1983 with 180,551 tons, 40 percent of the total cannery supply. California canneries followed with 38 percent of the total supply and American Samoa/Hawaii sites received 22 percent of the total 1983 supply. Total tropical tuna receipts for Puerto Rico increased 13 percent from 1982, increased 65 percent for American Samoa/Hawaii, but fell 5 percent for California (Table 11).

Of the total domestically caught receipts of tropical tuna for 1983, 125,224 tons (46 percent) was received in California, 78,208 tons (28 percent) at American Samoa/Hawaii sites, and the remaining 71,652 tons (26 percent) in Puerto Rico. Domestically caught deliveries of tropical tuna to California fell 8 percent from 1982 but increased 93 percent in American Samoa/Hawaii and increased 60 percent in Puerto Rico. Skipjack tuna dominated domestically caught tropical tuna receipts, composing 56 percent of the total domestically caught tropical tuna receipts for 1983 (Table 11).

Imported tropical tuna receipts totaled 173,640 tons in 1983, 2 percent below 1982. Imports made up 39 percent of the total tropical tuna cannery supply in 1983 vs. 45 percent in 1982. Puerto Rico was the major receiving site for tropical tuna imports during 1983 with 108,926 tons, 63 percent of the total. California followed with 26 percent and American Samoa/Hawaii received the remaining 11 percent. Receipts of imported tropical tuna in Puerto Rico decreased 5 percent from 1982 and increased slightly for California and American Samoa/Hawaii sites (1 and 3 percent, respectively). Skipjack tuna was the major tropical tuna species imported during 1983, with 135,308 tons, comprising 78 percent of total tropical tuna imports. Yellowfin tuna contributed the balance. Overall skipjack tuna imports were up 6 percent from 1982, while yellowfin tuna imports fell 25

percent (Table 11).

The leading exporter of raw tropical tuna to the United States in 1983 was Japan, with approximately 30,320 tons or 12 percent of the 1983 total. Imports from Japan consisted of 97 percent skipjack tuna and the remainder yellowfin and unidentified tuna. Ghana followed with 23,413 tons, 9 percent of the total; of this 95 percent was skipjack tuna, and the rest was yellowfin and unidentified tuna (Table 6).

The total value of 1983 tropical tuna imports received at U.S. canneries was \$138 million, down 21 percent from 1982. The value of skipjack tuna imports was approximately \$100 million and the value of yellowfin tuna imports was about \$38 million, decreases of 13 and 36 percent, respectively, from 1982. These values convert to weighted average prices of \$742 per ton for skipjack tuna imports and \$983 per ton for yellowfin tuna. This represents price decreases of 19 percent for skipjack tuna and 16 percent for yellowfin tuna from 1982.

The Pacific Ocean was the major source of U.S. tropical tuna cannery receipts. For all tropical tuna species combined, the Pacific provided 380,864 tons during 1983, 85 percent of the total supply. The Atlantic and Indian Oceans provided 14 and 1 percent, respectively, and virtually all were imports. On a regional basis, the western Pacific was the leading source of tropical tuna receipts contributing 263,001 tons, 59 percent of the total tropical tuna cannery supply in 1983. Total tropical tuna receipts from the western Pacific rose 99 percent from 1982. Of the total tropical tuna receipts originating in the western Pacific during 1983, 64 percent (169,121 tons), was domestically caught; the remainder (93,880 tons) consisted of imports. Domestically caught tropical tuna receipts from the western Pacific increased 154 percent from 1982 while imports increased 44 percent. Skipjack tuna dominated tropical tuna receipts from the western Pacific in 1983, contributing 72 percent of the total receipts from this oceanic area, and 42 percent of the total tropical tuna receipts from

all areas. Other oceanic regions contributing to the 1983 U.S. cannery supply, in order of importance, were the eastern Pacific (primarily domestically caught yellowfin tuna), the eastern Atlantic (almost all skipjack tuna imports), and the western Atlantic (mainly skipjack tuna imports). A breakdown of the 1983 tropical tuna cannery supply by ocean of origin is presented in Table 9.

California was the leading U.S. production center for canned light meat tuna during 1983, with 9,190 thousand cases, 39 percent of the total light meat pack for 1983. Next was Puerto Rico with 8,604,000 standard cases, 37 percent of the total, followed by American Samoa/Hawaii with 5,482,000 standard cases, 24 percent of the 1983 total. Production of canned light meat tuna in California was down 3 percent from 1982, unchanged from 1982 in Puerto Rico, and up 82 percent from 1982 in American Samoa/Hawaii (Table 7).

The wholesale list price of U.S. produced advertised light meat tuna ranged from \$43.00 to \$46.65 a standard case, discounted to as low as \$34.00 a standard case at the beginning of 1983. By the end of 1983 it had fallen to between \$40.15 and \$41.05 per standard case, a decrease of 7-12 percent. Total U.S. production of canned light meat tuna—both advertised and private label—in 1983 was valued at \$625 million, down 3 percent from 1982. Dividing total value by total volume yields a weighted average price of \$26.86 for a standard case of light meat tuna in 1983, down 12 percent from 1982.

### Canned Tuna Imports

The United States imposes tariffs on canned tuna imports in two categories: Tuna in oil and tuna not in oil. The tariff schedules on imported canned tuna were originally established when light meat tuna packed in oil was much more popular among U.S. consumers than light meat not in oil. Since then, U.S. consumption has shifted significantly in favor of light meat tuna packed in water.

Canned tuna in oil is subject to a 35

Table 12.—Imports of canned tuna (in oil and not in oil) by exporting country and their corresponding value, 1978-83.

Source	Quantity (1,000 lb)						Value (1,000 dollars)					
	1978	1979	1980	1981	1982	1983	1978	1979	1980	1981	1982	1983
Japan	35,887	28,366	24,794	21,271	26,481	20,387	46,343	37,055	42,015	36,453	38,561	24,643
Philippines	3,374	6,998	13,777	21,451	27,631	32,018	3,536	7,319	20,043	30,504	31,085	32,291
Thailand	1,551	4,844	6,405	10,315	18,667	39,930	1,886	5,135	8,875	15,400	22,711	43,259
Taiwan	9,051	12,282	15,947	15,771	10,704	18,710	9,667	14,103	23,316	24,631	14,366	22,772
Australia	0	0	0	58	1,930	2,799				105	3,451	3,684
Malaysia	651	292	66	696	755	3,083	746	314	76	1,230	1,242	4,068
Indonesia	0	0	0	146	595	2,634				209	699	2,679
Maldives	0	62	600	592	327	0		67	825	874	379	
Spain	132	336	146	170	120	133	294	501	367	402	300	268
Singapore	0	0	28	65	120	329			38	91	141	386
All other	1,136	523	1,792	316	248	2,306	1,349	579	1,698	459	412	3,274
Total	51,781	53,704	63,553	70,852	87,579	122,329	63,822	65,071	97,254	110,358	113,347	137,324

Source: U.S. International Trade Commission, Publication 841, Summary of Trade and Tariff Information, July 1983, Bureau of Census.

percent ad valorem tariff and imports are negligible. Canned tuna imports not in oil are controlled under a tariff rate quota which allows imports up to 20 percent of the previous year's domestic production at one rate, with imports above this level subject to a higher rate. Prior to reaching the quota on canned tuna not in oil, imports of canned white meat tuna not in oil are distinguished from imports of canned light meat tuna not in oil. Once the quota is reached however, there is no distinction between light and white meat tuna.

In 1983 the tariff rate on tuna not in oil was 6 percent ad valorem below quota and 12.5 percent above quota. The 1983 quota on imports of canned tuna not in oil was 95,620,000 pounds or approximately 4,900,000 standard, light meat equivalent, cases. Total imports amounted to a record 122,329,000 pounds or almost 6,300,000 standard, light meat equivalent, cases, an increase of 40 percent from 1982. When the 1983 quota was reached, white meat comprised 16 percent of the canned imports not in oil, the remaining 84 percent was light meat tuna. U.S. imports of canned tuna in oil—virtually all light meat tuna—totaled 197,000 pounds in 1983 or about 10,102 standard cases, down 8 percent from 1982.

Thailand was the leading exporter of canned tuna to the United States in 1983 with 39,930,000 pounds of canned product or about 2,000,000 standard, light meat equivalent, cases.

This was 33 percent of the total U.S. imports of canned tuna. The Philippines followed with 32,018,000 pounds, or about 1,600,000 standard, light meat equivalent, cases, representing 26 percent of the total 1983 canned imports.

The value of all imported canned tuna was approximately \$137 million in 1983, an increase of 21 percent from 1982. This converts to a weighted average standard, light meat equivalent, case price of \$21.89, which is 13 percent below that for 1982. Imports of canned tuna by exporting country and their corresponding value are shown in Table 12.

#### U.S. Consumption of Canned Tuna

U.S. civilian per capita consumption of canned tuna—both light and white meat—in 1983 was 3.0 pounds, 11 percent above 1982. Assuming that light meat comprises 80 percent of the total per capita consumption, and the remainder is white meat, domestic consumption is estimated to be 0.60 pounds of white meat tuna and 2.40 pounds of light meat tuna per capita for 1983, compared with 0.54 pounds and 2.16 pounds, respectively, for 1982. This is equivalent to 1.28 standard cans of white meat and 5.91 standard cans of light meat tuna per capita for 1983, and 1.15 standard cans of white meat and 5.32 standard cans of light meat tuna per capita for 1982. Based on the National Marine Fisheries Service's "Operation Price Watch," the 10-city average price for domestically produced canned tuna,

U.S. consumers paid an average of \$1.49 per can for white meat tuna and \$0.87 per can for light meat tuna during 1983, a decrease of 3 percent and 9 percent, respectively, from 1982. This results in a slight increase in estimated per capita tuna expenditures: \$7.05 for 1983 versus \$6.88 for 1982. These estimates do not take into account domestic consumption of imported canned tuna.

#### Discussion

U.S. tuna industry performance during 1983 was highlighted by increased domestically caught cannery receipts of albacore and tropical tuna, an increase in the light meat tuna pack, and increased purchases of tuna products by U.S. consumers. However, marked improvement in these areas was not realized without some significant changes in the industry's structure and operations. Some of these changes can be traced back to the late 1970's and early 1980's when rising production costs, particularly for fuel, led to record high prices at the ex-vessel, wholesale, and retail levels. Higher prices increased consumer resistance to purchases of canned tuna resulting in an accumulation of canned tuna inventories. To stimulate consumption, the U.S. tuna industry initiated price reductions in mid-1981 and prices at all levels have declined since. This action, together with overall improvements in the U.S. economy during the past year, has enhanced canned tuna sales and done much toward restoring U.S. canned

tuna production to its historic average.

To accommodate wholesale price reductions and improve their inventory positions, U.S. processors sought to streamline cannery operations. Production at California canneries was cut back severely beginning in 1982 with the closure of one major cannery and significant contractions in the remaining operations. Processing in California declined further in 1983 as major U.S. canners shifted their operations to offshore sites (Puerto Rico, American Samoa/Hawaii) to take advantage of more favorable operating conditions.

Adverse conditions in the processing sector of the U.S. tuna industry at the end of 1981 filtered downward to U.S. tuna fishermen in the form of substantially lower ex-vessel tuna prices and difficulties and delays in selling their catches. Further, canneries were anxious to divest themselves of interests they held in tropical tuna vessels and to cut back their financial support to independently owned vessels. Under these circumstances many vessels were unable to participate in the fisheries. In addition to weakened ex-vessel markets, U.S. tropical tuna fishermen faced continued uncertainty in terms of access to traditional eastern Pacific fishing grounds, decreased availability of tropical tuna resources in the eastern Pacific attributed to El Niño, and increased competition from foreign fishermen. These factors, together with potentially more abundant tropical tuna resources to be found in the western Pacific Ocean, contributed to a reduction in the number of active U.S. tropical tuna vessels and a redeployment of most large U.S. purse seiners to the western Pacific in 1983. Whether this situation will persist is unclear in view of events over which the industry has little or no direct controls.

Of particular concern is the growing interest of resource adjacent nations to develop their own tuna fisheries, or otherwise benefit from readily accessible tuna resources. Whether the western Pacific will continue to account for the largest share

of the U.S. tuna catch will depend on access and fishery development agreements that can be negotiated with the numerous island governments that exist in this region. In this regard, future stability in the exploitation of western Pacific tuna resources would seem contingent on the creation of a cohesive institutional arrangement that recognizes resource limitations as well as the particular interests of all parties involved. In addition, adequate industry infrastructure must be in place to support future growth. Similar concerns can be expressed over potential expansion of the U.S. tropical tuna fleet into the Atlantic and Indian Oceans. On the other hand, the eastern Pacific could regain its former harvesting stature once the effects of El Niño have completely abated and the pending international access licensing arrangement, the "Eastern Pacific Ocean Tuna Fishing Agreement," in this area is fully endorsed.

The U.S. industry has also expressed considerable alarm over the recent influx of canned tuna imports. Production of canned tuna outside the United States has grown steadily over the last decade. Most of this increase has been targeted for export to the United States, the major market for canned tuna, where the market share of imports has more than doubled in recent years from 6 percent in 1977 to 14 percent in 1982. In terms of total volume, U.S. imports of canned tuna increased 136 percent between 1978 and 1983 (72 percent from 1981 to 1983), an annual average rate of 19 percent. On the other hand, during this same period, imports of raw tuna decreased almost 43 percent, a significant shift in U.S. tuna imports from raw to finished product. Foreign producers thus gain the value added through processing. This implies a real cost-revenue squeeze for U.S. processors as they compete with foreign processors for inputs of raw tuna, driving up production costs and as they compete with foreign processors to maintain their share of domestic retail sales, putting downward pressure on prices they receive. Domestic wholesale prices fell

to low levels in 1983, and discounts of up to \$9.00 per case were also being offered; nonetheless, import prices were still from \$3.00 to \$5.00 per case below domestic prices. Lower production costs and a strong U.S. dollar abroad have made foreign produced canned tuna very attractive to U.S. importers since early 1982. Furthermore, since the ad valorem duties on canned tuna imports are determined by their price, the lower the price of imported canned tuna, the lower the customs duty. The current high value of the U.S. dollar acts to further reduce the effective tariff on imported canned tuna. Even if the dollar weakens against foreign currencies in the near term, U.S. producers will continue to face stiff competition from foreign processors.

A significant event affecting the tuna industry in 1983 was the exclusion of canned tuna not in oil packed in American Samoa from being counted against the quota on imports of canned tuna not in oil. It is estimated that one-third of the annual quota in recent years had been filled by canned tuna processed in American Samoa. In effect, the American Samoa exclusion allows foreign countries to export that much more canned tuna not in oil under the lower tariff duty rate. To a great extent this accounts for the large increase in foreign produced canned imports in 1983.

The U.S. tuna industry has brought attention to the import situation by seeking revisions to the tariff structure for tuna imports not in oil. It also successfully petitioned for a countervailing duty investigation on imported canned tuna from the Philippines. The investigation resulted in a countervailing duty of 0.72 percent being levied against Philippine exporters to offset production subsidies they received. This is the only case where the U.S. industry has obtained import relief, and it proved to be very minor, but as foreign competition grows more intense, it is likely that the U.S. industry will pursue other means available to protect itself as it adjusts to a new international order in tuna harvesting and processing.