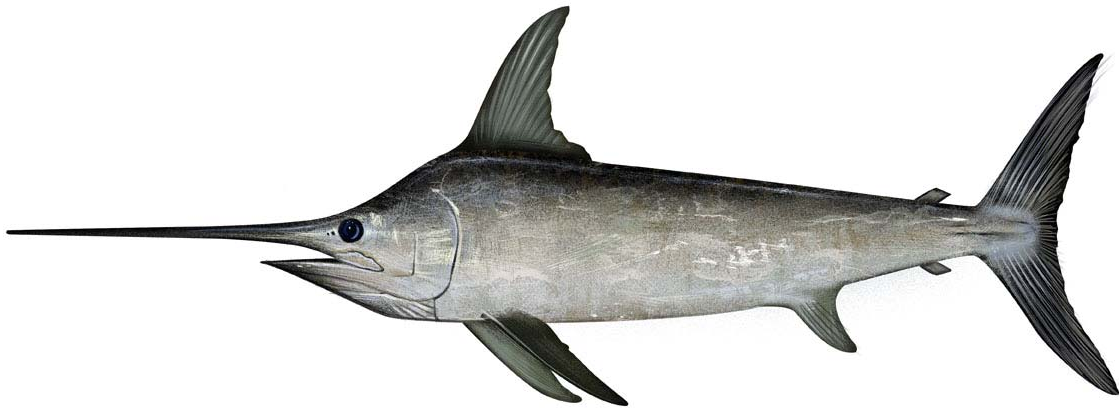


*Final Environmental Assessment,  
Regulatory Impact Review,  
and  
Final Regulatory Flexibility Analysis*

**for a Final Rule to**

**Implement the 2012 Atlantic Swordfish  
Quotas and Other Measures**



**United States Department of Commerce  
National Oceanic and Atmospheric Administration  
National Marine Fisheries Service  
Office of Sustainable Fisheries  
Highly Migratory Species Management Division  
July 2012**

## ABSTRACT

- Action:** Establish the 2012 quota specifications and modify the minimum size requirements for the Atlantic swordfish fisheries.
- Type of statement:** Final Environmental Assessment, Regulatory Impact Review, and Final Regulatory Flexibility Analysis
- Lead Agency:** National Marine Fisheries Service (NMFS): Office of Sustainable Fisheries
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- Abstract:** In October 2006, NMFS finalized the Consolidated Atlantic Highly Migratory Species Fishery Management Plan and issued implementing regulations for Atlantic swordfish to meet the requirements of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). This action is necessary to implement recommendations of the International Commission for the Conservation of Atlantic Tunas (Commission) pursuant to the Atlantic Tunas Convention Act and to achieve domestic management objectives under the Magnuson-Stevens Act. This action implements the baseline quotas for North and South Atlantic swordfish and adjusts the North Atlantic swordfish quota per the underharvest carryover provisions and international quota transfer requirements of Recommendation 11-02. This action would also implement the new minimum size measurement for Atlantic swordfish per Recommendation 11-02. These measures are consistent with the 2006 Consolidated Highly Migratory Species Fishery Management Plan.

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## **1.0 PURPOSE AND NEED FOR ACTION**

### **1.1 MANAGEMENT HISTORY**

The Atlantic swordfish fishery is managed under the dual authority of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) and the Atlantic Tunas Convention Act. The International Commission for the Conservation of Atlantic Tunas (Commission) is responsible for the conservation of tunas and tuna-like species in the Atlantic Ocean and adjacent seas. The Commission currently includes 48 contracting parties, including the United States, and its stated objective is to “cooperate in maintaining the populations of these fishes at levels which will permit the maximum sustainable catch for food and other purposes.” The Commission’s recommendations are binding on Contracting Parties unless they object per the treaty. The Commission’s resolutions are non-binding and express the will of the Commission. All Commission recommendations and resolutions are available on the Commission’s website at <http://www.iccat.int/en/>. Recommendations adopted by the Commission are promulgated as regulations in the United States as necessary and appropriate under the Atlantic Tunas Convention Act, which was signed in 1975 (16 U.S.C. 971).

In 1999, NMFS revised the 1993 Atlantic shark fishery management plan (FMP) and included swordfish and tunas in the 1999 FMP for Atlantic Tunas, Swordfish, and Sharks (NMFS 1999). The 1999 FMP was amended in 2003, and in 2006, we consolidated the Atlantic Tunas, Swordfish, and Shark Fishery Management Plan and its amendments and the Atlantic Billfish Fishery Management Plan and its amendments in the 2006 Consolidated Atlantic Highly Migratory Species (HMS) FMP (2006 Consolidated FMP). The 2006 Consolidated HMS FMP and its amendments are implemented by regulations at 50 CFR part 635. The 2006 Consolidated HMS FMP combined all HMS management into one FMP, changed certain management measures for various HMS, adjusted the regulatory framework measures, and continued the process for updating HMS essential fish habitat. In 2007, we published a final rule (October 5, 2007; 72 FR 56929) that implemented Recommendation 06-02 which established the current U.S. North Atlantic swordfish baseline quota of 2,937.6 metric tons (mt) dressed weight (dw) (3,907 mt whole weight (ww)) and the South Atlantic swordfish baseline quota of 75.2 mt dw (100 mt ww), among other swordfish management measures.

In 2006, Recommendation 06-02 established a western North Atlantic swordfish total allowable catch of 10,526 mt dw (14,000 mt ww) through 2008. Of this total allowable catch, the U.S. baseline quota was 2,937.6 mt dw (3,907.3 mt ww) per year. Recommendation 08-02 extended Recommendation 06-02 through 2009 and maintained the previous years’ U.S. quota allocation of 2,937.6 mt dw. Recommendation 09-02 reduced the western North Atlantic total allowable catch to 10,300.8 mt dw (13,700 mt ww) through 2010. Of the 10,300.8 mt dw total allowable catch, the United States continued to be allocated 2,937.6 mt dw (3,907.3 mt ww). At the 2010 Commission meeting, Recommendation 10-02 was adopted for North Atlantic swordfish for one year. Recommendation 10-02 established a total allowable catch of 13,700 mt ww, maintained the previous years’ U.S. quota allocation of 2,937.6 mt dw, and maintained an 18.8 mt dw annual transfer to Canada. Recommendation 10-02 also limited the amount of North Atlantic swordfish underharvest Contracting Parties, non-Contracting Cooperating Parties, Entities and Fishing Entities (CPC’s) can carry forward in a given year to 50 percent of their baseline quota allocation. In November 2011, the Commission issued a new North Atlantic swordfish recommendation as outlined below in Section

## 1.2.

### Minimum Size Background

In 1990, the Commission adopted Recommendation 90-02 based on scientific advice from the Commission's Standing Committee on Research and Statistics, which required member nations to set a swordfish minimum of size of 25 kilograms (55 pounds) live weight, or in the alternative, 125 cm (49 inches) lower jaw fork length and allowed a 15 percent tolerance for undersized fish by number. In 1991 via emergency rule and later final rule, the United States established a minimum size of 31 inches (78.7 cm) carcass length or 42 pounds (18.6 kg) dw with a 15 percent allowance for undersized swordfish based on the number of swordfish landed per trip. See 56 FR 26935 (June 12, 1991); 56 FR 65007 (December 13, 1991). In 1995, the Commission passed Recommendation 95-10 which provided an alternative minimum size of 119 cm (47 inches) lower jaw fork length, or in the alternative, 15 kilograms (33 pounds) with no tolerance for undersized fish and required appropriate record keeping of discards. Each member nation was given the flexibility to choose which of the measures best served the operational needs of their fishery. The United States chose to use the second alternative and revised the minimum size regulations. See 61 FR 27304 (May 31, 1996). However, instead of using the 47 inch lower jaw fork length measurement, the United States converted this measurement to a cleithrum to caudal keel measurement, as a reflection of the typical landing condition of commercial swordfish. This rule did not establish a lower jaw fork length minimum size but instead established only a cleithrum to caudal keel minimum size due to the dominant landing condition in the commercial fishery: dressed with the head, viscera and fins removed. The cleithrum to caudal keel minimum size was set at 29 inches which, based upon available observer and landings data, ensured near 100 percent compliance with the Commission 47 inch lower jaw fork length minimum size. However, due to morphological differences among individual swordfish, legal swordfish measuring 47 inches lower jaw fork length had varying cleithrum to caudal keel lengths. The 29 inch cleithrum to caudal keel minimum size ensured that all legally-retained swordfish met the Commission lower jaw fork length minimum size, but precluded the retention of some swordfish that met the lower jaw fork length minimum size but not the 29 inch cleithrum to caudal keel minimum size (i.e., some 47 inch lower jaw fork length fish have a cleithrum to caudal keel measurement < 29 inches).

In 2001 (66 FR 52801; August 15, 2001), we added a 47 inch lower jaw fork length minimum size as an alternative measurement due to the resurgence of the recreational swordfish fishery. Although this lower jaw fork length measurement could be used in both the commercial and recreational swordfish fisheries, the impetus behind implementation of this measurement was the typical landing condition of recreationally-caught swordfish which was usually maintained with both the head and tail attached. Beginning with the implementation of this rule, we allowed three minimum sizes to be applied in the domestic swordfish fisheries: 47 inches lower jaw fork length; 29 inches cleithrum to caudal keel; and 33 pounds. However, fishermen were only required to comply with one of the three minimum sizes. The lower jaw fork length and weight minimum sizes were the product of an internationally-negotiated Commission recommendation. The cleithrum to caudal keel minimum size was a U.S.-developed standard for domestic use.

Post-2001, we received information that the swordfish minimum sizes created two compliance and enforcement difficulties. First, the use of three minimum sizes (weight, lower jaw fork length, and cleithrum to caudal keel) complicated minimum size enforcement because all three measurements had to be taken to prove that a fish was undersized. This can require heavy time investments, particularly in cases with thousands of pounds of swordfish. Second, neither enforcement agents nor fishermen could definitively determine the accurate weight and subsequent legality of fish while at sea on a moving or pitching vessel and determining the weight was often delayed until the fish was brought to shore, presenting both compliance and enforcement problems. To address these enforcement and compliance complexities, we simplified the swordfish minimum size requirements in 2009 after consultation with enforcement, industry, and recreational fishery representatives. We published a final rule (December 16, 2009; 74 FR 66585) that removed the 33 pound weight requirement in the domestic fishery (although it remains in place for imported swordfish), and implemented minimum length measurements based on landing condition: the lower jaw fork length measurement is used if the head is naturally attached; and the cleithrum to caudal keel measurement is used if the head has been removed or if the carcass has been damaged by shark bites.

## **1.2 NEED FOR ACTION AND OBJECTIVES**

We analyzed alternatives regarding implementation of the Commission-recommended North Atlantic swordfish quota and minimum size requirements in order to ensure consistency with the objectives of the 2006 Consolidated HMS FMP and its implementing regulations, applicable law, and Recommendation 11-02 and other applicable recommendations. South Atlantic swordfish quotas were established in Recommendation 09-03 and the impacts were analyzed in the Environmental Assessment associated with the implementing rule, (75 FR 57407; September 21, 2010). Therefore, this Environmental Assessment does not consider impacts associated with the South Atlantic swordfish quota, although the annual specifications portion of the associated rule does implement an adjusted quota per Recommendation 09-03. For a discussion on the impacts resulting from Recommendation 09-03, please see 75 FR 57407 (September 21, 2010). In this action, we are also analyzing the impact of scientific research and exempted fishing permits on Atlantic swordfish and counting fishery-independent research landings against the reserve category (Section 4.9)

### 2011 North Atlantic Swordfish Commission Recommendation

In November 2011, the Commission adopted Recommendation 11-02 for North Atlantic swordfish. This recommendation maintains the U.S. baseline quota of 2,937.6 mt dw (3,907 mt ww) for 2012 and 2013. Previous North Atlantic swordfish recommendations included a quota transfer of 25 mt ww from the United States to Canada; however, Recommendation 11-02 eliminates this quota transfer and includes a transfer of 112.8 mt dw (150 mt ww) from the United States to Morocco to support joint scientific research and Morocco's efforts to eliminate the use of driftnets. Recommendation 11-02 includes a provision for the submission of annual swordfish management plans and a change to the underharvest carryover amount from 50 percent of the baseline quota to 25 percent of the baseline quota. This recommendation also includes an option for countries to use a cleithrum to caudal keel minimum size measurement of 63 centimeters (25 inches). One objective of this action is to ensure compliance with the 2012 North Atlantic swordfish quotas and other management measures in Recommendation 11-02 consistent with Atlantic Tunas Convention Act, the

2006 Consolidated HMS FMP, the requirements of the Magnuson-Stevens Act, and other applicable laws.

### Minimum Size Requirements

As described in Section 1.1 above, the current U. S. North Atlantic swordfish minimum size requirements include a 47 inch lower jaw fork length and a 29 inch cleithrum to caudal keel measurement. The U.S. commercial swordfish fleet often catches swordfish that meet the current 47 inch lower jaw fork length measurement, but not the 29 inch cleithrum to caudal keel measurement, thus meaning that the fishermen cannot fully dress the swordfish while at sea because the head needs to remain naturally attached in order to meet the lower jaw fork length minimum size. Since the removal of the 33 pound minimum weight requirement in the 2009 final rule (December 16, 2009; 74 FR 66585), we received multiple requests from commercial fishery participants asking us to reconsider the 33 pound minimum weight to allow them to dress at sea those swordfish that meet the 47 inch lower jaw fork length, but not the 29 inch cleithrum to caudal keel minimum size. Re-implementation of the weight option through this final rule should allow fishermen to dress and retain swordfish that meet the lower jaw fork length but not the cleithrum to caudal keel minimum size. Recommendation 11-02 includes an alternative minimum size measurement for dressed swordfish of 25 inches cleithrum to caudal keel, which is equivalent to the current 47 inch. In addition, commercial fishery participants also requested that we allow the removal of the swordfish bill from those swordfish that meet the 47 inch lower jaw fork length minimum size in order to make storage of these swordfish easier while continuing to allow an accurate lower jaw fork length measurement to be taken. Given the range of minimum size issues in the Atlantic swordfish fishery, another objective of this final action is to ensure compliance with the new minimum size requirement in Recommendation 11-02 and address the requests from fishery participants while preserving the ability to obtain the required minimum size measurements and facilitate compliance with and enforcement of those requirements.

The management measures considered for this final rule affecting the Atlantic swordfish fishery are taken under the dual authority of Atlantic Tunas Convention Act and the Magnuson-Stevens Act. In addition, management measures must also be consistent with other applicable laws including, but not limited to, the National Environmental Policy Act, the Endangered Species Act, the Marine Mammal Protection Act, and the Coastal Zone Management Act. This document is prepared, in part, to comply with the National Marine Fisheries Service' responsibilities under the National Environmental Policy Act, as implemented by the regulations published by the Council on Environmental Quality, 50 C.F.R. Parts 1501-1508 (Council on Environmental Quality Regs), and NOAA Administrative Order 216-6 ( NAO 216-6).



## 2.0

### SUMMARY OF THE ALTERNATIVES

This section provides a summary of the alternatives considered in this rulemaking to meet the obligations of NEPA, the Magnuson-Stevens Act, and Atlantic Tunas Convention Act. The goal of this action is to implement North Atlantic swordfish Recommendation 11-02, South Atlantic Swordfish Recommendation 09-03, adjust 2012 swordfish quotas based on recent landings information, implement a new cleithrum to caudal keel minimum size for Atlantic swordfish, and make other regulatory modifications and clarifications. Under the Atlantic Tunas Convention Act, the Secretary shall promulgate such regulations as may be necessary and appropriate to carry out Commission recommendations. We considered other quota measures in addition to the alternatives below; however, because those measures do not meet the obligations or mandates under Atlantic Tunas Convention Act, these measures were not analyzed.

**Alternative 1:** No Action. Do not implement Recommendation 11-02 for North Atlantic swordfish or any other new management measures

Under this alternative, we would not implement any of the measures contained in Recommendation 11-02, including the underharvest carryover limit, international quota transfer, or cleithrum to caudal keel minimum size measurement, nor would we implement any other management measures to facilitate the sustainable harvest of swordfish in U. S. waters.

**Alternative 2:** *Implement Recommendation 11-02, which includes a quota transfer of 112.8 mt dw from the United States to Morocco in 2012 and 2013 and an annual underharvest carryover limit of 25 percent of a CPC's base quota); maintain status quo for North Atlantic quotas – Preferred Alternative*

Under Alternative 2, we would implement both of the quota-related measures in Recommendation 11-02. The first measure requires an annual quota transfer of 112.8 mt dw from the United States to Morocco for 2012 and 2013 to support joint scientific research and Morocco's efforts to eliminate the use of driftnets. The second measure reduces the amount of underharvest the United States can carryover to the subsequent fishing year from 50 to 25 percent of the base quota. Currently, the United States can carry over underharvests of up to 50 percent of the annual base quota (1,468.8 mt dw); however, Recommendation 11-02 limits this carryover limit to 25 percent of the base quota (734.4 mt dw). As in the past, this carryover would be added to the base quota and allocated to the Directed Category. In addition to these two changes, we would maintain the annual baseline quota of 2,937.6 mt dw across quota categories, maintain the 300 mt dw quota for the incidental category quota, and reduce the reserve category quota to 50 mt dw. Previously, we deducted any Commission-recommended transfers from the reserve category quota. Under this alternative, however, we would remove the Commission-recommended transfers directly off the annual baseline quota and use the reserve category quota to adjust for inseason adjustments, any over- or underharvests, and scientific research, consistent with management objectives.

**Alternative 3:** *Implement the alternative swordfish cleithrum to caudal keel minimum size measurement of 25 inches per Recommendation 11-02 – Preferred*

### *Alternative*

In addition to the quota measures, Recommendation 11-02 also contains an alternative swordfish minimum size measurement. This minimum size is 25 inches cleithrum to caudal keel and is equivalent to the existing Commission lower jaw fork length measurement of 47 inches. Under Alternative 3, we would implement the 25 inch cleithrum to caudal keel minimum size, replacing the existing 29 inch cleithrum to caudal keel minimum size in the regulations. For more information on the existing 29 inch cleithrum to caudal keel minimum size, please see Section 1.1 above.

**Alternative 4:** Use the cleithrum to caudal keel measurement as the sole minimum size and discontinue the use of the lower jaw fork length minimum length standard in U.S. domestic fisheries

Under Alternative 4, we would remove the lower jaw fork length minimum size, leaving the cleithrum to caudal keel measurement as the sole minimum size in Atlantic swordfish domestic fisheries. Currently, the two minimum length standards are employed separately, depending on the condition of the carcass. If the head is naturally attached, the lower jaw fork length minimum size is the sole criterion for determining whether a swordfish meets the minimum size. If the head has been removed, the cleithrum to caudal keel minimum size is the sole criterion. Under Alternative 4, the cleithrum to caudal keel minimum size would be used regardless of carcass condition, consistent with the new alternative 25 inch cleithrum to caudal keel minimum size. The 25 inch cleithrum to caudal keel minimum size in Recommendation 11-02 is an equivalent measurement to the existing 47 inch lower jaw fork length minimum size. Although morphological differences between individual fish can result in a few outlying fish that meet the lower jaw fork length minimum size but not the cleithrum to caudal keel, the vast majority of fish that meet one likely meet the other. For this reason, employing two minimum sizes could be redundant in many cases.

**Alternative 5:** *Allow the lower jaw fork length minimum size to be applied to swordfish without a bill, provided the bill has been removed forward of the anterior tip of the lower jaw– Preferred Alternative*

Due to morphological differences between individual swordfish, fishermen occasionally retain swordfish that meet the 47 inch lower jaw fork length minimum size but not the current 29 inch cleithrum to caudal keel minimum size. In these cases, the fishermen must leave the head of the swordfish naturally attached in order to maintain the carcass in a form that can be measured using the lower jaw fork length standard. Under Alternative 5, the regulations would explicitly allow fishermen to remove the bill of the swordfish and still consider the head naturally attached, provided the bill is removed forward of the anterior tip of the lower jaw (Figure 1).



**Figure 1**                      **Diagram of bill removal location for Alternative 5**

**Alternative 6:**                      Reintroduce the 33 pound minimum weight standard

As described in Section 1.1, we removed the minimum weight standard in 2009 due to the difficulty of at-sea enforcement and compliance. Under this alternative, we would re-implement the minimum weight standard of 33 pounds, as allowed under the Commission’s North Atlantic swordfish recommendations, including the most recent, Recommendation 11-02. The two minimum length standards would continue to be used depending on the landing condition of the carcass (i.e., lower jaw fork length measurement for carcasses with the head and tail naturally attached, cleithrum to caudal keel measurement for carcasses with the head and/or tail removed or that has been damaged by shark bites) and the 33 pound minimum weight could be employed in either case.

### 3.0 DESCRIPTION OF THE AFFECTED ENVIRONMENT

This section includes a brief summary of the status of the stocks, fishery participants and gear types, and affected area including habitat and protected species. For a complete description of the biology and status of HMS and the Atlantic pelagic longline and recreational fisheries, including operations, catches, and discards, please see the HMS Stock Assessment and Fishery Evaluation Reports (NMFS 2011) and the 2006 Consolidated HMS FMP (NMFS 2006). The action area is the Atlantic Ocean, Gulf of Mexico, and Caribbean Sea.

Atlantic swordfish (*Xiphias gladius*) are managed in the U.S. Atlantic Ocean, Gulf of Mexico, and Caribbean Sea under the authority of the Magnuson-Stevens Act and Atlantic Tunas Convention Act. Under the Atlantic Tunas Convention Act, the Secretary shall promulgate such regulations as may be necessary and appropriate to carry out the Commission's Recommendations. The U.S. swordfish fishery is quota-managed, and has operated under a limited access program since 1999. The majority of swordfish landed in Atlantic HMS fisheries are by directed swordfish permit holders using pelagic longline and handgear (rod and reel, handline, harpoon, and buoy gear). Pelagic longlining accounts for the majority of U.S. swordfish landings; however, there is increasing effort in the commercial handgear and recreational fisheries. Driftnets were allocated two percent of the U.S. North Atlantic directed fishery quota in the past; however, this gear was prohibited by us in 1999. Currently, directed swordfish permit holders and swordfish handgear permit holders are not subject to trip limits. Incidental swordfish permits allow fishermen to land up to 30 swordfish while engaged in other fishing activities. The HMS Angling permit allows fishermen to land up to 1 swordfish per person up to a maximum of 4 swordfish per vessel per trip. The HMS Charter/Headboat permit allows for different retention limits depending on whether the vessel is operating as a charter or headboat. Charter vessels are allowed to retain 1 swordfish per paying passenger up to a maximum of 6 swordfish per vessel per trip. Headboat vessels are allowed to retain up to 1 swordfish per paying passenger up to a maximum of 15 swordfish per vessel per trip. In 2011, the United States implemented the Incidental HMS Squid Trawl permit which allows *Illex* squid trawl vessels to retain up to 15 swordfish per trip. Trawl gear is otherwise not authorized for HMS. There are also minimum size requirements on all Atlantic swordfish landed by HMS commercial and recreational fisheries. For cases where the head remains naturally attached to the swordfish (whole), a lower jaw fork length measurement of 47 inches is the sole method for determining if a retained swordfish meets the minimum size requirement. For cases where the head has been removed from the fish (dressed), a cleithrum to caudal keel measurement of 29 inches is the sole method for determining if a retained swordfish meets the minimum size requirement. This measurement also applies to swordfish carcasses damaged by shark bites.

Swordfish vessel permit holders may only sell to permitted swordfish dealers. Atlantic swordfish dealers must obtain an Atlantic swordfish dealer permit to receive, purchase, trade for, or barter for Atlantic swordfish from a vessel. Dealers importing and/or exporting swordfish must obtain an International Trade Permit.

#### 3.1 STATUS OF THE STOCKS

Stock assessments for Atlantic swordfish are conducted by the Commission's Standing Committee on Research and Statistics.

North Atlantic swordfish are fully rebuilt and overfishing is not occurring. The latest Standing Committee on Research and Statistics stock assessment (2009) indicates that the North Atlantic swordfish stock is at or above biomass at maximum sustainable yield. The estimated relative biomass trend shows a consistent increase since 2000. The relative trend in fishing mortality shows that the level of fishing peaked in 1995, followed by a decrease until 2002, followed by small increase in the 2003-2005 period and a downward trend since then. Fishing mortality has been below fishing mortality at maximum sustainable yield since 2005. The results suggest that there is greater than 50 percent probability that the stock is at or above biomass at maximum sustainable yield, and thus the Commission's stock rebuilding objective has been achieved. It is important to note that catches since 2003 have been below the total allowable catch thereby greatly increasing the chances for a quick recovery. Overall, the stock was estimated to be somewhat less productive than the previous assessment, with the intrinsic rate of increase,  $r$ , estimated at 0.44 compared to 0.49 in 2006. The next stock assessment for North Atlantic Swordfish is scheduled for 2013.

### South Atlantic Swordfish

South Atlantic swordfish are not overfished and overfishing is not occurring. However, until sufficiently more research has been conducted to reduce the high uncertainty in stock status evaluations for the southern Atlantic swordfish stock, the Standing Committee on Research and Statistics emphasizes that annual catch should not exceed the provisionally estimated maximum sustainable yield. Considering the unquantified uncertainties and the conflicting indications for the stock, the Standing Committee on Research and Statistics recommends a more precautionary management approach, to limit catches to the recent average level (~15,000 mt ww) which are expected to maintain the catch rates at about their current level.

## **3.2 FISHERY PARTICIPANTS, GEAR TYPES, AND AFFECTED AREA**

Atlantic HMS fishery participants that fish for swordfish commercially or recreationally with fishing gear that is authorized to retain swordfish (e.g., pelagic longline and handgear) are the affected fishery participants of this rulemaking. The majority of swordfish landed in Atlantic HMS fisheries are by directed swordfish permit holders using pelagic longline and handgear (rod and reel, handline, harpoon, and buoy gear). In the United States, six categories of swordfish permits are currently issued: Directed Swordfish, Incidental Swordfish, Swordfish Handgear, HMS Angling, HMS Charter/Headboat, and the Incidental HMS Squid Trawl Permit. The HMS Angling permit is required to fish for HMS recreationally and the sale of fish is prohibited under this permit. The HMS Charter Headboat permit is required for for-hire vessels that target HMS. The Directed Swordfish permit is valid only if the vessel owner also holds both an Atlantic Tunas Longline and an Atlantic shark limited access permit. Directed swordfish permit holders and swordfish handgear permit holders are not subject to trip limits. Incidental swordfish permits allow fishermen to land up to 30 swordfish while engaged in other fishing activities, but these fishermen must also have valid Atlantic Tunas Longline and Atlantic Shark permits. The Incidental HMS Squid Trawl permit allows *Illex* squid trawl vessels to retain up to 15 swordfish per trip. Regulations currently allow vessels to be

permitted in only one category per year and allow for only one permit category change to occur during the permit renewal period.

As of October 2011, there were 27,655 vessel permits issued in the swordfish fisheries, including: 23,138 HMS Angling permits; 4,194 HMS Charter Headboat permits; 178 Directed Swordfish permits; 67 Incidental Swordfish permits; and 78 Swordfish Handgear permits (NMFS, 2011). In 2011, there were a total of 724 HMS dealer permits issued in the United States. Of those permits, 191 were swordfish dealer permits (NMFS 2011).

Pelagic longlining accounts for the majority of U.S. swordfish landings; however, there is increasing effort in the commercial handgear and recreational fisheries. In 2010, U.S. swordfish catches and landings were approximately 2,137.93 mt dw. Of these reported catches and landings, 1,898.50 mt dw were reported as captured with pelagic longline gear (NMFS, 2011a). Approximately 234.4 mt dw of swordfish were reported as harvested with handline, rod and reel, harpoon, and trawl gears. See Table 3.1 for distribution of swordfish landings from 2006 – 2010 by gear type.

**Table 1. Catches and Landings of Swordfish Reported from 2006-2010 in metric tons (mt) dressed weight (dw) by gear type and year (NMFS 2011a).**

Gear	2006	2007	2008	2009	2010	TOTAL
Longline**	1,474.29	1,860.15	1,769.62	2,023.38	1,898.50	9,025.94
Handline	24.51	94.29	63.46	93.91	167.82	443.99
Rod and Reel*	39.62	51.28	56.92	23.76	50.00	221.58
Trawl	2.63	4.89	5.71	17.82	15.86	46.92
Harpoon	0.23	0.00	0.00	0.04	0.45	0.71
Unclassified	0.15	0.15	0.15	0.00	1.58	2.03
Unclassified discards	5.86	8.65	6.54	5.04	3.72	29.81
TOTAL	1,547.29	2,019.40	1,902.41	2,163.95	2,137.93	9,770.98

\* 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

### 3.3 HABITAT

The Magnuson-Stevens Act requires us to identify and describe essential fish habitat for each life stage of managed species (16 U.S.C. § 1855(b)(1), as implemented by 50 C.F.R. §

800.815), and to evaluate the potential adverse effects of fishing activities on essential fish habitat, including the cumulative effects of multiple fisheries activities (50 C.F.R § 800.815(a) (2)). Habitats that satisfy the criteria in the Magnuson-Stevens Act have been identified and described as essential fish habitat in the 1999 Fishery Management Plan and in Amendment 1 to the 1999 Fishery Management Plan (NMFS, 2003).

In 2009, we completed the five year review and update of essential fish habitat for Atlantic HMS with the publication of Amendment 1 to the 2006 Consolidated HMS FMP (June 12, 2009, 74 FR 28018) (NMFS, 2009). As a result of the 2009 Amendment 1 to the 2006 Consolidated HMS FMP, essential fish habitat was updated for all federally-managed Atlantic HMS. This amendment updated and revised essential fish habitat boundaries for highly migratory species, designated a new habitat area of particular concern for bluefin tuna in the Gulf of Mexico, and analyzed fishing and non-fishing impacts on essential fish habitat. As described in Amendment 1 to the Consolidated FMP, there is no evidence that physical effects caused by any authorized HMS gears (*i.e.*, pelagic longline and handgear) are adversely affecting essential fish habitat for targeted or non-targeted species, to the extent that physical effects can be identified on the habitat or the fisheries. As such, the actions analyzed in this Environmental Assessment are not expected to increase gear impacts on any essential fish habitat beyond those impacts that have already been analyzed in Amendment 1 to the 2006 Consolidated HMS FMP.

### **3.4 PROTECTED SPECIES UNDER THE ENDANGERED SPECIES ACT AND MARINE MAMMAL PROTECTION ACT**

The Endangered Species Act is the primary Federal legislation governing interactions between fisheries and species whose continued existence is threatened or endangered. Through a consultative process, the Endangered Species Act allows Federal agencies to evaluate proposed agency actions in light of the impacts they could have on Endangered Species Act -listed species. In the case of marine fisheries, the NMFS Office of Sustainable Fisheries consults with the Office of Protected Resources to determine what impacts major fishery management actions will have on endangered populations of marine species and what actions can be taken to reduce or eliminate negative impacts. Under the consultative process, we issue a Biological Opinion which outlines expected impacts of the proposed action and specifies terms and conditions which must be met to mitigate impacts on Endangered Species Act -listed species. The primary gear types considered in this rulemaking are recreational handgear, commercial handgear, and pelagic longline gear. Handgear is covered under the 2001 Biological Opinion for Highly Migratory Species fisheries and is not likely to jeopardize the continued existence of endangered or threatened species, including seas turtles. A 2004 Biological Opinion determined that the continued operation of the pelagic longline fishery is not likely to jeopardize the continued existence of loggerhead, green, hawksbill, Kemp's ridley, or olive ridley sea turtles, but is likely to jeopardize the continued existence of leatherback sea turtles. According to an August 9, 2007 memorandum regarding re-initiation of the Endangered Species Act Section 7 consultation process for the U.S. Atlantic pelagic longline fishery, we determined that the basis and assumptions of the 2004 Biological Opinion remain valid, and that the expected effects on the species, the Terms and Conditions, and the Incidental Take Statement, are still appropriate and do not need to be revised.

The Marine Mammal Protection Act is one of the principal Federal statutes that guide marine mammal species protection and conservation policy. Under Marine Mammal Protection Act requirements, we produce an annual List of Fisheries that classifies domestic commercial fisheries, by gear type, relative to their rates of incidental mortality or serious injury of marine mammals. The List of Fisheries includes three classifications:

- Category I fisheries are those with frequent serious injury or mortality to marine mammals (e.g., PLL);
- Category II fisheries are those with occasional serious injury or mortality (e.g., shark gillnet); and
- Category III fisheries are those with remote likelihood of serious injury or mortality to marine mammals (e.g., rod and reel, purse seine, harpoon).

Fishermen participating in Category I or II fisheries are required to be registered under the Marine Mammal Protection Act and, if selected, to accommodate an observer aboard their vessels. Vessel owners or operators, or fishermen, in Category I, II, or III fisheries must report all incidental mortalities and injuries of marine mammals during the course of commercial fishing operations to us. There are currently no regulations requiring recreational fishermen to report takes, nor are they authorized to have incidental takes (i.e., they are illegal). We do require reporting and authorize takes by charter/headboat fishermen (considered “commercial” by the MMPA), and, no takes have been reported to us to date.

The handgear (hook-and-line and harpoon) fishery is currently listed as a Category III fishery under the Marine Mammal Protection Act (November 29, 2011; 76 FR 73912). Strict control and operations of these fishing gears means these gear types are not likely to result in mortality or serious injury of marine mammals or sea turtles. The pelagic longline fishery is listed as a Category I fishery. We formed the Pelagic Longline Take Reduction Team to reduce bycatch of long finned and short finned pilot whales and Risso’s dolphins in the Atlantic pelagic longline fishery to a level approaching a zero mortality and serious injury rate within 5 years of implementation of the plan. On May 19, 2009 (74 FR 23349), NMFS implemented a consensus Take Reduction Plan in a final rule that limits the length of mainline for pelagic longline in the mid-Atlantic area, established the Cape Hatteras Special Research Area, required a placard showing how to release whales be posted in the wheelhouse and working deck of the vessel, and required owners and operators be certified in ways to reduce mortality of marine mammals.

Please refer to Sections 3.8 and 3.9.9 of the 2006 Consolidated HMS FMP for additional information on potential interactions of Atlantic HMS fisheries with protected species and marine mammals. Sections 3.9.9.1 and 3.9.9.2 specify the 22 cetacean species of concern that occur off the Atlantic and Gulf coasts, including six endangered whale species.



#### 4.0 ENVIRONMENTAL CONSEQUENCES OF ANALYZED ALTERNATIVES

The following sub-sections consider and describe probable and potential impacts of each of the considered alternatives. The alternatives that are preferred are identified and justification for this preference is explained.

As described in Section 2.0, the following alternatives consider the North Atlantic swordfish quota and swordfish minimum size options. NMFS prefers Alternatives 2, 3, and 5.

- Alternative 1:** No Action. Do not implement Recommendation 11-02 or any other new management measures
- Alternative 2:** *Implement Recommendation 11-02, which includes a quota transfer of 112.8 mt dw from the United States to Morocco in 2012 and 2013 and an annual underharvest carryover limit of 25 percent of a CPC's base quota); maintain status quo for North Atlantic quotas – Preferred Alternative*
- Alternative 3:** *Implement the alternative swordfish cleithrum to caudal keel minimum size measurement of 25 inches per Recommendation 11-02 – Preferred Alternative*
- Alternative 4:** Use the cleithrum to caudal keel measurement as the sole minimum size and discontinue the use of the lower jaw fork length minimum length standard in U.S. domestic fisheries
- Alternative 5:** *Allow the lower jaw fork length minimum size to be applied to swordfish without a bill, provided the bill has been removed forward of the anterior tip of the lower jaw– Preferred Alternative*
- Alternative 6:** Reintroduce the 33 pound minimum weight standard

#### 4.1 ECOLOGICAL IMPACTS

Under Alternative 1, we would not implement any of the measures contained in Recommendation 11-02, including the quota allocation, underharvest carryover limit, international quota transfer, or cleithrum to caudal keel minimum size measurement. Alternative 1 would likely have neutral direct ecological impacts in the short-term. The U.S. quota specified in Recommendation 11-02 is unchanged from previous years; therefore, the base quota would not be affected. The only effect of non-action would be that the U.S. base quota would not be adjusted for underharvest and the transferred quota would not be deducted from the U.S. adjusted quota. Since the United States has not harvested the entire allocated swordfish quota and is unlikely to do so in the short-term, deducting the transferred quota from the domestic adjusted quota is unlikely to result in changes in effort or landings. Similarly, if we do not reduce the annual carryover limit from 50

percent to 25 percent, the higher annual adjusted quota is unlikely to be utilized and is unlikely to result in changes in effort or landings in the short-term. In the long-term, due to a variety of swordfish revitalization efforts within and outside of the Agency, we expect that U.S. fishermen could achieve near 100 percent quota utilization. If we do not take action to reduce the adjusted quota and the United States obtains a higher annual adjusted quota in the future, the North Atlantic swordfish stock could experience higher levels of fishing mortality resulting in long-term direct minor adverse ecological impacts. No additional impacts would be expected if we do not implement the alternative minimum cleithrum to caudal keel size of 25 inches since the measurement is equivalent to the existing minimum sizes. Alternative 1 could result in swordfish mortality higher than Commission-negotiated levels and because the United States has an obligation to implement the Commission's recommendations under the Atlantic Tunas Convention Act, we do not prefer this alternative at this time.

Alternative 2 would implement Recommendation 11-02 provisions pertaining to quota allocation, the underharvest carryover limit, and quota transfer to Morocco. Alternative 2 would likely have neutral direct ecological impacts in the short-term. As noted in the ecological impact discussion for Alternative 1, the United States is unlikely to achieve 100 percent quota utilization in the short-term. Consequently, minor changes to the adjusted quota through international quota transfers or through reduced underharvest carryover limits are unlikely to impact swordfish catch rates or mortality levels. In the long-term, however, Alternative 2 could have direct minor beneficial ecological impacts as the U.S. swordfish fishery nears 100 percent quota utilization. At that time, an adjusted quota that reflects the annual international quota transfer to Morocco and the lower underharvest carryover limit would ensure that the U.S. domestic fishery harvest levels are consistent with international recommendations and the latest stock assessment and would result in lower levels of fishing mortality than under Alternative 1. We prefer Alternative 2 at this time because it fulfills the United States' obligation to implement the Commission's recommendations and because the measure will limit North Atlantic swordfish mortality to a Commission-adopted level.

Indirect ecological impacts resulting from Alternatives 1 and 2 are likely neutral in the short and long-term. Changes to international quota transfers and underharvest carryover limits are unlikely to affect essential fish habitat, bycatch, or predator/prey dynamics.

Under Alternative 3, NMFS would implement the swordfish minimum size portion of Recommendation 11-02 which allows a 25 inch cleithrum to caudal keel measurement. Figure 2 demonstrates the current lower jaw fork length and cleithrum to caudal keel minimum sizes and the minimum size preferred in Alternative 3, in the context of a larger representative sample of swordfish catch collected from Pelagic Observer Program data. The vertical line represents the minimum lower jaw fork length measurement determined by the Commission's Standing Committee on Research and Statistics to be appropriate for the sustainable harvest of Atlantic swordfish. The two horizontal lines represent the current (29 inches) (upper, solid line) and the proposed (25 inches) (lower, dashed line) cleithrum to caudal keel minimum sizes. The data points in the lower left quadrant formed by the solid lines represent swordfish that currently cannot be retained since the fish do not meet either of the cleithrum to caudal keel minimum sizes. The data points in the upper left quadrant formed by the solid lines represent swordfish that can currently be retained with the head removed, but not naturally attached, since the fish meets the cleithrum to caudal keel minimum size but not the lower jaw fork

length minimum size. The data points in the upper right quadrant formed by the solid lines represent swordfish that can currently be retained under either the current lower jaw fork length or cleithrum to caudal keel minimum sizes. The data points in the lower right quadrant formed by the solid lines represent swordfish that currently can only be retained with the head naturally attached, since the fish meets the minimum lower jaw fork length but not the minimum cleithrum to caudal keel size. These data points in the lower right quadrant represent the legal swordfish that fishermen are not currently able to dress because they do not meet the current cleithrum to caudal keel minimum size.

The dashed line represents the cleithrum to caudal keel minimum size of 25 inches preferred in Alternative 3 and demonstrates the impact on compliance and enforcement of these swordfish. Alternative 3 would likely result in direct neutral short and long-term ecological impacts. The 25 inch cleithrum to caudal keel minimum size is equivalent to the existing 47 inch lower jaw fork length minimum size measurement. Therefore, the 25 inch cleithrum to caudal keel measurement could result in a larger number of retained swordfish, however, the increase in retained fish would come almost exclusively from legal fish that were previously discarded.

During the public comment period of the proposed rule, a number of commenters asked if implementing the 25 inch cleithrum to caudal keel minimum size would increase swordfish landings and, if so, by how much. We believe that it is possible for the implementation of the 25 inch cleithrum to caudal keel minimum size under Alternative 3 to lead to a reduction in discarded swordfish and a concomitant increase in swordfish landings. The analysis below demonstrates one possible method for calculating the impact of the size limit change. Because the analysis relies on a number of assumptions, any actual changes in swordfish landings may be different from what this analysis predicts.

Calculating the possible increase in landings is difficult due to data limitations; however, an estimate can be made using pelagic observer program data and several assumptions about the pelagic longline fishery. We used 2010 pelagic observer data because the 33 pound minimum weight was removed in late 2009 and 2011 data were not yet available when preparing this analysis. In 2010, the pelagic observer program observed a total of 268 swordfish discarded between 47 and 57 inches lower jaw fork length. We examined fish in this size range because we feel that these fish are the mostly likely to have been discarded because they met the 47 inch lower jaw fork length minimum size but not the 29 inch cleithrum to caudal keel minimum size; swordfish over 57 inches lower jaw fork length likely met each of the minimum sizes (see Figure 2). In 2010, during the time that the pelagic observer program observed 268 swordfish discarded between 47 and 57 inches lower jaw fork length, a total of 884 pelagic longline sets were observed. This information allows for an estimate of the number of discarded swordfish (between 47 and 57 inches lower jaw fork length) per set:

$$(268 \text{ discarded swordfish between } 47'' \text{ and } 57'' \text{ lower jaw fork length}) / (884 \text{ pelagic longline set observed}) = 0.3 \text{ swordfish in the size range discarded per set}$$

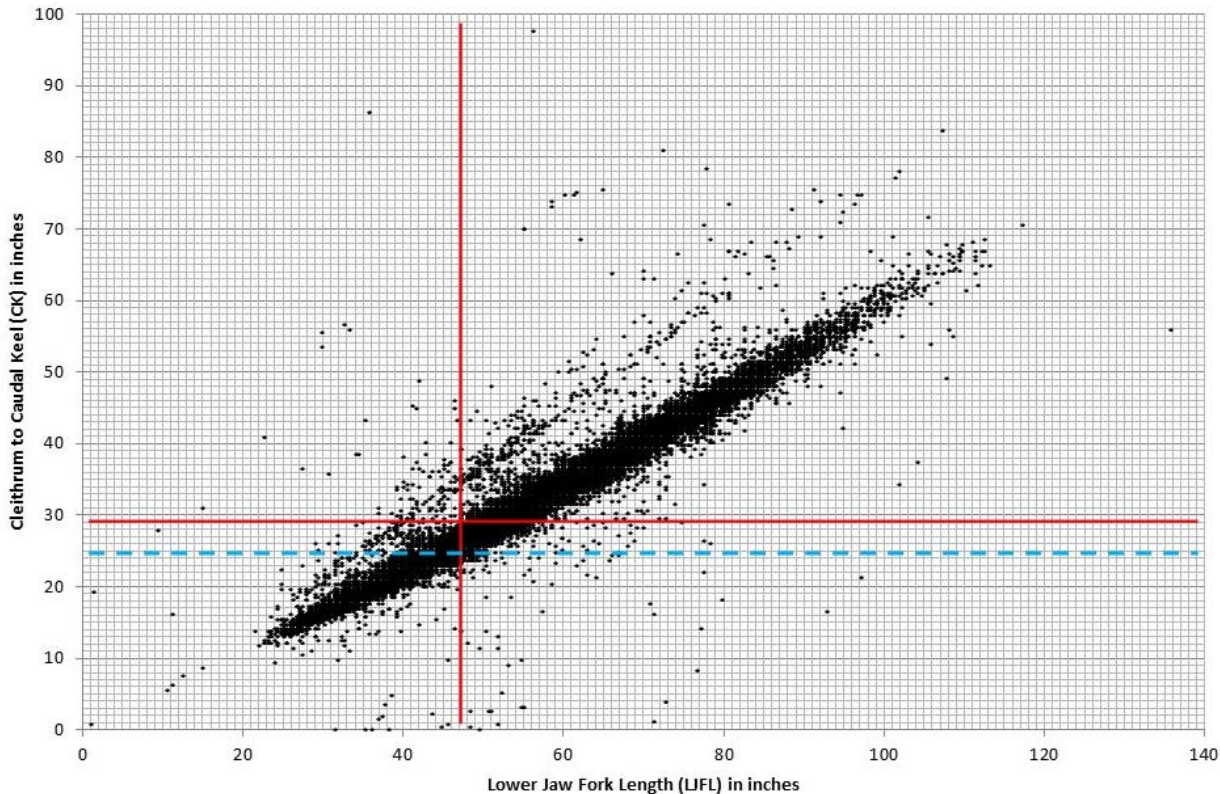
This ratio of discards per set can then be multiplied by the total number of pelagic longline sets in reported in logbooks in 2010, 8,036, to give an estimate of the total number of swordfish between 47 and 57 inches lower jaw fork length discarded across the entire Atlantic and Gulf of Mexico pelagic longline fishery:

0.3 swordfish in the size range discarded per set \* 8,036 total pelagic longline sets = 2,410.8 swordfish between 47 and 57 inches lower jaw fork length discarded across the entire Atlantic and Gulf of Mexico pelagic longline fishery

Using the swordfish length to dressed weight conversion equation available on the Commission's website, swordfish in the 47 to 57 inch lower jaw fork length size range weigh between 33 and 61 pounds dw, with an average of 47 pounds dw. Multiplying the total number of discarded swordfish between 47 and 57 inches lower jaw fork length by the average dressed weight gives an estimate of the increase in swordfish landings:

$2,410.8 \text{ discarded swordfish between 47 and 57 inches lower jaw fork length} * 47 \text{ pounds} = 113,308 \text{ pounds dw}$   
 $= 51.4 \text{ mt dw}$

A possible increase of 51.4 mt dw (113,316 lbs dw) is a very rough estimate of the landings impact resulting from implementation of Alternative 3. This estimate comes with a number of caveats. This estimate uses data from 2010, the year of the Gulf of Mexico Deepwater Horizon/BP oil spill. Fishery closures following that oil spill may have negatively affected fishing opportunities and swordfish landings in the Gulf of Mexico that year. This estimate also relies on the accuracy of the assumption that all swordfish discarded between 47 and 57 inches lower jaw fork length were discarded because the fish met the lower jaw fork length minimum size but not the cleithrum to caudal keel minimum size; it is not possible at this time to test the accuracy of that assumption. Furthermore, only swordfish measured by pelagic observer program observers were included, swordfish that were refused by dealers were not included, and the analysis only includes the pelagic longline fishery. The actual change in landings and discards for all swordfish fisheries may vary depending on catch rates and size of swordfish encountered in non-pelagic longline fisheries. All retained fish would continue to be above the minimum size recommended by the Commission's Standing Committee on Research and Statistics and so no ecological impacts are expected. The alternative cleithrum to caudal keel minimum size would simplify and facilitate compliance and enforcement of the minimum size requirements. Simplifying enforcement and compliance could lead to an increase in the number of fish retained, but we expect that this increase would be modest and well within the Commission's Standing Committee on Research and Statistics minimum size requirements and the United States' authorized quota. As demonstrated in Figure 2, the proposed 25 inch cleithrum to caudal keel minimum length could provide a length measurement equivalent to a greater number of fish that meet the 47 inch lower jaw fork length minimum size, which could better address the operational needs of the U.S. swordfish fleet while not causing negative ecological impacts to the swordfish stocks. For this reason, and because it fulfills the United States' obligation to implement the Commission's recommendations under Atlantic Tunas Convention Act as necessary and appropriate, we prefer this alternative.



**Figure 2. Lower jaw fork length measurement versus cleithrum to caudal keel measurements for individual swordfish. Vertical line represents current lower jaw fork length minimum size, solid horizontal line represents current cleithrum to caudal keel minimum size, and dashed horizontal line represents proposed minimum cleithrum to caudal keel length in Alternative 4; Source: Pelagic Observer Program Data, 1992-2009.**

Under Alternative 4, we would use the cleithrum to caudal keel measurement as the sole minimum size and discontinue the use of the lower jaw fork length minimum size in U.S. domestic fisheries. We do not expect that the removal of the lower jaw fork length measurement would have any direct ecological impacts in the short or long-term. The 25 inch cleithrum to caudal keel minimum size is equivalent to the current 47 inch lower jaw fork length minimum size for the majority of swordfish. Since these two minimum sizes are equivalent, the removal of the lower jaw fork length minimum size is unlikely to greatly increase swordfish retention levels. Removal of the lower jaw fork length minimum size could simplify compliance and enforcement, reduce confusion, and slightly increase retained catch numbers, but these numbers are unlikely to affect the stock and all legally retained swordfish would continue to fall well within the Commission’s Standing Committee on Research and Statistics minimum size requirements. Figure 2 provides a graphical comparison of the existing lower jaw fork length and cleithrum to caudal keel minimum sizes and the proposed cleithrum to caudal keel minimum size in the context of a larger representative sample of catch collected from Pelagic Observer Program data. This figure demonstrates that the proposed 25 inch cleithrum to caudal keel minimum size could, in the absence of the lower jaw fork length minimum size, continue to adequately protect undersized swordfish while minimizing changes to the number of swordfish that can be legally retained. However, removing one of the minimum size measurements could reduce flexibility for fishermen in how they choose to measure and land swordfish.

Furthermore, it is harder to use measure a fish alongside a vessel using the cleithrum to caudal keel measurement relative to the lower jaw fork length measurement. Therefore, recreational fishermen would likely need to bring the fish on board the vessel to employ the cleithrum to caudal keel measurement, which may increase handling of the fish by recreational fishermen and safety concerns. For these reasons, we do not prefer this alternative at this time.

Under Alternative 5, we would allow the lower jaw fork length minimum size to be applied to swordfish without a bill, provided the bill has been removed forward of the anterior tip of the lower jaw. Adoption of Alternative 5 would likely result in direct neutral short and long-term ecological impacts. Keeping the bill of a swordfish attached to the carcass is unnecessary when performing minimum size measurements. Both the lower jaw fork length and cleithrum to caudal keel minimum size measurements use two end points posterior to the bill, therefore, removing the bill would not have any impact on determining compliance with minimum size measurements (Figure 1). Alternative 5 would not create any additional impacts to the swordfish stock from increased catch or effort or result in the harvest of undersized individuals. We prefer this alternative because it provides increased flexibility for fisherman, increases safety, and allows for more efficient packing while not impacting the ability to determine if the fish meets the lower jaw fork length minimum size.

Under Alternative 6, we would reintroduce the 33 pound minimum weight requirement. Figure 3 demonstrates how dressed weight and cleithrum to caudal keel measurements compare in swordfish observed by the Pelagic Observer Program. The area in the box in the lower left hand corner is shown in greater detail in Figure 4. Swordfish weights were reported as dressed weight for retained fish or estimated whole weight for released fish. All data points represent swordfish that were observed before the minimum weight requirement was removed in 2009. Therefore, the figure presents an accurate comparison of dressed weight to cleithrum to caudal keel length, particularly in the detailed area presented in Figure 4. The data points in the upper left hand quadrant in Figure 4 formed by the two solid lines represent swordfish that did not meet the cleithrum to caudal keel minimum size, but met the 33 pound minimum weight. Retention of these swordfish became prohibited after the 2009 rule that removed the minimum weight requirement. The vertical dashed line indicates the proposed minimum cleithrum to caudal keel size of 25 inches. Similar to the above impact analyses, Alternative 6 is unlikely to have any short and long-term direct ecological impacts since the Commission-authorized 33 pound minimum weight requirement is equivalent to the dressed weight of a swordfish measuring 47 inch lower jaw fork length. Reintroducing the 33 pound minimum weight could provide some operational benefits to fishery participants, but it is unlikely to provide any additional impacts to the swordfish stock from increased catch or effort or result in the harvest of undersized individuals. Figure 4 demonstrates that the 25 inch cleithrum to caudal keel minimum size proposed in the preferred Alternative 4 could provide a length measurement equivalent to a greater number of fish that meet the 33 pound minimum weight and could allow for the retention of the majority of fish that weigh more than 33 pounds but do not meet the current cleithrum to caudal keel minimum size of 29 inches. Only those fish represented by the data points above the horizontal line and to the right of the dashed line would be precluded from retention in the absence of the 33 pound minimum weight. While the ecological impact is expected to be neutral, due to the enforcement and compliance difficulties described in Chapter 1, we do not prefer this alternative to reintroduce a minimum weight requirement at this time. Should those enforcement and compliance difficulties be resolved in the future, NMFS may reconsider reintroduction of a minimum weight



requirement.

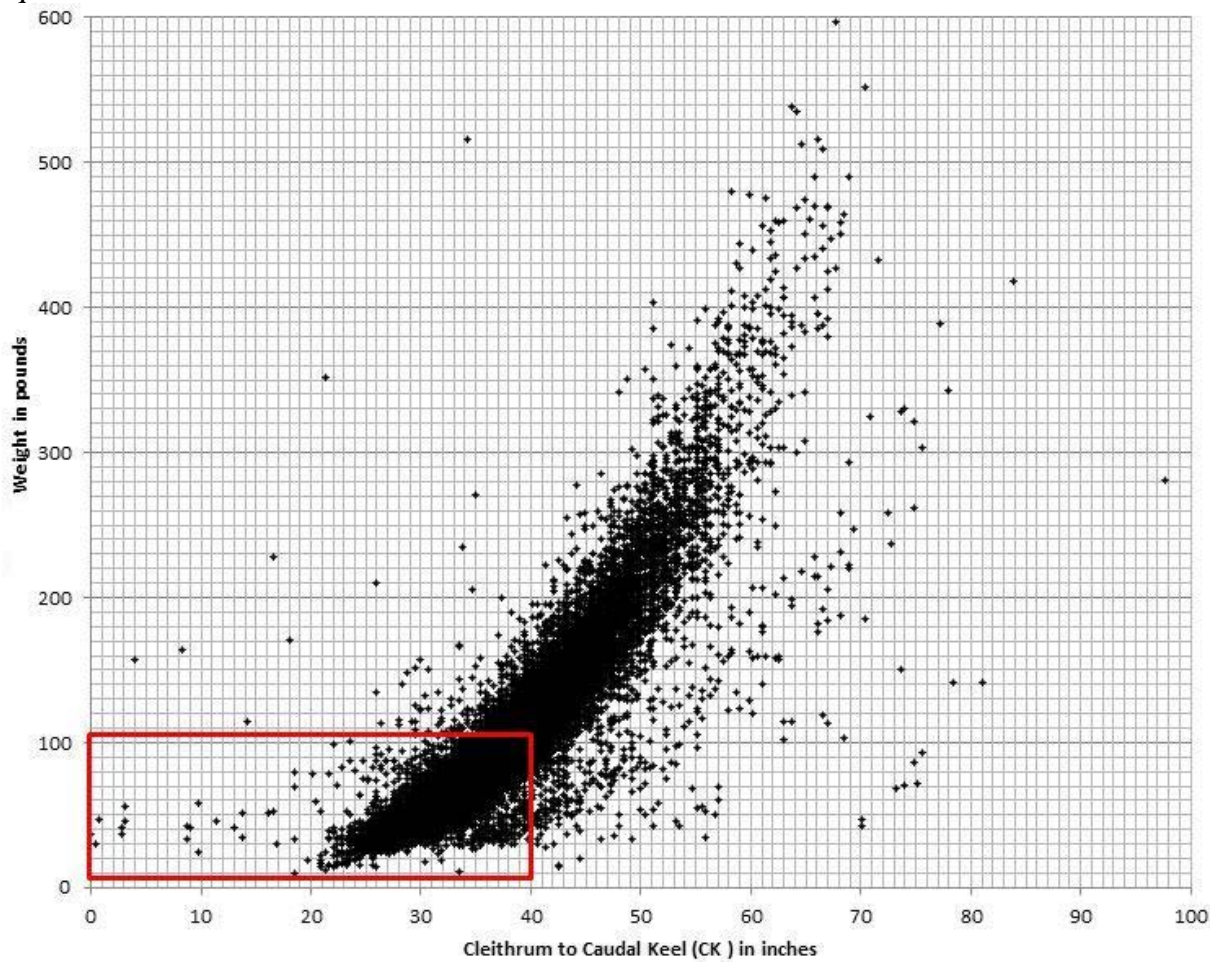


Figure 3. Cleithrum to caudal keel measurement versus weight for individual swordfish. Box in lower left hand corner is the area shown in Figure 5 which provides greater detail of the swordfish impacted by this rulemaking; Source: Pelagic Observer Program Data, 1992-2009.

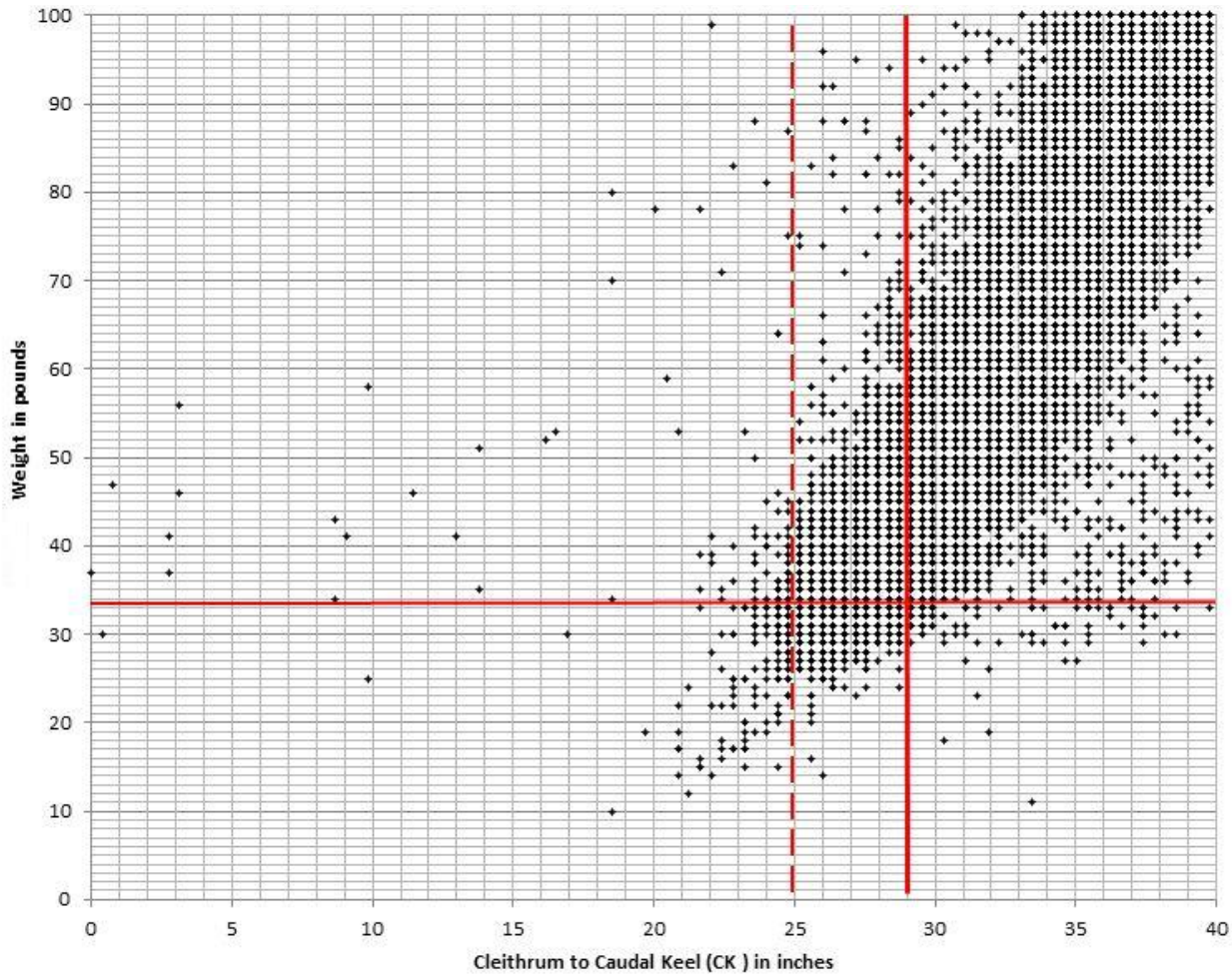


Figure 4. Detailed area highlighted in Figure 3 of cleithrum to caudal keel measurement versus weight for individual swordfish. Horizontal line represents the 33 pound minimum weight standard, the solid vertical line on the right represents the current minimum cleithrum to caudal keel length of 29 inches, and the dashed vertical line on the left represents the proposed minimum cleithrum to caudal keel length of 25 inches; Source: Pelagic Observer Program Data, 1992-2009.

Short and long-term indirect ecological impacts would likely be neutral for Alternatives 3 through 6. Indirect impacts to essential fish habitat, bycatch, and other ecosystem components are not expected because none of these alternatives would change fishing effort. Similarly, impacts to protected resources are expected to be neutral because no changes to fishing effort are anticipated from Alternative 3 through 6.

#### 4.2 SOCIAL AND ECONOMIC IMPACTS

Under Alternative 1, we would not implement any of the measures contained in Recommendation 11-02, including the quota allocation, underharvest carryover limit, international quota transfer, or cleithrum to caudal keel minimum size measurement. Alternative 1 would likely have net direct minor adverse socioeconomic impacts in the short-term. No impacts would be expected if we do not implement the quota portion of Recommendation 11-02; however, direct minor



adverse socioeconomic short-term impacts could result if we do not implement the alternative cleithrum to caudal keel minimum size. The U.S. quota specified in Recommendation 11-02 is unchanged from previous years; therefore, the base quota would not be affected. The only effect of non-action would be that the transferred quota would not be deducted from the U.S. base quota. Since the United States has not harvested the entire allocated swordfish quota and is unlikely to do so in the short-term, deducting the transferred quota from the domestic base quota is unlikely to result in changes to annual revenue or revenue to individual vessels. Similarly, if we do not reduce the annual carryover limit from 50 percent to 25 percent, the higher annual adjusted quota is unlikely to be utilized and is unlikely to result in changes in landings or revenue.

If we do not implement the alternative cleithrum to caudal keel minimum size, there could be direct minor adverse socioeconomic short-term impacts. The 25 inch cleithrum to caudal keel minimum size is equivalent to the existing 47 inch lower jaw fork length minimum size. Currently, fishermen do not have a minimum size measurement that allows for the retention of dressed swordfish that measure at or slightly above 47 inches lower jaw fork length. If a fisherman catches a swordfish that meets the 47 inch lower jaw fork length minimum size but not the current 29 inch cleithrum to caudal keel minimum size, the fisherman must either land the fish with the head naturally attached or discard the fish. Due to storage capacity limitations and uncertainty in minimum size regulations, fishermen sometimes choose to discard fish that legally meet the 47 lower jaw fork length measurement but do not meet the 29 inch cleithrum to caudal keel minimum size. Similarly, dealers sometimes will not accept fish that meet the 47 inch lower jaw fork length measurement but not the 29 inch cleithrum to caudal keel minimum size. These fish are landed with the head naturally attached, but once removed, some dealers have expressed concern that a minimum size violation could occur in the absence of proof that the fish was landed with the head and met the 47 inch lower jaw fork length measurement.

For these reasons, if we do not implement the alternative cleithrum to caudal keel minimum size, fishermen would continue to discard and not land some fish that meet the lower jaw fork length minimum size but not the current cleithrum to caudal keel minimum size, resulting in direct short-term minor adverse socioeconomic impacts.

In the long-term, Alternative 1 could have net direct minor beneficial socioeconomic impacts. Due to a variety of swordfish revitalization efforts within and outside of the Agency, we expect that U.S. fishermen could achieve near 100 percent quota utilization. If we do not take action to reduce the base quota due to the annual quota transfer to Morocco nor reduce the adjusted quota by limiting underharvest carryover, the domestic fishery could land more swordfish resulting in higher annual revenues. The United States is allocated 2,937.6 mt dw of North Atlantic swordfish. If 112.8 mt dw of quota is not transferred to Morocco and if up to 50 percent of the base quota can be carried over, the total U.S. adjusted quota could reach 4,406.4 mt dw (9,714,349 lb dw). Assuming an average ex-vessel price of \$4.41 per pound (NMFS 2011) and 100 percent quota utilization, the total possible annual gross revenues across the domestic fishery would be estimated to be \$42,840,279 under Alternative 1. As in the short-term, fishermen might still discard fish that meet the lower jaw fork length minimum size but not the current minimum size, precluding ex-vessel revenue from these landings, however, the larger quota would likely offset this impact. Because the United States has an obligation to implement the Commission's recommendations under the Atlantic Tunas Convention

Act, we do not prefer this alternative at this time.

Alternative 2 would implement Recommendation 11-02 provisions pertaining to quota allocation, the underharvest carryover limit, and the quota transfer to Morocco. Alternative 2 would likely have direct neutral socioeconomic impacts in the short-term. As noted in the ecological impact discussion for Alternative 1, the United States is unlikely to achieve 100 percent quota utilization in the short-term. Consequently, minor changes to the base quota through international quota transfers or to the adjusted quota through reduced underharvest carryover limits are unlikely to impact swordfish fishing effort levels or annual revenues. In the long-term, however, Alternative 2 could have direct minor adverse socioeconomic impacts assuming the U.S. swordfish fishery nears 100 percent quota utilization. At that time, an adjusted quota that reflects the annual international quota transfer to Morocco and the lower underharvest carryover limit could lead to a lower available quota relative to the current adjusted quota. This lower level of adjusted quota would result in a decrease in the total possible fishery-wide annual revenue. If we deduct the 112.8 mt dw quota transfer from the U.S. base quota of 2,937.6 mt dw and limits underharvest carryover to 25 percent, the total U.S. adjusted quota could reach 3,559.2 mt dw (7,846,612 lbs dw). Assuming an average ex-vessel price of \$4.41 per pound (NMFS 2011) and 100 percent quota utilization, total possible gross revenues across the domestic fishery would be estimated to be \$4,603,559 under Alternative 2. Therefore, Alternative 2 could result in annual gross revenues that are \$8,236,720 less (\$42,840,279 - \$34,603,559) than the possible annual gross revenues under Alternative 1. However, the United States is required to implement these measures through regulations as necessary and appropriate to comply with Recommendation 11-02 under the Atlantic Tunas Convention Act. Therefore, we prefer this alternative at this time.

Indirect socioeconomic impacts resulting from Alternatives 1 and 2 are likely neutral in the short and long-term. Changes to international quota transfers and underharvest carryover limits are unlikely to affect dealers, bait and tackle suppliers, and other supporting businesses since they do not solely rely on the swordfish fishery.

Under Alternative 3, we would implement the swordfish minimum size portion of Recommendation 11-02, which allows a 25 inch cleithrum to caudal keel measurement. This alternative would likely have direct moderate beneficial socioeconomic impacts in both the short- and long-term. The 25 inch cleithrum to caudal keel minimum size is equivalent to the existing 47 inch lower jaw fork length minimum size. Currently, fishermen do not have a minimum size measurement that allows for the retention of dressed swordfish that measure at or slightly above 47 inches lower jaw fork length. If a fisherman catches a swordfish that meets the 47 inch lower jaw fork length minimum size but not the current 29 inch cleithrum to caudal keel minimum size, the fisherman must either land the fish with the head naturally attached or discard the fish. Due to storage capacity limitations and uncertainty in minimum size regulations, fishermen sometimes choose to discard fish that legally meet the 47 inch lower jaw fork length measurement but do not meet the 29 inch cleithrum to caudal keel minimum size. Similarly, dealers sometimes will not accept fish that meet the 47 inch lower jaw fork length measurement but not the 29 inch cleithrum to caudal keel minimum size. Even when these swordfish are landed with the head naturally attached, some dealers have expressed concern that, once the head is removed, the fish could be in violation of minimum size requirements. For these reasons, implementing the Commission alternative minimum cleithrum to

caudal keel size of 25 inches could lead to increased retention of previously discarded legal fish that measure at or slightly above 47 inches lower jaw fork length, since this cleithrum to caudal keel minimum size is equivalent to a greater number of 47 inch lower jaw fork length fish (Figure 2). An analysis of the possible impact to swordfish landings resulting from Alternative 3 indicated a possible increase in swordfish landings of 51.4 mt dw (113,316 lbs dw) (Section 4.1). Assuming an average ex-vessel price of \$4.41 per pound (NMFS 2011), this would equate to additional revenue of \$499,724 annually under this alternative. Fish in this size range are the most frequently encountered fish (Figure 5 and Figure 6; note that the figures provide lengths in centimeters), therefore, increased landings of fish in this size range are not trivial. The increase in retained catch, which would come almost exclusively from legal fish that were previously discarded, could lead to increased annual revenues for both fishermen and dealers, resulting in direct moderate beneficial socioeconomic impacts in both the short and long-term. Because this alternative provides these benefits to fishermen but does not lead to increased mortality of undersized swordfish, NMFS prefers this alternative at this time.

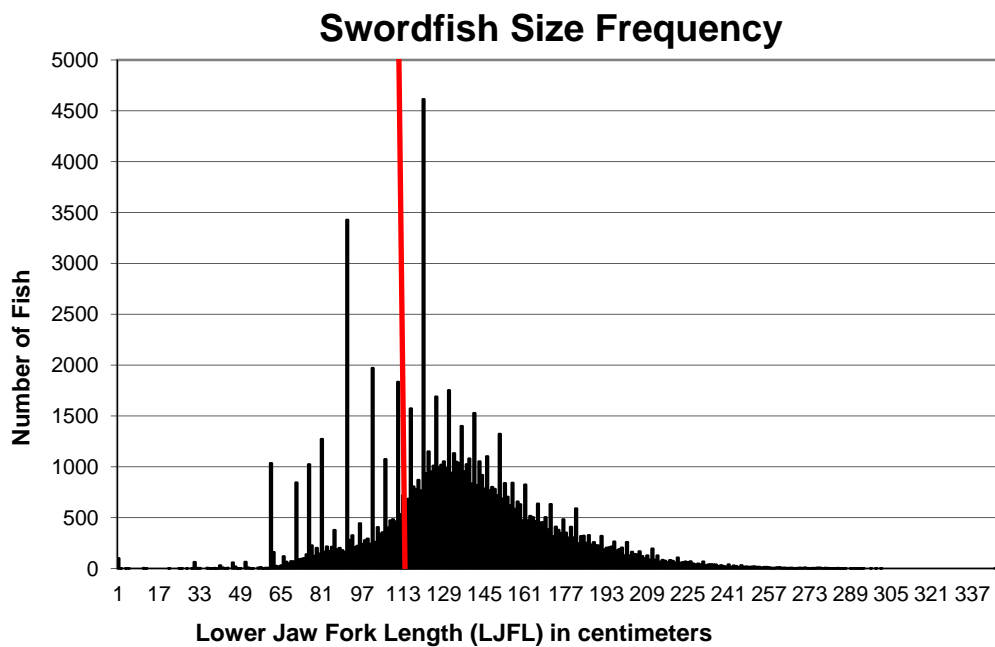
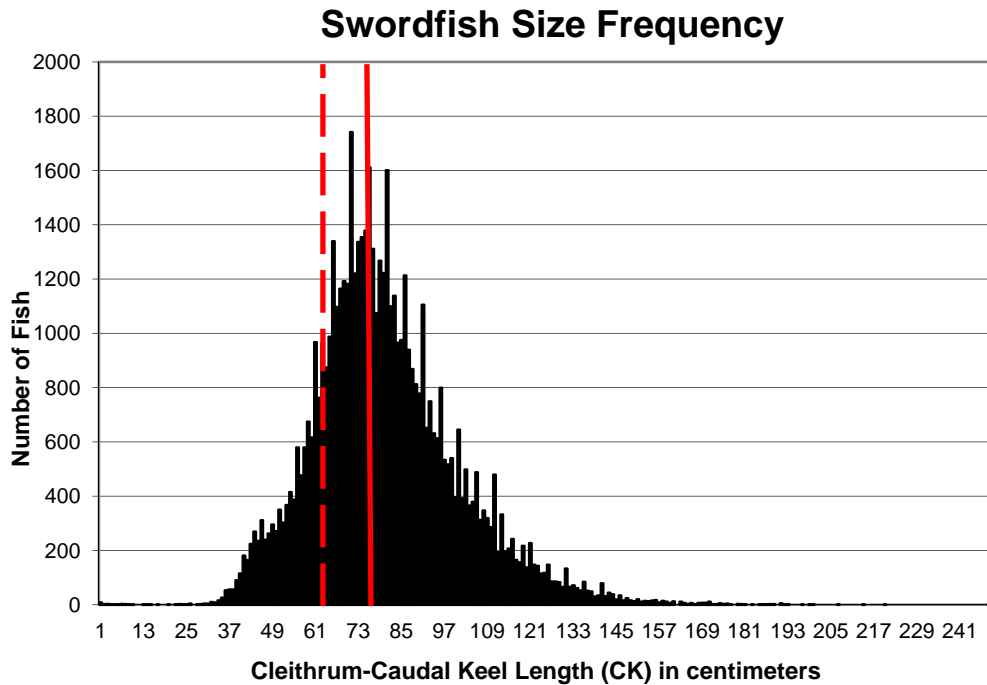


Figure 5. Frequency of observed swordfish lower jaw fork length measurements (cm). Vertical line represents minimum lower jaw fork length size of 47" (119 cm); Source: Pelagic Observer Program data, 1992-2009



**Figure 6. Frequency of observed swordfish cleithrum to caudal keel measurements (cm). Vertical line represents current minimum cleithrum to caudal keel length of 29” (74 cm) and dashed vertical line represents proposed minimum cleithrum to caudal keel length of 25” (63 cm); Source: Pelagic Observer Program data, 1992-2009**

Under Alternative 4, we would use the cleithrum to caudal keel measurement as the sole minimum size and discontinue the use of the lower jaw fork length minimum size in United States domestic fisheries. This alternative would be unlikely to have any direct socioeconomic impacts in the short or long-term, provided that the new Commission alternative cleithrum to caudal keel minimum size of 25 inches is implemented under Alternative 4. The current lower jaw fork length minimum size of 47 inches and the proposed cleithrum to caudal keel minimum size of 25 inches equate to the same size fish in the majority of instances. Therefore, the lower jaw fork length minimum size could be redundant with the cleithrum to caudal keel minimum size. Removal of the lower jaw fork length minimum size and use of only the cleithrum to caudal keel measurement could simplify enforcement and compliance with minimum size requirements. Additionally, since the two minimum sizes refer to the same size fish, removal of the lower jaw fork length minimum size is unlikely to result in increased landings. However, removing one of the minimum size measurements could reduce flexibility for fishermen in how they choose to measure and land swordfish; therefore we do not prefer this alternative at this time.

Under Alternative 5, we would allow the lower jaw fork length minimum size to be applied to swordfish without a bill, provided the bill has been removed forward of the anterior tip of the lower jaw. Adoption of Alternative 5 would likely result in short and long-term direct minor beneficial socioeconomic impacts. Swordfish are currently measured using either the lower jaw and fork of the tail (in the case of lower jaw fork length) or the cleithrum and caudal keel (in the case of cleithrum to caudal keel) as endpoints. Neither of these measurement methods require the bill of the swordfish to

be attached, therefore, the bill is unnecessary in determining if a swordfish is of legal size. The bill of a swordfish can complicate fishing operations by presenting safety concerns and imposing storage capacity costs. If we allow fishermen to continue to employ the lower jaw fork length measurement in the absence of the bill, commercial vessels could more efficiently pack the swordfish catch, leaving more room for additional product. This additional product could increase revenues for both fishermen and dealers, therefore we prefer Alternative 5 at this time.

Under Alternative 6, we would reintroduce the 33 pound minimum weight standard. This alternative would be unlikely to have any net direct socioeconomic impacts in the short or long-term, provided that the new Commission alternative cleithrum to caudal keel minimum size of 25 inches is implemented under Alternative 3. As discussed in Section 1.1, we employed the 33 pound minimum weight, in combination with two minimum lengths, until 2009. At that time, we removed the 33 pound minimum weight and specified landing condition-specific minimum sizes. The impetus for this change was twofold. First, the use of three minimum sizes (weight, lower jaw fork length, and cleithrum to caudal keel) complicated minimum size enforcement because all three measurements had to be taken to prove that a fish was undersized. This can require heavy time investments, particularly in cases with thousands of pounds of swordfish. Second, neither enforcement agents nor fishermen could definitively determine the accurate weight and subsequent legality of fish while at sea, presenting both compliance and enforcement problems. To address these enforcement and compliance complexities, we simplified the swordfish minimum size requirements by removing the 33 pound minimum weight and specified landing condition-specific minimum lengths. Reintroducing the minimum dressed weight could provide some benefits and some disadvantages. The 33 pound minimum weight and the proposed 25 inch cleithrum to caudal keel minimum size equate to the same size fish in the majority of instances (Figure 4). The primary benefit is that fishermen might be able to retain more swordfish because some fish meet the minimum weight but not the minimum length. Reintroducing the minimum weight could provide the opportunity to retain these fish, as demonstrated in Figure 4. Disadvantages include those discussed above, including enforcement and compliance difficulties. Since it is difficult to obtain a definitive weight at sea, fishermen are unlikely to be able to determine the legality of swordfish weighing near 33 pounds. This presents uncertainties and compliance difficulties. The possible benefits and possible disadvantages, when taken together, result in neutral socioeconomic impacts. Additionally, since the 33 pound minimum weight and the proposed 25 inch cleithrum to caudal keel minimum size equate to the same size fish in the majority of instances (Figure 4), reintroducing the minimum weight standard could be unnecessary. Since Alternative 6 poses enforcement and compliance concerns, and because the socioeconomic impacts may be neutral compared to the beneficial socioeconomic impacts under Alternatives 3 and 5, we do not prefer this alternative at this time. However, should the enforcement and compliance issues be resolved in the future, we may reconsider reintroduction of the 33 pound minimum weight standard.

Short and long-term indirect socioeconomic impacts would likely be neutral to beneficial for Alternatives 3 through 6. Indirect socioeconomic impacts include those experienced by supporting businesses such as fish processors, bait and tackle suppliers, and vessel maintenance companies. Fishermen and dealers will experience some beneficial socioeconomic impacts that may carry over into the supporting businesses.

### **4.3 IMPACTS ON ESSENTIAL FISH HABITAT**

The Magnuson-Stevens Act established a program to promote the protection of essential fish habitat in the review of projects conducted by federal agencies, or under federal permits, licenses, or other authorities that affect or have the potential to affect such habitat. After the Secretary has identified essential fish habitat, federal agencies are obligated to consult with the Secretary with respect to any action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by such agency that may adversely affect any essential fish habitat. In the 2006 Consolidated HMS FMP, we concluded that there is no evidence that physical effects caused by fishing for HMS are adversely affecting essential fish habitat to the extent that detrimental effects can be identified on the habitat of fisheries. As this action would not alter fishing effort, it is anticipated that this action would not have any adverse impacts to essential fish habitat, and the conclusion for the 2006 Consolidated HMS FMP is still applicable, so further consultation is not necessary.

### **4.4 IMPACTS ON PROTECTED RESOURCES**

Direct impacts to protected resources resulting from Alternatives 1 and 2 are likely neutral in the short term. Because neither of these two alternatives are likely to impact effort in the short-term, impacts to protected resources are likely neutral. In the long-term, Alternative 1 could allow more effort in the fishery due to a higher adjusted quota, therefore, long-term direct minor adverse impacts to protected resources would be possible. In the long-term, Alternative 2 would likely have neutral direct impacts on protected resources since effort and landings would be capped at a level lower than that under Alternative 1. All indirect impacts to protected resources under any of the alternatives are likely neutral since none would impact protected resource habitat or prey species.

Direct and indirect impacts to protected resources resulting from Alternatives 3 through 6 are likely neutral in both the short- and long-term. Addressing minimum size requirements is unlikely to impact fishing effort, levels, or patterns, therefore, it would be unlikely that any of these alternatives would have impacts on protected resources.

### **4.5 ENVIRONMENTAL JUSTICE CONCERNS**

Executive Order (E.O.) 12898 requires that Federal agencies address environmental justice in the decision-making process. In particular, the environmental effects of Federal actions should not have a disproportionate effect on minority and low-income communities. This action would not have any effects on human health nor is it expected to have any disproportionate social or economic effects on minority and low-income communities. Implementing the North Atlantic swordfish quotas would likely have neutral socioeconomic impacts in the short-term because the baseline quota would be the same as in previous years and the United States is unlikely to achieve 100 percent quota utilization in the short-term. However, because this action would reduce the adjusted quota due the reduction in carryover limit from 50 to 25 percent of the base quota, there could be minor adverse socioeconomic impacts if the U.S. swordfish fishery comes close to fully utilizing the adjusted swordfish quota. This lower adjusted quota could result in a decrease in the total fishery-wide revenue. However, implementing the 25 inch cleithrum to caudal keel measurement per Recommendation 11-02 would

have moderate beneficial socioeconomic impacts because it could better address the operational needs of the United States fleet and could allow commercial fishery participants the ability to retain and dress a larger number of swordfish resulting in increased revenues for fishermen and dealers.

#### **4.6 COASTAL ZONE MANAGEMENT ACT (CZMA) CONCERNS**

NMFS determined that this action is consistent to the maximum extent practicable with the enforceable policies of the approved coastal management program of coastal states on the Atlantic including the South Atlantic, Gulf of Mexico, and Caribbean that have approved coastal zone management programs. Upon receipt of the consistency determination, the states have 60 days to review and provide a response. This determination was submitted for review by NMFS on May 1, 2012 under section 307 of the CZMA. NMFS received letters of concurrence with the consistency determination from the following states: Connecticut, Alabama, Delaware, Florida, Georgia, Louisiana, New Hampshire, Maryland, Mississippi, New Jersey, North Carolina, Rhode Island, and Virginia. NMFS has not yet received letters of concurrence from Maine, Connecticut, Massachusetts, New York, Delaware, South Carolina, Puerto Rico, or the United States Virgin Islands. Because those states did not respond within the 60 day time period, we infer consistency.

#### **4.7 CUMULATIVE IMPACTS**

Cumulative impacts are the impacts on the environment that result from the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR § 1508.7). A cumulative impact includes the total effect on a natural resource, ecosystem, or human community due to past, present, and reasonably foreseeable future activities or actions of federal, non-federal, public, and private entities. Cumulative impacts may also include the effects of natural processes and events, depending on the specific resource in question. Cumulative impacts include the total of all impacts to a particular resource that have occurred, are occurring, and would likely occur as a result of any action or influence, including the direct and reasonably foreseeable indirect impacts of a federal activity. The goal of this section is to describe the cumulative ecological, economic and social impacts of past, present and reasonably foreseeable future actions with regard to the management measures presented in this document.

Prior to 2006, we implemented a number of measures primarily to reduce bycatch mortality in the pelagic longline fishery. These included the August 2000 bycatch and time/area closure rule (August 1, 2000; 65 FR 47214) and the July 2004 rule implementing Biological Opinion measures (i.e., circle hooks, release gears, etc.) required to fulfill NMFS' Section 7 Endangered Species Act obligations (July 6, 2004; 69 FR 40734). The cumulative impacts of these measures on the pelagic longline fishery has contributed to the unintended effect of the United States not harvesting its full Commission-recommended domestic swordfish quota since 2000, despite the improved stock status of the species

Since 2007, with the recovery of the North Atlantic swordfish stock, we have been actively working to revitalize the U.S. swordfish fishery by providing opportunities for additional swordfish

fishing when possible, especially with gears that are low in bycatch and bycatch mortality, while balancing the impacts on other species caught on the same gear that are still overfished or experiencing overfishing. We believe that this action, in combination with Agency's effort to revitalize the fishery, will have positive cumulative impacts on the North Atlantic swordfish stock. Preferred Alternative 2 would implement a reduction in the underharvest carryover limit to 25 percent of the base quota and a quota transfer of 112.8 mt dw to Morocco. The underharvest carryover limit would keep total Atlantic-wide swordfish mortality within the Commission's Standing Committee for Research and Statistics swordfish rebuilding plan and the quota transfer to Morocco would provide quota to support joint scientific research and Morocco's efforts to eliminate the use of driftnets.

Preferred Alternatives 3 and 5 would allow the use of the 25 inch cleithrum to caudal keel minimum size for dressed swordfish and the use of the 47 inch lower jaw fork length minimum size to be applied to swordfish without a bill, provided the bill has been removed forward of the anterior tip of the lower jaw, respectively. We believe that the preferred alternatives would have positive impacts on the Atlantic swordfish fishery but there would be no incremental change in cumulative impacts. Both preferred alternatives in conjunction with the Agency's efforts to revitalize the fishery would simplify and facilitate compliance and enforcement of the minimum size requirements and increase the efficiency of the fishery. Simplifying enforcement and compliance as well as the efficiency of the fishery could lead to an increase in the number of fish retained and annual revenue in the future. Additionally, both these measures could better address the operational needs of the U.S. swordfish fleet while not having negative ecological impacts (e.g., increase effort or landings) to the Atlantic swordfish stocks.

The HMS Management Division is preparing proposed rules for Amendment 5, 7, and 8 to the 2006 Consolidated HMS FMP. The proposed rule for Amendment 5 to the 2006 Consolidated HMS FMP would evaluate the management measures for scalloped hammerhead sharks, sandbar sharks, dusky sharks, blacktip sharks, and blacknose sharks based on recent stock assessments. The rulemaking could consider, among other things, a range of commercial and recreational management measures in both directed and incidental shark fisheries including, but not limited to: quota levels, regional and seasonal quotas, retention limits, gear modifications, and time/area closures. A proposed rule for Amendment 7 to the 2006 Consolidated HMS FMP would examine the regulations that affect all Atlantic bluefin tuna fisheries, both commercial and recreational, to determine if existing measures are the best means of achieving current management objectives and providing additional flexibility to adapt in the future. The proposed rule for Amendment 8 to the 2006 Consolidated HMS FMP would consider the establishment and implementation of new and/or modified commercial vessel permits to 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. All of these Amendments to the 2006 Consolidated HMS FMP potentially may have an impact on the swordfish fishery as new management measures may affect the PLL fishery that harvests large portion of U.S. swordfish in the foreseeable future

#### **4.8 COMPARISON OF ALTERNATIVES**

The environmental, socioeconomic and impacts to protected resources for the different alternatives and their sub-alternatives compared in Table 2.



**Table 2. Comparison of alternatives considered**

Alternative	Quality	Timeframe	Ecological	Protected Resources	Socioeconomic
<i>Alternative 1: No Action. Do not implement Recommendation 11-02 or any other new management measures</i>	Direct	Short-term	O	O	⊖ <sub>-</sub>
		Long-term	⊖ <sub>-</sub>	⊖ <sub>-</sub>	⊖ <sub>+</sub>
	Indirect	Short-term	O	O	O
		Long-term	O	O	O
	Cumulative	Short-term	O	O	O
		Long-term	O	O	O
<i>Implement Recommendation 11-02, which includes a quota transfer of 112.8 mt dw from the United States to Morocco in 2012 and 2013 and an annual underharvest carryover limit of 25 percent of a CPC's base quota); maintain status quo for North Atlantic quotas – Preferred Alternative</i>	Direct	Short-term	O	O	O
		Long-term	⊖ <sub>+</sub>	O	⊖ <sub>-</sub>
	Indirect	Short-term	O	O	O
		Long-term	O	O	O
	Cumulative	Short-term	O	O	O
		Long-term	O	O	O
<i>Alternative 3: Implement the alternative swordfish cleithrum to caudal keel minimum size measurement of 25 inches per Recommendation 11-02 – Preferred Alternative</i>	Direct	Short-term	O	O	⊖ <sub>+</sub>
		Long-term	O	O	⊖ <sub>+</sub>
	Indirect	Short-term	O	O	O
		Long-term	O	O	O
	Cumulative	Short-term	O	O	O
		Long-term	O	O	O
<i>Alternative 4: Use the cleithrum to caudal keel measurement as the sole minimum size and discontinue the use of the lower jaw fork length minimum</i>	Direct	Short-term	O	O	O
		Long-term	O	O	O

<i>length standard in United States domestic fisheries</i>	Indirect	Short-term	○	○	○
		Long-term	○	○	○
	Cumulative	Short-term	○	○	○
		Long-term	○	○	○
<i>Alternative 5: Allow the lower jaw fork length minimum size to be applied to swordfish without a bill, provided the bill has been removed forward of the anterior tip of the lower jaw. Preferred Alternative</i>	Direct	Short-term	○	○	⊙ <sub>+</sub>
		Long-term	○	○	⊙ <sub>+</sub>
	Indirect	Short-term	○	○	○
		Long-term	○	○	○
	Cumulative	Short-term	○	○	○
		Long-term	○	○	○
<i>Alternative 6: Reintroduce the 33 pound minimum weight standard.</i>	Direct	Short-term	○	○	○
		Long-term	○	○	○
	Indirect	Short-term	○	○	○
		Long-term	○	○	○
	Cumulative	Short-term	○	○	○
		Long-term	○	○	○

Symbol Key:

- Neutral Impacts
- ⊙<sub>+</sub> Minor Beneficial Impacts
- ⊙<sub>-</sub> Minor Adverse Impacts
- ⊙<sub>+</sub> Moderate Beneficial Impacts
- ⊙<sub>-</sub> Moderate Adverse Impacts

#### **4.9 SWORDFISH RESERVE CATEGORY QUOTA AND SWORDFISH COLLECTION VIA AUTHORIZED FISHING ACTIVITIES**

In 1999, we established a reserve quota category for U.S. North Atlantic swordfish, and 301

mt dw of North Atlantic swordfish was allocated to the reserve. The establishment of the reserve category was designed to allow the North Atlantic rebuilding program, established in 1999, to remain on track. Quota in the reserve category may be used for inseason adjustments to other fishing categories, to compensate for projected or actual overharvest in any category, for fishery independent research, or for other purposes consistent with management objectives. In 2007, we transferred 15 percent (440.6 mt dw) of the 2007 baseline U.S. North Atlantic swordfish allocation to the reserve category (October 5, 2007, 72 FR 56929). Since 2007, a number of transfers have been made out of the reserve, including 18.8 mt dw of North Atlantic swordfish to Canada annually since 2003 (November 23, 2004; 69 FR 68090) and 161.7 mt dw to Japan in 2002 (March 24, 2003; 68 FR 14167). In this action and per Recommendation 11-02, we will eliminate the 18.8 mt dw annual transfer to Canada out of the reserve quota.

We issue Exempted Fishing Permits and Scientific Research Permits for research activities involving the collection of biological samples and data from swordfish. Exempted Fishing Permits and Scientific Research Permits are issued under the authority of the Magnuson-Stevens Act and ATCA. These Exempted Fishing Permits and Scientific Research Permits authorize collections of swordfish, as well as other HMS, from federal waters in the Atlantic Ocean and Gulf of Mexico for the purposes of scientific data collection. Regulations at 50 CFR 600.745 and 50 CFR 635.32 govern scientific research activity, exempted fishing, and exempted educational activity with respect to Atlantic HMS. Exempted Fishing Permits are issued to individuals for the purpose of conducting research or other fishing activities using private (non-research) vessels, whereas an Scientific Research Permits would be issued to Agency, state, and academic scientists who are using NOAA or bona fide research vessels as their platforms.

Sampling may require collecting undersize fish, sampling fish in excess of retention/bag limits, the use of unauthorized gears, the collection of fish without the necessary commercial or recreational permits (as research vessels are not required to obtain such permits), and/or the deployment of archival tags. Issuance of Exempted Fishing Permits and Scientific Research Permits may be necessary if the fisheries for swordfish are closed for extended periods during which collection of live animals and/or biological samples would otherwise be prohibited. Researchers issued an Exempted Fishing Permits or Scientific Research Permits are required to submit interim reports regarding collections within five days of the completion of a fishing trip and an annual report within 30 days of the expiration of a permit.

NMFS regularly issues Exempted Fishing Permits and Scientific Research Permits to scientists for a wide range of research involving tagging and biological sampling of swordfish. For instance, much research has involved the deployment of archival and pop-up satellite archival tags on swordfish to determine swordfish stock structure. Other tagging studies have investigated migration routes, residency, spawning areas, mixing, and stock structure of swordfish. Biological sampling was conducted to determine reproduction status, feeding habits, and nutritional condition of fish. Additionally swordfish sampling was conducted to study the impact of gear modification on target catch rates and bycatch.

We issued a total of 24 and 28 Exempted Fishing Permits, Scientific Research Permits, and Display Permits in 2009 and 2010 for the collection of HMS, respectively. Although we authorized

collection of 312 swordfish, only one was taken in 2009. In 2010, we authorized the collection of 1,085 swordfish, of which only 181 were harvested. These authorizations do not include permits that were issued for research related to the Deepwater Horizon/BP oil spill in the Gulf of Mexico. An additional seven permits and/or amendments to permits were issued for research related to the oil spill in the Gulf of Mexico in 2010. Although the total number of authorized swordfish has not been taken in the past couple of years, the potential exists for research harvest to reach this number. Therefore, any reserve category would need to include enough quota to cover all authorized swordfish harvests. Using the 2009 average weight of non-Gulf of Mexico swordfish of 90 lbs dw (U.S. Domestic Longline Database, Southeast Fishery Science Center), multiplied by the number of swordfish authorized in 2010 (1085 swordfish), we expect that approximately 44.3 mt dw of swordfish could be harvested for fishery-independent research under the Exempted Fishing Permit program.

Currently, mortality associated with an Exempted Fishing Permits, Scientific Research Permits, Display, or Letter of Acknowledgement (except for larvae) is counted against the appropriate quota. As most fish are taken in conjunction with commercial fishing, mortality is usually counted against the commercial quotas. However, we still need to account for mortalities that come from research activities that are not in conjunction with commercial fishing activities. As noted above, the reserve category was specifically set up to account for inseason adjustments and authorized research activities. In this action, we would allocate 50 mt dw of adjusted quota to the reserve category quota and then use the reserve category quota to account for mortality associated with these types of permits. As noted in the previous paragraph, we expect approximately 44.3 mt dw of swordfish could be harvested under the Exempted Fishing Permit program, so allocating 50 mt dw to the reserve category should provide enough quota in the reserve category to cover any research. The impacts to the human environment associated with any of the swordfish quota categories have been previously analyzed in the 2006 Consolidated HMS FMP, and specific quota allocations based on the Commission's recommendations have been analyzed in subsequent National Environmental Policy Act analyses. Mortality associated with these types of permits is usually a small percentage of the total amount authorized for research activities, as evidenced by the small number of swordfish takes reported versus authorized for 2011. Mortality associated with these types of permits would not exceed the reserve category quota. Therefore, the impacts to the human environment associated with swordfish mortality authorized under these permits would be consistent with the analyses conducted under the 2006 Consolidated HMS FMP and implementing regulations and no further analysis is needed here.

## **5.0 MITIGATION AND UNAVOIDABLE ADVERSE IMPACTS**

### **5.1 MITIGATING MEASURES**

Under the preferred alternative for quotas, we would implement Recommendation 11-02 for the 2012 fishing year in accordance with domestic legislation and the 2006 Consolidated HMS FMP and implementing regulations. The Commission-recommended total allowable catch for North Atlantic swordfish is intended to have long-term positive ecological benefits and will maintain the stock biomass at maximum sustainable yield. The U.S. domestic swordfish management program includes numerous management measures to implement the Commission's quota and management recommendations, consistent with the 2006 Consolidated HMS FMP. We use a variety of controls such as swordfish quotas, seasons, retention limits, size limits, and time/area closures to provide reasonable swordfish fishing and harvest opportunities over a wide geographic range within available quotas, while minimizing negative ecological impacts.

Using its in-season management authority, we would be able to monitor and make adjustments to the commercial fishery close to "real time." Since we will continue to monitor the commercial fishery, any unpredicted increase in effort and landings of swordfish, should they occur, could be addressed within a fishing season. We also may adjust recreational effort controls based on the best information available, but landings data are not available with the timing and frequency of commercial data.

Under the preferred minimum size limit alternatives, we would implement the 25 inch cleithrum to caudal keel measurement per Recommendation 11-02, which could better address the operational needs of the U.S. fleet by allowing commercial fishery participants the ability to retain and dress a larger number of swordfish that meet the 47 inch lower jaw fork length measurement but not the current 29 inch cleithrum to caudal keel measurement. However, the 25 inch cleithrum to caudal keel measurement is not expected to jeopardize the sustainability of the North Atlantic swordfish because it is not expected that this lower cleithrum to caudal keel measurement will substantially increase the number of swordfish retained and is equivalent to current 47 inch lower jaw fork length. In addition, we would allow the lower jaw fork length minimum size to be applied to swordfish without a bill, provided the bill has been removed forward of the anterior tip of the lower jaw and the head remains naturally attached. Removing the bill would not have any impact on determining compliance with minimum size measurements nor create any additional impacts to the swordfish stock from increased catch or effort or result in the harvest of undersized individuals. Use of the lower jaw fork length minimum size measurement to swordfish without a bill would provide increased flexibility for fisherman, increase safety, and allow for more efficient packing while not impacting the ability to determine if the fish meets the lower jaw fork length minimum size. Thus, we have not identified mitigating measures for these issues.

### **5.2 UNAVOIDABLE ADVERSE IMPACTS**

Although the preferred quota alternative would result in a slight decrease in the adjusted quota due to the reduced underharvest carryover limit and quota transfer to Morocco, it is consistent with Recommendation 11-02, the 2006 Consolidated HMS FMP, Atlantic Tunas Convention Act, and the Magnuson-Stevens Act. We do not expect a change in current fishing patterns or an increase in

fishing effort as compared to pre-2011 levels. The action to adjust quotas and minimum size requirements would not alter current impacts on threatened or endangered species which have been previously analyzed in the 2001 and 2004 Biological Opinions. The action would not significantly modify fishing behavior or gear type, nor would it expand fishing effort because the current baseline quota remains unchanged and the U.S. swordfish fleet has not fully utilized the baseline quota. Thus, the actions analyzed in this Environmental Assessment/Regulatory Impact Review/Final Regulatory Flexibility Analysis would not be expected to change previously analyzed endangered species or marine mammal interaction rates or magnitudes, or substantially alter current fishing practices or bycatch mortality rates.

### **5.3 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES**

No irreversible or irretrievable commitments of resources are expected from this rule.

## 6.0 ECONOMIC EVALUATION

Note that all dollars are reported in nominal dollars, consistent with methods used in the 2006 Consolidated HMS FMP.

### 6.1 NUMBER OF VESSELS AND PERMIT HOLDERS

This section further describes the number of vessel and dealer permit holders that may be affected by this rulemaking as of October 2011. Table 3 lists the number of swordfish permit holders and is used to estimate the universe of commercial vessels (i.e., directed, incidental and handgear swordfish permits holders) that would be impacted. These permits have been limited access since 1999. The number of HMS Angling, Charter/Headboat, and Swordfish Dealer permits are also provided, however, these permits are not limited access. The HMS Angling and Charter/Headboat permits are not species-specific; thus, permit holders may fish for swordfish but may also fish for tunas, billfish, or sharks. The Incidental HMS Squid Trawl Permit, which allows for limited retention of swordfish caught in the *Illex* squid trawl fishery, became effective toward the end of 2011. We have preliminary estimates on the number of vessels that may have acquired this permit based on the number of existing *Illex* squid trawl moratorium permit holders. As of 2010, there were a total of 76 *Illex* squid moratorium permit holders that may have or could avail themselves of this permit (76 FR 49368, August 10, 2011). All permit holders are considered small entities for purposes of Executive Order 12866.

**Table 3. Number of Directed Swordfish, Incidental Swordfish, Swordfish Handgear, Charter/Headboat, HMS Angling, and Swordfish Dealer Permits, 2005-2011. Source: NMFS 2011.**

Type of Permit	2005	2006	2007	2008	2009	2010	2011
Directed Swordfish	190	191	180	181	187	177	178
Incidental Swordfish	91	86	79	76	72	72	67
Swordfish Handgear	92	88	82	81	81	75	78
Charter/Headboat	3,963	4,173	3,899	4,297	4,150	4,174	4,194
HMS Angling	24,127	25,238	24,220	26,933	25,506	24,479	23,138
Swordfish Dealer	294	285	269	171	177	181	191
<b>Total</b>	28,757	30,061	28,729	31,739	30,173	29,158	27,846

### 6.2 GROSS REVENUES OF COMMERCIAL FISHERMEN

We calculated annual gross revenues by combining current federal permit holders with their reported landings from the U.S. National Report (NMFS 2011a) averaged from 2006 to 2010. These landings were multiplied by ex-vessel prices for swordfish obtained from dealer reporting to determine annual gross revenues.

Table 4 provides data on the prices swordfish fishermen received at the dock. The average values from HMS dealer reports were used to construct the table.

**Table 4. Estimates of the Total Ex-vessel Annual Revenues of Atlantic HMS Commercial Swordfish Fisheries. Source: NMFS 2011.**

Species		2006	2007	2008	2009	2010
Swordfish	Ex-vessel \$/lb dw	\$3.54	\$4.02	\$3.63	\$3.45	\$4.41
	Weight lb dw	3,002,597	3,643,926	3,414,513	3,762,280	3,173,739
	Fishery Revenue	\$10,629,193	\$14,648,583	\$12,394,682	\$12,979,866	\$13,996,189

Note: Average ex-vessel prices may have some weighting errors

### 6.3 OPERATING COSTS OF COMMERCIAL FISHERMEN

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

The primary expenses associated with operating an Atlantic HMS permitted commercial vessel include labor, fuel, bait, ice, groceries, other gear, and light sticks on swordfish trips. Unit costs are collected on some of the primary variable inputs associated with trips. The unit costs for fuel, bait, and light sticks are reported in Table 5. Fuel costs increased approximately 89 percent from 2005 to 2008 while the cost per pound for bait has remained fairly constant. This spike in fuel costs ended in 2009 when fuel costs decreased by 45 percent in one year. The unit cost per light sticks used in the pelagic longline fishery has actually declined from 2005 to 2009.

**Table 5. Median Unit Costs for Fuel, Bait, and Light Sticks 2006- 2009. Source: Atlantic HMS logbooks.**

Input Unit Costs	2005	2006	2007	2008	2009
Fuel	\$1.90	\$2.20	\$2.29	\$3.59	\$1.98
Bait	\$0.85	\$0.85	\$0.85	\$0.85	\$0.85
Light Sticks*	\$0.50	\$0.50	\$0.40	\$0.37	\$0.37

\*Cost per light stick.

Table 6 provides the median total cost per trip for the major variable inputs associated with Atlantic HMS trips. Fuel costs are one of the largest variable expenses and the total costs of fuel decreased substantially per trip in 2009 in line with the decline in the unit cost of fuel.

**Table 6. Median Input Costs for HMS Trips 2006 - 2009. Source: Atlantic HMS logbooks.**

Input Costs	2005	2006	2007	2008	2009
Fuel	\$2,341	\$1,728	\$2,144	\$3,031	\$2,303



Bait	\$920	\$750	\$858	\$1,080	\$1,320
Light Sticks	\$500	\$500	\$520	\$444	\$446
Ice Costs	\$480	\$400	\$540	\$520	\$600
Grocery Expenses	\$610	\$470	\$600	\$600	\$800
Other Trip Costs	\$1,250	\$920	\$1,236	\$1,293	\$1,500

Labor costs are also an important component of operating costs for HMS commercial vessels. Table 7 lists the amount of crew on a typical trip. The median number of crew members has been consistently three from 2005 to 2009. Most crew and captains are paid based on a lay system.

According to Atlantic HMS logbook reports, owners are typically paid 50 percent of revenues. Captains receive a 20 percent share and crew in 2009 received 22.5 percent on average. These shares are typically paid out after costs are netted from gross revenues. Median total shared costs per trip have ranged from \$4,500 to \$5,000 from 2005 to 2009.

**Table 7. Median Labor Inputs and Costs for HMS Trips 2006 - 2009. Source: Atlantic HMS logbooks.**

Labor	2005	2006	2007	2008	2009
Number of Crew	3	3	3	3	3
Owner Share	50%	50%	50%	50%	50%
Captain Share	20%	20%	20%	20%	20%
Crew Share	11%	12%	15%	15%	22.5%
Total Shared Costs	\$4,550	\$4,500	\$4,500	\$5,000	\$4,689

In 2009, median reported total trip sales were \$9,731. In 2008, median reported total trip sales were \$10,970. In 2007, the median reported total trip sales were \$12,064. After adjusting for operating costs, median net earnings per trip in 2008 was \$3,214. Median net earnings per trip increased to \$4,340 in 2009.

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

#### **6.4 ANGLING AND CHARTER/HEADBOAT REVENUES**

A complete description of these fisheries is provided in the 2006 Consolidated HMS FMP and the 2011 Stock Assessment and Fishery Evaluation Report and is not repeated here. In 2004, we collected market information regarding advertised charterboat rates. The analysis of this data focused on observations of advertised rates on the internet for full day charters. Full day charters vary from 6 to 14 hours long with a typical trip being 10 hours. Most vessels can accommodate six passengers, but this also varies from two to 12 passengers. The average price for a full day boat charter was \$1,053 in 2004. Sutton *et al.*, (1999) surveyed charterboats throughout Alabama, Mississippi, Louisiana, and Texas in 1998 and found the average charterboat base fee to be \$762 for a full day trip. Holland *et al.* (1999) conducted a similar study on charterboats in Florida, Georgia, South Carolina, and North Carolina and found the average fee for full day trips to be \$554, \$562, \$661, and \$701, respectively. Comparing these two studies conducted in the late 1990s to the average

advertised daily HMS charterboat rate in 2004, it is apparent that there were significant increases in charterboat rates.

## **6.5 EXPECTED ECONOMIC IMPACTS OF THE ALTERNATIVES**

### **ALTERNATIVE 1: NO ACTION. DO NOT IMPLEMENT RECOMMENDATION 11-02 OR ANY OTHER NEW MANAGEMENT MEASURES**

Under Alternative 1, we would not implement any of the measures contained in Recommendation 11-02, including the quota allocation, underharvest carryover limit, international quota transfer, or cleithrum to caudal keel minimum size measurement. Alternative 1 would likely have net direct minor adverse socioeconomic impacts in the short-term. No impacts would be expected if we do not implement the quota portion of Recommendation 11-02, however, direct minor adverse socioeconomic short-term impacts could result if we do not implement the alternative cleithrum to caudal keel minimum size. The U.S. quota specified in Recommendation 11-02 is unchanged from previous years; therefore, the base quota would not be affected. The only effect of non-action would be that the transferred quota would not be deducted from the U.S. base quota. Since the United States has not harvested the entire allocated swordfish quota and is unlikely to do so in the short-term, deducting the transferred quota from the domestic base quota is unlikely to result in changes to annual revenue or revenue to individual vessels. Similarly, if we do not reduce the annual carryover limit from 50 percent to 25 percent, the higher annual adjusted quota is unlikely to be utilized and is unlikely to result in changes in landings or revenue. However, if NMFS does not implement the alternative cleithrum to caudal keel minimum size, there could be direct minor adverse socioeconomic short-term impacts. The 25 inch cleithrum to caudal keel minimum size is equivalent to the existing 47 inch lower jaw fork length minimum size. Currently, fishermen do not have a minimum size measurement that allows for the retention of dressed swordfish that measure at or slightly above 47 inches lower jaw fork length. If a fisherman catches a swordfish that meets the 47 inch lower jaw fork length minimum size but not the current 29 inch cleithrum to caudal keel minimum size, the fisherman must either land the fish with the head naturally attached or discard the fish. Due to storage capacity limitations and uncertainty in minimum size regulations, fishermen sometimes choose to discard fish that legally meet the 47 inch lower jaw fork length measurement but do not meet the 29 inch cleithrum to caudal keel minimum size. Similarly, dealers sometimes will not accept fish that meet the 47 inch lower jaw fork length measurement but not the 29 inch cleithrum to caudal keel minimum size. These fish are landed with the head naturally attached, but once removed, some dealers have expressed concern that a minimum size violation could occur in the absence of proof that the fish was landed with the head and met the 47 inch lower jaw fork length measurement. For these reasons, if we do not implement the alternative cleithrum to caudal keel minimum size, fishermen would continue to discard and not land some fish that meet the lower jaw fork length minimum size but not the current cleithrum to caudal keel minimum size, resulting in direct short-term minor adverse socioeconomic impacts.

In the long-term, Alternative 1 could have net direct minor beneficial socioeconomic impacts. Due to a variety of swordfish revitalization efforts within and outside of the Agency, we expect that U.S. fishermen could achieve near 100 percent quota utilization. If we do not take action to reduce the base quota due to the annual quota transfer to Morocco nor reduce the adjusted quota by limiting

underharvest carryover, the domestic fishery could land more swordfish resulting in higher annual revenues. The United States is allocated 2,937.6 mt dw of North Atlantic swordfish. If 112.8 mt dw of quota is not transferred to Morocco and if up to 50 percent of the base quota can be carried over, the total U.S. adjusted quota could reach 4406.4 mt dw (9,714,349 lb dw). Assuming an average ex-vessel price of \$4.41 per pound (NMFS 2011) and 100 percent quota utilization, the total possible annual gross revenues across the domestic fishery would be estimated to be \$42,840,279 under Alternative 1. In 2011, there were 178 directed swordfish permit holders, 67 incidental swordfish permit holders, and 78 swordfish handgear permit holders (NMFS 2011). The Incidental HMS Squid Trawl Permit, which allows for limited retention of swordfish caught in the *Illex* squid trawl fishery, became effective toward the end of 2011, therefore, we do not yet have a reliable estimate on the number of vessels that have or will avail themselves of this permit. Due to quota tracking complexities, we do not have a proportional breakdown of the total landings by permit type, however, the average annual ex-vessel revenue across all swordfish permit types is \$132,632 per vessel (\$42,840,279 / (178 directed swordfish permit holders, 67 incidental swordfish permit holders, and 78 swordfish handgear permit holders)). Since retention limits are higher for directed permit holders than incidental permit holders, actual per vessel revenue would likely be higher for directed permit holders and lower for incidental permit holders. Handgear permit holders do not have a retention limit, however, the gear used by these permit holders is less efficient, therefore, actual per vessel revenue is somewhere in between directed and incidental permit holders. As in the short-term, fishermen might still discard fish that meet the lower jaw fork length minimum size but not the current minimum size, precluding ex-vessel revenue from these landings, however, the larger quota would likely offset this impact. Because the United States has an obligation to implement the Commission's recommendations under the Atlantic Tunas Convention Act, we do not prefer this alternative at this time.

Indirect socioeconomic impacts resulting from Alternative 1 are likely neutral in the short and long-term. Changes to international quota transfers and underharvest carryover limits are unlikely to affect dealers, bait and tackle suppliers, and other supporting businesses since they do not solely rely on the swordfish fishery

**ALTERNATIVE 2: IMPLEMENT RECOMMENDATION 11-02, WHICH INCLUDES A QUOTA TRANSFER OF 112.8 MT DW FROM THE UNITED STATES TO MOROCCO IN 2012 AND 2013 AND AN ANNUAL UNDERHARVEST CARRYOVER LIMIT OF 25 PERCENT OF A CPC'S BASE QUOTA); MAINTAIN STATUS QUO FOR NORTH ATLANTIC QUOTAS – PREFERRED ALTERNATIVE**

Alternative 2 would implement the Recommendation 11-02 provisions pertaining to quota allocation, the underharvest carryover limit, and the quota transfer to Morocco. Alternative 2 would likely have direct neutral socioeconomic impacts in the short-term. As noted in the ecological impact discussion for Alternative 1, the United States is unlikely to achieve 100 percent quota utilization in the short-term. Consequently, minor changes to the base quota through international quota transfers or to the adjusted quota through reduced underharvest carryover limits are unlikely to impact swordfish fishing effort levels or annual revenues. In the long-term, however, Alternative 2 could have direct minor adverse socioeconomic impacts assuming the U.S. swordfish fishery nears 100 percent quota utilization. At that time, an adjusted quota that reflects the annual international quota transfer to Morocco and the lower underharvest carryover limit could lead to a lower available

quota relative to the current adjusted quota. This lower level of adjusted quota would result in a decrease in the total possible fishery-wide annual revenue. If we deduct the 112.8 mt dw quota transfer from the U.S. base quota of 2,937.6 mt dw and limits underharvest carryover to 25 percent, the total U.S. adjusted quota could reach 3,559.2 mt dw (7,846,612 lbs dw). Assuming an average ex-vessel price of \$4.41 per pound (NMFS 2011) and 100 percent quota utilization, total possible gross revenues across the domestic fishery would be estimated to be \$34,603,559 under Alternative 2. Therefore, Alternative 2 could result in annual gross revenues that are \$8,236,720 less (\$42,840,279 - \$34,603,559) than the possible annual gross revenues under Alternative 1. However, the United States is required to implement these measures through regulations as necessary and appropriated to comply with Recommendation 11-02 under Atlantic Tunas Convention Act. Therefore, we prefer this alternative at this time.

Indirect socioeconomic impacts resulting from Alternative 2 are likely neutral in the short and long-term. Changes to international quota transfers and underharvest carryover limits are unlikely to affect dealers, bait and tackle suppliers, and other supporting businesses since they do not solely rely on the swordfish fishery

**ALTERNATIVE 3: IMPLEMENT THE ALTERNATIVE SWORDFISH CLEITHRUM TO CAUDAL KEEL MINIMUM SIZE MEASUREMENT OF 25 INCHES PER RECOMMENDATION 11-02 – PREFERRED ALTERNATIVE**

Under Alternative 3, we would implement the swordfish minimum size portion of Recommendation 11-02 which allows a 25 inch cleithrum to caudal keel measurement. This alternative would likely have direct moderate beneficial socioeconomic impacts in both the short- and long-term. The 25 inch cleithrum to caudal keel minimum size is equivalent to the existing 47 inch lower jaw fork length minimum size. Currently, fishermen do not have a minimum size measurement that allows for the retention of dressed swordfish that measure at or slightly above 47 inches lower jaw fork length. If a fisherman catches a swordfish that meets the 47 inch lower jaw fork length minimum size but not the current 29 inch cleithrum to caudal keel minimum size, the fisherman must either land the fish with the head naturally attached or discard the fish. Due to storage capacity limitations and uncertainty in minimum size regulations, fishermen sometimes choose to discard fish that legally meet the 47 inch lower jaw fork length measurement but do not meet the 29 inch cleithrum to caudal keel minimum size. Similarly, dealers sometimes will not accept fish that meet the 47 inch lower jaw fork length measurement but not the 29 inch cleithrum to caudal keel minimum size. Even when these swordfish are landed with the head naturally attached, some dealers have expressed concern that, once the head is removed, the fish could be in violation of minimum size requirements. For these reasons, implementing the Commission's alternative minimum cleithrum to caudal keel size of 25 inches could lead to increased retention of previously discarded legal fish that measure at or slightly above 47 inches lower jaw fork length, since this cleithrum to caudal keel minimum size is equivalent to a greater number of 47 inch lower jaw fork length fish (Figure 2). Fish in this size range are the most frequently encountered fish (Figure 5 and Figure 6; note that the figures provide lengths in centimeters), therefore, increased landings of fish in this size range are not trivial. An analysis of the possible impact to swordfish landings resulting from Alternative 3 indicated a possible increase in swordfish landings of 51.4 mt dw (113,316 lbs dw) (Section 4.1). Assuming an average ex-vessel price of \$4.41 per pound (NMFS 2011), this would equate to

additional revenue for the entire fleet of \$499,724 under this alternative. The increase in retained catch could lead to increased annual revenues for both fishermen and dealers, resulting in direct moderate beneficial socioeconomic impacts in both the short and long-term. Because this alternative provides these benefits to fishermen but does not lead to increased mortality of undersized swordfish, we prefer this alternative at this time.

Short and long-term indirect socioeconomic impacts would likely be neutral for Alternative 3. Indirect socioeconomic impact include those experienced by supporting businesses such as fish processors, bait and tackle suppliers, and vessel maintenance companies. Although fishermen and dealers will experience some impacts, these impacts are unlikely to carry over into the supporting businesses.

**ALTERNATIVE 4: USE THE CLEITHRUM TO CAUDAL KEEL MEASUREMENT AS THE SOLE MINIMUM SIZE AND DISCONTINUE THE USE OF THE LOWER JAW FORK LENGTH MINIMUM LENGTH STANDARD IN U.S. DOMESTIC FISHERIES**

Under Alternative 4, we would use the cleithrum to caudal keel measurement as the sole minimum size and discontinue the use of the lower jaw fork length minimum size in U.S. domestic fisheries. This alternative would be unlikely to have any direct socioeconomic impacts in the short or long-term, provided that the new Commission's alternative cleithrum to caudal keel minimum size of 25 inches is implemented under Alternative 4. The current lower jaw fork length minimum size of 47 inches and the proposed cleithrum to caudal keel minimum size of 25 inches equate to the same size fish in the majority of instances. Therefore, the lower jaw fork length minimum size could be redundant with the cleithrum to caudal keel minimum size. Removal of the lower jaw fork length minimum size and use of only the cleithrum to caudal keel measurement could simplify enforcement and compliance with minimum size requirements. Additionally, since the two minimum sizes refer to the same size fish, removal of the lower jaw fork length minimum size is unlikely to result in increased landings. However, removing one of the minimum size measurements could reduce flexibility for fishermen in how they choose to measure and land swordfish; therefore we do not prefer this alternative at this time.

Short and long-term indirect socioeconomic impacts would likely be neutral for Alternative 4. Indirect socioeconomic impact include those experienced by supporting businesses such as fish processors, bait and tackle suppliers, and vessel maintenance companies. Although fishermen and dealers will experience some impacts, these impacts are unlikely to carry over into the supporting businesses.

**ALTERNATIVE 5: ALLOW THE LOWER JAW FORK LENGTH MINIMUM SIZE TO BE APPLIED TO SWORDFISH WITHOUT A BILL, PROVIDED THE BILL HAS BEEN REMOVED FORWARD OF THE ANTERIOR TIP OF THE LOWER JAW— PREFERRED ALTERNATIVE**

Under Alternative 5, NMFS would allow the lower jaw fork length minimum size to be applied to swordfish without a bill, provided the bill has been removed forward of the anterior tip of the lower jaw. Adoption of Alternative 6 would likely result in short and long-term direct minor beneficial socioeconomic impacts. Swordfish are currently measured using either the lower jaw and

fork of the tail (in the case of lower jaw fork length) or the cleithrum and caudal keel (in the case of cleithrum to caudal keel) as endpoints. Neither of these measurement methods require the bill of the swordfish to be attached, therefore, the bill is unnecessary in determining if a swordfish is of legal size. The bill of a swordfish can complicate fishing operations by presenting safety concerns and imposing storage capacity costs. If we allow fishermen to continue to employ the lower jaw fork length measurement in the absence of the bill, commercial vessels could more efficiently pack the swordfish catch, leaving more room for additional product. This additional product could increase revenues for both fishermen and dealers, therefore we prefer Alternative 5 at this time.

Short and long-term indirect socioeconomic impacts would likely be neutral for Alternative 5. Indirect socioeconomic impact include those experienced by supporting businesses such as fish processors, bait and tackle suppliers, and vessel maintenance companies. Although fishermen and dealers will experience some impacts, these impacts are unlikely to carry over into the supporting businesses.

#### **ALTERNATIVE 6: REINTRODUCE THE 33 POUND MINIMUM WEIGHT STANDARD.**

Under Alternative 6, we would reintroduce the 33 pound minimum weight standard. This alternative would be unlikely to have any net direct socioeconomic impacts in the short or long-term, provided that the new Commission's alternative cleithrum to caudal keel minimum size of 25 inches is implemented under Alternative 3. As discussed in Section 1.0, we employed the 33 pound minimum weight, in combination with two minimum lengths, until 2009. At that time, we removed the 33 pound minimum weight and specified landing condition-specific minimum sizes. The impetus for this change was twofold. First, the use of three minimum sizes (weight, lower jaw fork length, and cleithrum to caudal keel) complicated minimum size enforcement because all three measurements had to be taken to prove that a fish was undersized. This can require heavy time investments, particularly in cases with thousands of pounds of swordfish. Second, neither enforcement agents nor fishermen could definitively determine the accurate weight and subsequent legality of fish while at sea, presenting both compliance and enforcement problems. To address these enforcement and compliance complexities, we simplified the swordfish minimum size requirements by removing the 33 pound minimum weight and specified landing condition-specific minimum lengths. Reintroducing the minimum dressed weight could provide some benefits and some disadvantages. The 33 pound minimum weight and the proposed 25 inch cleithrum to caudal keel minimum size equate to the same size fish in the majority of instances (Figure 4). The primary benefit is that fishermen might be able to retain more swordfish because some fish meet the minimum weight but not the minimum length. Reintroducing the minimum weight could provide the opportunity to retain these fish, as demonstrated in Figure 4. Disadvantages include those discussed above, including enforcement and compliance difficulties. Since it is difficult to obtain a definitive weight at sea, fishermen are unlikely to be able to determine the legality of swordfish weighing near 33 pounds. This presents uncertainties and compliance difficulties. The possible benefits and possible disadvantages, when taken together, result in neutral socioeconomic impacts. Additionally, since the 33 pound minimum weight and the proposed 25 inch cleithrum to caudal keel minimum size equate to the same size fish in the majority of instances (Figure 4), reintroducing the minimum weight standard could be unnecessary. Since Alternative 6 poses enforcement and compliance concerns, and because the socioeconomic impacts may be neutral compared to the beneficial socioeconomic

impacts under Alternatives 3 and 5, we do not prefer this alternative at this time. However, should the enforcement and compliance issues be resolved in the future, we may reconsider reintroduction of the 33 pound minimum weight standard.

Short and long-term indirect socioeconomic impacts would likely be neutral for Alternative 6. Indirect socioeconomic impact include those experienced by supporting businesses such as fish processors, bait and tackle suppliers, and vessel maintenance companies. Although fishermen and dealers will experience some impacts, these impacts are unlikely to carry over into the supporting businesses.

## 7.0 REGULATORY IMPACT REVIEW

This section assesses the economic impacts of the alternatives presented in this document. The Regulatory Impact Review is conducted to comply with E.O. 12866 and provides analyses of the economic benefits and costs of each alternative to the nation and the fishery as a whole. Certain elements required in a Regulatory Impact Review are also required as part of an Environmental Assessment. Thus, this section should be considered only part of the Regulatory Impact Review, the rest of the Regulatory Impact Review can be found throughout this document.

### 7.1 DESCRIPTION OF THE MANAGEMENT OBJECTIVES

Please see Chapter 1 for a description of the objectives of this rulemaking.

### 7.2 DESCRIPTION OF THE FISHERY

Please see Chapter 3 for a description of fishery and environment that could be affected by this rulemaking.

### 7.3 STATEMENT OF THE PROBLEM

Please see Chapter 1 for a description of the problem and need for this rulemaking.

### 7.4 DESCRIPTION OF EACH ALTERNATIVE

Please see Chapter 2 for a summary of each alternative and Chapter 4 for a complete description of each alternative and its expected ecological, social, and economic impacts. Table 8 shows the net economic benefits and costs of each of the alternatives analyzed in this Final Environmental Assessment.

**Table 8. Net Economic Benefits and Costs of Alternatives.**

Alternatives	Net Economic Benefits	Net Economic Costs
Alternative 1: No Action. Do not implement Recommendation 11-02 or any other new management measures	Could allow for a higher adjusted quota since the underharvest carryover limit would not be reduced and the quota transfer to Morocco would not be deducted, leading to higher possible revenues. Because fishermen have not landed the entire quota in recent years, no directed net economic benefits are expected.	No direct economic impacts, but this alternative would not fulfill the United States' obligation to implement the Commission's recommendations and could impact the United States' position in the Commission.
<i>Alternative 2: Implement Recommendation 11-02, which includes a quota transfer of 112.8 mt dw from the United States to Morocco in 2012 and 2013 and an annual underharvest carryover limit of 25 percent of a CPC's base</i>	In the short-term, no economic benefits since the domestic fishery has not caught the entire North Atlantic quota in a number of years.	In the long-term, would limit adjusted quotas due to the underharvest carryover limit reduction and the quota transfer to Morocco deduction. The lower quota would reduce possible fishery-wide annual gross revenues by \$8,236,720.



<i>quota); maintain status quo for North Atlantic quotas – Preferred Alternative</i>		In the short-term, no economic costs since the domestic fishery has not caught the entire North Atlantic quota in almost a decade.
<i>Alternative 3: Implement the alternative swordfish cleithrum to caudal keel minimum size measurement of 25 inches per Recommendation 11-02 – Preferred Alternative</i>	Reduced cleithrum to caudal keel minimum size could result in an increase in the number of fish that can be retained with the head removed, increasing fishing and storage efficiency. This is estimated to produce additional revenue of \$499,724 annually.	No economic costs associated with a reduction in the cleithrum to caudal keel minimum size.
Alternative 4: Use the cleithrum to caudal keel measurement as the sole minimum size and discontinue the use of the lower jaw fork length minimum length standard in U.S. domestic fisheries	Could simplify compliance which would reduce uncertainty and allow for more efficient fishing.	Could preclude the retention of the small number of swordfish that measure at least 47 inches lower jaw fork length but not 25 inches cleithrum to caudal keel.
<i>Alternative 5: Allow the lower jaw fork length minimum size to be applied to swordfish without a bill, provided the bill has been removed forward of the anterior tip of the lower jaw– Preferred Alternative</i>	Commercial fishermen do not typically wish to retain the bill of swordfish. Allowing the lower jaw fork length minimum size be applied to swordfish without a bill would free more storage room for marketable swordfish product.	No economic cost associated with this alternative.
Alternative 6: Reintroduce the 33 pound minimum weight standard.	Could allow fishermen to retain the small number of swordfish that meet the 33 pound minimum live weight, but not the lower jaw fork length or cleithrum to caudal keel minimum sizes.	Would introduce enforcement and compliance concerns and uncertainty in determining whether a swordfish meets minimum size requirements. Difficult for fishermen to accurately assess the live weight of a swordfish while at sea, possibly reducing efficiency.

## 7.5 ECONOMIC ANALYSIS OF EXPECTED EFFECTS OF EACH ALTERNATIVE RELATIVE TO THE BASELINE

We do not foresee that the national net benefits and costs would change significantly in the short- or long-term as a result of implementation of the preferred alternatives relative to the baseline (Alternative 1). Alternative 2, which would implement an annual quota transfer of 112.8 mt dw from the United States to Morocco and an annual underharvest carryover limit of 25 percent of the base quota, would not have any short-term economic impacts. The United States has not fully used the quota in over a decade therefore, minor changes to the total adjusted quota available for U.S. harvest is unlikely to have any impact. In the long-term, as the United States uses more of the quota, total fishery-wide revenues could be impacted due to the lower adjusted quota under Alternative 2. If we deduct the 112.8 mt dw quota transfer from the U.S. base quota of 2,937.6 mt dw and limits underharvest carryover to 25 percent, the total U.S. adjusted quota could reach 3,559.2 mt dw (7,846,612 lbs dw). Assuming an average ex-vessel price of \$4.41 per pound (NMFS 2011) and 100 percent quota utilization, total possible gross revenues across the domestic fishery would be estimated

to be \$34,603,559 under Alternative 2. Therefore, Alternative 2 could result in annual gross revenues that are \$8,236,720 less (\$42,840,279 - \$34,603,559) than the possible annual gross revenues under Alternative 1. However, the transfer to Morocco and the reduction in the underharvest carryover limit are binding measures and the United States is required under Atlantic Tunas Convention Act to implement these measures in order to be in compliance with Recommendation 11-02.

Alternative 3 would implement the swordfish minimum size portion of Recommendation 11-02 which allows a 25 inch cleithrum to caudal keel measurement. If this alternative is implemented, we expect some benefits to fishermen and dealers in both the short and long-term. The lower cleithrum to caudal keel minimum size will allow more fish to be retained with the head removed, increasing fishing and storage efficiency. This is estimated to produce additional revenue of \$499,724. Since the 25 inch cleithrum to caudal keel minimum size equates to a 47 inch lower jaw fork length, this alternative would not allow for increased retention of undersized swordfish. The benefits from this alternative are minor and not significant in nature.

Alternative 4 would implement the use of the cleithrum to caudal keel measurement as the sole minimum size and discontinue the use of the lower jaw fork length minimum length standard in U.S. domestic fisheries. This alternative would be unlikely to have any impact in the short or long-term, provided that the new Commission's alternative cleithrum to caudal keel minimum size of 25 inches is implemented under Alternative 4. The current lower jaw fork length minimum size of 47 inches and the proposed cleithrum to caudal keel minimum size of 25 inches equate to the same size fish in the majority of instances. Therefore, the lower jaw fork length minimum size could be redundant with the cleithrum to caudal keel minimum size. Removal of the lower jaw fork length minimum size and use of only the cleithrum to caudal keel measurement could simplify enforcement and compliance with minimum size requirements. Additionally, since the two minimum sizes refer to the same size fish, removal of the lower jaw fork length minimum size is unlikely to result in increased landings. The benefits from this alternative are minor and not significant in nature.

Alternative 5 would allow the lower jaw fork length minimum size to be applied to swordfish without a bill. The bill is not necessary to obtain a lower jaw fork length measurement, presents a safety concern, and takes up storage room that could be used for marketable swordfish product. Allowing fishermen to remove the bill but still apply the lower jaw fork length minimum size will increase safety and allow for an increase in the storage efficiency, without undermining minimum size enforcement. The benefits from this alternative are minor and not significant in nature.

## **7.6 CONCLUSION**

Under E.O. 12866, a regulation is a "significant regulatory action" if it is likely to: 1) have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities; 2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; 3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights, and obligation of recipients thereof; or 4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order. The action described in this final

Environmental Assessment / Regulatory Impact Review /Final Regulatory Flexibility Analysis does not meet the above criteria, for example, the economic impacts as reflected in this rule are under the \$100 million threshold. This action raises no novel or legal policy issues as it implements the Commission's recommendations according to international and domestic law and policy, and is not expected to result in any inconsistency with other agency actions. Therefore, under E.O. 12866, the action described in this document has been determined to be not significant for the purposes of E.O. 12866. A summary of the expected net economic benefits and costs of each alternative can be found in Table 8.

## **8.0 FINAL REGULATORY FLEXIBILITY ANALYSIS**

The Final Regulatory Flexibility Analysis is conducted to comply with the Regulatory Flexibility Act (5 USC 601 et. seq.) (RFA). The goal of the Regulatory Flexibility Act is to minimize the economic burden of federal regulations on small entities. To that end, the Regulatory Flexibility Act directs federal agencies to assess whether the proposed regulation is likely to result in significant economic impacts to a substantial number of small entities, and identify and analyze any significant alternatives to the proposed rule that accomplish the objectives of applicable statutes and minimize any significant effects on small entities. Certain data and analysis required in a Final Regulatory Flexibility Analysis are also included in other chapters of this Environmental Assessment. Therefore, the Final Regulatory Flexibility Analysis incorporates the economic impacts identified in the Environmental Assessment by reference as supporting data for this analysis.

### **8.1 STATEMENT OF THE NEED FOR AND OBJECTIVES OF THIS FINAL RULE**

In compliance with section 604(a)(1) of the Regulatory Flexibility Act, the purpose of this rulemaking is, consistent with the 2006 Consolidated HMS FMP objectives, the Magnuson-Stevens Act, and other applicable law, to adjust the 2012 annual North and South Atlantic swordfish quotas and implement the management measures contained in Recommendation 11-02, consistent with the Magnuson-Stevens Act and the Atlantic Tunas Convention Act. Under the Atlantic Tunas Convention Act, the United States shall promulgate regulations as may be necessary and appropriate to implement binding recommendations of the Commission. An objective of this action is to adjust the 2012 Atlantic swordfish quotas and implement the management measures contained in Recommendation 11-02 including underharvest carryover provisions, international quota transfer requirements, and a new minimum size measurement for Atlantic swordfish, consistent with the Atlantic Tunas Convention Act, the 2006 Consolidated HMS FMP and other applicable laws.

### **8.2 SUMMARY OF THE SIGNIFICANT ISSUES RAISED BY THE PUBLIC COMMENTS IN RESPONSE TO THE INITIAL REGULATORY FLEXIBILITY ANALYSIS, A SUMMARY OF THE ASSESSMENT OF THE AGENCY OF SUCH ISSUES, AND A STATEMENT OF ANY CHANGES MADE AS A RESULT OF SUCH COMMENTS**

Section 604(a)(2) of the Regulatory Flexibility Act requires agencies to summarize significant issues raised by the public in response to the Initial Regulatory Flexibility Analysis, a summary of the agency's assessment of such issues, and a statement of any changes made as a result of the comments.

We received numerous comments on the proposed rule during the comment period. A summary of these comments and the Agency's responses are included in Chapter 11 and the final rule. Although we did not receive comment specifically on the Initial Regulatory Flexibility Analysis, we received some comments on the economic impacts from the reduction in underharvest carryover limit, international quota transfer, and implementation of the 25 inch cleithrum to caudal keel minimum size.

Most commenters supported implementation of the quota measures, including the reduction in the underharvest carryover limit and quota transfer to Morocco, in order to remain consistent with the Commission's Recommendation. However, a few commenters expressed concern that these quota measures could economically disadvantage U.S. fishermen since they lower the amount of adjusted quota potentially available for U.S. harvest of swordfish. We do not believe that these concerns warrant a change in preferred alternatives because the United States has not harvested the entire allocated quota in a number of years and is unlikely to do so in the short-term. Consequently, a lower adjusted quota is unlikely to impact U.S. fishermen. Furthermore, these measures are necessary to remain compliant with the Commission. Under the Atlantic Tunas Convention Act, the Secretary shall promulgate such regulations as may be necessary and appropriate to carry out the Commission's recommendations.

Comments regarding the change in the cleithrum to caudal keel minimum size were almost universally supportive. The 25 inch cleithrum to caudal keel minimum size has many advantages such as increased safety at sea and simpler enforcement and compliance. Additionally, commenters noted that the new cleithrum to caudal keel minimum size would have positive economic impacts as well. Storage efficiency would increase allowing fishermen to retain more swordfish, and since the 25 inch cleithrum to caudal keel minimum size provides an equivalent dressed measurement to 47 inch lower jaw fork length fish, would reduce discards. Detailed discussion of these benefits is available in Section 4.0 of the Final Environmental Assessment.

### **8.3 DESCRIPTION AND ESTIMATE OF THE NUMBER OF SMALL ENTITIES TO WHICH THE FINAL RULE WILL APPLY**

Section 604(a)(3) of the Regulatory Flexibility Act requires agencies to provide an estimate of the number of small entities to which the rule would apply. This action would apply to all participants in the Atlantic HMS commercial and recreational fisheries that retain Atlantic swordfish. NMFS considers all these participants to be small entities. As of October 2011, 245 vessels held a directed or incidental commercial swordfish permit and are reasonably expected to use pelagic longline gear although they could also use handgear. Also, as of October 2011, 78 vessels held a commercial handgear permit, 23,138 held an Atlantic HMS Angling permit, and 4,194 vessels held an Atlantic HMS Charter/Headboat permit. The Incidental HMS Squid Trawl Permit, which allows for limited retention of swordfish caught in the *Illex* squid trawl fishery, became effective toward the end of 2011. We have preliminary estimates on the number of vessels that may have acquired this permit based on the number of existing *Illex* squid trawl moratorium permit holders. As of 2010, there were a total of 76 *Illex* squid moratorium permit holders that may have or will avail themselves of this permit (76 FR 49368, August 10, 2011).

### **8.4 DESCRIPTION OF THE PROJECTED REPORTING, RECORD KEEPING, AND OTHER COMPLIANCE REQUIREMENTS OF THE FINAL RULE, INCLUDING AN ESTIMATE OF THE CLASSES OF SMALL ENTITIES WHICH WILL BE SUBJECT TO THE REQUIREMENTS OF THE REPORT OR RECORD**

Under section 604(a)(4) of the Regulatory Flexibility Act, agencies are required to describe

any new reporting, record-keeping and other compliance requirements. The action does not contain any new collection of information, reporting, record keeping, or other compliance requirements.

**8.5 DESCRIPTION OF THE STEPS THE AGENCY HAS TAKEN TO MINIMIZE THE SIGNIFICANT ECONOMIC IMPACT ON SMALL ENTITIES CONSISTENT WITH THE STATED OBJECTIVES OF APPLICABLE STATUTES, INCLUDING A STATEMENT OF THE FACTUAL, POLICY, AND LEGAL REASONS FOR SELECTING THE ALTERNATIVE ADOPTED IN THE FINAL RULE AND THE REASON THAT EACH ONE OF THE OTHER SIGNIFICANT ALTERNATIVES TO THE RULE CONSIDERED BY THE AGENCY WHICH AFFECT SMALL ENTITIES WAS REJECTED**

Under section 604(a)(5) of the Regulatory Flexibility Act, agencies are required to describe any alternatives to the rule which accomplish the stated objectives and which minimize any significant economic impacts. These impacts are discussed below and in Chapters 4 and 6 of this document. Additionally, the Regulatory Flexibility Act (5 U.S.C. § 603 (c) (1)-(4)) lists four general categories of “significant” alternatives that would assist an agency in the development of significant alternatives. These categories of alternatives are:

1. Establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities;
2. Clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities;
3. Use of performance rather than design standards; and
4. Exemptions from coverage of the rule for small entities.

In order to meet the objectives of this rule, consistent with Magnuson-Stevens Act and Atlantic Tunas Convention Act, we cannot exempt small entities or change the reporting requirements only for small entities because all the entities affected are considered small entities. Thus, there are no alternatives discussed that fall under the first and fourth categories described above. We do not know of any performance or design standards that would satisfy the aforementioned objectives of this rulemaking while, concurrently, complying with the Magnuson-Stevens Act and Atlantic Tunas Convention Act. Thus, there are no alternatives considered under the third category. As described below, we analyzed several different alternatives in this rulemaking that fall under the second category above and provides rationale for identifying the preferred alternative to achieve the desired objective.

We have prepared this Final Regulatory Flexibility Analyses to analyze the impacts on small entities of the alternatives for implementing Recommendation 11-02 for all domestic fishing categories that Atlantic swordfish. The FRFA assesses the impacts of the various alternatives on the vessels that participate in the Atlantic HMS commercial and recreational fisheries that retain Atlantic swordfish, all of which are considered small entities. Six alternatives were considered and analyzed and include (1) No Action; (2) Implement Recommendation 11-02, which includes an annual quota

transfer of 112.8 mt dw from the United States to Morocco in 2012 and 2013 and an annual underharvest carryover limit of 25 percent of the base quota (annual carryover limit of 734.4 mt dw); maintain status quo for North Atlantic quotas – Preferred Alternative; (3) Implement the alternative swordfish cleithrum to caudal keel minimum size measurement of 25 inches per Recommendation 11-02 – Preferred Alternative; (4) Use the cleithrum to caudal keel measurement as the sole minimum size and discontinue the use of the lower jaw fork length minimum length standard in U.S. domestic fisheries; (5) Allow the lower jaw fork length minimum size to be applied to swordfish without a bill, provided the bill has been removed forward of the anterior tip of the lower jaw– Preferred Alternative; and (6) Reintroduce the 33 pound minimum weight standard .

Under Alternative 1, we would not implement any of the measures contained in Recommendation 11-02, including the quota allocation, underharvest carryover limit, international quota transfer, or cleithrum to caudal keel minimum size measurement. Fishermen and dealers would be unlikely to notice any direct economic impacts in the short term if we do not implement the quota portion of Recommendation 11-02, however, they might notice short-term negative impacts if we do not implement the alternative cleithrum to caudal keel minimum size. The U.S. quota specified in Recommendation 11-02 is unchanged from previous years; therefore, the base quota would not be affected. The only effect of non-action would be that the transferred quota would not be deducted from the U.S. base quota. Since the United States has not harvested the entire allocated swordfish quota and is unlikely to do so in the short-term, deducting the transferred quota from the domestic base quota is unlikely to result in changes to annual revenue or revenue to individual vessels. Similarly, if we do not reduce the annual carryover limit from 50 percent to 25 percent, the higher annual adjusted quota is unlikely to be utilized and is unlikely to result in changes in landings or revenue to individual vessels. However, if we do not implement the alternative cleithrum to caudal keel minimum size, there could be minor adverse economic short-term impacts. The 25 inch cleithrum to caudal keel minimum size is equivalent to the existing 47 inch lower jaw fork length minimum size. Currently, fishermen do not have a minimum size measurement that allows for the retention of dressed swordfish that measure at or slightly above 47 inches lower jaw fork length. If a fisherman catches a swordfish that meets the 47 inch lower jaw fork length minimum size but not the current 29 inch cleithrum to caudal keel minimum size, the fisherman must either land the fish with the head naturally attached or discard the fish. Due to storage capacity limitations and uncertainty in minimum size regulations, fishermen sometimes choose to discard fish that legally meet the 47 inch lower jaw fork length measurement but do not meet the 29 inch cleithrum to caudal keel minimum size. Similarly, dealers sometimes will not accept fish that meet the 47 inch lower jaw fork length measurement but not the 29 inch cleithrum to caudal keel minimum size. These fish are landed with the head naturally attached, but once removed, some dealers have expressed concern that a minimum size violation could occur in the absence of proof that the fish was landed with the head and met the 47 inch lower jaw fork length measurement. For these reasons, if we do not implement the alternative cleithrum to caudal keel minimum size, fishermen would continue to discard and not land some fish that meet the lower jaw fork length minimum size but not the current cleithrum to caudal keel minimum size, resulting in direct short-term minor adverse economic impacts. An analysis of the possible impact to swordfish landings resulting from the implementation of the new 25 inch cleithrum to caudal keel minimum size measurement indicated a possible increase in swordfish landings of 51.4 mt dw (113,316 lbs dw) (Section 4.1). Therefore, if we do not implement the alternative cleithrum to caudal keel minimum size measurement, this would result in forgone revenue

totaling \$1,547 (\$499,724 divided by 178 directed swordfish permit holders, 67 incidental swordfish permit holders and 78 swordfish handgear permit holders) per vessel annually. As such, these permit holders would likely experience minor adverse economic impacts if the cleithrum to caudal keel minimum size was not changed to 25 inches. Because the United States has an obligation to implement the Commission's recommendations under Atlantic Tunas Convention Act, we do not prefer this alternative at this time.

Alternative 2 would implement the Commission's Recommendation 11-02 provisions pertaining to quota allocation, the underharvest carryover limit, and the quota transfer to Morocco. Alternative 2 would likely have neutral economic impacts to small entities in the short-term. As noted in the discussion for Alternative 1, the United States is unlikely to achieve 100 percent quota utilization in the short-term. Consequently, minor changes to the base quota through international quota transfers or to the adjusted quota through reduced underharvest carryover limits are unlikely to impact swordfish fishing effort levels or annual revenues. However, Alternative 2 could have minor adverse economic impacts if the U.S. swordfish fishery nears 100 percent quota utilization. At that time, an adjusted quota that reflects the annual international quota transfer to Morocco and the lower underharvest carryover limit could lead to a lower available quota than the level possible under Alternative 1. This lower level of adjusted quota would result in a decrease in the total possible fishery-wide annual revenue. If we deduct the 112.8 mt dw quota transfer from the U.S. base quota of 2,937.6 mt dw and limits underharvest carryover to 25 percent, the total U.S. adjusted quota could reach 3,559.2 mt dw (7,846,612 lbs dw). Assuming an average ex-vessel price of \$4.41 per pound (NMFS 2011) and 100 percent quota utilization, total possible gross revenues across the domestic fishery would be estimated to be \$34,603,559 under Alternative 2. Therefore, Alternative 2 could result in annual gross revenues that are \$8,236,720 less (\$42,840,279 - \$34,603,559) than the possible annual gross revenues under Alternative 1. This potential decrease in average annual ex-vessel revenue across all swordfish permit types is \$25,501 per vessel (\$8,236,720 / (178 directed swordfish permit holders, 67 incidental swordfish permit holders, and 78 swordfish handgear permit holders)). Since retention limits are higher for directed permit holders than incidental permit holders, actual per vessel revenue loss would likely be higher for directed permit holders and lower for incidental permit holders. Handgear permit holders do not have a retention limit, however, the gear used by these permit holders is less efficient, therefore, actual per vessel revenue loss is somewhere in between directed and incidental permit holders. The United States, however, is required to implement these measures in order to be in compliance with the Commission's recommendation 11-02 under the Atlantic Tunas Convention Act, therefore, we prefer this alternative at this time.

Under Alternative 3, we would implement the swordfish minimum size portion of Recommendation 11-02 which allows a 25 inch cleithrum to caudal keel measurement. This alternative would likely have moderate beneficial economic impacts in both the short- and long-term. The 25 inch cleithrum to caudal keel minimum size is equivalent to the existing 47 inch lower jaw fork length minimum size. Currently, fishermen do not have a minimum size measurement that allows for the retention of dressed swordfish that measure at or slightly above 47 inches lower jaw fork length. If a fisherman catches a swordfish that meets the 47 inch lower jaw fork length minimum size but not the current 29 inch cleithrum to caudal keel minimum size, the fisherman must either land the fish with the head naturally attached or discard the fish. Due to storage capacity limitations and uncertainty in minimum size regulations, fishermen sometimes choose to discard fish



that legally meet the 47 inch lower jaw fork length measurement but do not meet the 29 inch cleithrum to caudal keel minimum size. Similarly, dealers sometimes will not accept fish that meet the 47 inch lower jaw fork length measurement but not the 29 inch cleithrum to caudal keel minimum size. These fish are landed with the head naturally attached, but once removed, some dealers have expressed concern that a minimum size violation could occur in the absence of proof that the fish was landed with the head and met the 47 inch lower jaw fork length measurement. For these reasons, implementing the Commission's alternative minimum cleithrum to caudal keel size of 25 inches could lead to increased retention of previously discarded legal fish that measure at or slightly above 47 inches lower jaw fork length, since this cleithrum to caudal keel minimum size is equivalent to a greater number of 47 inch lower jaw fork length fish (Figure 2). Fish in this size range are the most frequently encountered fish (Figure 5 and Figure 6; note that the figures provide lengths in centimeters), therefore, increased landings of fish in this size range are not trivial. The increase in retained catch could lead to increased annual revenues for both fishermen and dealers, resulting in direct moderate beneficial economic impacts in both the short and long-term. NMFS estimated this additional revenue to be \$1,547 per swordfish permit holder annually under this alternative. These permit holders would likely experience minor beneficial economic impacts if the cleithrum to caudal keel minimum size is changed to 25 inches. Because this alternative provides these benefits to fishermen but does not lead to increased mortality of undersized swordfish, we prefer this alternative at this time.

Under Alternative 4, we would use the cleithrum to caudal keel measurement as the sole minimum size and discontinue the use of the lower jaw fork length minimum size in U.S. domestic fisheries. This alternative would be unlikely to have any direct socioeconomics in the short or long-term, provided that the new Commission's alternative cleithrum to caudal keel minimum size of 25 inches is implemented under Alternative 4. The current lower jaw fork length minimum size of 47 inches and the proposed cleithrum to caudal keel minimum size of 25 inches equate to the same size fish in the majority of instances. Therefore, the lower jaw fork length minimum size could be redundant with the cleithrum to caudal keel minimum size. Removal of the lower jaw fork length minimum size and use of only the cleithrum to caudal keel measurement could simplify enforcement and compliance with minimum size requirements. Additionally, since the two minimum sizes refer to the same size fish, removal of the lower jaw fork length minimum size is unlikely to result in increased landings for individual vessels. However, removing one of the minimum size measurements could reduce flexibility for fishermen in how they choose to measure and land swordfish; therefore we do not prefer this alternative at this time.

Under Alternative 5, NMFS would allow the lower jaw fork length minimum size to be applied to swordfish without a bill, provided the bill has been removed forward of the anterior tip of the lower jaw. Adoption of Alternative 5 would likely result short and long-term minor beneficial economic impacts. Swordfish are currently measured using either the lower jaw and fork of the tail (in the case of lower jaw fork length) or the cleithrum and caudal keel (in the case of cleithrum to caudal keel) as endpoints. Neither of these measurement methods require the bill of the swordfish to be attached, therefore, the bill is unnecessary in determining if a swordfish is of legal size. The bill of a swordfish can complicate fishing operations by presenting safety concerns and imposing storage capacity costs. If we allow fishermen to continue to employ the lower jaw fork length measurement in the absence of the bill, commercial vessels could more efficiently pack the swordfish catch, leaving

more room for additional product. This additional product could increase revenues for both fishermen and dealers, although quantifying the economic benefits on a per-vessel basis is not possible. We prefer Alternative 5 at this time.

Under Alternative 6, we would reintroduce the 33 pound minimum weight standard. This alternative would be unlikely to have any net economic impacts in the short or long-term, provided that the new Commission's alternative cleithrum to caudal keel minimum size of 25 inches is implemented under Alternative 4. As discussed in Section 1, we employed the 33 pound minimum weight, in combination with two minimum lengths, until 2009. At that time, we removed the 33 pound minimum weight and specified landing condition-specific minimum sizes. The impetus for this change was twofold. First, the use of three minimum sizes (weight, lower jaw fork length, and cleithrum to caudal keel) complicated minimum size enforcement because all three measurements had to be taken to prove that a fish was undersized. This can require heavy time investments, particularly in cases with thousands of pounds of swordfish. Second, neither enforcement agents nor fishermen could definitively determine the accurate weight and subsequent legality of fish while at sea, presenting both compliance and enforcement problems. To address these enforcement and compliance complexities, we simplified the swordfish minimum size requirements by removing the 33 pound minimum weight and specified landing condition-specific minimum lengths. Reintroducing the minimum dressed weight could provide some benefits and some disadvantages. The 33 pound minimum weight and the proposed 25 inch cleithrum to caudal keel minimum size equate to the same size fish in the majority of instances (Figure 4). The primary benefit is that fishermen might be able to retain more swordfish because some fish meet the minimum weight but not the minimum length. Reintroducing the minimum weight could provide the opportunity to retain these fish, as demonstrated in Figure 4. Disadvantages include those discussed above, including the enforcement and compliance difficulties. Since a definitive weight cannot be taken at sea, fishermen are unlikely to be able to determine the legality of swordfish weighing near 33 pounds. This presents uncertainties and compliance difficulties. The possible benefits and possible disadvantages, when taken together, result in neutral economic impacts across the fishery and to individual vessels. Additionally, since the 33 pound minimum weight and the proposed 25 inch cleithrum to caudal keel minimum size equate to the same size fish in the majority of instances (Figure 4), reintroducing the minimum weight standard could be unnecessary. Since Alternative 7 poses enforcement and compliance concerns, and because the economic impacts may be neutral compared to the beneficial economic impacts under Alternatives 4 and 6, we do not prefer this alternative at this time. However, should the enforcement and compliance issues be resolved in the future, we may reconsider reintroduction of the 33 pound minimum weight standard.

## 9.0 COMMUNITY PROFILES

Section 102(2)(a) of the National Environmental Policy Act requires Federal agencies to consider the interactions of natural and human environments by using “a systematic, interdisciplinary approach which will ensure the integrated use of the natural and social sciences in planning and decision-making.” Federal agencies should address the aesthetic, historic, cultural, economic, social, or health effects which may be direct, indirect, or cumulative. The Magnuson-Stevens Act also requires, among other matters, consideration of social impacts. Consideration of the social impacts associated with fishery management measures is a growing concern as fisheries experience variable participation and/or declines in stocks.

Profiles for HMS fishing communities were included in Chapter 9 of the 2006 Consolidated HMS FMP and updated in Chapter 6 of the 2010 Stock Assessment and Fishery Evaluation Report. These HMS communities are analyzed for social impacts in this action due to the importance of the pelagic longline fishery: Gloucester and New Bedford, Massachusetts; Barnegat Light and Brielle/Point Pleasant, New Jersey; Hatteras and Wanchese, North Carolina; and Venice and Dulac, Louisiana.

The impacts of this action will be neutral in all of these communities. The action to implement the management measures in Recommendation 11-02 is unlikely to result in a significant decrease effort and revenue. Since the United States has not harvested the entire allocated swordfish quota and is unlikely to do so in the short-term, the lower adjusted quota that would result from this action is not expected to decrease commercial and recreational fishing opportunities.

## **10.0 OTHER CONSIDERATIONS**

### **10.1 MAGNUSON-STEVENS ACT AND ATLANTIC TUNAS CONVENTION ACT**

We have determined that this action is consistent with the Magnuson-Stevens Act, Atlantic Tunas Convention Act, and other applicable law. Section 971d(c)(1)(C) of Atlantic Tunas Convention Act provides that regulations promulgated under the Act, to the extent practicable, be consistent with fishery management plans prepared and implemented under the Magnuson-Stevens Act.

The analyses in this document are consistent with the Magnuson-Stevens Act National Standards (NS) (see 50 C.F.R. Part 600, Subpart D for National Standard Guidelines). The final rule is consistent with National Standard 1 in that, according to the latest stock assessment, it would prevent overfishing of Atlantic swordfish. Because the action is based on the 2011 North Atlantic swordfish Commission recommendation which stems from the 2009 Commission's Standing Committee on Research and Statistics swordfish stock assessment, and the data used for the analysis in this document consists of fishery logbook and observer data from 2006 through 2010, it is based on the best scientific information available (National Standard 2), including self-reported, observer, and stock assessment data, which provide for the management of the affected species throughout its range (National Standard 3).

This action does not discriminate against fishermen in any state (National Standard 4) and increases resource efficiency without having economic allocation as its sole purpose (National Standard 5). With regard to National Standard 6, this action takes into account any variations that may occur in the fishery and the fishery resources. Additionally, we considered the costs and benefits of these management measures economically and socially under National Standards 7 and 8 in Sections 4, 5, 6, 7, and 8 of this document. This action ensures that bycatch is accounted for in the Atlantic swordfish fisheries, accounting for dead discards and incidentally caught swordfish taken in the pelagic longline and other fisheries within available quotas (National Standard 9). Finally, this action would allow fishermen to remove the bill of a swordfish when fishing, which may increase safety at sea, instead of requiring fishermen to fish in an unsafe manner (National Standard 10).

### **10.2 PAPERWORK REDUCTION ACT**

The quota specifications and effort controls contain no new collection-of-information requirements subject to the Paperwork Reduction Act.

### **10.3 E. O. 13132**

This action does not contain regulatory provisions with federalism implications sufficient to warrant preparation of a Federalism Assessment under E.O. 13132.

## 11.0 PUBLIC COMMENT AND AGENCY RESPONSES

### *Swordfish Quota Measures*

Comment 1: NMFS should implement the quota measures in Recommendation 11-02 in order to maintain compliance with the Commission. No underharvest should be carried over from one year to the next. The underharvest carryover limit should not be reduced from 50 percent to 25 percent of the base quota. NMFS should not transfer quota to other countries unless it gets something of value in return.

Response: NMFS agrees that it should implement the quota measures in Recommendation 11-02 in order to be compliant with the Commission's recommendations. NMFS does not agree, however, that it should not carryover allowable underharvest from one year to the next, where such carryover is consistent with Commission recommendations. The Commission's recommendations for this rebuilt stock take into consideration the health and status of the stock. Implementing the Commission-recommended U.S. North Atlantic swordfish baseline quota as well as the underharvest carry over and quota transfer to Morocco are consistent with Recommendation 11-02. Under the Atlantic Tunas Convention Act, the Secretary shall promulgate such regulations as may be necessary and appropriate to carry out the Commission's recommendations, and the regulations as finalized appropriately carry out the Commission's recommendations regarding the North Atlantic Swordfish stock while meeting NMFS's legal obligations and management needs.

### *Minimum Size Measures*

Comment 2: The 47 inch lower jaw fork length minimum size, and the equivalent dressed swordfish minimum size of 25 inches cleithrum to caudal keel, refers to a juvenile swordfish that is too small to be harvested.

Response: The Commission established the 47 inch lower jaw fork length minimum size in the 1999 North Atlantic swordfish rebuilding plan (Rec 99-02) based on advice from the Standing Committee on Research and Statistics (SCRS). Based on the SCRS's most recent stock assessment (2009), the 47 inch lower jaw fork length minimum size was deemed appropriate because it protected small swordfish from being harvested, helping to reduce mortality of immature swordfish. This minimum size has contributed to the successful rebuilding of the North Atlantic swordfish stock. The proposed alternative 25 inch cleithrum to caudal keel minimum length is equivalent to the 47 inch lower jaw fork length minimum size, therefore is as appropriate for a minimum size as the current 47 inch lower jaw fork length measurement.

Comment 3: NMFS should implement the 25 inch cleithrum to caudal keel minimum size because the previous 29 inch cleithrum to caudal keel minimum size was inconsistent with the 47 inch lower jaw fork length measurement. The current 29 inch cleithrum to caudal keel minimum size required fishermen to sometimes leave the head attached which is hazardous, makes the fish difficult to handle, and can lead to inconsistent enforcement once the head is removed. NMFS should implement the 25 inch cleithrum to caudal keel since it will increase the number of retained fish without reducing the minimum size.

Response: We agree that implementing the 25 inch cleithrum to caudal keel alternative minimum size measurement provides numerous benefits to fishermen without undermining protection of immature swordfish. In addition, we are finalizing a definition of naturally attached, as used to describe the head of a swordfish, that allows for removal of the bill forward of the anterior tip of the lower jaw. A swordfish with its head naturally attached in this manner may be measured using the lower jaw fork length measurement to determine compliance with minimum size requirements. We believe that these two changes should accommodate the operational needs of the U.S. swordfish fishery, including safety on board and storage efficiency, while also having the ancillary benefit of increased landings.

Comment 4: We received two comments regarding the minimum weight standard. The first commenter stated that NMFS should not reintroduce minimum weight because it is too hard for fishermen to obtain an accurate weight at sea. Fishermen can only obtain accurate dressed weight once the fish is processed, precluding the live release of a fish that does not meet the minimum weight. The second commenter stated that NMFS should reintroduce the 33 lb minimum weight standard to give more flexibility to fishermen. Failure to retain all Commission-defined minimum size criterion is inconsistent with Atlantic Tunas Convention Act and the Magnuson-Stevens Act. We are exceeding the Commission's recommendation by removing the minimum weight standard for United States fishermen.

Response: At this time, NMFS believes that the disadvantages of re-implementing the 33 pound minimum weight outweigh the benefits. Obtaining an accurate dressed weight at sea can be difficult and cannot be obtained until the swordfish is fully dressed, precluding the ability to release an undersized swordfish alive. The minimum weight measurement was often used by fishermen when they encountered swordfish that were shorter than the 29 inch cleithrum to caudal keel measurement but potentially heavier than 33 pounds. However, NMFS believes that implementation of the 25 inch cleithrum to caudal keel measurement eliminates the need for the weight measurement as fish meeting the 33 pound minimum weight would almost certainly measure greater than 25 inches cleithrum to caudal keel. Furthermore, under the Atlantic Tunas Convention Act, the Secretary shall promulgate such regulations as may be necessary and appropriate to carry out ICCAT recommendations. ICCAT Recommendation 11-02 allows for discretion as to which minimum sizes to implement in each Party's domestic fisheries and does not require implementation of all the different options. Recommendation 11-02 offers the option for ICCAT Parties to implement a 25 kg live weight or in the alternative, a 125 cm lower jaw fork length minimum size with a 15 percent tolerance for incidentally caught smaller fish. Alternatively, ICCAT Parties can implement a 15 kg live weight or a 119 cm lower jaw fork length minimum size but may not avail themselves of the 15 percent tolerance for incidentally caught smaller fish. In addition, for swordfish that have been dressed, a cleithrum to caudal keel measurement of 63 cm can also be applied. NMFS believes that the preferred alternatives are fully compliant with Recommendation 11-02.

Comment 5: NMFS also received two comments regarding maintaining the lower jaw fork length minimum size. The first commenter stated that NMFS should maintain the lower jaw fork length minimum size because failure to retain all ICCAT-defined minimum size criterion is inconsistent with the Atlantic Tunas Convention Act and the Magnuson-Stevens Act. The second commenter stated that NMFS should remove the lower jaw fork length minimum size because it would simplify

compliance and enforcement with minimal impact on the number of retained swordfish.

Response: At this time, NMFS prefers to maintain the lower jaw fork length minimum size. As described in the comment above, Recommendation 11-02 provides the flexibility to use different minimum sizes and does not require the use of all the minimum sizes. NMFS also notes that removal of the lower jaw fork length minimum size could simplify compliance and enforcement since only one minimum size measurement would be needed rather than multiple landing-condition-specific minimum sizes. However, it is possible that removal of the lower jaw fork length minimum size could preclude the retention of some fish that meet the lower jaw fork length minimum size but not the cleithrum to caudal keel minimum size, even with the implementation of the alternative 25 inch cleithrum to caudal keel minimum size. In addition, the lower jaw fork length measurement is easier for recreational fishermen to obtain from a swordfish without removing the fish from the water. Recreational fishermen will often bring the swordfish to the side of the vessel and use the easier straight-line lower jaw fork length measurement to visually determine if the fish meets the lower jaw fork length minimum size. If the cleithrum to caudal keel measurement was the only minimum size measurement required, this may be more difficult for recreational fishermen and may increase swordfish handling time. In the future, if commercial and recreational fishermen begin to use only the cleithrum to caudal keel minimum size or it is found that that the lower jaw fork length minimum size is not needed, NMFS may consider the issue in a future rulemaking.

Comment 6: NMFS should estimate the impact of the 25 inches cleithrum to caudal keel minimum size on landings.

Response: In response to requests from commenters on the proposed rulemaking, NMFS analyzed the impact of implementing the 25 inch cleithrum to caudal keel minimum size under Alternative 3 in the Environmental Assessment. According to this analysis, approximately 51.4 mt dw (113,316 lbs dw) of swordfish greater than 47 inch lower jaw fork length could be landed as a result of the change in minimum size. However, this estimate is very rough and relies on a number of caveats that are more fully described in the Environmental Assessment. While there could be an increase in swordfish landings as a result of implementing Alternative 3, the increase in retained fish would come almost exclusively from legal fish that were previously discarded and not as a result of an increase in fishing effort.

Comment 7: NMFS should only implement the 25 inch cleithrum to caudal keel minimum size in the pelagic longline fishery since swordfish in this fishery have high at-vessel mortality. The 25 inch cleithrum to caudal keel minimum size should not be implemented in the recreational, buoy gear, or commercial handgear fisheries since it will result in greater handling time when measuring the fish leading to a decrease in live releases. In non-pelagic longline fisheries, the lower jaw fork length minimum size should be raised to 52 inches, rather than implementing a reduction in the cleithrum to caudal keel minimum size.

Response: This action strives to simplify swordfish minimum size regulations to the extent practicable without disadvantaging fishermen or harming the sustainability of the stock. NMFS believes that limiting the 25 inch cleithrum to caudal keel measurement to the pelagic fishery could unnecessarily complicate minimum size regulations and increase confusion in compliance and

enforcement by requiring different minimum size measures across fishing sectors. Also, the swordfish handgear and recreational fisheries can continue to use the 47 inch lower jaw fork length measurement. Furthermore, there is no indication that the current 47 inch lower jaw fork length minimum size, or an equivalent dressed swordfish cleithrum to caudal keel minimum size, is of a concern in the swordfish fishery. This minimum size has contributed to the successful rebuilding of the North Atlantic swordfish stock and there is no evidence that this minimum size is inappropriate as explained in Comment 2.

Comment 8: NMFS should not enforce the minimum size past the first point of landing. The second or third dealer or restaurant owners should not be responsible for minimum size requirements.

Response: Enforcement of minimum size requirements with respect to carcasses that are in the round, measureable form should not have any practical effect on the legal supply chain. Swordfish are monitored for compliance with minimum size requirements from the time they are landed until they are filleted, cut into steaks or processing in any way that physically alters the fish so it is not longer in round, measurable form. Limiting minimum size enforcement to fishermen and first dealers would preclude the ability to investigate violations further along the supply chain and limit NOAA's ability to enforce minimum size requirements.

#### *Miscellaneous*

Comment 9: Swordfish are experiencing overfishing and NMFS should prohibit fishing for the species. Fishermen should be strongly encouraged to release any live fish that are close to the minimum size and only retain those fish that cannot be returned to the sea alive.

Response: According to the 2009 swordfish stock assessment, the North Atlantic swordfish stock has been fully rebuilt under the rebuilding plan developed through the Commission. This minimum size has contributed to the successful rebuilding of the North Atlantic swordfish stock and there is no evidence that this minimum size is inappropriate. An assessment for North Atlantic swordfish is scheduled for 2013 and the Commission will take appropriate action based on the results of this stock assessment, consistent with recommendations from the Standing Committee on Research and Statistics. NMFS strongly encourages fishermen to only retain legal-size fish and has developed catch and release guideline material to educate and encourage the catch and release of saltwater pelagic fish, including swordfish, in order to maximize their survival.

Comment 10: NMFS needs to reconsider the pelagic longline closed areas. The 29 inch cleithrum to caudal keel minimum size led to several pelagic longline closed areas, particularly off the coast of Florida. This area was closed to pelagic longline fishing primarily based on regulatory discards of undersized swordfish using the larger 29 inch cleithrum to caudal keel measurement.

Response: The East Florida Coast pelagic longline closed area was implemented in 2001 as part of a group of measures, including other time/area closures and live bait restrictions, that were designed, to the extent practicable, to reduce bycatch, bycatch mortality, and incidental catch of undersized swordfish, billfish, and other overfished and protected species caught in the pelagic longline fishery.



The analyses on which the closed area were based examined areas that included a relatively large number of discards of swordfish, billfish, bluefin tuna, and pelagic and large coastal sharks compared to the landings of target species such as swordfish, tunas, mahi, and pelagic and large coastal sharks. The analyses did not rely on the 29 inch cleithrum to caudal keel minimum size; however, to some extent the closed area analyses considered dead discards of swordfish and many of those discards were likely undersized swordfish. We are not aware, at this time, how many of those swordfish dead discards in the East Florida Coast area could have met the 25 inch cleithrum to caudal keel and how many would need to be discarded dead. As described above, NMFS does expect the minimum size change from 29 to 25 inch cleithrum to caudal keel to result in a small increase in swordfish landings across the entire fishery. However, NMFS does not expect the change in swordfish minimum size to impact discards of other species that were also considered in the analyses that resulted in the East Florida Coast closure. Thus, at this time, we do not feel that the change in the cleithrum to caudal keel measurement for the swordfish minimum size from 29 to 25 inches while maintaining the lower jaw fork length minimum size measurement is justification for reconsidering the East Florida Coast or any other pelagic longline closed areas.

## **LIST OF PREPARERS AND PERSONS/AGENCIES CONSULTED**

This Environmental Assessment/Regulatory Impact Review / Final Regulatory Flexibility Analysis was prepared by LeAnn Hogan, Delisse Ortiz, Sarah de Flesco, Steve Durkee, Karyl Brewster-Geisz, and Margo Schulze-Haugen from the HMS Management Division, Office of Sustainable Fisheries. Please contact the HMS Management Division for a complete copy of current regulations for the Atlantic HMS commercial and recreational fisheries.

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Discussions relevant to the formulation of the preferred alternatives and the analyses for this final Environmental Assessment/Regulatory Impact Review / Final Regulatory Flexibility Analysis involved input from several NMFS components and constituent groups, including: NMFS Southeast Fisheries Science Center, NMFS Office for Law Enforcement, NMFS Office of Science and Technology, and the members of the HMS Advisory Panel (which includes representatives from the commercial and recreational fishing industries, environmental and academic organizations, state representatives, and fishery management councils). We also considered the numerous comments received at Advisory Panel meetings from individual fishermen and interested parties regarding these issues.

## 12.0 REFERENCES

- NMFS. 1999. Fishery Management Plan for Atlantic Tunas, Swordfish, and Sharks. Highly Migratory Species Management Division, Silver Spring, MD.  
add in the ugly green book
- NMFS. 2004. Final Supplemental Environmental Impact Statement for a Final Rule to Implement Management Measures to Reduce Bycatch and Bycatch Mortality of Atlantic Sea Turtles in the Atlantic Pelagic Longline Fishery. NOAA, NMFS, Highly Migratory Species Management Division.
- NMFS. 2006. Final Consolidated Atlantic Highly Migratory Species FMP. Highly Migratory Species Management Division, NMFS, Silver Spring, MD
- NMFS. 2009. Amendment 1 to the Consolidated Atlantic Highly Migratory Species Fishery Management Plan Essential Fish Habitat. United States Department of Commerce, National Marine Fisheries Service, Office of Sustainable Fisheries, Highly Migratory Species Management Division, Silver Spring, MD.
- NMFS. 2011. Stock Assessment and Fishery Evaluation Report for Atlantic Highly Migratory Species. Atlantic Highly Migratory Species Management Division, 1315 East West Highway, Silver Spring, MD 20910.
- NMFS. 2011a. U.S. National Report to ICCAT, 2011. U.S. Department of Commerce, National Marine Fisheries Service, Office of Sustainable Fisheries, Silver Spring, MD.

## FINDING OF NO SIGNIFICANT IMPACT

### Finding of No Significant Impact for implementation of the 2011 ICCAT Recommendation for North Atlantic Swordfish

#### National Marine Fisheries Service

The Highly Migratory Species (HMS) Management Division of the Office of Sustainable Fisheries submits the attached Environmental Assessment for the Atlantic HMS fisheries for Secretarial review under the procedures of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). This Environmental Assessment considers the impacts of implementing the management measures in Recommendation 11-02 and was developed as an integrated document that includes a Regulatory Impact Review and Final Regulatory Flexibility Analysis. The National Oceanic and Atmospheric Administration Administrative Order 216-6 (NAO 216-6) (May 20, 1999) contains criteria for determining the significance of the impacts of a proposed action. In addition, the Council on Environmental Quality (CEQ) regulations at 40 C.F.R. 1508.27 state that the significance of an action should be analyzed both in terms of “context” and “intensity.” Each criterion listed below is relevant in making a finding of no significant impact and has been considered individually, as well as in combination with the others. The significance of this action is analyzed based on the NAO 216-6 criteria and CEQ’s context and intensity criteria. These include:

1) Can the proposed action reasonably be expected to jeopardize the sustainability of any target species that may be affected by the action?

The action is not expected to jeopardize the sustainability of North Atlantic swordfish. In this action, NMFS preferred Alternative 2 to implement Recommendation 11-02, which, among other things, maintains the current baseline quota that was established in the 2007 swordfish specifications final rule (October 5, 2007; 72 FR 56929). The Commission’s recommendation also includes a transfer of 112.8 mt dw from the United States to Morocco to support joint scientific research and Morocco’s efforts to eliminate the use of driftnets by implementing gear that reduces bycatch. In addition, Recommendation 11-02 includes a change to the underharvest carry over amount from 50 percent of the baseline quota to 25 percent of the baseline quota. The change in the underharvest carry over limit is not expected to jeopardize the sustainability of North Atlantic swordfish because less underharvested quota will be carried over, resulting in lower adjusted quotas.

The action also considers changes to the swordfish minimum size requirements at 50 CFR 635.20 consistent with Recommendation 11-02. Before Recommendation 11-02, the Commission’s minimum size measurements included a weight measurement of 33 pounds live weight and a lower jaw fork length (lower jaw fork length) measurement of 125 cm, with a 15 percent tolerance for small fish or a 119 cm lower jaw fork length measurement with no tolerance. NMFS has implemented the 119 cm (47 inch) lower jaw fork length measurement as well as a U.S.-developed cleithrum to caudal keel measurement of 29 inches for domestic use. However, some commercially caught swordfish meet the current 47 inch lower jaw fork length measurement, but not the 29 inch cleithrum to caudal keel measurement, precluding the ability to fully retain and dress the swordfish while at sea. Recommendation 11-02 includes an alternative minimum size measurement of 63 cm or 25 inches cleithrum to caudal keel which is equivalent to 47 inches lower jaw fork length. Therefore, the cleithrum to caudal keel measurement of 25 inches included in Recommendation 11-02 could allow

U.S. commercial fishery participants the ability to retain and dress a larger number of swordfish that previously met the 47 inch lower jaw fork length measurement but, not the 29 inch cleithrum to caudal keel measurement. Thus, NMFS has selected alternative 3 as a preferred alternative. NMFS has also selected preferred alternative 5 which would allow the lower jaw fork length minimum size to be applied to swordfish without a bill, provided the bill has been removed forward of the anterior tip of the lower jaw. The 25 inch cleithrum to caudal keel measurement and the removal of the swordfish bill are not expected to jeopardize the sustainability of the North Atlantic swordfish because it is not expected that this lower cleithrum to caudal keel measurement will substantially increase fishing effort or the number of swordfish retained and is equivalent to the current 47 inch lower jaw fork length minimum size. This proposed action is necessary to implement the North Atlantic swordfish Commission's recommendation pursuant to Atlantic Tunas Convention Act. In compliance with Atlantic Tunas Convention Act, NMFS implements the Commission's recommendations through regulations as may be necessary and appropriate.

2) Can the proposed action reasonably be expected to jeopardize the sustainability of any non-target species?

No. The action is not expected to jeopardize the sustainability of any non-target finfish species or bycatch because it is not expected to result in changes to fishing effort or practices compared to 2011 levels, as the current baseline quotas for North Atlantic swordfish would be maintained in this proposed action. The primary fishing gears used to target swordfish (i.e., handgear and pelagic longline) allow for the release of non-target species to a great degree. Primary non-target fish species caught by vessels targeting swordfish include tunas, sharks, and other large pelagic species. NMFS has already implemented rebuilding plans, as appropriate, and fishing controls for the primary non-target species. In addition, commercial fishery participants are required to attend safe handling and release workshops for non-target and protected species.

Handgear fisheries actions, covered under the June 2001 Biological Opinion for HMS fisheries, were determined not likely to jeopardize the continued existence of endangered or threatened species, including sea turtles. A June 2004 Biological Opinion determined that the continued operation of the pelagic longline fishery is not likely to jeopardize the continued existence of loggerhead, green, hawksbill, Kemp's ridley, or olive ridley seas turtles, but is likely to jeopardize the continued existence of leatherback sea turtles. NMFS has implemented the Reasonable and Prudent Alternatives required under the 2004 Biological Opinion. The analyses in the 2001 and 2004 Biological Opinion were relevant for the 2006 Consolidated HMS FMP, which serves as the baseline Final Environmental Impact Statement for annual swordfish specifications. On July 6, 2004, we published a final rule (69 FR 40734) implementing additional sea turtle bycatch and bycatch mortality mitigation measures for all Atlantic vessels with pelagic longline gear onboard. NMFS is implementing the other reasonable and prudent measures in compliance with the 2004 Biological Opinion. On August 9, 2007, the NMFS Southeast Regional Director determined that, following a review of sea turtle take during the 3-year Incidental Take Statement period, the 2004 Biological Opinion remains valid and does not need to be amended. On May 19, 2009 (74 FR 23349), NMFS implemented a consensus Pelagic Longline Take Reduction Plan in a final rule that limits the length of mainline for pelagic longline in the mid-Atlantic area, established the Cape Hatteras Special Research Area, required a placard showing how to release whales be posted in the wheelhouse and working deck of the vessel, and required owners and operators be certified in ways to reduce

mortality of marine mammals.

3) Can the proposed action reasonably be expected to cause substantial damage to the ocean and coastal habitats and/or essential fish habitat as defined under the Magnuson-Stevens Act and identified in Fishery Management Plans?

This action is not expected to change pelagic longline, commercial handgear, or recreational fishing patterns or have impacts on essential fish habitat, or to allow substantial damage to ocean and coastal habitats and/or essential fish habitat. The primary fishing gears used to harvest swordfish (handgear and pelagic longline) are pelagic in nature and have little impact on bottom substrate. Further, the effects of this action would not apply to any sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or cause loss or destruction of significant scientific, cultural or historical resources.

4) Can the proposed action be reasonably expected to have a substantial adverse impact on public health or safety?

The action is not expected to have substantial adverse impacts on public health and safety. Fishing activity or behavior would not change as a result of the adjustment of the swordfish quotas or changes to the minimum size measurements. Although fishing can be a dangerous profession, NMFS encourage fishermen to be responsible in safety matters while at sea. Nothing in this action would increase the risks already inherent in the fishing profession.

5) Can the proposed action reasonably be expected to adversely affect endangered or threatened species, marine mammals, or critical habitat of these species?

On September 7, 2000, NMFS reinitiated formal consultation for all HMS commercial fisheries under Section 7 of the Endangered Species Act. A Biological Opinion issued June 14, 2001, concluded that continued operation of the Atlantic pelagic longline fishery is likely to jeopardize the continued existence of endangered and threatened sea turtle species under NMFS jurisdiction. This Biological Opinion also concluded that the continued operation of the handgear fishery may adversely affect, but are not likely to jeopardize, the continued existence of any endangered or threatened species under NMFS jurisdiction. NMFS has implemented the reasonable and prudent alternatives required by this Biological Opinion.

Subsequently, based on the management measures in several proposed rules, a new Biological Opinion on the Atlantic pelagic longline fishery was issued on June 1, 2004. The 2004 Biological Opinion found that the continued operation of the fishery 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 2004 Biological Opinion identified reasonable and prudent alternatives necessary to avoid jeopardizing leatherbacks, and listed the reasonable and prudent measures and terms and conditions necessary to authorize continued take as part of the revised incidental take statement. On July 6, 2004, NMFS published a final rule (69 FR 40734) implementing additional sea turtle bycatch and bycatch mortality mitigation measures for all Atlantic vessels with pelagic longline gear onboard. NMFS is implementing the other Reasonable and Prudent Measures in compliance with the 2004 Biological Opinion. NMFS will undertake additional

rulemaking and non-regulatory actions, as required, to implement any management measures that are required under the 2004 Biological Opinion.

Goals of the 2006 Consolidated HMS FMP include implementing rebuilding plans, minimizing bycatch and bycatch mortality for overfished stocks, and managing healthy stocks for optimum yield. Bycatch reduction measures are in place under the HMS Bycatch Reduction Implementation Plan (discussed in Section 3.8 of the 2006 Consolidated HMS FMP), and this action would not change any of the bycatch measures in place under the 2006 Consolidated HMS FMP, or the effectiveness of those measures. Section 3.4 of this document and Chapter 7 of the 2011 Stock Assessment and Fishery Statistics Report list the 22 marine mammal species that are or could be of concern with respect to potential interactions with HMS fisheries. Those sections discuss interactions and the Endangered Species Act, including six endangered whale species. A summary of marine mammal interactions in the pelagic longline fishery from 1992 through 2005 is provided in Section 3.4.1.2 of the 2006 Consolidated HMS FMP and is updated for 2002 through 2010 in the 2011 Stock Assessment and Fishery Statistics Report. In addition, through a final rule that published on May 19, 2009 (74 FR 23349) and became effective on June 18, 2009, NMFS established additional management measures to reduce serious injury and mortality of long-finned and short-finned pilot whales, and Risso's dolphins in the U.S. East Coast Atlantic pelagic longline fishery. These measures include a requirement to post a marine mammal handling placard, restrict pelagic longline mainline length to 20 nautical miles in the Mid-Atlantic Bight area, and develop observer and research participation requirements to operate in the Cape Hatteras Special Research Area.

Consistent with Recommendation 11-02 for North Atlantic swordfish, the preferred alternatives would adjust the 2012 North Atlantic swordfish quota, reduce the underharvest carry over limit, transfer 112.8 mt dw of the U.S. North Atlantic swordfish quota to Morocco, and implement a new minimum size measurement. The measures in this proposed action are not expected to alter current fishing practices or increase fishing effort, and, therefore, are not expected to have adverse impacts on protected species, or have any further impacts on endangered species, marine mammals, or critical habitat beyond those considered in the 2001 and 2004 Biological Opinions. Thus, the proposed action in this final Environmental Assessment /Regulatory Impact Review / Final Regulatory Flexibility Analysis would not be expected to change previously analyzed endangered species or marine mammal interaction rates or magnitudes, or substantially alter current fishing practices or bycatch mortality rates, and no further consultation is necessary.

6) Can the proposed action be expected to have a substantial impact on biodiversity and/or ecosystem function within the affected area (e.g., benthic productivity, predator-prey relationships, etc.)?

The action is not expected to have a substantial impact on biodiversity and ecosystem function within the affected area, because the action is not expected to change fishing practices, and/or interactions with non-target and endangered or threatened species. The action would not affect unique geographic areas. In addition, this action is not expected to introduce or spread non-indigenous species.

7) Are significant social or economic impacts interrelated with natural or physical environmental effects?

No. There are no significant social and economic impacts interrelated with natural or physical environmental effects associated with the proposed action.

Implementing the North Atlantic swordfish quota would likely have neutral socioeconomic impacts in the short-term because the baseline quota would be the same as in previous years and the United States is unlikely to achieve 100 percent quota utilization in the short-term. However, because this proposed action would reduce the adjusted quota, there could be minor adverse socioeconomic impacts in the long-term if the U.S. swordfish fishery comes close to fully utilizing the adjusted swordfish quota. This lower adjusted quota could result in a decrease in the total fishery-wide revenue. However, implementing the 25 inch cleithrum to caudal keel measurement per Recommendation 11-02 would have moderate beneficial socioeconomic impacts because it could better address the operational needs of the U.S. fleet and could allow commercial fishery participants the ability to retain and dress a larger number of swordfish resulting in increased revenues for fishermen and dealers.

8) Are the effects on the quality of the human environment likely to be highly controversial?

The effects of this action on the human environment are not expected to be highly controversial because current North Atlantic swordfish management measures and controls have been in place for several years and this fishery is a highly regulated fishery. The proposed changes to current swordfish management measures are reasonably minor, and include underharvest carryover limits, international quota transfers, and swordfish minimum sizes and fall within the existing management structure.

9) Can the proposed action reasonably be expected to result in substantial impacts to unique areas, such as historic or cultural resources, park land, prime farmlands, wetlands, wild and scenic rivers or ecologically critical areas?

No. The action area does not include the unique areas listed. Thus, the proposed action will not result in substantial impacts to the listed areas.

10) Are the effects on the human environment likely to be highly uncertain or involve unique or unknown risks?

No. Effects on the human environment would be similar to those in similar annual actions since 1999, and have been considered in the 2006 Consolidated HMS FMP. This proposed action is necessary to implement the Commission's recommendation for North Atlantic swordfish pursuant to the Atlantic Tunas Convention Act. In compliance with the Atlantic Tunas Convention Act, NMFS is required to implement domestic regulations consistent with recommendations adopted by the Commission as may be necessary and appropriate.

11) Is the proposed action related to other actions with individually insignificant, but cumulatively significant impacts?

There are no significant cumulative impacts associated with this action in combination with other past, present or reasonable foreseeable future actions. The proposed rule implements the 2011 Commission's North Atlantic swordfish recommendation for the 2012 fishing year and maintains the current baseline quota, lowers the underharvest carry over limit, transfer 112.8 mt dw of the U.S.



North Atlantic swordfish quota to Morocco, and establishes an alternative minimum size measurement for swordfish that have been dressed. Other recent actions have been consistent with the Commission's recommendations and the 2006 Consolidated HMS FMP. Any future domestic actions taken in regard to the swordfish fishery would remain within the scope of the Commission's recommendations and the 2006 Consolidated HMS FMP. Likewise, all actions in this rule are consistent with those proposed and consulted over in previous Biological Opinions issued under the Endangered Species Act.

12) Is the proposed action likely to adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural or historical resources?

No. The management measures would occur in the inshore and offshore waters of the Atlantic Ocean, Gulf of Mexico, and Caribbean Sea and would not occur in any areas listed or eligible for listing in the National Register of Historic Places. This action would not cause loss or destruction of significant scientific, cultural, or historical resources because there are no significant scientific, cultural, or historic resources within the action area.

13) Can the proposed action reasonably be expected to result in the introduction or spread of a non-indigenous species?

As the action does not involve ballast water exchange or movement of vessels between water bodies, it is not expected to result in the introduction or spread of any non-indigenous species.

14) Is the proposed action likely to establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration?

No, the proposed action is not likely to establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration. This proposed action is necessary to implement the Commission's recommendations pursuant to Atlantic Tunas Convention Act and is consistent with the objectives of the 2006 Consolidated HMS FMP. In compliance with the Atlantic Tunas Convention Act, NMFS is required to implement the Commission's recommendations through regulations as may be necessary and appropriate. The HMS regulations at 50 CFR 635 lay out the approach and boundaries for the action. The 2012 adjusted quotas would be in place from the effective date through December 31, 2012. A separate action would be taken to establish the 2013 swordfish quota specifications and would not be dependent upon this proposed action. Thus, the decisions involved are limited and unlikely to involve principles which would affect future actions.

15) Can the proposed action reasonably be expected to threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment?

No. This action would be consistent with the Magnuson-Stevens Act, Atlantic Tunas Convention Act and the regulations at 50 CFR 635. NMFS has preliminarily determined that the proposed action would be implemented in a manner consistent to the maximum extent practicable with the enforceable policies of those coastal states on the Atlantic including the Gulf of Mexico and Caribbean that have approved coastal zone management programs. Letters will be sent to the

relevant states asking for their concurrence when the proposed rule is filed with the Federal Register. The proposed action would not be expected to violate any Federal, state or local law imposed for the protection of the environment.

16) Can the proposed action reasonably be expected to result in cumulative adverse effects that could have a substantial effect on the target species or non-target species?

The action is not expected to result in cumulative adverse effects that could have a substantial effect on target species or non-target species. The action would implement the 2011 Commission's North Atlantic swordfish recommendation for the United States and is consistent with the objectives of the 2006 Consolidated HMS FMP as analyzed in the 2006 Consolidated HMS FMP's Final Environmental Impact Statement. No increase in fishing effort or change in current fishing practices are expected as the 2011 recommendation maintains the current U.S. baseline quota for North Atlantic swordfish. The Commission's recommendation includes a transfer of 112.8 mt dw from the United States to Morocco to support joint scientific research and Morocco's efforts to eliminate the use of driftnets by implementing gear that reduces bycatch. Recommendation 11-02 also includes a change to the underharvest carry over amount from 50 percent of the baseline quota to 25 percent of the baseline quota. The change in the underharvest carry over limit is not expected to jeopardize the sustainability of North Atlantic swordfish because less underharvested quota will be carried over to subsequent fishing years, resulting in lower adjusted quotas. Recommendation 11-02 also includes an alternative minimum size measurement of 63 cm or 25 inches cleithrum to caudal keel (current cleithrum to caudal keel measurement is 29 inches), which is equivalent to the current 47 inch lower jaw fork length minimum size measurement. Therefore, the cleithrum to caudal keel measurement of 25 inches included in Recommendation 11-02 could better address the operational needs of the U.S. fleet by allowing commercial fishery participants to retain and fully dress swordfish that previously met the 47 inch lower jaw fork length measurement but not the 29 inch cleithrum to caudal keel measurement. The 25 inch cleithrum to caudal keel measurement is not expected to result in cumulative adverse effects that could have substantial effect on North Atlantic swordfish because it is not expected that this lower cleithrum to caudal keel measurement will substantially increase the number of swordfish retained. In compliance with Atlantic Tunas Convention Act, NMFS is required to implement domestic regulations consistent with recommendations adopted by the Commission as may be necessary and appropriate.

**DETERMINATION**

In view of the information presented in this document and the analysis contained in the supporting Environmental Assessment prepared for the implementation of the Commission's Swordfish Recommendations; it is hereby determined that this action will not significantly impact the quality of the human environment as described above and in the supporting Environmental Assessment. In addition, all beneficial and adverse impacts of the proposed action have been addressed to reach the conclusion of no significant impacts. Accordingly, preparation of an Environmental Impact Statement for this action is not necessary.

Emily Menashes                      7/13/2012  
Emily H. Menashes                      Date  
Acting Director, Office of Sustainable Fisheries