

Predraft of

Amendment 8 to the 2006 Consolidated Atlantic Highly Migratory Species Fishery Management Plan: Swordfish Commercial Permit Concept

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1.0 INTRODUCTION

This document is the Predraft for the draft Environmental Assessment (EA) for Amendment 8 to the 2006 Consolidated Atlantic Highly Migratory Species (HMS) Fishery Management Plan (FMP). Amendment 8 to the Consolidated HMS FMP would consider the establishment and implementation of a new or modified commercial vessel permit(s) that would allow for a limited number of swordfish caught on rod and reel, handline, harpoon gear, green-stick, or bandit gear to be retained and sold commercially. This Predraft document is a non-compulsory, but valuable step in the Atlantic HMS fishery management plan amendment process. It allows the National Marine Fisheries Service (NMFS) to obtain additional information and input from interested stakeholders, fishery participants, state and federal government agencies, the general public, and consulting parties on potential alternatives, thereby allowing NMFS to refine preliminary management alternatives, as appropriate, prior to the development of a formal amendment and proposed rule. The formal Draft Amendment 8 to the Consolidated HMS FMP will be an integrated document that includes an EA, draft regulatory impact review, initial regulatory flexibility analysis, and draft social impact analysis.

NMFS, under the authority of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) and the Atlantic Tunas Convention Act (ATCA), manages the U.S. fishery for North and South Atlantic swordfish. Under ATCA, the United States is obligated to implement by regulation, as necessary and appropriate, recommendations of the International Commission for the Conservation of Atlantic Tunas (ICCAT). ICCAT is an inter-governmental fishery organization, currently consisting of 48 contracting parties, which is responsible for the conservation and management of tunas and tuna-like species (including swordfish) in the Atlantic Ocean and its adjacent seas. ICCAT meetings are held annually. In addition to being consistent with ICCAT recommendations, swordfish management measures must also comply with the Magnuson-Stevens Act, the Endangered Species Act (ESA), the Marine Mammal Protection Act (MMPA), the Administrative Procedures Act (APA), the Regulatory Flexibility Act (RFA), the National Environmental Policy Act (NEPA), and other domestic laws.

The Magnuson-Stevens Act requires NMFS to “consult with and consider the comments and views of affected Councils, commissioners and advisory groups appointed under Acts implementing relevant international fishery agreements pertaining to highly migratory species, and the [HMS] advisory panel (HMS AP) in preparing and implementing any fishery management plan or amendment.” As such, NMFS is requesting comments on this Predraft document for Amendment 8 to the 2006 Consolidated HMS FMP. An electronic version of the Predraft is also available on the website of the HMS Management Division at: <http://www.nmfs.noaa.gov/sfa/hms>. In addition, in accordance with NEPA as implemented by the Council on Environmental Quality (CEQ), NMFS is engaging in an early and open public process for determining the scope of issues related to the amendment that the public believes are significant.

On June 1, 2009 (74 FR 26174), NMFS published an Advance Notice of Proposed Rulemaking (ANPR) to inform the public and request comments concerning actions NMFS was considering to increase opportunities for U.S. fisheries to fully harvest U.S. swordfish quotas and continue to revitalize the swordfish fishery, while minimizing bycatch to the extent practicable. One of the

items contained in the ANPR was the potential establishment of a new commercial permit to harvest swordfish using handgear. The comment period for the ANPR ended on August 31, 2009. NMFS discussed the commercial swordfish permit and related concepts at the May and September 2010 HMS AP meetings. Additionally, on September 21, 2011, at the fall HMS AP meeting, NMFS staff gave a presentation on the concept of a Swordfish General Commercial Handgear permit and solicited public comment. Many of the comments received on the June 2009 ANPR, and before and during the September 2011 HMS AP meeting are considered in this Predraft document.

This Predraft includes a summary of the potential purpose and need, stock status, management history, and fishery description (Chapter 1) and tables summarizing the ecological, social, and economic impacts of management alternatives that NMFS is considering at this time (Chapter 2). NMFS does not select preferred alternatives at this stage; rather, the alternatives outlined in Chapter 2 may be modified, removed, or supplemented based on any comments received, additional analyses, and other factors, as appropriate. NMFS will provide a more detailed analysis describing the ecological, social, and economic impacts and select preferred alternatives in the proposed rule and draft EA.

NMFS specifically solicits opinions and advice from the HMS AP and consulting parties on the potential range of alternatives and whether there are additional alternatives that should be addressed, and on the impacts described for each alternative. Comments received on the June 1, 2009, ANPR relevant to the swordfish fishery are summarized in Appendix A. Any written comments on the Predraft should be submitted to Rick Pearson, HMS Management Division, F/SF1, Office of Sustainable Fisheries, 263 13th Avenue South, Saint Petersburg, FL 33701 or faxed to (727) 824-5398. For further information, contact Rick Pearson or Randy Blankinship at (727) 824-5399, or Mike Clark or Jennifer Cudney at (301) 427-8503.

1.1 Purpose and Need for Action

Several U.S. domestic management measures (e.g., gear requirements, time/area closures, other bycatch mitigation measures) and market factors have impacted the ability of the United States to fully harvest its ICCAT swordfish quota allocation. From 2007-2010, on average, the United States has caught approximately 70 percent of its base allocation of North Atlantic swordfish. Rollover allowances permitted half of the uncaught U.S. quota to be incorporated into the following year's quota from 2006 and 2010 (this was reduced to a 25 percent rollover allowance in a recommendation adopted at the 2011 ICCAT meeting). Several countries, including Canada and developing countries seeking to build capacity within their respective swordfish fisheries, have requested additional North Atlantic swordfish quota to be transferred from the U.S. allocation. Some ICCAT member countries do not fully employ fishing methods that reduce bycatch and consider the ecosystem impacts associated with harvesting North Atlantic swordfish. Therefore, a loss of U.S. quota to these countries has the potential to affect ecological gains resulting from actions that the United States commercial swordfish fleet has already adopted to reduce bycatch. ICCAT will reconsider North Atlantic swordfish quota allocations at its 2013 annual meeting; therefore, it may benefit the United States to take further action to more fully utilize its North Atlantic swordfish quota allocation before then. Efforts, such as those in this document, to expand commercial fishing opportunities using selective fishing gears that have

minimal bycatch and few discards would allow the United States to more fully utilize its quota allocation and, therefore, warrant further consideration.

In recent years, the North Atlantic swordfish stock has experienced significant growth due largely to ongoing domestic and international conservation measures designed to reduce mortality, protect juvenile swordfish, monitor international trade, reduce bycatch, and improve data collection. Several strong year classes in the late 1990s, and an overall reduction in catch since 1987, have supported the recovery of the North Atlantic swordfish stock. The most recent stock assessment, conducted in 2010, indicates that the North Atlantic swordfish population is considered fully rebuilt (“not overfished”) and that overfishing is no longer occurring. As a result of revitalization efforts and the increased availability of fish due to stock rebuilding, U.S. swordfish catch has increased by nearly 40 percent since 2006. As the swordfish stock has continued to rebuild, more fish have recruited to larger sizes. Therefore, fishing gears such as rod and reel, handline, bandit gear, and harpoon have become more economically viable. In addition, with a robust stock structure the mean size of landed U.S. swordfish is expected to increase.

Prior to, and since, the North Atlantic swordfish stock was declared rebuilt in 2010, NMFS has made significant efforts to restructure its fisheries and adjust regulatory constraints on its swordfish fishermen. There has been a recent re-emergence of interest in handgear fishing gears to fish commercially for swordfish including buoy gear, harpoon gear, and rod and reel, as well as a renewed interest in recreational fisheries for swordfish. These gears are “tended” and, when compared to other gears, are highly selective, have low bycatch interaction rates with protected species and marine mammals, and may have low post-release mortality rates on non-target species and undersized swordfish. The support and careful expansion of these handgear fisheries is essential to the United States’ intentions to make steady progress toward fully harvesting its swordfish allocation while minimizing bycatch.

The current Swordfish Handgear permit is a limited access permit (LAP), meaning that participants interested in entering the fishery must obtain a permit from an existing permit holder leaving the fishery. Anecdotal information suggests that prices for the Swordfish Handgear LAP have increased substantially in recent years, especially in the south Florida area, because of favorable market conditions for swordfish product and other factors. The fact that the current Swordfish Handgear permit is limited access, and is often difficult or expensive to obtain, presents a barrier to entry for many participants that are interested in participating in the swordfish commercial handgear fishery. Thus, one of the primary goals of this action would be to expand commercial fishing opportunities for selective fishing gears that have minimal bycatch or discard mortality in order for the United States to more fully utilize its swordfish quota allocation.

Based on the rebuilt status of North Atlantic swordfish, the interest in fishing gears that are lower in bycatch and bycatch mortality, and the need to more fully utilize the U.S. ICCAT swordfish quota allocation, NMFS has identified a need to provide additional fishing opportunities for North Atlantic swordfish. An amendment to the 2006 Consolidated HMS FMP could potentially implement management measures specific to the northwest Atlantic swordfish fishery. The purpose of this amendment would be to enact management measures to establish a new or modified commercial vessel permit(s) that would allow for a limited number of swordfish to be

caught on rod and reel, handline, harpoon, bandit gear, or green-stick gear and sold commercially. 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. Although rarely, if ever, used to target swordfish, it is being considered for authorization with any new swordfish permit in order to be consistent with the gears currently authorized for the Atlantic Tunas General category permit.

1.2 Stock Status and Biological Information

Stock Status and Outlook

The thresholds used to determine the status of Atlantic HMS are fully described in Chapter 3 of the 1999 FMP and Amendment 1 to the Billfish FMP, and are presented in Figure 1.1. These thresholds were incorporated into the 2006 Consolidated HMS FMP. These thresholds are based upon the thresholds described in a paper providing technical guidance for implementing National Standard 1 of the Magnuson-Stevens Act (Restrepo *et al.*, 1998).

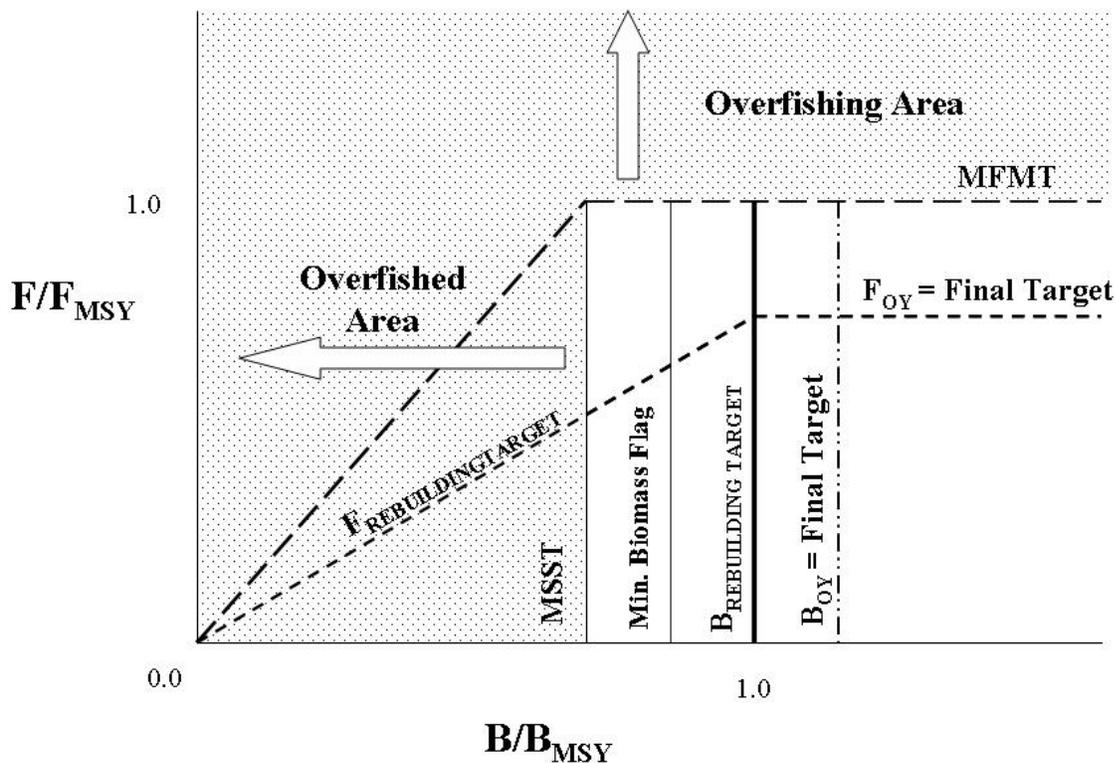


Figure 1.1 Illustration of the status determination criteria and rebuilding terms.

In summary, a species is considered overfished when the current biomass (B) is less than the minimum stock size threshold ($B < B_{MSST}$). The minimum stock size threshold ($MSST$) is determined based on the natural mortality of the stock and B_{MSY} . MSY is the maximum long-term average yield that can be produced by a stock on a continuing basis. The biomass can be lower than B_{MSY} , and the stock not be declared overfished as long as the biomass is above B_{MSST} .

Overfishing may be occurring on a species if the current fishing mortality (F) is greater than the fishing mortality at MSY (F_{MSY}) ($F > F_{MSY}$). In the case of F , the maximum fishing mortality threshold (MFMT) is F_{MSY} . Thus, if F exceeds F_{MSY} , the stock is experiencing overfishing.

If a species is declared overfished or has overfishing occurring, action to rebuild the stock and/or prevent further overfishing is required by law. A species is considered to be rebuilt when B is equal to or greater than B_{MSY} and F is less than F_{MSY} .

With the exception of most Atlantic sharks, stock assessments for Atlantic HMS (including North Atlantic swordfish) are conducted by ICCAT's Standing Committee on Research and Statistics (SCRS). All SCRS final stock assessment reports can be found at www.iccat.int/assess.htm.

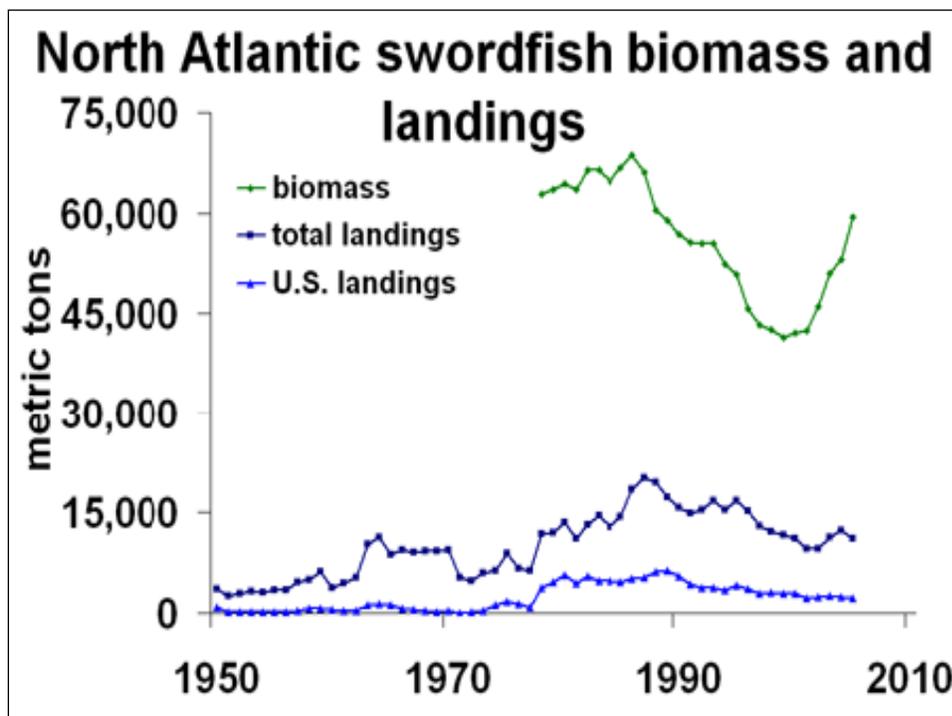


Figure 1.2 North Atlantic Swordfish Landings & Biomass, 1950-2007. (NMFS Fishwatch)

Figure 1.2 provides a graph of North Atlantic swordfish biomass and landings from 1950 – 2007. Recent trends in biomass suggest that the northwest Atlantic swordfish stock was at or near a measurable peak in the 1980s. Biomass declined between the mid-1980s and the mid-1990s, before starting to increase in the late 1990s and through the 2000s. Total northwest Atlantic swordfish landings have decreased from a peak in the late 1980s. U.S. northwest Atlantic swordfish landings have also decreased since a peak in the late 1980s.

The most recent SCRS stock assessment for North Atlantic swordfish was conducted in 2010, using data through 2008 (Table 1.1). Results for the base case production model indicate that the trend for estimated relative biomass shows a consistent increase since 2000, and that relative biomass is at or above B_{msy} (1.05, range = 0.94-1.24) (Table 1.1). Fishing mortality has been

below F_{msy} since 2005. The SCRS indicated that there is a greater than 50 percent probability that the stock is above B_{msy} , and thus ICCAT’s rebuilding objective has been achieved.

	2010 Assessment
Relative Biomass Level	$B_{2009}/B_{MSY} = 1.05(0.94-1.24)$
Relative Fishing Mortality Rate	$F_{08}/F_{MSY} = 0.76 (0.67 - 0.96)$ $F_{MSY} = 0.22 (0.14-0.27)$
Maximum Sustainable Yield	13,730 mt (13,020 – 14,182)
Current Yield	12,154 mt (2010)
<i>Outlook – Status of Stock</i>	<i>Stock rebuilt; not overfished, overfishing not occurring – NMFS 2011</i>

Table 1.1 Summary table for the status of North Atlantic swordfish based on 2010 stock assessment. Source: SCRS 2011.

Life History and Species Biology

Swordfish are one of the fastest and largest predators of the Atlantic Ocean, reaching maximum size at 530 kg. Swordfish are characterized by having dimorphic growth, where females show faster growth rates and attain larger sizes than males. Young swordfish grow very rapidly, reaching about 130 cm lower jaw fork length (LJFL) by age two and 140 cm LJFL by age three. Swordfish are difficult to age, but more than 50 percent of females are considered to be mature by age five, at a length of about 180 cm. (LJFL). Males are considered to be mature at 129 cm. (LJFL). Tagging studies indicate that swordfish can live up to 15 years. Known spawning areas are located in warm tropical and subtropical waters, where swordfish spawn throughout the year in different localized areas displaying a regular seasonal pattern (summer and fall months). Swordfish feed throughout the water column on a variety of prey items, including squids, pelagic fish, deep-water fish, and other invertebrates. Their diet varies geographically and seasonally (SCRS 2011).

Swordfish are widely distributed in the Atlantic Ocean and Mediterranean Sea. They range from Canada to Argentina in the western Atlantic, and from Norway to South Africa in the eastern Atlantic. The management units for assessment purposes are a separate Mediterranean group, and North and South Atlantic groups separated at 5° N. These management units are supported by genetic analyses, however, exact boundaries between stocks are unknown and mixing is expected between the North and South Atlantic stocks.

1.3 Management History and Description of the Fishery

Management History

Prior to 1990, the five Atlantic RFMCs (New England, Mid-Atlantic, South Atlantic, Gulf of Mexico, and Caribbean) had domestic authority to manage Atlantic HMS in their regions. In 1985, the first U.S. Atlantic Swordfish FMP was implemented by the Councils, which included reductions in the harvest of small swordfish, permitting and monitoring requirements, and scientific research. On November 28, 1990, the President of the United States signed into law the Fishery Conservation Amendments of 1990. This law amended the Magnuson Act and gave the Secretary of Commerce (Secretary) the authority to manage Atlantic tunas, swordfish, billfish, and sharks in the exclusive economic zone of the Atlantic Ocean, Gulf of Mexico, and Caribbean Sea (16 U.S.C. 1811 and 16 U.S.C. 1854(f)(3)). The Secretary subsequently delegated this authority to manage Atlantic HMS to NMFS. The HMS Management Division within NMFS develops regulations for HMS fisheries, although some actions (*e.g.*, Large Whale Take Reduction Plan) are taken by other NMFS offices if the primary legislation (*e.g.*, MMPA) driving the action is not the Magnuson-Stevens Act or ATCA.

NMFS manages Atlantic HMS at both the international and national levels because of the highly migratory nature of these species. In 1996, Congress amended the Magnuson Act with the Sustainable Fisheries Act, re-naming it the Magnuson-Stevens Act, to require that NMFS establish advisory panels (APs) to assist in the development of FMPs and FMP amendments for Atlantic HMS. As a result, NMFS established the HMS and Billfish APs and, in 1999, finalized and implemented the 1999 FMP for Atlantic Tunas, Swordfish, and Sharks (1999 FMP) and Amendment 1 to the Atlantic Billfish FMP. The 1999 FMP contained several important management measures to rebuild the swordfish stock including: 1) an annual swordfish quota; 2) limited access swordfish vessel permits and vessel upgrading restrictions; 3) swordfish dealer permits; 4) minimum size requirements; 5) a 1-month pelagic longline (PLL) closed area to reduce bluefin tuna dead discards; 6) observer and logbook reporting; 7) vessel monitoring systems (VMS) for PLL vessels; and, 8) tournament registration and tournament reporting requirements for tunas, swordfish, and sharks. Many of these requirements are currently still in effect.

Time-area closures have also been an important management tool for bycatch mitigation. To protect undersized swordfish, billfish, sharks, and protected species, several large time/area closures for PLL vessels were implemented in 2000 and 2001 which closed 132,670 square miles (343,610 square kilometers). Sea turtle bycatch measures included the closure of 2,631,000 square nautical miles (9,035,617 square kilometers) of high seas south of Newfoundland and Greenland, described as “the Northeast Distant Statistical Area,” to fishing by the U.S. PLL fleet. This area was reopened in 2004, with other conditional requirements for the PLL fishery (the use of 18/0 circle hooks, finfish baits, possession of sea turtle release tools, and adherence to careful sea turtle handling and release techniques).

Other management actions included a mandatory reporting system for all non-tournament recreational landings of swordfish (2003), and the establishment of an annual International Trade Permit (2005). In 2006, NMFS published the 2006 Consolidated HMS FMP, which combined the 1999 FMP, the Atlantic Billfish FMP, and their amendments, and also combined the two

separate APs into a single HMS AP. The 2006 Consolidated HMS FMP implemented mandatory protected species workshop certification requirements for longline vessels, implemented restrictions on HMS fisheries in two Gulf of Mexico FMC time-area closures (Madison-Swanson and Steamboat Lumps), and authorized buoy gear as a permissible gear type in the commercial swordfish handgear fishery.

In 2007, the United States modified PLL vessel upgrading requirements, increased incidental swordfish landing limits, and increased recreational landing limits to provide additional opportunities for U.S. vessels to harvest the allocated swordfish quota. These actions allowed for increased U.S. swordfish catches while continuing to minimize the bycatch of undersized swordfish and protected species. Other actions to revitalize the fishery include an increase in commercial and recreational swordfish retention limits in 2007, and the relaxation of permit conditions in 2008 that allowed certain PLL permits that had previously been expired to be renewed. The 2008 action helped to ensure that an adequate number of PLL permits would be available to fish for swordfish as the stock rebuilt.

International Management under ATCA/ICCAT

The operative ICCAT North Atlantic swordfish recommendation (11-02) is a two year measure (2012 and 2013) that maintains the overall TAC for North Atlantic swordfish at 13,700 mt (ww). The ICCAT SCRS indicated that if this overall TAC is maintained, the biomass of North Atlantic Swordfish will remain above B_{MSY} , with greater than 50 percent probability. The United States' quota of 3,907 mt (ww) was also maintained. The 2011 recommendation includes a 150 mt (ww) quota transfer from the United States to Morocco to support joint scientific research but discontinues the 25 mt (ww) quota transfer from the United States to Canada. ICCAT Contracting Parties and cooperating non-contracting parties (CPCs) that have an initial base quota allocation of less than 500 mt (ww) will be able to continue to carry forward up to 50 percent of their underharvest. However, those CPCs with base quota allocations greater than 500 mt (ww) may only carry forward 25 percent of their initial catch limit. The maximum underharvest that the United States can carry forward is 976.75 mt (ww). The provision allowing CPCs with a quota allocation to make a one-time transfer within a fishing year of up to 15 percent of its base quota allocation to other CPCs with quota allocations was maintained. ICCAT Recommendation 11-02 also extended the provision allowing the United States to harvest up to 200 mt (ww) of its quota allocation between 5 degrees North latitude and 5 degrees South latitude. Recommendation 11-02 maintains the requirement that CPCs shall submit an annual fishery development/management plan to ICCAT by September 15 of each year. Finally, an alternative minimum size standard for swordfish that have been dressed at sea is included in Recommendation 11-02. A cleithrum to keel (CK) measurement of 63 cm (25") can be applied as an alternative to the existing minimum sizes of 25 kg (ww) (55 lbs (ww))/125 cm (49") LJFL (allows a 15 percent tolerance for smaller fish) **or** 15 kg (ww) (33 lbs (ww)) /115 cm (45") LJFL (with no tolerance for smaller fish). The next stock assessment for North Atlantic swordfish is scheduled for 2013.

Description of the Fishery

The United States has a long history of fishing for swordfish. The commercial North Atlantic swordfish fishery began in the early 1800s as a harpoon fishery off the New England coast.

Sailing vessels used harpoons to capture swordfish on extended trips to the Hudson Canyon and Georges Bank during summer months. For more than 150 years, up until the 1960s, most U.S. commercial swordfish were captured using harpoons or handlines. A small U.S. recreational swordfish fishery developed in the 1920s using rod and reel and handline, primarily from Massachusetts to New York. As diesel engines came to replace sail, PLL gear eventually replaced harpoons as the primary commercial swordfish gear during the 1960s. The U.S. PLL fishery grew steadily during the 1960s and 1970s. At the same time, a recreational rod and reel fishery developed in Florida during the 1970s, and many towns along the Mid-Atlantic coast developed a tradition of holding annual swordfish tournaments, which contributed to tourism and local economies. As overall Atlantic swordfish effort increased in the 1980s, the commercial U.S. PLL fishery also expanded to the Grand Banks, Florida Keys, and the Gulf of Mexico.

Decreased swordfish stock abundance, natural and environmental disasters, market conditions, management regulations, and increased operating costs contributed to a generally declining trend in U.S. swordfish catches starting in 1990 with the lowest catches reported in 2006 (2,057 mt). The United States has since taken several important steps to address this issue as the North Atlantic swordfish stock continued to rebuild. In 2007, the United States modified PLL vessel upgrading requirements, increased incidental swordfish landing limits, and increased recreational landing limits to provide additional opportunities for U.S. vessels to harvest the allocated swordfish quota. These actions allowed for increased U.S. swordfish catches since 2007, while continuing to minimize the bycatch of undersized swordfish and protected species. From 2007-2010, on average, the United States has caught approximately 70 percent of its annual base quota allocation of North Atlantic swordfish.

As the swordfish stock has rebuilt, more fish have recruited to larger sizes and the range of fish captured on traditional handgears has expanded. Rod and reel and harpoon gears have recently become more economically viable again in more areas, including New England and the Gulf of Mexico. This is a very positive development that will help to facilitate a sustainable fishery and continue to produce high quality food for consumption. Efforts to expand commercial fishing opportunities using selective fishing gears that have minimal bycatch and discards would allow the United States to more fully utilize its swordfish quota allocation and therefore warrant further consideration.

Pelagic Longline Fishery

The PLL fishery for Atlantic HMS primarily targets swordfish, yellowfin tuna, and bigeye tuna in various areas and seasons. Secondary target species include dolphin fish, 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, it is generally a multi-species fishery. Swordfish sets are buoyed to the surface, have fewer hooks between floats, and are relatively shallow compared to tuna sets. 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). 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 prey species near the surface. The major U.S. swordfish fleets include 1) the South Atlantic-Florida east coast to Cape Hatteras swordfish fishery, which has been greatly affected by the Florida East Coast and Charleston Bump time/area closures; 2) the

Mid-Atlantic and New England swordfish and bigeye tuna fishery; 3) the U.S. distant water swordfish fishery (vessels fishing the Grand Banks and other high seas regions); and, 4) the Caribbean Islands tuna and swordfish fishery. The number of boats capturing swordfish steadily declined beginning in approximately 1995, with a slight increase since 2006 (Figure 1.3).

PLL is a heavily managed gear type and is strictly monitored due to the less selective nature of the fishery. In order to enforce gear-specific time/area closures, vessels fishing with PLL gear must regularly report positions through an approved vessel monitoring system (VMS). PLL vessels are also subject to restrictions on hook size and type, bait type, and approved bycatch handling and release gear, and must be regularly certified via workshops on protected species safe handling and release protocols. PLL fishermen and the dealers who purchase Atlantic HMS from them are also subject to reporting and observer requirements.

Number of Swordfish Vessels and Hooks Fished (1989 – 2010)

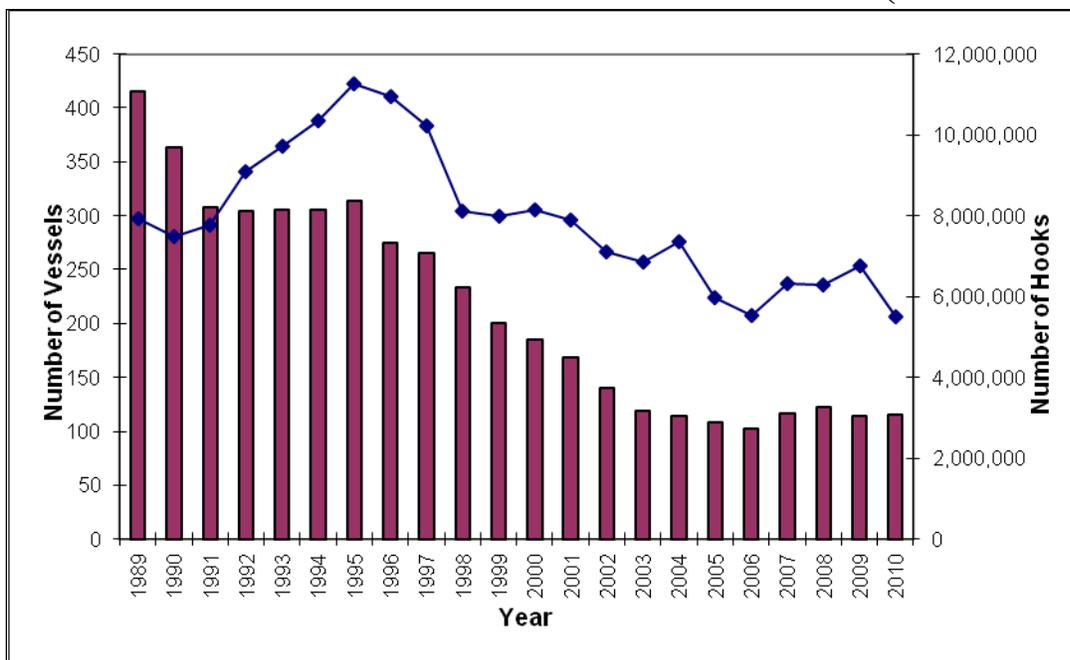


Figure 1.3. Number of Swordfish Vessels (*i.e.*, landed at least one swordfish) and Hooks Fished, 1989-2010. Source: 2011 U.S. ICCAT National Report.

Handgear Fishery

Handgear fisheries (commercial and recreational) for all HMS are typically most active during the summer and fall months, although fishing in the South Atlantic and Gulf of Mexico often occurs during the winter months. Fishing usually takes place between 8 – 200 km from shore and for those vessels using bait, the baitfish typically includes herring, mackerel, whiting, mullet, menhaden, ballyhoo, butterfish, and squid.

Protected species interactions for most handgears are governed under a Biological Opinion (BiOp) issued on June 14, 2001, entitled “Reinitiation of Consultation on the Atlantic Highly Migratory Species Fishery Management Plan and its Associated Fisheries.” The June 14, 2001

BiOp found that the continued operation of harpoon, hand gear, and rod and reel fisheries in the Atlantic Ocean may adversely affect but are not likely to jeopardize the continued existence of the right whale, humpback, fin, or sperm whales, or Kemp's ridley, green, loggerhead, hawksbill or leatherback sea turtles. NMFS has also previously determined for the proposed rule authorizing green-stick gear for the harvest of Atlantic tunas (73 FR 24924; May 6, 2008), that green-stick gear was not likely to adversely affect ESA-listed species (2008 Memorandum from Roy E. Crabtree, PhD, to Margo Schulze-Haugen). As indicated in the June 14, 2001 BiOp, since the potential for takes in these fisheries (*i.e.*, harpoon/handgear fisheries, hook & line, etc.) is low, NMFS anticipates that the continued operation of these fisheries would result in documented takes of no more than three sea turtles, of any species, in combination, per calendar year. Additionally, the Atlantic HMS hook and line/harpoon fishery and green-stick fishery are classified as Category III under the MMPA meaning that it has a remote likelihood of incidental mortality or serious injury to marine mammals.

Commercial

Handgear may currently be deployed to fish commercially for swordfish with any valid Swordfish LAP, other than an Incidental HMS Squid Trawl permit. These are: Directed LAP; Incidental LAP, and, Swordfish Handgear LAP. The deployment of buoy gear is only authorized for persons issued valid swordfish Directed or Handgear LAPs. As of October 2011, there were 178 Directed LAPs, 67 Incidental LAPs, and 78 Handgear LAPs. These permits are limited access, meaning that participants interested in entering the fishery must obtain a permit from an existing permit holder that is interested in getting out of the fishery. There are currently two HMS open access commercial handgear permits, but these are restricted to Atlantic tunas only. As of October 2011, there were 3,764 Atlantic Tunas General category permit holders, and 24 Atlantic Tunas Harpoon Category permit holders.

North Atlantic swordfish can only be taken commercially with handgear (bandit gear, handline, harpoon, rod & reel), buoy gear (Directed or Handgear permit holders only) or longline gear, except that a limited number of swordfish may be taken incidentally on a vessel issued an Incidental HMS Squid Trawl permit. Handgear and buoy gear have recently emerged (or re-emerged) as viable methods to fish commercially for swordfish in conjunction with recent increases in U.S. swordfish landings. The number of active Swordfish Handgear permits has increased substantially over the last decade, especially in southeastern Florida. Between 2004 and 2011, the number of Swordfish Handgear permits in Florida doubled from 20 to 49 permits.

The commercial Swordfish Handgear LAP and Directed LAP allow vessel operators to harvest swordfish using handgear (bandit gear, handline, harpoon, rod and reel), and/or buoy gear. The 2006 Consolidated HMS FMP authorized and defined buoy gear as 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 gear may be free-floating and is not required to be attached to, or in contact with, a vessel; however, it must be released and retrieved by hand. Vessels utilizing buoy gear are limited to possessing or deploying no more than 35 floatation devices. Fishermen must mark each floatation device with the vessel's name, registration number, or HMS permit number. Monitoring equipment such as radar reflectors, beeper devices, lights, or reflective tape must be attached. Individual buoy gears may not be attached to one another. The buoy gear

fishery is usually prosecuted at night. Since buoy gear was authorized in 2006, the U.S. buoy gear fishery has grown to about 25 active vessels, based primarily in southeastern Florida.

When the directed swordfish fishery is open, there is no retention limit for Directed and Handgear LAP holders. If the directed fishery is closed, Directed LAP holders can retain 15 swordfish per PLL trip, two swordfish per handgear trip, and no swordfish using harpoon.

Handgear and buoy gear have the benefit of low bycatch and bycatch mortality rates. The gears are authorized for use with the Swordfish Handgear LAP (harpoon, handline, rod and reel, and bandit gear), and buoy gear, are all considered Category III fishing gears by the MMPA, meaning that these gears would have a remote likelihood of serious injury or mortality to marine mammals. In the commercial fishing context, this gear type is not expected to cause serious injury or mortality of marine mammals as it does not have a high interaction rate with marine mammals. Furthermore, these gears have been determined to be unlikely to jeopardize the continued existence of any endangered or threatened species under the ESA.

Recreational

The recreational North Atlantic swordfish fishery declined dramatically from about 1980 through 1999, due to decreased stock abundance, but has grown rapidly since 2003 as stock abundance has increased off the east coast of Florida and in the Mid-Atlantic Bight. In the past, the New York recreational swordfish fishery occurred incidentally during overnight yellowfin tuna trips. During the day, fishermen targeted tunas, while at night they fished deeper for swordfish. This yellowfin tuna/swordfish fishery appears to have evolved into a year-round directed swordfish fishery off the east coast of Florida and a summer fishery off the coasts of New Jersey and New York. Swordfish have also been recreationally reported from Maryland, Virginia, Texas, Louisiana, South Carolina, and Rhode Island. The Florida fishery has primarily occurred at night with fishermen targeting swordfish while drift fishing with live or dead bait and using additional attractants such as lightsticks, LED lights, and light bars suspended under the boat. Notably, Florida recreational fishermen have recently begun targeting swordfish by fishing on the ocean bottom during the day in depths exceeding 1,600 ft. (“deep-dropping”). In general, swordfish captured by this method are larger than those captured during nighttime drift fishing. These fishermen use specialized gear including braided lines, high capacity reels (with electric or manual retrieve), heavy weights, and heavy duty rods.

Since 2003, recreational fishing for any HMS-managed species requires an HMS Angling permit (67 FR 77434, December 18, 2002) or an HMS Charter/Headboat (CHB) permit, and all non-tournament recreational landings of Atlantic marlins, sailfish, and swordfish must be reported. The recreational swordfish fishery is managed through the use of a minimum size limit (47” LJFL or 29” CK), trip-based retention limits, and landing requirements (swordfish may be headed and gutted but may not be cut into smaller pieces at sea). The recreational swordfish trip limits are: 1/person up to 4/vessel (HMS Angling permit); 1/paying passenger up to 6/vessel (CHB charter vessel); and 1/paying passenger up to 15/vessel (CHB headboat). As of October 2011, there were 4,194 HMS CHB permit holders and 23,138 HMS Angling permit holders.

2.0 RANGE OF POTENTIAL ALTERNATIVES

For this document, NMFS is considering three broad issues regarding a new swordfish commercial permit. The three issues are: 1) Vessel permitting and authorized gears; 2) Commercial catch reporting; and, 3) Swordfish retention limits. Each of these issues is examined in greater detail below. Additional or modified alternatives may be considered in the future based on HMS AP and consulting parties comment, additional analyses, and other factors, as appropriate.

2.1 Vessel Permitting and Authorized Gears

2.1.1 Description of the issue

The 1999 FMP established a LAP program for the commercial Atlantic swordfish, shark, and tuna longline fisheries to rationalize harvesting capacity with the available quotas and reduce latent effort while preventing further overcapitalization. To assist with enforcement and management of the program, permit restrictions were also placed on vessels fishing for Atlantic tunas with PLL gear. Implementation of the HMS LAP program has been ongoing since the implementation of the 1999 FMP and is executed via issuance of permits to eligible recipients in the commercial swordfish, shark, and tuna longline fisheries. Currently, eligible PLL vessels are required to obtain up to three separate LAPs to fish for, or retain, HMS including swordfish. There is also a separate Swordfish Handgear LAP that has been in place since 1999. Because no new swordfish permits have been issued since 1999, many HMS LAPs have increased in value. Since 2004, the number of Swordfish Handgear LAPs that has been issued has ranged from 75–96 per year. Limited availability and high LAP values may present a significant barrier to entry into the commercial swordfish handgear fishery.

Based upon discussions with the HMS AP and other constituents, NMFS believes that there is interest in potentially expanding access to the commercial swordfish fishery. As the swordfish stock has been declared rebuilt and more fish have recruited to larger sizes, rod and reel, handline, bandit gear, and harpoon gear have increasingly become more viable gears for commercial swordfish fishing over a larger geographic range. Additionally, these gears have the benefit of low bycatch and bycatch mortality rates. There is adequate swordfish quota available to expand access to the fishery. In 2010, the most recent year for which complete data are available, the United States landed approximately half of its baseline swordfish quota and 1/3 of its adjusted quota. For these reasons, NMFS is considering increasing commercial access to the swordfish resource either through the establishment of a new swordfish permit, or through modifications to existing permits.

Through this Predraft of Amendment 8 to 2006 Consolidated HMS FMP, NMFS intends to collect preliminary public comment on the establishment of a new Swordfish General Commercial permit, or the potential expansion of the Atlantic Tunas General category permit and Atlantic Tunas Harpoon category permit to include swordfish. Such an expansion of the Atlantic Tunas General category permit and Atlantic Tunas Harpoon category permit could allow for the retention of swordfish, thus converting the open access Atlantic Tunas General category permit to an Atlantic Tunas and Swordfish General category commercial permit, and the Atlantic Tunas Harpoon category permit to an Atlantic Tunas and Swordfish Harpoon category permit. A

new swordfish commercial permit could be implemented as either an open or limited access permit and could expand participation in the commercial swordfish rod and reel, handline, bandit gear, harpoon, and green-stick fishery. Green-stick gear is rarely, if ever, used to fish for swordfish. It is being considered for authorization with a new swordfish commercial permit to be consistent with the gears currently authorized for the Atlantic Tunas General category permit. NMFS specifically requests comments on all permit options.

One unique aspect of the current swordfish limited access fishery is the authorization of buoy gear. Buoy gear is authorized for swordfish fishing only, and may only be used aboard vessels issued a swordfish Handgear or Swordfish Directed LAP. The buoy gear fishery is currently limited in its geographic range, occurring primarily off the southeast coast of Florida. Due to a potentially large number of applicants for a new Swordfish General Commercial permit or a modified Atlantic Tunas General or Harpoon category permit, NMFS is currently not considering authorizing buoy gear for a new or modified permit in order to minimize the potential for gear conflict within the narrow geographic range of the current buoy gear fishery. NMFS specifically requests comments on whether buoy gear should be authorized under the new or revised commercial swordfish permit(s) that are being considered. If the Atlantic Tunas General category permit were modified to include swordfish and buoy gear were authorized for swordfish, it may also be necessary to consider authorizing buoy gear for tunas since there would be only one permit for both species.

Atlantic Tunas General category permit holders may currently participate in Atlantic HMS registered tournaments and, when fishing in an HMS tournament, may land billfish, swordfish, and sharks recreationally. Under a potential shift to a Swordfish General Commercial permit or a modified Atlantic Tunas General category permit, participation in HMS tournaments and landing of these species in tournaments could continue to be allowed, or it could be eliminated or modified. If it were eliminated, existing holders of the Atlantic Tunas General category permit who can currently participate in registered HMS tournaments could potentially lose that ability if they were to also obtain a Swordfish General Commercial permit and tournament participation was not allowed with that permit. If the Atlantic Tunas General category permit were modified to include swordfish, the current tournament allowance would likely need to be reconsidered. NMFS specifically requests comments as to whether an allowance for HMS tournament participation should be allowed for persons obtaining a new commercial swordfish permit or modified Atlantic Tunas General category permit that are being considered in this document.

Currently, the Atlantic Tunas General category permit only authorizes the commercial harvest of Atlantic tunas with handgear, and the Atlantic Tunas Harpoon category permit only authorizes the commercial harvest of Atlantic tunas with harpoon gear. Expanding those permits to include swordfish or creating a new separate permit to allow for the retention of swordfish with handgear could add flexibility for fishermen and fishery managers. The North Atlantic swordfish stock is fully rebuilt, overfishing is not occurring, and the ICCAT-recommended U.S. swordfish quota is currently underharvested. Therefore, a new or revised permit(s) would provide additional opportunities to harvest swordfish and help to achieve the domestic North Atlantic swordfish quota using gears with generally low bycatch. The LAP system for swordfish was established when swordfish were overfished and overfishing was occurring. The costs and requirements for obtaining existing Swordfish LAPs are significant. If proposed and adopted, a new or revised

swordfish commercial permit(s) would provide a unique opportunity for U.S. fishermen to enter the domestic commercial swordfish fishery that has not been available since 1999.

A list of alternatives considered for vessel permitting and their associated impacts can be seen in Table 2.1. All of these permit alternatives would only authorize the use of rod and reel, handline, bandit gear, green-stick, and harpoon gear. These alternatives are organized from least restrictive to most restrictive, with the exception of the no action alternative.

2.1.2 Potential alternatives for management

Table 2.1 Issue 1 - List of alternatives considered for vessel permitting.

Alternative	Ecological Impacts	Social/Economic Impacts
<p>Alternative 1.1 - Maintain current swordfish LAP program and do not establish a new or revised swordfish commercial permit(s) (No Action)</p>	<p>- No change in impacts on target species, non-target species, protected resources, and Essential Fish Habitat (EFH)</p> <p>-Possibility exists for some long-term negative ecological impacts if U.S. swordfish quota allocation were distributed to other ICCAT CPCs without a requirement that the CPC adopt comparable bycatch controls on their fisheries</p>	<p>- No alternative to the existing swordfish LAP program would be provided, thus entry into the commercial swordfish fishery would remain difficult due to high LAP costs and scarcity</p> <p>- Loss of potential income by fishermen that want to commercially fish for swordfish but can't afford entry</p> <p>-United States may not attain its full ICCAT swordfish quota allocation with associated foregone revenues</p>

Alternative	Ecological Impacts	Social/Economic Impacts
<p>Alternative 1.2 - Establish an open-access commercial swordfish permit that would authorize rod & reel, handline, bandit gear, harpoon, and green-stick gear (same gears authorized for Atlantic Tunas General category permit)</p>	<ul style="list-style-type: none"> - Could cause an increase in rod & reel, handline, bandit gear, green-stick, and harpoon commercial fishing effort if previously inactive fishermen obtain the new permit and begin fishing for swordfish - Could provide for additional U.S. harvest of swordfish (a species that is fully rebuilt and the U.S. quota has been underharvested in recent years) thus potentially protecting U.S. quota from transfer to countries with fewer bycatch controls - Could cause a minor increase in swordfish discards and discard mortality if fishing effort increases substantially in areas with large concentrations of juvenile swordfish, thereby resulting in minor negative ecological impacts - Minimal negative impacts on protected resources because handgear and green-stick are Category III MMPA fishery and 2001 BiOp indicates minimal impacts on sea turtles - Minimal ecological impacts on EFH anticipated because handgear rarely interacts with bottom substrate 	<ul style="list-style-type: none"> - Would provide an alternative to the existing swordfish LAP program, thus removing economic barriers for some fishermen to begin commercially fishing for swordfish which would result in positive economic impacts - May economically benefit some fishermen by providing additional commercial opportunities to harvest swordfish - May be perceived as economically disadvantaging current commercial swordfish fishermen by reducing the value of their existing swordfish LAPs and potentially reducing ex-vessel swordfish prices - Negative impacts on current swordfish LAP holders could be mitigated by establishing lower retention limits for the new open access permit than currently exist for swordfish LAPs

Alternative	Ecological Impacts	Social/Economic Impacts
<p>Alternative 1.2.1 - As a sub-alternative to Alternative 1.2 above, add swordfish to the existing open access Atlantic Tunas General category permit</p>	<ul style="list-style-type: none"> - Same as Alternative 1.2, above -This alternative is not expected to affect the calculation of fishing effort indexes for various species, so neutral impacts on stock assessments -Would not provide the ability for NMFS to precisely differentiate between tuna and swordfish fishermen for analytical and fishery management purposes based upon permit issuance 	<ul style="list-style-type: none"> - Same as Alternative 1.2, above - Would minimize costs associated with obtaining the permit for persons who already possess the Atlantic Tunas General category permit - Could streamline permit issuance for persons that want to commercially fish for both tunas and swordfish with rod & reel, handline, harpoon, and bandit gear because they would only need to obtain one permit rather than two - Would require persons currently issued an Atlantic Tunas Harpoon category permit that want to harpoon swordfish to either: (1) obtain the modified Atlantic Tunas General Category permit and fish under Atlantic Tunas General Category regulations for tunas (<i>i.e.</i>, lower BFT retention limits) or, (2) obtain a swordfish LAP and continue fishing under Atlantic Tunas Harpoon category regulations
<p>Alternative 1.2.2 - As a sub-alternative to Alternative 1.2 above, create a new separate open access commercial swordfish permit</p>	<ul style="list-style-type: none"> - Same as Alternative 1.2, above - This alternative is not expected to affect the calculation of fishing effort indexes for various species - Would provide the ability for NMFS to precisely differentiate between tuna and swordfish fishermen for analytical and management purposes based upon permit issuance 	<ul style="list-style-type: none"> - Same as Alternative 1.2, above - Would increase costs associated with obtaining the permit for persons that already possess the Atlantic Tunas General category permit - Would not streamline permit issuance for persons that want to commercially fish for both tunas and swordfish with rod & reel, handline, harpoon, and bandit gear because they would need to obtain two different permits

Alternative	Ecological Impacts	Social/Economic Impacts
<p>Alternative 1.2.3 - As a sub-alternative to Alternative 1.2 above, allow HMS CHB permit holders to fish under open-access swordfish commercial regulations when fishing commercially (<i>i.e.</i>, not on a for-hire trip with paying passengers)</p>	<p>- Same as Alternative 1.2, above</p>	<p>- Same as Alternative 1.2, above</p> <p>-Would provide economic benefits to CHB permit holders when fishing commercially (<i>i.e.</i>, not on a for hire trip)</p> <p>-Could streamline permit issuance because CHB vessels would not need to obtain another permit</p>
<p>Alternative 1.2.4 - As a sub-alternative to Alternative 1.2 above, add swordfish to the existing open access Atlantic Tunas Harpoon category permit</p>	<p>- Same as Alternative 1.2, above</p> <p>-Would not provide the ability for NMFS to precisely differentiate between tuna and swordfish fishermen for analytical and fishery management purposes based upon permit issuance</p>	<p>- Same as Alternative 1.2, above</p> <p>- Would minimize costs associated with obtaining the modified permit for persons that already possess the Atlantic Tunas Harpoon category permit</p> <p>- Could streamline permit issuance for persons that want to commercially fish for both tunas and swordfish with harpoon gear because they would only need to obtain one permit rather than two</p> <p>-Would provide economic benefits to current Atlantic Tunas Harpoon category permit holders that want to harpoon swordfish and also fish under Atlantic Tunas Harpoon category regulations (<i>i.e.</i>, higher BFT retention limits)</p>

Alternative	Ecological Impacts	Social/Economic Impacts
<p>Alternative 1.3 - Establish a new limited access commercial swordfish permit that would authorize rod & reel, handline, bandit gear, harpoon and green-stick (same gears authorized for Atlantic Tunas General Category permit)</p>	<p>-Similar ecological impacts as Alternative 1.2, except that any increase in fishing effort associated with Alternative 1.2 would be reduced because fewer new permits would likely be issued</p>	<ul style="list-style-type: none"> - Would allow for additional new swordfish LAPs to be issued (something that has not occurred since 1999) and remove some barriers for fishermen to begin commercially fishing for swordfish - May economically benefit some fishermen by providing new commercial opportunities to harvest swordfish -May affect some fishermen who do not qualify for a LAP - Could temperany negative economic and social impacts on current commercial swordfish LAP holders by limiting the number of new swordfish permits issued - Selection of this alternative may require, among other things, the establishment of qualification criteria, control dates, application deadlines, application procedures, and grievance/appeals procedures -May increase administrative costs for NMFS and burden for the public to meet qualifying criteria

2.2 Commercial Catch Reporting

2.2.1 Description of the issue

Dealers and fishermen provide fishery dependent information that is essential to the management of HMS fisheries. Data on landings and sales provided by dealers and information on catch, landings, location, and effort provided by fishermen are used for biological, social, and economic analyses necessary for fisheries management as well as for documenting catch histories, which can be important for quota allocations domestically and internationally. Different types of information may be collected using different methodologies such as vessel logbooks or dealer reports. Also, NMFS has published a proposed rule (76 FR 37750, June 28, 2011) to require that Federal Atlantic swordfish, shark, and tunas dealers report commercially harvested Atlantic sharks, swordfish, and bigeye, albacore, yellowfin, and skipjack tunas to NMFS through an electronic reporting system. A final rule has not been published at this time.

Currently, in Atlantic HMS fisheries, all commercial fishing vessels and CHB vessels are required to submit logbooks for all HMS trips if they are selected for reporting. Vessel permit holders selected for HMS logbook reporting include all shark and swordfish LAP holders, as well as all Atlantic Tunas Longline permit holders. These permit holders are required to submit logbooks to NMFS postmarked no later than seven days after unloading a trip. If no fishing activity occurred during a calendar month, a “no fishing” report must be submitted to NMFS postmarked within seven days after the end of the month. Currently, HMS CHB, Atlantic Tunas General category, and Atlantic Tunas Harpoon category permit holders are not selected for submitting logbooks.

Atlantic swordfish, sharks, and tunas may only be sold to federally permitted swordfish, shark, and tuna dealers, respectively. All federally permitted HMS dealers are required to submit reports detailing the nature of their business. Swordfish, shark, and tuna dealer permit holders must submit bi-weekly dealer reports on all HMS they purchase. In addition, tuna dealers must submit, within 24 hours of the receipt of a bluefin tuna, a landing report for each bluefin tuna purchased from a U.S. fisherman. To facilitate quota monitoring, “negative reports” for shark and swordfish are required from dealers when no purchases are made during a reporting period.

If NMFS implements anything other than the “No Action” Alternative 1.1 above, it may also be necessary to select an alternative that ensures accurate reporting of all swordfish landed commercially under the new or modified permit(s). At a minimum, a requirement to sell swordfish only to permitted swordfish dealers is being considered (Alternative 2.1). In addition, NMFS is considering a requirement for all holders of the new or modified permit(s) to report all HMS trips in logbooks, if selected, and that all sales be only to permitted swordfish dealers (Alternative 2.2). Finally, to ensure the highest possible level of accounting for all swordfish landed under the new permit, NMFS is considering an alternative to implement a swordfish tagging program and that all sales be only to permitted swordfish dealers (Alternative 2.3). If the alternative to implement a tagging program (Alternative 2.3) is selected, it may also be necessary to consider three additional sub-alternatives. From least restrictive to most restrictive, these are: 1) Only swordfish landed by vessels issued the new or modified permit(s) be tagged; 2) all swordfish landed by any gear other than PLL (*i.e.*, rod & reel, handline, harpoon, bandit gear,

green-stick, trawl gear, and buoy gear) be tagged; and, 3) all commercially landed swordfish be tagged. A list of the alternatives being considered for commercial reporting under the new or revised permit(s) and their associated impacts are shown in Table 2.2.

2.2.2 Potential alternatives for management

Table 2.2 Issue 2 - List of alternatives considered for commercial catch reporting.

Alternative	Ecological Impacts	Social/Economic Impacts
<p>Alternative 2.1 - Require that all swordfish sold under the new/modified permit(s) be sold only to permitted swordfish dealers</p>	<ul style="list-style-type: none"> - Would continue to ensure that NMFS collects the basic information needed for accurate swordfish quota monitoring and stock assessments, which could help maintain the stock at rebuilt levels 	<ul style="list-style-type: none"> - Would maintain current reporting burden on swordfish dealers who already must report purchases using bi-weekly dealer reports, but there would likely be more fishermen from which to report sales -Minor burden on newly permitted fishermen because it would implement the same requirement to sell to permitted dealers as currently exists for current swordfish LAP holders - Would continue to ensure reporting of commercial swordfish catch for quota monitoring and stock assessments, which could positively impact fishermen in the long term by maintaining stock at rebuilt levels - Administratively, no change because reporting forms and procedures would not change

Alternative	Ecological Impacts	Social/Economic Impacts
<p>Alternative 2.2 - Require that all swordfish sold under the new/modified permit(s) be reported in HMS logbooks, if selected, <u>and</u> that all sales be only to permitted swordfish dealers</p>	<ul style="list-style-type: none"> - Would continue to ensure that NMFS collects the basic information needed for swordfish quota monitoring and stock assessments, which could help maintain stock in the long term at rebuilt levels - Could potentially improve NMFS' efforts to collect additional information such as fishing effort and HMS catch and discard information, which would be beneficial for accurate swordfish quota monitoring, stock assessments, and improved understanding of protected species interactions 	<ul style="list-style-type: none"> - Could be an additional reporting burden on commercial fishermen if they are selected; otherwise, it would implement the same requirement to sell to permitted dealers for new swordfish permit holders as exists for current swordfish LAP holders. Currently, Atlantic Tunas General category permit holders are not selected to report, so new burden for them, if selected for logbook reporting - Neutral impacts on current swordfish dealers because current swordfish dealers already report their purchases through bi-weekly dealer reports, but could be larger volume from more landings - Could potentially improve estimates of fishing effort, catch, and discards, which would be beneficial to future swordfish stock assessments and could result in increased fishing opportunities through improved management which would result in positive economic impacts - May increase administrative burden to effectively distribute, collect, and analyze additional logbooks, if new fishermen are selected for reporting; otherwise neutral administrative impacts - NMFS could select these permit holders for cost/earnings reports to better evaluate impacts of regulations on revenue
<p>Alternative 2.3 - Require that swordfish be tagged prior to offloading for some or all commercial swordfish permit holders <u>and</u> that all sales be only to permitted swordfish dealers</p>	<ul style="list-style-type: none"> - Would continue to ensure that NMFS collects the basic information needed for swordfish quota monitoring and stock assessments, which could help maintain stock in the long term at rebuilt levels - Could improve reporting of swordfish landings which would be beneficial to future swordfish stock assessments 	<ul style="list-style-type: none"> - Would be an additional reporting burden on commercial fishermen and dealers - Could improve reporting of swordfish landings which would be beneficial to future swordfish stock assessments and could result in increased fishing opportunities - Could improve enforcement of swordfish regulations and reduce any illegal swordfish landings - Increased administrative costs to effectively distribute and retrieve tags, record data from tags, analyze information, and enforce regulations

Alternative	Ecological Impacts	Social/Economic Impacts
<p>Alternative 2.3.1 - As a sub-alternative to 2.3, require that only swordfish landed by vessels issued the new/modified permit(s) be tagged prior to offloading <u>and</u> that all sales be only to permitted swordfish dealers</p>	<p>- Same as Alternative 2.3, above</p>	<p>-Same as Alternative 2.3, above</p> <p>-Could cause confusion among swordfish dealers and NMFS Law Enforcement, because some swordfish would have to be tagged whereas others would not</p>
<p>Alternative 2.3.2 - As a sub-alternative to 2.3, require that all swordfish commercially landed using gears other than pelagic longline (<i>i.e.</i>, rod and reel, handline, harpoon, bandit gear, green-stick, trawl gear, and buoy gear) be tagged prior to offloading <u>and</u> that all sales be only to permitted swordfish dealers</p>	<p>-Same as Alternative 2.3, above</p> <p>- Would provide a higher level of reporting swordfish landings than Alternative 2.3.1 because more swordfish would be tagged which would be beneficial to future swordfish stock assessments</p>	<p>-Same as Alternative 2.3, above</p> <p>-Could cause confusion among swordfish dealers and NMFS Law Enforcement, because some swordfish would have to be tagged whereas others would not, however less confusion than Alternative 2.3.1 because only PLL swordfish would be exempt</p> <p>- Would impose a larger additional reporting burden on commercial fishermen and dealers than Alternative 2.3.2 because all commercially landed swordfish caught using handgear, green-stick, and trawl would be required to be tagged</p>
<p>Alternative 2.3.3 – As a sub-alternative to 2.3, require that all commercially-landed swordfish be tagged prior to offloading <u>and</u> that all sales be only to permitted swordfish dealers</p>	<p>-Same as Alternative 2.3, above</p> <p>-Would provide the highest level of reporting swordfish landings which would be beneficial to future swordfish stock assessments because all swordfish would be tagged</p>	<p>-Same as Alternative 2.3, above</p> <p>-Would minimize any confusion by swordfish dealers and NMFS Law Enforcement because all commercially landed swordfish would have to be tagged</p> <p>- Would impose the largest additional reporting burden on commercial fishermen and dealers because all commercially landed swordfish would have to be tagged</p>

2.3 Swordfish Retention Limits

2.3.1 Description of the issue

The U.S. North Atlantic swordfish fishery is managed using a variety of management measures including, but not limited to, permits, quotas, gear restrictions, closed areas, minimum size limits, and landing restrictions.

One important swordfish management measure is the use of vessel retention limits. For purposes of establishing a new or modified commercial swordfish permit(s), vessel retention limits would also be an important management measure. Currently, recreational HMS Angling permit holders may retain one swordfish per person, up to four per vessel per trip. HMS CHB permit holders are limited to one swordfish per paying passenger, up to six per vessel per trip for charter vessels (*i.e.*, a vessels less than 100 gross tons that meets U.S. Coast Guard requirements to carry six or fewer passengers for hire), and one per paying passenger, up to 15 per vessel per trip for headboat vessels (*i.e.*, a vessel that holds a valid Certificate of Inspection issued by the U.S. Coast Guard to carry passengers for hire). When fishing in a registered HMS tournament, Atlantic Tunas General category permit holders are limited to one per person up to four per vessel per trip. Commercially, for Swordfish Directed and Handgear limited access permit holders, there are no trip limits; however, if the directed fishery closes, these permit holders may retain 15 swordfish per pelagic longline trip, two swordfish per handgear trip, and no swordfish per harpoon trip. Incidental swordfish limited access permit holders are limited to 30 swordfish per trip. Finally, Incidental HMS Squid Trawl permit holders may retain 15 swordfish per trip (provided that squid constitute not less than 75 percent of the total catch on board and trawl gear is the only gear onboard the vessel). These retention limits are codified in the HMS regulations at 50 CFR § 635.22 - 635.24.

These swordfish retention limits are applied coastwide throughout the swordfish management unit, and the regulations do not currently allow modification of these limits either on a regional basis on using in-season adjustment authority. For all of the alternatives described below, NMFS is considering establishing a trip limit between zero and six swordfish per trip. This range is developed to be consistent with the current limits established for HMS Angling category, Atlantic Tunas General category (when fishing in a registered HMS tournament), and for HMS charter vessels. This range represents a conservative amount of swordfish that could be harvested under the alternatives below. The most significant difference between the alternatives is whether a single specific retention limit would be established and codified in the regulations (Alternative 3.1), whether a zero – six fish limit range would be codified with in-season authority to adjust the limit (similar to the Atlantic Tunas General category bluefin tuna limit) (Alternative 3.2), or whether a zero – six fish limit range would be codified with in-season authority to adjust the limit on a regional basis (Alternative 3.3). These alternatives and their associated impacts are described below in Table 2.5

2.3.2 Potential alternatives for management

Table 2.3 Issue 3 - List of alternatives considered for swordfish retention limits.

Alternative	Ecological Impacts	Social/Economic Impacts
<p>Alternative 3.1 - Establish a coast wide 0 – 6 swordfish retention limit range for all persons issued the new or modified permit(s), but codify a specific limit within that range</p>	<ul style="list-style-type: none"> - Could cause a minor increase in rod & reel, handline, bandit gear, green-stick, and harpoon commercial fishing effort if previously inactive fishermen obtain the new or modified permit(s) and begin fishing - Could provide for additional harvest of swordfish – a species that is fully rebuilt and the U.S. quota has been underharvested in recent years - Could cause a minor increase in swordfish discards and discard mortality if fishing effort increases substantially in areas with large concentrations of juvenile swordfish - Minimal negative impacts on protected resources and marine mammals from handgear and green-stick gear - Minimal impacts on EFH anticipated from handgear and green-stick gear 	<ul style="list-style-type: none"> - May result in positive economic benefits for some fishermen by providing increased commercial opportunities to harvest swordfish - May reduce the value of existing swordfish LAPs and potentially reduce ex-vessel swordfish prices - Any negative impacts on current swordfish LAP holders could be mitigated by establishing lower retention limits for the new open access permit than those that currently exist for swordfish LAPs -Provides certainty to fishermen and NMFS law enforcement regarding the swordfish retention limit -Would not provide in-season adjustment authority to quickly modify the swordfish retention limit either regionally or by using pre-established criteria

Alternative	Ecological Impacts	Social/Economic Impacts
<p>Alternative 3.2 - Codify a coast wide 0 – 6 fish swordfish retention limit range for all persons issued the new or modified permit(s) with in-season adjustment authority to change the limit based on pre-established criteria (<i>i.e.</i>, rate of landings, attainment of quota, bycatch of juveniles, etc.)</p>	<p>- Same as Alternative 3.1, above</p> <p>-Would provide the ability to more quickly adjust the retention limit using in-season authority and pre-established criteria (<i>i.e.</i>, rate of landings, attainment of quota, bycatch of juveniles, etc.), so any adverse ecological impacts could be more quickly, if necessary</p>	<p>- Same as Alternative 3.1, above</p> <p>-Would provide in-season adjustment authority to quickly modify the swordfish retention using in-season authority and pre-established criteria (<i>i.e.</i>, rate of landings, attainment of quota, bycatch of juveniles, etc.)</p> <p>-Would provide less certainty than Alternative 3.1 to fishermen and NMFS law enforcement regarding the swordfish retention limit</p>
<p>Alternative 3.3 - Establish regions (<i>i.e.</i>, Gulf of Mexico, Caribbean, South Atlantic, Mid-Atlantic, New England) and codify a 0 – 6 swordfish retention limit range for all persons issued the new or modified permit(s) with in-season adjustment authority to change the limit regionally based on pre-established criteria (<i>i.e.</i>, rate of landings, attainment of quota, bycatch of juveniles, etc.)</p>	<p>- Same as Alternative 3.1, above</p> <p>-Would provide NMFS with maximum ability to quickly adjust the retention limit on a regional basis using in-season authority and pre-established criteria (<i>i.e.</i>, rate of landings, attainment of quota, bycatch of juveniles, etc.)</p>	<p>- Same as Alternative 3.1, above</p> <p>-Would provide maximum ability to quickly adjust the retention limit on a regional basis using in-season authority and pre-established criteria (<i>i.e.</i>, rate of landings, attainment of quota, bycatch of juveniles, etc.)</p> <p>-Provides less certainty than Alternative 3.1 to fishermen and NMFS law enforcement regarding the swordfish retention limit</p>

2.4 Alternatives Considered but not Currently Anticipated to be Further Analyzed

The following alternatives have been suggested by the public during the comment period on the June 1, 2009, ANPR (74 FR 26174) and at previous HMS AP meetings. NMFS has considered these alternatives but decided not to provide additional analysis at this time based on the rationale provided below. NMFS requests public comment on whether these issues should be further analyzed.

2.4.1 Prohibit nighttime swordfishing with new permit

Swordfish forage near the surface by night (0–90 m) to deeper than 650 m by day. The diversity of prey species occurring in swordfish stomachs implies an opportunistic feeding pattern, which allows swordfish to forage from various trophic levels during diurnal vertical migrations. Because swordfish are typically found closer to the surface at night, they become more susceptible to capture. In areas with high concentrations of juvenile swordfish, including the Florida Straits, there can be a large amount of fish that are caught and discarded because they are below the minimum size.

NMFS has received comment recommending that nighttime fishing for swordfish be prohibited for vessels issued a new or modified commercial swordfish permit(s) in order to minimize the incidental catch of fish less than minimum length. This recommendation might be difficult to enforce. It may not be practical to police every vessel at sea to ensure that all lines are retrieved between sunset and dawn. Also, it may be difficult to distinguish between vessels legally fishing for other species at night and those fishing for swordfish. Finally, it may be inconsistent to implement this regulation for new or modified permit holders only, while not imposing the same regulation on other swordfish permit holders.

2.4.2 Establish 5-year sunset provision for management measures

NMFS has received comment recommending that any new regulations to implement a new or modified commercial swordfish permit(s) contain a “sunset provision,” whereby the regulations would automatically expire after five years. At this time, NMFS believes that this provision is not needed but invites comment on this issue. NMFS may initiate an action at anytime to either amend or remove the regulations. Such a provision could also dissuade persons interested in obtaining a new or modified permit(s) from doing so in the third or fourth year after implementation. If implemented, NMFS would regularly evaluate the effectiveness of any new regulations and determine if modifications are necessary.

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A.0 APPENDIX A: SUMMARY OF COMMENTS RECEIVED DURING ANPR

On June 1, 2009 (74 FR 26174), NMFS published an Advance Notice of Proposed Rulemaking (ANPR) to initiate an amendment to the 2006 Consolidated HMS FMP, including preparation of an EA. One of the items contained in the ANPR was consideration of a new commercial permit to harvest swordfish using handgear, similar to the concept being considered in this document. The comment period for the ANPR ended on August 31, 2009. NMFS conducted five public meetings to obtain additional comment during the months of June and July of 2009. These meetings were held in Manahawkin, NJ; Manteo, NC; Plymouth, MA; Belle Chase, LA; and, Ft. Lauderdale, FL. Since 2009, NMFS has continued to receive comments on the subject and discussed the commercial swordfish permit and related concepts at the May and September 2010 HMS AP meetings. Additionally, NMFS presented the concept of a HMS/swordfish general commercial permit to the HMS Advisory Panel (HMS AP) at the September 2011 meeting. A summary of the comments received during the scoping period is provided below.

HMS General Commercial Handgear Permit (GCHP) Concept

In Support of Concept

- Support was expressed, generally, for measures to increase swordfish landings.
- The swordfish fishery should transition to cleaner, more sustainable gears. Longliners should be encouraged to use hand-gear, either harpoon or rod-and-reel, to target swordfish. NMFS should consider expanding the handgear permits for swordfish in the northern fishing areas (mid-Atlantic to New England) in concert with a phase-down in the longline fishery.
- Support was expressed for a new Swordfish General Commercial permit with the following caveats:
 - NMFS should be cautious about avoiding increases in user group and gear type conflicts.
 - Authorization of swordfish retention with under a new Swordfish General Commercial permit should only be for “traditional handgears” and not buoy gear.
 - NMFS should consider a sunset provision on any new swordfish permit.

In Opposition to Concept

- Opposition was expressed for a new Swordfish General Commercial permit including:
 - Such a permit will devalue existing limited access permits.
 - Small vessels can't take care of the catch which will result in a low quality product and create potential health concerns.
 - Fish house and ice infrastructure along Atlantic is not available to support an increase in the number of small commercial vessels.
 - Gear conflicts will increase.

- Polling the members of the Swordfish Club in South Florida about a General Category permit revision to allow swordfish retention resulted in 81% opposed and 19% in favor. However, if the revision of the permit occurred, 66% of the club would purchase such a permit, as long as they did not have to register their vessel as a commercial vessel.
- Opposition was expressed to any increase in commercial effort in the Florida Straits. However, if NMFS provides some mechanism for increased commercial swordfish effort, it should be restricted to rod and reel only.
- A new Swordfish General Commercial permit would result in several thousand new entrants to the commercial fishery in South Florida which would devastate the swordfish resource and the fishery.
- A new Swordfish General Commercial permit would not result in a large influx of new entrants to the fishery.
- A large increase in swordfish landings in South Florida would cause the price to decrease.
- Disagreement with the science indicating that swordfish stocks are almost rebuilt was expressed. NMFS should use estimates of swordfish stock based on analysis that includes 1960s data such as the Hoey et al (1993), “ A Standardized Biomass Index of Abundance for North Atlantic Swordfish”, Col.Vol.Sci.Pap. ICCAT, 40 (1): 344—352. This study suggests that the North Atlantic Swordfish Population is not near recovery, but is only half way to full biomass.

B.0 APPENDIX B: TABLE OF HIGHLY MIGRATORY SPECIES COMMON NAMES, SCIENTIFIC NAMES, AND ABBREVIATIONS

Common Name	Scientific Name	Abbreviation
Billfish		BLF
Atlantic blue marlin	<i>Makaira nigricans</i>	BUM
Atlantic white marlin	<i>Tetrapturus albidus</i>	WHM
Atlantic sailfish	<i>Istiophorus albicans</i>	SAI
Longbill spearfish	<i>Tetrapturus pfluegeri</i>	SPX
Roundscale spearfish	<i>Tetrapturus georgii</i>	RSP
Swordfish		SWO
Atlantic swordfish	<i>Xiphias gladius</i>	SWO
Tuna		TUN
Atlantic bluefin tuna	<i>Thunnus thynnus</i>	BFT
Atlantic bigeye tuna	<i>Thunnus obesus</i>	BET
Atlantic albacore tuna	<i>Thunnus alalunga</i>	ALB
Atlantic yellowfin tuna	<i>Thunnus albacares</i>	YFT
Atlantic skipjack tuna	<i>Katsuwonus pelamis</i>	SKJ
Shark		SHK
Large coastal sharks		LCS
Sandbar shark	<i>Carcharhinus plumbeus</i>	
Silky shark	<i>Carcharhinus falciformis</i>	
Tiger shark	<i>Galeocerdo cuvieri</i>	
Blacktip shark	<i>Carcharhinus limbatus</i>	
Bull shark	<i>Carcharhinus leucas</i>	
Great hammerhead shark	<i>Sphyrna mokarran</i>	
Lemon shark	<i>Negaprion brevirostris</i>	

Common Name	Scientific Name	Abbreviation
Nurse shark	<i>Ginglymostoma cirratum</i>	
Scalloped hammerhead	<i>Sphyrna lewini</i>	
Smooth hammerhead	<i>Sphyrna zygaena</i>	
Spinner shark	<i>Carcharhinus brevipinna</i>	
Small coastal sharks		SCS
Atlantic sharpnose shark	<i>Rhizoprionodon terraenovae</i>	
Blacknose shark	<i>Carcharhinus acronotus</i>	
Bonnethead shark	<i>Sphyrna tiburo</i>	
Finetooth shark	<i>Carcharhinus isodon</i>	
Pelagic sharks		
Blue shark	<i>Prionace glauca</i>	
Oceanic whitetip shark	<i>Carcharhinus longimanus</i>	
Porbeagle shark	<i>Lamna nasus</i>	
Shortfin mako shark	<i>Isurus oxyrinchus</i>	
Common thresher	<i>Alopias vulpinus</i>	
Prohibited sharks		
Atlantic angle shark	<i>Squatina dumeril</i>	
Basking shark	<i>Cetorhinus maximus</i>	
Bigeye sand tiger shark	<i>Odontaspis noronhai</i>	
Bigeye sixgill shark	<i>Hexanchus nakamurai</i>	
Bigeye thresher shark	<i>Alopias superciliosus</i>	
Bignose shark	<i>Carcharhinus altimus</i>	
Caribbean reef shark	<i>Carcharhinus perezi</i>	
Caribbean sharpnose shark	<i>Rhizoprionodon porosus</i>	
Dusky shark	<i>Carcharhinus obscurus</i>	

Common Name	Scientific Name	Abbreviation
Galapagos shark	<i>Carcharhinus galapagensis</i>	
Longfin mako shark	<i>Isurus paucus</i>	
Narrowtooth shark	<i>Carcharhinus brachyurus</i>	
Night shark	<i>Carcharhinus signatus</i>	
Sand tiger shark	<i>Carcharias taurus</i>	
Sevengill shark	<i>Heptranchias perlo</i>	
Sixgill shark	<i>Hexanchus griseus</i>	
Smalltail shark	<i>Carcharhinus porosus</i>	
Whale shark	<i>Rhincodon typus</i>	
White shark	<i>Carcharodon carcharias</i>	