

3.5 Economic Status of HMS Fisheries

Under the National Standard 2 guidelines, NMFS must prepare an annual SAFE report in order to account for the best scientific information available. Each SAFE report should, among other things, provide information on the economic condition of the commercial and recreational fishing interests.

The review of each rule, and of HMS fisheries as a whole, is facilitated when there is a baseline against which the rule or fishery may be evaluated. In this report, as in past reports, NMFS decided to use 1996 as a baseline. NMFS believes that this baseline is appropriate because the Regulatory Flexibility Act (RFA) was amended in 1996, the Magnuson-Stevens Act was amended in 1996, NMFS began to collect economic information voluntarily for vessels using the pelagic logbook, and regarding HMS specifically, no rules were implemented in 1996 that were classified as significant under RFA. Additionally, while the Tunas, Swordfish, and Shark FMP and the Billfish Amendment 1 were finalized in 1999, scoping for these two major documents and its final rule began in 1997. It is possible that anticipation of these documents and any potential changes in their implementing regulations could have begun to impact the decisions made by HMS fishermen and any associated businesses.

In addition to using the 1996 baseline, this SAFE report also provides five years of data, when possible, in order to facilitate the analysis of trends. It also should be noted that all dollar figures are reported in nominal dollars (*i.e.* current dollars), unlike past SAFE reports. If analysis of real dollar (*i.e.* constant dollar) trends controlled for inflation is desired, price indexes for 1996 to 2003 are provided in Table 3.63. To determine the real price in base year dollars, divide the base year price index by the current year price index, and then multiply this result by the price that is being adjusted for inflation. From 1996 to 2003, the Consumer Price Index (CPI-U) indicates that prices have risen by 17.3 percent, the Gross Domestic Product (GDP) Implicit Price Deflator indicates that prices have risen 12.9 percent, and the Producer Price Index (PPI) for unprocessed finfish indicates a 5.6 percent rise. From 2002 to 2003 the CPI, GDP Deflator and the PPI for unprocessed finfish indicate prices rose by 2.3 percent, 1.8 percent, and -2.8 percent respectively.

Table 3.63 Inflation Price Indexes. The CPI-U is the standard Consumer Price Index for all urban consumers (1982-84=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 (2000=100) is produced by the U.S. Department of Commerce Bureau of Economic Analysis and obtained from the Federal Reserve Bank of St. Louis (<http://www.stlouisfed.org/>).

Year	CPI-U	GDP Deflator	PPI Unprocessed Finfish
1996	156.9	93.8	185.5
1997	160.5	95.4	165.7
1998	163	96.5	170.7
1999	166.6	97.9	191.7
2000	172.2	100.0	182.4
2001	177.1	102.4	176.1
2002	179.9	104.1	201.5

2003	184	106.0	195.8
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3.5.1 Commercial Fisheries⁷

In 2003, the total commercial landings at ports in the 50 states by U.S. fishermen were 9.5 billion pounds and were valued at \$3.3 billion. The overall value of landings was up eight percent from 2002 estimates. The total value of commercial HMS landings in 2003 was \$73.7 million (Table 3.66). The 2003 ex-vessel price index indicated that seven of the 17 finfish species tracked had increasing ex-vessel prices, nine species had decreasing ex-vessel prices, and one species maintained ex-vessel prices. The total edible finfish ex-vessel price index for 2003 was up eight percent from 2002.

The estimated value of the 2003 domestic production of all fishery products was \$7.0 billion. This is \$670 million less than the estimated value in 2002. The total import value of fishery products was \$21.3 billion in 2003. This is an increase of \$1.6 billion from 2002. The total import value in 1996 was \$13.1 billion. The total export value of fishery products was \$12.0 billion in 2003. This is an increase of \$294 million from 2002. The total export value in 1996 was \$8.7 billion.

Consumers spent an estimated \$61.2 billion for fishery products in 2003 including \$42.0 billion at food service establishments, \$18.9 billion in retail sales for home consumption, and \$290.4 million for industrial fish products. The commercial marine fishing industry contributed \$31.5 billion to the U.S. Gross National Product in 2003. In 1996, consumers spent an estimated \$41.2 billion including \$27.8 billion at food service establishments, \$13.2 billion for home consumption, and \$283.9 billion for industrial fish products. The commercial marine fishing industry contributed \$21.0 billion to the U.S. Gross National Product in 1996.

The average ex-vessel prices per pound dressed weight (dw) for 1996 and 1999 to 2003 by area, Atlantic HMS, and major gear types are summarized in Table 3.64. The average ex-vessel prices per lb. dw for 1996 and 1999 to 2003 by species and area are summarized in Table 3.65. For both of these tables, 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.

⁷ All the information and data presented in this section were obtained from NMFS 1997a and NMFS 2004.

Table 3.64 Average ex-vessel prices per lb. dw for Atlantic HMS by gear and area. Source: Dealer weigh out slips from the Southeast Fisheries Science Center and Northeast Fisheries Science Center, and bluefin tuna dealer reports from the Northeast Regional Office. HND=Handline, harpoon, spears, trot lines, and trolls, PLL=Pelagic longline, BLL=Bottom longline, Net=Gillnets and pound nets, TWL=Trawls, SEN=Seines, TRP=Pots and traps, DRG=Dredge, and UNK=Unknown. Gulf of Mexico includes: TX, LA, MS, AL, and the west coast of FL. S. Atlantic includes: east coast of FL, GA, SC, and NC dealers reporting to Southeast Fisheries Science Center. Mid-Atlantic includes: NC dealers reporting to Northeast Fisheries Science Center, VA, MD, DE, NJ, NY, and CT. N. Atlantic includes: RI, MA, NH, and ME. For bluefin tuna, all NC landings are included in the Mid-Atlantic.

Gulf of Mexico							
Species	Gear	1996	1999	2000	2001	2002	2003
Bigeye tuna	HND	\$0.68	\$2.13	\$1.83	\$1.82	\$1.44	\$1.25
	PLL	-	\$4.04	\$2.82	\$2.64	\$5.09	\$3.41
	BLL	-	\$4.41	\$2.31	\$0.50	\$4.24	\$3.53
Bluefin tuna	HND	-	-	\$1.86	\$1.25	\$2.69	-
	PLL	\$5.83	\$6.32	-	-	\$6.40	\$6.32
	BLL	-	-	-	-	\$4.50	-
Yellowfin tuna	HND	-	\$2.38	\$2.48	\$2.55	\$2.83	\$2.34
	PLL	-	\$3.18	\$3.40	\$3.25	\$3.68	\$3.64
	BLL	-	\$3.06	\$3.68	\$3.31	\$3.23	\$3.73
Other tunas	HND	\$0.28	\$0.90	\$0.76	\$0.79	\$0.91	\$0.87
	PLL	-	\$0.78	\$0.72	\$0.70	\$0.79	\$0.66
	BLL	-	\$0.67	\$0.85	\$0.74	\$0.75	\$0.55
	NET	\$0.38	\$0.33	\$0.58	\$0.33	\$0.83	\$0.29
	TWL	-	\$0.70	\$0.61	\$0.78	\$0.40	\$0.30
	SEN	-	\$0.52	-	\$0.61	\$0.19	-
	TRP	-	-	-	-	\$0.30	\$0.30
Swordfish	HND	-	\$3.21	\$3.91	\$2.84	\$3.19	\$3.68
	PLL	-	\$3.39	\$3.33	\$3.41	\$2.94	\$2.91
	BLL	-	\$3.29	\$3.10	\$3.25	\$2.88	\$2.67
Large coastal sharks	HND	\$0.23	\$0.64	\$0.59	\$0.51	\$0.44	\$0.45
	PLL	-	\$0.79	\$0.48	\$0.45	\$0.36	\$0.38
	BLL	\$0.60	\$0.55	\$0.43	\$0.44	\$0.36	\$0.38
	NET	\$0.38	\$0.41	\$0.48	\$0.50	\$0.39	\$0.43
	TWL	\$0.15	\$0.49	\$0.15	\$0.25	\$0.25	\$0.25
Pelagic sharks	HND	-	\$1.35	\$1.38	\$1.48	\$0.93	\$1.04
	PLL	-	\$1.27	\$1.27	\$1.32	\$1.06	\$1.11
	BLL	-	\$1.43	\$1.31	\$1.42	\$1.19	\$1.15
Small coastal sharks	HND	-	\$0.59	\$0.93	\$0.37	\$0.38	\$0.32
	PLL	-	\$0.50	\$0.47	\$0.74	\$0.32	\$0.33
	BLL	-	\$0.52	\$0.41	\$0.61	\$0.53	\$0.50
	NET	-	\$0.67	-	\$0.45	\$0.46	\$0.36
	TRP	-	-	-	\$0.74	-	-
Shark fins	HND	-	\$8.51	\$21.57	\$15.90	\$21.28	\$13.97
	PLL	-	\$14.02	\$15.65	\$21.08	-	\$15.21
	BLL	-	\$14.34	\$15.89	\$21.50	\$22.72	\$20.17
	NET	-	\$7.78	\$15.50	\$11.02	-	\$6.05
	TWL	-	-	\$9.17	-	-	-

South Atlantic							
Species	Gear	1996	1999	2000	2001	2002	2003
Bigeye tuna	HND	\$1.30	\$2.02	\$1.02	\$2.14	\$2.29	\$1.89

	PLL	\$1.33	\$2.87	\$2.27	\$2.78	\$2.33	\$2.26
	BLL	\$1.30	\$3.00	\$1.87	\$2.63	\$2.74	\$2.66
	NET	\$1.30	-	-	-	-	-
Bluefin tuna	HND	-	-	\$7.99	\$3.52	\$3.35	-
	PLL	\$4.62	\$4.71	\$5.36	\$4.82	\$4.95	\$4.11
	BLL	-	-	-	\$3.61	\$5.15	-
Yellowfin tuna	HND	\$1.55	\$1.41	\$1.56	\$1.41	\$1.54	\$1.54
	PLL	\$1.63	\$2.17	\$2.23	\$2.14	\$1.89	\$2.09
	BLL	\$1.41	\$2.45	\$2.29	\$2.45	\$2.29	\$2.60
	NET	\$1.07	\$0.87	-	\$1.21	\$1.12	-
	TWL	-	-	-	-	\$0.44	-
Other tunas	HND	\$0.75	\$0.67	\$0.59	\$0.61	\$0.47	\$0.58
	PLL	\$0.79	\$1.47	\$1.31	\$1.33	\$1.09	\$1.26
	BLL	\$0.87	\$1.41	\$1.49	\$1.86	\$1.67	\$1.13
	NET	\$0.35	\$0.19	\$0.20	\$0.23	\$0.21	\$0.21
	TWL	\$0.31	\$0.56	\$0.25	\$0.47	\$0.26	-
	SEN	-	\$0.11	-	-	-	-
	TRP	-	-	-	\$0.18	-	-
Swordfish	HND	\$2.48	\$3.04	\$3.92	\$4.24	\$3.93	\$3.91
	PLL	\$2.88	\$3.27	\$3.12	\$3.27	\$2.84	\$2.98
	BLL	\$2.46	\$3.39	\$3.42	\$3.14	\$2.76	\$3.19
	NET	-	-	-	-	\$2.50	-
Large coastal sharks	HND	\$0.72	\$0.66	\$0.59	\$0.96	\$1.01	\$0.49
	PLL	\$1.54	\$1.32	\$1.21	\$1.69	\$2.63	\$0.35
	BLL	\$0.73	\$1.13	\$0.78	\$0.89	\$1.10	\$0.39
	NET	\$1.30	\$1.70	\$0.91	\$1.49	\$1.59	\$0.30
	TWL	\$0.86	\$0.67	\$0.49	\$0.51	\$0.81	\$0.41
	TRP	-	-	-	-	\$0.23	-
Pelagic sharks	HND	\$0.82	\$0.95	\$0.78	\$0.71	\$0.68	\$0.84
	PLL	\$0.68	\$1.04	\$0.95	\$0.95	\$0.93	\$0.93
	BLL	\$0.59	\$0.89	\$0.90	\$0.78	\$0.75	\$0.87
	NET	\$0.33	\$0.28	\$0.35	\$0.36	\$0.34	\$0.34
	TWL	-	\$0.21	\$0.20	\$0.26	\$0.26	-
Small coastal sharks	HND	\$0.25	\$0.39	\$0.40	\$0.46	\$0.53	\$0.49
	PLL	-	\$0.57	\$0.57	\$0.63	\$0.41	\$0.24
	BLL	-	\$0.57	\$0.56	\$0.53	\$0.54	\$3.19
	NET	\$0.25	\$0.52	\$0.48	\$0.54	\$0.54	\$0.53
	TWL	-	\$0.52	\$0.23	\$0.23	-	-
Shark fins	HND	\$14.00	\$5.65	\$11.92	\$19.75	\$15.53	\$17.17
	PLL	-	\$11.18	\$10.34	\$11.44	\$6.81	\$12.72
	BLL	\$14.00	\$15.76	\$17.57	\$22.21	\$22.26	\$17.83
	NET	-	\$5.19	\$6.95	\$10.60	\$10.41	\$12.85
	TWL	\$9.11	\$6.61	-	\$12.17	\$14.00	\$10.77

Mid-Atlantic							
Species	Gear	1996	1999	2000	2001	2002	2003
Bigeye tuna	HND	\$5.74	\$3.62	\$4.45	\$4.32	\$3.97	\$3.79
	PLL	\$3.51	\$3.19	\$4.30	\$3.81	\$4.12	\$3.92
	BLL	\$2.61	\$4.33	\$3.45	\$4.37	\$2.84	\$3.91
	NET	\$3.87	\$4.63	\$5.55	\$4.50	-	-
	TWL	\$4.68	\$3.16	\$5.68	-	-	-
	DRG	-	-	-	-	\$1.50	-
	UNK	-	-	-	-	\$5.00	-

Mid-Atlantic							
Species	Gear	1996	1999	2000	2001	2002	2003
Bluefin tuna	HND	\$14.70	\$3.51	\$6.60	\$4.93	\$4.06	\$7.54
	PLL	\$6.12	\$7.34	\$5.73	\$6.83	\$5.72	\$6.25
	NET	\$15.71	-	-	\$2.23	-	-
	BLL	-	-	-	\$7.00	\$7.00	-
Yellowfin tuna	HND	\$2.49	\$1.60	\$2.14	\$2.11	\$2.00	\$1.93
	PLL	\$2.51	\$2.15	\$2.32	\$2.30	\$2.14	\$2.00
	BLL	\$3.28	\$1.51	\$1.86	\$2.11	\$1.81	\$1.89
	NET	\$1.07	\$1.07	\$1.77	\$1.49	\$1.81	\$1.50
	TWL	\$2.40	\$1.59	\$1.56	\$1.53	-	\$1.48
	TRP	-	-	-	-	\$1.97	\$1.57
	DRG	-	-	-	-	\$1.94	-
	UNK	-	-	-	-	\$2.75	-
Other tunas	HND	\$1.34	\$0.89	\$0.94	\$0.89	\$0.69	\$0.66
	PLL	\$1.84	\$1.59	\$1.03	\$0.88	\$0.86	\$0.93
	BLL	-	\$0.83	\$1.17	\$0.78	\$0.83	\$1.08
	NET	\$0.45	\$0.54	\$0.44	\$0.49	\$0.75	\$0.48
	TWL	\$0.45	\$0.66	\$0.70	\$0.47	\$0.42	\$0.62
	TRP	-	-	-	-	\$0.57	\$0.47
	DRG	-	-	-	-	\$1.00	-
	UNK	-	-	-	-	\$1.03	\$1.69
Swordfish	HND	\$3.61	\$3.13	\$3.25	\$3.70	-	-
	PLL	\$4.31	\$3.53	\$3.59	\$3.47	\$3.18	\$2.97
	BLL	\$4.88	\$3.77	\$2.91	\$3.45	\$4.00	-
	NET	\$4.63	\$3.81	-	\$4.19	\$3.51	-
	TWL	\$4.56	\$3.29	\$3.94	\$2.86	\$3.34	\$3.21
Large coastal sharks	HND	\$0.74	\$0.96	\$0.50	\$0.88	\$2.09	\$2.19
	PLL	\$0.58	\$0.79	\$0.45	\$2.62	\$2.78	\$2.32
	BLL	\$0.54	\$0.56	\$0.41	\$0.55	\$1.11	\$2.08
	NET	\$0.45	\$0.46	\$0.53	\$0.89	\$1.02	\$1.02
	TWL	\$0.47	\$0.49	\$0.72	\$0.55	\$0.52	\$0.50
	TRP	-	-	-	-	\$2.50	-
	SEN	-	-	-	-	\$1.26	-
	UNK	-	-	-	-	\$0.50	-
Pelagic sharks	HND	\$1.47	\$1.71	\$1.41	\$1.26	\$1.41	\$1.57
	PLL	\$1.25	\$1.39	\$1.45	\$1.56	\$1.31	\$1.32
	BLL	\$1.47	\$1.04	\$1.24	\$0.97	\$1.12	\$1.17
	NET	\$0.99	\$0.99	\$1.02	\$1.02	\$0.97	\$1.08
	TWL	\$1.00	\$1.10	\$0.90	\$0.69	\$1.03	\$0.88
	TRP	-	-	-	\$0.40	-	\$1.43
	DRG	-	-	-	\$0.49	\$2.00	-
	UNK	-	-	-	-	-	\$0.57
Small coastal sharks	HND	-	\$0.46	\$0.38	\$0.51	\$0.45	\$0.36
	PLL	\$0.25	-	\$0.20	\$0.44	\$0.50	\$0.39
	BLL	-	-	-	\$0.95	-	-
	NET	-	\$0.45	\$0.40	-	\$0.42	\$0.39
	TWL	-	\$0.53	-	-	\$1.26	-
Shark fins	HND	\$2.74	\$3.60	\$6.17	-	-	-
	PLL	\$7.79	\$3.35	\$8.57	-	-	-
	BLL	\$8.00	-	-	-	-	-
	NET	\$4.77	\$3.96	\$3.38	-	-	-

North Atlantic							
Species	Gear	1996	1999	2000	2001	2002	2003
Bigeye tuna	HND	\$3.69	\$3.41	\$4.22	\$6.00	-	-
	PLL	\$3.36	\$3.26	\$4.39	\$3.42	\$4.08	\$3.50
	BLL	\$2.15	-	-	-	-	-
	NET	\$3.31	-	\$0.42	-	-	-
	TWL	\$8.00	\$3.29	\$3.87	\$3.54	\$3.76	-
Bluefin tuna	HND	\$10.73	\$8.44	\$10.02	\$8.21	\$7.94	\$6.33
	PLL	\$5.56	\$7.06	\$5.65	\$5.24	\$5.96	\$4.21
	NET	-	-	-	\$4.26	-	-
	SEN	\$11.05	\$7.83	\$7.80	\$7.43	\$6.61	\$4.92
	TWL	-	-	-	\$3.80	-	-
Yellowfin tuna	HND	\$2.50	\$1.16	\$2.66	\$2.87	\$3.25	\$1.90
	PLL	\$2.14	\$2.44	\$2.77	\$3.01	\$2.76	\$2.57
	BLL	\$2.03	\$0.51	\$2.32	\$3.77	-	-
	NET	\$2.43	\$0.50	-	-	\$4.75	-
	TWL	\$2.67	\$2.21	\$2.31	\$2.10	\$2.19	\$1.65
	TRP	-	-	-	-	\$4.50	\$3.10
Other tunas	HND	\$1.90	\$1.41	\$1.59	\$2.39	\$2.03	\$1.56
	PLL	\$0.98	\$0.60	\$1.13	\$0.70	\$1.15	\$1.00
	BLL	\$1.50	-	\$0.50	\$3.00	-	-
	NET	\$0.73	\$0.20	\$0.50	\$0.36	\$0.70	\$1.14
	TWL	\$1.08	\$0.37	\$0.22	\$0.80	\$0.69	\$0.37
	TRP	-	-	-	-	\$0.34	\$0.44
	DRG	-	-	-	-	\$3.00	-
Swordfish	HND	\$5.20	-	\$8.00	\$5.69	\$5.32	-
	PLL	\$4.01	\$3.30	\$3.67	\$3.58	\$3.30	\$3.36
	BLL	\$3.07	-	\$2.00	-	-	-
	NET	\$5.62	-	-	-	\$4.25	-
	TWL	\$3.08	\$3.77	\$4.05	\$4.75	\$3.05	\$3.18
	TRP	-	-	-	-	\$3.74	-
Large coastal sharks	HND	-	\$0.74	-	\$0.50	\$0.45	\$0.74
	PLL	\$1.03	-	\$1.00	\$1.21	\$0.29	\$0.28
	BLL	\$0.99	\$1.03	\$0.65	\$1.43	\$1.00	-
	NET	\$0.83	\$0.64	\$1.06	\$0.99	\$0.89	\$0.89
	TWL	\$0.80	\$1.00	\$1.08	\$0.93	\$0.86	\$0.66
	TRP	-	-	-	-	\$0.28	\$0.22
Pelagic sharks	HND	\$1.60	-	-	\$1.38	\$1.71	-
	PLL	\$1.26	\$3.30	\$1.38	\$1.37	\$1.31	\$1.30
	BLL	\$1.85	\$0.89	\$1.50	-	\$0.65	-
	NET	\$1.12	\$0.70	\$0.82	\$0.98	\$0.60	\$1.30
	TWL	\$0.96	\$0.77	\$0.97	\$1.19	\$0.81	\$0.63
	TRP	-	-	-	-	\$0.69	\$0.68
Small coastal sharks	HND	-	-	-	-	-	-
	NET	-	-	-	\$1.51	-	-
	TWL	-	-	-	-	\$0.58	-
Shark fins	PLL	\$4.25	-	\$5.54	-	-	-
	BLL	\$3.00	\$0.33	\$25.19	-	-	-
	NET	\$1.96	\$2.79	\$2.41	-	-	-
	TWL	\$2.32	\$0.49	\$3.00	-	-	-

Table 3.65 Average ex-vessel prices per lb. for Atlantic HMS by area.

Species	Area	1996	1999	2000	2001	2002	2003
Bigeye tuna	Gulf of Mexico	\$0.68	\$3.38	\$2.26	\$1.94	\$4.33	\$3.29
	S. Atlantic	\$1.32	\$2.77	\$1.98	\$2.57	\$2.45	\$2.24
	Mid-Atlantic	\$3.99	\$3.52	\$4.39	\$4.26	\$3.82	\$3.77
	N. Atlantic	\$3.59	\$3.30	\$4.12	\$4.32	\$4.03	\$3.45
Bluefin tuna	Gulf of Mexico	\$5.83	\$6.32	\$1.86	\$1.25	\$5.56	\$6.32
	S. Atlantic	\$4.62	\$4.70	\$6.83	\$4.00	\$3.77	\$4.11
	Mid-Atlantic	\$9.48	\$5.90	\$5.98	\$5.25	\$4.70	\$7.38
	N. Atlantic	\$10.78	\$8.26	\$8.94	\$5.79	\$7.31	\$5.71
Yellowfin tuna	Gulf of Mexico	-	\$2.94	\$3.22	\$2.98	\$3.23	\$3.31
	S. Atlantic	\$1.56	\$1.77	\$1.88	\$1.70	\$1.73	\$1.76
	Mid-Atlantic	\$2.43	\$1.61	\$2.12	\$1.91	\$2.02	\$1.91
	N. Atlantic	\$2.35	\$1.52	\$2.65	\$2.93	\$2.90	\$2.38
Other tunas	Gulf of Mexico	\$0.29	\$0.86	\$0.74	\$0.76	\$0.84	\$0.75
	S. Atlantic	\$0.62	\$0.61	\$0.58	\$0.58	\$0.49	\$0.59
	Mid-Atlantic	\$1.10	\$0.80	\$0.76	\$0.70	\$0.73	\$0.70
	N. Atlantic	\$1.31	\$0.51	\$0.93	\$1.46	\$1.17	\$0.95
Swordfish	Gulf of Mexico	-	\$3.35	\$3.25	\$3.31	\$2.91	\$2.95
	S. Atlantic	\$2.79	\$3.27	\$3.24	\$3.43	\$3.14	\$3.26
	Mid-Atlantic	\$4.43	\$3.47	\$3.67	\$3.53	\$3.25	\$2.97
	N. Atlantic	\$4.09	\$3.45	\$3.87	\$4.67	\$3.47	\$3.33
Large coastal sharks	Gulf of Mexico	\$0.21	\$0.56	\$0.43	\$0.44	\$0.36	\$0.38
	S. Atlantic	\$1.02	\$1.10	\$0.78	\$1.12	\$1.27	\$0.39
	Mid-Atlantic	\$0.55	\$0.59	\$0.53	\$1.09	\$1.56	\$1.62
	N. Atlantic	\$0.88	\$0.77	\$1.01	\$1.02	\$0.77	\$0.72
Pelagic sharks	Gulf of Mexico	-	\$1.36	\$1.31	\$1.42	\$1.11	\$1.13
	S. Atlantic	\$0.62	\$0.83	\$0.76	\$0.68	\$0.67	\$0.71
	Mid-Atlantic	\$1.21	\$1.23	\$1.20	\$1.09	\$1.17	\$1.21
	N. Atlantic	\$1.31	\$0.81	\$1.10	\$1.23	\$1.00	\$1.12
Small coastal sharks	Gulf of Mexico	-	\$0.55	\$0.52	\$0.58	\$0.48	\$0.40
	S. Atlantic	\$0.25	\$0.50	\$0.48	\$0.52	\$0.53	\$0.51
	Mid-Atlantic	\$0.25	\$0.47	\$0.38	\$0.55	\$0.48	\$0.38
	N. Atlantic	-	-	-	\$1.51	\$0.58	-
Shark fins	Gulf of Mexico	-	\$14.01	\$15.99	\$20.90	\$22.64	\$18.12
	S. Atlantic	\$10.74	\$11.10	\$14.16	\$18.43	\$17.10	\$15.85
	Mid-Atlantic	\$4.60	\$3.41	\$4.90	-	-	-
	N. Atlantic	\$2.69	\$1.19	\$6.83	-	-	-

Table 3.64 and Table 3.65 indicate that the average ex-vessel prices for bigeye tuna have generally increased since 1996. However, prices from 2002 to 2003 have decreased in all four

regions. The gears used also influenced the average price of bigeye tuna. Longline-caught fish brought the highest average value in 2003.

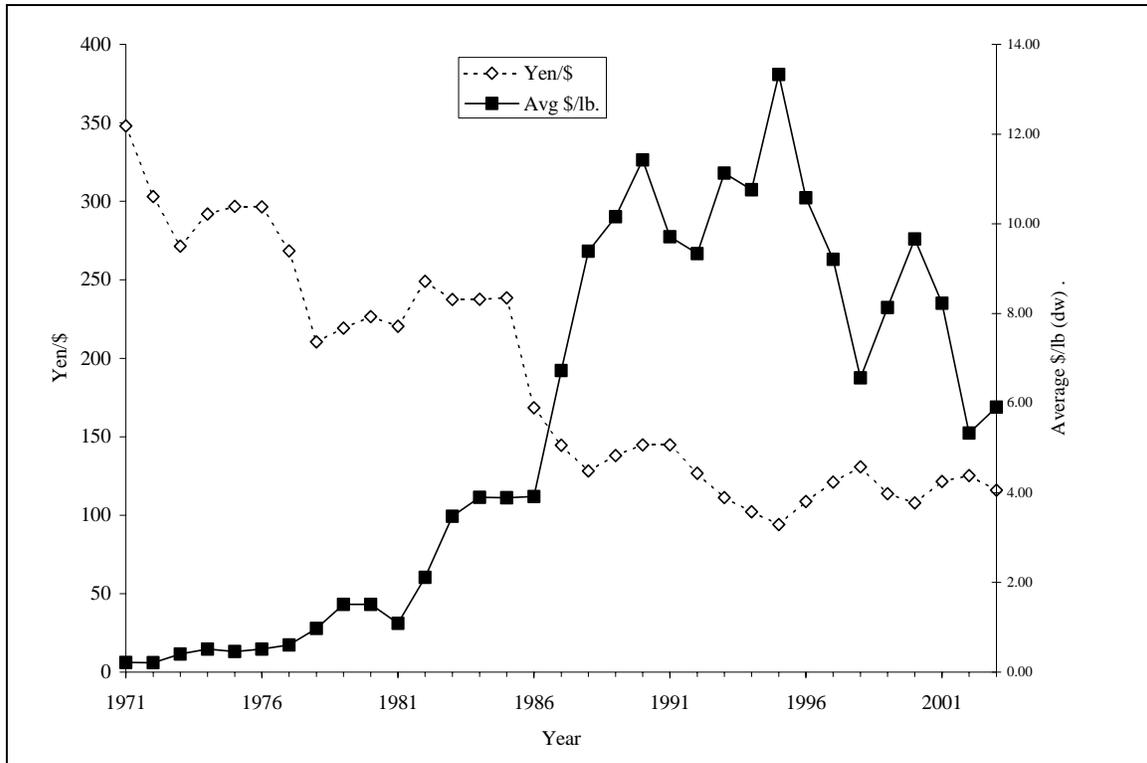


Figure 3.26 Average Annual Yen/\$ Exchange Rate and Average U.S. BFT Ex-vessel \$/lb (dw) for all gears: 1971-2003. Source: Federal Reserve Bank (www.stls.frb.org) and Northeast Regional Office.

Average ex-vessel prices for bluefin tuna have generally declined since 1996. Since 2002, however, prices increased in all regions except the North Atlantic (Table 3.65). As with bigeye tuna, the gear used also made a difference in the ex-vessel price (Table 3.64). In the North Atlantic and Mid-Atlantic, bluefin tuna caught with handgear had higher average prices than those caught with longline. This trend has been fairly consistent over the years between 1996 and 2003. 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 3.26 shows the average ¥/\$ exchange rate, plotted with average ex-vessel bluefin tuna prices, from 1971 to 2003.

The average ex-vessel prices for yellowfin tuna have decreased slightly in 2003 in the Mid-Atlantic and North Atlantic while increasing slightly in the Gulf of Mexico and South Atlantic (Table 3.65). Yellowfin tuna caught with longline gear had higher average ex-vessel prices than fish caught with other gear types in 2003 (Table 3.64).

The average ex-vessel price for other tunas decreased in all regions except the South Atlantic in 2003 (Table 3.65). The average price of other tunas is lowest in the South Atlantic compared to other regions. The type of gear used did not appear to consistently influence the average ex-vessel prices of other tuna.

In the South Atlantic and Gulf of Mexico, average ex-vessel prices for swordfish increased in 2003, while it decreased in the Mid-Atlantic and North Atlantic (Table 3.65). Swordfish caught using handline gear had higher average ex-vessel prices than other gear types (Table 3.64).

The average ex-vessel price for LCS increased in the Gulf of Mexico and Mid-Atlantic in 2003. However, prices for LCS declined in the North Atlantic and South Atlantic (Table 3.65). Large coastal sharks caught on handline gear versus longline gear tended to have higher average ex-vessel prices in 2003, except in the Mid-Atlantic (Table 3.64).

The average ex-vessel prices for pelagic sharks increased in all regions in 2003 (Table 3.65). The 2003 prices for pelagic sharks are not significantly different than 1996 prices and are actually lower than 1996 when adjusting for inflation.

The average ex-vessel prices for small coastal sharks (SCS) declined in all regions in 2003 (Table 3.65). Small coastal sharks caught using bottom longline gear in 2003 had higher ex-vessel prices in 2003 than SCS caught in other gear types (Table 3.64).

Table 3.66 Estimates of the total ex-vessel annual revenues of Atlantic HMS fisheries. Note: Average ex-vessel prices may have some weighting errors, except for bluefin tuna which is based on a fleet-wide average. (NMFS, 1997; NMFS 2004a; Cortes, 2003; and bluefin tuna dealer reports from the Northeast Regional Office).

Species		1996	1999	2000	2001	2002	2003
Bigeye tuna	Ex-vessel \$/lb dw	\$2.40	\$3.24	\$3.18	\$3.27	\$3.66	\$3.19
	Weight lb dw	1,212,706	1,664,385	1,012,352	2,391,350	1,267,645	846,191
	Fishery Revenue	\$2,910,494	\$5,395,971	\$3,222,636	\$7,827,218	\$4,637,372	\$2,697,233
Bluefin tuna	Ex-vessel \$/lb dw	\$10.58	\$8.14	\$9.66	\$8.23	\$5.33	\$5.91
	Weight lb dw	1,652,989	1,926,442	2,137,580	2,176,016	4,133,625	2,519,345
	Fishery Revenue	\$17,488,624	\$15,677,959	\$20,648,413	\$17,904,240	\$22,042,839	\$14,889,328
Yellowfin tuna	Ex-vessel \$/lb dw	\$2.11	\$1.96	\$2.46	\$2.38	\$2.48	\$2.34
	Weight lb dw	6,679,938	6,351,717	12,435,708	14,777,800	12,885,887	13,556,340
	Fishery Revenue	\$14,094,669	\$12,433,149	\$30,577,372	\$35,193,181	\$31,919,170	\$31,721,836
Other tunas*	Ex-vessel \$/lb dw	\$0.83	\$0.69	\$0.75	\$0.87	\$0.81	\$0.75
	Weight lb dw	368,433	495,241	795,243	867,960	1,298,509	900,522
	Fishery Revenue	\$305,799	\$343,771	\$593,595	\$754,322	\$1,057,273	\$673,140
Total tuna	Fishery Revenue	\$34,799,586	\$33,850,849	\$55,042,015	\$61,678,960	\$59,656,653	\$49,981,537

Species		1996	1999	2000	2001	2002	2003
Swordfish* *	Ex-vessel \$/lb dw	\$3.77	\$3.38	\$3.51	\$3.74	\$3.20	\$3.13
	Weight lb dw	7,170,619	5,942,839	4,832,384	5,662,350	5,985,489	4,668,466
	Fishery Revenue	\$27,033,234	\$20,104,498	\$16,974,346	\$21,153,927	\$19,150,819	\$14,600,627
Large coastal sharks	Ex-vessel \$/lb dw	\$0.67	\$0.76	\$0.68	\$0.91	\$0.99	\$0.78
	Weight lb dw	5,262,314	3,919,570	3,762,000	3,562,546	4,097,363	4,421,249
	Fishery Revenue	\$3,525,750	\$2,950,102	\$2,560,307	\$3,256,955	\$4,040,977	\$3,437,521
Pelagic sharks	Ex-vessel \$/lb dw	\$1.05	\$1.06	\$1.09	\$1.11	\$0.99	\$1.04
	Weight lb dw	695,531	400,821	215,005	362,925	303,666	616,967
	Fishery Revenue	\$730,308	\$424,273	\$233,650	\$401,430	\$299,487	\$643,188
Small coastal sharks	Ex-vessel \$/lb dw	\$0.25	\$0.51	\$0.46	\$0.79	\$0.52	\$0.43
	Weight lb dw	460,667	672,245	672,245*	719,484	579,441	549,799
	Fishery Revenue	\$115,167	\$340,890	\$309,926	\$568,441	\$299,023	\$236,414
Shark fins (weight = 5% of all sharks landed)	Ex-vessel \$/lb dw	\$6.01	\$7.43	\$10.47	\$19.67	\$19.87	\$17.09
	Weight lb dw	320,926	249,632	232,462	232,248	249,024	279,401
	Fishery Revenue	\$218,561	\$1,854,313	\$2,434,344	\$4,568,937	\$4,949,056	\$4,774,959
Total sharks	Fishery Revenue	\$4,589,786	\$5,569,578	\$5,538,227	\$8,795,763	\$9,588,545	\$9,092,082
Total HMS	Fishery Revenue	\$66,422,606	\$59,524,926	\$77,554,588	\$91,628,650	\$88,396,016	\$73,674,245

Table 3.66 summarizes the average annual revenues of the Atlantic HMS fishery based on average ex-vessel prices and the weight reported landed as per the United States National Report (NMFS 2003), the Shark Evaluation Reports (NMFS, 1997), information given to ICCAT (Cortes, 2001), 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 11 percent from approximately \$66.4 million in 1996 to approximately \$73.7 million in 2003. From 2002 to 2003, the tuna fishery total revenue decreased by 16 percent. A majority of that decrease can be attributed to reduced commercial landings of bluefin tuna. From 2002 to 2003, the annual revenues from swordfish also decreased by 24 percent. From 2002 to 2003, the annual revenues from shark decreased by five percent.

Table 3.67 The overall average wholesale price per lb of fresh HMS sold in Atlantic and Gulf of Mexico states as reported by the Fulton Fish Market. Note: #'s indicate quality (1 is highest, 3 is lowest); BTF is by the fish. Source: NMFS, 2004.

Species	Description	1996 Price/lb	1999 Price/lb	2000 Price/lb	2001 Price/lb	2002 Price/lb	2003 Price/lb	Percent Change 1996 to 2003
Blacktip	-	\$1.05	\$1.04	\$1.04	\$1.05	\$1.00	\$1.33	27%
Mako	-	\$2.77	\$2.74	\$3.18	\$3.00	\$2.00	\$2.37	-14%
Thresher	-	\$1.00	\$0.91	\$0.82	\$1.25	\$1.25	\$0.78	-22%

Species	Description	1996 Price/lb	1999 Price/lb	2000 Price/lb	2001 Price/lb	2002 Price/lb	2003 Price/lb	Percent Change 1996 to 2003
Swordfish	100# and up	\$6.28	\$5.26	\$5.26	\$5.42	\$5.19	\$5.08	-19%
	50-99#	\$6.02	\$4.54	\$4.72	\$4.81	\$4.59	\$4.50	-25%
	26-49#	\$5.50	\$3.36	\$3.58	\$4.05	\$3.50	-	-
	Cuts	\$7.74	\$6.55	\$6.54	\$6.73	\$6.84	\$6.55	-15%
Yellowfin tuna	#1: BTF	\$7.00	\$5.97	\$5.69	\$5.50	\$7.42	-	-
	#1: Cuts	\$9.38	\$8.23	\$8.00	\$8.23	\$10.67	-	-
	#2: BTF	\$5.00	\$4.24	\$4.36	\$3.97	\$4.92	\$4.60	-8%
	#2: Cuts	\$6.52	\$6.22	\$6.20	\$6.00	\$7.29	\$6.98	7%
	#3: BTF	-	\$3.00	-	-	-	\$2.50	-
	#3: Cuts	-	\$4.50	-	-	-	-	-
Bigeye tuna	#1: BTF	-	\$4.00	-	-	-	\$6.50	-
	#1: Cuts	-	\$5.50	-	-	-	\$8.50	-
	#2: BTF	-	\$4.26	-	-	-	-	-
	#2: Cuts	-	\$6.00	-	-	-	-	-

Currently, NMFS does not collect wholesale price information from dealers. However, the wholesale price of some fish species is available off the web (http://www.st.nmfs.gov/st1/market_news/index.html). The wholesale prices presented in Table 3.67 are from the annual reports of the Fulton Fish Market. As with ex-vessel prices, wholesale prices depend on a number of factors including the quality of the fish, the weight of the fish, the supply of fish, and consumer demand.

As reported by the Fulton Fish Market, Table 3.67 indicates that the average wholesale price of HMS sold in Atlantic and Gulf of Mexico states decreased from 1996 to 2003. During that same period, the wholesale price of swordfish weighing over 100 pounds decreased 19 percent, swordfish weighing between 50 and 99 pounds decreased 19 percent, and swordfish cuts decreased 15 percent. The wholesale price of blacktip shark increased 27 percent from 1996 to 2003, with most of the increase occurring in 2003. The wholesale price both mako shark decreased 14 percent from 1996 to 2003, however 2003 wholesale prices were up from 2002. The wholesale price of thresher shark has decreased 22 percent from 1996 to 2003. Wholesale yellowfin tuna prices have remained relatively stable from 1996 to 2003. The yellowfin tuna wholesale price of #2 quality fish had decreased eight percent while the price of #2 cuts has increased seven percent from 1996 to 2003. Bigeye tuna wholesale prices from 1999 to 2003 have increased significantly for both high grade cuts and fish.

3.5.2 Recreational Fisheries

Although NMFS believes that recreational fisheries have a large influence on the economies of coastal communities, NMFS has only recently been able to gather additional information on the costs and expenditures of anglers or the businesses that rely on them.

An economic survey done by the U.S. Fish and Wildlife Service² in 2001 found that 9.1 million saltwater anglers went on approximately 72 million fishing trips and spent approximately \$8.4 billion (USFWS, 2001). Expenditures included lodging, transportation to and from the coastal community, vessel fees, equipment rental, bait, auxiliary purchases (e.g. binoculars, cameras, film, foul weather clothing, etc.), and fishing licenses (USFWS, 2001). Saltwater anglers spent \$4.5 billion on trip related costs and \$3.9 billion on equipment (USFWS, 2001). Approximately 76 percent of the saltwater anglers surveyed fished in their home state (USFWS, 2001). The next USFWS survey is expected in 2006.

The American Sportfishing Association (ASA) also has a report listing the 2001 economic impact of sportfishing on specific states. This report states that all sportfishing has an overall economic importance of \$116 billion dollars (ASA, 2001). Florida, Texas, North Carolina, New York, and Alabama are among the top ten states in terms of overall economic impact for both saltwater and freshwater fishing (ASA, 2001). Florida is also one of the top states in terms of economic impact of saltwater fishing with \$2.9 billion in angler expenditures, \$5.4 billion in overall economic impact, \$1.5 billion in salaries and wages related to fishing, and 59,418 fishing related jobs (ASA, 2001). California followed Florida with \$0.8 billion in angler expenditures, \$1.7 billion in overall economic impact, \$0.4 billion in salaries and wages, and 15,652 jobs (ASA, 2001). Texas and New Jersey were the next highest states in terms of economic impact (ASA, 2001).

At the end of 2004, NMFS began collecting market information regarding advertised charter boat rates. This preliminary analysis of the data collected includes 99 observations of advertised rates on the internet for full day charters. Full day charters vary from six to 14 hours long with a typical trip being 10 hours. Most vessels can accommodate six passengers, but this also varies from two to 12 passengers. Table 3.68 summarizes the average charter boat rate for full day trips on vessels with HMS Charter/Headboat permits. The average price for a full day boat charter was \$1,053 in 2004. Sutton *et al.* (1999) surveyed charter boats throughout Alabama, Mississippi, Louisiana, and Texas in 1998 and found the average charter boat base fee to be \$762 for a full day trip. Holland *et al.* (1999) conducted a similar study on charter boats 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 charter boat rate in 2004, it is apparent that there has been a significant gain in charter boat rates.

² This survey interviewed over 77,000 households during phase 1 and approximately 25,070 sports persons during phase 2. The response rate during phase two of the survey was 75 percent.

Table 3.68 Average Atlantic HMS charter boat rates for day trips.

Source: NMFS searches for advertised daily charter rates of HMS Charter/Headboat permit holders. (Observations = 99)

State	2004 Average Daily Charter Rate
AL	\$1,783
CT	\$1,500
DE	\$1,060
FL	\$894
LA	\$1,050
MA	\$777
MD	\$1,167
ME	\$900
NC	\$1,130
NJ	\$1,298
NY	\$1,113
RI	\$917
SC	\$1,300
TX	\$767
VA	\$825
Overall Average	\$1,053

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

Billfish recreational anglers tend to spend a great deal of money on trips. Ditton and Stoll (2003) report that a 1990 study of U.S. total trip costs for a typical billfish angler estimated a mean expenditure of \$2,105 for Atlantic trips and \$1,052 for Puerto Rico trips. The aggregate economic impact of billfish fishing trips in the U.S. Atlantic is conservatively estimated to be \$22.7 million annually and \$48.6 million for Puerto Rico.

In addition to the economic impact of recreational billfish angling, Ditton and Stoll (2003) report that using a contingent valuation method that consumer's surplus or net economic benefit to maintain current billfish populations in the U.S. Atlantic to be \$497 per billfish angler per year in the U.S. Atlantic and \$480 in Puerto Rico. They also estimate that the number of annual billfish anglers in the U.S. Atlantic to be 7,915 and 1,627 in Puerto Rico. The aggregate willingness-to-pay for maintaining current billfish populations is \$3.93 million in the U.S. Atlantic and 0.78 million in Puerto Rico. The aggregate direct impact of billfish expenditures is estimated to be \$15.13 million for the U.S. Atlantic and \$32.40 million for Puerto Rico. Thus, the total aggregate economic value of billfish angler fishing is \$19.06 million per year for the U.S. Atlantic and \$33.18 million per year for Puerto Rico.

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

Cash awards distributed in HMS tournaments can be quite substantial. Several of the largest tournaments, some of which are described below, are part of the World Billfish Series Tournament Trail whereby regional winners are invited to compete in the World Billfish Series Grand Championship for a new automobile and a bronze sculpture. Other tournament series include the International Game Fish Association (IGFA) Rolex Tournament of Champions, and the South Carolina Governor's Cup. White marlin is a top billfish species from Cape Hatteras, North Carolina to the eastern tip of Georges Bank from June through October each year. The White Marlin Open in Ocean City, Maryland, which is billed as the "world's richest fishing tournament," established a new world record payout for catching a fish when it awarded \$1.32 million in 2004 to the vessel catching the largest white marlin. The 21st Annual Pirates Cove Billfish Tournament in North Carolina awarded over \$1 million in prizes in 2004, with the top boat garnering over \$400,000 for winning in six categories. Total prize money awarded in the Big Rock Tournament in North Carolina has exceeded \$1 million since 1998.

Blue marlin, sailfish and tunas are also often targeted in fishing tournaments, including those discussed above. In 2003, blue marlin was the HMS most frequently identified as a prize category in registered HMS tournaments. Forty-five teams participated in the 2004 Emerald Coast Blue Marlin Classic at Sandestin, Florida, with over \$482,000 in cash prizes and the top boat receiving over \$58,000. The 34th Annual Pensacola (Florida) International Billfish Tournament indicated that it would award over \$325,000 in cash and prizes in 2004. The World Sailfish Championship in Key West, FL has a \$100,000 guaranteed first prize for 2005. In South Carolina, the Megadock Billfishing Tournament offers a \$1,000,000 prize for any boat exceeding the current blue marlin state record. The 2004 Florida Billfish Masters Tournament in Miami, Florida awarded over \$123,000 in prize money, with the top boat receiving over \$74,000. Sixty-two boats competed in the 2003 Babylon Tuna Club Invitational in Babylon, New York for over \$75,000 in cash prizes, and the Mid-Atlantic Tuna Tournament sponsored by the South Jersey Marina in Cape May, New Jersey anticipates awarding over \$25,000 in prizes in 2005.

Several tournaments target sharks. Many shark tournaments occur in New England, New York and New Jersey, although other regions hold shark tournaments as well. In 2004, the 24th Annual South Jersey Shark Tournament hosted over 200 boats and awarded over \$220,000 in prize money, with an entry fee of \$450 per boat. The "Mako Fever" tournament, sponsored by

the Jersey Coast Shark Anglers, in 2004 awarded over \$55,000 in prizes, with the first place vessel receiving \$25,000. In 2004, the 18th Annual Monster Shark Tournament in Martha's Vineyard, Massachusetts was broadcast on ESPN, and featured a new fishing boat valued at over \$130,000 awarded to the winner.

Swordfish tournaments have gained increased popularity in recent years, especially on the east coast of Florida, as the swordfish population has recovered. Events include the Islamorada Swordfish Tournament that began in 2004, and the Miami Swordfish Tournament that began in 2003. Both of these tournaments anticipated awarding over \$30,000 in total cash and prizes, assuming that 50 boats would participate.

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

Fishing tournaments can sometimes generate a substantial amount of money for surrounding communities and local businesses. Besides the entry fee to the tournament and possibly the calcutta, anglers may also pay for marina space and gas (if they have their own vessel), vessel rental (if they do not have their own vessel), meals and awards dinners (if not covered by the entry fee), hotel, fishing equipment, travel costs to and from the tournament, camera equipment, and other miscellaneous expenses. Fisher and Ditton (1992) found that the average angler who attended a billfish tournament spent \$2,147 per trip (2.59 days), and that billfish tournament anglers spent an estimated \$180 million (tournament and non-tournament trips) in 1989. Ditton and Clark (1994) estimated annual expenditures for Puerto Rican billfish fishing trips (tournaments and non-tournaments) at \$21.5 million. More recently, Ditton, *et. al.* (2000) estimated that the total expenditure (direct economic impact) associated with the 1999 Pirates Cove Billfish Tournament, not including registration fees, was approximately \$2,072,518. The total expenditure (direct economic impact) associated with the 2000 Virginia Beach Red, White, and Blue Tournament was estimated at approximately \$450,359 (Thailing, *et. al.*, 2001). These estimated direct expenditures do not include economic effects that may ripple through the local economy leading to a total impact exceeding that of the original purchases by anglers (*i.e.*, the multiplier effect). Less direct, but equally important, fishing tournaments may serve to generally promote the local tourist industry in coastal communities. In a survey of participants in the 1999 Pirates Cove Billfish Tournament, Ditton, *et. al.* (2000) found that almost 80 percent of tournament anglers were from outside of the tournament's county. For this reason, tourism bureaus, chambers of commerce, resorts, and state and local governments often sponsor fishing tournaments.