5.0 ECONOMIC STATUS OF HMS FISHERIES

The review of each rule, and of Atlantic HMS fisheries as a whole, is facilitated when there is an economic baseline against which the rule or fishery may be evaluated. In this analysis, NMFS used the past ten years of data to facilitate the analysis of trends. It also should be noted that all dollar figures are reported in nominal dollars (*i.e.*, current dollars). If analysis of real dollar (*i.e.*, constant dollar) trends controlled for inflation is desired, price indexes for 2001 to 2010 are provided in Table 5.1. To determine the real price in base year dollars, divide the base year price index by the current year price index, and then multiply the result by the price that is being adjusted for inflation. From 2001 to 2010, the Consumer Price Index (CPI-U) indicates that prices have risen by 23.1 percent, the Gross Domestic Product (GDP) Implicit Price Deflator indicates that prices have risen 23.1 percent, and the Producer Price Index (PPI) for unprocessed finfish indicates a 116.6 percent rise in prices. From 2008 to 2009, the CPI, GDP Deflator, and the PPI for unprocessed finfish indicate prices changed by -0.4 percent, 0.9 percent, and 1.8 percent respectively. From 2009 to 2010, the CPI, GDP Deflator, and the PPI for unprocessed finfish indicate prices changed by 1.7 percent, 1.7 percent, and 24.3 percent respectively.

Table 5.1 **Inflation Price Indexes. The CPI-U is the standard Consumer Price Index for all urban consumers (1982-1984=100) produced by U.S. Department of Labor Bureau of Labor Statistics.** The source of the Producer Price Index (PPI) for unprocessed finfish (1982=100) is also the Bureau of Labor Statistics. The Gross Domestic Product Implicit Price Deflator (2005=100) is produced by the U.S. Department of Commerce Bureau of Economic Analysis and obtained from the Federal Reserve Bank of St. Louis (http://www.stlouisfed.org/).

Year	CPI-U	GDP Deflator	PPI Unprocessed Finfish
2001	177.1	90.6	176.1
2002	179.9	92.1	201.5
2003	184.0	94.1	195.8
2004	188.9	96.8	224.1
2005	195.3	100.0	253.1
2006	201.6	103.3	334.6
2007	207.3	106.3	318.1
2008	215.3	108.6	301.6
2009	214.5	109.6	306.9
2010	218.1	111.5	381.5

5.1 Commercial Fisheries[2]

In 2010, 8.2 billion pounds valued at $4.5 billion were landed for all fish species by U.S. fisherman at U.S. ports. In 2009, 7.9 billion pounds valued at $3.9 billion were landed for all fish species by U.S. fisherman at U.S. ports. The overall value of landings between 2009 and 2010 increased by 15.4 percent. The total value of commercial HMS landings in 2010 was $39.9 million (Table 5.3).

The estimated value of the 2010 domestic production of all fishery products was $9.0 billion. This is $757.3 million more than the estimated value in 2009. The total import value of fishery products was $27.4 billion in 2010. This is a increase of $3.8 billion from 2009. The total export value of fishery products was $22.4 billion in 2010. This is an increase of $2.7 billion from 2008. In comparison, the total export value in 1996 was only $8.7 billion.

5.1.1 Ex-Vessel Prices

The average ex-vessel prices per pound dressed weight (dw) for 2002 to 2010 by species and area are summarized in Table 5.2. Prices are reported in nominal dollars. The ex-vessel price depends on a number of factors including the quality of the fish (*e.g.*, freshness, fat content, method of storage), the weight of the fish, the supply of fish, and consumer demand.

Table 5.2 and Table 5.3 indicate that the average ex-vessel prices for bigeye tuna have generally increased since 2003. Prices, however, declined from 2009 to 2010 across all regions.

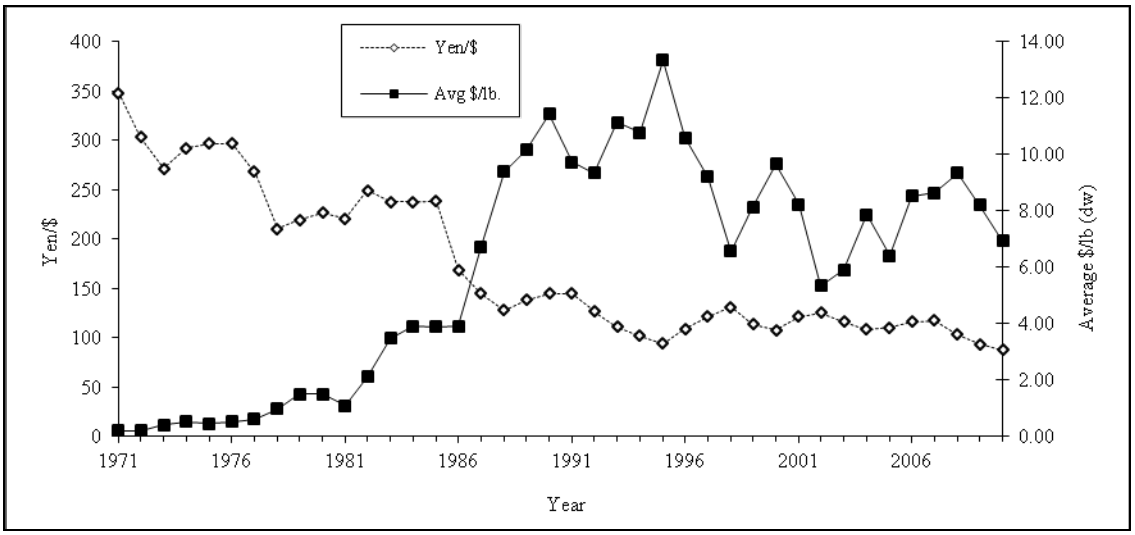

Figure 5.1 Average Annual Yen/$ Exchange Rate and Average U.S. BFT Ex-vessel $/lb (dw) for All Gears: 1971-2010. Source: Federal Reserve Bank (**www.stls.frb.org**) and Northeast Regional Office.

Average ex-vessel prices for BFT have risen 54 percent since 2003. The ex-vessel prices for BFT can be influenced by many factors, including market supply and the Japanese Yen/U.S.

[2] All the information and data presented in this section were obtained from NMFS 2010b.

Dollar (¥/$) exchange rate. Figure 5.1 shows the average ¥/$ exchange rate, plotted with average ex-vessel BFT prices, from 1971 to 2010.

The average ex-vessel prices for yellowfin tuna have increased in 2010 in all regions except for the northeast region, which slightly decreased (Table 5.2). From 2003 to 2010, the average ex-vessel price of yellowfin tuna increased 67.6 percent (Table 5.3).

The average ex-vessel price for albacore tuna increased in the South Atlantic and North Atlantic regions and decreased in the Mid-Atlantic and Gulf of Mexico in 2010 (Table 5.2). From 2003 to 2010, the average ex-vessel price of albacore tuna increased 53 percent (Table 5.3).

The average price of skipjack tuna increased in the South Atlantic from 2009 to 2010 (Table 5.2). From 2003 to 2010, the average ex-vessel price of skipjack tuna decreased 11 percent (Table 5.3).

The average ex-vessel price LCS decreased in the Gulf of Mexico, but increased in the South Atlantic and Mid-Atlantic in 2010 (Table 5.2). The average ex-vessel prices for pelagic sharks increased or remained the same in 2010 (Table 5.2). The average ex-vessel prices for SCS decreased from 2009 to 2010 in the Mid-Atlantic and Gulf of Mexico regions, but increased in the South-Atlantic region (Table 5.2). Shark fin prices increased in all regions except the North Atlantic in 2010 (Table 5.2).

Table 5.2 **Average Ex-vessel Prices per lb for Atlantic HMS by Area.** Source: Dealer weighout slips from the Southeast Fisheries Science Center, Northeast Fisheries Science Center, and BFT dealer reports from the Northeast Regional Office. Gulf of Mexico includes: TX, LA, MS, AL, and the west coast of FL. S. Atlantic includes: east coast of FL. GA, SC, and NC dealers reporting to Southeast Fisheries Science Center. Mid-Atlantic includes: NC dealers reporting to Northeast Fisheries Science Center, VA, MD, DE, NJ, NY, and CT. N. Atlantic includes: RI, MA, NH, and ME. For BFT, all NC landings are included in the Mid-Atlantic.

Species	Area	2003	2004	2005	2006	2007	2008	2009	2010
Bigeye tuna	Gulf of Mexico	$4.90	$5.42	$5.75	$5.73	$5.66	$6.12	$5.80	$6.12
	S. Atlantic	$3.21	$3.10	$3.61	$3.94	$4.34	$4.34	$4.11	$4.35
	Mid-Atlantic	$3.85	$4.22	$5.16	$4.95	$5.78	$5.70	$5.41	$5.88
	N. Atlantic	$3.68	$4.60	$4.65	$4.54	$5.31	$5.60	$5.18	$4.79
Bluefin tuna	Gulf of Mexico	$6.32	$4.64	$4.67	$4.39	$5.87	$4.83	$4.65	$6.50
	S. Atlantic	$4.11	$4.91	$4.60	$6.36	$7.07	$6.00	$14.43	$7.03
	Mid-Atlantic	$7.38	$9.62	$10.30	$9.81	$10.05	$12.56	$9.40	$8.83
	N. Atlantic	$5.71	$7.42	$5.57	$7.92	$8.31	$8.33	$7.09	$9.29
Yellowfin tuna	Gulf of Mexico	$2.79	$3.21	$3.32	$2.89	$3.02	$3.51	$3.04	$5.79
	S. Atlantic	$2.20	$2.51	$2.60	$2.32	$2.69	$2.99	$2.90	$4.03
	Mid-Atlantic	$1.74	$1.98	$2.74	$2.44	$2.99	$3.30	$2.49	$3.43
	N. Atlantic	$2.27	$2.69	$3.15	$2.63	$3.17	$3.82	$3.69	$2.80
Albacore tuna	Gulf of Mexico	$0.55	$0.68	$0.61	$0.53	$0.49	$0.55	$1.42	$1.25
	S. Atlantic	$0.86	$0.76	$0.94	$0.93	$1.24	$1.21	$1.29	$1.49
	Mid-Atlantic	$0.92	$0.54	$0.76	$0.82	$0.86	$0.97	$1.46	$1.31
	N. Atlantic	$0.93	$0.74	$0.91	$0.97	$1.37	$2.00	$1.26	$1.56

Species	Area	2003	2004	2005	2006	2007	2008	2009	2010
Skipjack tuna	Gulf of Mexico	-	-	-	-	-	-	$0.50	-
	S. Atlantic	$0.47	$1.11	$0.70	$0.74	$0.73	$0.95	$0.95	$1.16
	Mid-Atlantic	$1.20	$0.84	$1.13	$0.79	$2.22	$4.50	-	$2.50
	N. Atlantic	$4.17	$2.65	-	-	-	-	-	-
Swordfish	Gulf of Mexico	$2.85	$3.42	$3.20	$2.90	$3.07	$2.93	$2.69	$3.53
	S. Atlantic	$3.37	$3.88	$4.00	$3.86	$4.24	$4.11	$4.12	$4.63
	Mid-Atlantic	$3.04	$3.38	$3.52	$3.52	$4.07	$3.49	$3.40	$4.45
	N. Atlantic	$3.08	$3.96	$3.69	$3.64	$4.11	$4.20	$3.49	$4.61
Large coastal sharks	Gulf of Mexico	$1.01	$0.73	$0.86	$0.75	$0.42	$0.40	$0.66	$0.48
	S. Atlantic	$0.44	$0.46	$0.50	$0.47	$0.40	$0.72	$0.55	$0.78
	Mid-Atlantic	$0.25	$0.36	$0.29	$0.27	$0.55	$0.66	$0.57	$0.61
	N. Atlantic	-	$0.66	-	-	-	-	-	-
Pelagic sharks	Gulf of Mexico	$1.05	$1.15	$1.19	$1.21	$1.29	$1.18	$1.25	$1.47
	S. Atlantic	$1.24	$1.26	$1.26	$1.26	$1.36	$1.36	$1.34	$1.34
	Mid-Atlantic	$0.70	$0.89	$1.21	$1.15	$1.10	$1.20	$1.15	$1.17
	N. Atlantic	$1.29	$1.08	$0.92	$0.73	$0.85	$0.93	$1.23	$1.28
Small coastal sharks	Gulf of Mexico	$0.35	$0.35	$0.47	$0.51	$0.58	$0.62	$0.69	$0.55
	S. Atlantic	$0.54	$0.67	$0.71	$0.68	$0.80	$0.78	$0.71	$0.79
	Mid-Atlantic	$0.38	$0.44	$0.39	$0.44	$0.43	$0.48	$0.57	$0.54
	N. Atlantic	-	-	-	-	-	-	-	-
Shark fins	Gulf of Mexico	$14.70	$15.76	$16.22	$16.40	$13.22	$14.94	$15.09	$16.48
	S. Atlantic	$13.83	$12.55	$13.93	$13.24	$11.44	$12.73	$13.15	$15.35
	Mid-Atlantic	$10.09	$7.72	$10.55	$9.72	$6.12	$3.74	$3.60	$5.70
	N. Atlantic	$2.30	$1.39	$4.55	$6.23	$3.24	$3.00	$3.67	$2.40

5.1.2 Revenues

Table 5.3 summarizes the average annual revenues of the Atlantic HMS fisheries based on average ex-vessel prices. Data for Atlantic HMS landings weight is as reported per the U.S. National Report (NMFS, 2011a), the information used in the shark stock assessments, information given to the ICCAT (Cortés pers. comm., 2010), as well as price and weight reported to the NMFS Northeast Regional Office by Atlantic BFT dealers. These values indicate that the estimated total annual revenue of Atlantic HMS fisheries has increased in 2010 to $39.9 million from $ 36.1 million in 2009. From 2009 to 2010, the Atlantic tuna fishery's total revenue increased by $2.5 million. A majority of that increase can be attributed to the increased commercial landings of bigeye tuna and increase in price for yellowfin tuna. From 2009 to 2010, the annual revenues for the shark fisheries increased by $410,000, mainly due to an increase in fin price. Finally, the annual revenues for swordfish increased by $1 million from 2009 to 2010 due to an increase in price.

Table 5.3 Estimates of the Total Ex-vessel Annual Revenues of Atlantic HMS Fisheries. Sources: CFDBS, QMS, and NMFS 2011a.

Note: Average ex-vessel prices may have some weighting errors, except for BFT which is based on a fleet-wide average. *Weight and fishery revenue data updated since 2009 SAFE Report

Species		2003	2004	2005	2006	2007	2008	2009	2010
Bigeye tuna	Ex-vessel $/lb dw	$3.74	$4.19	$5.37	$4.92	$5.71	$5.63	$5.35	$5.22
	Weight lb dw	512,002	556,270	563,325	960,863	706,361	736,520	774,087	982,476
	Fishery Revenue	$1,914,887	$2,330,771	$3,025,055	$4,727,446	$4,033,321	$4,146,608	$4,141,365	$5,128,523
Bluefin tuna	Ex-vessel $/lb dw	$5.91	$7.86	$6.41	$8.51	$8.62	$9.33	$8.19	$6.93
	Weight lb dw	1,963,172	1,010,599	772,500	528,404	515,176	720,823	899,477*	1,119,937
	Fishery Revenue	$11,602,347	$7,943,308	$4,951,725	$4,496,718	$4,440,817	$6,725,279	$7,366,716*	$7,761,163
Yellowfin tuna	Ex-vessel $/lb dw	$2.07	$4.62	$2.92	$2.47	$2.98	$3.31	$2.68	$3.47
	Weight lb dw	4,172,204	4,999,908	3,379,951	3,849,095	4,521,240	2,423,498	3,159,665	2,712,187
	Fishery Revenue	$8,636,462	$23,099,575	$9,869,457	$9,507,265	$13,473,295	$8,021,778	$8,467,902	$9,411,289
Skipjack tuna	Ex-vessel $/lb dw	$1.31	$0.93	$1.15	$0.80	$1.21	$1.36	$0.97	$1.17
	Weight lb dw	230,163	307,942	26,103	21,693	26,455	32,628	30,688	113,669
	Fishery Revenue	$301,514	$286,386	$30,018	$17,354	$32,011	$44,374	$29,767	$132,993
Albacore tunas	Ex-vessel $/lb dw	$0.88	$1.57	$0.81	$0.85	$0.96	$1.15	$1.34	$1.35
	Weight lb dw	230,163	307,942	232,808	203,354	244,272	216,759	291,187	315,223
	Fishery Revenue	$202,543	$483,469	$188,574	$172,851	$234,501	$249,273	$390,191	$425,550
Total tuna	**Fishery Revenue**	$22,455,210	$33,660,040	$17,876,256	$18,748,783	$21,979,444	$18,938,039	$20,395,941*	$22,859,518
Swordfish	Ex-vessel $/lb dw	$3.11	$3.54	$3.62	$3.54	$4.02	$3.63	$3.45	$4.41
	Weight lb dw	4,658,997	4,301,003	3,466,728	3,002,597	3,643,926	3,414,513	3,762,280	3,173,739
	Fishery Revenue	$14,489,481	$15,225,551	$12,549,555	$10,629,193	$14,648,583	$12,394,682	$12,979,866	$13,996,189
Large coastal sharks	Ex-vessel $/lb dw	$0.58	$0.47	$1.18	$0.50	$0.76	$0.92	$0.59	$0.67
	Weight lb dw	4,292,403	3,213,896	3,147,196	3,808,662	2,329,272	1,363,021	1,513,201	1,543,644
	Fishery Revenue	$2,489,594	$1,510,531	$3,713,691	$1,904,331	$1,770,247	$1,253,979	$892,789	$1,034,241
Pelagic sharks	Ex-vessel $/lb dw	$0.92	$0.96	$1.19	$1.15	$1.13	$1.21	$1.17	$1.21
	Weight lb dw	637,324	679,469	252,815	192,843	262,179	234,546	225,575	299,366
	Fishery Revenue	$586,338	$652,290	$300,850	$221,769	$296,262	$283,801	$263,923	$362,233
Small coastal sharks	Ex-vessel $/lb dw	$0.44	$0.55	$0.54	$0.54	$0.58	$0.63	$0.64	$0.68
	Weight lb dw	534,523	451,651	634,885	763,327	618,191	623,848	667,815	367,768
	Fishery Revenue	$235,190	$248,408	$342,838	$412,197	$358,551	$393,024	$427,402	$250,082
Shark fins (5% of all sharks landed)	Ex-vessel $/lb dw	$12.92	$10.88	$12.76	$12.74	$9.61	$9.47	$9.49	$13.48
	Weight lb dw	273,213	217,251	201,745	238,242	160,482	111,071	120,330	110,539
	Fishery Revenue	$3,529,906	$2,363,689	$2,574,264	$3,035,198	$1,542,233	$1,051,840	$1,141,927	$1,490,066
Total sharks	**Fishery Revenue**	$6,841,027	$4,774,918	$6,931,643	$5,573,495	$3,967,293	$2,982,644	$2,726,040	$3,136,622
Total HMS	Fishery Revenue	$43,785,718	$53,660,509	$37,357,454	$34,951,471	$40,595,319	$34,315,365	$36,101,847*	$39,992,329

5.2 Fish Processing and Wholesale Sectors

Consumers spent an estimated $80.2 billion for fishery products in 2010, including $54.0 billion at food service establishments, $25.8 billion in retail sales for home consumption, and $432 million for industrial fish products. The commercial marine fishing industry contributed $41.4 billion (in value added) to the U.S. Gross National Product in 2010 (NMFS, 2010b). For comparison, in 1996 consumers spent an estimated $41.2 billion, including $27.8 billion at food service establishments, $13.2 billion for home consumption, and $283.9 billion for industrial fish products. The commercial marine fishing industry contributed $21.0 billion to the U.S. Gross National Product in 1996.

5.2.1 Dealers

NMFS does not currently have information regarding the costs and revenues for Atlantic HMS dealers. In general, dealer costs include: purchasing fish; paying employees to process the fish; rent or mortgage on the appropriate building; and supplies to process the fish. Some dealers may provide loans to the vessel owner, money for vessel repairs, fuel, ice, bait, etc. In general, outlays and revenues of dealers are not as variable or unpredictable as those of a vessel owner; however, dealer costs may fluctuate depending upon supply of fish, labor costs, and equipment repair.

Although NMFS does not have specifics regarding HMS dealers, there is some information on the number of employees for processors and wholesalers in the United States provided in *Fisheries of the United States* (NMFS, 2010b) (http://www.st.nmfs.noaa.gov/st1/publications.html). Table 5.4 provides a summary of available information.

Table 5.4 Processors and Wholesalers: Plants, and Employment, 2009

Area and State	Processing (1)		Wholesale (2)		Total	
	Plants	Employment	Plants	Employment	Plants	Employment
	----------Number----------					
New England:						
Maine	36	804	172	936	208	1,740
New Hampshire	9	257	12	(3)	21	257
Massachusetts	55	2,774	165	2,001	220	4,775
Rhode Island	10	(3)	35	(3)	45	(3)
Connecticut	6	73	17	178	23	251
Total	**116**	**3,908**	**401**	**3,115**	**517**	**7,023**
Mid-Atlantic:						
New York	19	380	274	1,898	293	2,278
New Jersey	15	494	94	1,066	109	1,560
Pennsylvania	4	(3)	30	554	34	554
Delaware	1	(3)	7	22	8	22
District of Columbia	-	-	4	(3)	4	(3)
Maryland	20	545	47	491	67	1,036
Virginia	45	1,551	60	494	105	2,045
Total	**104**	**2,970**	**516**	**4,525**	**620**	**7,495**
South Atlantic:						
North Carolina	28	603	63	556	91	1,159
South Carolina	1	(3)	19	125	20	125
Georgia	5	493	31	462	36	955
Florida	34	1,385	274	2,564	308	3,910
Total	**68**	**2,442**	**387**	**3,707**	**455**	**6,149**
Gulf:						
Alabama	34	1,591	15	176	49	1,767
Mississippi	24	2,853	22	101	46	2,954
Louisiana	71	2,113	103	520	174	2,241
Texas	31	1,385	91	856	122	2,241
Total	**160**	**7,942**	**231**	**1,653**	**391**	**9,595**
Inland States or Other						
Areas: (4), Total	**60**	1,945	**221**	**2,847**	**281**	**4,792**

(1) Data are based on North American Industry Classification System (NAICS) 3117 as reported to the Bureau of Labor Statistics.
(2) Data are based on North American Industry Classification System (NAICS) 42446 as reported to the Bureau of Labor Statistics.
(3) Included with Inland States.
(4) Includes Puerto Rico and Virgin Islands

5.2.2 Processing Sector

NMFS does not collect wholesale price information from dealers. The Agency did collect annual report information from the Fulton Fish Market, however that data series was discontinued in 2004.

NMFS has information regarding the mark-up percentage paid by consumers. A mark-up or margin is the difference between the price paid for the product by the consumer and the wholesale or dockside value for an equivalent weight of the product. This information is

presented in Table 5.5. Primary wholesalers and processors on average received a 114.7 percent margin on sales in 2010, down from 126 percent in 2009.

Table 5.5 Summary of the Mark-Up and Consumer Expenditures for the Primary Wholesale and Processing of Domestic Commercial Marine Fishery Products. Source: NMFS 2010b.

	2009	2010
Purchase of fishery inputs	$7,000,518,000	$8,128,293,000
Percent mark-up of fishery inputs	126.0%	114.7%
Total mark-up	$6,675,397,000	$9,326,111,000
Value added as percent of total mark-up	60.2%	60.2%
Value added within sector	$5,311,542,000	$5,618,427,000
Total value of sales within sector	**$15,822,199,000**	**$17,454,404,000**

5.3 International Trade

5.3.1 Overview of International Trade for Atlantic HMS

Several RFMOs, including ICCAT, have taken steps to improve the collection of international trade data to further international conservation policy for the management of HMS. While RFMOs cannot re-create information about stock production based on trade data, this information can be used provisionally to estimate landings related to these fisheries, and to identify potential compliance problems with certain RFMO management measures. This section describes United States participation in HMS related international trade programs, a review of U.S. HMS export activity, import activity, and data use.

The United States collects general trade monitoring data through the U.S. Bureau of Customs and Border Protection (CBP; imports) and the U.S. Bureau of the Census (Census Bureau; exports and imports). These programs collect data on the amount and value of imports and exports categorized under the Harmonized Tariff Schedule (HTS). Many HMS have distinct HTS codes, and some species are further subdivided by product (*e.g.*, fresh or frozen, fillets, steaks, etc.). NMFS provides Census Bureau trade data for marine fish products online for the public at http://www.st.nmfs.gov/st1/trade/index.html. Some species are combined into groups (*e.g.*, sharks), which can limit the value of these data for fisheries management when species-specific information is required. Often the utility of these data are further limited if the ocean area of origin for each product is not distinguished. For example, the HTS code for Atlantic, Pacific, and Indian Ocean bigeye tuna is the same.

Trade data for Atlantic HMS are more useful as a conservation tool when they include more detailed information, such as the flag of the harvesting vessel, the ocean of origin, and the species for each transaction. Under the authority of ATCA and the Magnuson-Stevens Act, NMFS collects this more detailed information through catch and statistical document programs while monitoring international trade of BFT, swordfish, southern BFT, and frozen bigeye tuna.

These trade programs implement ICCAT recommendations and support rebuilding efforts by collecting data necessary to identify nations and individuals that may be fishing in a manner that diminishes the effectiveness of ICCAT fishery conservation and management measures (Section 1.1.3). In support of these programs, NMFS implemented the HMS International Trade Permit (ITP) in 2005 (69 FR 67268, November 17, 2004) to identify importers and exporters of HMS products that require trade monitoring documentation. Traders of shark fins must also be permitted. Copies of the ITP application and all trade monitoring documents associated with these programs are found on the NMFS HMS Management Division webpage at http://www.nmfs.noaa.gov/sfa/hms/. These and several other trade monitoring programs established by NMFS for HMS are described in greater detail below.

Table 5.6 Number of International Trade Permits (ITP) by state as of November 2011.

State	Number of ITPs
CA	68
CT	1
DC	1
FL	57
GA	2
HI	13
IL	1
KS	1
LA	2
MA	34
MD	2
ME	7
MP	1
NC	3
NH	1
NJ	11
NY	24
OH	1
OR	1
PA	0
PR	0
RI	5
TX	5
VA	3
WA	10
TOTAL	**241**

5.3.1.1 Bluefin Tuna Catch Document

In 2007, ICCAT adopted a rigorous BFT catch document (BCD) program (Recommendation 07-10) which tracks BFT from capture, through farming operations, landing, and trade. NMFS implemented the program in July 2008 (73 CFR 31380; June 2, 2008). Updates to the program were included in ICCAT recommendations 08-12, 09-11, and 11-20. The intent of the program is to support the ICCAT rebuilding program by accounting for all BFT harvested and available in the marketplace, or held in cages. Previous to the BCD program, the trade of BFT was tracked internationally under ICCAT's BFT Statistical Document (BSD) program (Recommendation 92-01).

All CPCs to ICCAT are required to generate a BCD at the harvest of a BFT, including live BFT bound for capture related aquaculture. In the United States, BFT are tagged when landed, and landing data associated with the tag number is transmitted to NMFS within 24 hours. The tag stays on the fish until it is cut up into portions to be consumed, and the associated landings data can be retrieved at any time by referencing the tag number. If a BFT is exported, then a BCD document must accompany the export, and remains with the tagged fish until it is consumed abroad. All exporters must be permitted with a HMS ITP as described above.

BFT that are imported into the United States must also be accompanied by a BCD. Importers are first required to obtain an HMS ITP from NMFS, and must report any imports of BFT to NMFS. NMFS routinely consults import data generated by CBP to check against BCD data and ensure that importers are abiding by BCD and other NMFS regulations implementing ICCAT recommendations.

5.3.1.2 Swordfish Statistical Document

On March 17, 2005, the ICCAT swordfish statistical document (SD) program was implemented by the United States (69 FR 67268, November 17, 2004) to replace the previously used Certificate of Eligibility. The swordfish SD program is based on a 2001 ICCAT recommendation (01-22), and ensures that all imported swordfish are greater than the minimum size of 14.9 kg (33 lb) dw, and identifies the flag of the harvesting vessel and ocean area of origin. Similar to the BCD program, CBP data on swordfish imports is used to obtain missing data and identify dealers that are not following the required reporting procedures.

5.3.1.3 Bigeye Tuna Statistical Document

Like the two previous trade monitoring programs discussed above, the bigeye tuna SD program is used to track movement of internationally traded bigeye tuna to its final destination. ICCAT recommended the implementation of a bigeye tuna SD program in 2001 (Recommendation 01-21). The initial program was implemented in 2005 along with the swordfish SD, and applies only to frozen bigeye tuna. It may be expanded to cover fresh product in the future. Other RFMOs, including the Inter-American Tropical Tuna Commission and the Indian Ocean Tuna Commission, have also adopted frozen bigeye SD programs that have been implemented by the United States.

5.3.1.4 Dolphin-safe Tuna Imports

For every shipment of frozen or processed tuna imported into the United States, a completed Fisheries Certificate of Origin (NOAA Form 370) is required to be submitted at the time of importation. In some cases, an additional certification signed by a representative of a nation participating in the International Dolphin Conservation Program or a Captain's Statement is required to accompany the NOAA Form 370. Since the late 1970s, NOAA Form 370 has been used to document imports of frozen or processed yellowfin tuna and other species of tuna for the purpose of protecting dolphins in the Eastern Tropical Pacific Ocean. Form 370 is filed with other documents necessary for entry of tuna into the United States. The form is *not* required for fresh tuna. Further information is available on the website http://dolphinsafe.gov/.

5.3.1.5 Billfish Certificate of Eligibility

The Billfish Certificate of Eligibility is used to ensure that any billfish being imported or sold in the United States (outside of the Pacific states) is not of Atlantic origin. In the Pacific states, billfish involved in trade are presumed to be of Pacific origin. Any statement that contains the specified information is sufficient to meet the certificate of eligibility documentation requirements, and it needs to be available upon request throughout the entire commerce stream, including at time of consumption at a restaurant. It is not necessary to use the form available from NMFS or to submit the form to NMFS upon final disposition of the billfish

5.3.1.6 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

CITES is an international agreement that regulates the global trade in endangered plants and wildlife. The goal of CITES is to protect and regulate species of animals and plants to ensure that commercial demand does not threaten their survival in the wild. Countries cooperate through a system of permits and certificates to confirm that trade is legal. Species listed on Appendix II are those that are vulnerable to overexploitation, but not at risk of extinction. In every case of an import or export of an Appendix II species, an export/import permit may only be issued if, the export/import will not be detrimental to the survival of the species, the specimen was legally acquired (in accordance with the national wildlife protection laws) and any live specimen will be shipped in a manner which will not cause it any damage. Currently there are three species of sharks listed on Appendix II, whale, basking and great white sharks. Species listed on Appendix I are considered to be at risk of extinction, and are prohibited from international commercial trade, except in special circumstances.

The United States proposed that six shark species be listed in Appendix II, for consideration at the fifteenth meeting of the Conference of the Parties to CITES (CoP15) held during March 2010 in Doha, Qatar. The proposed species were oceanic whitetip shark (*Carcharhinus longimanus*) and scalloped hammerhead (*Sphyrna lewini*); along with "look alike" species great hammerhead (*S. mokarran*); smooth hammerhead (*S. zygaena*); dusky shark (*C. plumbeus*); and sandbar shark (*C. obscurus*). The United States submitted these proposals due to concerns that over-exploitation to supply the international fin trade is negatively impacting the population status of these sharks, as the fins of these six shark species are among the most valuable in trade. These proposals were defeated at CoP15.

In October 2009, Monaco submitted, and the U.S. supported, a proposal to list Atlantic BFT in Appendix I of CITES; however it was not adopted at CoP15. NMFS, in conjunction with the U.S. Fish and Wildlife Service, is in the process of evaluating which species proposals, if any, will be put forward and/or supported at CoP16.

5.3.2 U.S. Exports of HMS

"Exports" may include merchandise of both domestic and foreign origin. The Census Bureau defines exports of "domestic" merchandise to include commodities which are grown, produced, or manufactured in the United States (*e.g.*, fish caught by U.S. fishermen). For statistical purposes, domestic exports also include commodities of foreign origin which have been altered in the United States from the form in which they were imported, or which have been enhanced in value by further manufacture in the United States. The value of an export is the f.a.s. (free alongside ship) value defined as the value at the port of export based on a transaction price including inland freight, insurance, and other charges incurred in placing the merchandise alongside the carrier. It excludes the cost of loading the merchandise, freight, insurance, and other charges or transportation costs beyond the port of exportation.

5.3.2.1 Atlantic and Pacific Bluefin Tuna Exports

As discussed in the previous section, NMFS collects detailed export data on BFT (Atlantic and Pacific) through the BCD program. Table 5.7 gives BFT export data for exports from the United States since 2000 and includes data from the NMFS BCD program, and Census Bureau data. Census Bureau data are consistently greater in value than data reported by the BCD program. This has been determined to be a result of NMFS' additional quality control measures that ensure data for other species (*e.g.*, Southern BFT) or other transaction types (*e.g.*, re-exports) are not erroneously included with BFT export data. BFT re-export data are listed separately later in this section (Table 5.8).

Table 5.7 United States Exports of Atlantic and Pacific Bluefin Tuna (BFT), 2000-2010. Sources: NMFS BCD Program, NERO, and Census Bureau.

Year	Atlantic Commercial Landings (NERO, MT, DW)	Atlantic BFT Exports (BCD, MT, DW)	Pacific BFT Exports (BCD, MT, DW)	Total U.S. Exports (BCD, MT, DW)	Total U.S. Exports (Census Bureau, MT)	Value of U.S. Exports (Census Bureau, $ million)
2000	903.9	758.0	76.0	834.0	1,044	11.20
2001	987.0	812.3	67.0	879.0	1,020	10.70
2002	964.0	730.4	0.1	730.5	922	10.74
2003	756.9	578.7	2.1	580.8	998	11.36
2004	428.6	247.3	0.0	247.3	370	4.50
2005	419.4	245.7	125.1	370.8	454	5.30
2006	204.6	93.1	0.0	93.1	281	3.60
2007	196.4	85.4	8.2	93.6	238	2.90
2008	266.4	146.5	0.0	146.5	177	2.49

Year	Atlantic Commercial Landings (NERO, MT, DW)	Atlantic BFT Exports (BCD, MT, DW)	Pacific BFT Exports (BCD, MT, DW)	Total U.S. Exports (BCD, MT, DW)	Total U.S. Exports (Census Bureau, MT)	Value of U.S. Exports (Census Bureau, $ million)
2009	408.5	236.2	0.0	236.2	300	4.05
2010	509.5	334.2	0.0	334.2	346	4.90

Note: most exports of Pacific BFT were in round (whole) form, although some exports were of dressed and gilled/gutted fish; Atlantic exports were almost entirely dressed, but also included whole and other product forms (dw); data are preliminary and subject to change.

In the time series shown in Table 5.7 and depicted in Figure 5.2, U.S. exports of Atlantic BFT generally increased when commercial landings increased, while domestic consumption of U.S. landings remained fairly constant from year to year. Most U.S. BFT exports are destined for the sushi markets in Japan. As shown in Figure 5.2 and Figure 5.3, the percentage of the commercial U.S. BFT catch that was exported was lowest when landings declined to their lowest point, from 2006 to 2008.

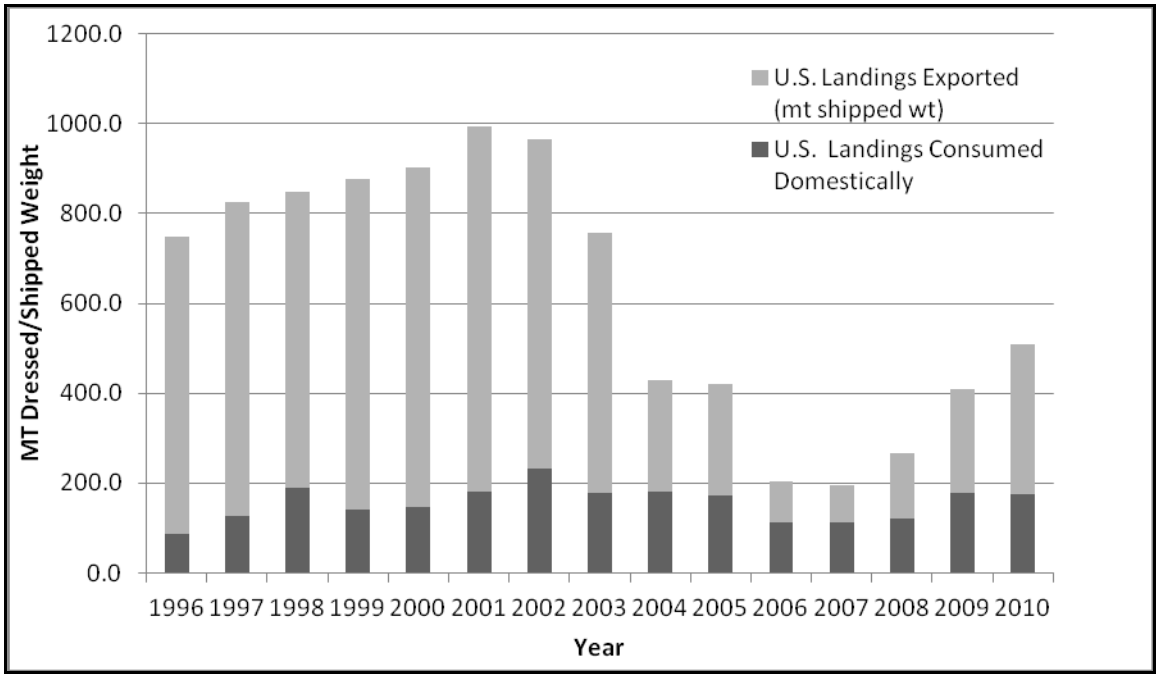

Figure 5.2 Total Annual U.S. Domestic Landings (mt dressed weight) for Atlantic Bluefin Tuna Divided into U.S. Exports (mt shipped weight) and Domestic Consumption.

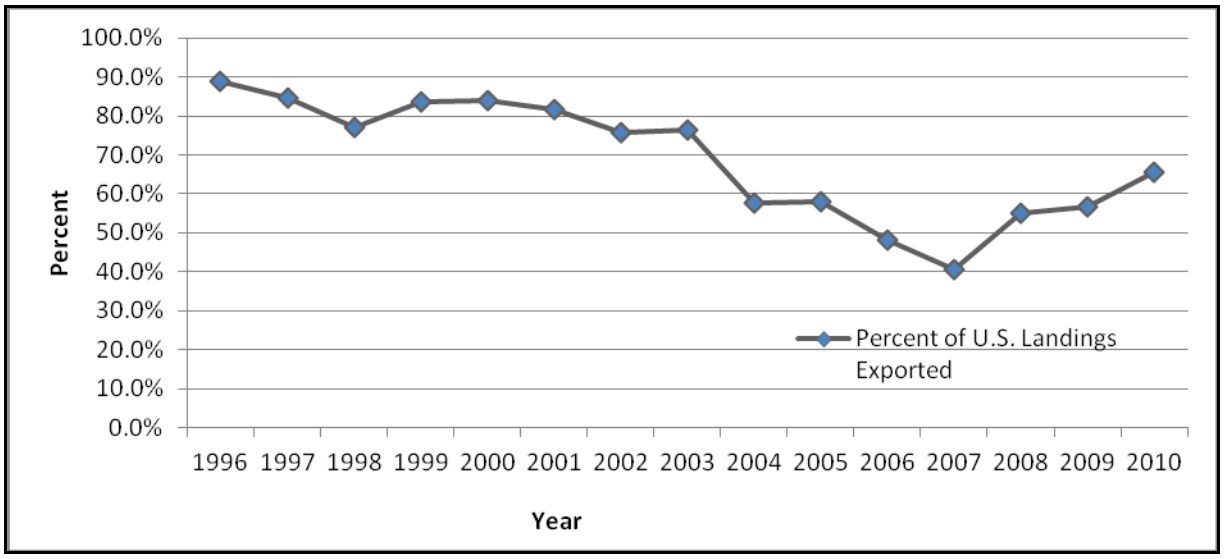

Figure 5.3 Annual Percentage (by weight) of Commercially Landed U.S. Atlantic Bluefin Tuna that Was Exported.

5.3.2.2 Other Tuna Exports

Export data for other tunas is gathered by the Census Bureau, and includes trade data for albacore, yellowfin, bigeye, and skipjack tuna from all ocean areas of origin combined. In 2001, albacore tuna was the most valuable tuna export from the United States (Table 5.8), according to Census Bureau information.

The value of annual albacore exports has exceeded the value for any other tuna export for the same year since 2003. The total value of albacore exports has remained over $20 million per year for seven of the last eight years. Most albacore exports are Pacific in origin, as Atlantic landings have ranged between 188 mt and 640 mt during the time series in Table 5.8, but total U.S. exports has ranged from 12,097 mt to a low of 3,010 mt. Landings of Atlantic albacore over the last three years have been the lowest of the time series (except for 2001).

Table 5.8 Amount and Value of U.S. Exports of Fresh or Frozen Albacore Tuna from All Ocean Areas, 2000 - 2010 (Census Bureau data) and U.S. Landings of North Atlantic Albacore Tuna (2011 U.S. National Report to ICCAT).

Year	Atlantic Landings (mt ww)	**U.S. Exports** (from all ocean areas)					
		Fresh		Frozen		Total for all Exports	
		MT	US$ (million)	MT	US$ (million)	MT	US$ (million)
2000	407	263	0.78	2,747	6.04	3,010	6.83
2001	324	1,542	3.62	4,609	9.83	6,151	13.45
2002	488	680	1.50	4,483	8.28	5,163	9.78
2003	448	894	1.86	9,731	18.85	10,624	20.71
2004	640	1,360	3.28	10,737	24.11	12,097	27.38
2005	486	549	1.61	7,402	16.99	7,951	18.60
2006	400	378	1.04	8,810	19.56	9,187	20.60

Year	Atlantic Landings (mt ww)	**U.S. Exports** (from all ocean areas)					
		Fresh		**Frozen**		**Total for all Exports**	
		MT	**US$ (million)**	**MT**	**US$ (million)**	**MT**	**US$ (million)**
2007	532	275	0.84	11,731	25.52	12,006	26.35
2008	248	997	2.69	7,958	22.54	8,955	25.23
2009	188	417	1.02	9,903	22.58	9,510	23.60
2010	329	1269	3.25	8528	23.31	9,798	26.56

Note: Landings may be calculated on a calendar or fishing year basis; exports may be in whole (ww) or product weight (dw); data are preliminary and subject to change.

Table 5.9 and Table 5.10 show U.S. Atlantic landings and U.S. exports from all ocean areas combined for yellowfin and skipjack tuna, respectively. Yellowfin exports were greater and more valuable than exports for skipjack or bigeye tuna (Table 5.11). Yellowfin tuna exports were unusually high in 2008. The amount of fresh yellowfin product exported usually exceeds the amount of frozen yellowfin product annually. However, export of frozen product was much higher in 2008 than any other year included in Table 5.9. Table 5.10, the amount and value of exported fresh and frozen skipjack tuna has varied over the eleven year period with no discernable trends. Exports of skipjack in 2009 greatly exceeded values for any of the previous years in the time series.

Table 5.9 Amount and Value of U.S. Exports of Fresh or Frozen Yellowfin Tuna from All Ocean Areas, 2000-2010 (Census Bureau data) and U.S. Landings of Atlantic Yellowfin Tuna (*2011 U.S. National Report to ICCAT).*

Year	Atlantic Landings (mt ww)	**U.S. Exports** (from all ocean areas)					
		Fresh		**Frozen**		**Total for all Exports**	
		MT	**US$ (million)**	**MT**	**US$ (million)**	**MT**	**US$ (million)**
2000	7,051	412	1.12	406	.76	819	1.89
2001	6,703	290	.71	834	1.45	1,124	2.17
2002	5,646	1612	2.37	420	.81	2,033	3.19
2003	7,685	1792	2.93	176	.68	1,968	3.62
2004	6,437	306	1.54	242	.31	549	1.86
2005	5,562	158	1.70	291	.97	449	2.67
2006	7,090	183	1.96	108	.37	291	2.32
2007	5,529	148	1.75	138	.44	286	2.19
2008	2,407	198	2.09	4,140	9.06	4,338	11.16
2009	2,802	221	2.51	274	.66	495	3.17
2010	2,648	211	2.31	70	.33	281	2.64

Note: Landings may be calculated on a calendar or fishing year basis; exports may be in whole (ww) or product weight (dw); data are preliminary and subject to change.

Table 5.10 Amount and Value of U.S. Exports of Fresh or Frozen Skipjack Tuna from All Ocean Areas, 2000-2010 (Census Bureau data) and U.S. Landings of West Atlantic Skipjack Tuna (*2011 U.S. National Report to ICCAT)*.

Year	Atlantic Landings (mt ww)	**U.S. Exports** (from all ocean areas)					
		Fresh		Frozen		Total for all Exports	
		MT	US$ (million)	MT	US$ (million)	MT	US$ (million)
2000	44	7	.01	83	.05	91	.06
2001	69	82	.15	34	.04	117	.20
2002	66	66	.17	11	.01	77	.18
2003	77	81	.22	0	0	81	.22
2004	102	55	.30	140	.18	196	.48
2005	30	35	.14	-	-	35	.14
2006	61	6	.02	23	.04	30	.06
2007	66	17	.06	77	.12	94	.18
2008	67	31	.15	350	.41	381	.56
2009	119	206	.54	530	.71	737	1.25
2010	55	194	.57	126	.17	319	.73

Note: Landings data may have been ported on either a fishing year or calendar year basis; exports may be in whole (ww) or product weight (dw); data are preliminary and subject to change.

Bigeye tuna exports and Atlantic landings are given in Table 5.11. No data were available for bigeye tuna exports in 2001, and prior to 2001 bigeye exports were included in the category of unspecified tuna. Annually, bigeye tuna exports include more fresh than frozen product, except in 2008 when export of frozen product increased dramatically. The value of bigeye exports in 2010 is tied with 2005 for the second highest in the time series.

Table 5.11 Amount and Value of U.S. Exports of Fresh or Frozen Bigeye Tuna from All Ocean Areas, 2002-2010 (Census Bureau data) and U.S. Landings of Atlantic Bigeye Tuna (*2011 U.S. National Report to ICCAT)*.

Year	Atlantic Landings (mt ww)	**U.S. Exports** (from all ocean areas)					
		Fresh		Frozen		Total for all Exports	
		MT	US$ (million)	MT	US$ (million)	MT	US$ (million)
2002	600	95	.22	8	.01	104	.24
2003	480	255	.47	40	.08	295	.56
2004	419	361	1.40	48	.10	410	1.51
2005	484	431	1.95	50	.12	481	2.07
2006	991	223	1.69	76	.20	299	1.89
2007	523	128	1.38	65	.14	193	1.52
2008	489	145	1.72	318	.96	462	2.68
2009	516	121	1.53	78	.19	199	1.72
2010	673	141	1.96	37	.11	179	2.07

NOTE: Landings data may have been reported on either a fishing year or calendar year basis; exports may be in whole (ww) or product weight (dw); data are preliminary and subject to change.

5.3.2.3 Shark Exports

Export data for sharks are gathered by the Census Bureau, and include trade data for sharks from any ocean area of origin. Shark exports are not categorized to the species level, with the exception of dogfish, and are not identified by specific product code other than fresh or frozen meat and fins. Due to the popular trade in shark fins and their high relative value compared to shark meat, a specific Harmonized Tariff Schedule code was assigned to shark fins in 1998. It should be noted that there is no tracking of other shark products besides meat and fins. Therefore, NMFS cannot track trade in shark leather, oil, or shark cartilage products.

Table 5.12 indicates the magnitude and value of shark exports by the United States from 2000 – 2010. The reduction in shark fin exports from 2000 to 2003 is of particular note, as is the increase in the unit value of shark fins during this time period. Decreases in shark fin trade were expected as a result of the Shark Finning Prohibition Act, which was enacted in December of 2000 and implemented by final rule on February 11, 2002 (67 FR 6194). Exports of shark fins were at a low in 2008 (11 mt) but have increased since then. Also of note is the dramatic increase in export of frozen shark products in 2008.

Table 5.12 Amount and Value of U.S. Shark Product Exported from 2000-2010. Source: Census Bureau.

Yr	Shark Fins Dried			Non-specified Fresh Shark			Non-specified Frozen Shark			Total for all Exports	
	MT	US$ (million)	$/KG	MT	US$ (million)	$/KG	MT	US$ (million)	$/KG	MT	US$ (million)
2000	365	3.51	9.62	430	.78	1.82	345	.81	2.35	1,140	5.10
2001	335	3.16	9.44	332	.54	1.64	634	2.34	3.69	1,301	6.04
2002	123	3.46	28.00	968	1.47	1.52	982	2.34	2.38	2,075	7.28
2003	45	4.03	87.79	837	1.31	1.57	592	1.34	2.28	1,476	6.70
2004	63	3.02	47.53	536	1.18	2.21	472	.98	2.09	1,071	5.18
2005	31	2.37	76.93	377	1.03	2.73	494	1.06	2.15	902	4.46
2006	34	3.17	94.66	816	1.62	1.99	747	1.38	1.85	1,597	6.17
2007	19	1.78	93.68	502	1.05	2.09	695	1.35	1.94	1,216	4.18
2008	11	0.69	63.00	559	1.21	2.16	4122	7.21	1.75	4,692	9.11
2009	56	2.82	50.36	254	.72	2.83	320	1.33	4.16	630	4.87
2010	36	2.89	80.28	222	.67	3.02	244	.52	2.11	502	4.08

Note: Exports may be in whole (ww) or product weight (dw); data are preliminary and subject to change.

5.3.2.4 Swordfish Exports

U.S. Census data only report exports of swordfish for the last 4 years (2007 through 2010) (Table 5.13). The low cost and year round availability of swordfish imports into the United States are believed to have reduced the marketability of U.S. domestic swordfish, and created an export market for U.S. product in recent years.

Table 5.13 Amount and Value of U.S. Swordfish Product Exported from 2007-2010.
Source: Census Bureau

Yr	Swordfish Fillet Fresh		Swordfish Fillet Frozen		Swordfish Fresh		Swordfish Frozen		Swordfish Meat Frozen		Total	
	MT	US$ (mill.)	MT	US$ (mill.)	MT	US$ (mill.)	MT	US$ (mill.)	MT	US$ (mill.)	MT	US$ (mill.)
2007	38	.33	11	.08	135	.91	11	.04	216	.69	412	2.1
2008	24	.25	48	.34	121	.89	1.2	.01	154	.88	349	2.4
2009	43	.38	19	.23	133	.81	12.1	.04	24	.13	231	1.6
2010	98	.71	16	.15	134	.78	.60	.01	3	.02	252	1.7

5.3.2.5 Re-exports of Atlantic HMS

For purposes of international trade tracking of HMS, the term "re-export" refers to a product that has been entered for consumption into the United States and then exported to another country, with or without further processing in the United States (from 50 CFR Part 300, Subpart M, International Trade Documentation and Tracking Programs for HMS). For most HMS species for most years, re-export activity is a small fraction of export activity and well below relative reference points of 1000 mt and/or one million dollars annually. Annual re-export figures in excess of these relative reference points are given in Table 5.14

In previous editions of SAFE reports, BFT re-exports for 2003-2005 reflected a great deal of transshipment from Mexico through the United States to Japan. Implementation of the HMS ITP regulations in 2005 (69 FR 67268, November 17, 2004) changed the way re-exports and transshipments were distinguished. Table 5.15 shows re-exports of BFT since 2000, and is updated to reflect these changes for previous years. Re-exports of BFT in 2010 were particularly high.

Table 5.14 Re-exports for HMS (see Table 5.15 for bluefin tuna) over the Reference Points of 1000 mt and/or One Million U.S. Dollars, Annually from 2000 - 2010. (Census Bureau data).

Year	Product	Amount (MT)	Value ($ mill.)
2004	Shark fins, dried	29	1.84
2005	Yellowfin tuna, fresh	123	2.30
2005	Shark fins, dried	34	1.53
2006	Yellowfin tuna, fresh	208	2.62
2007	Yellowfin tuna, fresh	208	2.91
2007	Yellowfin tuna, frozen	506	1.80
2008	Yellowfin tuna, fresh	224	3.40
2008	Shark fins, dried	26	1.37
2009	Yellowfin tuna, fresh	162	2.18
2010	Yellowfin tuna, fresh	130	1.88
2010	Yellowfin tuna, frozen	340	1.12

5.3.2.6 Summary of Atlantic HMS Exports

As indicated in the previous section, the value of HMS exports (from all ocean areas combined) is nationally dominated by tuna products. In 2010, fresh and frozen tuna products accounted for 17,391 mt dw or 1.7 percent of the 1,109,789 mt dw of fresh and frozen seafood products exported from the United States, as indicated in *Fisheries of the United States, 2010.* The value of these HMS products accounted for $61.5 million, out of a national total of $3.7 billion.

Data reflecting international trade of HMS species harvested from all ocean areas are of limited value for describing trade of HMS harvested from the Atlantic Ocean. For example, Atlantic landings of albacore tuna (commercial and recreational) for 2010 were reported in the 2011 U.S. National Report to ICCAT as 329 mt (Table 5.8). National trade data show that over 9,798 mt of albacore were exported in 2010 (Table 5.8), indicating the majority of albacore exports were Pacific Ocean product. Trade tracking programs such as the BFT, swordfish, and bigeye tuna consignment document programs are more accurate for tracking the international disposition of Atlantic HMS.

5.3.3 U.S. Imports of HMS

All import shipments must be reported to the CBP. “General” imports are reported when a commodity enters the country, and "consumption" imports consist of entries into the United States for immediate consumption combined with withdrawals from CBP bonded warehouses. “Consumption” import data reflect the actual entry of commodities originating outside the United States into U.S. channels of consumption. As discussed previously, CBP data for certain

products are provided to NMFS for use in implementing consignment document programs. U.S. Census Bureau import data are used by NMFS as well.

5.3.3.1 Atlantic and Pacific Bluefin Tuna Imports

United States imports and re-exports of BFT for 2000 through 2010, as reported through both CBP and BCD program data, are shown in Table 5.15. The difference in import numbers between the CBP and BCD data may be explained by imports of other species (e.g., Southern BFT) erroneously included under the BFT HTS code, or, a lack of knowledge and compliance with the BCD program by importers.

Table 5.15 Imports of Atlantic and Pacific Bluefin Tuna into the United States: 2000 - 2010. Sources: NMFS BCD program and CBP data.

YEAR	NMFS BCD Program		U.S. CBP Data	
	Imports (MT)	Re-exports (MT)	Imports (MT)	VALUE (US$ mill.)
2000	431.5	29.7	453.4	7.67
2001	512.9	7.0	532.3	8.21
2002	529.8	9.9	605.0	9.75
2003	649.9	38.4	780.3	11.67
2004	823.4	17.1	886.1	15.25
2005	966.1	10.4	1,064.0	19.96
2006	791.5	18.5	865.2	17.05
2007	584.6	17.7	697.1	13.97
2008	412.7	16.8	487.1	11.91
2009	407.7	33.6	476.8	10.29
2010	569.5	61.6	682.5	15.75

Note: Most imports of BFT were in dressed form, and some were round and gilled/gutted fish, fillets or belly meat (dw); data are preliminary and subject to change. Southern BFT trade was included in figures for Atlantic and Pacific BFT trade prior to 2002.

The rise in popularity of sashimi in the United States may have generated the increase in imports of BFT seen in Table 5.15. Dealers have reported an expanded domestic market for both locally-caught and imported raw tuna during the early part of the current decade. U.S. consumption of BFT (landings + imports – exports – re-exports) generally increased from 1996 through 2005, and has generally declined since then (Figure 5.4). Consumption of domestic landings was fairly consistent and ranged between about 100 mt to 200 mt per year. Consumption of imported BFT is more variable and ranged from a low in 1997 of less than 50 mt to a high in 2006 of almost 700 mt.

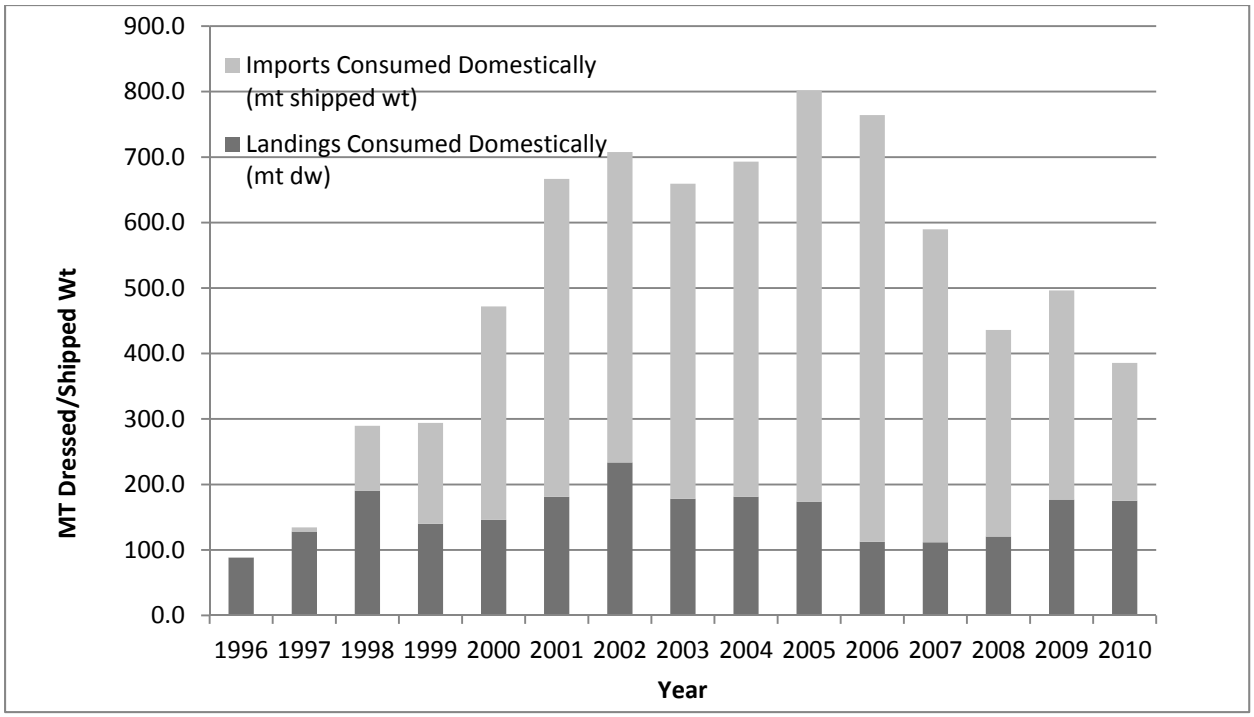

Figure 5.4 United States annual consumption of bluefin tuna from 1996 through 2010. Annual U.S. imports, re-exports, exports (mt shipped wt) and landings (mt dressed weight) are also depicted. Consumption equals landings + imports – exports – re-exports.

Figure 5.5 shows U.S. trade of BFT since 1996. From 2004 through 2009, the United States imported more BFT than it exported. This trade gap was greatest in 2006, but narrowed over the last several years and ended in 2010.

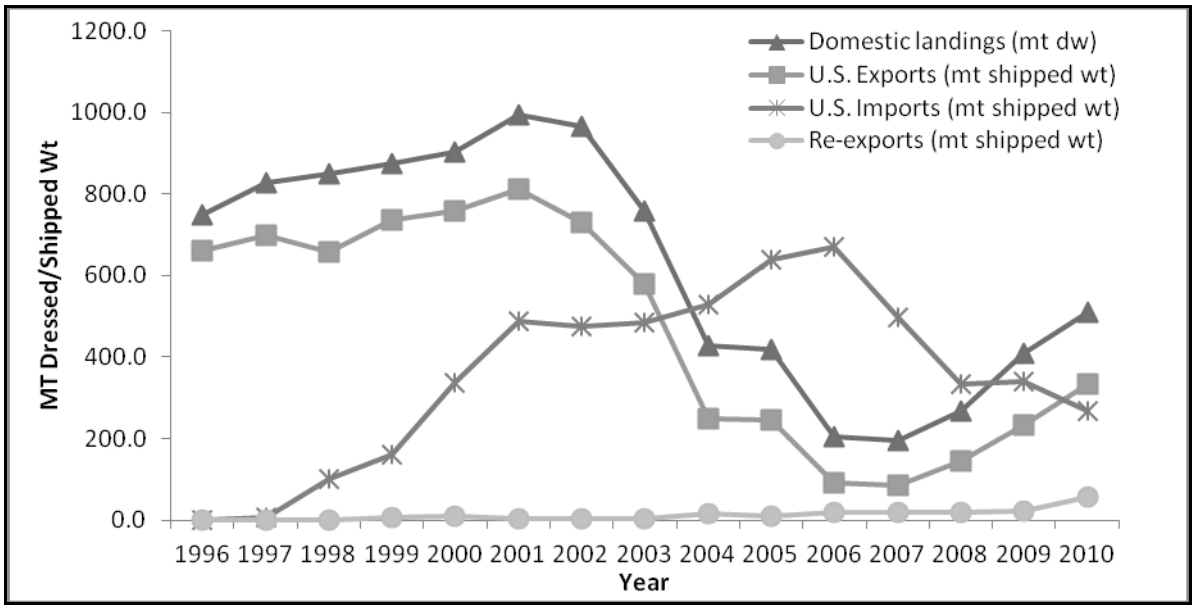

Figure 5.5 United States trade of BFT (MT shipped wt) and domestic landings (MT dressed wt), from 1996 through 2010.

5.3.3.2 Other Tuna Imports

Since January 2001, CBP has been collecting species-specific import information for bigeye tuna (grouped to include all ocean areas). Previously, bigeye tuna had been grouped with other tuna under general tuna imports. The total amount of bigeye tuna imports has ranged between 4,340 and 8,059 mt over the last ten years, as shown in Table 5.16. Since 2000, imports of frozen bigeye tuna were greatest in 2008. Imports of all bigeye products in Table 5.16 were the lowest of the time series in 2010.

Table 5.16 Imports of Fresh or Frozen Bigeye Tuna into the United States from All Ocean Areas Combined: 2001-2010. Source: Census Bureau data.

Year	Fresh		Frozen		Total for all Imports	
	MT	US$ (million)	MT	US$ (million)	MT	US$ (million)
2001	4,684	25.70	135	.32	4,820	26.02
2002	6,312	39.84	319	.70	6,632	40.55
2003	7,312	51.01	560	1.48	7,872	52.49
2004	6,752	49.10	1,175	2.62	7,928	51.73
2005	5,040	38.18	1,539	3.33	6,579	41.51
2006	4,920	36.55	1,523	3.15	6,442	39.70

Year	Fresh		Frozen		Total for all Imports	
	MT	US$ (million)	MT	US$ (million)	MT	US$ (million)
2007	5,617	42.30	1,512	3.19	7,129	45.49
2008	5,462	41.43	2,597	5.31	8,059	46.74
2009	5,459	41.72	1,125	2.36	6,584	44.08
2010	4,024	32.39	315	.73	4,340	33.11

Note: Imports may be whole weight (ww) or product weight (dw); data are preliminary and subject to change.

Annual yellowfin tuna imports into the United States for all ocean areas combined are given in Table 5.17. As indicated by the data in this section, yellowfin tuna are imported in the greatest quantity of all fresh and frozen tuna products. The annual value and total amount of yellowfin imports had generally increased from 2000 to 2007 and have been lower since then. Most imported yellowfin products are fresh. The least amount of frozen product during this time series was imported in 2010.

Table 5.17 Imports of Fresh or Frozen Yellowfin Tuna into the United States from All Ocean Areas Combined: 2000 - 2010. Source: Census Bureau data.

Year	Fresh		Frozen		Total for all Imports	
	MT	US$ (million)	MT	US$ (million)	MT	US$ (million)
2000	13,153	70.27	3,290	18.73	16,443	89.00
2001	15,563	85.50	3,967	23.45	19,530	108.95
2002	15,966	95.22	4,619	29.31	20,585	124.53
2003	15,299	94.03	5,579	39.67	20,878	133.71
2004	15,624	99.41	5,833	35.35	21,457	134.96
2005	17,064	116.58	6,002	46.89	23,066	163.47
2006	17,792	126.47	5,442	42.78	23,234	169.25
2007	17,985	137.42	5,506	44.26	23,492	181.69
2008	15,904	129.59	3,847	27.97	19,751	157.56
2009	14,199	112.34	2,868	24.73	17,067	137.07
2010	15,984	128.69	2,076	16.91	18,062	145.60

NOTE: Imports may be whole weight (ww) or product weight (dw); data are preliminary and subject to change.

The amount of albacore imports from all ocean areas generally declined from 2000 to 2005 (Table 5.18) and was relatively low since. In 2000, albacore imports were valued at $133 million while in 2005 the value dropped to approximately $5 million, and has remained fairly low. Import amounts and value have been fairly stable over the last several years. (Products in airtight containers (e.g., cans or foil pouches) are not included in these data.)

Table 5.18 Imports of Fresh or Frozen Albacore Tuna into the United States From All Ocean Areas Combined: 2000-2010. Source: Census Bureau data.

Year	Fresh		Frozen		Total for all Imports	
	MT	US$ (million)	MT	US$ (million)	MT	US$ (million)
2000	1,843	6.42	51,001	127.33	52,845	133.76
2001	1,107	3.85	40,428	105.58	41,536	109.43
2002	1,296	4.81	11,903	24.49	13,200	29.31
2003	1,062	4.11	12,569	25.90	13,632	30.02
2004	1,004	3.12	4,943	11.67	5,947	14.80
2005	706	2.38	1,016	2.96	1,722	5.34
2006	876	3.54	667	1.71	1,543	5.25
2007	945	3.86	718	1.98	1,664	5.86
2008	703	2.95	1,632	4.73	2,335	7.68
2009	718	3.07	1,493	3.46	2,211	6.53
2010	519	2.19	1,860	5.17	2,380	7.36

Note: Imports may be whole weight (ww) or product weight (dw); data are preliminary and subject to change.

Skipjack tuna imports into the United States are comprised mainly of frozen product (Table 5.19). The amount and value of skipjack imports is variable over this time series. (Products in airtight containers (e.g., cans or foil pouches) are not included in these data.)

Table 5.19 Imports of Fresh or Frozen Skipjack Tuna from All Ocean Areas Combined into the United States: 2000 - 2010. Source: U.S. Census Bureau data.

Year	Fresh		Frozen		Total for all Imports	
	MT	US$ (million)	MT	US$ (million)	MT	US$ (million)
2000	0	0	904	2.75	904	2.75
2001	<1	<0.01	377	0.61	378	0.62
2002	<1	0.01	824	0.83	825	0.84
2003	0	0	224	0.43	224	0.43
2004	<1	<0.01	110	0.26	112	0.27
2005	0	0	652	0.67	652	0.67
2006	140	0.14	883	0.84	1,023	0.98
2007	31	0.06	835	0.73	866	0.79
2008	14	0.02	685	0.77	699	0.79
2009	20	0.04	498	0.63	519	0.67
2010	36	0.09	542	0.79	578	0.87

Note: Imports may be whole weight (ww) or product weight (dw); data are preliminary and subject to change.

5.3.3.3 Swordfish Imports

Table 5.20 summarizes swordfish import data collected by NMFS' Swordfish Statistical Document Program for the 2010 calendar year. According to these data, most swordfish imports were Pacific Ocean product. For Atlantic product, most imports came from Canada, followed by Trinidad and Tobago. CBP data located at the bottom of the table reflect a larger amount of imports than reported by the import monitoring program, and may be used by NMFS staff to follow up with importers, collect statistical documents that have not been submitted, and enforce dealer reporting requirements.

Table 5.20 Swordfish Import Data for the 2010 Calendar Year Collected Under the NMFS Swordfish Statistical Document Program. (np=not provided)

Swordfish Import Data for the 2010 Calendar Year Collected Under the NMFS Swordfish Statistical Document Program.									
	Ocean Area of Origin								
Flag of Harvesting Vessel	Atlantic (mt dw)	North Atlantic (mt dw)	South Atlantic (mt dw)	Med. (mt dw)	Pacific (mt dw)	Western Pacific (mt dw)	Indian (mt dw)	Not Provided (mt dw)	Total (mt dw)
Australia						75.7		2.4	78.1
Brazil	4.8		301.9					1.8	308.5
Canada		1017.5	3.2					2.7	1023.4
Chile					668.4				668.4
China					1.7				1.7
Costa Rica					594.6				594.6
Ecuador		0.9		0.8	543.7			5.3	550.7
Fiji Islands					4.0	7.1		28.1	39.2
Indonesia							381.1	2.4	383.5
Japan					2.0				2.0
Korea					15.1				15.1
Mexico		2.6			227.4			8.5	238.5
Micronesia					13.4				13.4
Nambia			2.8					5.7	8.5
New Zealand					0.2	138.6		7.5	146.3
Nicaragua					18.6				18.6
Panama					918.9			192.0	1110.9
Seychelles							0.4		0.4
South Africa	1.1		129.3				98.8		229.2
Trinidad & Tobago	16.8							1.9	18.7
Uruguay			47.9						47.9
Vietnam					150.3	0.6		30.0	180.9
np	0.8		6.3	2.8	388.2	1.4		29.6	429.1
Total Imports Reported by SDs	23.5	1021.0	491.4	3.6	3546.5	223.4	480.3	317.9	6107.6
Total Imports Reported by U.S. Customs & Border Protection									9093.4
Total Imports Not Reported by SDs									2985.8

Table 5.21 indicates the amount and value of swordfish products imported by the United States from 2000 to 2010, as recorded by the U.S. Census Bureau, for all ocean areas combined. New import product categories were added in 2007. The amount of each product imported per

year and annual totals for product and value were fairly consistent over the past several years. Total imports have generally fallen since imports peaked in 2002.

Table 5.21 Imported Swordfish Products by Year: 2000-2010. Source: Census Bureau data.

Year	Fresh (MT)			Frozen (MT)					Total for all Imports	
	Steaks		Other	Fillets	Steaks	Other			MT	US$ (million)
2000	161		8626	4833	524	167			14,314	85.57
2001	71		8982	3814	710	119			13,697	81.89
2002	195		9726	4156	956	677			15,711	88.26
2003	147		8079	3929	433	560			13,150	75.62
2004	157		6568	3261	387	351			10,726	70.95
2005	172		6388	2957	367	304			10,187	77.17
2006	77		6830	2875	351	201			10,334	75.63
*New Categories in 2007	*Fillets	Steaks	Other	Fillets	Steaks	*Meat >6.8 kg	*Meat <=6.8 kg	Other		
2007	174	84	5412	2520	171	118	737	205	9,422	70.85
2008	96	13	5658	2673	170	55	207	88	8,962	68.98
2009	53	10	5312	1632	112	96	23	33	7272	55.85
2010	125	2	5228	2077	153	277	45	31	7939	68.33

NOTE: Imports may be whole weight (ww) or product weight (dw); data are preliminary and subject to change.

5.3.3.4 Shark Imports

Similar to tuna imports other than BFT and frozen bigeye tuna, NMFS does not require shark importers to collect and submit information regarding the ocean area of catch. Shark imports are also not categorized by species, and lack specific product information on imported shark meat such as the proportion of fillets and steaks. The condition of shark fin imports*; e.g.*, wet, dried, or further processed products such as canned shark fin soup, is also not collected. There is no longer a separate tariff code for shark leather, so its trade is not tracked by CBP or Census Bureau data.

The United States may be an important trans-shipment port for shark fins, which may be imported wet, processed, and then exported dried. It is also probable that U.S.-caught shark fins are exported to Hong Kong or Singapore for processing, and then imported back into the United States for consumption by urban-dwelling Asian Americans (Rose, 1996).

Table 5.22 summarizes Census Bureau data on shark imports for 2000 through 2010. Imports of fresh shark products and shark fins have decreased significantly since 2000. As of July 2, 2008, shark fin importers, exporters, and re-exporters are required to be permitted under

NMFS' HMS ITP regulations (73 FR 31380). Permitting of shark fin traders was implemented to assist in enforcement and monitoring trade of this valuable commodity.

From 2000 to 2010, the overall annual amount of shark imports has generally decreased to a low in 2010, while the value during this time series has fluctuated with no apparent trend. Imports of dried shark fins have increased gradually since 2003, although imports are still less than the high of 66 mt in 2000.

Table 5.22 U.S. Imports of Shark Products From All Ocean Areas Combined: 2000-2010. Source: Census Bureau data.

Year	Shark Fins Dried		Non-specified Fresh Shark		Non-specified Frozen Shark		Total For All Imports	
	MT	US$ (million)	MT	US$ (million)	MT	US$ (million)	MT	US$ (million)
2000	66	2.35	1,066	1.85	90	.57	1,222	4.79
2001	50	1.08	913	1.38	123	1.78	1,087	4.25
2002	39	1.02	797	1.24	91	1.09	928	3.35
2003	11	0.01	515	0.72	100	0.99	626	1.82
2004	14	0.34	650	1.00	156	2.35	821	3.70
2005	27	0.75	537	1.02	147	2.27	711	4.04
2006	28	1.38	338	0.68	93	1.35	459	3.41
2007	29	1.68	548	1.03	174	1.04	751	3.75
2008	29	1.74	348	0.72	189	1.88	566	4.34
2009	21	0.97	180	0.37	125	1.50	326	2.83
2010	34	1.18	114	0.33	34	1.16	182	2.66

NOTE: Imports may be whole weight (ww) or product weight (dw); data are preliminary and subject to change.

5.3.4 The Use of Trade Data for Management Purposes

Trade data has been used in a number of ways to support the international management of HMS. When appropriate, the SCRS uses trade data on BFT, swordfish, bigeye tuna, and yellowfin tuna that are submitted to ICCAT as an indication of landings trends. These data can then be used to augment estimates of fishing mortality of these species, which improves scientific stock assessments. For example, in 2009, the SCRS used BCD data to more precisely estimate BFT catch levels in the Mediterranean Sea and eastern Atlantic (SCRS, 2009). Previously, the SCRS had determined that reported catches of the eastern stock of BFT had been significantly under-reported for ten years, beginning in the mid 1990s.

Trade data can also be used to assist in assessing compliance with ICCAT recommendations and identify those countries whose fishing practices diminish the effectiveness of ICCAT conservation and management measures. On several occasions, ICCAT has adopted recommendations to address the lack of compliance with management programs for the BFT,

bigeye tuna, and North and South Atlantic swordfish fisheries by ICCAT members. Penalties for non-compliance or fishing in a manner that diminishes the effectiveness of ICCAT conservation measures may include catch limit reductions and, if necessary, trade restrictive measures.

For example, an analysis of vessel sighting and Japanese BSD data led to the 1996 determination that fishing vessels from the countries of Panama, Honduras, and Belize were fishing in a manner that diminished the effectiveness of the BFT rebuilding program, and resulted in a 1996 ICCAT recommendation for sanctions against the import of BFT from these countries (Table 5.23). In 1999, ICCAT recommended this trade restriction on Panama be lifted as a result of the Government of Panama's efforts to substantially reduce fishing vessel activities deemed inconsistent with ICCAT measures. In 2001, Honduras became a member of ICCAT, and based on this change in status and Honduras' significant efforts to control its fleet and address ICCAT concerns, ICCAT recommended lifting trade sanctions for BFT. The BFT sanction for Belize was lifted by ICCAT in 2002.

In another example, import data from 1997–1999 revealed significant Atlantic BFT exports from Equatorial Guinea despite the fact that a zero catch limit was in effect for that country. The government of Equatorial Guinea had not responded to ICCAT inquiries and had reported no BFT catch data to ICCAT, and as a result ICCAT recommended trade restrictions as a penalty for non-compliance. Based on information regarding improved compliance presented by Equatorial Guinea at the 2004 ICCAT meeting, specifically, that Equatorial Guinea had canceled licenses and flags of large-scale longline vessels previously participating in IUU tuna fishing in the Convention area and guaranteed compliance with ICCAT conservation and management measures, the trade sanction was lifted by ICCAT. As indicated in Table 5.23 most of the trade sanctions recommended by ICCAT since 1996 have been lifted. In fact, only trade sanctions for Bolivia and Georgia remained until the 2011 ICCAT annual meeting where they were lifted, and no new sanctions have been recommended since 2003.

Table 5.23 Summary and Current Status of ICCAT Recommended Trade Sanctions for BFT, Swordfish, and Bigeye Tuna Implemented by the United States.

Country	Species	ICCAT Recommended Sanction	U.S. Sanction Implemented	ICCAT Sanction Lifted	U.S. Sanction Lifted
Panama	Bluefin	1996	1997	1999	2000
Honduras	Bluefin	1996	1997	2001	2004
	Bigeye	2000	2002	2002	2004
	Swordfish	1999	2000	2001	2004
Belize	Bluefin	1996	1997	2002	2004
	Swordfish	1999	2000	2002	2004
	Bigeye	2000	2002	2002	2004
Equatorial Guinea	Bluefin	1999	2000	2004	2005
	Bigeye	2000	2002	2004	2005
Cambodia	Bigeye	2000	2002	2004	2005
St. Vincent & the Grenadines	Bigeye	2000	2002	2002	2004
Bolivia	Bigeye	2002	2004	2011	expected 2012
Sierra Leone	Bluefin	2002	2004	2004	2005
	Bigeye	2002	2004	2004	2005

Country	Species	ICCAT Recommended Sanction	U.S. Sanction Implemented	ICCAT Sanction Lifted	U.S. Sanction Lifted
	Swordfish	2002	2004	2004	2005
Georgia	Bigeye	2003	2004	2011	expected 2012

5.4 Recreational Fisheries

A comprehensive understanding of the economic impacts of HMS recreational fishing is not currently available; however, existing studies indicate that HMS recreational fishing provides significant positive economic impacts to coastal communities. These positive economic impacts derive from individual angler expenditures, recreational charters, tournaments, and the shoreside businesses that support those activities. The net economic and social benefits of HMS recreational fishing in the United States are likely positive and some of the ecological impacts are mitigated by the strong catch-and-release ethic in this fishery.

The Deepwater Horizon/BP Oil Spill in the Gulf of Mexico affected recreational fisheries in the Gulf of Mexico due to a series of fishery closures of various sizes that began on May 2, 2010 and continued until April 19, 2011. More information about the Deepwater Horizon/BP Oil Spill is available at http://sero.nmfs.noaa.gov/deepwater_horizon_oil_spill.htm. The impacts of the oil spill and related fishery closures continue to be investigated.

5.4.1 Recreational Angling

The 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation is currently underway. Data collection began throughout the country on April 1, 2011 and will be completed by March 31, 2012. This survey is conducted every five years and is designed to provide data on fishing, hunting, and other wildlife-related activities during calendar year 2011. National preliminary estimates will be available the end of June 2012. The final national report and the data CD-ROM will be available from the U.S. Fish and Wildlife Service (USFWS) in November of 2012. The 50 state reports will be available on a flow basis beginning in November 2012.

The most recent complete survey by the USFWS was conducted in 2006. The economic survey found that for the entire United States, 7.7 million saltwater anglers (including anglers in state waters) went on approximately 67 million fishing trips and spent approximately $8.9 billion (USFWS, 2006). These participation rates are down from the 2001 survey which found 9.1 million saltwater anglers (including anglers in state waters) went on approximately 72 million fishing trips and spent approximately $8.4 billion (USFWS, 2001). The 2006 survey found saltwater anglers spent $5.3 billion on trip-related costs and $3.6 billion on equipment (USFWS, 2006). Expenditures on trip-related costs increased 17 percent from 2001, but equipment expenditures declined by seven percent. These expenditures included lodging, transportation to and from the coastal community, vessel fees, equipment rental, bait, auxiliary purchases (e.g., binoculars, cameras, film, foul weather clothing, etc.), and fishing licenses. Approximately 79

percent of the saltwater anglers surveyed fished in their home state in 2006, compared to 76 percent in 2001 (USFWS, 2001).

Specific information regarding angler expenditures for trips targeting HMS species was extracted from the recreational fishing expenditure survey add-on (1998 in the Northeast, 1999 – 2000 in the Southeast) to the NMFS' MRFSS. These angler expenditure data were analyzed on a per person per trip-day level and reported in 2003 dollars. The expenditure data includes the costs of tackle, food, lodging, bait, ice, boat fuel, processing, transportation, party/charter fees, access/boat launching, and equipment rental. The overall average expenditure on HMS related trips is estimated to be $122 per person per day. Specifically, expenditures are estimated to be $686 per person per day on billfish directed trips (based on a low sample size), $85 on pelagic shark directed trips, $95 on LCS directed trips, $81 on SCS directed trips, and $106 on tuna directed trips.

The American Sportfishing Association (ASA) also has a report listing the 2006 economic impact of sportfishing on specific states. This report states that all sportfishing (in both federal and state waters) has an overall economic importance of $125 billion dollars. ASA estimates 8,528,000 anglers participate in saltwater fishing. These saltwater anglers spent $11 billion in retail sales, resulting in 263,000 jobs, and $9 billion in salaries, wages, and business earnings in 2006. Saltwater fishing contributed $30 billion of the overall economic impact estimated. Florida, Texas, South Carolina, and North Carolina are among the top ten states in terms of overall economic expenditures for both saltwater and freshwater fishing. Florida is also one of the top states in terms of economic impact of saltwater fishing with $3.0 billion in angler expenditures, $5.1 billion in overall economic impact, $1.6 billion in salaries and wages related to fishing, and 51,588 fishing related jobs (ASA, 2008).

In 2003, Ditton and Stoll published a paper that surveyed the literature regarding what is currently known about the social and economic aspects of recreational billfish fisheries. It was estimated that 230,000 anglers in the United States spent 2,136,899 days fishing for billfish in 1991. This is approximately 3.6 percent of all saltwater anglers over age 16. The states with the highest number of billfish anglers are Florida, California, North Carolina, Hawaii, and Texas, in descending order. Billfish anglers studied in the U.S. Atlantic, Puerto Rico, and Costa Rica fished between 39 and 43 days per year.

Billfish recreational anglers tend to spend a great deal of money on trips. Ditton and Stoll (2003) report that a 1990 study of U.S. total trip costs for a typical billfish angler estimated a mean expenditure of $2,105 per trip for the Atlantic and $1,052 per trip for Puerto Rico. The aggregate economic impact of billfish fishing trips in the U.S. Atlantic is conservatively estimated to be $22.7 million annually.

In addition to the economic impact of recreational billfish angling, Ditton and Stoll (2003), using a contingent valuation method, estimated consumer's surplus or net economic benefit to maintain current billfish populations in the U.S. Atlantic to be $497 per billfish angler per year in the U.S. Atlantic and $480 in Puerto Rico. They also estimate that the number of annual billfish anglers in the U.S. Atlantic to be 7,915 and 1,627 in Puerto Rico. The aggregate willingness-to-pay for maintaining current billfish populations is $3.93 million in the U.S.

Atlantic and 0.78 million in Puerto Rico. The aggregate direct impact of billfish expenditures is estimated to be $15.13 million for the U.S. Atlantic and $32.40 million for Puerto Rico. Thus, the total aggregate economic value of billfish angler fishing is $19.06 million per year for the U.S. Atlantic and $33.18 million per year for Puerto Rico.

5.4.2 Atlantic HMS Tournaments

Generally, HMS tournaments last from three to seven days, but lengths can range from one day to an entire fishing season. Similarly, average entry fees can range from approximately $0 to $5,000 per boat (average approximately $500/boat – $1,000/boat), depending largely upon the magnitude of the prize money that is being awarded. The entry fee would pay for a maximum of two to six anglers per team during the course of the tournament. Additional anglers can, in some tournaments, join the team at a reduced rate of between $50 and $450. The team entry fee did not appear to be directly proportional to the number of anglers per team, but rather with the amount of money available for prizes and, possibly, the species being targeted. Prizes may include citations, T-shirts, trophies, fishing tackle, automobiles, boats, or other similar items, but most often consists of cash awards. In general, it appears that billfish and tuna tournaments charge higher entry fees and award more prize money than shark and swordfish tournaments, although all species have a wide range. Prize money is often determined by the number of tournament participants. Compared to recent previous years, overall prize money and number of participants declined noticeably in 2011.

Cash awards distributed in HMS tournaments can be quite substantial. Several of the largest tournaments, some of which are described below, are part of the World Billfish Series Tournament Trail whereby regional winners are invited to compete in the World Billfish Series Grand Championship for a new automobile and a bronze sculpture. Other tournament series include the International Game Fish Association (IGFA) Rolex Tournament of Champions, and the South Carolina Governor's Cup. White marlin is a top billfish species from Cape Hatteras, North Carolina to the eastern tip of Georges Bank from June through October each year. The White Marlin Open in Ocean City, Maryland, which is billed as the "world's largest billfish tournament," awarded $758,828.00 in 2011 to the vessel catching the largest white marlin and $379,677.00 to the vessel catching the largest blue marlin. The 28th Annual Pirate's Cove Billfish Tournament in North Carolina awarded over $500 thousand in prizes in 2011, with the top boat garnering over $297,296 for winning in three categories. Total prize money awarded in the Big Rock Tournament in North Carolina has exceeded $1 million since 1998. The 2011 winner of the Big Rock Blue Marlin Tournament won $524,375 from a total tournament purse of $1.46 million.

Blue marlin, sailfish, and tunas are often targeted in fishing tournaments, including those discussed above. In 2010, blue marlin was the HMS most frequently identified as a prize category in registered HMS tournaments. The 40th Annual Pensacola (Florida) International Billfish Tournament indicated that it would award over $565,000 in cash and prizes in 2011. The World Sailfish Championship in Key West, Florida had a $100,000 guaranteed first prize for 2011. In South Carolina, the Megadock Billfishing Tournament awarded a $90,185 prize in 2011 for the first place winner of this three-day tournament. The 2011 Mid-Atlantic Tuna

Tournament sponsored by the South Jersey Marina in Cape May, New Jersey, had 18 vessels competing for a share of approximately $80,000 in total prize money.

Several tournaments target sharks. Many shark tournaments occur in New England, New York, and New Jersey, although other regions hold shark tournaments as well. In 2011, the 31st Annual South Jersey Shark Tournament hosted 113 boats and awarded over $238,626 in prize money, with an entry fee of $545 per boat. In 2011, the 25th Annual Oak Bluffs Monster Shark Tournament in Martha's Vineyard hosted 104 boats.

While fishing tournaments are an important component of Atlantic HMS recreational fisheries and provide socioeconomic benefits to associated communities, there are some organizations that oppose these tournaments. For the past several years, for example, the Humane Society of the United States has petitioned NMFS to halt all shark tournaments.

Swordfish tournaments have gained increased popularity in recent years, especially on the east coast of Florida, as the swordfish population has recovered. Events include the Islamorada Swordfish Tournament that began in 2004, and the Miami Swordfish Tournament that began in 2003, which make up the Florida Swordfish Series. In 2011, the Islamorada Swordfish Tournament was relocated to Ft. Lauderdale, FL and then later cancelled. Therefore, the Florida Swordfish Series was cancelled for 2011, but is expected to resume again in 2012.

In addition to official prize money, many fishing tournaments may also conduct a "calcutta" whereby anglers pay from $200 to $5,000 to win more money than the advertised tournament prizes for a particular fish. Tournament participants do not have to enter calcuttas. Tournaments with calcuttas generally offer different levels depending upon the amount of money an angler is willing to put down. Calcutta prize money is distributed based on the percentage of the total amount entered into that Calcutta. Therefore, first place winner of a low level Calcutta (entry fee ~$200) could win less than a last place winner in a high level calcutta (entry fee ~$1000). On the tournament websites, it was not always clear if the total amount of prizes distributed by the tournament included prize money from the calcuttas or the estimated price of any equipment. As such, the range of prizes discussed above could be a combination of fish prize money, calcutta prize money, and equipment/trophies.

Fishing tournaments can sometimes generate a substantial amount of money for surrounding communities and local businesses. Ditton *et al*., (2000) estimated that the total expenditure (direct economic impact) associated with the 1999 Pirates Cove Billfish Tournament, not including registration fees, was approximately $2,072,518. The total expenditure (direct economic impact) associated with the 2000 Virginia Beach Red, White, and Blue Tournament was estimated at approximately $450,359 (Thailing *et al*., 2001). These estimated direct expenditures do not include economic effects that may ripple through the local economy leading to a total impact exceeding that of the original purchases by anglers (i.e., the multiplier effect). Less direct, but equally important, fishing tournaments may serve to generally promote the local tourist industry in coastal communities. In a survey of participants in the 1999 Pirates Cove Billfish Tournament, Ditton *et al*., (2000) found that almost 80 percent of tournament anglers were from outside of the tournament's county. For this reason, tourism

bureaus, chambers of commerce, resorts, and state and local governments often sponsor fishing tournaments.

5.4.3 Atlantic HMS Charter and Party Boat Operations

At the end of 2004, NMFS collected market information regarding advertised charterboat rates. The analysis of this data focused on observations of advertised rates on the internet for full day charters. Full day charters vary from 6 to 14 hours long with a typical trip being 10 hours. Most vessels can accommodate six passengers, but this also varies from two to 12 passengers. The average price for a full day boat charter was $1,053 in 2004. Sutton *et al.,* (1999) surveyed charterboats throughout Alabama, Mississippi, Louisiana, and Texas in 1998 and found the average charterboat base fee to be $762 for a full day trip. Holland *et al.* (1999) conducted a similar study on charterboats in Florida, Georgia, South Carolina, and North Carolina and found the average fee for full day trips to be $554, $562, $661, and $701, respectively. Comparing these two studies conducted in the late 1990s to the average advertised daily HMS charterboat rate in 2004, it is apparent that there has been a significant gain in charterboat rates.

5.5 Chapter 5 References

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