

4. FISHERY DATA UPDATE

In this chapter, HMS fishery data, with the exception of some data on Atlantic sharks, are analyzed by gear type. While HMS fishermen generally target particular species, the non-selective nature of many fishing gears warrants analysis and management on a gear-by-gear basis. In addition, issues such as bycatch and safety are generally better addressed by gear type. A summary of bycatch, incidental catch, and protected resource interaction statistics can be found in Chapter 7 of this document.

The list of authorized fisheries and fishing gear used in those fisheries became effective December 1, 1999 (64 FR 67511) and has been modified several times in subsequent final rules. The list applies to all U.S. marine fisheries, including Atlantic HMS. As stated in the rule, “no person or vessel may employ fishing gear or participate in a fishery in the exclusive economic zone (EEZ) not included in this List of Fisheries (LOF) without giving 90 days’ advance notice to the appropriate Fishery Management Council (Council) or, with respect to Atlantic HMS, the Secretary of Commerce (Secretary).”

HMS Fishery	Authorized Gear Types
Swordfish handgear	Rod and reel, harpoon, handline, bandit gear, buoy gear, green-stick (beginning in the 2014 fishing year)
Swordfish recreational	Rod and reel, handline
Pelagic longline	Longline, green-stick
Shark gillnet	Gillnet
Shark bottom longline	Longline
Shark handgear	Rod and reel, handline, bandit gear
Shark recreational	Rod and reel, handline
Tuna purse seine	Purse seine
Tuna recreational	Rod and reel, handline, speargun (allowed for tunas other than bluefin), green-stick (only for vessels possessing the Atlantic HMS Charter/Headboat permit)
Tuna handgear	Rod and reel, harpoon, handline, bandit gear
Tuna harpoon	Harpoon
Atlantic billfish recreational	Rod and reel only
Tuna green-stick	Green stick
HMS commercial Caribbean small boat	Rod and reel, handline, harpoon, bandit gear, green-stick, and buoy gear

The U.S. percentage of regional and total catch of HMS species is presented to provide a basis for comparison of the U.S. catch relative to other nations/entities (Table 4.1). International catch levels and U.S. reported catches for HMS (other than sharks) are taken from the 2013 ICCAT Standing Report of the SCRS (SCRS, 2013). The SCRS data collection is reported by species; therefore, Table 4.1 depicts a summary of U.S. and international HMS catches by species rather than gear type. Catch of billfish includes both recreational landings and dead discards from commercial fisheries; bluefin tuna includes commercial landings and dead discards and recreational landings; and swordfish includes recreational landings and commercial landings and dead discards. International catch and landings data for the pelagic longline and purse seine fisheries are in Sections 0 and 4.1. Data necessary to compare the U.S. regional and total percentage of international catch levels for most Atlantic shark species are currently limited;

therefore, Table 4.1 provides information only on the species that have been assessed by the SCRS.

Table 4.1 U.S. vs. International Catch of HMS Reported to ICCAT (Calendar Year 2012)

Species	Total International Reported Catch (mt ww)	Region	Total Regional Catch (mt ww)	U.S. Catch (mt ww)	U.S. Percentage of Regional Catch	U.S. Percentage of Total Atlantic Catch
Atlantic swordfish	24,152	North Atlantic	13,972	3,651	26.1	15.10
		South Atlantic	10,180	0	0.0	
Atlantic bluefin tuna	12,602	West Atlantic	1,750	915	52.2	7.20
		East Atlantic/Med.	10,852	0	0.0	
Atlantic bigeye tuna	70,536	Atlantic/Med.	70,536	869	1.2	1.20
Atlantic yellowfin tuna	101,866	West Atlantic	20,409	4,109	20.1	4.00
		East Atlantic/Med.	81,457	0	0.0	
Atlantic albacore tuna	53,048	North Atlantic	26,237	425	1.6	0.80
		South Atlantic/Med.	26,811	0	0.0	
Atlantic skipjack tuna	240,821	West Atlantic	33,219	112	0.33	0.04
		East Atlantic/Med.	207,603	0	0.0	
Atlantic blue marlin	1,834	North Atlantic	1,086	53	4.8	2.90
		South Atlantic	748	0	0.0	
Atlantic white marlin	403	North Atlantic	285	22	7.7	5.50
		South Atlantic	118	0	0.0	
Atlantic sailfish	2,044	West Atlantic	891	25	2.8	1.20
		East Atlantic	1,153	0	0.0	
Blue sharks	60,953	North Atlantic	36,131	162	0.45	0.26
		South Atlantic/Med.	24,823	0	0.0	
Porbeagle sharks	188	North Atlantic	157	21	13.3	11.20
		South Atlantic/Med.	31	0	0.0	
Shortfin mako sharks	7,277	North Atlantic	4,488	429	9.5	5.90
		South Atlantic/Med.	2,789	0	0.0	

Source: SCRS, 2013.

4.1 Pelagic Longline

4.1.1 Current Management

The pelagic longline (PLL) fishery for Atlantic HMS primarily targets swordfish, yellowfin tuna, and bigeye tuna in various areas and seasons. Secondary target species include dolphin, albacore tuna, and, to a lesser degree, sharks. Although this gear can be modified (e.g., depth of set, hook type, hook size, bait, etc.) to target swordfish, tunas, or sharks, it is generally a multi-species fishery. PLL vessel operators are opportunistic, switching gear style and making subtle changes to target the best available economic opportunity on each individual trip. PLL

gear sometimes attracts and hooks non-target finfish with little or no commercial value as well as species that cannot be retained by commercial fishermen due to regulations, such as billfish. PLL gear may also interact with protected species such as marine mammals, sea turtles, and seabirds. Thus, this gear has been classified as a Category I fishery with respect to the Marine Mammal Protection Act (MMPA). Any species that cannot be landed due to fishery regulations (or undersized catch of permitted species) is required to be released, regardless of whether the catch is dead or alive.

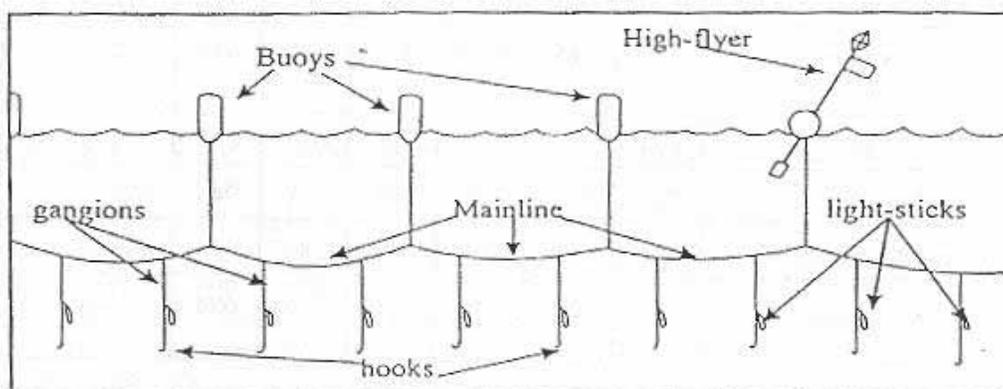


Figure 4.1 Typical U.S. Pelagic Longline Gear

Source: Arocha, 1996.

PLL gear is composed of several parts (Figure 4.1). The primary fishing line, or mainline of the longline system, can vary from five to 40 miles in length, with approximately 20 to 30 hooks per mile. The depth of the mainline is determined by ocean currents and the length of the floatline, which connects the mainline to several buoys, and periodic markers which can have radar reflectors or radio beacons attached. Each individual hook is connected by a leader, or gangion, to the mainline. Lightsticks, which contain light emitting chemicals, are often used, particularly when targeting swordfish. When attached to the hook and suspended at a certain depth, lightsticks attract baitfish, which may, in turn, attract pelagic predators (NMFS, 1999).

When targeting swordfish, PLL gear is generally deployed at sunset and hauled at sunrise to take advantage of swordfish nocturnal near-surface feeding habits (NMFS, 1999). In general, longlines targeting tunas are set in the morning, fished deeper in the water column, and hauled back in the evening. Except for vessels of the distant water fleet, which undertake extended trips, fishing vessels preferentially target swordfish during periods when the moon is full to take advantage of increased densities of pelagic species near the surface. The number of hooks per set varies with line configuration and target species (Table 4.2).

Table 4.2 Average Number of Hooks per Pelagic Longline Set (2002-2012)

Target Species	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Swordfish	711	701	747	742	672	708	687	759	728	683
Bigeye tuna	967	400	634	754	773	751	755	653	802	865
Yellowfin tuna	720	696	691	704	672	678	689	687	645	628
Mix of tuna species	765	779	692	676	640	747	744	837	786	728
Shark	696	717	542	509	494	377	354	455	348	525
Dolphin	692	1,033	734	988	789	989	1,033	1,131	1,082	1,129
Other species	865	270	889	236	NA	NA	NA	467	400	300
Mix of species	747	777	786	777	757	749	781	761	749	758

Source: Fisheries Logbook System.

Figure 4.2 illustrates basic differences between swordfish (shallow) and tuna (deep) longline sets. Swordfish sets are buoyed to the surface, have fewer hooks between floats, and are relatively shallow. This same type of gear arrangement is used for mixed target species sets. Tuna sets use a different type of float placed much further apart. Compared with swordfish sets, tuna sets have more hooks between the floats and the hooks are set much deeper in the water column. It is believed that tuna sets hook fewer turtles than the swordfish sets because of the difference in fishing depth. In addition, tuna sets use bait only, while swordfish sets use a combination of bait and lightsticks. Compared with vessels targeting swordfish or mixed species, vessels specifically targeting tuna are typically smaller and fish different grounds.

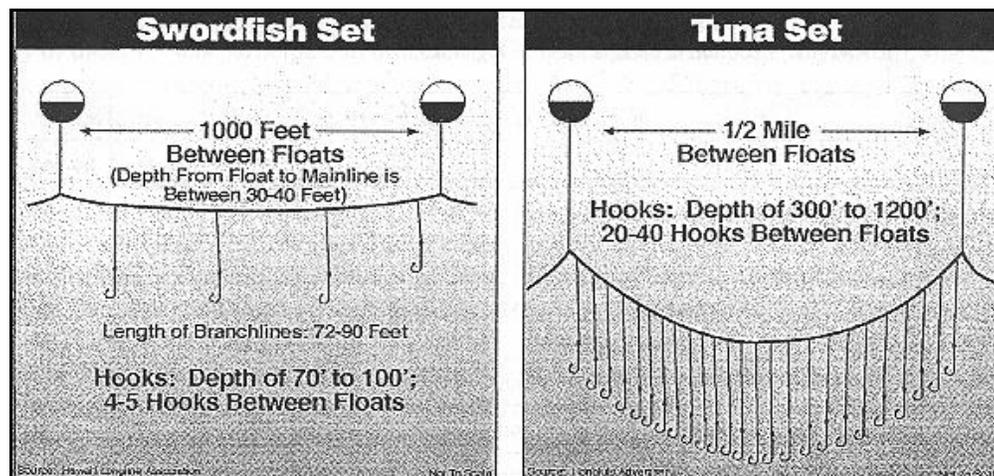


Figure 4.2 Pelagic Longline Gear Deployment Techniques

Note: This figure is only included to show basic differences in pelagic longline gear configuration and to illustrate that this gear may be altered to target different species.

Source: Hawaii Longline Association and Honolulu Advertiser.

The 1999 FMP established six different limited access permit (LAP) types: (1) directed swordfish, (2) incidental swordfish, (3) swordfish handgear, (4) directed shark, (5) incidental

shark, and (6) Atlantic tunas longline. To reduce bycatch in the PLL fishery, these permits were designed so that the swordfish directed and incidental permits are valid only if the permit holder also holds both a tuna longline and a shark permit. Similarly, the tuna longline permit is valid only if the permit holder also holds both a swordfish (directed or incidental, not handgear) and a shark permit. This allows limited retention of species that might otherwise have been discarded.

As of October 2013, approximately 252 tuna longline LAPs had been issued. In addition, approximately 185 directed swordfish LAPs, 71 incidental swordfish LAPs, 220 directed shark LAPs, and 265 incidental shark LAPs had been issued (see Table 8.1 for more detailed data on LAPs). Not all vessels with limited access swordfish and shark permits use PLL gear, but these are the only permits ((1) tuna longline; (2) shark LAP; and, (3) swordfish LAP (other than handgear)) that allow for the use of PLL gear in HMS fisheries.

PLL Observer Program

During 2012, NMFS observers recorded 945 PLL sets for overall non-experimental fishery coverage of 8.6 percent (Garrison and Stokes, 2013). Table 4.3 details the amount of observer coverage in past years for this fleet.

The Pelagic Longline Take Reduction Plan (PLTRP) (74 FR 23349, May 19, 2009) recommended that NMFS increase observer coverage to 12 to 15 percent throughout all Atlantic PLL fisheries that interact with pilot whales and Risso's dolphins to ensure representative sampling of fishing effort. If resources are not available to provide such observer coverage for all fisheries, regions, and seasons, the Pelagic Longline Take Reduction Team (PLTRT) recommended NMFS allocate observer coverage to fisheries, regions, and seasons with the highest observed or reported bycatch rates of pilot whales. The PLTRT recommended that additional coverage be achieved either by increasing the number of NMFS observers who have been specially trained to collect additional information supporting marine mammal research, or by designating and training special "marine mammal observers" to supplement traditional observer coverage. In 2012, total observer coverage, including experimental sets, was 9.5 percent (Table 4.3).

Table 4.3 Observer Coverage of the Atlantic Pelagic Longline Fishery (1999-2012)

Year	Number of Sets Observed			Percentage of Total Number of Sets		
1999	420			3.8		
2000	464			4.2		
	Total	Non-NED	NED	Total	Non-NED	NED
2001 ¹	584	398	186	5.4	3.7	100
2002 ¹	856	353	503	8.9	3.9	100
2003 ¹	1,088	552	536	11.5	6.2	100
	Total	Non-EXP	EXP	Total	Non-EXP	EXP
2004 ²	702	642	60	7.3	6.7	100
2005 ²	796	549	247	10.1	7.2	100
2006	568	-	-	7.5	-	-
2007	944	-	-	10.8	-	-
2008 ³	1,190	-	101	13.6	-	100
2009 ³	1,588	1,376	212	17.3	15.0	100
2010 ³	884	725	159	11.0	9.7	100
2011 ³	879	864	15	10.9	10.1	100
2012 ⁴	1,060	945	115	9.5	8.6	100

NED – Northeast Distant Area; EXP – experimental. ¹In 2001, 2002, and 2003, 100 percent observer coverage was required in the NED research experiment. ²In 2004 and 2005, there was 100 percent observer coverage in EXP. ³In 2008- 2011, 100 percent observer coverage was required in experimental fishing in the FEC, Charleston Bump, and GOM, but these sets are not included in extrapolated bycatch estimates because they are not representative of normal fishing. ⁴In 2012, 100 percent observer coverage was required in a cooperative research program in the GOM to test the effectiveness of “weak hooks” on target species and bycatch rates, but these sets are not included in extrapolated bycatch estimates because they are not representative of normal fishing.

Sources: Yeung, 2001; Garrison, 2003b; Garrison and Richards, 2004; Garrison, 2005; Fairfield-Walsh and Garrison, 2006; Fairfield-Walsh & Garrison, 2007; Fairfield & Garrison, 2008; Garrison, Stokes & Fairfield, 2009; Garrison and Stokes, 2010, 2011, 2012, 2013.

4.1.2 Recent Catch, Landings, and Bycatch

U.S. Atlantic PLL catch (including bycatch, incidental catch, and target catch) is largely related to vessel characteristics and gear configuration. The reported catch, in numbers of fish, is summarized for the whole fishery in Table 4.4. Table 4.5 provides a summary of U.S. Atlantic PLL landings, as reported to the International Commission for the Conservation of Atlantic Tunas (ICCAT).

Table 4.4 Catch Reported in the U.S. Atlantic Pelagic Longline Fishery, in Number of Fish per Species (2003-2012)

Species	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Swordfish kept	51,835	46,440	41,139	38,241	45,933	42,800	45,378	33,831	38,721	51,544
Swordfish discarded	11,829	10,675	11,134	8,900	11,823	11,194	7,484	6,107	8,736	7,996
Blue marlin discarded	595	712	567	439	611	687	1,013	504	544	896
White marlin discarded	809	1,053	989	557	744	670	1,064	605	943	1,432
Sailfish discarded	277	424	367	277	321	506	774	312	581	795
Spearfish discarded	108	172	150	142	147	197	335	212	281	270
Bluefin tuna kept	273	475	375	261	337	343	629	392	347	392
Bluefin tuna discarded	881	1,031	765	833	1,345	1,417	1,290	1,488	765	563
Bigeye, albacore, yellowfin, and skipjack tunas kept	63,321	76,962	57,132	73,058	70,390	50,108	57,461	51,786	69,504	84,707
Pelagic sharks kept	3,037	3,440	3,149	2,098	3,504	3,500	3,060	3,872	3,732	2,794
Pelagic sharks discarded	21,705	25,355	21,550	24,113	27,478	28,786	33,721	45,511	43,806	23,038
Large coastal sharks kept	5,326	2,292	3,362	1,768	546	115	403	434	131	86
Large coastal sharks discarded	4,813	5,230	5,877	5,326	7,133	6,732	6,672	6,726	6,351	7,716
Dolphin kept	29,372	38,769	25,707	25,658	68,124	43,511	62,701	30,454	30,054	42,445
Wahoo kept	3,919	4,633	3,348	3,608	3,073	2,571	2,648	749	1,922	3,121
Sea turtle interactions	399	369	152	128	300	476	137	94	66	61
<i>Number of Hooks (x 1,000)</i>	<i>7,008</i>	<i>7,276</i>	<i>5,911</i>	<i>5,662</i>	<i>6,291</i>	<i>6,498</i>	<i>6,979</i>	<i>5,729</i>	<i>6,035</i>	<i>7,679</i>

Source: Fisheries Logbook System.

Table 4.5 Reported Landings (mt ww) in the U.S. Atlantic Pelagic Longline Fishery (2003-2012)

Species	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Yellowfin tuna	2,164.0	2,492.2	1,746.2	2,009.9	2,394.5	1,324.5	1,700.1	1,188.8	1,458.3	2,281.0
Skipjack tuna	1.4	0.7	0.6	0.2	0.02	1.45	0.5	1.4	0.6	0.4
Bigeye tuna	283.9	310.1	311.9	520.6	380.7	407.7	430.1	443.2	600.2	583.2
Bluefin tuna*	133.9	180.1	211.5	204.6	164.3	232.6	335.0	238.7	241.4	291.9
Albacore tuna	107.6	120.4	108.5	102.9	126.8	126.5	158.3	159.9	240.0	261.4
Swordfish N.*	2,756.3	2,518.5	2,272.8	1,960.8	2,474.0	2,353.6	2,691.3	2,206.2	2,570.9	3,384.5
Swordfish S.*	20.5	15.7	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

* Includes landings and estimated discards from scientific observer and logbook sampling programs

Source: NMFS, 2013.

Consistent with ICCAT Recommendations 09-07, 10-07, 10-08, and 11-08, the United States has prohibited the retention of bigeye thresher sharks in all fisheries (since 1999); prohibited retaining, transshipping, landing, storing, or selling oceanic whitetip sharks (*Carcharhinus longimanus*) or hammerhead sharks in the family Sphyrnidae (except for *Sphyrna tiburo*) caught in association with ICCAT fisheries (since 2011); and prohibited retaining on board, transshipping, or landing silky sharks (*Carcharhinus falciformis*) since 2012. Additionally, in 2012, to be consistent with the oceanic whitetip and hammerhead shark prohibitions, the United States also prohibited the storing, selling, or purchasing of silky sharks caught in association with ICCAT fisheries. The data on the number of releases (and status) of ICCAT prohibited species from pelagic longline vessels during 2012 can be found in Table 4.6.

Table 4.6 Prohibited Shark Interactions and Dispositions (2012)

Species	Released Unknown	Kept	Released Dead	Released Alive	Lost at Surface
Bigeye thresher	0	0	31	34	0
Silky	1	0	150	160	1
Great hammerhead	0	0	17	15	0
Oceanic whitetip	0	0	6	25	0
Smooth hammerhead	0	0	0	0	0
Scalloped hammerhead	1	0	122	111	0

Source: NMFS Pelagic Observer Program.

Bycatch mortality of marlins, sailfish, swordfish, and bluefin tuna from all fishing nations may significantly affect the ability of these populations to rebuild, and it remains an important management issue. In order to minimize bycatch and bycatch mortality in the domestic PLL fishery, NMFS implemented regulations to close certain areas to this gear type (Figure 4.3) and has banned the use of live bait and required the use of weak hooks by PLL vessels in the Gulf of Mexico.

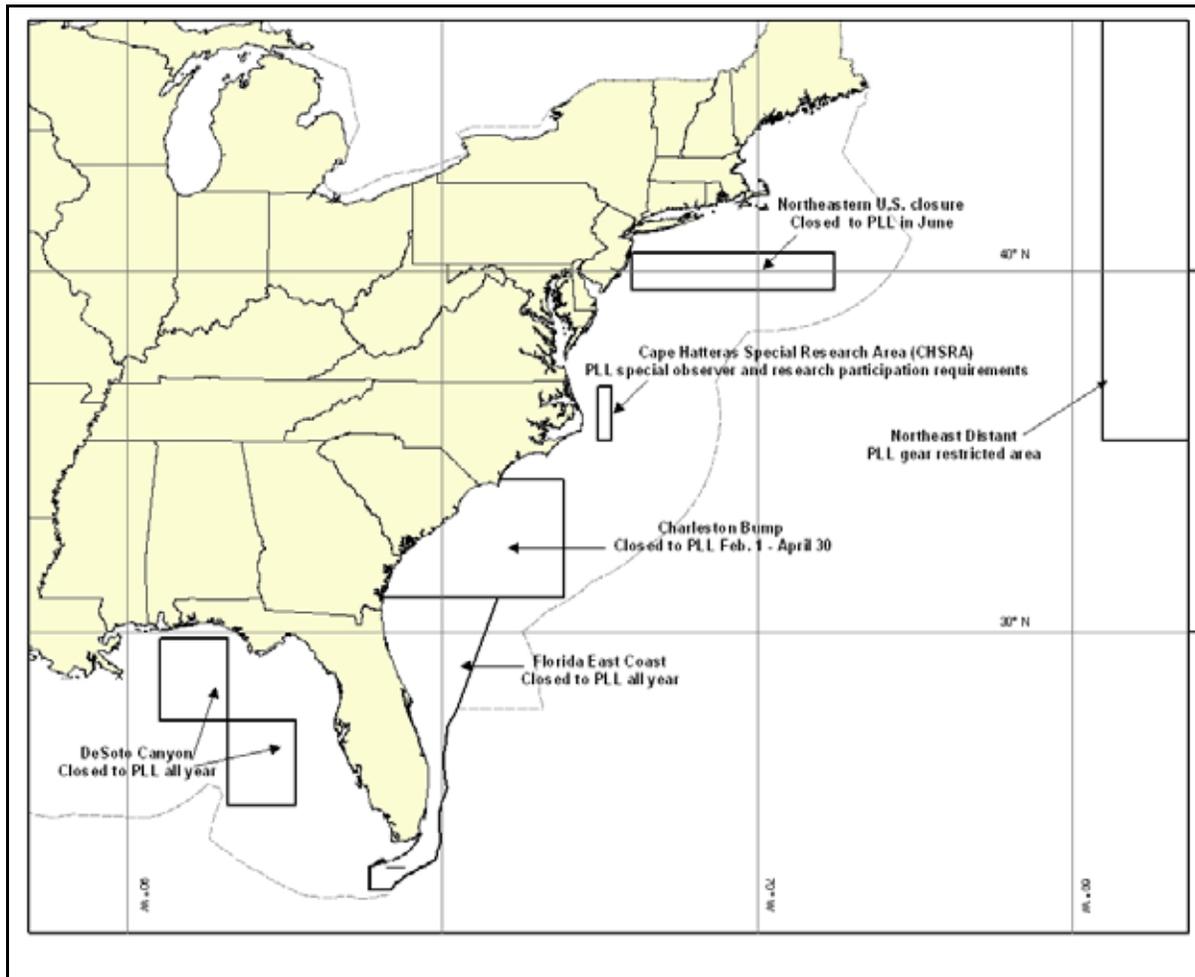


Figure 4.3 Areas Closed to Pelagic Longline Fishing by U.S. Flagged Vessels

Protected Species - Marine Mammals

Many of the marine mammals that are hooked by U.S. PLL fishermen are released alive, although some animals suffer serious injuries and may die after being released. The observed and estimated marine mammal interactions for 2003 – 2012 are summarized in Table 4.6. Marine mammals are caught primarily during the third and fourth quarters in the Mid Atlantic Bight (MAB), Northeast Coastal (NEC), and Gulf of Mexico (GOM) areas. In 2012, the majority of observed interactions were with pilot whales, bottlenose dolphins, Risso’s dolphins, and short-finned pilot whales (Garrison and Stokes, 2013). NMFS monitors observed interactions with sea turtles and marine mammals on a quarterly basis and reviews data for appropriate action, if any, as necessary.

Table 4.7 Marine Mammal Interactions in the Atlantic Pelagic Longline Fishery (2003–2012)

Year	Species	Total		Mortality		Serious Injury		Alive	
		Obs.	Est.	Obs.	Est.	Obs.	Est.	Obs.	Est.
2003	Beaked whale	2	48.8	-	-	1	5.3	1	43.5
	Dolphin	1	16.2	-	-	1	16.2	-	-
	Atlantic spotted dolphin	1	29.8	-	-	1	29.8	-	-
	Bottlenose dolphin	1	2.0	-	-	-	-	1	2.0
	Common dolphin	2	45.6	-	-	-	-	2	45.6
	Risso's dolphin	14	109.5	1	1.0	3	40.1	10	68.4
	Striped dolphin	1	1.0	-	-	-	-	1	1.0
	Pilot whale	4	32.1	-	-	2	21.4	1	11.3
	Baleen whale	1	1.0	-	-	-	-	1	1.0
	Minke whale	1	22.3	-	-	-	-	1	22.3
2004	Pilot whale	8	107.5	-	-	6	74.1	2	33.8
	Common dolphin	1	6.8	-	-	-	-	1	6.8
	Risso's dolphin	3	49.4	-	-	2	27.5	1	21.9
2005	Pilot whale	18	294.4	-	-	9	211.5	9	79.5
	Risso's dolphin	2	42.1	-	-	-	2.9	2	39.2
	Common dolphin		5.7	-	-	-	-	-	5.7
	Bottlenose dolphin	1	5.2	-	-	-	-	1	5.2
	Beaked whale		1.0	-	-	-	1.0	-	-
	Atlantic spotted dolphin	1	4.3	-	-	-	-	1	4.3
	Unidentified marine mammal	1	13.2	-	-	1	13.2	-	-
	Unidentified whale		3.4	-	-	-	3.4	-	-
	Unidentified dolphin	1	2.6	-	-	-	-	1	2.6
2006	Atlantic spotted dolphin		1.9	-	-	-	-	-	1.9
	Beaked whale		2.2	-	-	-	-	-	2.2
	Bottlenose dolphin		0.6	-	-	-	-	-	0.6
	Pilot whale	20	274.5	1	15.5	12	168.6	7	90.4
	Unidentified dolphin	2	26.5	-	-	2	26.5	-	-
	Unidentified marine mammal	1	12.6	1	12.6	-	-	-	-
2007	Atlantic spotted dolphin		1.4	-	-	-	-	-	1.4
	Bottlenose dolphin	2	12.6	-	-	1	-	1	12.6
	Beaked whale	1	1.5	-	-	-	-	1	1.5
	Pilot whale	8	86.6	-	-	5	56.7	3	30.7
	Risso's dolphin	2	20.3	-	-	1	9.3	1	11.0
	Unidentified dolphin	2	3.8	1	1.5	-	-	1	2.3
	Unidentified marine mammal	2	22.1	-	-	2	22.1	-	-
2008	Atlantic spotted dolphin		3.1	-	-	-	-	-	3.1
	Bottlenose dolphin	1	6.6	-	-	-	-	1	6.6
	Beaked whale	1	6.1	-	-	-	-	1	6.1
	Killer whale	1	3.4	-	-	-	-	1	3.4
	Pilot whale	8	141.5	-	-	5	98.2	3	43.3
	Risso's dolphin	9	64.4	1	4.4	4	20.4	4	39.6
	Sperm whale	1	1.6	-	-	-	-	1	1.6
	Unidentified dolphin		3.2	-	-	-	-	-	3.2

Year	Species	Total		Mortality		Serious Injury		Alive	
		Obs.	Est.	Obs.	Est.	Obs.	Est.	Obs.	Est.
	Unidentified marine mammal	2	34.7	-	-	1	20.4	1	14.3
2009	Bottlenose dolphin	3	23.0	-	-	2	11.3	1	11.6
	Common dolphin	1	8.5	1	8.5	-	-	-	-
	False Killer whale		2.5	-	-	-	-	-	2.5
	Pantropical spotted dolphin	5	26.6	-	-	4	14.1	1	12.5
	Pilot whale	4	35.7	-	-	2	16.5	2	19.2
	Risso's dolphin	5	38.5	-	-	2	11.4	3	27.1
	Unidentified dolphin	1	1.6	-	-	-	-	1	1.6
	Unidentified marine mammal	1	8.0	-	-	1	8.0	-	-
2010	Bottlenose dolphin	2	16.9	-	-	1	1.0	1	15.9
	Minke whale	1	24.4	-	-	-	-	2	24.4
	Pantropical spotted dolphin	3	6.1	-	-	-	-	2	5.1
	Pilot whale	10	149.9	-	-	8	126.5	2	20.5
	Pygmy sperm whale	1	1.2	1	1.2	-	-	-	-
	Risso's dolphin	1	9.9	-	-	-	-	1	9.9
	Unidentified dolphin	1	1.5	-	-	-	-	1	1.5
	Unidentified marine mammal	4	27.5	1	5.5	3	21.9	-	-
2011	Bottlenose dolphin	3	40.5	-	-	1	12.2	2	28.3
	False killer whale	1	11.0	-	-	-	-	1	11.0
	Atlantic spotted dolphin	1	0.8	-	-	-	-	1	0.8
	Pilot whale	16	291.7	1	18.7	12	233.8	3	39.5
	Short-finned pilot whale	4	58.3	-	-	3	46.5	1	11.8
	Pygmy/Dwarf sperm whale	1	17.0	-	-	1	17.0	-	-
	Risso's dolphin	7	31.3	-	-	3	13.3	4	18.0
	Unidentified dolphin	1	1.1	-	-	1	1.1	-	-
2012	Bottlenose dolphin	6	101.0	-	-	4	77.5	2	23.5
	Pilot whale	19	242.6	-	-	14	170.1	5	72.4
	Short-finned pilot whale	1	10.0	-	-	-	-	1	10.0
	Pantropical spotted dolphin*	1	1.0	1	1	-	-	-	-
	Risso's dolphin	3	58.2	-	-	2	45.0	1	13.2

Obs. – observed; Est. – estimated. * Pantropical spotted dolphin was observed dead in an experimental set.

Sources: Garrison and Richards, 2004; Garrison, 2005; Walsh and Garrison, 2006; Fairfield-Walsh and Garrison, 2007; Fairfield and Garrison, 2008; Garrison, Stokes & Fairfield, 2009; Garrison and Stokes, 2010, 2011, 2012, 2013.

Protected Species - Sea Turtles

As a result of increased sea turtle interactions in 2001 and 2002, NMFS reinitiated consultation for the PLL fishery and completed a new Biological Opinion on June 1, 2004. The June 2004 Biological Opinion concluded that long-term continued operation of the Atlantic PLL fishery as proposed was not likely to jeopardize the continued existence of loggerhead, green, hawksbill, Kemp's ridley, or olive ridley sea turtles, but was likely to jeopardize the continued existence of leatherback sea turtles. The Biological Opinion included a Reasonable and Prudent Alternative (RPA) which was adopted and implemented within the PLL fishery, and an Incidental Take Statement (ITS) for 2004 – 2006 combined, and for each subsequent three-year period (NMFS, 2004). The estimated sea turtle takes for regular fishing and experimental fishing effort for 2003- 2012 are summarized in Table 4.8, Table 4.9, and Table 4.10. Loggerhead interactions are more widely distributed; however, the NED and the NEC appear to be areas with high interaction levels each year.

Sea turtle bycatch in the U.S. Atlantic PLL fishery has decreased significantly in the last decade. From 1999 to 2003, the PLL fleet targeting HMS interacted with an average of 772 loggerhead and 1,013 leatherback sea turtles per year, based on observed takes and total reported effort. In 2004, the fleet was estimated to have interacted with 734 loggerhead and 1,362 leatherback sea turtles (Garrison, 2005). These numbers have been reduced and in 2012, the U.S. Atlantic PLL fishery was estimated to have interacted with 681 loggerhead sea turtles and 596 leatherback sea turtles outside of experimental fishing operations (Garrison and Stokes, 2013) (Table 4.10). In 2012, the majority of loggerhead sea turtle interactions occurred in the NEC, NED, and FEC areas (Table 4.8). Interactions with leatherback sea turtles were highest in the GOM, SAB, and FEC areas (Table 4.9). The 2012 increase in reported sea turtle takes was likely due to an increase in fishing effort; however, **the total interactions for the 3-year period (2010-12) are below the level established by the ITS in the 2004 Biological Opinion for both loggerheads and leatherbacks.** NMFS monitors observed interactions with sea turtles and marine mammals on a quarterly basis and reviews data for additional appropriate action, if any, as necessary.

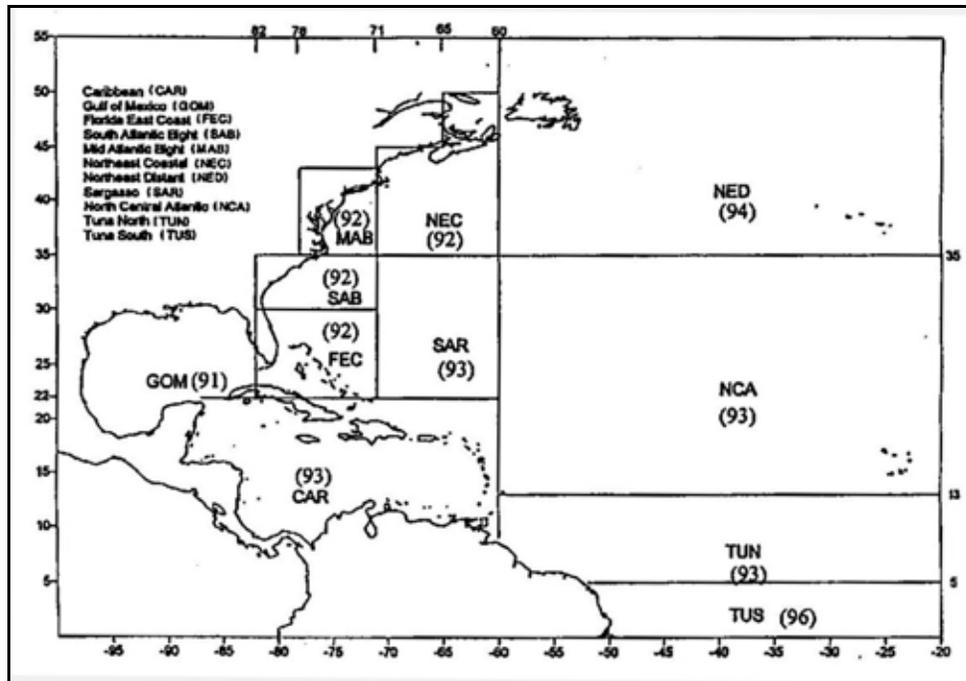


Figure 4.4 Geographic Areas Used in Summaries of Pelagic Logbook Data

Source: Cramer and Adams, 2000.

Table 4.8 Estimated Number of Loggerhead Sea Turtle Interactions in the U.S. Atlantic Pelagic Longline Fishery, by Statistical Area (2003-2012)

Area	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
CAR	36	61	40	16	7	17	9	12	4	0
GOM	135	45	19	17	10	10	38	2	0	56
FEC	137	99	0	40	83	47	41	26	92	157
SAB	52	194	34	18	34	70	47	39	9	37
MAB	18	92	54	70	155	20	37	55	81	71
NEC	241	150	67	135	48	237	43	101	103	199
NED	0	52	20	235	200	352	22	97	105	161
SAR	70	41	38	19	4	16	7	13	44	0
NCA	39	0	3	10	2	1	0	0	0	0
TUN	0	0	0	0	0	0	9	0	0	0
TUS	0	0	0	0	0	0	0	0	0	0
Total	728	734	275	559	543	770	243	344	438	681
NED experimental fishery (2001-03)	92	-	-	-	-	-	-	-	-	-
Experimental fishery (2004-05; 2008-12)	-	0	8	-	-	1	0	0	0	0
Total	820	734	283	559	543	771	243	344	438	681

Sources: Garrison and Richards, 2004; Garrison, 2005; Walsh and Garrison, 2006; Fairfield-Walsh and Garrison, 2007; Fairfield and Garrison, 2008; Garrison et al., 2009; Garrison and Stokes, 2010, 2011, 2012, 2013.

Table 4.9 Estimated Number of Leatherback Sea Turtle Interactions in the U.S. Atlantic Pelagic Longline Fishery, by Statistical Area (2003-2012)

Area	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
CAR	0	17	2	4	1	2	1	10	3	0
GOM	838	780	179	109	212	144	93	26	33	250
FEC	27	64	62	28	7	30	19	20	17	75
SAB	75	164	7	39	0	0	31	13	12	119
MAB	94	184	11	30	114	43	31	0	140	46
NEC	76	33	6	73	76	140	73	40	26	60
NED	0	98	63	116	84	0	37	55	8	41
SAR	0	18	20	14	5	14	3	2	0	3
NCA	2	0	0	1	0	0	0	0	0	0
TUN	0	0	0	0	0	8	1	0	1	2
TUS	0	0	0	0	0	0	0	0	0	0
Total	1,113	1,359	351	415	499	381	286	166	239	596
NED experimental fishery (2003)	79	-	-	-	-	-	-	-	-	-
Experimental fishery (2004-05; 2008-12)	-	3	17	-	-	4	4	2	1	2
Total	1,192	1,362	368	415	499	385	290	168	240	598

Sources: Garrison and Richards, 2004; Garrison, 2005; Walsh and Garrison, 2006; Fairfield-Walsh and Garrison, 2007; Fairfield and Garrison, 2008; Garrison et al, 2009; Garrison and Stokes, 2010, 2011, 2012, 2013.

Table 4.10 Estimated Sea Turtle and Marine Mammal Interactions and Incidental Take Levels (ITS) in the US Atlantic Pelagic Longline Fishery (by Species, 2003-2012)

Species	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	3 year ITS 2004-06 / 2007-09*
											Total
Leatherback	1,192	1,362	368	415	499	385	290	168	240	598	1,981 / 1,764
Loggerhead	820	734	283	559	543	771	243	344	438	681	1,869 / 1,905
Other/unidentified sea turtles	38	0	0	11	1	0	0	3	4	15	105 / 105
Marine mammals	300	164	372	313	151	265	144	237	452	413	N/A

* Applies to all subsequent 3-year ITS periods

Protected Species - Seabirds

Observer data indicate that seabird bycatch is low in the U.S. Atlantic PLL fishery (Table 4.11 and Table 4.12) (NMFS, 2012). In 2012, there were 122 active U.S. PLL vessels fishing for swordfish in the Atlantic Ocean, Gulf of Mexico, and Caribbean Sea that reportedly set approximately 7.7 million hooks. One seabird was observed taken, a laughing gull. This seabird was released dead. Extrapolated estimates of seabird bycatch from 2000 – 2007 were presented

in the 2011 SAFE Report. These estimates varied widely. Bycatch estimates ranged from 27 to 284 seabirds per year, averaging 62 per year. The rate of total seabird catch ranged from 0.005 to 0.036 birds per 1,000 hooks.

Table 4.11 Observed Seabird Bycatch in the U.S. Atlantic Pelagic Longline Fishery (2004-2012)

Year	Quarter	Area	Type of Bird	Number observed	Status
2004	1	MAB	Gull	5	dead
	3	MAB	Shearwater greater	1	alive
	3	MAB	Shearwater greater	4	dead
	4	NED	Seabird	1	dead
2005	1	SAB	Gull herring	1	dead
	1	SAB	Shearwater spp	1	dead
	3*	NEC	Shearwater greater	1	alive
	3*	NEC	Shearwater greater	1	dead
2006	4	MAB	Shearwater greater	1	dead
	4	NEC	Shearwater spp	1	alive
	4	NED	Shearwater greater	1	dead
2007	1	MAB	Gull blackbacked	6	dead
2008	2	GOM	Pelican brown	1	alive
2009	1	MAB	Northern gannet	2	alive
	1	MAB	Northern gannet	1	dead
	2	GOM	Brown pelican	1	dead
	3	MAB	Shearwater greater	3	dead
	3	MAB	Unid	1	dead
2010	4	MAB	Gull herring	1	dead
2011	3	NED	Northern gannet	1	dead
	3	NED	Unid	1	dead
	4	MAB	Herring gull	3	dead
	4	MAB	Unid gull	1	dead
	4	MAB	Greater shearwater	1	dead
2012	4	GOM	Laughing gull	1	dead

* Experimental fishery takes.

Source: NMFS Pelagic Observer Program.

Table 4.12 Status of Seabird Bycatch in the U.S. Atlantic Pelagic Longline Fishery (1992-2012)

Species	Release Status		Total	Percent Dead
	Dead	Alive		
Greater shearwater	29	3	32	90.6
Cory's shearwater	1	-	1	100.0
Unidentified shearwater	2	1	3	66.7
Herring gull	12	-	12	100.0
Great black-backed gull	9	1	10	90.0
Laughing gull	2	1	3	66.7
Unidentified gull	15	8	23	65.2
Northern gannet	3	9	12	25.0
Storm petrel	1	-	1	100.0
Unidentified seabird	41	19	60	68.3
Brown pelican	2	0	2	100.0
Total	117	42	159	73.6

Source: NMFS Pelagic Observer Program.

4.1.3 International Issues and Catch

Highly Migratory Species

The U.S. PLL fleet represents a small fraction of the international PLL fleet that competes on the high seas for catches of tunas and swordfish. In recent years, the proportion of U.S. PLL landings of HMS, for the fisheries in which the United States participates, has remained relatively stable in proportion to international landings. Historically, the U.S. fleet has accounted for less than 0.5 percent of the landings of swordfish and tuna from the Atlantic Ocean south of 5° N. Lat. and does not operate at all in the Mediterranean Sea. Tuna and swordfish landings by foreign fleets operating in the tropical Atlantic and Mediterranean are greater than the catches from the north Atlantic area where the U.S. fleet operates. Within the area where the U.S. longline fleet operates, U.S. longline landings still represent a limited fraction of total landings. In recent years (2003 - 2012), U.S. longline landings have averaged 5.0 percent of total Atlantic longline landings, ranging from a high of 6.8 percent in 2012 to a low of 4.2 percent in 2010. Table 4.13 contains aggregate longline landings of HMS, other than sharks, for all countries in the Atlantic for the period 2003 – 2012.

Table 4.13 Estimated International Longline Landings (mt ww) of HMS (Excluding Sharks) for All Countries in the Atlantic (2003-2012)

Species (Region)	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Swordfish (N. Atl + S. Atl)	22,663	24,205	24,765	24,778	26,806	22,343	23,703	23,179	22,905	23,365
Yellowfin tuna (W. Atl.) ²	10,166	16,019	14,449	14,249	13,557	13,192	12,660	13,078	10,521	13,108
Bigeye tuna	54,466	48,396	38,035	34,182	46,232	41,063	43,985	42,925	38,211	38,393
Bluefin tuna (W. Atl.) ²	186	644	425	565	420	606	366	529	743	478
Albacore tuna (N. Atl + S. Atl)	28,325	21,652	19,888	22,963	18,324	15,865	14,732	17,390	20,111	21,908
Skipjack tuna (W. Atl.) ²	95	206	207	286	52	49	20	30	41	470
Blue marlin (N. Atl. + S. Atl.) ³	1,786	1,461	1,595	1,357	2,042	2,000	1,839	1,983	1,490	1,182
White marlin (N. Atl. + S. Atl.) ³	646	685	594	374	554	532	558	363	336	373
Sailfish (W. Atl.) ⁴	878	754	1,065	651	838	1,038	975	662	704	717
Total International longline landings ⁶	119,311	114,022	101,023	99,405	108,825	96,688	98,838	100,139	95,062	99,994
Total U.S. longline landings ⁵	5,468	5,638	4,652	4,799	5,540	4,446	5,315	4,238	5,111	6,802
U.S. landings as a percent of total International landings	4.6	4.9	4.6	4.8	5.1	4.6	5.3	4.2	5.4	6.8

¹ Landings include those classified by the SCRS as longline landings. ² Note that the United States has not reported participation in the E. Atl yellowfin tuna fishery since 1983 and has not participated in the E. Atl bluefin or the E. Atl skipjack tuna fishery since 1982. ³ Includes U.S. dead discards and Brazilian live discards. ⁴ Includes U.S. dead discards. ⁵ From U.S. National Reports to ICCAT, 2004-2013. Includes swordfish, blue marlin, white marlin, and sailfish longline discards. ⁶ From SCRS, 2013.

Sources: U.S. ICCAT National Reports 2003 – 2013; SCRS, 2013.

Atlantic Sharks

Stock assessments and data collection for international shark fisheries have improved in recent years due to increased reporting requirements adopted by ICCAT. Since 2004, there have been several shark-related Recommendations and Resolutions (e.g., 04-10, 06-10, 07-06, 08-07, 08-08, 09-07, 10-06, 10-07, and 11-08, 12-05). Additionally, SCRS has assessed several species of sharks including blue, shortfin mako, and porbeagle sharks. For more information on ICCAT shark actions, see previous SAFE reports and the ICCAT webpage (<http://www.iccat.int/en/>). Table 4.14 provides the most recent catch totals for blue, shortfin mako, and porbeagle sharks.

Table 4.14 Estimated International Longline Landings (mt ww)¹ of Pelagic Sharks for All Countries in the Atlantic (2003-2012)

Species (Region)	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Blue shark (N. Atl + S. Atl + Med)	34,591	34,750	41,809	39,116	46,126	53,375	58,002	64,285	72,022	60,539
Shortfin mako (N. Atl + S. Atl + Med)	7,189	7,104	6,305	6,022	6,714	5,175	5,599	6,034	6,396	6,908
Porbeagle (N. Atl + S. Atl + Med)	647	745	572	508	525	611	484	137	89	188
Total International longline catches	42,427	42,599	48,686	45,646	53,365	59,161	64,085	70,456	78,507	67,635
U.S. blue shark catches ¹	0	72	68	47	55	138	107	176	271	162
U.S. shortfin mako catches ¹	142	521	469	386	382	354	385	394	392	429
U.S. porbeagle catches ¹	0	1	0	0	0	1	1	4	12	21
Total U.S. catches ¹	142	594	537	433	437	493	493	574	675	612
U.S. catches ¹ as a percent of total International catch	0.3	1.4	1.1	0.9	0.8	0.8	0.8	0.8	1.0	0.9

¹Includes catches and discards.

Source: SCRS, 2013.

4.2 Purse Seine

4.2.1 Current Management

Purse seine gear consists of a floated and weighted encircling net that is closed by means of a drawstring, known as a purseline, threaded through rings attached to the bottom of the net. The efficiency of this gear can be enhanced by the assistance of spotter planes used to locate schools of tuna. Once a school is spotted, the vessel, with the aid of a smaller skiff, intercepts and uses the large net to encircle it. Once encircled, the purseline is pulled, closing the bottom of the net and preventing escape. The net is hauled back onboard using a powerblock, and the tunas are removed and placed onboard the larger vessel. Economic and social aspects of the fisheries are described in Chapter 5 of this report. A brief history of the Atlantic purse seine fishery and regulations is available in Draft Amendment 7 to the 2006 Consolidated HMS FMP.

The bluefin tuna baseline percentage quota share for the Purse Seine category is 18.6 percent of the U.S. quota. The purse seine fishery is managed under a limited entry system with non-transferable individual vessel quotas (IVQs), excluding any new entrants into this category. Equal baseline quotas of bluefin tuna are assigned to individual vessels by regulation; the IVQ system is possible given the small pool of ownership in this sector of the fishery (i.e., five

qualified participants). The quotas are transferable among the five entities provided they notify NMFS in writing.

Vessels participating in the Atlantic tunas purse seine fishery are required to target the larger size class bluefin tuna, more specifically the giant size class (≥ 81 inches) and are granted a tolerance limit for large medium size class bluefin tuna (73 to < 81 inches) (i.e., large medium catch may not exceed 15 percent by weight of the total amount of giant bluefin tuna landed during a season). These vessels may commence fishing starting on July 15 of each year and may continue through December 31, provided the vessel has not fully attained its IVQ. Over the last few years, the Purse Seine category has not fully harvested its allocated bluefin tuna quota. In 2008, 2010, and 2011, the Purse Seine category did not harvest any Atlantic tunas (Table 4.15).

4.2.2 Recent Catch and Landings

Table 4.15 shows purse seine landings of Atlantic tunas from 2004 through 2012. Purse seine landings historically have made up approximately 20 percent of the total annual U.S. landings of bluefin tuna (about 25 percent of total commercial landings), but recently only account for a small percentage. In the 1980s and early 1990s, purse seine landings of yellowfin tuna were often over several hundred metric tons. Over 4,000 mt ww of yellowfin were recorded landed in 1985. Over the past 15 years, via informal agreements with other sectors of the tuna industry, the purse seine fleet has opted not to direct any effort on HMS other than bluefin tuna; therefore, Table 4.15 only includes bluefin tuna.

Table 4.15 Domestic Atlantic Tuna Landings (mt ww) for the Purse Seine Fishery in the Northwest Atlantic Fishing Area (2004-2012)

Species	2004	2005	2006	2007	2008	2009	2010	2011	2012
Bluefin tuna	31.8	178.3	3.6	27.9	0.0	11.4	0.0	0.0	1.7

Source: NMFS, 2013.

4.2.3 International Issues and Catch

The U.S. purse seine fleet has historically accounted for a small percentage of the total international Atlantic tuna landings. Table 4.16 shows that since 2004, the U.S. purse seine fishery has contributed to less than 0.10 percent of the total purse seine landings reported to ICCAT. In Recommendation 10-10, ICCAT established a minimum standard for scientific fishing vessel observer programs and adopted a minimum of 5% observer coverage of fishing effort in the purse seine fishery, as measured in number of sets or trips.

Table 4.16 Estimated International Atlantic Tuna Landings (mt ww) for the Purse Seine Fishery in the Atlantic and Mediterranean (2004-2012)

Tuna Species	2004	2005	2006	2007	2008	2009	2010	2011	2012
Bluefin	19,895	23,524	20,356	22,980	12,641	9,479	4,985	4,293	6,096
Yellowfin	62,228	61,410	62,761	52,733	70,047	77,757	74,172	69,802	70,716
Skipjack	93,284	89,704	71,215	81,335	73,080	84,494	125,467	149,307	157,666
Bigeye	18,417	18,595	16,457	17,553	15,536	22,658	23,769	27,544	21,469
Albacore	717	949	3,432	1,289	169	259	213	192	586
Total	194,541	194,182	174,221	175,890	171,473	194,659	228,606	251,138	256,533
U.S. total	32	178	4	28	0	11	0	0	2
U.S. percentage	0.02	0.09	< 0.01	0.02	0	< 0.01	0	0	< 0.01

Source: SCRS, 2013.

4.3 Commercial Handgear

4.3.1 Current Management

Commercial handgears, including handline, harpoon, rod and reel, buoy gear and bandit gear, are used to fish for Atlantic HMS on private vessels, charter vessels, and headboat vessels. Rod and reel gear may be deployed from a vessel that is anchored, drifting, or underway (trolling). In general, trolling consists of dragging baits or lures through, on top of, or even above the water's surface. While trolling, vessels often use outriggers to assist in spreading out or elevating baits or lures and to prevent fishing lines from tangling. Buoy gear is discussed in detail in Section 4.7.

The handgear fisheries for all HMS are typically most active during the summer and fall, although in the South Atlantic and Gulf of Mexico, fishing occurs during the winter months. Fishing usually takes place between eight and two hundred km from shore and for those vessels using bait, the baitfish typically includes herring, mackerel, whiting, mullet, menhaden, ballyhoo, butterfish, and squid. The commercial handgear fishery for bluefin tuna occurs mainly in New England, and more recently off the coast of southern Atlantic states, such as Virginia, North Carolina, and South Carolina, with vessels targeting large medium and giant bluefin tuna. Figure 4.5 shows bluefin tuna commercial landings, which are predominately handgear landings, in metric tons by geographic region (Gulf of Mexico, South Atlantic, Mid-Atlantic, and Northeast). The South Atlantic region ends at Cape Hatteras, and the Mid-Atlantic region ends at eastern Long Island (New York). Commercial landings declined from peak in 2001 until 2007, increased from 2007 through 2010, and decreased slightly in 2011, and remained at that level in 2012. Targeting bluefin tuna in the Gulf of Mexico is prohibited. The majority of U.S. commercial handgear fishing activities for bigeye, albacore, yellowfin, and skipjack tunas take place in the northwest Atlantic. Beyond these general patterns, the availability of Atlantic tunas at a specific location and time is highly dependent on environmental variables that fluctuate from year to year.

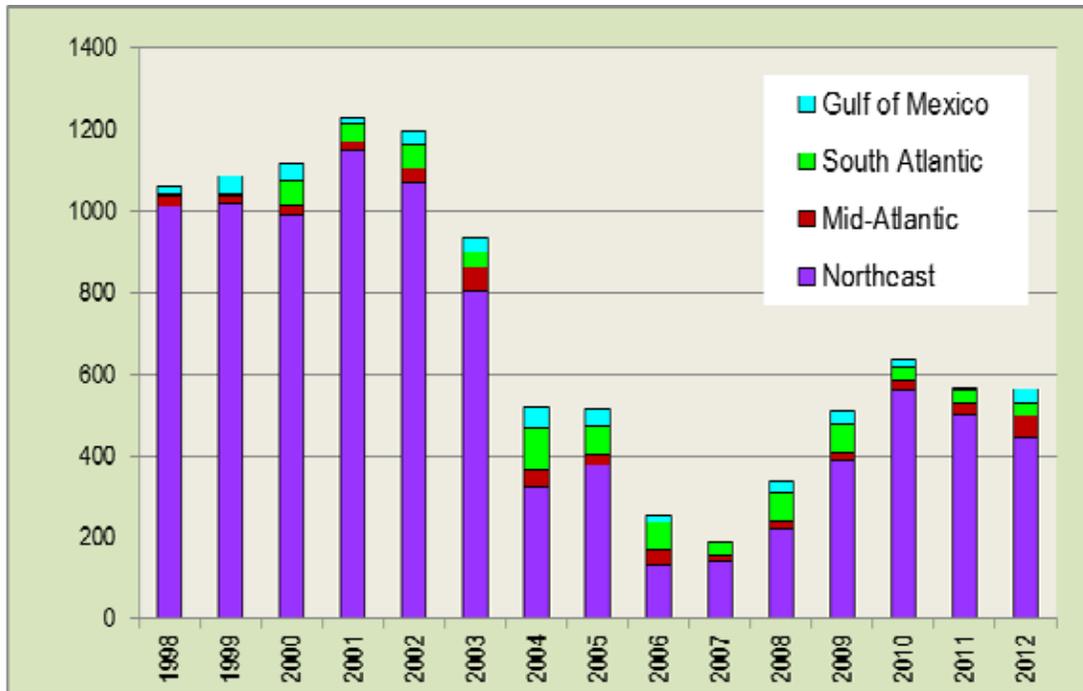


Figure 4.5 U.S. Atlantic and Gulf of Mexico Commercial Bluefin Tuna Landings by Geographic Area (1998 – 2012)

Source: NMFS Commercial BFT Landings Database.

The U.S. Atlantic tuna commercial handgear fisheries are currently managed through an open access vessel permit program. Vessels that wish to sell their Atlantic tunas must obtain a permit in one of the following categories: General (handgear including rod and reel, harpoon, handline, bandit gear, and green-stick), Harpoon (harpoon only), or Charter/Headboat (rod and reel, handline, bandit gear, and green-stick). These federally-permitted vessels may also need permits from the states they operate from in order to land and sell their catch, and are encouraged to check with their local state fish/natural resource management agency regarding these requirements. Federally-permitted vessels are required to sell Atlantic tunas only to federally-permitted Atlantic tunas dealers. Because the Atlantic tunas dealer permits are issued by the Northeast Region Permit Office, vessel owner/operators are encouraged to contact the permitting office directly, either by phone at (978) 281-9438 or online at <http://www.nero.noaa.gov/ro/doc/vesdata1.htm>, to obtain a list of permitted dealers in their area.

Vessels that are permitted in the General and Charter/Headboat categories fish commercially under the General category rules and regulations. For instance, vessels that possess either of the two permits mentioned above have the ability to retain an Agency-specified daily bag limit of one to five bluefin tuna (measuring 73 inches or greater curved fork length per vessel per day while the General category bluefin tuna fishery is open). The General category bluefin tuna fishery opens on January 1 of each year and remains open until either the General category quota allocation has been caught, or until March 31, whichever comes first. The fishery then reopens on June 1 and remains open until December 31 or until the quota is filled. Vessel owners/operators should check with the agency online (<http://www.hmspermits.com>) or via telephone information lines (888-872-8862) to verify the bluefin tuna retention limit on any

given day. In accordance with the fishery management plan, the General category receives approximately 47 percent of the U.S. bluefin tuna quota.

Vessels that are permitted in the Harpoon category fish under the Harpoon category rules and regulations. For instance, regarding bluefin tuna, vessels have the ability to keep four bluefin tuna measuring 73 inches to less than 81 inches curved fork length (“large medium”) per vessel trip per day while the fishery is open. There is no limit on the number of bluefin tuna that can be retained measuring longer than 81 inches curved fork length (“giant”), as long as the Harpoon category season is open. The Harpoon category season also opens on June 1 of each year and remains open until November 15, or until the quota is filled. The Harpoon category bluefin tuna quota is approximately 3.9 percent of the U.S. quota. A brief history of the harpoon fishery in the United States is available in Draft Amendment 7 to the 2006 Consolidated HMS FMP.

A commercial swordfish fishery utilizing handgear (especially buoy-gear) exists primarily off the east coast of Florida, but also occurs in other locations of the Atlantic, Gulf of Mexico, and U.S. Caribbean. For information regarding the commercial buoy gear fishery, refer to Section 4.7.

On August 21, 2013, NMFS established a new commercial fishing vessel permit (the Swordfish General Commercial permit) that allows permit holders to retain and sell a limited number of swordfish caught on rod and reel, handline, harpoon, green-stick, or bandit gear. The HMS Charter/Headboat permit regulations were also modified to allow for the commercial retention of swordfish on non-for-hire trips, and regional swordfish retention limits were implemented for the new and modified permits, along with gear authorizations, and reporting requirements. The new and modified permits became available in November 2013 for the 2014 fishing year.

The shark commercial handgear fishery plays a very minor role in contributing to the overall shark landing statistics. For information regarding the shark fishery, refer to Sections 4.5 and 4.6. Economic and social aspects of all the domestic handgear fisheries are described in Chapter 5.

4.3.2 Recent Catch and Landings

The proportion of domestic HMS landings harvested with handgear varies by species, with Atlantic tunas comprising the majority of commercial landings. Commercial handgear landings of all Atlantic HMS (other than sharks) in the United States are shown in Table 4.17. In 2012, bluefin tuna commercial handgear landings accounted for approximately 66 percent of the total U.S. bluefin tuna landings and 84 percent of commercial bluefin tuna landings. Figure 4.6 shows the U.S. Atlantic bluefin tuna landings in metric tons by category since 1997. Note that the commercial handgear landings are comprised of bluefin tuna landed by both the general and harpoon categories.

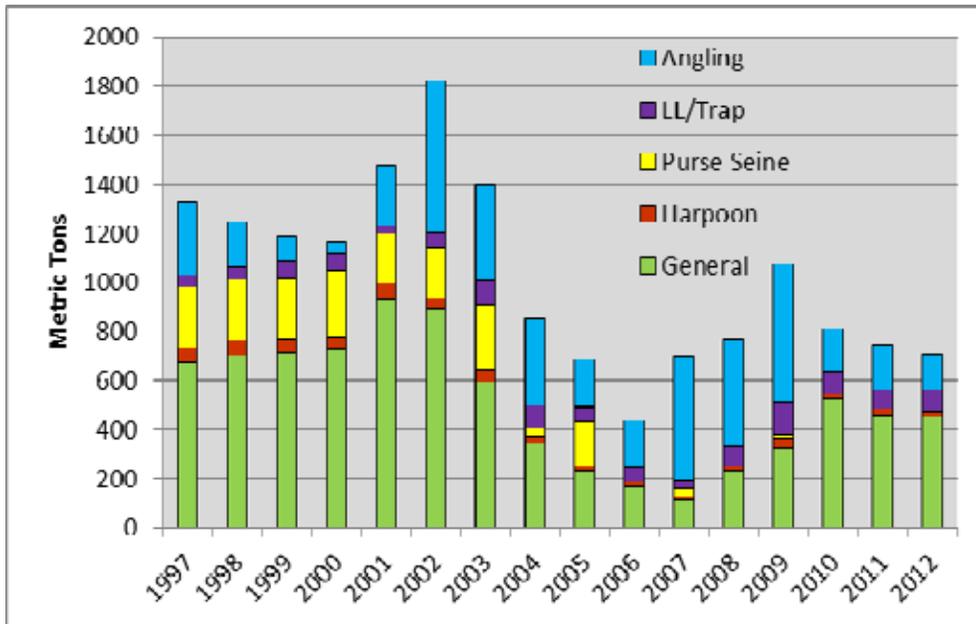


Figure 4.6 Landings of Bluefin Tuna by Category (1997 – 2012)

Source: NMFS Commercial BFT Landings Database.

Also in 2012, two percent of the total yellowfin catch, or three percent of the commercial yellowfin catch, was attributable to commercial handgear. Commercial handgear landings of skipjack tuna accounted for approximately two percent of total skipjack landings, or about 25 percent of commercial skipjack landings. For albacore, commercial handgear landings accounted for approximately less than one percent of total albacore landings, and less than one percent of commercial albacore landings. Commercial handgear landings of bigeye tuna accounted for approximately less than one percent of total bigeye landings and one percent of total commercial bigeye landings. Updated landings for the commercial handgear fisheries by gear and by area for 2004 – 2012 are presented in the following tables.

Table 4.17 U.S. Atlantic Commercial Handgear Landings of Tunas and Swordfish (mt ww) by Gear Type (2004-2012)

Species	Gear	2004	2005	2006	2007	2008	2009	2010	2011	2012
Bluefin tuna	Rod and Reel	353.2	226.6	164.1	120.8	226.6	301.7	515.1	418.6	419.5
	Handline	1.5	2.3	0.3	0.0	0.6	0.1	2.7	0.9	1.3
	Harpoon	41.2	31.5	30.3	22.5	30.2	65.6	29.0	70.1	52.3
	Total	395.9	260.4	194.7	143.3	257.4	367.4	546.8	489.6	473.1
Bigeye tuna	Troll	0.0	0.0	0.0	0.9	0.8	0.6	0.0	0.1	0.2
	Handline	3.5	6.3	21.5	16.8	6.6	4.6	1.8	3.4	7.8
	Total	3.5	6.3	21.5	17.7	7.4	5.2	1.8	3.5	8.0
Albacore tuna	Troll	0.0	0.0	0.0	0.2	0.2	0.07	0.04	0.0	0.0
	Handline	8.2	4.2	2.6	5.4	0.2	0.5	1.9	1.7	0.6
	Total	8.2	4.2	2.6	5.6	0.4	0.57	1.94	1.7	0.6
Yellowfin tuna	Troll	0.0	0.0	0.0	6.9	2.4	5.4	1.2	0.5	0.3
	Handline	248.5	160.3	105.1	113.2	30.1	58.7	43.5	34.0	66.0
	Total	248.5	160.3	105.1	120.1	32.5	64.1	44.7	34.5	66.3
Skipjack tuna	Troll	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Handline	10.4	11.8	0.2	0.3	0.4	2.8	1.2	1.5	2.0
	Total	10.4	11.8	0.2	0.3	0.4	2.8	1.2	1.5	2.0
Swordfish	Handline	22.7	34.7	32.5	125.2	83.2	123.0	126.9	120.4	154.2
	Harpoon	0.5	0.0	0.3	0.0	0.0	0.05	0.6	0.6	0.3
	Total	23.2	34.7	32.8	125.2	83.2	123.05	127.5	121.0	154.5

Source: NMFS, 2013.

Table 4.18 U.S. Atlantic Commercial Handgear Landings of Tunas and Swordfish (mt ww) by Region (2004-2012)

Species	Region	2004	2005	2006	2007	2008	2009	2010	2011	2012
Bluefin tuna	NW Atl	395.6	260.4	194.7	143.3	257.3	366.3	546.8	489.6	473.1
Bigeye tuna	NW Atl	3.3	6.2	21.5	16.8	6.9	4.6	2.5	3.4	8.0
	GOM	0.2	0.1	1.5	1.01	0.0	0.07	1.8	0.0	0.0
	Caribbean	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.0
Albacore tuna	NW Atl	6.1	3.0	2.6	5.4	0.2	0.5	1.9	0.7	0.6
	GOM	0.0	0.1	0.07	0.0	0.0	0.01	0.0	0.0	0.0
	Caribbean	2.1	1.1	0.4	0.2	0.4	0.003	0.05	0.1	0.4
Yellowfin tuna	NW Atl	213.2	105.1	105.1	113.2	30.1	58.7	43.5	33.1	66.3
	GOM	28.3	45.5	49.9	26.2	11.2	21.6	2.9	8.7	16.9
	Caribbean	7.0	9.7	7.8	9.1	3.7	3.3	1.9	1.5	2.8
Skipjack tuna	NW Atl	0.6	0.9	0.2	0.3	0.4	2.8	1.2	1.2	2.0
	GOM	0.2	0.0	0.0	0.2	0.06	0.2	0.02	0.2	0.06
	Caribbean	9.6	12.9	10.0	13.7	16.0	8.8	6.2	6.6	3.3
Swordfish	NW Atl	19.2	34.4	32.8	125.2	83.2	123.05	126.9	120.4	154.5
	GOM	4.0	0.3	0.1	0.2	1.2	1.9	2.6	0.5	3.3

Source: NMFS, 2013.

Handgear Trip Estimates

Table 4.19 displays the estimated number of rod and reel and handline trips targeting large pelagic species (e.g., tunas, billfishes, swordfish, sharks, wahoo, dolphin, and amberjack) from Maine through Virginia, in 2003 through 2012. The trips include commercial and recreational trips, and are not specific to any particular species. It should be noted that the 2012 estimates are preliminary and subject to change.

Table 4.19 Estimated Number of Rod and Reel and Handline Trips Targeting Atlantic Large Pelagic Species, by State (ME-VA, 2003-2012)

Year	AREA							Total
	NH/ME	MA	CT/RI	NY	NJ (North)	NJ (South) and MD/DE	VA	
Private Vessels								
2003	4,501	13,411	2,869	12,466	3,214	21,619	5,067	63,147
2004	2,025	10,033	3,491	11,525	3,632	22,433	4,406	57,545
2005	4,607	12,052	7,603	8,051	2,446	19,759	4,631	59,148
2006	3,303	24,951	5,430	11,114	3,043	19,187	5,274	72,302
2007	5,929	25,139	6,020	6,809	5,875	17,712	5,012	72,496
2008	3,873	19,157	3,546	7,587	3,099	15,807	3,081	56,150
2009	4,724	27,066	2,670	8,274	3,633	15,458	4,299	66,122
2010	6,102	19,679	2,276	6,737	3,898	12,493	2,591	53,776
2011	6,931	20,227	2,175	5,480	4,549	12,109	2,630	54,101
2012	8,408	19,096	6,189	6,425	5,447	13,682	2,445	61,692
Charter Vessels								
2003	221	2,561	1,246	2,035	1,331	5,201	546	13,141
2004	312	2,021	1,564	2,285	1,094	5,080	1,579	13,935
2005	329	2,397	551	2,033	1,024	3,476	763	10,573
2006	96	1,294	677	1,057	891	3,452	828	8,296
2007	789	4,073	1,141	1,445	1,420	4,579	610	14,057
2008	892	3,295	751	1,525	1,026	4,340	370	12,199
2009	568	4,930	726	1,677	1,142	3,348	534	12,923
2010	917	3,581	549	1,432	1,111	2,679	511	10,780
2011	1,318	4,339	322	2,019	1,279	3,685	774	13,736
2012	1,570	4,248	465	1,211	1,437	2,910	619	12,462

Source: Large Pelagics Survey.

4.4 Recreational Handgear

The following section describes the recreational portion of the handgear fishery with a primary focus on rod and reel fishing.

4.4.1 Current Management

Most Atlantic HMS are targeted by domestic recreational fishermen using a variety of handgear including rod and reel gear. Since 2003, recreational fishing for any HMS-managed species requires an HMS Angling permit (67 FR 77434, December 18, 2002), and all non-tournament recreational landings of Atlantic marlins, roundscale spearfish, sailfish, and swordfish must be reported. Additionally, all HMS fishing tournaments are required to register with NMFS at least four weeks prior to the commencement of tournament fishing activities. If selected, tournament operators are required to report the results of their tournament to the NMFS Southeast Fisheries Science Center. All billfish and swordfish tournaments are selected for

reporting. For more information on recreational HMS handgear fisheries, please see the 2006 Consolidated HMS FMP and the 2011 HMS SAFE Report.

4.4.2 Recent Catch, Landings, and Bycatch

The recreational landings database for Atlantic HMS consists of information obtained through surveys including the Marine Recreational Information Program (MRIP), Large Pelagics Survey (LPS), Southeast Headboat Survey (HBS), Texas Headboat Survey, Recreational Billfish Survey (RBS) tournament data, and the HMS Recreational Reporting Program (non-tournament swordfish, billfish, and bluefin tuna). Descriptions of these surveys, the geographic areas they include, and their limitations are discussed in the 2006 Consolidated HMS FMP and previous HMS SAFE Reports.

Updated landings for HMS recreational rod and reel fisheries are presented below in Table 4.20 from 2003 through 2012.

Table 4.20 Domestic Landings (mt ww)* for the Atlantic Tunas and Swordfish Recreational Rod and Reel Fishery (2003-2012)

Species	Region	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Bluefin tuna*	NW Atlantic	314.6	370.2	254.4	158.2	398.6	352.2	143.3	111.4	173.3	148.7
	GOM	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0
	Total	314.6	370.2	254.4	158.8	398.6	352.2	143.3	111.4	173.3	148.7
Bigeye tuna**	NW Atlantic	188.5	94.6	165.0	422.3	126.8	70.9	77.6	116.8	72.4	269.6
	GOM	0.0	6.0	0.0	24.3	0.0	0.0	0.0	0.8	34.9	0.1
	Caribbean	4.0	<0.1	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0
	Total	192.5	100.6	165.0	446.6	126.8	70.9	77.6	117.6	109.6	269.7
Albacore**	NW Atlantic	333.8	500.5	356.0	284.2	393.6	125.2	22.8	46.2	170.6	144.3
	Caribbean	0.0	0.0	0.0	0.0	0.0	0.0	0.0	103.4	0.0	0.7
	Total	333.8	500.5	356.0	284.2	393.6	125.2	22.8	149.6	170.6	145.0
Yellowfin tuna**	NW Atlantic	4,672.1	3,433.7	3,504.8	4,649.2	2,726.0	657.1	742.6	1,209.0	1,134	1,433
	GOM	640.0	247.1	146.9	258.4	227.6	366.3	264.7	18.0	362.8	294.1
	Caribbean	16.0	0.0	0.0	0.0	12.4	0.0	3.5	4.5	0.9	0.0
	Total	5,328.0	3,684.8	3,651.7	4,907.6	2,966.0	1,023.4	1,010.8	1,231.5	1,497.7	1,721.1
Skipjack tuna**	NW Atlantic	34.1	27.3	8.1	34.6	27.4	21.0	75.7	29.1	50.3	98.0
	GOM	11.1	6.3	3.1	6.4	23.9	16.3	22.0	15.5	23.7	2.5
	Caribbean	15.7	40.4	3.9	7.7	0.2	11.3	4.3	0.4	3.0	3.0
	Total	60.9	74.0	15.1	48.7	51.5	48.6	102.0	45.0	77.0	103.5
Swordfish	Total	6.1	25.2	61.2	52.7	68.2	75.7	31.6	49.3	53.6	70.8

* Rod and reel catch and landings estimates of bluefin tuna < 73 in curved fork length (CFL) based on statistical surveys of the U.S. recreational harvesting sector. Rod and reel catch of bluefin tuna > 73 in CFL are commercial and may also include a few metric tons of "trophy" bluefin (recreational bluefin ≥ 73 in). ** Rod and reel catches and landings for Atlantic tunas represent estimates of landings and dead discards based on statistical surveys of the U.S. recreational harvesting sector.

Sources: NMFS, 2005; NMFS, 2006; NMFS, 2007; NMFS, 2009; NMFS, 2010; NMFS, 2011; and NMFS, 2012.

Atlantic Billfish Recreational Fishery

Due to the rare nature of billfish encounters and the difficulty of monitoring landings outside of tournament events, reports of recreational billfish landings are sparse; however, the Recreational Billfish Survey (RBS) provides a preliminary source for analyzing recreational billfish tournament landings. Table 4.21 documents the number of billfish and swordfish reported to the RBS that were landed in tournaments from 2003 – 2013.

Table 4.21 Atlantic HMS Tournament Billfish Landings, in Numbers of Fish (2003-2012)

Species	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Blue marlin	96	110	64	72	46	44	35	18	27	42
White marlin	20	25	26	36	31	47	46	63	31	23
Roundscale spearfish	-	-	-	-	-	-	5	10	3	4
Sailfish	24	9	3	4	1	-	-	3	7	7
Swordfish	48	168	385	207	274	114	85	46	29	29

Source: Recreational Billfish Survey.

All recreational, non-tournament landings of billfish, including swordfish, are required to be reported to NMFS within 24 hours of landing by the permitted owner of the vessel landing the fish. This requirement is applicable to all permit holders, both private and charter/headboat vessels, not fishing in a tournament. In Maryland and North Carolina, vessel owners are required to report their billfish landings at state-operated landings stations. Table 4.22 provides a summary of non-tournament billfish and swordfish landings since 2004.

Table 4.22 Atlantic Recreational (Non-tournament) Billfish Landings, in Numbers of Fish (2004-2013)

Species	2004	2005	2006	2007	2008	2009	2010	2011	2012
Blue marlin	2	4	2	5	7	5	3	3	7
White marlin	0	1	1	4	4	6	5	6	1
Roundscale spearfish	-	-	-	-	-	-	-	0	0
Sailfish	35	61	58	101	143	140	185	166	159
Swordfish	290	388	549	716	369	389	285	318	386

Source: HMS Recreational Reporting Program.

Under ICCAT Recommendation 06-09 and as specified in § 635.27(d)(1), the recreational billfish fishery is limited to maximum of 250 Atlantic blue and white marlin landings, combined, per year. Table 4.23 provides landings estimates in numbers of fish for Atlantic blue and white marlin and roundscale spearfish. NMFS added roundscale spearfish to the Atlantic HMS management unit (75 FR 57698; September 22, 2010) due to a relatively recent taxonomic change and identification of the species as distinct from white marlin, and effective January 2011, annual landings of roundscale spearfish are included in the 250 marlin count.

Table 4.23 Atlantic Blue and White Marlin and Roundscale Spearfish Landings (in Numbers of Fish) vs. Domestic Landings Limit of 250 Fish

Species	2007	2008	2009	2010	2011	2012
White marlin	39	59	53	72	56	30
Blue marlin	59	58	44	28	43	63
Roundscale spearfish*	-	-	-	19	7	4
Total landings	98	117	97	119	106	97
Balance remaining (from 250 limit)	152	133	153	131	144	153

* Roundscale spearfish are included in the 250 fish domestic landings limit for Atlantic blue and white marlin. Roundscale spearfish landings are reported to ICCAT.

Sources: Recreational Billfish Survey, HMS Recreational Reporting System, the HMS Catch Card Programs in NC and MD, the Large Pelagics Survey, and the Marine Recreational Information Program.

Shark Recreational Fishery

Unlike billfish or bluefin tuna, shark landings are not required to be reported to NMFS unless an angler is required to participate in LPS or MRIP. However, as of 2013, in Maryland, vessel owners are required to report their shark landings at state-operated landings stations using catch cards. The following tables provide estimated landings for each of the three shark species groups: large coastal sharks (Table 4.24 and Table 4.25), pelagic sharks (Table 4.26), and small coastal sharks (Table 4.27 and Table 4.28).

Table 4.24 Estimated Recreational Harvest of Large Coastal Sharks in the Atlantic Region, in Number of Fish per Species (2008-2012)

Species	2008	2009	2010	2011	2012
Basking ²	0	0	0	0	0
Bignose ¹	0	0	0	0	0
Bigeye sand tiger ²	0	0	0	0	0
Blacktip	5,317	1,902	1,656	754	1,164
Bull	247	2	1	698	68
Caribbean reef ¹	0	0	0	0	0
Dusky ¹	1,501	506	4	23	15
Galapagos ¹	0	0	0	0	0
Hammerhead, great	3	5	0	0	37
Hammerhead, scalloped	1	569	13	179	4
Hammerhead, smooth	0	0	0	0	0
Hammerhead, unclassified	0	0	0	0	0
Lemon	1	291	0	14	0
Night ¹	0	0	0	0	0
Nurse	331	156	209	301	706
Sandbar ³	4,210	6,461	2,193	1,125	857
Sand tiger ²	1	0	0	0	0
Silky ³	0	208	13	0	232
Spinner	0	179	693	679	1,145
Tiger	4	4	2	1	2
Whale ²	0	0	0	0	0

White ²	0	0	0	0	0
Requiem shark, unclassified	11,541	8,794	2,966	4,949	6,069
Total	23,157	19,077	7,750	8,723	10,299

¹Prohibited in the recreational fishery as of July 1, 1999. ²Prohibited as of April 1997. ³Prohibited as of July 2008.

Source: Cortés pers. comm.

Table 4.25 Estimated Recreational Harvest of Large Coastal Sharks in the Gulf of Mexico Region, in Number of Fish per Species (2008-2012)

Species	2008	2009	2010	2011	2012
Basking ²	0	0	0	0	0
Bignose ¹	0	0	0	0	0
Bigeye sand tiger ²	0	0	0	0	0
Blacktip	9,283	12,600	23,781	16,083	22,530
Bull	964	6,957	260	581	2,415
Caribbean reef ¹	0	1	0	0	0
Dusky ¹	58	40	87	125	42
Galapagos ¹	0	0	0	0	0
Hammerhead, great	10	123	3	126	5
Hammerhead, scalloped	118	105	140	22	24
Hammerhead, smooth	0	0	0	0	0
Hammerhead, unclassified	0	0	0	0	0
Lemon	1,065	3	781	1,274	0
Night ¹	0	22	0	0	0
Nurse	14	729	25	1,098	2
Sandbar ³	211	701	883	200	46
Sand tiger ²	0	0	0	0	0
Silky ³	390	0	64	74	0
Spinner	3,111	2,461	6,040	1,694	4,975
Tiger	1	0	366	52	0
Whale ²	0	0	0	0	0
White ²	0	0	0	0	0
Requiem shark, unclassified	2,937	24,972	68,134	38,876	16,454
Total	18,162	48,714	100,564	60,205	46,493

¹Prohibited in the recreational fishery as of July 1, 1999. ²Prohibited as of April 1997. ³Prohibited as of July 2008.

Source: Cortés pers. comm.

Table 4.26 Estimated Recreational Harvest of Pelagic Sharks in the Atlantic and Gulf of Mexico, in Number of Fish per Species (2003-2012)

Species	2008	2009	2010	2011	2012
Bigeye thresher*	0	0	0	0	0
Bigeye sixgill*	0	0	0	0	0
Blue Shark	87	0	1,512	0	0
Mako, longfin*	0	0	0	0	0
Mako, shortfin	1,087	5,271	3,297	301	689
Mako, unclassified	0	0	0	396	14
Oceanic whitetip	0	0	0	0	0
Porbeagle	0	0	0	19	0
Sevengill*	0	0	0	0	0
Sixgill*	0	0	0	0	0
Thresher	798	3,422	214	0	0
Pelagic shark, unclassified	0	0	0	0	0
Total	1,972	8,693	5,023	716	703

*Prohibited in the recreational fishery as of July 1, 1999.

Source: Cortés, pers. comm.

Table 4.27 Estimated Recreational Harvest of Small Coastal Sharks in the Atlantic Region, in Number of Fish per Species (2008-2012)

Species	2008	2009	2010	2011	2012
Atlantic angel*	0	0	0	0	0
Blacknose	2	947	0	573	0
Bonnethead	12,225	8,009	10,073	8,598	9,798
Finetooth	1,347	0	239	0	0
Atlantic sharpnose	33,489	33,568	41,217	28,252	23,207
Caribbean sharpnose*	0	0	0	0	0
Smalltail*	0	0	0	0	0
Total	47,063	42,524	51,529	37,423	33,005

*Prohibited in the recreational fishery as of July 1, 1999.

Source: Cortés, pers. comm.

Table 4.28 Estimated Recreational Harvest of Small Coastal Sharks in the Gulf of Mexico Region, in Number of Fish per Species (2008-2012)

Species	2008	2009	2010	2011	2012
Atlantic angel*	0	0	0	0	0
Blacknose	2,468	5,276	1,463	1,533	2,638
Bonnethead	8,939	14,189	6,084	51,714	6,746
Finetooth	665	395	380	47	248
Atlantic sharpnose	38,927	31,237	29,494	19,072	40,302
Caribbean sharpnose*	0	0	0	0	0

Smalltail*	0	0	0	0	0
Total	50,999	51,097	37,421	72,366	49,934

*Prohibited in the recreational fishery as of July 1, 1999.

Source: Cortés, pers. comm.

Bycatch Issues

Bycatch in the recreational rod and reel fishery is difficult to quantify because many fishermen simply value the experience of fishing and may not be targeting a particular species. The 1999 Billfish Amendment established a catch-and-release fishery management program for the recreational Atlantic billfish fishery. As a result of this program, all Atlantic billfish that are released alive, regardless of size, are not considered bycatch. The recreational white shark fishery is by regulation a catch-and-release fishery only, and white sharks are not considered bycatch.

Bycatch can result in death or injury to discarded fish; therefore, bycatch mortality is incorporated into fish stock assessments, and into the evaluation of management measures. The number of kept and released fish reported or observed through the LPS dockside intercepts for 2002 – 2011 is presented in Table 4.29 and Table 4.30.

An outreach program to address bycatch and to educate anglers on the benefits of circle hooks has been implemented by NMFS. In January 2011, NMFS developed and released a brochure that provides guidelines on how to increase the survival of hook-and-line caught large pelagic species. This brochure is available at:

http://www.nmfs.noaa.gov/sfa/hms/Compliance_Guide/Careful_release_brochure.pdf

Table 4.29 Observed or Reported Number of HMS Kept in the Rod and Reel Fishery (ME-VA, 2003-2012)

Species	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
White marlin ²	12	6	5	8	4	13	8	9	17	5
Blue marlin ²	4	5	3	2	2	3	3	3	1	3
Sailfish ²	0	0	1	0	1	0	0	0	0	0
Swordfish	9	9	22	27	42	30	7	9	27	28
Giant bluefin tuna ³	58	50	48	15	15	20	46	54	51	65
Large medium bluefin tuna ³	11	13	12	1	5	11	0	36	28	23
Small medium bluefin tuna	83	30	22	48	69	48	205	11	14	21
Large school bluefin tuna	287	291	179	171	298	398	107	174	77	73
School bluefin	509	927	638	84	314	228	180	201	180	146
Young school bluefin	4	16	25	0	3	4	1	2	0	2
Bigeye tuna	21	46	32	35	59	55	58	36	66	97
Yellowfin tuna	3,216	3,858	3,700	3,572	2,988	1,029	1,886	1,906	3,474	3,296
Skipjack tuna	681	197	79	104	34	64	242	151	278	200
Albacore	546	1,458	835	542	934	168	67	154	550	358
Thresher shark	24	58	45	34	62	59	66	44	41	39
Mako shark	141	216	99	111	143	169	159	159	172	151
Sandbar shark	9	7	1	1	9	1	1	0	1	0
Dusky shark	1	0	0	3	6	1	0	1	0	0
Tiger shark	0	0	1	0	1	1	3	1	0	2
Porbeagle	0	1	1	1	0	0	0	2	2	2
Blacktip shark	1	0	1	1	0	-	-	0	0	0
Atlantic sharpnose shark	0	0	0	0	0	-	-	10	5	3
Blue shark	65	74	67	61	109	43	54	26	30	28
Hammerhead shark	0	1	0	0	0	1	0	0	0	0
Smooth hammerhead	0	0	0	0	0	1	0	0	0	0
Scalloped hammerhead	0	0	0	1	0	0	0	0	0	0
Unidentified hammerhead	0	0	0	0	0	0	0	0	0	0
Wahoo	68	110	112	85	190	172	69	111	63	206
Dolphin	4,209	3,050	6,366	3,921	2,536	5,739	3,317	6,063	4,935	3,055
King mackerel	66	11	376	170	82	67	14	14	3	3
Atlantic bonito	315	410	96	262	283	51	138	57	41	79
Little tunny	121	231	181	90	195	93	175	239	151	172
Amberjack	44	0	2	1	5	31	81	99	25	40
Spanish mackerel	35	9	4	1	2	67	9	8	24	146

¹NMFS typically expands these “raw” data to report discards of bluefin tuna by the rod and reel fishery to ICCAT. If sample sizes are large enough to make reasonable estimates for other species, NMFS may produce estimates for other species in future SAFE reports. ²Amendment 1 to the Atlantic Billfish FMP established billfish released in the recreational fishery as a “catch-and-release” program, thereby exempting these fish from bycatch considerations. ³Includes some commercial handgear landings.

Source: Large Pelagics Survey.

Table 4.30 Observed or Reported Number of HMS Released in the Rod and Reel Fishery (ME-VA, 2003-2012)

Species	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
White marlin ²	160	378	397	160	359	454	936	1,070	1,355	1,996
Blue marlin ²	39	80	52	42	69	69	60	86	106	137
Sailfish ²	6	2	6	3	1	6	69	11	11	61
Swordfish	21	22	23	52	40	45	13	15	27	12
Giant bluefin tuna ³	0	3	0	3	0	0	0	1	0	0
Large medium bluefin tuna ³	0	36	4	1	3	11	7	22	2	9
Small medium bluefin tuna	13	21	30	18	32	23	93	46	32	45
Large school bluefin tuna	40	107	141	85	99	286	77	172	53	64
School bluefin tuna ⁴	174	1,297	1,917	290	347	358	173	392	345	184
Young school bluefin tuna ⁴	10	1,885	282	117	83	55	52	68	44	21
Bigeye tuna	3	2	2	2	1	0	13	0	2	3
Yellowfin tuna ^{4, 5}	200	1,093	502	351	171	411	2,038	374	1,479	195
Skipjack tuna ⁴	526	362	105	129	17	217	610	188	479	325
Albacore tuna	31	66	67	41	40	14	5	10	84	25
Thresher shark ⁵	8	27	9	15	24	35	23	21	9	16
Mako shark	208	350	142	177	190	242	250	276	224	238
Sandbar shark	26	68	37	158	168	222	219	37	45	14
Dusky shark	44	60	49	73	87	128	152	116	84	76
Tiger shark	12	0	6	7	11	20	11	13	25	26
Porbeagle	3	1	6	8	2	2	6	11	31	18
Blacktip shark	0	1	19	9	31	-	-	34	10	346
Atlantic sharpnose shark	0	0	11	0	0	-	-	5	3	4
Blue shark ^{4, 5}	2,060	2,242	920	884	1,978	2,735	4,185	3,333	3,752	2,705
Hammerhead shark	38	2	5	0	0	0	0	0	1	2
Smooth hammerhead shark	0	0	0	1	2	0	1	1	3	3
Scalloped hammerhead shark	0	0	0	0	0	4	2	0	0	4
Unidentified hammerhead shark	0	0	0	11	14	27	31	32	10	30
Wahoo	3	5	7	6	9	4	4	6	2	5
Dolphin ⁵	677	192	375	394	227	372	222	344	380	192
King mackerel	5	1	7	20	3	5	5	1	0	0
Atlantic bonito ⁴	282	389	231	114	60	36	124	55	55	120
Little tunny	443	1,130	505	102	387	614	1,028	886	640	993
Amberjack	111	1	2	13	33	145	101	119	17	48
Spanish mackerel ⁴	1	0	0	0	2	37	1	8	0	0

¹NMFS typically expands these “raw” data to report discards of bluefin tuna by the rod and reel fishery to ICCAT. If sample sizes are large enough to make reasonable estimates for other species, NMFS may produce estimates for other species in future HMS SAFE Reports. ²Amendment 1 to the Atlantic Billfish FMP established billfish released in the recreational fishery as a “catch-and-release” program, thereby exempting these fish from bycatch considerations. ³Includes some commercial handgear landings. ⁴Includes dead releases in 2010. ⁵Includes dead releases in 2011.

Source: Large Pelagics Survey.

4.5 Bottom Longline

Bottom longline (BLL) gear is the primary commercial gear employed for targeting large coastal sharks (LCS) in all regions. Small coastal sharks (SCS) are also caught on BLL. Gear characteristics vary by region and target species, but in general, BLL consists of a longline between 3 and 8 km (1.8 – 5 miles) long with 200-400 hooks attached and is set for 2 and 20 hours. Depending on the species being targeted, both circle and J hooks are used. Fishermen targeting sharks with BLL gear are opportunistic and often maintain permits for council-managed fisheries such as reef fish, snapper/grouper, tilefish, and other teleosts. Minor modifications to how and where the gear is deployed allow fishermen to harvest sharks and teleosts on the same trip. Seasons, quota availability, market prices, and other factors influence decisions concerning whether or not to target sharks, teleosts, or both on a given trip. The gear typically consists of a heavy monofilament mainline with lighter weight monofilament gangions. Some fishermen may occasionally use a flexible 1/16 inch wire rope as gangion material or as a short leader above the hook (Hale et al., 2010).

4.5.1 Current Management

For a description of the history of bottom longline fishery management, please see the Amendment 5a to the 2006 Consolidated HMS FMP. Current commercial regulations include limited access vessel permits requirements, commercial quotas, vessel retention limits, a prohibition on landing 20 species of sharks (one of these species can be landed in the shark research fishery), numerous closed areas, gear restrictions, landing restrictions (including requiring all sharks be landed with fins naturally attached), fishing regions, vessel monitoring system requirements, dealer permits, and vessel and dealer reporting requirements.

NMFS is currently working on additional proposals to amend the 2006 Consolidated HMS FMP, including one amendment (Amendment 5b) that could change certain shark regulations based on recent stock assessments for dusky sharks. NMFS is also working on rulemakings to implement the 2011 Shark Conservation Act and Amendment 6 to the 2006 Consolidated HMS FMP, which looks at the shark fishery and its management as a whole.

4.5.2 Recent Catch, Landings, and Discards

This section provides information on shark landings, species composition, bycatch, and discards as reported in the shark BLL observer program. Since 2002, shark BLL vessels have been required to take an observer if selected. Participants in the shark research fishery are required to take an observer when targeting sandbar sharks. Outside the research fishery and depending on the time of year and fishing season, vessels that target sharks, possessed current valid directed shark permit, and reported fishing with longline gear in the previous year were randomly selected for coverage with a target coverage level of 2-3% for shark directed (Gulak et al., 2013).

In 2012, the BLL observer program selected 35 vessels with a total of 730 BLL hauls (defined as setting gear, soaking gear for some duration of time, and retrieving gear) were observed in a total of 110 trips (defined as from the time a vessel leaves the port until the vessel returns to port and lands catch, including multiple hauls therein). Gear characteristics of trips

varied by area (Gulf of Mexico or the U.S. Atlantic Ocean) and target species (grouper/snapper (reef fish), non-sandbar LCS, or sandbar shark) (Gulak et al., 2013). The data were grouped by targets into six groups: a) hauls targeting shallow water reef fish in the Gulf of Mexico (81% of reef fish targeted sets were shallower than 50 fathoms (< 91.4 m) depth), b) hauls targeting deep water reef fish in the Gulf of Mexico (19% of reef fish targeted sets were deeper than 50 fathoms (> 91.4 m) depth), c) hauls targeting tilefish in the Gulf of Mexico, d) hauls targeting non-sandbar LCS species in the Gulf of Mexico, e) hauls targeting non-sandbar LCS species in the U.S. Atlantic Ocean, and f) hauls targeting sandbar sharks in the Gulf of Mexico and U.S. Atlantic Ocean. No trips were observed in the northern U.S. Atlantic Ocean; therefore, subsequent references to the “U.S. Atlantic Ocean” refer to the coastal waters off the southern U.S. Atlantic states from North Carolina to Florida (Richards, 1999). In 2012, NMFS changed the regulations for vessels participating in the shark research fishery. Participants were allowed to harvest all non-prohibited species of sharks, including sandbar sharks. Fishermen were required to land all catch of shark species that were legal under a directed shark permit (including sandbar shark, which is otherwise prohibited) unless they could be released alive. The amount of catch was limited with gear restrictions and the fishery opened with one set of 150 hooks per trip. To reduce catch of prohibited dusky sharks, the set allowance was revised to two sets per research trip in May (one 75 hook ‘feeler’ set with a soak time of no more than two hours and one 150 hook set with no soak limit). In September, there was a further revision and the hook limits were doubled for each set. These vessels averaged 1 trip per month in 2012. Table 4.31, Table 4.32, Table 4.33, Table 4.34, Table 4.35, and Table 4.36 summarize the shark catch composition and disposition for observed BLL trips in 2012.

Table 4.31 Shark Species Caught on Observed Bottom Longline Trips Targeting Shallow Water Reef Fish in the Gulf of Mexico (2012)

Species	Total Number Caught	Percent Kept	Percent Discarded Dead	Percent Discarded Alive	Percent Disposition Unknown
Atlantic sharpnose shark	497	1.0	4.8	94.2	0.0
Blacknose shark	191	1.0	1.6	97.4	0.0
Sandbar shark	125	2.4	0.0	96.8	0.8
Tiger shark	69	0.0	4.3	94.2	1.4
Nurse shark	62	3.2	1.6	95.2	0.0
Silky shark	41	2.4	19.5	78.0	0.0
Smoothhound	38	0.0	10.5	89.5	0.0
Requiem shark family	36	0.0	0.0	91.7	8.3
Spinner shark	24	0.0	20.8	79.5	0.0
Houndsharks	23	0.0	0.0	100.0	0.0
Blacktip shark	15	0.0	6.7	93.3	0.0
Sharks	13	0.0	0.0	100.0	0.0
Bull shark	8	0.0	0.0	100.0	0.0
Hammerhead sharks	5	0.0	0.0	80.0	20.0
Scalloped hammerhead shark	4	0.0	0.0	100.0	0.0
Bonnethead shark	1	0.0	0.0	100.0	0.0
Total	1,152				

Source: Gulak et al., 2013.

Table 4.32 Shark Species Caught on Observed Bottom Longline Trips Targeting Deep Water Reef Fish in the Gulf of Mexico (2012)

Species	Total Number Caught	Percent Kept	Percent Discarded Dead	Percent Discarded Alive	Percent Disposition Unknown
Smoothhound	323	0.0	10.8	89.2	0.0
<i>Squalidae</i> family	177	2.9	1.1	96.0	0.0
Houndsharks	89	2.3	1.1	96.6	0.0
Atlantic sharpnose shark	79	0.0	39.2	60.8	0.0
Blacktip shark	19	0.0	0.0	100.0	0.0
Night shark	13	0.0	30.8	69.2	0.0
Cuban dogfish	11	0.0	9.1	90.9	0.0
Blacknose shark	8	0.0	50.0	50.0	0.0
Sandbar shark	8	0.0	12.5	75.0	12.5
Sixgill shark	8	0.0	12.5	87.5	0.0
Requiem shark family	7	0.0	0.0	100.0	0.0
Scalloped hammerhead shark	4	0.0	100.0	0.0	0.0
Sharks	3	0.0	33.3	33.4	33.3
Tiger shark	3	0.0	0.0	100.0	0.0
Silky shark	2	0.0	100.0	0.0	0.0
Bigeye sixgill shark	2	0.0	50.0	50.0	0.0
Hammerhead sharks	2	0.0	0.0	100.0	0.0
Bull shark	1	0.0	0.0	100.0	0.0
Sevengill shark	1	0.0	0.0	100.0	0.0
Total	760				

Source: Gulak et al., 2013.

Table 4.33 Shark Species Caught on Observed Bottom Longline Trips Targeting Tilefish in the Gulf of Mexico (2012)

Species	Total Number Caught	Percent Kept	Percent Discarded Dead	Percent Discarded Alive	Percent Disposition Unknown
Cuban dogfish	23	4.3	8.7	87.0	0.0
<i>Squalidae</i> family	23	4.3	8.7	87.0	0.0
Bigeye thresher shark	1	0.0	100.0	0.0	0.0
Shortfin mako shark	1	0.0	0.0	100.0	0.0
Houndsharks	1	0.0	0.0	100.0	0.0
Total	49				

Source: Gulak et al., 2013.

Table 4.34 Shark Species Caught on Observed Bottom Longline Trips Targeting Large Coastal Sharks in the Gulf of Mexico (2012)

Species	Total Number Caught	Percent Kept	Percent Discarded Dead	Percent Discarded Alive	Percent Disposition Unknown
Blacktip shark	515	95.5	4.3	0.0	0.2
Nurse shark	107	0.0	0.0	100.0	0.0
Blacknose shark	44	88.6	11.4	0.0	0.0
Tiger shark	30	23.3	6.7	63.3	6.7
Spinner shark	26	100.0	0.0	0.0	0.0
Sandbar shark	23	0.0	21.8	73.9	4.3
Lemon shark	23	82.6	0.0	0.0	17.4
Bull shark	22	100.0	0.0	0.0	0.0
Atlantic sharpnose shark	16	75.0	25.0	0.0	0.0
Great hammerhead shark	15	100.0	0.0	0.0	0.0
Dusky shark	8	12.5	12.5	50.0	25.0
Scalloped hammerhead shark	7	100.0	0.0	0.0	0.0
Finetooth shark	6	100.0	0.0	0.0	0.0
Silky shark	1	100.0	0.0	0.0	0.0
Blue shark	1	100.0	0.0	0.0	0.0
Total	844				

Source: Gulak et al., 2013.

Table 4.35 Shark Species Caught on Observed Bottom Longline Trips Targeting Large Coastal Sharks in the Atlantic Ocean (2012)

Species	Total Number Caught	Percent Kept	Percent Discarded Dead	Percent Discarded Alive	Percent Disposition Unknown
Atlantic sharpnose shark	443	95.7	4.1	0.2	0.0
Blacktip shark	347	95.2	3.5	0.0	0.3
Blacknose shark	102	92.2	7.8	0.0	0.0
Sandbar shark	80	0.0	35.0	65.0	0.0
Smoothhound	60	95.0	1.7	3.3	0.0
Lemon shark	35	91.4	0.0	8.6	0.0
Nurse shark	26	0.0	0.0	100.0	0.0
Bull shark	18	100.0	0.0	0.0	0.0
Tiger shark	16	75.0	0.0	25.0	0.0
Spinner shark	6	100.0	0.0	0.0	0.0
Sharks	4	0.0	100.0	0.0	0.0
Finetooth shark	2	100.0	0.0	0.0	0.0
Scalloped hammerhead shark	2	50.0	50.0	0.0	0.0
Dusky shark	1	0.0	0.0	100.0	0.0
Caribbean reef shark	1	100.0	0.0	0.0	0.0
Great hammerhead shark	1	100.0	0.0	0.0	0.0
Total	1,144				

Source: Gulak et al., 2013.

Table 4.36 Shark Species Caught on Observed Bottom Longline Trips Targeting Sandbar shark in the Gulf of Mexico and Atlantic Ocean (2012)

Species	Total Number Caught	Percent Kept	Percent Discarded Dead	Percent Discarded Alive	Percent Disposition Unknown
Sandbar	1,411	98.9	0.4	0.3	0.4
Atlantic sharpnose shark	316	81.3	14.9	3.8	0.0
Tiger shark	290	56.9	1.0	39.7	2.4
Dusky shark	252	0.0	93.3	15.9	0.8
Blacktip shark	180	99.4	0.0	0.0	0.6
Bull shark	103	94.2	0.0	0.0	5.8
Nurse shark	97	0.0	0.0	99.0	1.0
Scalloped hammerhead shark	77	85.7	7.8	6.5	0.0
Great hammerhead shark	45	91.1	2.2	6.7	0.0
Spinner shark	39	89.7	2.6	5.1	2.6
Sand tiger shark	29	0.0	0.0	100.0	0.0
Blacknose shark	27	81.5	7.4	7.4	3.7
Lemon shark	12	100.0	0.0	0.0	0.0
Sharks	8	0.0	62.5	0.0	37.5
Silky shark	7	57.1	28.6	14.3	0.0
Great white shark	3	0.0	66.7	33.3	0.0
Hammerhead sharks	2	0.0	50.0	0.0	50.0
Requiem shark family	1	0.0	0.0	0.0	100.0
Night shark	1	0.0	100.0	0.0	0.0
Smoothhound	1	0.0	100.0	0.0	0.0
Total	2,901				

Source: Gulak et al., 2013.

4.5.3 Bottom Longline Bycatch

For more detailed information on the fishery classification and requirements under the Marine Mammal Protection Act (MMPA; 16 U.S.C. 1361 *et seq.*) and the Endangered Species Act (ESA), please see the 2011 HMS SAFE Report. On December 12, 2012, NMFS released a Biological Opinion (BiOp) for shark fisheries, which stated that the proposed operation of the Atlantic shark fisheries (including authorized gear types) is not likely to jeopardize the continued existence of Atlantic sturgeon, smalltooth sawfish, or any species of ESA-listed large whale or sea turtles. NMFS has implemented the Reasonable and Prudent Measures and Terms and Conditions of the 2012 BiOp for all sharks except smoothhounds because smoothhounds have not yet been brought under federal management. We will implement the new requirements of the 2012 BiOp for smoothhounds when the regulations for that species are implemented.

Table 4.37 provides information on observed interactions with protected resources for BLL vessels targeting sharks in the Gulf of Mexico and Atlantic regions. In 2012, one smalltooth sawfish and 2 loggerhead seas turtles were observed on sets targeting sharks. No sea bird or marine mammal interactions were observed. No interactions with protected resources

(sea bird, sea turtle, sawfish, or marine mammal) were observed for BLL vessels fishing in the Gulf of Mexico and South Atlantic regions targeting LCS (Gulak et al., 2013).

Table 4.37 Protected Species Interactions Observed Bottom Longline Trips Targeting Sharks in the Gulf of Mexico and Atlantic Ocean (2007-2012)

Year	Sea Turtles	Sea Birds	Marine Mammals	Smalltooth Sawfish	Total
2007	4 (2A, 2D)	-	-	3 (2A, 1D)	7
2008	1 (A)	-	-	2 (A)	3
2009	2 (D)	-	-	5 (A)	7
2010	4 (2A, 2D)	-	-	10 (A)	14
2011	4 (1A, 3D)	-	-	2 (A)	6
2012	2 (A)	-	-	1 (D)	3
Total	17	0	0	23	40

Letters in parentheses indicate whether the animal was released alive (A), dead (D), or unknown (U).

4.6 Gillnet Fishery

Gillnet gear is the primary gear for vessels directing on small coastal sharks, although vessels directing on other species can also catch shark species. Vessels participating in the shark gillnet fishery typically possess permits for other Council and/or state managed fisheries and will deploy nets in several configurations based on target species including drift, strike, and sink gillnets.

4.6.1 Current Management

Many of the commercial regulations for the Atlantic shark fishery are the same for both the bottom longline and gillnet fishery, including, but not limited to: seasons, quotas, species complexes, permit requirements, authorized/prohibited species, and retention limits. Examples of regulations that are specific to shark gillnet fishing include: gillnet mesh size, requiring that gillnets remain attached to the vessel, and the need to conduct net checks every two hours when gear is deployed.

4.6.2 Recent Catch, Landings, and Discards

In 2012, a total of 316 sets comprising of various gillnet fisheries were observed. A total of 2 drift gillnet vessels were observed making 10 drift sets on 5 trips 2012. A total of 5 strike gillnet fishery vessels were observed making 6 strike sets on 6 trips in 2012. During the strike gillnet trips, only 2 blacktip sharks were observed on trips that targeted king mackerel in 2012. A total of 62 trips making 300 sink net sets on 18 vessels were observed in 2012. Table 4.38 through Table 4.41 of this section outline shark species composition, disposition, and summary information for sharks caught during observed in sink gillnet trips with observers onboard in 2012 (Mathers et al., 2013).

Table 4.38 Shark Species Caught on Observed Sink Gillnet Trips Targeting Spanish Mackerel (2012)

Species	Total Number Caught	Percent		
		Percent Kept	Discarded Alive	Discarded Dead
Atlantic sharpnose shark	537	42.6	47.1	10.2
Bonnethead shark	207	20.3	20.8	58.9
Spinner shark	50	44.0	56.0	0.0
Scalloped hammerhead shark	38	5.3	21.1	73.7
Smoothhound	29	69.0	31.0	0.0
Blacknose shark	6	50.0	0.0	50.0
Blacktip shark	2	0.0	50.0	50.0
Common thresher shark	1	100.0	0.0	0.0
Total	870			

Source: Mathers et al., 2013.

Table 4.39 Shark Species Caught on Observed Sink Gillnet Trips Targeting Smoothhound (2012)

Species	Total Number Caught	Percent		
		Percent Kept	Discarded Alive	Discarded Dead
Smoothhound	623	99.8	0.0	0.2
Atlantic sharpnose shark	28	100.0	0.0	0.0
Sandbar shark	27	3.7	96.3	0.0
Scalloped hammerhead shark	11	0.0	0.0	100.0
Atlantic angel shark	11	0.0	100.0	0.0
Common thresher shark	6	100.0	0.0	0.0
Sand tiger shark	3	0.0	33.3	66.7
Tiger shark	2	0.0	100.0	0.0
Spinner shark	1	0.0	0.0	100.0
Dusky shark	1	0.0	100.0	0.0
Total	713			

Source: Mathers et al., 2013.

Table 4.40 Shark Species Caught on Observed Sink Gillnet Trips Targeting Southern Kingfish (2012)

Species	Total Number Caught	Percent		
		Percent Kept	Discarded Alive	Discarded Dead
Spiny dogfish	38	0.0	76.3	23.7
Sandbar shark	3	0.0	100.0	0.0
Total	41			

Source: Mathers et al., 2013.

Table 4.41 Shark Species Caught on Observed Sink Gillnet Trips Targeting Mixed Teleost (2012)

Species	Total Number Caught	Percent		
		Percent Kept	Discarded Alive	Discarded Dead
Atlantic sharpnose shark	17	0.0	100.0	0.0
Smoothhound	16	43.8	50.0	6.3
Bonnethead shark	10	0.0	100.0	0.0
Spiny dogfish	6	0.0	83.3	16.7
Scalloped hammerhead shark	4	0.0	100.0	0.0
Sandbar shark	2	0.0	100.0	0.0
Total	418			

Source: Mathers et al., 2013.

4.6.3 Gillnet Bycatch

This section describes the non-shark bycatch observed in the southeast sink gillnet fishery during trips targeting sharks (Mathers et al., 2013).

There was a wider range of fish species caught in the sink gillnet fisheries due to the number of sets observed, gear deployment methods, and targeted species. Predominant species caught in sink gillnets included Atlantic croaker, Spanish mackerel, King mackerel, and Atlantic bumper. All of the observed interactions with protected species between 2000 and 2012 in the observed gillnet fisheries are on Table 4.42.

Sea Turtles

There was one leatherback sea turtle (*Dermochelys coriacea*) and one unidentified sea turtle observed caught in sink gillnet gear targeting Spanish mackerel in 2012. The both sea turtles were released alive (Mathers et al., 2013).

Sea Birds

There was one common loon (*Gavia immer*) observed caught and released dead in sink gillnet gear in 2012 (Mathers et al., 2013).

Marine Mammals

The MMPA Category II classification refers to occasional serious injuries and mortalities. In 2012, there were no marine mammals observed caught in gillnet gear in the shark fisheries (Mathers et al. 2013).

Smalltooth Sawfish

In 2012, there were no observed interactions with smalltooth sawfish in gillnet gear. The last observed interaction occurred in 2003 and the sawfish was released with no visible injuries. Given the high rate of observer coverage in for these gillnet fisheries consistent with Atlantic

Large Whale Take Reduction Team requirements, NMFS believes that smalltooth sawfish interactions in this fishery are rare.

Table 4.42 Protected Species Interactions in the Shark Gillnet Fishery Targeting Sharks Other than Smoothhounds (2007-2012)

Year	Sea Turtles	Sea Birds	Marine Mammals	Smalltooth Sawfish	Total
2007	4 (3A, 1D)	-	-	-	4
2008	-	-	-	-	0
2009	2 (A)	1 (A)	1 (D)	-	4
2010	-	1 (D)	-	-	1
2011	1 (A)	-	-	-	1
2012	2 (A)	-	-	-	2
Total	9	2	1	0	12

Letters in parentheses indicate whether the animal was released alive (A), dead (D), or unknown (U).

Table 4.43 Bycatch by Species on Observed Sink Gillnet Fishery Trips Targeting Smoothhounds (2012)

Common Name	Total Number Caught	Percent	
		Percent Kept	Percent Discarded Dead
Atlantic menhaden	49	4.1	95.9
Shads	31	35.5	64.5
Little tunny	5	100.0	0.0
Searobins	5	100.0	0.0
Cobia	5	100.0	0.0
Flounders	2	50.0	50.0
King mackerel	2	100.0	0.0
Sheepshead	1	100.0	0.0
Monkfish anglerfish	1	100.0	0.0
Atlantic croaker	1	0.0	100.0
Bluefish	1	100.0	0.0
Total	103		

Source: Mathers et al., 2013.

4.7 Buoy Gear

Buoy gear means a fishing gear consisting of one or more floatation devices supporting a single mainline to which no more than two hooks or gangions are attached. The buoy gear fishery is usually prosecuted at night. Authorized permit holders may not possess or deploy more than 35 floatation devices and may not deploy more than 35 individual buoy gears per vessel. Buoy gear must be constructed and deployed so that the hooks and/or gangions are attached to the vertical portion of the mainline. Floatation devices may be attached to one, but not both ends of the mainline, and no hooks or gangions may be attached to any floatation device

or horizontal portion of the mainline. If more than one floatation device is attached to a buoy gear, no hook or gangion may be attached to the mainline between them. Individual buoy gears may not be linked, clipped, or connected together in any way. Buoy gears must be released and retrieved by hand. All deployed buoy gear must have some type of monitoring equipment affixed to it including, but not limited to, radar reflectors, beeper devices, lights, or reflective tape. If only reflective tape is affixed, the vessel deploying the buoy gear must possess on board an operable spotlight capable of illuminating deployed floatation devices. If a gear monitoring device is positively buoyant, and rigged to be attached to a fishing gear, it is included in the 35 floatation device vessel limit and must be marked appropriately.

4.7.1 Recent Catch, Landings, and Discards

Buoy gear effort and catch data are available for 2007 through 2012 (Table 4.44, Table 4.45, and Table 4.46). Prior to 2007, buoy gear catch data were included in handline catch data.

Table 4.44 Buoy Gear Effort (2007-2012)

Specifications	2007	2008	2009	2010	2011	2012
Number of vessels	42	44	53	57	50	55
Number of trips	745	598	708	632	603	688
Average buoy gears deployed per trip	11.0	11.2	11.9	11.9	12.2	14.1
Total number of set hooks	11,742	8,922	11,595	8,855	8,858	11,639
Average number hooks per gear	1.4	1.3	1.4	1.2	1.2	1.2

Source: Fisheries Logbook System.

Table 4.45 Buoy Gear Landings (lb dw, 2007-2012)

Species	2007	2008	2009	2010	2011	2012
Swordfish	183,982	122,700	154,674	153,520	138,041	178,088
Dolphin	966	1,031	1,427	419	1,269	1,324
Oilfish	346	414	245	270	338	719
Shortfin mako shark	308	797	932	466	812	2,295
Wahoo	63	227	623	75	198	163
Bigeye tuna	150	0	0	0	350	0
Blacktip shark	9	0	0	0	0	38
King mackerel	0	194	67	576	142	56
Yellowfin tuna	0	0	350	0	400	0
Hammerhead shark	0	0	350	1,190	575	400
Silky shark	0	0	20	48	0	120
Greater amberjack	0	0	10	201	0	0
Bonito	0	0	86	120	0	54
Blackfin tuna	0	0	0	115	70	97

Source: Fisheries Logbook System.

Table 4.46 Buoy Gear Catches and Discards, in Numbers of Fish per Species (2007-2012)

Species	2007	2008	2009	2010	2011	2012
Kept						
Swordfish	2,849	1,843	2,085	1,950	1,893	2,699
Dolphin	63	103	113	29	121	196
Oilfish	7	10	5	10	76	13
Bigeye tuna	5	0	0	0	4	0
Blackfin tuna	3	7	2	7	3	10
Wahoo	2	6	44	2	40	12
Bonito	0	7	11	6	0	1
King mackerel	0	53	4	7	130	2
Shortfin mako	3	4	8	4	7	14
Hammerhead shark	1	0	1	6	3	3
Blacktip shark	1	0	0	0	0	1
Silky shark	0	1	1	1	0	4
Yellowfin tuna	0	0	9	0	8	0
Greater amberjack	0	0	1	7	0	0
Thresher shark	0	0	0	0	0	1
Released Alive						
Swordfish	1,559	1,018	763	1,031	1,659	1,221
Dolphin	0	0	0	0	11	14
Blue marlin	1	0	1	1	2	2
White marlin	0	3	0	0	0	0
Sailfish	2	1	0	1	1	0
Hammerhead shark	14	7	35	52	81	93
Blue shark	0	2	1	0	30	5
Thresher shark	0	1	1	2	7	6
Dusky shark	4	0	0	12	2	9
Night shark	16	1	34	39	87	238
Oceanic whitetip shark	0	1	0	0	0	0
Bigeye thresher shark	4	0	0	0	2	2
Tiger shark	1	2	1	1	2	2
Sandbar shark	1	0	1	2	0	0
Longfin mako shark	4	3	2	7	5	6
Shortfin mako shark	0	1	2	6	4	5
Blacktip shark	0	0	8	4	19	39
Silky shark	0	0	13	12	14	12
Oilfish	0	0	1	0	1	0
Greater amberjack	0	0	1	0	0	0
Blackfin Tuna	0	0	0	0	3	0
Skipjack Tuna	0	0	0	0	1	0
Discarded Dead						
Swordfish	129	80	51	87	155	139

Silky shark	9	0	0	0	0	0
Hammerhead shark	1	0	0	1	1	0
Blackfin tuna	0	0	1	0	1	0
Blue marlin	0	0	1	0	0	0
Night shark	0	0	0	1	0	1
Longfin mako shark	0	0	0	0	0	1
Shortfin Mako	0	0	0	0	1	0

Source: Fisheries Logbook System.

4.8 Green-Stick Gear

Green-stick gear is defined as “an actively trolled mainline attached to a vessel and elevated or suspended above the surface of the water with no more than 10 hooks or gangions attached to the mainline. The suspended line, attached gangions and/or hooks, and catch may be retrieved collectively by hand or mechanical means. Green-stick does not constitute a pelagic longline or a bottom longline as defined in this section or as described at §635.21(c) or §635.21(d), respectively.” Green-stick gear may be used to harvest bigeye, northern albacore, yellowfin, and skipjack tunas (collectively referred to as BAYS tunas) and bluefin tuna aboard Atlantic tunas General category, HMS Charter/Headboat, and Atlantic tunas Longline permitted vessels.

Onboard Atlantic tunas Longline permitted vessels, up to 20 J-hooks may be possessed for use with green-stick gear and no more than 10 J-hooks may be used with a single green-stick gear. J-hooks may not be used with PLL gear and no J-hooks may be possessed onboard a PLL vessel unless green-stick gear is also onboard. J-hooks possessed and used onboard PLL vessels may be no smaller than 1.5 inch (38.1 mm) when measured in a straight line over the longest distance from the eye to any other part of the hook.

4.8.1 Recent Catch and Landings

Recent Atlantic tuna catches are presented earlier in Chapter 4 (See Table 4.1). An unknown portion of these landings were made with green-stick gear as the gear has been used in the Atlantic tuna fisheries since the mid-1990s. Reporting mechanisms that are in place do not enable the number of vessels using green-stick gear to be quantified; although, limited data allow the catch to be characterized and were presented in the 2008 SAFE Report (NMFS, 2008). Data on landings specific to green-stick gear are expected to improve because a green-stick gear code was designated for use in dealer reporting systems such as trip tickets in the southeast and electronic reporting programs in the northeast. NMFS has, with some success, also encouraged states to utilize the green-stick gear code in their trip ticket programs. In 2009, the states of South Carolina, Louisiana, and Texas indicated that they would add a green-stick gear code to their trip ticket programs and Florida confirmed that the code has been added to their program. The HMS e-Dealer electronic reporting system is also anticipated to improve the available green-stick landings data.

NMFS and the Louisiana Department of Wildlife and Fisheries continue to investigate the catch and bycatch of green-stick gear with a study in the northern Gulf of Mexico that is

funded by the NOAA Bycatch Reduction Engineering Program. Sampling began in summer 2012 and is scheduled to continue through 2014 with a final report expected in late 2014.

4.9 Safety Issues

The following section highlights safety issues in fisheries. Specific information regarding safety issues and statistics may be obtained from the following two U.S. Coast Guard (USCG) web pages: (1) “Analysis of Fishing Vessel Casualties – A Review of Lost Fishing Vessels and Crew Fatalities 1992-2010”: http://www.fishsafe.info/FVStudy_92_10.pdf and (2) USCG Safety Program website: <http://www.uscgboating.org/default.aspx>. A summary of previous findings can be found in the 2011 HMS SAFE Report.

Beginning October 15, 2015, the USCG will require that all commercial fishing vessels that operate or transit more than 3 nautical miles off shore must be fully compliant with existing fishing vessel safety regulations. To meet this requirement, all commercial fishing vessels will be required to complete biennial dockside safety examinations. More information on the new requirement can be found at the USCG Commercial Fishing Safety website: <http://www.uscg.mil/d13/cfvs/>.

4.10 Fishery Data: Landings by Species

The following tables (Table 4.47 - Table 4.52) of Atlantic HMS landings are taken from the 2013 National Report of the United States to ICCAT (NMFS, 2013). The purpose of this section is to provide a summary of recent domestic landings of HMS by gear and species allowing for interannual comparisons. Landings for sharks (Table 4.53 - Table 4.57) were compiled from the most recent stock assessment documents and updates provided from the NMFS Southeast Fisheries Science Center.

Table 4.47 U.S. Landings (mt) of Atlantic Bluefin Tuna, by Area and Gear (2005-2012)

Area	Gear	2005	2006	2007	2008	2009	2010	2011	2012
NW Atlantic	Longline**	72.7	104.4	70.7	107.4	166.7	164.7	216.3	182.2
	Handline	2.3	0.3	0.0	0.6	0.1	2.7	0.9	1.3
	Purse seine	178.3	3.6	27.9	0.0	11.4	0.0	0.0	1.7
	Harpoon	31.5	30.3	22.5	30.2	65.6	29.0	70.1	52.3
	Rod and reel (>145 cm LJFL)*	170.4	217.2	235.4	305.7	717.1	570.8	-	-
	Rod and reel (<145 cm LJFL)*	254.4	158.2	398.6	352.2	143.3	111.4	-	-
	Unclassified	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0
	Commercial rod and reel	-	-	-	-	-	-	418.6	419.5
	Recreational rod and reel	-	-	-	-	-	-	173.4	148.7
	Trawl	-	-	0.0	0.0	0.0	0.0	0.4	0.0
Gulf of Mexico	Longline	118.5	88.1	81.2	111.7	111.6	56.2	13.2	105
	Rod and reel*	0.0	0.6	0.0	0.0	0.0	0.0	-	-
NC Area 94a	Longline	20.3	12.1	12.4	13.5	56.7	17.8	11.3	3.8
Caribbean	Longline	-	-	0.0	0.0	0.0	0.0	0.6	0.9
All areas	All gears	848.4	614.8	848.7	919.9	1,272.6	952.6	904.7	915.5

* Rod and reel catches and landings represent estimates of landings and dead discards when available based on statistical surveys of the U.S. recreational harvesting sector. ** Includes landings and estimated discards from scientific observer and logbook sampling programs.

Source: NMFS, 2013.

Table 4.48 U.S. Landings (mt) of Atlantic Yellowfin Tuna, by Area and Gear (2005-2012)

Area	Gear	2005	2006	2007	2008	2009	2010	2011	2012
NW Atlantic	Longline	394.2	701.7	757.8	460.5	416.4	673.4	684.1	882.1
	Rod and reel*	3,504.8	4,649.2	2,726.0	657.1	742.6	1,209.0	1,133.8	1,433
	Troll	0.0	0.0	6.9	2.4	5.4	1.2	0.5	0.3
	Gillnet	0.1	4.7	4.2	0.6	0.0	0.5	0.06	1.6
	Trawl	0.2	0.7	2.4	0.0	0.0	1.4	1.3	0.2
	Handline	105.1	105.1	113.2	30.1	58.7	43.5	34	66.0
	Trap	0.01	0.0	0.0	0.05	0.1	0.5	0.0	0.0
	Unclassified	3.8	3.9	7.0	1.4	2.2	9.5	4.2	4.4
Gulf of Mexico	Longline	1,210.9	1,128.5	1,379.5	756.5	1,147.0	303.2	642.1	1,254
	Rod and reel*	146.9	258.4	227.6	366.3	264.7	18.0	362.8	294.1
	Handline	45.5	49.9	26.2	11.2	21.6	2.9	8.7	16.9
	Gillnet	0.0	0.0	0.0	0.0	0.0	0.0	-	-
	Unclassified	0.3	0.0	0.0	0.0	0.0	0.0	0.1	8.7
Caribbean	Longline	140.6	179.7	255.6	107.1	136.7	212.2	132.1	141.9
	Handline	9.7	7.8	9.1	3.7	3.3	1.9	1.5	2.8
	Gillnet	**	0.0	0.0	0.04	0.04	0.0	0.0	0.0
	Trap	**	0.4	0.0	0.0	0.0	0.0	-	-
	Rod and reel*	5.5	0.0	12.4	9.7	3.5	4.5	0.9	0.0
NC Area 94a	Longline	0.5	0.0	1.8	0.4	0.0	0.0	0.0	3
SW Atlantic	Longline	0.0	0.0	0.0	0.0	0.0	28.7	-	-
All areas	All gears	5,568.1	7,090.0	5,529.5	2,407.2	2,802.3	2,481.7	3,010.4	4,109

* Rod and reel catches and landings represent estimates of landings and dead discards based on statistical surveys of the U.S. recreational harvesting sector. ** ≤ 0.05 mt.

Source: NMFS, 2013.

Table 4.49 U.S. Landings (mt) of Atlantic Skipjack Tuna, by Area and Gear (2005-2012)

Area	Gear	2005	2006	2007	2008	2009	2010	2011	2012
NW Atlantic	Longline	0.05	0.04	0.0	0.1	0.4	1.4	0.4	0.3
	Rod and reel*	8.1	34.6	27.4	21.0	75.7	29.1	50.3	98.0
	Gillnet	2.2	0.2	0.05	0.04	3.3	0.2	0.04	1.6
	Trawl	0.07	0.7	0.005	0.003	0.0	0.0	0.0	0.006
	Handline	0.9	0.2	0.3	0.4	2.8	1.2	1.5	2.0
	Trap	0.0	0.3	0.0	0.0	0.0	0.0	-	-
	Pound net	0.0	0.5	0.0	0.0	0.0	0.0	-	-
	Unclassified	0.01	0.06	0.6	0.5	1.2	0.1	0.8	0.6
Gulf of Mexico	Longline	0.3	0.0	0.0	0.05	0.05	0.0	0.2	0.0
	Rod and reel*	3.1	6.4	23.9	16.3	22.0	15.5	23.7	0.06
	Handline	0.02	0.0	0.2	0.06	0.2	0.02	0.2	2.5
Caribbean	Longline	0.2	0.2	0.02	1.3	0.05	0.0	0.0	0.1
	Gillnet	0.06	0.02	0.0	0.01	0.6	0.0	0.0	-
	Rod and reel*	3.9	7.7	0.2	11.3	4.3	0.4	3.0	3.0
	Handline	10.9	10.0	13.7	16.0	8.8	6.2	4.5	3.3
	Trap	0.1	0.05	0.0	0.0	0.0	0.0	-	1
All areas	All gears	29.9	61.0	66.5	67.1	119.4	54.2	86.7	111.5

* Rod and reel catches and landings represent estimates of landings and dead discards based on statistical surveys of the U.S. recreational harvesting sector.

Source: NMFS, 2013.

Table 4.50 U.S. Landings (mt) of Atlantic Bigeye Tuna, by Area and Gear (2005-2012)

Area	Gear	2005	2006	2007	2008	2009	2010	2011	2012
NW Atlantic	Longline	272.9	469.4	331.9	380.2	384.7	431.1	397.2	567
	Rod and reel*	165.0	422.3	126.8	70.9	77.6	116.8	72.4	269.6
	Troll	0.0	0.0	0.9	0.8	0.6	0.0	0.9	0.2
	Handline	6.2	21.5	16.8	6.9	4.6	1.8	3.4	7.8
	Trawl	0.6	0.0	0.4	0.0	0.0	0.7	1.2	0.2
	Unclassified	0.6	0.8	0.9	2.1	1.9	6.7	4.7	7.1
Gulf of Mexico	Longline	25.2	37.7	37.0	14.0	19.5	6.9	2.2	13.1
	Rod and reel*	0.0	24.3	0.0	0.0	0.0	0.8	34.9	0.1
	Handline	0.1	1.5	0.01	0.0	0.07	0.09	0.0	0.0
Caribbean	Longline	6.9	10.5	3.4	8.9	22.2	5.0	0.0	0.002
	Rod and reel*	-	-	0.0	0.0	0.0	0.0	2.3	0.0
	Handline	0.04	0.0	0.0	0.0	0.0	0.0	0.05	0.0
NC Area 94a	Longline	6.9	3.0	8.4	4.6	3.7	3.7	-	-
SW Atlantic	Longline	0.0	0.0	0.0	0.0	0.0	0.2	200.8	3.1
All areas	All gears	484.4	991.4	527.3	488.5	515.2	571.3	718.7	868.8

* Rod and reel catches and landings represent estimates of landings and dead discards based on statistical surveys of the U.S. recreational harvesting sector.

Source: NMFS, 2013.

Table 4.51 U.S. Landings (mt) of Atlantic Albacore Tuna, by Area and Gear (2005-2012)

Area	Gear	2005	2006	2007	2008	2009	2010	2011	2012
NW Atlantic	Longline	88.9	84.8	109.9	115.9	141.3	87.8	138.2	158.3
	Gillnet	6.0	2.1	1.0	2.1	5.6	0.5	0.2	5.7
	Handline	3.0	2.6	5.4	0.2	0.5	1.9	1.7	0.6
	Trawl	1.7	1.1	0.3	0.01	0.08	0.2	2.0	0.3
	Trap	-	0.5	0.4	0.005	0.01	0.01	0.0	0.0
	Troll	0.0	0.0	0.2	0.2	0.07	0.04	0.0	0.0
	Rod and reel*	356.0	284.2	393.6	125.2	22.8	46.2	170.6	144.3
	Unclassified	9.9	5.6	4.2	1.9	1.3	2.2	7.8	11.1
Gulf of Mexico	Longline	6.9	7.6	15.4	10.2	16.7	7.1	101.8	103.1
	Rod and reel*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
	Handline	0.1	0.07	0.0	0.0	0.01	0.01	0.1	0.4
Caribbean	Longline	12.1	10.5	1.2	0.4	0.3	0.7	**	**
	Gillnet	0.002	0.0	0.0	0.0	0.0	0.0	-	-
	Rod and reel*	-	0.0	0.0	0.0	0.0	103.6	**	**
	Trap	0.0	0.0	0.0	0.0	0.0	0.0	-	-
	Handline	1.1	0.4	0.2	0.4	0.003	0.05	**	**
NC Area 94a	Longline	0.6	0.03	0.3	0.8	0.3	0.6	-	-
SW Atlantic	Longline	0.0	0.0	0.0	0.0	0.0	0.0	-	-
All areas	All gears	488.0	399.5	532.1	256.7	188.8	314.5	422.4	424.5

* Rod and reel catches and landings represent estimates of landings and dead discards based on statistical surveys of the U.S. recreational harvesting sector. ** Caribbean landings included in Gulf of Mexico total.

Source: NMFS, 2013.

Table 4.52 U.S. Catches and Landings (mt) of Atlantic Swordfish, by Area and Gear (2005-2012)

Area	Gear	2005	2006	2007	2008	2009	2010	2011	2012
NW Atlantic	Longline*	1,096.2	1,165.2	1,649.6	1,622.5	1,696.0	1,647.7	1,741.8	2,009.2
	Gillnet	0.0	0.0	0.2	0.0	0.05	0.0	0.0	0.08
	Handline	34.4	32.5	125.2	83.2	123.0	126.9	120.4	154.2
	Trawl	8.2	3.5	6.5	7.6	23.7	21.2	17.9	26.8
	Unclassified	0.5	0.2	0.2	0.2	0.0	2.1	0.0	0.5
	Unclassified discards	4.2	5.1	5.5	4.1	3.0	3.6	5.8	3.6
	Harpoon	0.0	0.3	0.0	0.0	0.05	0.6	0.6	0.3
	Rod and reel**	53.1	50.6	65.9	56.7	19.0	47.6	48.7	64.3
	Trap	0.0	0.0	0.0	0.0	0.0	1.8	-	-
Gulf of Mexico	Longline*	480.9	328.1	457.7	361.6	476.1	212.3	363.6	673.3
	Handline	0.3	0.1	0.2	1.2	1.9	2.6	0.5	3.3
	Rod and reel**	1.5	2.1	2.3	19.0	12.6	1.7	4.9	6.3
	Unclassified	0.2	0.0	0.0	0.0	2.9	-	-	-
	Unclassified discards	3.9	2.7	5.5	4.6	3.5	1.3	2.5	6.8
Caribbean	Longline	143.5	88.9	27.8	57.9	22.6	41.4	14.2	3.7
	Trap*	0.0	0.0	0.0	0.0	-	-	-	-
	Rod and reel**	6.6	0.0	0.0	0.0	0.0	-	-	0.2
	Handline	0.0	0.0	0.0	0.0	0.003	0.0	0.0	0.0
	Unclassified discards	0.7	0.0	0.0	0.0	0.2	0.04	0.9	0.0
NC Atlantic	Longline*	552.2	378.6	338.9	311.6	496.4	304.8	451.3	698.3
SW Atlantic	Longline*	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
All areas	All gears	2,387.6	2,057.9	2,682.8	2,530.3	2,878.0	2,412.1	2,773.7	3,651.0

* Includes landings and estimated dead discards from scientific observer and logbook sampling programs. ** Rod and reel catches and landings represent estimates of landings and dead discards based on statistical surveys of the U.S. recreational harvesting sector.

Source: NMFS, 2013.

Table 4.53 Commercial Landings of Large Coastal Sharks in the Atlantic Region (lb dw, 2008-2012)

Large Coastal Sharks	2008	2009	2010	2011	2012
Basking ²	0	0	0	0	0
Bignose ¹	0	0	0	0	0
Bigeye sand tiger ²	0	0	0	0	0
Blacktip	258,035	229,267	246,617	176,136	215,403
Bull	43,200	61,396	56,901	49,927	24,504
Caribbean reef ¹	0	0	0	0	0
Dusky ¹	0	0	0	14	172
Galapagos ¹	0	0	0	0	0
Hammerhead, great	0	0	0	0	371
Hammerhead, scalloped	0	0	0	0	15,800
Hammerhead, smooth	0	4,025	7,802	110	3,967
Hammerhead, unclassified	21,631	62,825	43,345	35,618	9,617
Lemon	22,530	30,909	25,316	45,448	21,563
Narrowtooth ¹	0	0	0	0	0
Night ¹	0	0	0	0	0
Nurse	10	0	71	0	81
Sandbar	63,035	54,141	84,339	94,295	46,446
Sand tiger ²	0	0	18	20	66
Silky	306	1,386	1,049	992	29
Spinner	1,265	20,022	13,544	4,113	10,643
Tiger	14,119	15,172	43,145	36,425	23,245
Whale ²	0	0	0	0	0
White ²	117	0	0	0	0
Unclassified, assigned to large coastal	187,670	70,894	2,229	50,711	53,705
Unclassified LCS fins	26,707	33,173	20,545	21,535	15,370
Total, excluding fins	611,918	550,037	524,376	493,809	425,612
	(278 mt dw)	(249 mt dw)	(238 mt dw)	(224 mt dw)	(193 mt dw)

¹ Prohibited in the commercial fishery as of June 21, 2000. ² Prohibited as of April 1997.

Source: Cortés pers. comm.

Table 4.54 Commercial Landings of Large Coastal Sharks in the Gulf of Mexico Region (lb dw, 2008-2012)

Large Coastal Sharks	2008	2009	2010	2011	2012
Basking ²	0	0	0	0	0
Bignose ¹	0	0	0	0	109
Bigeye sand tiger ²	0	0	0	0	0
Blacktip	326,280	374,573	654,942	384,662	405,015
Bull	144,356	150,094	165,894	178,595	255,892
Caribbean reef ¹	0	0	0	0	0
Dusky ¹	0	0	0	0	0
Galapagos ¹	0	0	0	0	0
Hammerhead, great	156	1,430	6,339	49	99
Hammerhead, scalloped	0	0	0	0	33,216
Hammerhead, smooth	0	0	0	0	0
Hammerhead, unclassified	35,332	95,678	51,149	68,709	8,005
Lemon	30,897	54,984	21,081	38,132	29,362
Narrowtooth ¹	0	0	0	0	0
Night ¹	0	0	0	208	0
Nurse	48	147	0	27	11
Sandbar	26,740	113,717	54,914	46,040	23,854
Sand tiger ²	0	0	0	0	0
Silky	4,488	4,087	270	643	0
Spinner	122,395	17,028	78,951	66,996	49,647
Tiger	17,089	7,874	8,825	21,594	26,209
Whale ²	0	0	0	0	0
White ²	0	0	0	27	0
Unclassified, assigned to large coastal	131,724	163,320	0	169,651	188,566
Unclassified LCS fins	23,938	35,142	45,425	40,768	40,693
Total, excluding fins	839,505	982,932	1,042,365	975,333	1,019,985
	(381 mt dw)	(446 mt dw)	(473 mt dw)	(442 mt dw)	(463 mt dw)

¹ Prohibited in the commercial fishery as of June 21, 2000. ² Prohibited as of April 1997.

Source: Cortés pers. comm.

Table 4.55 Commercial Landings of Small Coastal Sharks in the Atlantic Region (lb dw, 2003-2010)

Small Coastal Sharks	2008	2009	2010	2011	2012
Atlantic angel*	91	0	96	11	171
Blacknose	117,197	90,023	30,287	28,373	37,873
Bonnethead	61,549	53,912	9,069	28,284	19,907
Finetooth	26,872	63,359	76,438	52,318	15,922
Sharpnose, Atlantic	261,788	262,508	211,190	214,382	345,625
Sharpnose, Caribbean*	0	0	0	0	0
Unclassified, assigned to small coastal	23,077	34,429	851	36,639	492
Unclassified SCS fins	0	0	0	0	0
Total, excluding fins	490,574 (223 mt dw)	504,231 (229 mt dw)	327,931 (149 mt dw)	360,007 (163 mt dw)	419,990 (191 mt dw)

*Prohibited in the commercial fishery as of June 21, 2000.

Source: Cortés pers. comm.

Table 4.56 Commercial Landings of Small Coastal Sharks in the Gulf of Mexico Region (lb dw, 2008-2012)

Small Coastal Sharks	2008	2009	2010	2011	2012
Atlantic angel*	0	0	0	0	0
Blacknose	17,058	61,682	4,204	3,900	14,379
Bonnethead	388	3,444	2,672	12,986	2,601
Finetooth	53,961	95,705	45,001	159,558	130,278
Sharpnose, Atlantic	77,861	43,217	17,958	53,723	100,253
Sharpnose, Caribbean*	0	0	0	0	0
Unclassified, assigned to small coastal	0	0	0	0	0
Unclassified SCS fins	0	0	0	0	0
Total, excluding fins	149,268 (68 mt dw)	204,048 (93 mt dw)	69,835 (32 mt dw)	230,167 (104 mt dw)	247,511 (112 mt dw)

*Prohibited in the commercial fishery as of June 21, 2000.

Source: Cortés pers. comm.

Table 4.57 Commercial landings of Atlantic Pelagic Sharks (lb dw, 2008-2012)

Pelagic Sharks	2008	2009	2010	2011	2012
Bigeye thresher*	0	0	28	135	276
Bigeye sixgill*	0	0	0	0	0
Blue shark	3,229	4,793	9,135	13,370	17,200
Mako, longfin*	1,896	25,264	289	3,465	362
Mako, shortfin	120,255	141,456	220,400	207,630	198,841
Mako, unclassified	39,661	9,383	0	0	0
Oceanic whitetip	1,899	933	796	2,435	258
Porbeagle	5,259	3,609	4,097	5,933	4,250
Sevengill*	0	0	0	0	0
Sixgill*	0	0	0	0	0
Thresher	47,528	33,333	61,290	47,462	63,965
Unclassified, assigned to pelagic	14,819	6,650	16,160	33,884	28,932
Unclassified pelagic fins	0	0	0	0	0
Total, excluding fins	234,546 (106 mt dw)	225,421 (102 mt dw)	312,195 (142 mt dw)	314,314 (143 mt dw)	314,084 (142 mt dw)

*Prohibited in the commercial fishery as of June 21, 2000.

Source: Cortés pers. comm.

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