

5. ECONOMIC STATUS OF HMS FISHERIES

Development 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 2002 to 2011 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.

Table 5.1 Inflation Price Indexes

Year	CPI-U	GDP Deflator	PPI Unprocessed Finfish
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	103.2	334.6
2007	207.3	106.2	318.1
2008	215.3	108.6	301.6
2009	214.5	109.5	306.9
2010	218.1	111.0	381.5
2011	224.9	113.4	388.1

Note: 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.

5.1 Commercial Fisheries

All of the information and data presented in this section were obtained from NMFS 2012b. In 2011, 9.9 billion pounds valued at \$5.3 billion were landed for all fish species by U.S. fisherman at U.S. ports. 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. The overall value of landings between 2010 and 2011 increased by 17 percent. The total value of commercial HMS landings in 2011 was \$52.4 million (Table 5.3).

The estimated value of the 2011 domestic production of all fishery products was \$9.6 billion. This is \$406.6 million more than the estimated value in 2010. The total import value of fishery products was \$30.8 billion in 2011. This is an increase of \$3.4 billion from 2010. The total export value of fishery products was \$26.0 billion in 2011. This is an increase of \$3.7 billion from 2010.

5.1.1 Ex-Vessel Prices

The average ex-vessel prices per pound dressed weight (dw) for 2004 to 2011 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.

Average ex-vessel prices for bluefin tuna have risen 21 percent since 2010. The ex-vessel prices for bluefin tuna can be influenced by many factors, including market supply and the Japanese Yen/U.S. Dollar (¥/\$) exchange rate. Figure 5.1 shows the average ¥/\$ exchange rate, plotted with average ex-vessel bluefin tuna prices, from 1971 to 2011.

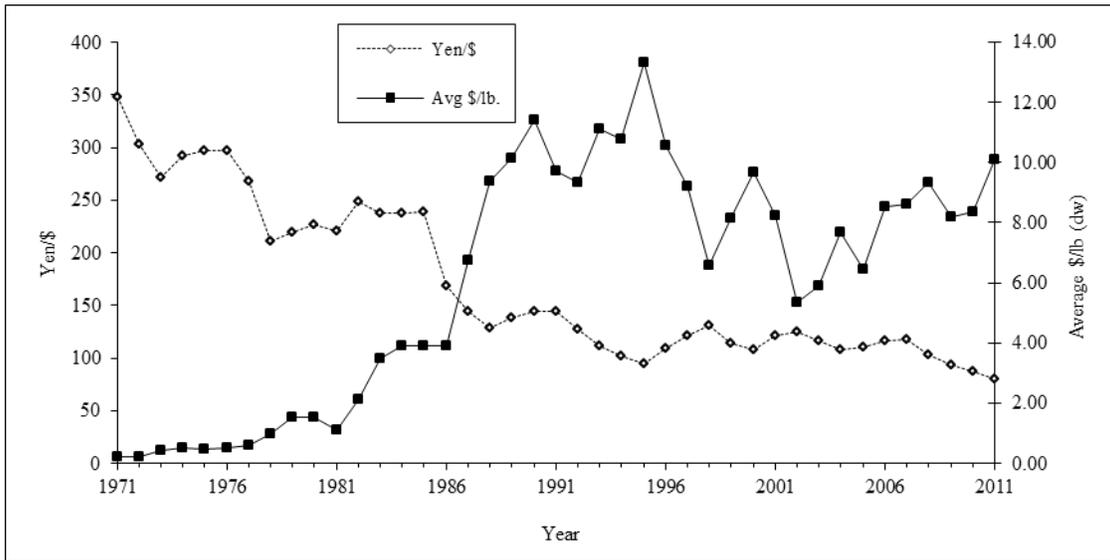


Figure 5.1 Average Annual Yen/\$ Exchange Rate and Average U.S. Bluefin Tuna Ex-vessel \$/lb (dw) for All Gears (1971-2011)

Source: Federal Reserve Bank (research.stlouisfed.org) and NMFS Northeast Regional Office.

Table 5.2 Average Ex-vessel Prices per Pound for Atlantic HMS, by Area (2004-2011)

Species	Area	2004	2005	2006	2007	2008	2009	2010	2011
Bigeye tuna	Gulf of Mexico	\$5.42	\$5.75	\$5.73	\$5.66	\$6.12	\$5.80	\$5.79	\$5.99
	S. Atlantic	3.10	3.61	3.94	4.34	4.34	4.11	4.03	4.73
	Mid-Atlantic	4.22	4.55	4.96	5.48	5.70	5.42	5.86	6.38
	N. Atlantic	4.60	4.48	4.54	5.31	5.60	5.18	4.79	5.39
Bluefin tuna	Gulf of Mexico	5.01	4.56	4.78	5.63	4.51	4.65	5.42	6.38
	S. Atlantic	9.30	10.64	10.42	11.16	13.29	14.43	8.75	7.34
	Mid-Atlantic	7.76	8.14	7.92	6.95	7.94	10.10	8.94	10.64
	N. Atlantic	7.38	5.54	7.68	8.31	8.31	7.06	8.38	10.21
Yellowfin tuna	Gulf of Mexico	3.21	3.32	2.89	3.02	3.51	3.04	3.72	3.60
	S. Atlantic	2.23	2.60	2.32	2.69	2.99	2.90	3.53	3.93
	Mid-Atlantic	1.91	2.27	2.39	2.99	3.30	2.50	3.43	3.45
	N. Atlantic	2.69	3.06	2.63	3.17	3.82	2.86	2.80	3.39
Albacore tuna	Gulf of Mexico	0.68	0.61	0.62	0.53	0.49	0.55	1.40	1.00
	S. Atlantic	0.76	0.94	0.93	1.24	1.21	1.29	1.36	1.42
	Mid-Atlantic	0.54	0.76	0.82	0.86	0.97	1.10	1.30	1.19
	N. Atlantic	0.70	0.91	0.98	1.37	2.00	1.26	1.56	1.55
Skipjack tuna	Gulf of Mexico	-	-	-	-	-	0.50	-	0.90
	S. Atlantic	1.11	0.70	0.74	0.73	0.95	0.95	1.13	1.25
	Mid-Atlantic	0.84	1.13	0.79	2.22	4.50	-	-	0.60
	N. Atlantic	2.65	-	-	-	-	-	-	-
Swordfish	Gulf of Mexico	3.42	3.20	2.90	3.07	2.93	2.69	3.53	4.22
	S. Atlantic	3.88	4.00	3.86	4.24	4.11	4.12	4.63	4.84
	Mid-Atlantic	3.42	3.54	3.52	4.07	3.50	3.40	4.45	4.45
	N. Atlantic	3.96	3.69	3.65	4.11	4.20	3.49	4.61	4.23
Large coastal sharks	Gulf of Mexico	0.73	0.86	0.75	0.42	0.67	0.52	0.48	0.38
	S. Atlantic	0.46	0.52	0.47	0.54	0.72	0.55	0.65	0.61
	Mid-Atlantic	0.36	0.29	0.28	0.56	0.71	0.57	0.64	0.54
	N. Atlantic	0.66	-	-	-	-	-	-	-
Pelagic sharks	Gulf of Mexico	1.15	1.19	1.21	1.29	1.18	1.25	1.47	1.54
	S. Atlantic	1.20	1.19	1.23	1.29	1.29	1.25	1.27	1.46
	Mid-Atlantic	0.89	1.21	1.15	1.06	1.20	1.16	1.19	1.30
	N. Atlantic	1.08	0.92	0.73	0.85	0.96	1.23	1.28	1.48
Small coastal sharks	Gulf of Mexico	0.35	0.47	0.51	0.58	0.62	0.69	0.55	0.58
	S. Atlantic	0.67	0.71	0.68	0.80	0.78	0.71	0.79	0.81
	Mid-Atlantic	0.44	0.39	0.45	0.43	0.48	0.57	0.57	0.59
	N. Atlantic	-	-	-	-	-	-	-	-
Shark fins	Gulf of Mexico	15.76	16.22	16.40	13.22	14.94	15.09	16.48	15.11
	S. Atlantic	12.55	13.93	13.24	11.44	12.73	13.15	15.35	14.91
	Mid-Atlantic	7.72	10.58	9.82	6.12	3.74	3.62	6.83	3.50
	N. Atlantic	1.39	4.55	6.23	3.24	3.00	3.67	2.40	1.60

Sources: Dealer weighout slips from the Southeast Fisheries Science Center (SEFSC), Northeast Fisheries Science Center, and bluefin tuna 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 SEFSC. Mid-Atlantic includes: NC dealers reporting to NEFSC, VA, MD, DE, NJ, NY, and CT. N. Atlantic includes: RI, MA, NH, and ME. For bluefin tuna, all NC landings are included in the Mid-Atlantic.

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, 2012a), the information used in the shark stock assessments, information given to ICCAT (Cortés pers. comm., 2011), as well as price and weight reported to the NMFS Northeast Regional Office by Atlantic bluefin tuna dealers. These values indicate that the estimated total annual revenue of Atlantic HMS fisheries has increased in 2011 to \$52.4 million from \$42.4 million in 2010. From 2010 to 2011, the Atlantic tuna fishery's total revenue increased by \$6.0 million. A majority of that increase can be attributed to the increased commercial landings of bigeye and yellowfin tuna and an increase in price for bluefin tuna. From 2010 to 2011, the annual revenues for the shark fisheries remained virtually unchanged. Finally, the annual revenues for swordfish increased by \$4 million from 2010 to 2011 due to an increase in landings.

Table 5.3 Estimates of the Total Ex-vessel Annual Revenues of Atlantic HMS Fisheries (2004-2011)

Species		2004	2005	2006	2007	2008	2009	2010	2011
Bigeye tuna	Ex-vessel \$/lb dw	\$5.73	\$5.24	\$5.47	\$6.04	\$6.35	\$6.23	\$7.40	\$7.85
	Weight lb dw	556,270	563,325	960,863	706,361	736,520	774,087	799,934	1,122,619
	Fishery revenue	\$3,187,427	\$2,951,823	\$5,255,921	\$4,266,420	\$4,676,902	\$4,822,562	\$5,919,512	\$8,812,559
Bluefin tuna	Ex-vessel \$/lb dw	\$7.68	\$6.43	\$8.51	\$8.63	\$9.35	\$8.18	\$8.35	\$10.08
	Weight lb dw	1,010,599	772,500	528,404	515,176	720,823	899,477	1,119,937	996,661
	Fishery revenue	\$7,761,400	\$4,967,175	\$4,496,718	\$4,445,969	\$6,739,695	\$7,357,722	\$9,351,474	\$10,046,343
Yellowfin tuna	Ex-vessel \$/lb dw	\$2.31	\$2.66	\$2.50	\$2.90	\$3.22	\$2.87	\$3.46	\$3.59
	Weight lb dw	4,999,908	3,379,951	3,849,095	4,521,240	2,423,498	3,159,665	2,154,728	2,676,682
	Fishery revenue	\$11,549,787	\$8,990,670	\$9,622,738	\$13,111,596	\$7,803,664	\$9,068,239	\$7,455,359	\$9,609,288
Skipjack tuna	Ex-vessel \$/lb dw	\$0.95	\$1.16	\$0.75	\$0.75	\$1.01	\$0.91	\$1.15	\$1.17
	Weight lb dw	307,942	26,103	21,693	26,455	32,628	30,688	16,269	12,931
	Fishery revenue	\$292,545	\$30,279	\$16,270	\$19,841	\$32,954	\$27,926	\$18,709	\$15,129
Albacore tunas	Ex-vessel \$/lb dw	\$0.60	\$0.82	\$0.86	\$0.97	\$1.15	\$1.11	\$1.36	\$1.29
	Weight lb dw	307,942	232,808	203,354	244,272	216,759	291,187	290,827	491,133
	Fishery revenue	\$184,765	\$190,903	\$174,884	\$236,944	\$249,273	\$323,218	\$395,525	\$633,562
Total tuna	Fishery revenue	\$22,975,925	\$17,130,850	\$19,566,530	\$22,080,770	\$19,502,488	\$21,599,666	\$23,140,579	\$29,116,881
Swordfish	Ex-vessel \$/lb dw	\$3.60	\$3.66	\$3.54	\$3.99	\$3.68	\$3.46	\$4.41	\$4.51
	Weight lb dw	4,301,003	3,466,728	3,002,597	3,643,926	3,414,513	3,762,280	3,676,324	4,473,140
	Fishery revenue	\$15,483,611	\$12,688,224	\$10,629,193	\$14,539,265	\$12,565,408	\$13,017,489	\$16,212,589	\$20,173,861
Large coastal sharks	Ex-vessel \$/lb dw	\$0.57	\$0.64	\$0.62	\$0.48	\$0.70	\$0.54	\$0.60	\$0.53
	Weight lb dw	3,213,896	3,147,196	3,808,662	2,329,272	1,363,021	1,513,201	1,519,603	1,485,467
	Fishery revenue	\$1,831,921	\$2,014,205	\$2,361,370	\$1,118,051	\$954,115	\$817,129	\$911,762	\$787,298
Pelagic sharks	Ex-vessel \$/lb dw	\$0.99	\$1.19	\$1.17	\$1.12	\$1.21	\$1.18	\$1.22	\$1.35
	Weight lb dw	679,469	252,815	192,843	262,179	234,546	225,575	312,195	314,314
	Fishery revenue	\$672,674	\$300,850	\$225,626	\$293,640	\$283,801	\$266,179	\$380,878	\$424,324
Small coastal sharks	Ex-vessel \$/lb dw	\$0.62	\$0.65	\$0.61	\$0.70	\$0.69	\$0.69	\$0.69	\$0.75
	Weight lb dw	451,651	634,885	763,327	618,191	623,848	667,815	357,855	583,364
	Fishery revenue	\$280,024	\$412,675	\$465,629	\$432,734	\$430,455	\$460,792	\$246,920	\$437,523
Shark fins (5% of all sharks landed)	Ex-vessel \$/lb dw	\$12.87	\$14.22	\$14.80	\$11.63	\$12.43	\$12.45	\$13.99	\$11.90
	Weight lb dw	217,251	201,745	238,242	160,482	111,071	120,330	110,539	110,539
	Fishery revenue	\$2,796,018	\$2,868,811	\$3,525,976	\$1,866,407	\$1,380,609	\$1,498,103	\$1,531,662	\$1,417,971
Total sharks	Fishery revenue	\$5,580,636	\$5,596,542	\$6,578,602	\$3,710,832	\$3,048,980	\$3,042,202	\$3,071,222	\$3,067,116
Total HMS	Fishery revenue	\$44,040,172	\$35,415,616	\$36,774,326	\$40,330,867	\$35,116,875	\$37,659,357	\$42,424,389	\$52,357,858

Sources: CFDBS, QMS, and NMFS 2012.

5.1.3 Operating Costs

NMFS has collected operating cost information from commercial permit holders via logbook reporting. Each year, 20 percent of active Atlantic HMS commercial permit holders are selected to report economic information along with their Atlantic HMS logbook or Coast Fisheries logbook submissions. In addition, NMFS also receives voluntary submissions of the trip expense and payment section of the logbook form from non-selected vessels.

The primary expenses associated with operating an Atlantic HMS permitted PLL commercial vessel include labor, fuel, bait, ice, groceries, other gear, and light sticks on swordfish trips. Unit costs are collected on some of the primary variable inputs associated with trips. The unit costs for fuel, bait, and light sticks are reported in Table 5.4. Fuel costs increased over 170 percent from 2004 to 2011 while the cost per pound for bait remained fairly constant from 2004 to 2010 but nearly doubled between 2010 and 2011. The unit cost per light sticks has actually declined from 2004 to 2011.

Table 5.4 Pelagic Longline Vessel Median Unit Costs for Fuel, Bait, and Light Sticks (2004–2011)

Input Unit Costs (\$)	2004	2005	2006	2007	2008	2009	2010	2011
Fuel (per gallon)	1.25	1.85	2.15	2.25	3.55	1.73	2.50	3.38
Bait (per lb)	0.80	0.84	0.85	0.85	0.81	0.81	0.85	1.53
Light sticks (per stick)	0.50	0.50	0.46	0.36	0.37	0.37	0.28	0.25

Source: Atlantic HMS logbooks.

Table 5.5 provides the median total cost per trip for the major variable inputs associated with Atlantic HMS trips taken by pelagic longline vessel. Fuel costs are one of the largest variable expenses and the total costs of fuel increased substantially per trip in 2011 in line with the increase in the unit cost of fuel.

Table 5.5 Median Input Costs for Pelagic Longline Vessel Trips (2004–2011)

Input Costs (\$)	2004	2005	2006	2007	2008	2009	2010	2011
Fuel	2,029	2,786	1,728	3,012	3,600	3,000	2,480	3,445
Bait	1,110	1,200	1,115	1,200	1,500	1,875	1,731	3,671
Light sticks	715	700	728	648	600	600	493	663
Ice costs	480	495	498	540	540	625	225	726
Grocery expenses	790	793	696	786	800	1,000	752	900
Other trip costs	1,000	1,500	1,200	1,500	1,651	1,670	1,500	2,000

Source: Atlantic HMS logbooks.

Labor costs are also an important component of operating costs for HMS pelagic longline vessels. Table 5.6 lists the number of crew on a typical pelagic longline trip. The median number of crew members has been consistently three from 2004 to 2011. Most crew and captains are paid based on a lay system. According to Atlantic HMS logbook reports, owners are typically paid 50 percent of revenues. Captains receive a 20 percent share and crew in 2011 received 29 percent on average. These shares are typically paid out after costs are netted from

gross revenues. Median total shared costs per trip on pelagic longline vessels have ranged from \$4,903 to \$11,306 from 2004 to 2011.

Table 5.6 Median Labor Inputs for Pelagic Longline Vessel Trips (2004–2011)

Labor	2004	2005	2006	2007	2008	2009	2010	2011
Number of crew	3	3	3	3	3	4	3	3
Owner share (%)	50	50	50	47	45	45	50	50
Captain share (%)	20	20	20	20	20	20	23	20
Crew share (%)	13	12	13	15	15	30	29	29
Total shared costs (\$)	4,903	5,000	5,657	5,566	6,037	7,000	6,500	11,306

Source: Atlantic HMS logbooks.

In 2011, median reported total trip sales were \$26,650. In 2010, median reported total trip sales were \$17,768. In 2009, the median reported total trip sales were \$17,584. After adjusting for operating costs, median net earnings per trip in 2010 were \$7,525. Median net earnings per trip increased to \$11,255 in 2011.

It should be noted that operating costs for the Atlantic HMS commercial fleet vary considerably from vessel to vessel. The factors that impact operating costs include unit input costs, vessel size, target species, and geographic location among other things.

5.2 Fish Processing and Wholesale Sectors

Consumers spent an estimated \$85.9 billion for fishery products in 2011, including \$57.7 billion at food service establishments, \$27.6 billion in retail sales for home consumption, and \$625 million for industrial fish products. The commercial marine fishing industry contributed \$43.9 billion (in value added) to the U.S. Gross National Product in 2011 (NMFS, 2012b).

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; 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, 2012b) (<http://www.st.nmfs.noaa.gov/st1/publications.html>). Table 5.7 provides a summary of available information.

Table 5.7 Processors and Wholesalers: Plants and Employment (2010)

Area and State	Processing ¹		Wholesale ²		Total	
	Plants	Employment	Plants	Employment	Plants	Employment
New England						
Maine	36	778	177	1,024	213	1,802
New Hampshire	9	239	11	*	20	239
Massachusetts	57	2,744	166	2,030	223	4,774
Rhode Island	9	*	36	*	45	*
Connecticut	6	72	17	190	23	262
Total	117	3,833	407	3,244	524	7,077
Mid-Atlantic						
New York	20	362	269	1,931	289	2,293
New Jersey	15	454	91	973	106	1,427
Pennsylvania	4	77	31	582	35	659
Delaware	1	*	6	23	7	23
District of Columbia	-	-	2	*	2	*
Maryland	20	573	49	545	69	1,118
Virginia	39	1,469	59	506	98	1,975
Total	99	2,935	507	4,560	606	7,495
South Atlantic						
North Carolina	28	567	60	506	88	1,073
South Carolina	2	*	22	162	24	162
Georgia	5	419	28	469	33	888
Florida	35	1,284	287	2,394	322	3,678
Total	70	2,270	397	3,531	467	5,801
Gulf						
Alabama	35	1,362	15	150	50	1,512
Mississippi	23	2,778	22	91	45	2,869
Louisiana	67	1,964	105	500	172	2,464
Texas	28	1,444	99	928	127	2,372
Total	153	7,548	241	1,669	394	9,217
Inland States or Other						
Areas**, Total	63	1,850	223	2,749	286	4,599

¹ Based on North American Industry Classification System (NAICS) 3117 as reported to the Bureau of Labor Statistics. ² Based on North American Industry Classification System (NAICS) 42446 as reported to the Bureau of Labor Statistics. *Included with Inland States. **Includes Puerto Rico and U.S. Virgin Islands.

Source: NMFS, 2012b.

5.2.2 Processing Sector

NMFS does not collect wholesale price information from dealers. The Agency used to 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 5.8. Primary wholesalers and processors on average received a 90.3 percent margin on sales in 2011, down from 126 percent in 2009.

Table 5.8 Summary of the Mark-Up and Consumer Expenditures for the Primary Wholesale and Processing of Domestic Commercial Marine Fishery Products

	2009	2010	2011
Purchase of fishery inputs (\$)	7,000,518,000	8,128,293,000	9,142,981,000
Percent mark-up of fishery inputs (%)	126.0	114.7	90.3
Total mark-up (\$)	6,675,397,000	9,326,111,000	8,942,039,000
Value added as percent of total mark-up (%)	60.2	60.2	60.4
Value added within sector (\$)	5,311,542,000	5,618,427,000	5,398,531,000
Total value of sales within sector (\$)	15,822,199,000	17,454,404,000	18,085,020,000

Source: NMFS 2012b.

5.3 International Trade

Several Regional Fishery Management Organizations (RFMOs), including ICCAT, have taken steps to improve the collection of international trade data in order 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.

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 in the 2011 HMS SAFE Report.

Table 5.9 Number of International Trade Permits (ITPs) by State (as of October 2012)

State	Number of ITPs	State	Number of ITPs
CA	73	NC	3
CT	1	NH	1
DC	1	NJ	12
FL	62	NY	28
GA	2	OH	1
HI	14	OR	0
IL	1	PA	1
KS	0	PR	1
LA	1	RI	7
MA	32	TX	5
MD	1	VA	2
ME	8	WA	9
MP	1	Total	271

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 is co-sponsoring with Brazil and Colombia a proposal to list oceanic whitetip sharks in Appendix II for consideration at the sixteenth meeting of the Conference of Parties to CITES (CoP16) to be held in Bangkok, Thailand in March 2013. The United States is cosponsoring this proposal due to concerns that over-exploitation to supply the international fin trade negatively affects the population status of this species.

5.3.1 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 that 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 export.

Atlantic and Pacific Bluefin Tuna Exports

Table 5.10 gives bluefin tuna export data for exports from the United States since 2001 and includes data from the NMFS BCD program and Census Bureau data. The Census Bureau usually reports a greater amount of bluefin tuna exported when compared to the amount reported by NMFS. Additional quality control measures are taken by NMFS to ensure data for other species (e.g., Southern bluefin tuna) or other transaction types (e.g., re-exports) are not erroneously included with bluefin tuna export data. Bluefin tuna re-export data are listed separately later in this section (Table 5.18).

Table 5.10 United States Exports of Atlantic and Pacific Bluefin Tuna (2001-2011)

Year	Atlantic BFT Commercial Landings ¹ (mt dw)	Atlantic BFT Exports ² (mt dw)	Pacific BFT Exports ² (mt dw)	Total U.S. Exports ² (mt dw)	Total U.S. Exports ³ (mt)	Value of U.S. Exports ³ (\$ million)
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
2009	408.5	236.2	0.0	236.2	300	4.05
2010	509.5	334.2	0.0	334.2	346	4.90
2011	566.7	329.5	0.8	330.5	293	4.03

Note: most exports of Pacific bluefin tuna (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.

Sources: ¹ Northeast Regional Office, ² NMFS Bluefin Catch Document Program, and ³ U.S. Census Bureau.

In the time series shown in Table 5.10 and depicted in Figure 5.2, U.S. exports of Atlantic bluefin tuna generally increased when commercial landings increased, while domestic consumption of U.S. landings remained fairly constant from year to year. Most U.S. bluefin tuna 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. bluefin tuna catch that was exported was lowest when landings declined to their lowest point, from 2006 to 2008.

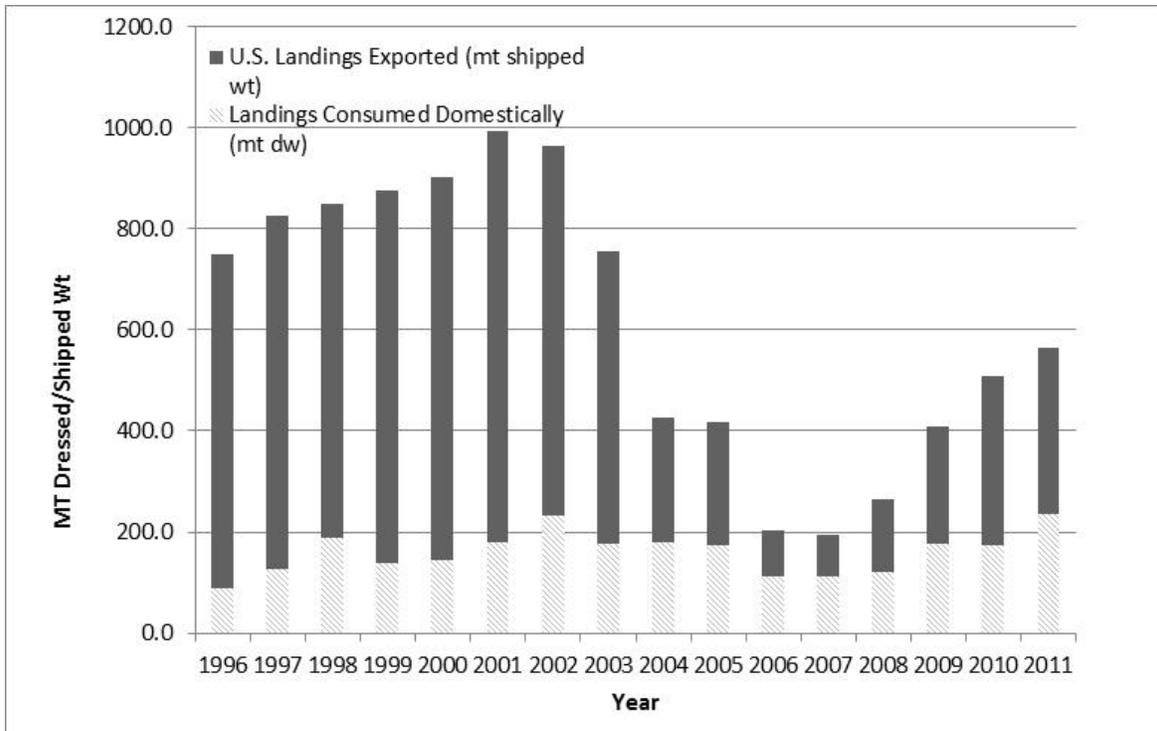


Figure 5.2 Annual U.S. Domestic Landings of Atlantic Bluefin Tuna, Divided into U.S. Export (mt shipped weight) and U.S. Domestic Consumption (mt dw) (1996-2011)

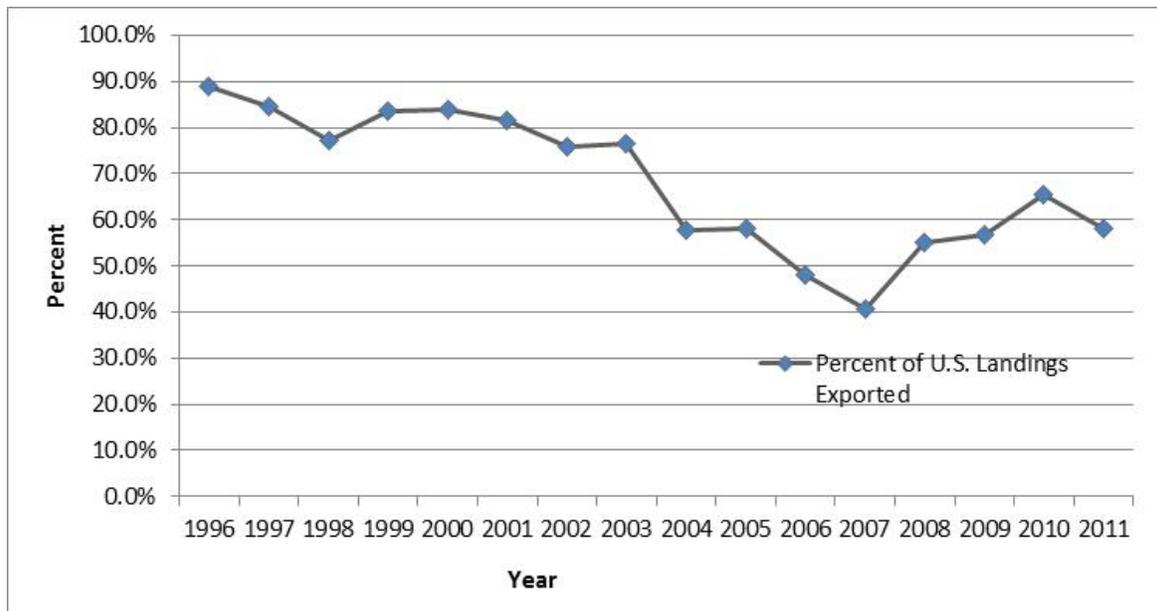


Figure 5.3 Annual Percentage (by weight) of Commercially-Landed U.S. Atlantic Bluefin Tuna that was Exported (1996-2011)

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. 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 (Table 5.11). Most albacore exports are Pacific in origin, as Atlantic landings have ranged between 188 mt and 640 mt during the time series in Table 5.11, but total U.S. exports has ranged from 12,097 mt in 2004 to a low of 5,163 mt in 2002. Landings of Atlantic albacore have increased over the last three years, and were the fifth highest in the time series in 2011.

Table 5.11 U.S. Atlantic Landings and Total U.S. Exports of Albacore Tuna (2001–2011)

Year	Atlantic Landings (mt ww) ¹	U.S. Exports (from all ocean areas) ²					
		Fresh		Frozen		Total for all Exports	
		Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)
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
2007	532	275	0.84	11,731	25.52	12,006	26.35
2008	257	997	2.69	7,958	22.54	8,955	25.23
2009	189	417	1.02	9,903	22.58	9,510	23.60
2010	315	1,269	3.25	8,528	23.31	9,798	26.56
2011	449	566	1.56	9,639	23.49	10,205	25.05

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.

Sources: ¹U.S. National Report 2012, ²U.S. Census Bureau.

Table 5.12 and Table 5.13 show U.S. Atlantic landings and U.S. exports from all ocean areas for yellowfin and skipjack tuna, respectively. Yellowfin exports were greater and more valuable than exports for skipjack or bigeye tuna (Table 5.14). 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 5.12. Frozen yellowfin exports have been decreasing from the last four years, and were the lowest of the time series in 2011. Table 5.13 shows that the amount and value of exported fresh and frozen skipjack tuna has varied over the eleven year time series with a general increase over the last four years. Exports of skipjack in 2009 greatly exceeded values for any of the previous years in the time series.

Table 5.12 U.S. Atlantic Landings and Total U.S. Exports of Yellowfin Tuna (2001-2011)

Year	Atlantic Landings (mt ww) ¹	U.S. Exports (from all ocean areas) ²					
		Fresh		Frozen		Total for all Exports	
		Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)
2001	6,703	290	0.71	834	1.45	1,124	2.17
2002	5,646	1,612	2.37	420	0.81	2,033	3.19
2003	7,685	1,792	2.93	176	0.68	1,968	3.62
2004	6,437	306	1.54	242	0.31	549	1.86
2005	5,562	158	1.70	291	0.97	449	2.67
2006	7,090	183	1.96	108	0.37	291	2.32
2007	5,529	148	1.75	138	0.44	286	2.19
2008	2,407	198	2.09	4,140	9.06	4,338	11.16
2009	2,802	221	2.51	274	0.66	495	3.17
2010	2,482	211	2.31	70	0.33	281	2.64
2011	3,015	275	2.99	56	0.23	331	3.22

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.

Sources: ¹U.S. National Report 2012, ²U.S. Census Bureau.

Table 5.13 U.S. Atlantic Landings and Total U.S. Exports of Skipjack Tuna (2001-2011)

Year	Atlantic Landings (mt ww) ¹	U.S. Exports (from all ocean areas) ²					
		Fresh		Frozen		Total for all Exports	
		Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)
2001	69	82	0.15	34	0.04	117	0.20
2002	66	66	0.17	11	0.01	77	0.18
2003	77	81	0.22	0	0.00	81	0.22
2004	102	55	0.30	140	0.18	196	0.48
2005	30	35	0.14	-	-	35	0.14
2006	61	6	0.02	23	0.04	30	0.06
2007	67	17	0.06	77	0.12	94	0.18
2008	67	31	0.15	350	0.41	381	0.56
2009	119	206	0.54	530	0.71	737	1.25
2010	54	194	0.57	126	0.17	319	0.73
2011	84	185	0.56	14	0.05	198	0.61

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.

Sources: ¹U.S. National Report 2012, ²U.S. Census Bureau.

Bigeye tuna exports and Atlantic landings are given in Table 5.14. Atlantic landings have been increasing since 2008. 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 2011 is the second highest in the time series.

Table 5.14 U.S. Atlantic Landings and Total U.S. Exports of Bigeye Tuna (2002-2011)

Year	Atlantic Landings (mt ww) ¹	U.S. Exports (from all ocean areas) ²					
		Fresh		Frozen		Total for all Exports	
		Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)
2002	600	95	0.22	8	0.01	104	0.24
2003	480	255	0.47	40	0.08	295	0.56
2004	419	361	1.40	48	0.10	410	1.51
2005	484	431	1.95	50	0.12	481	2.07
2006	991	223	1.69	76	0.20	299	1.89
2007	527	128	1.38	65	0.14	193	1.52
2008	489	145	1.72	318	0.96	462	2.68
2009	515	121	1.53	78	0.19	199	1.72
2010	571	141	1.96	37	0.11	179	2.07
2011	746	197	2.11	44	0.13	240	2.24

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.

Sources: ¹U.S. National Report 2012, ²U.S. Census Bureau.

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 spiny 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 5.15 indicates the magnitude and value of shark exports by the United States from 2001 – 2011. 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) and increased for the next several years, but dropped in 2011. The price of shark fins was greatest in 2011. Also of note is the dramatic increase in export of frozen shark products in 2008 and the decrease in 2011 to the lowest value in the time series.

Table 5.15 Amount and Value of U.S. Shark Products Exported (2001-2011)

Year	Dried Shark Fins			Non-specified Fresh Shark			Non-specified Frozen Shark			Total for All Exports	
	Amount (mt)	Value (\$ million)	Value (\$/kg)	Amount (mt)	Value (\$ million)	Value (\$/kg)	Amount (mt)	Value (\$ million)	Value (\$/kg)	Amount (mt)	Value (\$ million)
2001	335	3.16	9.44	332	0.54	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	0.98	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	4,122	7.21	1.75	4,692	9.11
2009	56	2.82	50.36	254	0.72	2.83	320	1.33	4.16	630	4.87
2010	36	2.89	80.28	222	0.67	3.02	244	0.52	2.11	502	4.08
2011	15	1.51	100.67	333	0.87	2.61	59	0.22	3.73	407	2.62

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

Source: U.S. Census Bureau.

Swordfish Exports

U.S. Census data only report exports of swordfish since 2007 (Table 5.16). 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 a modest export market for U.S. product in recent years.

Table 5.16 Amount and Value of U.S. Swordfish Product Exported (2007-2011)

Year	Swordfish Fillet Fresh		Swordfish Fillet Frozen		Swordfish Fresh		Swordfish Frozen		Swordfish Meat Frozen		Total	
	Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)
2007	38	0.33	11	0.08	135	0.91	11.0	0.04	216.0	0.69	412	2.1
2008	24	0.25	48	0.34	121	0.89	1.2	0.01	154.0	0.88	349	2.4
2009	43	0.38	19	0.23	133	0.81	12.1	0.04	24.0	0.13	231	1.6
2010	98	0.71	16	0.15	134	0.78	0.6	0.01	3.0	0.02	252	1.7
2011	0	0.00	31	0.26	133	0.80	72.0	0.45	0.5	0.01	269	1.8

Source: U.S. Census Bureau.

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 1,000 mt and/or one million dollars annually. Re-exports of yellowfin tuna (fresh or frozen) and shark fins most frequently exceed these values. Annual re-export figures in excess of these relative reference points are given in Table 5.17.

In previous editions of SAFE reports, bluefin tuna 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 5.18 shows re-exports of bluefin tuna since 2000, and is updated to reflect these changes for previous years. Re-exports of bluefin tuna in 2010 were particularly high.

Table 5.17 Re-exports of HMS (Excluding Bluefin Tuna) in Excess of 1000 mt and/or One Million U.S. Dollars (2004–2011)

Year	Product	Amount (mt)	Value (\$ million)
2004	Shark fins, dried	29	1.84
2005	Yellowfin tuna, fresh	123	2.30
	Shark fins, dried	34	1.53
2006	Yellowfin tuna, fresh	208	2.62
2007	Yellowfin tuna, fresh	208	2.91
	Yellowfin tuna, frozen	506	1.80
2008	Yellowfin tuna, fresh	224	3.40
	Shark fins, dried	26	1.37
2009	Yellowfin tuna, fresh	162	2.18
2010	Yellowfin tuna, fresh	130	1.88
	Yellowfin tuna, frozen	340	1.12
2011	Yellowfin tuna, fresh	117	1.85
	Swordfish fillet, frozen	302	2.70
	Shark fins, dried	23	1.42

Source: U.S. Census Bureau.

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 2011, fresh and frozen tuna products accounted for 17,808 mt dw or 1.3 percent of the 1,332,858 mt dw of fresh and frozen seafood products exported from the United States, as indicated in *Fisheries of the United States, 2011*. The value of these HMS products accounted for \$58.9 million, out of a national total of \$4.6 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 5.11). National trade data show that over 9,798 mt of albacore were exported in 2010, indicating the majority of albacore exports were Pacific Ocean product. Trade tracking programs such as the bluefin tuna, swordfish, and bigeye tuna consignment document programs are more accurate for tracking the international disposition of Atlantic HMS.

5.3.2 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.

Atlantic and Pacific Bluefin Tuna Imports

United States imports and re-exports of bluefin tuna for 2000 through 2011, as reported through both CBP and BCD program data, are shown in Table 5.18.

Table 5.18 U.S. Imports and Re-exports of Atlantic and Pacific Bluefin Tuna (2001–2011)

Year	NMFS BFT Catch Document Program		U.S. Customs and Border Protection Data	
	Imports (mt)	Re-exports (mt)	Imports (mt)	Value (\$ million)
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
2011	442.5	35.1	555.4	14.01

Note: Most imports of bluefin tuna (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.

Sources: NMFS Bluefin Tuna Catch Document Program and U.S. Customs and Border Protection.

The rise in popularity of sashimi in the United States may have generated the increase in imports of bluefin tuna in the mid part of the decade, as seen in Table 5.18. Dealers have

reported an expanded domestic market for both locally-caught and imported raw tuna. U.S. consumption of bluefin tuna (landings + imports – exports – re-exports) generally increased from 1996 through 2005, and has generally declined since then, with a slight uptick in 2011(

Figure 5.4). Consumption of domestic landings was fairly consistent and ranged between about 100 mt to 200 mt per year. Consumption of imported bluefin tuna is more variable and ranged from a low in 1997 of less than 50 mt to a high in 2006 of almost 700 mt.

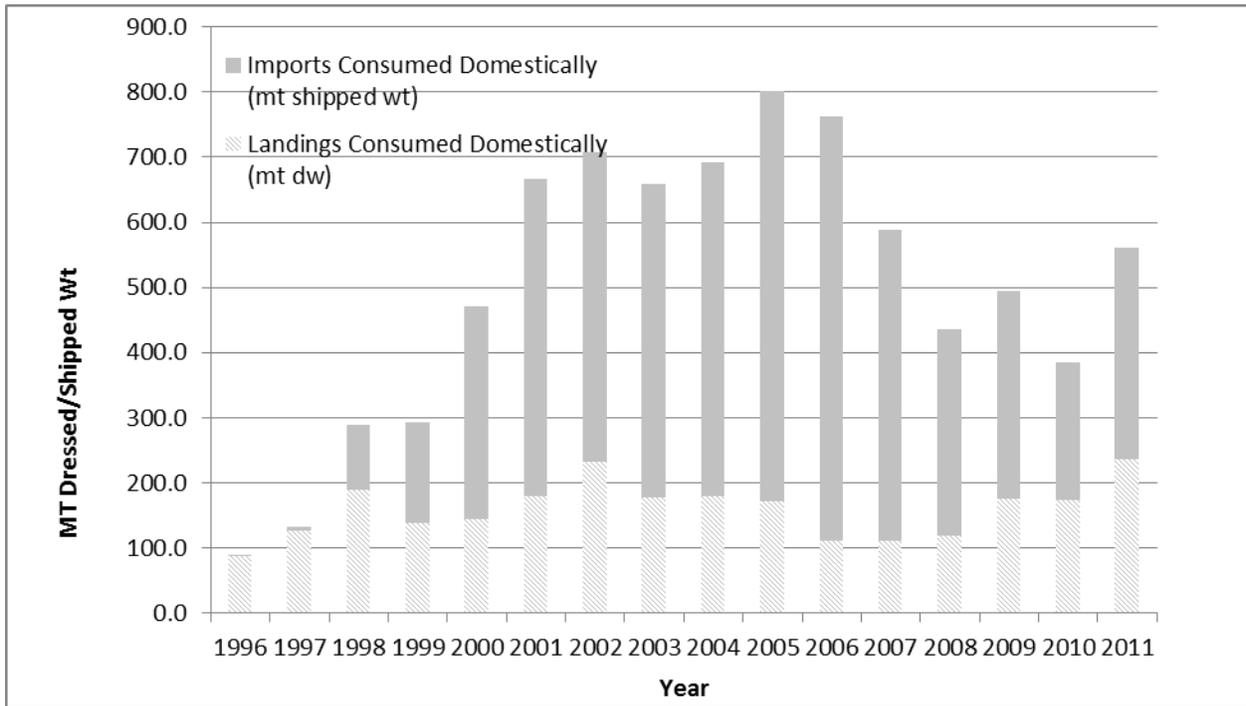


Figure 5.4 U.S. Annual Consumption of Bluefin Tuna, by Imports and U.S. Landings (1996-2011)

Annual U.S. imports, re-exports, exports (mt shipped wt), and landings (mt dw) are also depicted. Consumption = landings + imports – exports – re-exports.

Figure 5.5 shows U.S. domestic landings of Atlantic bluefin tuna and trade of bluefin tuna since 1996. From 2004 through 2011, the United States imported more bluefin tuna than it exported (except for 2010). This trade gap was greatest between 2005 and 2007, but narrowed over the last several years and ended in 2010.

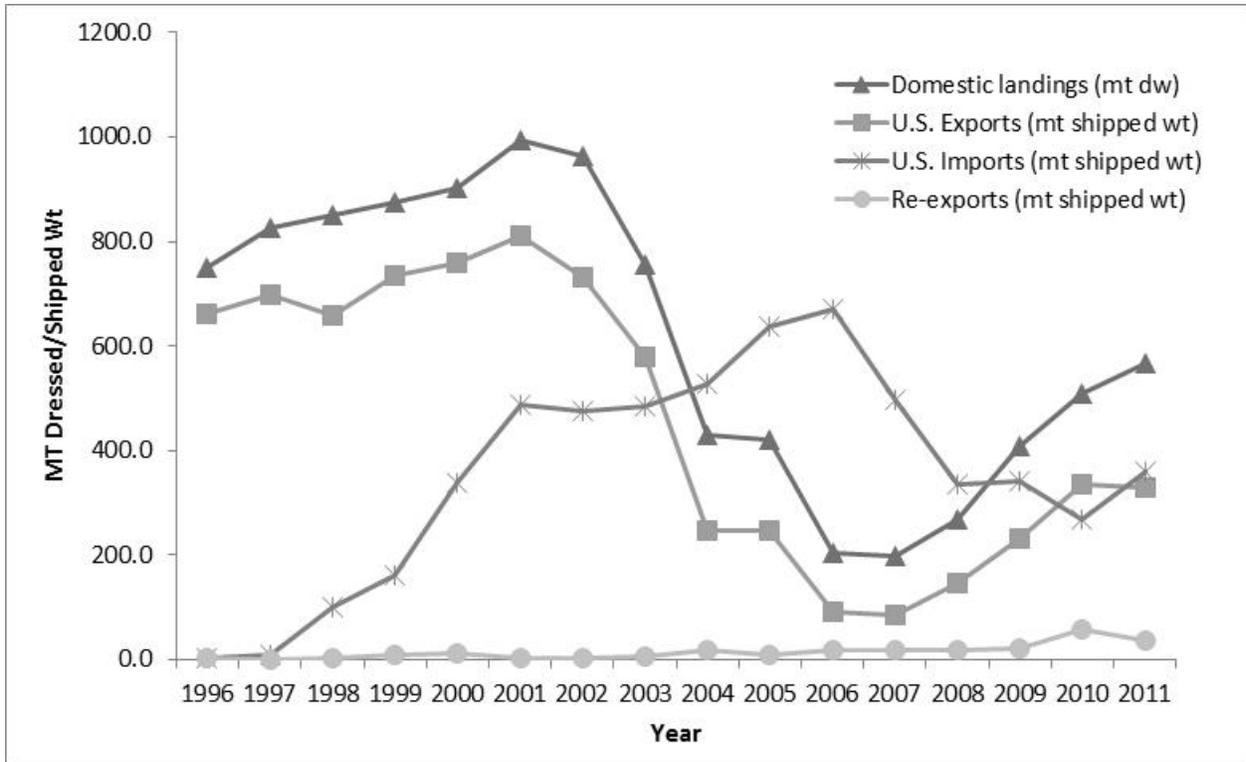


Figure 5.5 U.S. Domestic Landings (mt dw) and Trade (mt shipped wt) of Bluefin Tuna (1996-2011)

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 3,498 (2011) and 8,059 mt (2008) over the time series, as shown in Table 5.19. Imports of all fresh bigeye products in Table 5.19 were the lowest of the time series in 2011, and 2010 for frozen product.

Table 5.19 U.S. Imports of Bigeye Tuna from All Ocean Areas Combined (2001-2011)

Year	Fresh		Frozen		Total for all Imports	
	Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)
2001	4,684	25.70	135	0.32	4,820	26.02
2002	6,312	39.84	319	0.70	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
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	4,025	32.39	316	0.73	4,340	33.12
2011	3,011	26.72	487	1.01	3,498	27.73

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

Source: U.S. Census Bureau.

Annual yellowfin tuna imports into the United States for all ocean areas combined are given in Table 5.20. 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 2001 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 5.20 U.S. Imports of Yellowfin Tuna from All Ocean Areas Combined (2001–2011)

Year	Fresh		Frozen		Total for all Imports	
	Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)
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	15,985	128.69	2,077	16.91	18,062	145.60
2011	15,635	141.83	2,398	17.56	18,033	159.39

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

Source: U.S. Census Bureau.

The amount of albacore imports from all ocean areas generally declined from 2001 to 2006 (Table 5.21) and was relatively low since. In 2001, albacore imports were valued at \$109 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, with a small uptick in 2011. (Products in airtight containers (e.g., cans or foil pouches) are not included in these data.)

Table 5.21 U.S. Imports of Albacore Tuna from All Ocean Areas Combined (2001-2011)

Year	Fresh		Frozen		Total for all Imports	
	Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)
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
2011	669	3.05	3,794	7.17	4,462	10.22

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

Source: U.S. Census Bureau.

Skipjack tuna imports into the United States are comprised mainly of frozen product (Table 5.22). The amount and value of skipjack imports is variable over this time series, with the greatest amount of imports and highest value in 2006. Products in airtight containers (e.g., cans or foil pouches) are not included in these data.

Table 5.22 U.S. Imports of Skipjack Tuna from All Ocean Areas Combined (2001–2011)

Year	Fresh		Frozen		Total for all Imports	
	Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)	Amount (mt)	Value (\$ million)
2001	<1	<0.01	377	0.61	378	0.62
2002	<1	0.01	824	0.83	825	0.84
2003	0	0.00	224	0.43	224	0.43
2004	<1	<0.01	110	0.26	112	0.27
2005	0	0.00	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
2011	2	0.05	594	0.92	595	0.96

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

Source: U.S. Census Bureau.

Swordfish Imports

Table 5.23 summarizes swordfish import data collected by NMFS' Swordfish Statistical Document Program for the 2011 calendar year. According to these data, most swordfish imports were Pacific Ocean product from Central and South America. For Atlantic product, most North Atlantic imports came from Canada, and South Atlantic product came from Brazil and South Africa. 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 5.23 U.S. Imports of Swordfish, by Flag of Harvesting Vessel and Area of Origin (2011)

Flag of Harvesting Vessel	Ocean Area of Origin								Total (mt dw)
	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)	
Australia	-	-	-	-	-	62.3	-	5.7	68.0
Barbados	-	-	0.3	-	-	-	-	-	0.3
Brazil	-	-	369.8	-	-	-	-	-	369.8
Canada	-	983.3	-	-	-	-	-	-	983.3
Chile	-	-	-	-	578.3	-	-	-	578.3
China	-	-	-	-	15.3	-	-	-	15.3
Chinese Taipei	-	-	-	-	-	-	19.1	-	19.1
Costa Rica	-	-	-	-	594.3	-	-	-	594.3
Ecuador	-	0.2	-	1.5	868.8	-	0.1	7.6	878.2
Fiji Islands	-	-	0.9	-	27.4	-	-	32.3	60.6
Indonesia	-	-	-	-	-	-	297.2	1.3	298.5
Japan	-	-	-	-	8.2	-	-	-	8.2
Mexico	-	0.8	-	-	200.2	-	-	10.3	211.3
Micronesia	-	-	-	-	1.3	-	-	-	1.3
New Zealand	-	-	-	-	-	238.7	-	5.4	244.1
Nicaragua	-	-	-	-	10.8	-	-	-	10.8
Panama	-	-	-	-	575.8	-	-	-	575.8
South Africa	-	-	100.2	-	-	-	121.4	6.1	227.7
Spain	-	0.5	-	-	-	-	-	-	0.5
Sri Lanka	-	-	-	-	-	-	0.0	-	0.0
Trinidad & Tobago	-	12.0	-	-	-	-	-	0.3	12.3
Uruguay	-	-	6.2	-	-	-	-	-	6.2
Vietnam	-	-	-	-	165.1	-	-	23.7	188.8
Not provided	1.6	0.4	0.8	5.0	664.9	0.9	1.5	20.0	695.1
Total Imports Reported by SDs	1.6	997.2	478.2	6.5	3,710.4	301.9	439.3	112.7	6,047.8
Total Imports Reported by U.S. Customs & Border Protection									8,076.5
Total Imports Not Reported by SDs									2,028.7

Source: NMFS Swordfish Statistical Document (SD) Program.

In recent years, it appears that the importance of the United States as a transshipment port has decreased since shark fin imports have decreased (Table 5.25).

Table 5.25 summarizes Census Bureau data on shark imports for 2001 through 2011. Imports of fresh shark products and shark fins have decreased significantly over time since 2001. 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 2001 to 2011, the overall annual amount of shark imports has generally decreased to a low in 2011, while the value during this time series has fluctuated with no apparent trend. Imports of dried shark fins have generally increased since 2003, and in 2011 (58 mt) surpassed the previous high in 2001 (50 mt).

Table 5.25 U.S. Imports of Shark Products from All Ocean Areas Combined (2001-2011)

Year	Shark Fins Dried		Non-specified Fresh Shark		Non-specified Frozen Shark		Total for All Imports	
	(mt)	(\$ million)	(mt)	(\$ million)	(mt)	(\$ million)	(mt)	(\$ million)
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
2011	58	1.79	72	0.22	32	1.20	162	3.21

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

Source: U.S. Census Bureau.

5.3.3 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 bluefin tuna, 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. 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. For examples of the use of trade data, please see this section of the 2011 HMS SAFE Report.

Table 5.26 Summary and Current Status of ICCAT-Recommended Trade Sanctions for Bluefin Tuna, 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 tuna	1996	1997	1999	2000
Honduras	Bluefin tuna	1996	1997	2001	2004
	Bigeye tuna	2000	2002	2002	2004
	Swordfish	1999	2000	2001	2004
Belize	Bluefin tuna	1996	1997	2002	2004
	Swordfish	1999	2000	2002	2004
	Bigeye tuna	2000	2002	2002	2004
Equatorial Guinea	Bluefin tuna	1999	2000	2004	2005
	Bigeye tuna	2000	2002	2004	2005
Cambodia	Bigeye tuna	2000	2002	2004	2005
St. Vincent & the Grenadines	Bigeye tuna	2000	2002	2002	2004
Bolivia	Bigeye tuna	2002	2004	2011	2012
Sierra Leone	Bluefin tuna	2002	2004	2004	2005
	Bigeye tuna	2002	2004	2004	2005
	Swordfish	2002	2004	2004	2005
Georgia	Bigeye tuna	2003	2004	2011	2012

5.4 Recreational Fisheries

HMS recreational fishing provides significant positive economic impacts to coastal communities that are derived from individual angler expenditures, recreational charters, tournaments, and the shoreside businesses that support those activities.

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 was released in August 2012. The final national report and the data CD-ROM are available from the U.S. Fish and Wildlife Service (USFWS). The 2011 National Survey data show that hunters, anglers and wildlife watchers spent \$145 billion last year on related gear, trips and other purchases such as licenses, tags and land leasing or ownership. More information on the 2011 national survey is available at <http://www.fws.gov/pacific/news/news.cfm?id=2144375111>

For a detailed discussion of recreational economic information, please see the 2011 HMS SAFE Report.

5.4.2 Atlantic HMS Tournaments

For detailed information about HMS tournaments, please see Section 8.2 of this document, the 2006 Consolidated HMS FMP, and the 2011 HMS SAFE Report.

5.4.3 Atlantic HMS Charter and Party Boat Operations

At the end of 2004 and 2012, NMFS collected market information regarding advertised charterboat rates. The analysis of this data focused on advertised rates for full day charters. Full day charters vary from 6 to 14 hours long with a typical trip being 10 hours. The average price for a full day boat charter was \$1,053 in 2004 and \$1,200 in 2012. 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 and 2012, it is apparent that there has been a significant increase in charterboat rates.

For additional information on HMS charter fishing, please see the 2006 Consolidated HMS FMP and the 2011 HMS SAFE Report.

5.5 Review of Regulations under Section 610 of the Regulatory Flexibility Act

The Regulatory Flexibility Act, 5 U.S.C. 601, requires that Federal agencies take into account how their regulations affect “small entities,” including small businesses, small governmental jurisdictions and small organizations. In order to assess the continuing effect of an agency rule on small entities, The Regulatory Flexibility Act contains a provision in Section 610 that requires Federal agencies to review existing regulations on a periodic basis that had or will have a significant economic impact on a substantial number of small entities.

NMFS recently published a plan for this required period review of regulations in the Federal Register (77 FR 41728, July 16, 2012). This plan stated, "NMFS will conduct reviews in such a way as to ensure that all rules for which a Final Regulatory Flexibility Analysis was prepared are reviewed within 10 years of the year in which they were originally issued. By December 31, 2012, NMFS will review all such rules issued during 2003 and 2004." Table 5.27 reviews the Atlantic HMS regulations between 2003 and 2004 using the criteria established in Section 610 of the Regulatory Flexibility Act.

Final rules should be reviewed to determine whether they should be continued without change, or whether they should be amended or rescinded, consistent with the stated objectives of applicable statutes. Section 610 of the Regulatory Flexibility Act requires NMFS to consider the following factors when reviewing rules to minimize any significant economic impact of the rule on a substantial number of small entities:

1. The continued need for the rule;
2. The nature of complaints or comments received concerning the rule from the public;
3. The complexity of the rule;

4. The extent to which the rule overlaps, duplicates, or conflicts with other Federal rules, and , to the extent feasible, with State and local government rules; and
5. The length of time since the rule has been evaluated or the degree to which technology, economic conditions, or other factors have changed in the area affected by the rule.

Table 5.27 Regulatory Flexibility Act Section 610 Review of Atlantic Highly Migratory Species Regulations between 2003 and 2004

#1	Atlantic Highly Migratory Species; Incidental Catch Requirements of Bluefin Tuna RIN 0648-A075; 68 FR 32414, May 30, 2003
Rescinded, Amended, or Continuing	Continuing with parts amended
Description of Management Measures and Complexity	NMFS amended regulations under the framework provisions of the 1999 FMP for Atlantic Tunas, Swordfish, and Sharks governing the Atlantic bluefin tuna fishery as they affected landing of Atlantic bluefin tuna in the Atlantic pelagic longline fishery. The intent of this action was to minimize dead discards of Atlantic bluefin tuna and improve management of the Atlantic pelagic longline fishery, while complying with the National Standards of the Magnuson-Stevens Act and allowing harvest consistent with recommendations of ICCAT.
Economic Impacts of Management Measures and Nature of Public Comments	<p>The economic analysis of this rule found that the final actions under this rule would have beneficial impacts. When this rule was proposed, there were approximately 171 pelagic longline vessels permitted to retain Atlantic tunas and swordfish, all of which are considered small entities, and average annual gross revenues per vessel was approximately \$168,000 with annual gross revenues from the Atlantic pelagic longline fishery of approximately \$29 million. NMFS selected this final action because the selected target catch requirements will minimize bluefin tuna discards while allowing retention of truly incidentally caught bluefin tuna and preventing a directed fishery. One target catch alternative considered was rejected because it would not reduce bluefin tuna discards as much as the final action, and it would have negative economic impacts. While the other alternatives generally had positive economic impacts, NMFS did not select them because they maintained differential target catch requirements, which no longer seemed warranted based on available data, or because they would not have reduced bluefin tuna discards as much as the final action. The final action was anticipated to have a positive economic impact on revenues, approximately a 1.2 to 1.5% increase for pelagic longline vessels. While the north/south boundary line and inseason adjustment authority was not expected to have any direct economic impacts, NMFS selected these measures as part of the final action because they could help prevent negative impacts on small entities due to closures. In addition, the new boundary line was selected to address confusion regarding the applicability of regulations.</p> <p>No comments were received concerning the economic impact of this rule.</p>
Overlap with other State or	This final rule does not duplicate, overlap, or conflict with any other Federal rules.

Federal Rules	
Recommendation and Need for Continuing the Rule	This rule is continuing and needed to address the ongoing need to minimize dead discards of Atlantic bluefin tuna and maintain consistency with the recommendations of ICCAT. Many of the provisions in this regulation are being revisited during the development of draft Amendment 7 to the 2006 Consolidated HMS FMP.
#2	Atlantic Highly Migratory Species; Atlantic Bluefin Tuna Quota Specifications, General Category Effort Controls, and Permit Revisions RIN 0648-AQ38; 68 FR 56783, October 2, 2003
Rescinded, Amended, or Continuing	Continuing with parts amended
Description of Management Measures and Complexity	NMFS established the final initial 2003 fishing year specifications for the Atlantic bluefin tuna fishery for each of the established fishing categories; to set General category effort controls; to allocate 25 metric tons (mt) of Atlantic bluefin tuna to account for incidental catch of Atlantic bluefin tuna by pelagic longline vessels “in the vicinity of the management boundary area;” to define the management boundary area and applicable restrictions; to revise permit requirements to allow General category permitted vessels to fish in registered recreational HMS fishing tournaments; and to allow permit applicants a 10-calendar-day period to make permit category changes to correct potential errors. The final initial quota specifications, including the quota allocation to account for incidental catch of Atlantic bluefin tuna by pelagic longline vessels in the vicinity of the management boundary area and the General category effort controls, were necessary to implement recommendations of ICCAT, pursuant to the Atlantic Tunas Convention Act, and to achieve domestic management objectives under the Magnuson-Stevens Act. The definition of the management boundary area was to assist management, monitoring, and enforcement of the 25 mt allocated to the Longline category. The permit revisions to allow General category permitted vessels to participate in registered recreational HMS fishing tournaments and to allow a time period for permit category changes were intended to relieve restrictions and help achieve domestic management objectives.
Economic Impacts of Management Measures and Nature of Public Comments	An analysis was conducted to assess the impacts of the various quota alternatives on the vessels that participate in the bluefin tuna fisheries, all of which are considered small entities. In order to do this, NMFS has estimated the average impact that the alternative to establish the 2003 bluefin tuna quota for all domestic fishing categories would have on individual categories and the vessels within those categories. The 2002 ICCAT Recommendation increased the bluefin tuna quota allocation to 1,489.6 mt. This increase includes 77.6 mt to be redistributed to the domestic fishing categories based on the allocation percentages established in the 1999 FMP for Atlantic Tunas, Swordfish, and Sharks, as well as a set-aside quota of 25

mt to account for incidental catch of bluefin tuna related to directed pelagic longline swordfish and BAYS (bigeye, albacore, yellowfin, skipjack) fisheries in the vicinity of the management area boundary. In 2002, the annual gross revenues from the commercial bluefin tuna fishery were approximately \$18 million. There are approximately 11,091 vessels that are permitted to land and sell bluefin tuna under four bluefin tuna quota categories. The four quota categories and their 2002 gross revenues are General (\$13,948,190), Harpoon (\$588,884), Purse Seine (\$3,066,034), and Incidental Longline (\$588,352). The analysis assumed that all category vessels have similar catch and gross revenues. Regardless of this assumption, the analyses are sufficient to show the relative impact of the various final actions on vessels. The final action increased the quota by 77.6 mt and was expected to have positive impacts for fishermen.

The final action to establish Restricted Fishing Days (RFD) late in the season to provide a late Fall, southern Atlantic fishery would have positive economic impacts to those south Atlantic fishermen, but could have potentially negative economic impacts to those northern area fishermen who would have otherwise caught and sold fish earlier in the season. These negative impacts would be slightly mitigated if northern area fishermen are willing to travel south late in the season. NMFS selected this final action because extending the season as late as possible enhances the likelihood of increasing participation by southern area fishermen and increasing overall access to the fishery over a greater range of the fish migration.

The final action, which allows General category permitted vessels to participate in registered recreational HMS tournaments, was expected to have positive economic and social impacts by relieving a restriction on General category vessels. The final action also provides a 10–calendar day time period for permit changes due to errors which would have positive social and economic impacts. The alternative to allow dual permits would further liberalize the restriction and alleviate any negative economic impacts by allowing General category vessels to choose on any given day whether they wish to fish commercially or recreationally. However, there would be some administrative impacts to vessel owners/operators as they would have to declare with NMFS their intent before making a trip, and difficulties in monitoring and enforcing the declarations in real-time and providing multiple permits for the same vessel may end up causing more confusion within the fishery than alleviating any perceived negative economic impacts, thus this alternative was rejected. The final action provides a 10–calendar day time period for permit changes due to errors and would have positive economic impacts by allowing permit holders to fish in the manner intended.

The final action which defines the area “in the vicinity of the management boundary area” as the Northeast Distant area and will allow retention of the 25 mt quota of bluefin tuna with no target catch

	<p>requirements was anticipated to provide slight positive economic impacts by allowing more retention of incidentally caught bluefin tuna relative to the other alternatives because no target requirements would apply.</p> <p>No comments were received concerning the economic impact of this final rule.</p>
Overlap with other State or Federal Rules	This final rule does not duplicate, overlap, or conflict with any other Federal rules.
Recommendation and Need for Continuing the Rule	This rule is continuing and needed to consistency with the recommendations ICCAT. Some of the provisions in this regulation may be revisited during the development of draft Amendment 7 to the 2006 Consolidated HMS FMP.
#3	Atlantic Highly Migratory Species; Atlantic Shark Management Measures RIN 0648-AQ95; 68 FR 74746, December 24, 2003
Rescinded, Amended, or Continuing	Amended with parts continuing
Description of Management Measures and Complexity	This final rule was necessary to ensure that shark regulations were based on the results of the 2002 stock assessments for large coastal sharks and small coastal sharks. The results of these stock assessments indicated that the large coastal shark complex continued to be overfished, and overfishing was occurring; that sandbar sharks were not overfished, but overfishing was occurring; that blacktip sharks were rebuilt and healthy; that the small coastal shark complex was healthy; and that finetooth sharks were not overfished, but overfishing was occurring. Based on these results, NMFS revised the rebuilding timeframe for large coastal sharks to 26 years starting from 2004; changed some of the commercial regulations; changed some of the recreational regulations; implemented measures to reduce bycatch and bycatch mortality, including a time/area closure; removed the deepwater/other sharks from the management unit; established criteria regarding adding or removing sharks from the prohibited species group; and established a display permit for fishermen who wish to harvest HMS for public display. NMFS also updated essential fish habitat identifications for sandbar, blacktip, finetooth, dusky, and nurse sharks. NMFS also notified eligible participants of the opening and closing dates for the Atlantic large coastal, small coastal, and pelagic shark fishing seasons.
Economic Impacts of Management Measures and Nature of Public Comments	The economic analyses conducted for the final rule acknowledged that reductions in commercial quotas, implementation of trimesters, regional quotas, VMS requirements, and the time/area closure would likely result in economic impacts to the fishery as a whole, some of which may be significant for small entities/vessel owners. However, all of these alternatives, when compared to the other alternatives

considered, mitigate undesirable or greater economic impacts associated with continued overfishing, shortened seasons, bycatch of vulnerable species, and economic instability of fishery participants and associated fishing communities in the long-term. The combination of these preferred alternatives is necessary for large coastal sharks to rebuild and small coastal sharks to achieve optimum yield, consistent with the objectives of this rule, the Magnuson-Stevens Act, and other domestic laws.

As of September 2003, there were approximately 256 directed permit holders and 351 incidental permit holders for a total of 607 permit holders who are authorized to fish for sharks and could be affected by the preferred alternatives outlined in the final rule. Only about 20 percent of all permit holders are actually active in the fishery. Currently, 120 vessels (i.e., number of vessels that reported landings of shark during 2001) would be directly affected by changes (i.e., increases/decreases) in shark quotas or other changes to the commercial management measures. The revised time/area closure would have a direct economic impact on a total of 23 vessels (out of 256 total directed permits issued in 2003 or approximately 9 percent) with directed shark permits. As of September 2003, only eight vessels with home ports in North Carolina reported shark landings during 2001. NMFS knows of fewer than 11 shark fishermen who have used drift gillnet gear to target sharks at some point in the past and only five in recent years. The recreational requirements proposed in this rulemaking could affect all recreational HMS permit holders including HMS Angling category permit holders (18,249 as of September 2003) and HMS charter/headboat permit holders (4,041 as of September 2003). These permit holders can target any HMS; however, few actually target sharks. Other sectors of HMS fisheries such as dealers, processors, bait houses, and gear manufacturers might be affected by these regulations, particularly the shift to trimester seasons for commercial fisheries, reduction in commercial large coastal shark quota/increase in commercial small coastal shark quota, and time/area closure off North Carolina during the winter commercial fishery.

The costs associated with implementing a VMS program in the Atlantic shark gillnet fishery include an initial average cost per vessel of approximately \$2,275 (not including postage costs for returning certification statement), an average annual maintenance cost of approximately \$500/year, and approximately \$197.28/year for communications during the right whale calving season. Costs associated with implementing a VMS program in the directed shark bottom longline fishery include an initial average cost per vessel of approximately \$2,275 (not including postage costs for returning certification statement), an average annual maintenance cost of approximately \$500/year, and approximately \$305.28/year for communications during the seven month shark bottom longline time/area closure. Installation of VMS likely increased costs to the vessel owner but should not increase the needed skill level required for HMS fisheries.

The increase in the recreational bag and size limits, change in authorized gear types, addition of the bottom longline time/area closure, requirement to have and use release equipment, and requirement to move 1 nmi after interacting with a protected species may have changed the way and areas in which fishermen can fish and set their gear, require the possession and use of specific equipment, limit the gears authorized for use in recreational shark fisheries, and increase the skill level needed to participate in HMS fisheries. The increased recreational bag and size limit could result in positive economic benefits if they resulted in increased tournament participation and business profits within the charter/headboat industry for sharks. NMFS does not expect changes to the recreational authorized gear to have any substantive economic impacts, because sharks caught recreationally in Federal waters cannot be sold and the majority of HMS recreational fishermen already use the gears being authorized in this final rule.

The bottom longline time/area closure and VMS was anticipated to have significant economic impacts, particularly for those fishermen in states bordering the closure (i.e., North Carolina). However, for vessels not directly affected by the closure there might be a few economic benefits, and NMFS anticipates long-term benefits to the fishery as a whole when the large coastal shark complex rebuilds. The bycatch release equipment and moving 1 nmi after an interaction would likely only have minor economic impacts (e.g., the purchase of stainless-steel hooks and release equipment and minor increases in fuel costs to move one mile after an interaction). Although the release equipment is relatively simple to use, limited training may be required to use them effectively.

No economic impacts were anticipated from the display permit alternative, because this is an administrative name change that does not affect current application processes or related regulations. In addition, the quotas and fishing seasons in this final rule are not likely to change reporting or compliance in the fishery.

The final actions for commercial management measures (i.e., the large coastal shark complex classification, regional quotas, trimester seasons, MSY based quotas, and no minimum size) were designed to minimize economic impacts incurred on fishermen, while simultaneously enhancing equity among users groups, allowing healthy stocks to be managed at optimum yield, and allowing overfished stocks to rebuild.

Aggregating the large coastal shark complex was expected to reduce costs associated with the lengthening of trips (i.e., fuel, bait, and ice) due to sorting inefficiencies and simplify compliance and reporting requirements. Implementation of regional quotas was not anticipated to result in any changes to economic benefits or costs because it maintained historic fishing patterns based on dealer reports and was anticipated to enhance equity among user regions. Trimester seasons would spread open seasons out more evenly over

the calendar year and could, in the long-term, result in greater economic stability for fishermen and associated communities because the amount of time between open and closed seasons would likely be reduced. Thus, in the long-term, the combination of regional quotas and trimester seasons was expected to help minimize any economic impacts caused by other final actions.

The final action alternatives (quota based on MSY and aggregating the large coastal shark complex) will implement commercial quota levels of 1,017 mt dw for the large coastal shark aggregate and 454 mt dw for the small coastal shark aggregate, resulting in a 21-percent reduction in large coastal shark quota and a 10-percent increase in small coastal shark quota, respectively, from the baseline quotas outlined in Amendment 1 to the 1999 FMP for Atlantic Tunas, Swordfish, and Sharks.

This final rule eliminated the current commercial minimum size, thus relieving a restriction that would impose negative economic impacts on the commercial shark fishery. Given that the previous minimum size for commercial fishery has never been implemented due to litigation, NMFS did not anticipate any significant changes in economic benefits or costs from this final action.

Similar to the final actions for commercial quotas, the final action alternatives for recreational retention (i.e., existing limits plus one bonnethead) and minimum size limits (i.e., existing size limits plus no minimum size for bonnethead) were designed to minimize the economic impacts on recreational fishermen, while simultaneously allowing healthy stocks to be managed at optimum yield and overfished stocks to rebuild. Since one shark per vessel per trip plus one Atlantic sharpnose and one bonnethead shark per person per trip allows the additional retention of bonnethead sharks, this alternative may increase revenues to charter/headboats and other small entities above the no action and catch and release only alternatives.

The final size limit, 4.5 ft fork length for all sharks and no size limit for Atlantic sharpnose and bonnethead sharks, takes into account the fact that bonnethead sharks do not reach the minimum size currently in place and simplifies compliance for small entities with the final retention limits for bonnethead sharks. The final size limit alternative was anticipated to increase the willingness to pay, angler consumer surplus, and current revenues to charter/headboat captains and other small entities who rely on the recreational shark fishery for income.

The final action regarding recreational authorized gear limits fishermen in the recreational fishery to handline and rod and reel and addresses the need for NMFS to clarify which gear types are authorized specifically for recreational fishing activities. Most recreational HMS fishermen already use handline as well as rod and reel in the fishery.

As such, there were no anticipated economic costs or benefits associated with implementation of the final action.

The final action to remove the deepwater and other sharks from the management unit seeks to simplify compliance and reporting requirements under the final rule for small entities. No economic costs were anticipated with from this alternative.

The final action that retains the current 19 prohibited species and establishes a criteria for the addition/removal of other species to/from the prohibited species group, also simplifies compliance and reporting requirements. Given the possibility that recreationally or commercially valuable species may either be added/removed from the prohibited species group, it is possible that economic impacts/benefits would be experienced by small entities. While removing or adding sharks to the prohibited list could have economic impacts, maintaining the status quo while establishing a process to add or remove, should not have economic impacts on a substantial numbers of small entities.

The final actions for bycatch reduction (i.e., install and activate VMS, obtain and use release equipment, use non-stainless steel corrodible hooks, and move 1 nm after an interaction with a protected species) were designed to minimize the economic impacts on fishermen, while simultaneously promoting bycatch reduction of protected species in shark fisheries. Installation of VMS units could result in economic impacts to small entities in the short-term. However, in the long-term, this alternative could result in increased revenues by preventing more burdensome regulations and allowing more fishing time.

Additionally, bottom longline vessels would be able to traverse the closed area, while gillnet vessels may require less observer coverage.

Under the VMS requirement approximately five gillnet shark fishing vessels and approximately eight directed category bottom longline shark fishing vessels would need to install VMS units. Requiring VMS for only a portion of the shark fishing fleet minimizes the economic impact on the remainder of the fleet. Economic analyses of the impacts associated with VMS requirements on small entities indicate that the average gross revenue by permit holder, during the first year of implementation, will be reduced by nine percent. For every year thereafter, economic analyses on small entities indicate that the average gross revenue by permit holder will be reduced by two percent.

As noted above, to minimize economic impacts, NMFS delayed the effective date of this requirement and will, in the future, type approve VMS units for use in the Atlantic shark fisheries.

The final alternative regarding release equipment, corrodible hooks, and moving after an interaction with a protected species would likely result in minor economic impacts to small entities, primarily because the

cost associated with purchasing release equipment is minimal and is a one-time cost. Although many shark fishermen may already use non-stainless steel corrodible hooks, this may increase the financial burden on fishermen who will have to purchase new hooks. The requirement to move one nautical mile after an interaction with a marine mammal, sea turtle, or sawfish would likely increase fuel costs due to increased time transiting to another fishing area and increased time needed to fish if alternate fishing grounds are not as productive for target species. However, because few marine mammals, sea turtles, or protected species have been observed caught, NMFS does not believe that this requirement would affect more than a few trips for all vessels combined, each year.

NMFS also finalized a time/area closure for sandbar and dusky shark nursery and pupping areas offshore North Carolina during the winter fishery. This alternative is designed to reduce bycatch of neonate and juvenile sandbar sharks and prohibited dusky sharks by 92 percent and 61 percent, respectively. This alternative is likely to have significant impacts on the small entities/vessel owners directly affected by the closure. As discussed above, NMFS has refined the size of the time/area closure in this final action, thus reducing the number of vessels affected from 13 to 8 and mitigating the economic impacts by \$17,956 in total gross revenues for the small entities directly affected by the closure as compared with the original preferred alternative. For those vessels affected by the time/area closure, the closure would impose a reduction in catch and income from areas traditionally relied upon and affect fishing practices by requiring fishermen to travel further offshore. Due to greater distances traveled, fishermen would spend more time at sea, and associated costs of food, fuel, and labor could increase. This could cause some fishermen to go out of business, move to new areas, or alter fishing patterns in other ways. This alternative could result in a change in the distribution of benefits and costs, with the financial costs of operating in the fishery increasing and benefits decreasing. However, the time/area closure will facilitate rebuilding of the large coastal shark complex, thus providing for longer term economic stability, and it minimizes the economic impacts compared to the other larger time/area closure alternative considered.

The provision for identifying EFH would not affect small entities in any way that would complicate compliance and reporting requirements for EFH or result in significant economic impacts for small entities. The EFP provision was also not expected to affect small entities in any way that would complicate compliance and reporting requirements for EFPs or result in significant economic impacts for small entities.

As set forth above, NMFS received many comments on the proposed rule and draft Amendment 1 to the 1999 FMP for Atlantic Tunas, Swordfish, and Sharks during the comment period. NMFS did not receive any comments specific to the IRFA, but did receive a limited number of comments on the potential for

	substantial impacts related to the proposed commercial quota reductions, implementation of trimester seasons and regional quotas, gillnet restrictions, VMS requirements, and the time/area closure. In summary, commenters noted that commercial quota reductions, VMS requirements, and the bottom longline time/area closure off North Carolina would put fishermen out of business and create less economic stability among industry participants; implementation of trimester seasons and regional quotas could disrupt existing markets and lead to insufficient income; and requiring the strikenet method only would not allow the commercial shark gillnet fishery to continue while minimizing interactions, as it was originally intended.
Overlap with other State or Federal Rules	This final rule does not duplicate, overlap, or conflict with any other Federal rules.
Recommendation and Need for Continuing the Rule	NMFS recommends continuing this rule as currently amended to meet the objectives of the Magnuson-Stevens Act and the 2006 Consolidated HMS FMP. Some of the provisions in this regulation are being revisited in draft Amendment 5 to the 2006 Consolidated HMS FMP.
#4	Atlantic Highly Migratory Species; Bluefin Tuna Season and Size Limit Adjustments RIN 0648-AR12; 68 FR 74504, December 24, 2003
Rescinded, Amended, or Continuing	Continuing with parts amended
Description of Management Measures and Complexity	Under the framework provisions of the 1999 FMP for Atlantic Tunas, Swordfish, and Sharks governing the Atlantic bluefin tuna fishery, NMFS amended the regulations regarding the opening date of the Purse seine category, closure dates of the Harpoon and General categories, and size tolerances of large-medium Atlantic bluefin tuna for the Purse seine and Harpoon categories. The intent of this final rule was to further achieve domestic management objectives under the 1999 FMP for Atlantic Tunas, Swordfish, and Sharks and the Magnuson-Stevens Act and to implement recommendations of ICCAT pursuant to the Atlantic Tunas Convention Act.
Economic Impacts of Management Measures and Nature of Public Comments	The economic analysis for this rule assessed the impacts of the various alternatives on the vessels that participate in the bluefin tuna fisheries, all of which are considered small entities. This final action would affect vessels in three permit categories, namely the Purse seine, Harpoon, and General categories. The gross revenues for 2002 and number of vessels to date for 2003 for each category are as follows: General category, \$13.9 million, 6,797 vessels; Purse seine category, \$3.0 million, 5 vessels; and the Harpoon category, \$0.5 million, 59 vessels. The selected alternative of a July 15 start date would minimize the negative impacts on the Harpoon

category by reducing by more than half the amount of overlap with the Purse seine category season relative to the June 1 start date alternative, while still reducing the mid-season market glut, which should positively impact Purse seine and General category ex-vessel prices. Under this alternative, increase in overlap with the Harpoon category would be reduced to 30 days and such overlap would occur during the time period when the Harpoon category averages approximately 26 percent of its gross revenues annually. Due to the large amount of landings, gross revenues and numbers of participants attributed to the Purse seine and General category commercial bluefin tuna sectors, this alternative is expected to provide the greatest positive impacts to the bluefin tuna fishery as a whole, even though the smaller Harpoon category may experience slightly negative economic impacts. Any negative impact to the Harpoon category could be partially mitigated by the increase in this final rule of the Harpoon category tolerance limit for large medium bluefin tuna to two fish per vessel per day, which would improve the ability of the Harpoon category to catch its annual quota. In addition, in response to comment, the final rule for this alternative includes a provision for delaying the start date to no later than August 15 if such a delay would further reduce gear conflicts or overlap between the different categories.

The final provision was designed to maintain the Harpoon category quota for the traditional New England fishery and impact only the Harpoon category vessels. This alternative was selected as it is expected to provide positive impacts for the traditional New England Harpoon category fishery since it would close the fishery near the time period when bluefin tuna migrate out of the New England area. Negative impacts to southern area fishermen interested in participating in the Harpoon category fishery under this alternative are expected to be negligible since there had been no bluefin tuna landings against the Harpoon category quota in such area prior to 2002, few vessels have participated in the Harpoon category fishery in the south Atlantic since that time, and there has been little investment in gear and equipment in a Harpoon category fishery outside of the New England area. Finally, vessel owners/operators that fish outside the traditional New England area that wish to use a harpoon as a primary gear type would still be allowed to do so under the General category permit, albeit under General category retention limits and restrictions.

The General category season is scheduled to end on December 31 of each fishing year or when the General category quota is harvested, whichever comes first. A winter fishery for large medium and giant bluefin tuna has existed in the south Atlantic since the early 1990s, and when quota is available, fish have been harvested under the General category. This final regulation moved the General category end date to January 31 of each fishing year. Overall economic impacts of this alternative to the General category bluefin tuna fishery as a whole would be neutral since the same overall amount of the General category quota would be landed and the value of the General category quota would not be changed. General

	<p>category fishermen in the northern region may experience negative economic and social impacts, when compared to the status quo, since any unharvested quota as of December 31 would otherwise be rolled over to the following year. General category fishermen in the southern region would be positively affected by this alternative as it would allow greater utilization of existing investment in gear and equipment if quota was still available for harvest after December 31, and since bluefin tuna are usually available in the southern region during the end of the calendar year due to the fall migration from the north. The Purse seine and Harpoon categories have recently experienced difficulties in landing the full annual quota provided for each of these categories with the result of decreased annual gross revenues. Eliminating the trip limit and establishing the annual limit at 15 percent would provide access to the same total amount of landings as alternative two, but may also increase net revenues by increasing flexibility in meeting the annual tolerance limit. This rule also allowed an increase in the daily retention limit for the Harpoon category from the status quo of one large medium bluefin tuna per day to two large medium bluefin tuna per day, and was selected since it is expected to provide an acceptable balance between positive economic effects and a modest increase in mortality of large medium bluefin tuna. Large medium bluefin tuna mortality is not expected to increase significantly under this alternative because of a harpooner's ability to visually determine the size class of bluefin tuna prior to throwing a harpoon.</p> <p>No comments were received on the IRFA concerning the economic impact of this final rule.</p>
Overlap with other State or Federal Rules	This final rule does not duplicate, overlap, or conflict with any other Federal or State rules.
Recommendation and Need for Continuing the Rule	NMFS recommends continuing this rule to meet the objectives of the Magnuson-Stevens Act and the 2006 Consolidated HMS FMP. Some of the provisions in this regulation may be revisited during the development of draft Amendment 7 to the 2006 Consolidated HMS FMP.
#5	Atlantic Highly Migratory Species; Pelagic Longline Fishery RIN 0648-AR80; 69 FR 40734, July 6, 2004
Rescinded, Amended, or Continuing	Continuing
Description of Management Measures and Complexity	This final rule implemented new sea turtle bycatch and bycatch mortality mitigation measures for all Atlantic vessels that have pelagic longline gear onboard and that have been issued, or are required to have, Federal HMS limited access permits, consistent with the requirements of the Endangered Species Act, the Magnuson-Stevens Act, and other domestic laws. These measures included mandatory circle hook and bait requirements, and mandatory possession and use of sea turtle release equipment to reduce bycatch mortality. This final rule also allowed vessels with pelagic longline gear onboard that have been issued, or

	<p>are required to have, Federal HMS limited access permits to fish in the Northeast Distant, if they possess and/or use certain circle hooks and baits, sea turtle release equipment, and comply with specified sea turtle handling and release protocols.</p>
<p>Economic Impacts of Management Measures and Nature of Public Comments</p>	<p>The final provisions of this rule are intended to reduce sea turtle interaction and mortality levels while minimizing adverse economic impacts to the extent practicable, consistent with the Endangered Species Act, Magnuson-Stevens Act, and other applicable law. The rule provide flexibility to utilize circle hooks and baits that are effective at reducing sea turtle interactions and post-hooking mortality, without adversely impacting catches of swordfish and tunas.</p> <p>An average annual vessel gross revenue estimate of \$178,619 was assumed for these analyses.</p> <p>This rule limits vessels with pelagic longline gear onboard, at all times, in all areas open to pelagic longline fishing, excluding the NED, to possessing onboard and/or using only 16/0 or larger non-offset circle hooks and/or 18/0 or larger circle hooks with an offset not to exceed 10 degrees. Only whole finfish and squid baits may be possessed and/or utilized with allowable hooks. Under this provision, fishermen may experience little or no change in catches of tunas (i.e., tuna catch remains at 58.6 percent by weight), and a 10 to 20 percent decrease in catches of swordfish. Based on this, vessel revenues attributable to tunas would likely remain at approximately \$104,670. Vessel revenues attributable to swordfish may possibly decrease by 3.88 (\$6,925) to 7.75 (\$13,850) percent to between \$171,694 and \$164,769. However, because fishermen have the option of using a hook and bait combination shown to be more effective at catching swordfish, this reduction in revenues is not expected to occur. Actual impacts of this alternative would depend on the frequency with which particular hook and bait combinations are employed and species targeted.</p> <p>This rule allows pelagic longline vessels to fish in the Northeast Distant, but requires vessels in that area, at all times, to possess onboard and/or use only 18/0 or larger circle hooks with an offset not to exceed 10 degrees. Only whole mackerel and squid baits may be possessed and/or utilized with the allowable hooks. Depending upon whether fishermen use the 18/0 offset circle hook with whole mackerel bait or the 18/0 non-offset circle hook with squid, respectively, there may be a -32.58 percent to +30.24 percent change in swordfish catches (by weight) and a -87.64 to possibly as much as +29.22 percent (by weight) change in tuna catches. Thus, the portion of landings of historically attributable to swordfish may shift from 88.54 percent (by weight) of landings to between 59.69 and 115 percent. Gross revenues attributable to swordfish may vary between -28.72 percent (-\$51,292) and +26.65 percent (\$47,608), resulting in overall gross vessel revenues of between \$127,327 and \$226,227. The portion of vessel landings historically attributable to tuna may shift from 9.85 percent of landings to between 1.22 and 12.73 percent. Gross revenues of</p>

vessels attributable to tuna may vary by -9.88 percent (-\$17,642) to +3.29 percent (\$5,882), resulting in overall gross vessel revenues of between \$160,997 and \$184,501. For vessels engaging in mixed target trips, estimated gross vessel revenues could range between \$109,685 and \$232,109. These figures likely represent over estimates of both losses and gains. The actual impact would likely fall between these estimates, depending on the frequency with which particular hook and bait combinations are employed and species targeted. Given that no pelagic longline vessels can currently fish in the Northeast Distant Area, any revenues generated from fishing in that area, would increase gross vessel revenues, compared with the status quo.

This regulation also requires the possession and use of sea turtle release gear, and compliance with careful handling protocols. This alternative would likely have only minor initial adverse economic impacts, as there are currently similar requirements in the pelagic longline fishery, with some positive long-term impacts resulting from reduced hook replacement costs. NMFS estimates that a full suite of release gear could cost between \$485.00 and \$1056.50. These costs could be reduced if fishermen were able to construct some pieces of equipment themselves, rather than purchasing pre-assembled gear from commercial suppliers.

The final measures will likely result in an initial increase in costs, but may result in longer-term cost savings because circle hooks have lower replacement costs than “J”-hooks, and because the newly-required release gears may result in increased hook retention. An informal internet and telephone survey of hook suppliers provides a range in price of approximately \$0.28 to \$0.50 (\$0.3539 avg) per hook for 16/0 circle hooks, and \$0.26 to \$0.66 (\$0.4176 avg) per hook for 18/0 commercial grade circle hooks. Large commercial grade “J”-hooks range from approximately \$0.26 to \$1.00 (avg. \$0.5733) per hook. Assuming that an average of 2,500 hooks per vessel are needed to initially comply with the hook requirements (equip vessels with enough hooks for one trip), the compliance cost for 16/0 circle hooks, on a per vessel basis, may range from \$697.50 to \$1,241.75 with an anticipated average cost of approximately \$884.75. Similarly, assuming that an average of 2,500 18/0 circle hooks per vessel are needed to initially comply with the hook requirements, the compliance cost, on a per vessel basis, may range from \$657.25 to \$1,650.00, with an anticipated average cost of approximately \$1,044.00. The circle hook requirements should not increase the needed skill level required for HMS fisheries, as the physical act of switching hook types is a normal aspect of commercial fishing operations. However, there probably will be a period of time during which fishing crews adjust, as with any new gear. Circle hooks are not expected to be prohibitively difficult to work with, as some vessels are already utilizing them.

The requirement to purchase and use sea turtle release gear would require additional skills and would

impose a compliance cost for purchase of the gear of between \$485.00 and \$1,056.50. These costs may be reduced if fishermen are able to construct various pieces of equipment themselves, rather than purchasing pre-assembled gear from a commercial supplier. In addition, specific protocols regarding the proper use of sea turtle release equipment and onboard turtle handling procedures are being implemented. These protocols may increase the needed skill level required for HMS fisheries. A document containing the sea turtle careful release protocols will be required to be onboard. Also, NMFS will conduct training on the proper use of the release equipment.

Traditionally, bait accounts for 16 to 26 percent of the total costs per trip. Any fluctuations in the price and availability of mackerel, whole finfish, or squid baits could have a substantial positive or negative impact on profitability. These baits are generally abundant, but availability will likely depend upon harvesting and distributional capacities. There could also be unquantifiable compliance costs as fishing crews who have not traditionally fished with a particular hook and bait combination familiarize themselves with the most efficient techniques.

As described in the Comments and Responses section of the preamble, NMFS received many comments on the potential for substantial economic impacts associated with the proposed regulations, and two comments specifically related to the IRFA. Many commenters stated that there would be potentially reduced revenues from the preferred alternatives due to: (1) the lack of flexibility for fishermen to select various hook and bait combinations; (2) potentially reduced catches of target species, both inside and outside the Northeast Distant area, due to the proposed 18/0 circle hooks; and, (3) potentially reduced catches outside the Northeast Distant Area due to the proposed “exotic” baits (i.e., squid or Atlantic mackerel only). Several commenters stated that more concern should be focused on the potential loss of jobs and social costs. Regarding the economic analyses in the DSEIS/RIR/IRFA, two commenters stated that the ex-vessel prices presented in the analyses were not up to date. Another commenter stated that the analyses overstate potential increases in target catches and understates potential losses in target catches. Commenters also requested that the following additional factors be considered: (1) overhead costs will increase because of the need to buy new hooks and more expensive, non-indigenous baits outside the Northeast Distant Area; (2) there would be irretrievable lost costs because existing inventories of fishing hooks would become obsolete; and, (3) U.S. pelagic longline fishermen could be put at a competitive disadvantage to foreign vessels because of potentially increased costs and decreased revenues. The Agency modified the final rule, in response to public comment, to provide more flexibility regarding baits, offset and non-offset circle hooks, and minimum hook sizes outside the Northeast Distant area. However, pursuant to the 2004 Biological Opinion, additional rulemaking may be necessary to consider a new time

	and area closure(s), which could have adverse economic impacts. The economic impacts of such a closure, if necessary, would be analyzed and addressed in that rulemaking. In response to the comment that the IRFA used outdated ex-vessel price information, the Agency has updated the RIR and FRFA using actual 2002 ex-vessel prices. The IRFA utilized 2001 ex-vessel prices adjusted to 2002 dollars using the Consumer Price Index on-line adjustment calculator. The result of this adjustment is that the 2002 annual gross vessel revenue estimate used in the economic analyses was lowered from \$187,074 to \$178,619, due to generally lower ex-vessel prices received in 2002.
Overlap with other State or Federal Rules	The final regulations do not duplicate, overlap, or conflict with any other relevant regulations, federal or otherwise.
Recommendation and Need for Continuing the Rule	NMFS recommends continuing this rule to maintain compliance with the 2004 Biological Opinion for the Atlantic pelagic longline fishery and to meet the objectives of the Magnuson-Stevens Act and the 2006 Consolidated HMS FMP.
#6	International Fisheries; Atlantic Highly Migratory Species RIN 0648- AQ37; 69 FR 67268, November 17, 2004
Rescinded, Amended, or Continuing	Continuing
Description of Management Measures and Complexity	This final rule implemented international trade tracking recommendations of ICCAT and the Inter-American Tropical Tuna Commission for bluefin tuna, swordfish, and frozen bigeye tuna, regardless of ocean area of origin. Trade monitoring requirements for species covered under the recommendations and for southern bluefin tuna were established by this rule, including: An HMS international trade permit; statistical documents and re-export certificates; and recordkeeping, reporting, and inspection requirements.
Economic Impacts of Management Measures and Nature of Public Comments	<p>This final rule was expected to affect approximately 1,890 (930 foreign and 960 domestic) seafood businesses that participate in international trade of swordfish, bluefin tuna, southern bluefin tuna and bigeye tuna, all of which are considered small entities. Impacts to businesses would occur in two areas - permitting and reporting (reporting includes documentation and recordkeeping). NMFS expects only minor negative economic impacts from the final rule because the regulatory measures only involve adjusting permitting and reporting requirements.</p> <p>The final action would implement the recordkeeping requirements by linking them to the HMS international dealer trade permit. Overall, the immediate costs associated with the final action was expected to be greater than for the no action alternative; however, access to international markets could be</p>

	<p>reduced under the status quo, which is expected to have much greater negative economic impacts in the long term.</p> <p>The initial cost of obtaining the permit for each U.S. business under the final action was expected to be \$100 plus the time to fill out the form and the cost of postage, which would be approximately \$2. NMFS expects this amount to be a minor negative impact for the affected businesses. The permit-associated cost for the final action differs from building onto existing systems in an amount between \$0 and \$100 per business, depending upon the other permits held by the business. However, if the business were required to have a swordfish permit for importing or exporting swordfish, the cost could be either \$25 or \$100, depending upon whether the business has another permit issued by NMFS. NMFS estimated that approximately 960 businesses would be impacted by the final action.</p> <p>Impacts of reporting for the final action were expected to be approximately the same since all businesses must submit the required reports, regardless of whether the permitting is accomplished through the HMS international trade permit or by adding on to other permitting programs. The professional skills necessary to complete the reporting requirements are equivalent to an educational level of high school completion. The annual economic impacts of the reporting requirements, in addition to the potential costs of the HMS international trade permit discussed in the previous paragraph, would be approximately \$386 per permit holder, including statistical document and re-export certificate opportunity costs (\$285) and mailing (\$2), biweekly opportunity cost (\$90) and mailing (\$9). This amount will vary depending on the volume of HMS imported or exported or the number of forms submitted.</p> <p>NMFS received one comment specifically addressing the IRFA and several comments addressing economic concerns. The primary economic concern identified by the public was the potential impact of the validation requirement, including the potential dollar cost of validation and the time cost of validation procedures. Of particular concern to island businesses on Guam and Hawaii was the potential that validation procedures could delay shipments significantly enough to impact shipment schedules. Other economic concerns expressed by the public included general concern about the costs of the reporting requirements.</p>
Overlap with other State or Federal Rules	This final rule does not duplicate, overlap, or conflict with any other Federal or State rules.
Recommendation and Need for Continuing the Rule	This rule is continuing and needed to consistency with the recommendations of ICCAT.

#7	Atlantic Highly Migratory Species; Atlantic Commercial Shark Management Measures RIN 0648-AS08; 69 FR 69537, November 30, 2004
Rescinded, Amended, or Continuing	Amended with parts continuing
Description of Management Measures and Complexity	<p>This final rule adjusted the regional quotas and established new trimester season quotas for large coastal sharks and small coastal sharks based on updated landings information. This final rule included a framework mechanism for the annual adjustment of quotas, a method of accounting for over- or under harvests in the transition from semi-annual to trimester seasons, and a new process for notifying participants of season opening and closing dates and quotas. This final rule also announced the opening and closing dates for the large coastal sharks fishery based on adjustments to the regional and trimester quotas. This action was necessary to ensure that the landings quotas in the Atlantic commercial shark fishery represent the latest landings data and accurately reflected historic fishing effort.</p>
Economic Impacts of Management Measures and Nature of Public Comments	<p>This rule directly impacted commercial shark fishermen and dealers in the Atlantic, Gulf of Mexico, and Caribbean. NMFS estimated that as of April 2004, there were approximately 253 directed and 358 incidental permit holders, of which 199 (32 percent) reported landings in 2003. As of September 2003, there were 267 commercial shark dealers. Average annual gross revenues from sharks for commercial shark fishermen in 2003 was \$31,085.60 and \$1,946.18 for directed and incidental permit holders, respectively. Average ex-vessel prices were \$0.79 and \$0.53/lb dw for large coastal shark and small coastal shark flesh, respectively and shark fins averaged \$19.86/lb dw.</p> <p>The final measure to modify the regional large coastal shark and small coastal shark quotas based on updated landings information will increase the existing large coastal shark regional quotas, and therefore potential landings, by 3 percent for the North Atlantic and 10 percent for the Gulf of Mexico, while reducing the South Atlantic quota by 13 percent. For small coastal sharks, the regional quotas were increased by 6 percent for the Gulf of Mexico and 4 percent for the South Atlantic, and will be decreased by 10 percent for the North Atlantic. Based on landings and revenue information obtained from the 2003 logbooks, these potential increases or decreases in landings may result in similar increases or decreases to gross revenue, however, NMFS is unable to predict future ex-vessel prices for shark products.</p> <p>The final measures of this rule were selected for the commercial Atlantic large coastal shark and small coastal shark fisheries because they minimize economic, ecological, and social impacts incurred on fishermen while, consistent with the Magnuson-Stevens Act and other domestic laws, enhancing equity among user groups, and allowing stocks to be managed on a sustainable basis.</p>

The alternative to remove the 30-day requirement to publish a fishing season's length and quotas will be replaced with a proposed and final rule process. This will provide greater opportunity for public comment, and is not expected to result in negative economic impacts.

Overall economic impacts of adjusting the regional quotas were expected to be minimal. Economic data from large coastal shark revenues generated in 2003 indicate that the final adjustments to the regional quotas would result in an increase in gross revenues to the Gulf of Mexico (+3.5 percent; \$62,503) and North Atlantic (+.01 percent; \$3,083) regions, and a decrease in gross revenues to the South Atlantic (-2.6 percent; \$60,006) region. Economic data for the small coastal shark fishery indicate that gross revenues for the Gulf of Mexico would decrease (-57 percent; \$14,885) while the gross revenues would increase for the South Atlantic (+54 percent; \$27,443) and the North Atlantic (+3 percent; revenues unknown because of lack of landings in 2003). The percentage change in gross revenues for small coastal sharks is larger than for large coastal sharks in some of the regions, however, the total dollar value for the small coastal shark fishery is minimal compared to the total gross revenues generated by the large coastal shark fishery (approximately \$93,734 for small coastal sharks vs. approximately \$4,402,136 in 2003 for large coastal sharks).

NMFS received comments in support of establishing a single quota for large coastal sharks or small coastal sharks and eliminating the existing regional quotas. While a single quota system would simplify management and monitoring of the fishery, regional quotas provide a more effective means of ensuring that historical catches and equitable distribution of quotas are maintained, accounting for regional differences in fishing effort, and providing flexibility to reduce mortality on juveniles and reproductive female sharks.

The final preferred alternatives for trimester season quota allocations and accounting for over- or under-harvests in the transition from semi-annual to trimester seasons are not expected to have adverse economic impacts. The final preferred alternative for allocating trimester season quotas equally in the Gulf of Mexico and South Atlantic regions, and according to historical landing in the North Atlantic was selected because it provides equitable distribution of quotas based on the requirements of each of the regions. The final preferred alternative of dividing any over- or under-harvests from the first semiannual season equally between the first and second trimester seasons will help minimize any economic impacts to the South Atlantic and should have little or no impact on the Gulf of Mexico or the North Atlantic.

Economically, the final alternatives provide the greatest benefit to those fishermen who will not have an opportunity to fish for sharks during the mid-Atlantic closure from January through July 2005. By dividing regional quotas equally among the trimester seasons, and dividing over- or under-harvests from the 2004

	<p>first semi-annual season equally between the 2005 first and second trimester seasons, fishermen in the South Atlantic region will have an opportunity to harvest a potentially larger quota during the second and third trimester seasons compared to the other alternatives.</p> <p>NMFS received several comments on the proposed rule and draft EA during the comment period. NMFS did not receive any comments specific to the IRFA, but did receive a limited number of comments on the potential impact of regional quotas, trimester season quota allocations, and transferring over- or under-harvest from semiannual to trimester seasons. In summary, commenters noted that regional quotas would result in a reduction in quota for the South Atlantic that, coupled with allocating regional quotas to trimester seasons based on historical landings, could have negative economic impacts on fishermen affected by the time/area closure off North Carolina.</p> <p>The IRFA for the proposed rule acknowledged that there could be negative economic impacts as a result of lowering quotas for the South Atlantic, but noted that the quotas were based upon updated landings that indicate a shift in fishing effort in recent years from the South Atlantic to the Gulf of Mexico. In order to mitigate some of the impacts described in the comments, NMFS will divide the regional quotas for the South Atlantic and the Gulf of Mexico equally between the three trimester seasons, rather than dividing them according to historic landings, which would have resulted in the largest quota during the first trimester season when the time/area closure off North Carolina is in effect. Dividing the quotas equally between the trimester seasons will result in a higher quota for the second and third trimester seasons for the South Atlantic region. Given that NMFS is considering a delay to the start date of the second trimester season, a larger portion of the South Atlantic quota may be available to fishermen off North Carolina during the second and third trimester seasons when the time/area closure will no longer be in effect. In addition, NMFS will transfer over- or under-harvests from the 2004 first semi-annual season to the 2005 first and second trimester seasons, rather than to the first trimester season only, to further mitigate the impact of overharvests that occurred during the 2004 first semiannual season.</p>
Overlap with other State or Federal Rules	This final rule does not conflict with current relevant regulations, Federal or otherwise.
Recommendation and Need for Continuing the Rule	NMFS recommends continuing this rule as currently amended. Some of the provisions in this regulation may be revisited in draft Amendment 5 to the 2006 Consolidated HMS FMP.

#8	Atlantic Highly Migratory Species; Atlantic Trade Restrictive Measures RIN 0648-AR10; 69 FR 70396, December 6, 2004
Rescinded, Amended, or Continuing	Continuing
Description of Management Measures and Complexity	<p>NMFS adjusted the regulations governing the trade of species regulated by ICCAT in the North and South Atlantic Ocean to implement recommendations adopted at the 2002 and 2003 meetings. This final rule lifted or implemented import prohibitions for bigeye tuna, bluefin tuna, and swordfish on Honduras, St. Vincent and the Grenadines, Belize, Sierra Leone, Bolivia, and Georgia. This rule also prohibited imports from vessels on the ICCAT illegal, unreported, and unregulated fishing list and from vessels that are not listed on ICCAT's record of vessels that are authorized to fish in the Convention Area. Additionally, this rule required issuance of a chartering permit before a vessel begins fishing under a chartering arrangement.</p>
Economic Impacts of Management Measures and Nature of Public Comments	<p>As this final rule impacts the trade and importation of HMS (e.g., ICCAT regulated species) in the United States and chartering arrangements with foreign entities, the regulations will not directly impact a specific domestic fishery. However, these measures could impact HMS dealers and vessels that participate in chartering arrangements, all of which NMFS considers to be small entities. In December 2003, there were approximately 516 and 302 dealer permits issued for tuna and swordfish, respectively. NMFS estimates that less than 10 domestic vessels may participate in chartering arrangements in any given calendar year.</p> <p>Imposing or lifting trade restrictions, establishing chartering notification and permit requirements, and implementing measures designed to prevent illegal, unreported, and unregulated fishing and fishing by unauthorized large scale fishing vessels were not expected to have significant economic or social impacts. By prohibiting the import of bigeye tuna, bluefin tuna, and swordfish from Sierra Leone and bigeye tuna from Bolivia and Georgia, NMFS could reduce the economic benefits to importers and dealers. Conversely, by lifting the trade restrictions on imports of bluefin tuna and swordfish from Honduras and lifting the prohibition of imports of bigeye tuna from Belize and St. Vincent and the Grenadines and bluefin tuna and swordfish from Belize, NMFS could provide economic benefits to importers and dealers. However, because current and past import levels of these fish species from these countries are either low or nonexistent, NMFS does not anticipate major positive or negative economic impacts as a result of implementing this measure.</p> <p>The chartering permit was not expected to significantly increase the administrative burden to the vessel owners or result in significant economic impacts. The application process requires the provision, through mail or facsimile, of information, including, but not limited to: name and registration number of the vessel,</p>

	<p>name and address of the owner, description of the vessel, targeted species, quota allocated to the chartering party, and the duration of the chartering arrangement. Additional information such as copies of fishing licenses, permits, other authorizations (e.g., High Seas Fishing Compliance Act Permit, 50 CFR 300.10), and documentation regarding the legal establishment of the chartering company will be requested. A vessel shall not be authorized to fish under more than one chartering arrangement at the same time and all interactions with protected species outside the United States exclusive economic zone will be included against the authorized take levels of the relevant Biological Opinions. NMFS will issue permits only if it is determined that the chartering arrangement is in conformance with ICCAT's conservation and management programs. NMFS does not anticipate major economic impacts to domestic vessels as a result of a permit denial, given that these vessels will continue to be able to fish in domestic waters for HMS and may decide to sell HMS domestically or export product to other countries depending upon which market has the higher product price. Given that only one exempted fishing permit exempting vessels from U.S. regulations for chartering arrangements has been issued under current requirements in the fishery, NMFS does not anticipate any significant economic impacts to a substantial number of domestic vessels as a result of taking this action.</p> <p>NMFS did not anticipate any significant impacts to U.S. entities by prohibiting the import of ICCAT regulated species from vessels known to be illegal, unreported, and unregulated fishing or from unauthorized large scale fishing vessels. Currently, NMFS does not have specific information concerning the amount of HMS imported from such vessels; however, NMFS believes that the amount of HMS imported from these types of vessels is insignificant, and therefore does not expect any major economic impacts associated with implementation of the management measure.</p> <p>No comments were received regarding the economic impact of this rule or the initial regulatory flexibility analysis.</p>
Overlap with other State or Federal Rules	This action does not duplicate, overlap, or conflict with any other relevant Federal rules.
Recommendation and Need for Continuing the Rule	This rule is continuing and needed to consistency with the recommendations of ICCAT.

Chapter 5 References

- American Sportfishing Association 2008. Sportfishing in America. Available at:
<http://www.asafishing.org/images/statistics/resources/Sportfishing%20in%20America%20Rev.%207%2008.pdf>
- Ditton, R.B., D.K. Anderson, J.F. Thigpen III, B.L. Bohnsack, and S.G. Sutton. 2000. 1999 Pirates cove big game tournaments: participants' characteristics, participation in fishing, attitudes, expenditures, and economic impacts. Human Dimensions of Fisheries Laboratory Report #HD-615, Texas A & M University, College Station, TX. 126 pp.
- Ditton, R.B. and D.J. Clark. 1994. Characteristics, attitudes, catch-and-release behavior, and expenditures of billfish tournament anglers in Puerto Rico. Report prepared for The Billfish Foundation, Ft. Lauderdale, FL. 27pp.
- Ditton, R.B. and J.R. Stoll. 2003. Social and economic perspective on recreational billfish fisheries. Marine & Freshwater Research (54)4: 545-554.
- Holland, S. M., A. J. Fedler, and J. W. Milon. 1999. The operations and economics of the charter and head boat fleets of the Eastern Gulf of Mexico and South Atlantic Coasts. Memo NOAA Fisheries - F/SPO-38.
- NMFS Office of Science and Technology foreign trade statistics website:
http://www.st.nmfs.noaa.gov/st1/trade/cumulative_data/TradeDataProduct.html
- NMFS. 2012a. Annual report of the United States to ICCAT. USDOC, National Marine Fisheries Service. ANN/045/2012.
- NMFS. 2012b. Fisheries of the United States: 2011. Alan Lowther, Editor. Office of Science and Technology, Fisheries Statistics and Economics Division, NOAA, U.S. Department of Commerce, Silver Spring, MD. 124 p.
- NMFS. 2010a. U.S National Report to ICCAT, 2009. NMFS Office of Sustainable Fisheries, Silver Spring, MD. ANN/045/2009.
- NMFS. 2010b. Fisheries of the United States: 2010. E.S. Pritchard, Editor. Office of Science and Technology, Fisheries Statistics and Economics Division, NOAA, U.S. Department of Commerce, Silver Spring, MD.
- NMFS. 2010c. Stock Assessment and Fishery Evaluation (SAFE) Report for Atlantic Highly Migratory Species, 2009. NMFS Office of Sustainable Fisheries, Silver Spring, MD. 234 p.
- Pritchard, E.S. 2009. Fisheries of the United States, 2008. NMFS. Office of Science and Technology. Silver Spring, MD.
- Rose, D. 1996. An overview of world trade in sharks. TRAFFIC International. 105 p.

- Sutton, S.G., R.B. Ditton, J.R. Stoll, and J.W. Milon. 1999. A cross-sectional study and longitudinal perspective on the social and economic characteristics of the charter and party boat fishing industry of Alabama, Mississippi, Louisiana, and Texas. Report prepared for the National Marine Fisheries Service with MARFIN funding support (Grant Number NA 77FF0551.) Human Dimensions of Fisheries Research Laboratory Report #HD-612. Texas A&M University, College Station. 198p.
- Thailing, C.E., R.B. Ditton, D.K. Anderson, T.J. Murray, J.E. Kirkley, J. Lucy. 2001. The 2000 Virginia Beach red, white, and blue fishing tournament: participants' characteristics, attitudes, expenditures, and economic impacts. VIMS, College of William and Mary, Virginia Marine Resources Report No. 2001-9, VSG-01-88, Texas A & M University, College Station, TX. 110pp.
- U.S. Fish and Wildlife Service and U.S. Department of Commerce Census Bureau. 2011. National survey of fishing, hunting, and wildlife-associated recreation.
- U.S. Fish and Wildlife Service and U.S. Department of Commerce U.S. Census Bureau. 2011 national survey of fishing, hunting, and wildlife-associated recreation. FHW/-6-NAT.