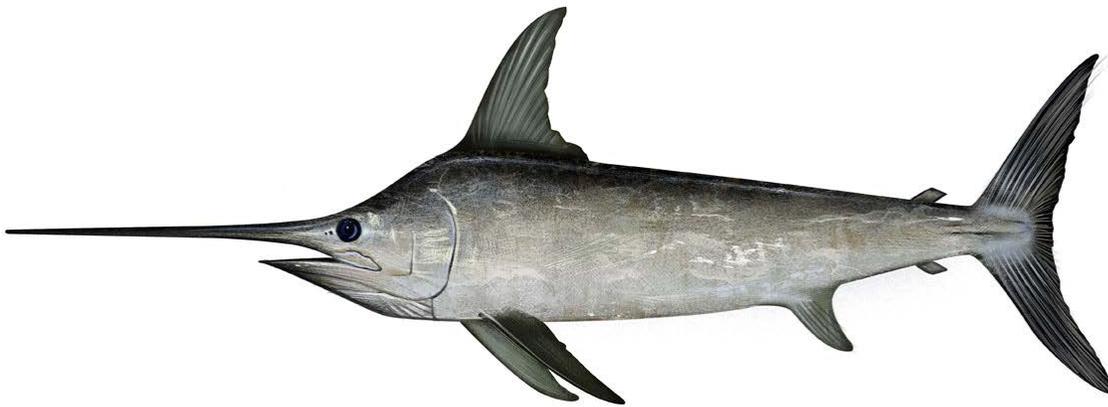


*Draft Environmental Assessment,  
Regulatory Impact Review,  
and  
Initial Regulatory Flexibility Analysis*

*for*

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



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

*February 2013*



## ABSTRACT

- Proposed Action:** Amendment 8 to the 2006 Consolidated Atlantic Highly Migratory Species (HMS) Fishery Management Plan (FMP): Commercial Swordfish Management Measures
- Type of statement:** Environmental Assessment (EA), Regulatory Impact Review (RIR), and Initial Regulatory Flexibility Analysis (IRFA)
- Lead Agency:** National Marine Fisheries Service (NMFS): Office of Sustainable Fisheries
- For further information:** Atlantic Highly Migratory Species Management Division (F/SF1)  
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**Abstract:** This EA analyzes the potential environmental impacts of the commercial swordfish management measures proposed in Amendment 8 to the 2006 Consolidated Atlantic HMS FMP. Amendment 8 would establish new and modified commercial fishing vessel permits that would allow participants to catch swordfish on rod and reel, handline, harpoon, green-stick, and bandit gear and sell them commercially. In recent years, the North Atlantic swordfish stock has experienced significant growth due largely to ongoing domestic and international conservation measures designed to reduce mortality, protect juvenile swordfish, monitor international trade, reduce bycatch, and improve data collection. The most recent stock assessment, conducted in 2009, indicates that the North Atlantic swordfish population is fully rebuilt and that overfishing is no longer occurring. The resulting increased availability of swordfish has increased the economic viability of selective fishing gears that have minimal bycatch and result in few discards, such as rod and reel, handline, bandit gear, green-stick, and harpoon. The purpose of the proposed action is to provide additional opportunities for United States fishermen to harvest swordfish using selective gears that are low in bycatch, given their rebuilt status and increased availability.

## **DRAFT FINDING OF NO SIGNIFICANT IMPACT**

Draft Finding of No Significant Impact for a Proposed Rule to Implement Amendment 8 to the 2006 Consolidated Atlantic Highly Migratory Species Fishery Management Plan.

The Highly Migratory Species (HMS) Management Division of the Office of Sustainable Fisheries submits the attached draft Environmental Assessment (EA) for Atlantic HMS fisheries for Secretarial review under the procedures of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). This draft EA analyzes the ecological, social, and economic impacts of 15 alternatives and sub-alternatives that are intended to consider the implementation of new and modified commercial vessel permits that would allow for a limited number swordfish caught on rod and reel, handline, harpoon, green-stick, or bandit gear to be retained and sold commercially. The responses in the draft Finding of No Significant Impact statement are supported by the analyses in the EA as well as in the other National Environmental Policy Act (NEPA) documents referenced in the EA. Copies of the EA/Regulatory Impact Review/Initial Regulatory Flexibility Analysis are available at the following address:

Highly Migratory Species Management Division, F/SF1  
National Marine Fisheries Service  
263 13th Avenue South  
St Petersburg, FL 33701  
Phone: (727)-824-5399  
or  
<http://www.nmfs.noaa.gov/sfa/hms>

The proposed action would implement new and modified commercial fishing vessel permits that would allow permittees to retain and sell commercially a limited number of swordfish caught on rod and reel, handline, harpoon gear, green-stick, or bandit gear. Specifically this action would implement: (1) new and modified commercial swordfish vessel permits and authorized gears; and, (2) swordfish retention limits associated with the new and modified permits.

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 an action. In addition, the Council on Environmental Quality 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 to 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 action be reasonably expected to jeopardize the sustainability of any target species that may be affected by the action?

No. The primary target species evaluated for this proposed action is North Atlantic swordfish. The proposed open-access Swordfish General Commercial permit would authorize

the use of rod and reel, handline, harpoon, bandit gear, and green-stick for commercial swordfish fishing, with retention limits ranging from 0 to 6 fish. Any swordfish catches resulting from the new permit will remain limited to the applicable, previously analyzed and implemented quota for North Atlantic swordfish, which is adjusted annually consistent with NMFS's obligations to end overfishing and rebuild overfished stocks. The proposed action would allow NMFS to modify swordfish retention limits for the new permit regionally using in-season adjustment authority. The existing limited access commercial swordfish handgear fishery consists mostly of smaller vessels which are limited in range and hold capacity. Although the preferred alternative establishes an open-access commercial permit, NMFS expects that most new commercial permit applicants would be current recreational swordfish fishery participants issued an HMS Angling permit, resulting in a shift of effort from the recreational fishery to the commercial fishery. There are numerous commercial fishing vessel safety requirements and management regulations to comply with when operating a commercial fishing business that may discourage some recreational fishermen from obtaining a commercial permit. Additionally, a recreational fisherman who obtains a Swordfish General Commercial permit would forfeit the ability to fish for Atlantic billfishes, unless they are fishing in a registered HMS tournament and the ability to fish for Atlantic tunas and sharks unless they are fishing in a registered HMS tournament and/or hold appropriate commercial tuna and/or shark permits. Therefore, not all recreational fishermen will choose to become commercial fishermen. Some current Atlantic Tunas General category permit holders may also obtain the new permit, and current Charter/Headboat permit holders would not need the new permit, as they would be able to fish commercially for swordfish on non for-hire trips under their existing permits. These permit holders would likely participate in the commercial swordfish fishery to supplement their primary fishing activities (*i.e.* tuna fishing and charter fishing). All new commercial swordfish fishery participants would be restricted to using only authorized handgear and would be required to comply with the applicable regional retention limits. For these reasons, any increase in fishing effort is likely to be limited because of the low proposed retention limits and the authorization of handgear only. Traditional handgears (rod and reel, handline, harpoon, bandit gear, and green-stick) are closely tended by fishermen, so any incidentally caught undersized swordfish can usually be quickly and safely released with higher post-release survival rates than with other gears. There is a chance that a very small number of undersized swordfish could be incidentally captured and killed, but not at levels that are expected to jeopardize the sustainability of the fully-rebuilt swordfish stock. Swordfish landings will continue to be carefully monitored, especially with implementation of a new electronic dealer reporting system that will be operational in 2013. The proposed action also includes adaptive management measures to allow NMFS to quickly adjust swordfish retention limits regionally (down to zero fish, if necessary) in response to landings information, changes in stock status, quota availability, etc.

According to the most recent stock assessment (SCRS, 2009), the swordfish stock is fully rebuilt and overfishing is not occurring. Moreover, the United States has been harvesting less than 50 percent of its adjusted swordfish quota allocated by ICCAT in recent years. The range of the maximum daily retention limits being considered under this proposed action is consistent with the current open-access HMS Charter/Headboat category retention limit for a vessel with six paying passengers onboard. The proposed initial default retention limits are lower (three for all regions except for the U.S. Caribbean (two swordfish per vessel/trip and the Florida swordfish management region (one swordfish per vessel/trip)). Therefore, the proposed action will not jeopardize the sustainability of North Atlantic swordfish.

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

No. The action is not expected to jeopardize the sustainability of any non-target fish species because overall fishing effort is not expected to significantly increase and any catches will still be limited within the applicable, previously analyzed and implemented TACs for the species, which were established consistent with NMFS's obligations to end overfishing and rebuild overfished stocks. Many of the vessels that may obtain the new permit already likely possess an HMS Angling category permit, so a portion of fishing effort would simply shift from the recreational fishery to the commercial fishery. There are numerous commercial fishing vessel safety requirements and management regulations to comply with when operating a commercial fishing business that may discourage some recreational fishermen from obtaining a commercial permit. Additionally, a recreational fisherman who obtains a Swordfish General Commercial permit would forfeit the ability to fish for Atlantic billfishes, unless they are fishing in a registered HMS tournament and the ability to fish for Atlantic tunas and sharks unless they are fishing in a registered HMS tournament and/or hold appropriate commercial tuna and/or shark permits. For these reasons, any increase in fishing effort is likely to be limited. Some current Atlantic Tunas General category permit holders may also obtain the new permit, as well as current Charter/Headboat permit holders (who would not need the new permit, but could fish commercially for swordfish on non for-hire trips). These permit holders would likely participate in the commercial swordfish fishery to supplement their primary fishing activities (*i.e.*, tuna fishing and charter fishing). All new commercial swordfish fishery participants would be restricted to using only authorized handgear (rod and reel, handline, harpoon, bandit gear, and green-stick), and would be required to comply with the applicable regional retention limits. These traditional handgears are closely tended by fishermen, so any incidentally-caught non-target species can usually be quickly and safely released. There is a possibility that some non-target species could be captured and killed, but not at levels that are expected to jeopardize the sustainability of any other stocks.

3. Can the action be reasonably expected to cause substantial damage to the ocean and coastal habitats and/or essential fish habitat (EFH) as defined under the Magnuson-Stevens Act and identified in FMPs?

No. NMFS anticipates that the proposed action would have a low level of adverse environmental impacts to ocean and coastal habitats and EFH due to the proposed authorization of only traditional handgears. The commercial swordfish handgear fishery primarily consists of smaller vessels operating in predominantly pelagic environments. NMFS concluded in Amendment 1 to the 2006 Consolidated Atlantic HMS FMP ((June 12,2009, 74 FR 28018) (NMFS, 2009)) that most HMS gears have minimal to no impact on HMS EFH, or to any other species' EFH because most HMS gears, including handlines, are fished in the upper water column. The potential adverse impacts to EFH are generally considered negligible, minimal, or low. In other words, HMS gears do not affect the physical characteristics that define HMS EFH (including salinity, temperature, and dissolved oxygen) and EFH identified in other FMPs, such as benthic habitats, because they are deployed in the water column and thus have minimal adverse impacts to benthic habitats. Some handgears such as rod and reel and bandit gear may have the ability to contact the bottom depending upon the method selected to fish, however this contact was determined in Amendment 1 to the Consolidated HMS FMP to not produce

significant effects on EFH including benthic habitats. Overall, the swordfish handgear fishery would have negligible adverse physical impacts on mid-water environments, the substrate, and most sensitive benthic habitats.

4. Can the action be reasonably expected to have a substantial adverse impact on public health and safety?

No. The proposed action is not expected to have substantial adverse impacts on public health and safety. The proposed action includes the modification of swordfish management measures to provide additional commercial fishing opportunities to small-scale swordfish handgear fishermen. Beginning October 16, 2012, all commercial fishing vessels (regardless of whether the vessel is State-registered or Federally-documented) must comply with recently enhanced U.S. Coast Guard commercial fishing vessel safety regulations requiring all commercial fishing vessels that operate (or transit) more than 3 nautical miles offshore to demonstrate full compliance with the existing fishing industry vessel safety regulations found in 46 C.F.R. Part 28, via a mandatory vessel safety examination. This examination requirement is one of several new mandates established by the *Coast Guard Authorization Act of 2010*. Otherwise, fishing patterns and behavior in the swordfish fishery are not expected to change as a result of the proposed action.

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

No. There would not be any additional negative ecological impacts to non-target species or their habitats, including species protected by the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA), beyond those impacts currently occurring under the status quo as previously analyzed in the agency actions implementing North Atlantic swordfish quotas. This proposed action is not expected to adversely affect any endangered or threatened species or any marine mammals. All handgears are closely tended by the fishing vessel so unwanted bycatch or unmarketable catch can be quickly released. A 2001 Biological Opinion (BiOp) issued under the ESA concluded that the continued operation of the HMS handgear fishery (including rod and reel, handline, harpoon, green-stick, and bandit gear) is unlikely to jeopardize the continued existence of the right whale, humpback, fin, or sperm whales, or Kemp's ridley, green, loggerhead, hawksbill or leatherback sea turtles. NMFS has also previously determined for the proposed rule authorizing green-stick gear for the harvest of Atlantic tunas (73 FR 24924; May 6, 2008), that green-stick gear was not likely to adversely affect ESA-listed species (2008 Memorandum from Roy E. Crabtree, PhD, to Margo Schulze-Haugen). NMFS determined that reinitiation of section 7 consultation under the ESA was not required for Amendment 4 to the 2006 Consolidated Atlantic HMS FMP, which authorized the use of handgears to harvest BAYS tunas, swordfish, and sharks in the U.S. Caribbean (June 2012 memo to the file). The Southeastern U.S. Atlantic, Gulf of Mexico, and Caribbean commercial handgear fishery is considered a Category III fishery (76 FR 73912, November 29, 2011), with a remote likelihood of causing serious injury or mortality to marine mammals. In the commercial fishing context, this gear type is not expected to interact with or cause serious injury or mortality of marine mammals.

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.)?

No. A 2001 BiOp concluded that the HMS handgear fishery is unlikely to jeopardize any endangered species. The proposed action utilizes fishing gear that is closely tended, and allows unmarketable species or bycatch to be dehooked and released quickly. Also, swordfish retention limits would be set at low levels to maintain a small-scale fishery, perhaps occurring seasonally or to supplement other commercial fishing income. Overall fishing effort is not expected to significantly increase because many of the vessels that may obtain the new commercial permit are already likely to possess an HMS Angling category permit, thereby shifting recreational fishing effort to the commercial fishery while using similar gears. There are numerous commercial fishing vessel safety requirements and management regulations to comply with when operating a commercial fishing business that may discourage recreational fishermen from obtaining a commercial permit. Some current Atlantic Tunas General category permit holders may also obtain the new permit, as well as current Charter/Headboat permit holders (who would not need the new permit, but could fish commercially for swordfish on non for-hire trips). These permit holders would likely participate in the commercial swordfish fishery to supplement their primary fishing activities (*i.e.*, tuna fishing and charter fishing). All new commercial swordfish fishery participants would be restricted to using only authorized handgear (rod and reel, handline, harpoon, bandit gear, and green-stick), and would be required to comply with the applicable regional retention limits. These traditional handgears are closely tended. Any swordfish catches resulting from the new permit will still be limited within the applicable, previously analyzed and implemented TACs for the species, which were established consistent with NMFS's obligations to end overfishing and rebuild overfished stocks. For these reasons, any increase in fishing effort is not likely to cause adverse impacts, nor will it have a substantial impact on biodiversity and/or ecosystem function within the affected areas.

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

No. There are no anticipated significant natural or physical environmental effects associated with the proposed action and no significant social or economic impacts interrelated with natural or physical environmental effects that would result from this action. The proposed action is expected to have largely neutral environmental effects. This is because no significant change in fishing effort is expected, as many of the fishermen are already participating in recreational swordfish fisheries with similar gears and would simply shift to the new commercial permit. Some current Atlantic Tunas General category permit holders may also obtain the new permit, as well as current Charter/Headboat permit holders (who would not need the new permit, but could fish commercially for swordfish on non for-hire trips). These permit holders would likely participate in the commercial swordfish fishery to supplement their primary fishing activities (*i.e.*, tuna fishing and charter fishing). All new commercial swordfish fishery participants would be restricted to using only authorized handgear (rod and reel, handline, harpoon, bandit gear, and green-stick), and would be required to comply with the applicable regional retention limits. These traditional handgears are closely tended by fishermen. The proposed action would provide small-scale handgear fishermen with access to the commercial swordfish fishery and will likely produce a moderate economic gain. Currently, entrance to the

limited access commercial swordfish fishery has been difficult for small-scale fishermen because limited access permits are frequently expensive and difficult to obtain. Further, the action is consistent with the 2006 Consolidated Atlantic HMS FMP including objectives to monitor and control all components of fishing mortality, both directed and incidental, so as to ensure the long-term sustainability of HMS stocks, and to provide the data necessary for assessing HMS fish stocks and managing HMS, including addressing inadequacies in current data collection and the ongoing collection of social, economic, and bycatch data in Atlantic HMS fisheries.

8. To what degree are the effects on the quality of the human environment expected to be highly controversial?

The effects of this proposed action on the human environment are not expected to be highly controversial. NMFS has worked extensively with the HMS Advisory Panel (HMS AP), commercial and recreational fishermen, and non-governmental organizations (NGOs) through publication of a 2009 Advance Notice of Proposed Rulemaking (ANPR) and a 2011 pre-draft of Amendment 8 to the 2006 Consolidated Atlantic HMS FMP to identify the needs and concerns of domestic North Atlantic swordfish fishery. As a result of this extensive public outreach effort, some of the issues that would result in potential public or scientific controversy over the effects of the proposed action on the quality of the human environment have been factored into the alternatives presented.

On June 1, 2009 (74 FR 26174), NMFS published an ANPR to inform the public and request comments concerning actions NMFS was considering to increase opportunities for U.S. fisheries to fully harvest the U.S. swordfish quota. One of the items contained in the ANPR was the potential establishment of a new commercial permit to harvest swordfish using handgear. The comment period for the ANPR ended on August 31, 2009. NMFS also discussed a new commercial swordfish permit during HMS AP meetings from 2009-2012. A Pre-draft of Amendment 8, including specific management alternatives, was presented to the HMS AP and made public in March 2012. NMFS received numerous comments both in support of, and in opposition to, the concept. All of the comments received on the 2009 ANPR, 2009-2012 HMS AP meetings, and the Pre-draft to Amendment 8 have been considered in the preparation of this document. NMFS preliminarily anticipates that the proposed action will have a low level of potential adverse environmental impacts due to the relatively low retention limits that are being proposed and by restricting the authorized gears to traditional handgears. Additionally, the potential adverse impacts to non-target and protected species are expected to be minimal.

9. Can the action 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. This action would not 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 because the proposed action would occur in open areas of the ocean. In addition, there is no park land, prime farmlands, wetlands, or wild and scenic rivers within the action area so there would be no impacts on these 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 effects analyzed in similar swordfish management actions since the 1999 HMS FMP, including those in the Final Environmental Impact Statement (FEIS) prepared for the 2006 Consolidated Atlantic HMS FMP, those in Environmental Assessments (EAs) prepared for other final rules providing additional access to North Atlantic swordfish (76 FR 14884, March 18, 2011; 73 FR 38144, July 3, 2008; and, 72 FR 31688, June 7, 2007), and those in the EAs prepared for annual swordfish quota specifications. The effects of this proposed action are within the overall swordfish quota which has previously been analyzed. None of the previous actions resulted in highly uncertain effects or unique or unknown risks. Swordfish landings will continue to be monitored through the submission of weekly swordfish dealer reports, and retention limits could be adjusted through in-season action to zero, if necessary.

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

No. NMFS does not anticipate any significant cumulative ecological, economic, and social impacts as a result of these permit changes. It is the goal of NMFS for the United States to achieve, but not exceed, its ICCAT-recommended swordfish quota without adversely impacting protected species, non-target species, and juvenile swordfish. The proposed action would provide an opportunity for more U.S. fishermen to participate in the commercial swordfish fishery using handgear, which has been determined to have minimal impacts on protected species and marine mammals. It would provide positive social and economic impacts for some U.S. fishermen. The commercial swordfish handgear fishery primarily consists of smaller vessels operating in predominantly pelagic environments. Overall, the swordfish handgear fishery would have negligible adverse physical impacts on mid-water environments, the substrate, and most sensitive benthic habitats. As a result of recent swordfish revitalization efforts, the U.S. swordfish fishery has shown an increasing trend in catch. U.S. swordfish catches in 2011 were at the highest level since 2000, even with fewer active pelagic longline vessels. The cumulative impacts of the ongoing swordfish fishery revitalization efforts, including those in this action, are expected to be positive from both an ecological and socio-economic perspective because of low impacts of the handgear fishery. If the United States is successful at increasing its North Atlantic swordfish catch and maintaining its international allocation of swordfish quota, the cumulative results will provide increased gross revenues to some U.S. fishermen who are participating in a well-managed, sustainable fishery. NMFS believes there would be no significant increase in fishing effort under any of the alternatives because most new commercial permit holders are likely to be currently participating in the recreational swordfish or tuna commercial handgear fisheries. Under the proposed actions, NMFS anticipates that fishermen using handgear would have no adverse impacts on ESA-listed species in excess of the impacts analyzed in the 2001 BiOp which concluded that the HMS handgear fishery is unlikely to jeopardize the continued existence of any ESA-listed species.

12. Is the 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 proposed action would occur in offshore waters and not in any areas listed or eligible for listing in the National Register of Historic Places, and would not cause loss or destruction of significant scientific, cultural, or historical resources because there are no significant scientific, cultural, or historical resources within the action area.

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

No. The proposed action is not expected to result in any significant change to fishing patterns previously analyzed in the Final Environmental Impact Statement (FEIS) for the 2006 Consolidated Atlantic HMS FMP. The swordfish handgear fleet generally consists of small vessels with limited range and hold capacity. Because of the small size of these vessels, they are not expected to travel between ecologically different bodies of water or exchange ballast water. Thus, the proposed action is highly unlikely to contribute to the introduction or spread of non-indigenous species.

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

No. This action is part of an ongoing process to carefully and deliberately increase fishing opportunities in the U.S. North Atlantic swordfish fishery with minimal impacts on protected and non-target species in order to attain, but not exceed, the ICCAT-recommended U.S. swordfish quota. This action would provide U.S. fishermen with a cost-effective opportunity to participate in a small-scale swordfish handgear fishery that they would otherwise be precluded from because existing limited-access commercial swordfish permits are often expensive and difficult to obtain. The retention limits proposed in this action are within the range of limits currently established for the recreational swordfish fishery. Additionally, this action includes mechanisms by which retention limits can be modified regionally using in-season adjustment authority as NMFS collects data on catches, discards, fishing patterns, quota attainment, etc. A commercial open-access handgear permit is already available for tunas. There is no open-access permit available for sharks, in part due to the overfished and overfishing status of many shark species.

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

No. The action would be consistent with the Magnuson-Stevens Fishery Conservation and Management Act, the Atlantic Tunas Convention Act, and the regulations at 50 CFR 635. NMFS has preliminarily determined that the action would be implemented in a manner consistent with the enforceable policies of those coastal states on the Atlantic (including the GOM 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 or requirement imposed for the protection of the environment.

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

No. 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 cumulative impacts of ongoing swordfish fishery revitalization efforts, including those in this proposed action, are expected to be positive from both an ecological and socio-economic perspective. If the United States is successful at increasing its North Atlantic swordfish catch and maintaining its international swordfish quota, the cumulative results will provide increased gross revenues to some U.S. fishermen who are participating in a well-managed, sustainable fishery. NMFS believes there would be no significant increase in fishing effort under any of the alternatives because most new commercial permit holders are likely already participating in the recreational swordfish fishery. Some current Atlantic Tunas General category permit holders may also obtain the new permit, as well as current Charter/Headboat permit holders (who would not need the new permit, but could fish commercially for swordfish on non for-hire trips). These permit holders would likely participate in the commercial swordfish fishery to supplement their primary fishing activities (*i.e.*, tuna fishing and charter fishing). All new commercial swordfish fishery participants would be restricted to using only authorized handgear (rod and reel, handline, harpoon, bandit gear, and green-stick), and would be required to comply with the applicable regional retention limits. These traditional handgears are closely tended by fishermen, so any incidentally-caught non-target species can usually be quickly and safely released. Under the proposed actions, NMFS anticipates that fishermen using handgear would have no adverse impacts on ESA-listed species in excess of the impacts analyzed in the 2001 BiOp which concluded that the HMS handgear fishery will not jeopardize any ESA-listed species.

## **DETERMINATION**

In view of the information presented in this document and the analysis contained in the attached EA that was prepared to address proposed changes to the U.S. North Atlantic swordfish fishery, particularly the small-scale handgear fishery, it is hereby determined that this action would not have a significant impact on the quality of the human environment as described above and in the EA. In addition, all impacts to potentially affected areas, including national, regional, and local, have been addressed to reach the conclusion of no significant impact. Accordingly, preparation of an EIS for this action is not necessary.

DRAFT

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Emily Menashes  
Acting Director, Office of Sustainable Fisheries, NMFS

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Date

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## 1.0 INTRODUCTION

Atlantic Highly Migratory Species (HMS<sup>1</sup>) are managed under the dual authority of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) and the Atlantic Tunas Convention Act (ATCA). Under the Magnuson-Stevens Act, the National Marine Fisheries Service (NMFS) must, consistent with the National Standards, manage fisheries to maintain optimum yield (OY) by rebuilding overfished fisheries and ending overfishing. Under ATCA, the Secretary shall promulgate regulations as may be necessary and appropriate to carry out the recommendations from the International Commission for the Conservation of Atlantic Tunas (ICCAT). The management measures proposed for this amendment (Amendment 8) to the 2006 Consolidated Atlantic HMS Fishery Management Plan (FMP) and its associated proposed rule are taken under the authority of both the Magnuson-Stevens Act and ATCA. In addition to these two laws, the regulations to implement any management measures must also be consistent with other applicable laws including, but not limited to, the National Environmental Policy Act (NEPA), the Endangered Species Act (ESA), the Marine Mammal Protection Act (MMPA), and the Coastal Zone Management Act (CZMA).

As required by NEPA, Section 2 of this draft EA provides a description of the alternatives considered, Section 3 provides a description of the affected environment of the fishery, and Section 4 analyzes the potential ecological, social, and economic impacts of the 15 alternatives and sub-alternatives. Sections 5 and 6 analyze the economic impacts of the alternatives and address the requirements of a Regulatory Impact Review (RIR) and Initial Regulatory Flexibility Analysis (IRFA).

NMFS is proposing management measures that would amend the HMS fishery management regulations for North Atlantic swordfish. Changes to North Atlantic swordfish management measures could include the creation of a new and/or modified swordfish permit(s), specific authorized gears, and modified swordfish retention limits associated with a new and/or modified permit(s).

### 1.1 Purpose and Need

The purpose of the proposed action is to provide additional opportunities to harvest swordfish using selective gears that are low in bycatch given the rebuilt status of the swordfish stock and their resulting increased availability. Providing additional harvest opportunities can also help the United States to more fully utilize its domestic swordfish quota allocation. Several U.S. fishery management measures (*e.g.*, gear requirements, time/area closures, and other bycatch mitigation measures) as well as market factors have impacted the ability of the United States to fully harvest its ICCAT swordfish quota allocation. From 2007-2011, on average, the United States has caught approximately 70 percent of its base allocation of North Atlantic swordfish. ICCAT rollover allowances permitted half of the uncaught U.S. quota to be incorporated into the following year's quota from 2006 and 2011. This was reduced to a 25-

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<sup>1</sup> The Magnuson-Stevens Act, at 16 U.S.C. 1802(14), defines the term "highly migratory species" as tuna species, marlin (*Tetrapturus* spp. and *Makaira* spp.) oceanic sharks, sailfishes (*Istiophorus* spp.), and swordfish (*Xiphias gladius*). Further, the Magnuson-Stevens Act, at 16 U.S.C. 1802(27), defines the term "tunas species" as albacore tuna (*Thunnus alalunga*), bigeye tuna (*Thunnus obesus*), bluefin tuna (*Thunnus thynnus*), skipjack tuna (*Katsuwonus pelamis*), and yellowfin tuna (*Thunnus albacares*).

percent rollover allowance starting in 2012. Several countries, including Canada and developing countries seeking to build their respective swordfish fisheries, have requested that ICCAT transfer additional North Atlantic swordfish quota to them from the U.S. allocation. Some ICCAT member countries do not fully employ fishing methods that reduce bycatch and do not consider the ecosystem impacts associated with harvesting North Atlantic swordfish. Therefore, a loss of U.S. quota to these countries has the potential to reduce the ecological gains resulting from actions that the United States commercial swordfish fleet has already adopted to reduce bycatch. ICCAT will reconsider North Atlantic swordfish quota allocations at its 2013 annual meeting; therefore, it may benefit the United States to take further action to more fully utilize its North Atlantic swordfish quota allocation before then.

In recent years, the North Atlantic swordfish stock has experienced significant growth due to ongoing domestic and international conservation measures to reduce mortality, protect juvenile swordfish, monitor international trade, reduce bycatch, and improve data collection. Several strong year classes in the late 1990s, and an overall reduction in catch since 1987, have supported the recovery of the North Atlantic swordfish stock. The most recent stock assessment, conducted in 2009, indicates that the North Atlantic swordfish population is fully rebuilt (“not overfished”) and that overfishing is not occurring. As the swordfish stock has continued to rebuild, more fish have recruited to larger sizes.

Traditional handgears such as rod and reel, handline, harpoon, and bandit gear have recently become more economically viable as swordfish are more broadly distributed and available to these gear types. In addition, with a robust stock structure, the mean size of landed U.S. swordfish has increased. The current swordfish Handgear permit is a limited access permit (LAP), meaning that participants interested in entering the fishery must obtain a permit from an existing permit holder leaving the fishery. Anecdotal information suggests that prices for the swordfish Handgear LAPs have increased substantially in recent years, especially in the south Florida area. Because the current swordfish Handgear permit is limited access, and is often difficult or expensive to obtain, it presents a barrier to entry to the commercial swordfish handgear fishery. Thus, a primary goal of this action is to expand commercial swordfish fishing opportunities using selective fishing gears that have minimal bycatch and bycatch mortality.

Before, and since, the North Atlantic swordfish stock was declared rebuilt, NMFS made significant efforts to restructure the fishery and adjust regulatory constraints on swordfish fishermen. As a result of these “revitalization” efforts and the increased availability of fish due to stock rebuilding, U.S. swordfish catches have increased by nearly 40 percent since 2006. The recent re-emergence of interest in handgears to fish commercially for swordfish is consistent with NMFS’ ongoing efforts to revitalize the swordfish fishery. Handgears are tended and, when compared to other gears, are highly selective, have low bycatch interaction rates with protected species and marine mammals, and may have low post-release mortality rates on non-target species and undersized swordfish. The support and careful expansion of these handgear fisheries is important to the United States’ intentions to make steady progress toward fully harvesting its swordfish allocation while minimizing bycatch and complying with all of its legal obligations to protect listed species and manage a healthy stock.

Based upon the rebuilt status of North Atlantic swordfish, the renewed interest in commercial handgears that are lower in bycatch and bycatch mortality, and the need to more

fully utilize the U.S. ICCAT-recommended swordfish quota allocation, NMFS is proposing Amendment 8 to the 2006 Consolidated HMS FMP (Amendment 8). The preferred alternatives in Amendment 8 would establish a new open-access commercial swordfish vessel permit to allow for the retention and sale of a limited number (0-6) of swordfish caught on rod and reel, handline, harpoon, bandit gear, or green-stick. HMS Charter/Headboat vessel permit holders would also be authorized to fish under open-access swordfish commercial permit regulations when fishing commercially (*i.e.*, not on a for-hire trip). In addition, the preferred alternatives would establish swordfish management regions. The retention limit within each region could be adjusted in-season based upon pre-established criteria (*i.e.*, dealer reports, landing trends, quota availability, availability of swordfish on fishing grounds, variations in seasonal distribution, abundance, or migration patterns, and other relevant factors).

## **1.2 Scope of the NEPA Analysis**

This draft Environmental Assessment (EA) describes the NMFS proposed action of amending the 2006 Consolidated Atlantic HMS FMP to increase participation in the North Atlantic swordfish commercial handgear fishery. The draft EA analyzes the potential direct, indirect, and cumulative ecological, social, and economic impacts associated with fifteen different alternatives and sub-alternative that are described in detail in Chapters 2 and 4.

In considering the proposed action, NMFS is responsible for complying with a number of Federal regulations, including the National Environmental Policy Act. As such, the purpose of the draft EA is to provide an environmental analysis to analyze the potential effects of NMFS' proposed action to inform its decisionmaking process and to encourage and facilitate public involvement in the environmental review process.

Under NEPA, a draft EA is prepared to determine if any significant environmental impacts are likely to be caused by a proposed action. If the draft EA does not identify significant impacts, a Finding of No Significant Impacts (FONSI) is prepared to document the decision maker's determination and to approve the proposed action. If at any time during preparation of the draft EA it appears that significant impacts would result from the proposed action, the agency would halt development of the draft EA and begin preparation of an Environmental Impact Statement (EIS) to more thoroughly evaluate the potential impacts and potential ways to reduce or mitigate those impacts.

## **1.3 Background on Development of the FMP Amendment**

On June 1, 2009 (74 FR 26174), NMFS published an Advance Notice of Proposed Rulemaking (ANPR) to inform the public and request comments concerning actions NMFS was considering to increase opportunities for U.S. fisheries to fully harvest the U.S. swordfish quota. One of the items contained in the ANPR was the potential establishment of a new commercial permit to harvest swordfish using handgear. The comment period for the ANPR ended on August 31, 2009. NMFS also discussed the commercial swordfish permit during HMS Advisory Panel (AP) meetings from 2009-2012. A Pre-draft of Amendment 8, including specific management alternatives, was presented to the HMS AP and made public in March 2012. NMFS received numerous comments both in support of, and in opposition to, the concept. All of the comments received on the 2009 ANPR, 2009-2012 HMS AP meetings, and the Pre-draft to

Amendment 8 have been considered in the preparation of this document. NMFS preliminarily anticipates that the proposed action would have neutral environmental impacts due to the relatively low retention limits that are being considered and by restricting the authorized gears to traditional handgears and green-stick gear. Additionally, the potential adverse impacts to protected species are expected to be minimal.

#### **1.4 Objectives**

Consistent with the 2006 Consolidated Atlantic HMS FMP objectives, the Magnuson-Stevens Act, and other relevant federal laws, the specific objectives for this action are to:

- Implement conservation and management measures that prevent overfishing while achieving, on a continuing basis, the optimum yield (OY) from the U.S. north Atlantic swordfish fishery;
- Provide increased opportunities for the United States to more fully utilize its ICCAT-recommended domestic swordfish quota allocation;
- Implement a North Atlantic swordfish management system to make fleet capacity commensurate with resource status so as to improve both economic efficiency and biological conservation;
- Provide commercial swordfish fishing opportunities for U.S. fishermen within established quota levels using selective fishing gears that have minimal bycatch and maximize the survival of any released species;
- Enact management measures to establish new and/or modified commercial vessel permit(s) that would allow for a limited number of swordfish (0-6) to be caught on rod and reel, handline, harpoon, bandit gear, or green-stick gear and sold commercially;
- Examine and implement regionally tailored North Atlantic swordfish management strategies, as appropriate;
- Improve the Agency's capability to monitor and sustainably manage the North Atlantic swordfish fishery.

#### **1.5 Brief Management History**

This section provides a brief overview of HMS management.

Prior to 1990, the five Atlantic Regional Fishery Management Councils (New England, Mid-Atlantic, South Atlantic, Gulf of Mexico, and Caribbean) had authority to manage Atlantic HMS in their regions. In 1985, those councils implemented the original Swordfish FMP and, in 1988, the original Billfish FMP.

On November 28, 1990, the President of the United States signed into law the Fishery Conservation Amendments of 1990. This law amended the Magnuson Act and gave the

Secretary of Commerce the authority to manage Atlantic Tunas, swordfish, billfish, and sharks in the exclusive economic zone (EEZ) of the Atlantic Ocean, Gulf of Mexico, and Caribbean Sea (16 U.S.C. 1811 and 16 U.S.C. 1854(f)(3)). The Secretary subsequently delegated this authority to manage Atlantic HMS to NMFS. The HMS Management Division within NMFS develops regulations for HMS fisheries, although some actions (*e.g.*, Large Whale Take Reduction Plan) are taken by other NMFS offices if the primary legislation (*e.g.*, Marine Mammal Protection Act) driving the action is not the Magnuson-Stevens Act or the ATCA. NMFS manages Atlantic HMS at the international and national levels given the highly migratory nature of these species.

In 1996, Congress amended the Magnuson Act with the Sustainable Fisheries Act, re-naming it the Magnuson-Stevens Fishery Conservation and Management Act, to require that NMFS establish advisory panels (APs) to assist in the development of FMPs and FMP amendments for Atlantic HMS. As a result, NMFS established the HMS and Billfish APs and, in 1999, finalized and implemented the 1999 FMP for Atlantic Tunas, Swordfish, and Sharks (1999 FMP) and Amendment 1 to the Atlantic Billfish FMP (NMFS, 1999; NMFS, 1999a). In 2003, NMFS amended the 1999 FMP to address shark management issues (NMFS, 2003). In 2006, NMFS published the 2006 Consolidated Atlantic HMS FMP, which combined the 1999 FMP, the Atlantic Billfish FMP, and their amendments, and also combined the two separate APs into a single HMS AP (NMFS, 2006). The 2006 Consolidated Atlantic HMS FMP has since been amended by Amendment 1 (NMFS, 2009), which focused on essential fish habitat; Amendment 2 (NMFS, 2008), which focused on large coastal shark management measures; Amendment 3 (NMFS, 2010), which focused on management measures for small coastal sharks, pelagic sharks, and smooth dogfish, and Amendment 4 to the 2006 Consolidated Atlantic HMS FMP (NMFS, 2012), which created a new Caribbean Small Boat permit that is valid only in the U.S. Caribbean HMS fisheries. The regulations for Atlantic HMS can be found at 50 CFR part 635. Detailed descriptions of domestic management measures can be found in the 2006 Consolidated Atlantic HMS FMP and the HMS commercial and recreational compliance guides. These documents are available on the NMFS HMS website (<http://www.nmfs.noaa.gov/sfa/hms>).

Since 1966, ICCAT has been responsible for international conservation and management of tuna and tuna-like species. ICCAT 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.” Atlantic Tunas, swordfish, and billfish are subject to ICCAT management authority. ICCAT also assesses the stock status of some pelagic shark species. Recommendations adopted by ICCAT are promulgated as regulations in the United States under the ATCA, which was signed in 1975 (16 U.S.C. 971). The ATCA authorizes the Secretary of Commerce to administer and enforce all provisions of ICCAT.

Under the Magnuson-Stevens Act, NMFS must maintain OY of each fishery by preventing overfishing and rebuilding overfished stocks. To do this, NMFS must, among other things, consider the National Standards, including using the best available scientific information as well as the potential impacts on residents of different States, efficiency, costs, fishing communities, bycatch, and safety at sea (16 U.S.C. §1851 (a)(1-10)). The Magnuson-Stevens Act also has a specific section that addresses preparing and implementing FMPs for Atlantic HMS (16 U.S.C. §1854 (g)(1)(A-G)). In summary, the section includes, but is not limited to, the following requirements:

- Consult with and consider the views of affected Councils, Commissions, and advisory groups;
- Evaluate the likely effects of conservation and management measures on participants and minimize, to the extent practicable, any disadvantage to U.S. fishermen in relation to foreign competitors;
- Provide fishing vessels with a reasonable opportunity to harvest any allocation or quota authorized under an international fishery agreement;
- Diligently pursue comparable international fishery management measures; and,
- Ensure that conservation and management measures promote international conservation of the effected fishery, take into consideration traditional fishing patterns of fishing vessels, are fair and equitable in allocating fishing privileges among U.S. fishermen and do not have economic allocation as the sole purpose, and promote, to the extent practicable, implementation of scientific research programs that include the tagging and release Atlantic HMS.

### **1.5.1 Atlantic Swordfish**

The U.S. Atlantic swordfish fishery is managed under the 2006 Consolidated Atlantic HMS FMP under the authority of the Magnuson-Stevens Act and ATCA. There are two distinct management units for swordfish in the Atlantic Ocean, north and south, divided at 5° N latitude. Because the southern stock is located south of 5° N latitude, South Atlantic swordfish are not within the management authority of the Magnuson-Stevens Act. However, the stock and its fishery are included in the 2006 Consolidated Atlantic HMS FMP because South Atlantic swordfish are managed by ICCAT and because there are U.S. fishermen who have traditionally fished in the South Atlantic.

The first Atlantic swordfish FMP was completed and implemented in 1985 by the South Atlantic Fishery Management Council in cooperation with other Atlantic regional fishery management councils. This FMP laid the groundwork for defining approved fishing methods, determining optimum yield and status of the stocks, implementing variable season closures, and regulating foreign fishing in U.S. waters. Swordfish management was transferred from the regional fishery management councils to NMFS in the early 1990s. From that time to implementation of a rebuilding plan in 2000, numerous management initiatives were implemented including a minimum size limit, commercial quota changes, and a prohibition on driftnets for swordfish.

In 1999, ICCAT established a 10-year rebuilding plan, reducing the TAC to 10,400 mt ww over a three-year period while maintaining the U.S. quota share at 29 percent of the overall TAC. The United States completed development of a domestic rebuilding plan for North Atlantic swordfish in 2000. In 2002, after limited stock increases, ICCAT increased the overall TAC to 14,000 mt and increased the U.S. allocation to 30.49 percent. In 2006, the United States began providing 1,345 mt of its North Atlantic swordfish underharvest on a temporary basis to other ICCAT contracting parties attempting to develop North Atlantic swordfish fisheries. North

Atlantic swordfish were last assessed in 2009 and, according to the ICCAT's Standing Committee on Research and Statistics (SCRS), the results of the assessment suggested that there was greater than 50% probability that the stock was at or above  $B_{msy}$ , and thus ICCAT's rebuilding objective had been achieved. The SCRS also noted that catches have been below the TACs since 2003. The 2009 North Atlantic SWO assessment found the stock to be fully rebuilt with no overfishing occurring. In 2010, ICCAT established a catch limit of 3,907 mt ww for the United States for 2011. In 2011, Recommendation 11-02 was adopted and maintains the TAC at 13,700 mt ww for 2012 and 2013. The SCRS indicated that if this TAC is maintained, the biomass of North Atlantic swordfish will remain above  $B_{msy}$ , with greater than 50 percent probability. The United States baseline quota of 3,907 mt (ww) was maintained, but the annual quota rollover allowance which previously permitted 50 percent of the uncaught quota to be incorporated into the following year's quota was reduced to 25 percent starting in 2012.

In recent years, several management measures other than quota changes have been implemented that affect commercial swordfish fishermen. These measures include: time/area closures; mandatory use of circle hooks; bait restrictions; gear requirements; mandatory protected species workshop training; mandatory vessel monitoring systems (VMS) in the pelagic longline (PLL) fishery; changes to authorized gears; commercial and recreational retention limits; and, vessel upgrading restrictions. Most recently, in 2012, the cleithrum to caudal keel (CK) minimum size measurement was modified from 29 inches to 25 inches based upon Recommendation 11-02, to provide a more equivalent alternative dressed swordfish measurement to the existing 47 inch lower jaw-fork length (LJFL) minimum size.

## **2.0 DESCRIPTION OF NEPA ALTERNATIVES**

This section provides a summary of the NEPA alternatives that NMFS considered for this draft NEPA analysis. In this EA, NMFS considers two broad issues regarding North Atlantic swordfish management measures. The two issues are: 1) vessel permitting and authorized gears; and, 2) swordfish retention limits. Each of these issues is examined in greater detail below. The alternatives represent a range of options that NMFS has considered to establish and implement a new or modified commercial vessel permit(s) that would allow for a limited number of swordfish caught on rod and reel, handline, harpoon gear, green-stick, or bandit gear to be retained and sold. Swordfish landings under the proposed new or modified permit(s) would be deducted from the appropriate semi-annual directed swordfish quota (see Appendix A). The ecological, economic, and social impacts of the alternatives are discussed in Chapter 4.

In the final EA, NMFS may select the preferred alternatives mentioned in this draft EA or modify the proposed action alternatives due to public comment or other information. NMFS requests public comment on other alternatives that should be considered, but are not included in this EA.

### **2.1 Issue 1: Vessel Permitting and Authorized Gears**

#### **2.1.1 Description of the issue**

The 1999 FMP established a limited access permit (LAP) program for the commercial Atlantic swordfish, shark, and tuna longline fisheries to rationalize harvesting capacity with the

available quotas and reduce latent effort while preventing further overcapitalization. The LAP system for swordfish was established when swordfish were overfished and overfishing was occurring. Implementation of the HMS LAP program is executed via issuance of permits to eligible recipients in the commercial swordfish, shark, and tuna longline fisheries. Currently, eligible PLL vessels are required to obtain up to three separate LAPs to fish for or retain HMS, including swordfish. There is also a separate swordfish Handgear LAP that has been in place since 1999. Since 2004, the number of swordfish Handgear LAPs that have been renewed has decreased from 96 to 78 per year. Because no new swordfish permits have been issued since 1999, many HMS LAPs have increased in value. Limited availability and high LAP values may present a significant barrier to entry into the commercial swordfish handgear fishery. Anecdotal information indicates that the cost of a swordfish Handgear LAP can range from \$15,000 to \$30,000.

There is currently adequate quota available to expand access to the commercial swordfish fishery. In 2011, the most recent year for which complete data are available, the United States caught approximately 74 percent of its baseline swordfish quota and approximately 50 percent of its adjusted quota. The North Atlantic swordfish stock is fully rebuilt, overfishing is not occurring, and the ICCAT-recommended U.S. swordfish quota is currently underharvested. Therefore, a new or revised permit(s) would provide additional opportunities to harvest swordfish and help to achieve the domestic North Atlantic swordfish quota using gears with generally low bycatch. For these reasons, NMFS is considering increasing commercial access to the swordfish resource either through the establishment of a new swordfish permit or through modifications to existing permits.

Through this draft EA for Amendment 8 to 2006 Consolidated Atlantic HMS FMP, NMFS is considering the establishment of a new Swordfish General Commercial permit, or the potential expansion of the Atlantic Tunas General category permit, and the Atlantic Tunas Harpoon category permit to include the commercial sale of swordfish. Such an expansion of the Atlantic Tunas General category permit and Atlantic Tunas Harpoon category permit would allow for the retention of swordfish, thus converting the open-access Atlantic Tunas General category permit to an Atlantic Tunas and Swordfish General category commercial permit, and the Atlantic Tunas Harpoon category permit to an Atlantic Tunas and Swordfish Harpoon category permit. A new swordfish commercial permit could be implemented as either an open or limited access permit and could expand participation in the commercial swordfish rod and reel, handline, bandit gear, harpoon, and green-stick fishery. If implemented, a new or modified commercial swordfish permit(s) would provide a unique opportunity for U.S. fishermen to enter the domestic commercial swordfish fishery that has not been available since 1999. NMFS specifically requests comments on all permit options.

One unique aspect of the current swordfish limited access handgear fishery is the authorization of buoy gear. Buoy gear is authorized for swordfish fishing only, and may only be used aboard vessels issued a swordfish Handgear or swordfish Directed LAP. Currently, the buoy gear fishery primarily occurs off the southeast coast of Florida. Comments from the HMS Advisory Panel in recent years have reflected public concern about user conflicts with buoy gear within the narrow geographic range of the current buoy gear fishery off the southeast coast of Florida. With this in mind and due to a potentially large number of applicants for a new Swordfish General Commercial permit or a modified Atlantic Tunas General or Harpoon

category permit, NMFS is currently not considering authorizing buoy gear for a new or modified permit in order to minimize the potential for gear conflicts. Additionally, if the Atlantic Tunas General category permit were modified to include swordfish and buoy gear were authorized for swordfish, it could also be necessary to consider authorizing buoy gear for the harvest of tunas throughout the Atlantic since there would be only one permit for both species. In Amendment 4, NMFS recently authorized the use of buoy gear for the harvest of bigeye, albacore, yellowfin, and skipjack tunas under the HMS Commercial Caribbean Small Boat permit, which is valid only in the U.S. Caribbean. While the authorization of buoy gear for tunas outside the U.S. Caribbean may be considered in a future rulemaking, it is not being considered at this time.

The alternatives considered for vessel permitting are described in Section 2.1.2. All of these permit alternatives would authorize only the use of rod and reel, handline, bandit gear, green-stick, and harpoon gear. All of the alternatives for a new and/or modified swordfish permit would require that all swordfish landed under the new/modified permit(s) be reported in HMS logbooks, if selected, and that all sales be only to permitted swordfish dealers. The permitting alternatives described below are organized from least restrictive to most restrictive, with the exception of the no action alternative.

### **2.1.2 Potential alternatives for management**

**Alternative 1.1** - Maintain existing swordfish limited access permit program and do not establish a new swordfish permit (No Action)

This alternative would, among other things, maintain the current swordfish limited access permit (LAP) program and would not establish a new or modified swordfish commercial permit(s). Alternative 1.1 would maintain the current authorized species and gear possession structure, gear deployment restrictions and closed areas, as well as current retention limits and allowable landing forms. Additionally, current observer and vessel and dealer reporting requirements would remain in place. The current specific management measures for HMS are codified in the Code of Federal Regulations (CFR) at 50 CFR Part 635. These regulations are also summarized in the HMS Compliance Guides which can be found at: [http://www.nmfs.noaa.gov/sfa/hms/Compliance\\_Guide/index.htm](http://www.nmfs.noaa.gov/sfa/hms/Compliance_Guide/index.htm).

**Alternative 1.2** - Establish a new open-access commercial swordfish permit and modify existing open access HMS permits to allow for the commercial retention of swordfish using rod and reel, handline, bandit gear, harpoon, and green-stick gear (same gears authorized for Atlantic Tunas General category permit) – *Preferred Alternative*

This alternative would create a new and/or modified open-access commercial vessel permit that would authorize commercial fishing for North Atlantic swordfish in the U.S. Exclusive Economic Zone (EEZ). Vessels issued the new and/or modified permit would be authorized to possess and utilize only rod and reel, handline, harpoon, bandit gear, and green-stick gear to capture swordfish. This alternative would require that all swordfish landed under the new/modified permit(s) be reported in HMS logbooks, if selected, and that all sales be only to permitted swordfish dealers. Applicable retention limits being considered for this new and modified permit(s) are described in a subsequent section of this document.

Atlantic Tunas General category permit holders may currently participate in registered Atlantic HMS tournaments and, when fishing in an HMS tournament, may land billfish, swordfish, and sharks recreationally. Under a proposed new Swordfish General Commercial permit or a modified Atlantic Tunas General category permit, participation in registered HMS tournaments and landing billfish in tournaments would be allowed. This is consistent with current Atlantic Tunas General category regulations. If it were eliminated, existing holders of the Atlantic Tunas General category permit who can currently participate in registered HMS tournaments would lose that ability if they were to also obtain a Swordfish General Commercial permit and tournament participation was not allowed with that permit.

Four sub-alternatives are being considered for an open-access swordfish permit.

**Sub-Alternative 1.2.1** - Modify existing open-access Atlantic Tunas General category permit to allow for the commercial retention of swordfish using handgears

This sub-alternative would add swordfish to the existing Atlantic Tunas General category permit, and rename the modified permit as the “Atlantic Tunas and Swordfish General category permit.” Vessels issued the modified permit would be authorized to possess and utilize only rod and reel, handline, harpoon, bandit gear, and green-stick gear to capture swordfish, BAYS tunas, and bluefin tuna. This alternative would require that all swordfish landed under the new/modified permit(s) be reported in HMS logbooks, if selected, and that all sales be only to permitted swordfish dealers. Applicable retention limits being considered for this modified permit are described in subsequent sections of this document. All other existing Atlantic Tunas General category permit regulations would remain in effect.

**Sub-Alternative 1.2.2** - Modify existing open-access Atlantic Tunas Harpoon category permit to allow for the commercial retention of swordfish using harpoon

This sub-alternative would add swordfish to the existing Atlantic Tunas Harpoon category permit, and rename the modified permit as the “Atlantic Tunas and Swordfish Harpoon category permit.” Vessels issued the modified permit would be authorized to possess and utilize only harpoon gear to capture swordfish, BAYS tunas, and bluefin tuna. This sub-alternative would require that all swordfish landed under the modified permit be reported in HMS logbooks, if selected, and that all sales be only to permitted swordfish dealers. Applicable retention limits being considered for this modified permit are described in subsequent sections of this document. All other existing Atlantic Tunas Harpoon category permit regulations would remain in effect.

**Sub-Alternative 1.2.3** - Modify existing HMS Charter/Headboat permit to allow fishing under open-access swordfish commercial regulations (with rod and reel and handline only) when fishing commercially (*i.e.*, not on a for-hire trip) - *Preferred Alternative*

This sub-alternative would modify regulations to allow vessel owners issued an HMS Charter/Headboat permit to fish under open-access swordfish commercial regulations (with rod and reel and handline) when fishing commercially (*i.e.*, when not on a for-hire trip). This would be similar to the current allowance for Charter/Headboat vessels to fish commercially for bigeye, albacore, yellowfin, and skipjack (BAYS) tunas when not on a for-hire trip. A “for-hire trip” means a recreational fishing trip taken by a vessel with an Atlantic HMS Charter/Headboat

permit during which paying passenger(s) are aboard; or, for uninspected vessels, trips during which there are more than three persons aboard, including operator and crew; or, for vessels that have been issued a Certificate of Inspection by the U.S. Coast Guard to carry passengers for hire, trips during which there are more persons aboard than the number of crew specified on the vessel's Certificate of Inspection. On a non-for-hire swordfish trip, HMS Charter/Headboat vessels would be required to comply with the commercial swordfish retention limits, reporting requirements, and other regulations, as applicable, that would apply to vessels issued the new and modified swordfish permit(s) described in this document. This sub-alternative would require that all swordfish landed under the modified permit be reported in HMS logbooks, if selected, and that all sales be only to permitted swordfish dealers. The retention limits being considered for HMS Charter/Headboat vessels on a non for-hire trip are described in subsequent sections of this document. Existing regulations that prevent a vessel issued an HMS Charter/Headboat permit for a fishing year from being issued an HMS Angling permit or an Atlantic Tunas permit in any category for that same fishing year would be maintained. All other existing HMS Charter/Headboat permit regulations would remain in effect. Only rod and reel and handline are authorized gears for swordfish for vessels issued an HMS Charter/Headboat permit.

**Sub-Alternative 1.2.4** - Create a new, separate, open-access commercial swordfish permit to allow landings using handgears- *Preferred Alternative*

This sub-alternative would create a new, separate, open-access commercial vessel permit that would authorize commercial fishing for North Atlantic swordfish in the U.S. Exclusive Economic Zone (EEZ). The new permit could not be held on a vessel in combination with any other swordfish permits, an HMS Charter/Headboat permit, an HMS Angling category permit, or any Atlantic Tunas permit except for the Atlantic Tunas General or Harpoon category permits. The new permit could be held on a vessel in combination with a commercial shark permit and an Atlantic Tunas General or Harpoon category permit. Vessels issued the new permit would be authorized to possess and utilize only rod and reel, handline, harpoon, bandit gear, and green-stick gear to capture swordfish. This sub-alternative would require that all swordfish landed under the new permit be reported in HMS logbooks, if selected, and that all sales be only to permitted swordfish dealers. Applicable retention limits being considered for this new permit are described in subsequent sections of this document.

**Alternative 1.3** - Establish a new limited access commercial swordfish permit to allow for the commercial retention of swordfish using rod and reel, handline, bandit gear, harpoon and green-stick gear (same gears authorized for Atlantic Tunas General Category permit)

This alternative would create a new limited access commercial vessel permit that would authorize commercial fishing for North Atlantic swordfish in the U.S. Exclusive Economic Zone (EEZ). The new permit could not be held on a vessel in combination with any other swordfish permits, an HMS Charter/Headboat permit, an HMS Angling category permit, or any Atlantic Tunas permit except for the Atlantic Tunas General or Harpoon category permits. The new permit could be held on a vessel in combination with a commercial shark permit and an Atlantic Tunas General or Harpoon category permit. Vessels issued the new permit would be authorized to possess and utilize only rod and reel, handline, harpoon, bandit gear, and green-stick gear to capture swordfish. This alternative would require that all swordfish landed under the new permit be reported in HMS logbooks, if selected, and that all sales be only to permitted swordfish

dealers. Applicable retention limits being considered for this permit are described in a subsequent section of this document. If this alternative were selected and implemented, it would also be necessary to establish limited access permit qualification criteria, application procedures, appeal procedure for persons initially determined to be not eligible for a permit, permit transfer procedures, permit renewal procedures, and vessel upgrading regulations, among others. Any such regulations would be considered in a future rulemaking, if applicable.

## **2.2 Issue 2: Swordfish Retention Limits**

### **2.2.1 Description of the issue**

The U.S. North Atlantic swordfish fishery is managed using a variety of management measures including, but not limited to, permits, quotas, gear restrictions, closed areas, minimum size limits, and landing restrictions. Swordfish vessel retention limits are also an important fishery management measure. For purposes of establishing a new and modified commercial swordfish permit(s), it is also necessary to determine appropriate vessel retention limits.

Currently, recreational HMS Angling permit holders may retain one swordfish per person, up to four per vessel per trip. HMS Charter/Headboat permit holders are limited to one swordfish per paying passenger, up to six per vessel per trip for charter vessels (*i.e.*, a vessel less than 100 gross tons that meets U.S. Coast Guard requirements to carry six or fewer passengers for hire), and one per paying passenger, up to 15 per vessel per trip for headboat vessels (*i.e.*, a vessel that holds a valid Certificate of Inspection issued by the U.S. Coast Guard to carry passengers for hire). When fishing in a registered HMS tournament, Atlantic Tunas General Category permit holders are limited to one swordfish per person up to four per vessel per trip.

Commercially, there are no trip limits for swordfish Directed and Handgear limited access permit holders. However, if the directed fishery closes, these permit holders may, under existing regulations, retain 15 swordfish per pelagic longline trip, two swordfish per handgear trip, and no swordfish per harpoon trip. Incidental swordfish limited access permit holders are restricted to 30 swordfish per trip. Finally, Incidental HMS Squid Trawl permit holders may retain 15 swordfish per trip (provided that squid constitute not less than 75 percent of the total catch on board and trawl gear is the only gear onboard the vessel). These retention limits are codified in the HMS regulations at 50 CFR § 635.22 - 635.24.

These existing swordfish retention limits are applied fishery-wide throughout the swordfish management unit, and the regulations do not currently allow modification of these limits either on a regional basis or using in-season adjustment authority. For all of the alternatives described below, NMFS is considering establishing a trip limit between zero and six swordfish per vessel per trip for the new and/or modified permits. This range is developed to be consistent with the current limits established for HMS Angling category, Atlantic Tunas General category (when fishing in a registered HMS tournament), and for HMS charter/headboat vessels. This range represents a conservative amount of swordfish that could be harvested under the alternatives below. Under all alternatives, current swordfish size limits and landing restrictions would apply. The most significant difference between the alternatives is whether a single specific retention limit would be established and codified in the regulations (Alternative 2.1), whether a zero – six fish limit range would be established with in-season authority to adjust the

limit (similar to the Atlantic Tunas General category bluefin tuna limit) (Alternative 2.2), or whether a zero – six fish limit range would be established with regional limits codified and with in-season authority to adjust the regional limits (Preferred Alternative 2.3). Appendix A describes how swordfish landings for the new permit under the preferred alternative 2.3 would be allocated. These alternatives are described below in Section 2.2.2.

### **2.2.2 Potential alternatives for management**

**Alternative 2.1** - Establish a fishery-wide zero – six swordfish retention limit range for the new or modified permit(s), and codify a specific retention limit within that range

Under Alternative 2.1, the retention limit under the new and modified swordfish permit would be set between zero to six fish per vessel per trip. Any adjustment to this retention limit would be implemented through proposed and final rulemaking. The current swordfish minimum size limit and other landing restrictions would remain in effect under this alternative.

**Alternative 2.2** - Establish a fishery-wide zero to six swordfish retention limit range for the new and modified permits, and codify a specific fishery-wide retention limit within that range with in-season adjustment authority to change the limit based on pre-established criteria (*i.e.*, dealer reports, landing trends, available quota, variations in seasonal distribution, abundance, or migration patterns, etc.).

Under Alternative 2.2, the retention limit under the new and modified swordfish permit would be set between zero to six fish per vessel per trip. Any adjustment to this retention limit could be implemented in the future through in-season adjustment authority similar to the procedures codified for bluefin tuna at 50 CFR § 635.27(a)(8). The current swordfish minimum size limit and other landing restrictions would remain in effect under this alternative.

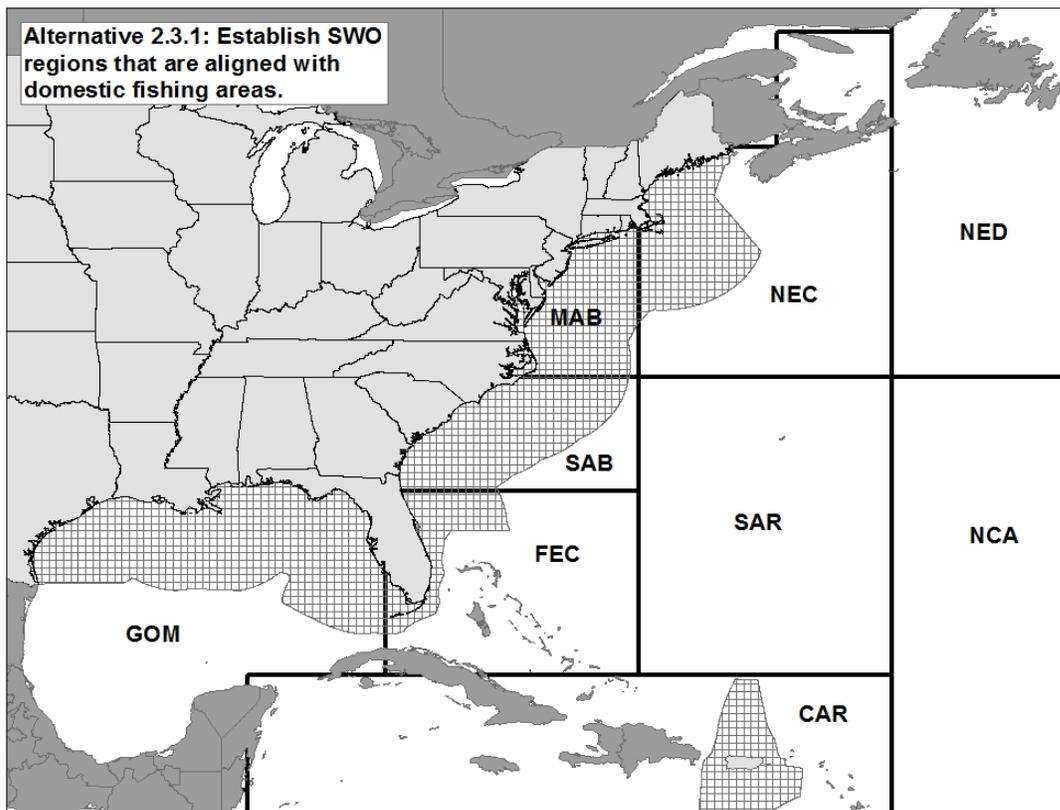
**Alternative 2.3** - Establish a zero to six swordfish retention limit range for the new and modified permits, and establish swordfish management regions with specific retention limits codified for each region with in-season authority to adjust the regional retention limits based on pre-established criteria (*i.e.*, dealer reports, landing trends, available quota, variations in seasonal distribution, abundance, or migration patterns, etc.). – *Preferred Alternative*

Alternative 2.3 would establish swordfish management regions with a zero to six swordfish retention limit range within each region for the new or modified permit(s). Specific regional retention limits would be codified. For all of the sub-alternatives under Alternative 2.3, NMFS is proposing to require that vessels may not possess, retain, or land any more swordfish than is specified for the region in which the vessel is located. Vessels must adhere to the retention limits established for the region in which the fish are landed. For swordfish captured outside of the regions, vessels may not land any more swordfish than is specified for the region in which the swordfish are landed. This restriction will aid in the effectiveness and enforcement of the proposed retention limits by ensuring that vessels comply with the retention limits associated with the region in which they are located and in which the fish are landed. Any adjustment to the regional retention limits could be implemented in the future through in-season adjustment authority similar to the procedures codified for bluefin tuna at 50 CFR § 635.27(a)(8). If this alternative (*i.e.*, regional management) were selected and implemented, it

would also be necessary to specify the management regions and the applicable retention limits established for each region. Therefore, the sub-alternatives described below provide options for establishing regions and request public comment on possible retention limits within each region.

**Sub-Alternative 2.3.1-** Base regions upon existing major U.S. domestic fishing areas as reported to ICCAT (Northeast Distant Area, Northeast Coastal Area, Mid-Atlantic Bight, South Atlantic Bight, Florida East Coast, Gulf of Mexico, Caribbean, Sargasso Sea)

This sub-alternative would base the regions upon existing major U.S. domestic fishing areas as reported to ICCAT (Northeast Distant Area (NED), Northeast Coastal Area (NEC), Mid-Atlantic Bight (MAB), South Atlantic Bight (SAB), Florida East Coast (FEC), Gulf of Mexico (GOM), Caribbean (CAR), Sargasso Sea (SAR)). **For all vessels issued the new and modified permit(s), under Sub-Alternative 2.3.1, NMFS requests specific comment on an initial default retention limit of one swordfish per vessel per trip for the Florida East Coast, two swordfish per vessel per trip for the U.S. Caribbean, and a three swordfish per vessel per trip retention limit for all other areas.** A chart of the regions in this alternative is provided below in Figure 2.1.



**Figure 2.1** U.S. domestic fishing areas: Caribbean (CAR), Florida East coast (FEC), Gulf of Mexico (GOM), Mid Atlantic Bight (MAB), Northeast Central (NEC), Northeast Distant (NED), South Atlantic Bight (SAB), Sargasso Sea (SAR), North Central Atlantic (NCA), Tuna North

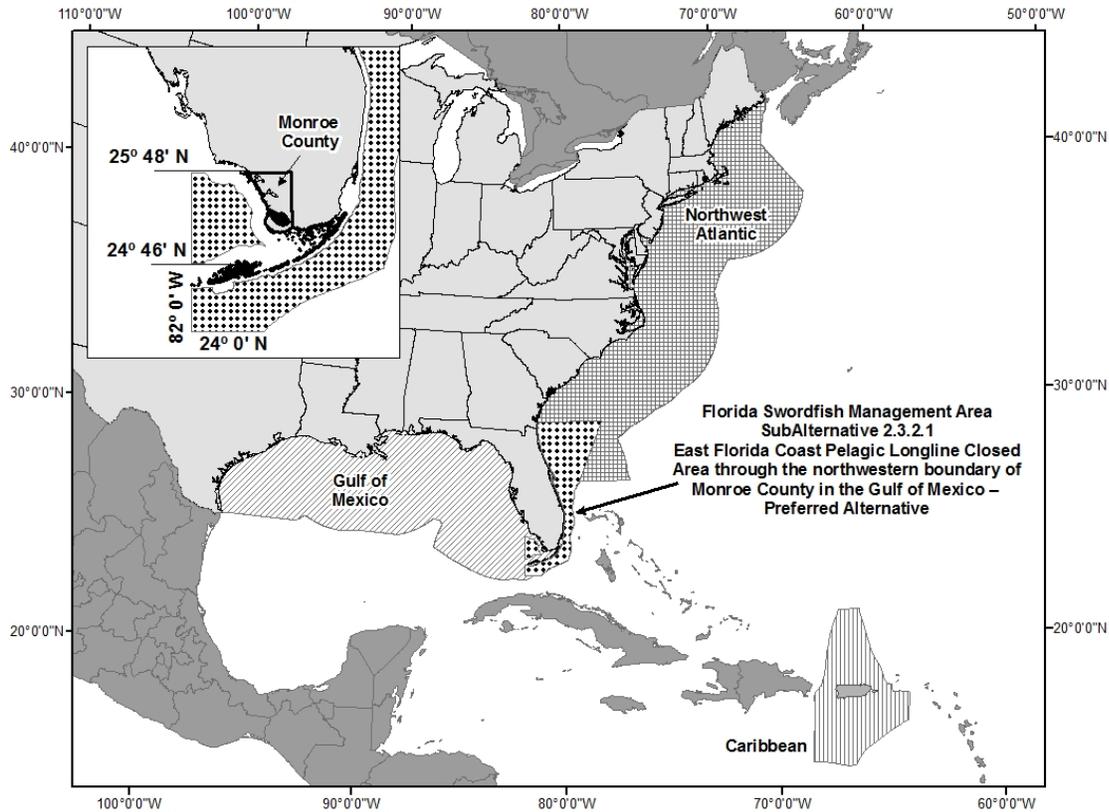
**(TUN), and Tuna South (TUS) (Hatched areas are waters within the U.S. Exclusive Economic Zone).**

**Sub-Alternative 2.3.2** – Base regions upon large reporting areas with the addition of a separate Florida Swordfish Management Area (Northwest Atlantic, Gulf of Mexico, Caribbean, and a Florida Swordfish Management Area as defined below) – *Preferred Alternative*

This sub-alternative would establish larger regions by merging the major domestic regions discussed in Alternative 2.3.1 into three larger regions (Northwest Atlantic, Gulf of Mexico, and Caribbean) and then adding a separate Florida Swordfish Management Area. A separate Florida Swordfish Management Area is being considered for the conservation of juvenile and adult swordfish in and near the Florida Straits. Comments received from the public on the 2009 ANPR (74 FR 26174, June 1, 2009) and from the HMS Advisory Panel during recent meetings indicated a concern about increased fishing mortality in this area, which is considered to be important for the migration of swordfish and as juvenile habitat that is in close proximity to a large human population center. **For all vessels issued the new and modified permit(s), under Sub-Alternative 2.3.2, NMFS requests specific comment on the appropriate boundaries of a Florida Swordfish Management Area and on an initial default retention limit of one swordfish per vessel per trip for that area, two swordfish in the U.S. Caribbean, and three swordfish per vessel per trip limit for all other areas. There are three sub-alternatives to describe the Florida Swordfish Management Area.**

**Sub-Alternative 2.3.2.1** – East Florida Coast Pelagic Longline Closed Area through the northwestern boundary of Monroe County, Florida in the Gulf of Mexico – *Preferred Alternative*

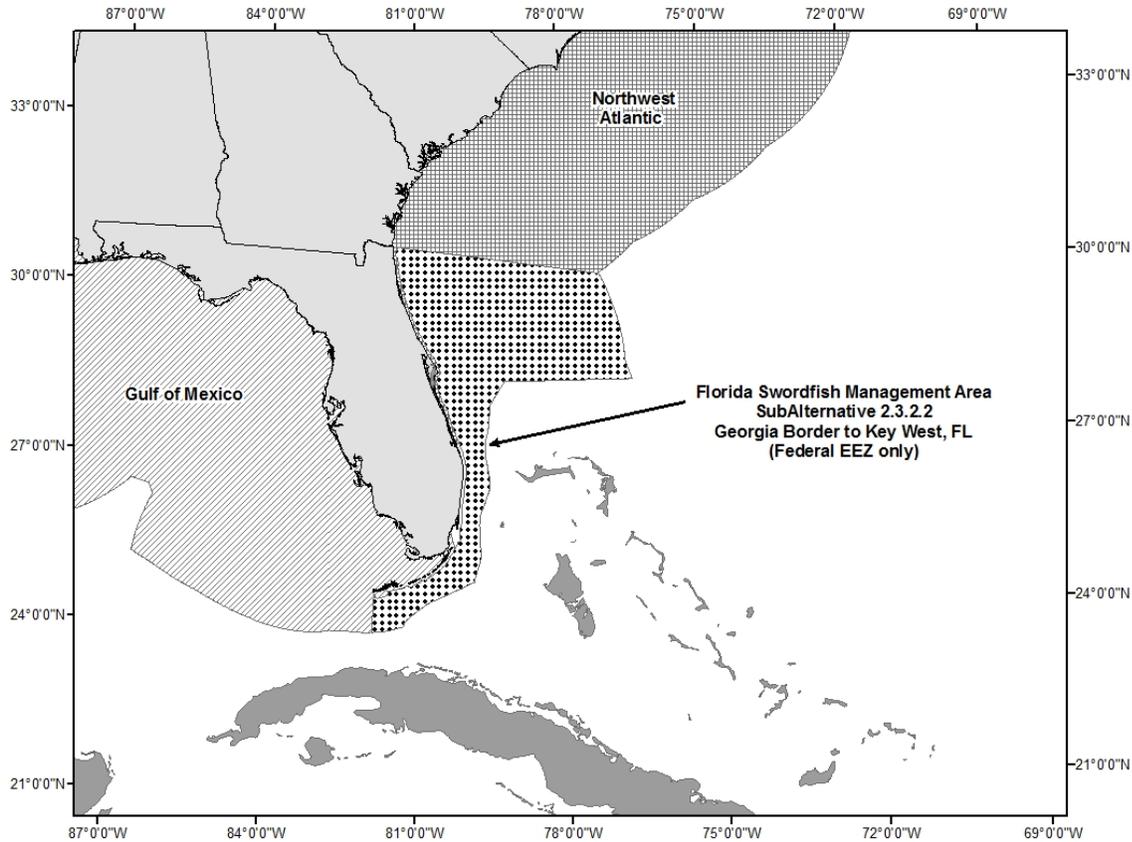
For sub-alternative 2.3.2.1, the Florida Swordfish Management Area would consist of the current East Florida Coast Pelagic Longline Closed Area through the northwestern boundary of Monroe County, Florida in the Gulf of Mexico. Specifically, it would include the Atlantic Ocean area seaward of the inner boundary of the U.S. EEZ from a point intersecting the inner boundary of the U.S. EEZ at 31°00' N. lat. near Jekyll Island, GA, and proceeding due east to connect by straight lines the following coordinates in the order stated: 31°00' N. lat., 78°00' W. long.; 28°17'10" N. lat., 79°11'24" W. long.; then proceeding along the outer boundary of the EEZ to the intersection of the EEZ with 24°00' N. lat.; then proceeding due west to 24°00' N. lat., 82°0' W. long, then proceeding due north to intersect the inner boundary of the U.S. EEZ at 82° 0' W. long. near Key West, FL. This management area also includes the area west of Monroe County, Florida from 82° 0' W. long., 25° 48' N. lat.; then proceeding clockwise east along the inner boundary of the U.S. EEZ to a point located at 82° 0' W. long., 24° 46' N. lat.; and then proceeding due north to 82° 0' W. long., 25° 48' N. lat. As a condition of the new permit(s), all landings from this area must be landed in Georgia or Florida between 31°00' N. lat. (southward of Jekyll Island, GA) and 25° 48' N. lat. (southward of the northwest boundary of Monroe County, FL near Chokoloskee, FL). The initial swordfish default retention limit would be one swordfish per vessel per trip (or from zero to six swordfish (depending upon what limit is selected). A chart of the larger regions with the Florida Swordfish Management Area described in this sub-alternative is provided in Figure 2.2.



**Figure 2.2** Regions: Northwest Atlantic, Gulf of Mexico, Caribbean, and Florida Swordfish Management Area incorporating boundaries of East Florida Coast PLL closure in EEZ through northwestern boundary of Monroe County in Gulf of Mexico

**Sub-Alternative 2.3.2.2 - Georgia border through Key West, Florida**

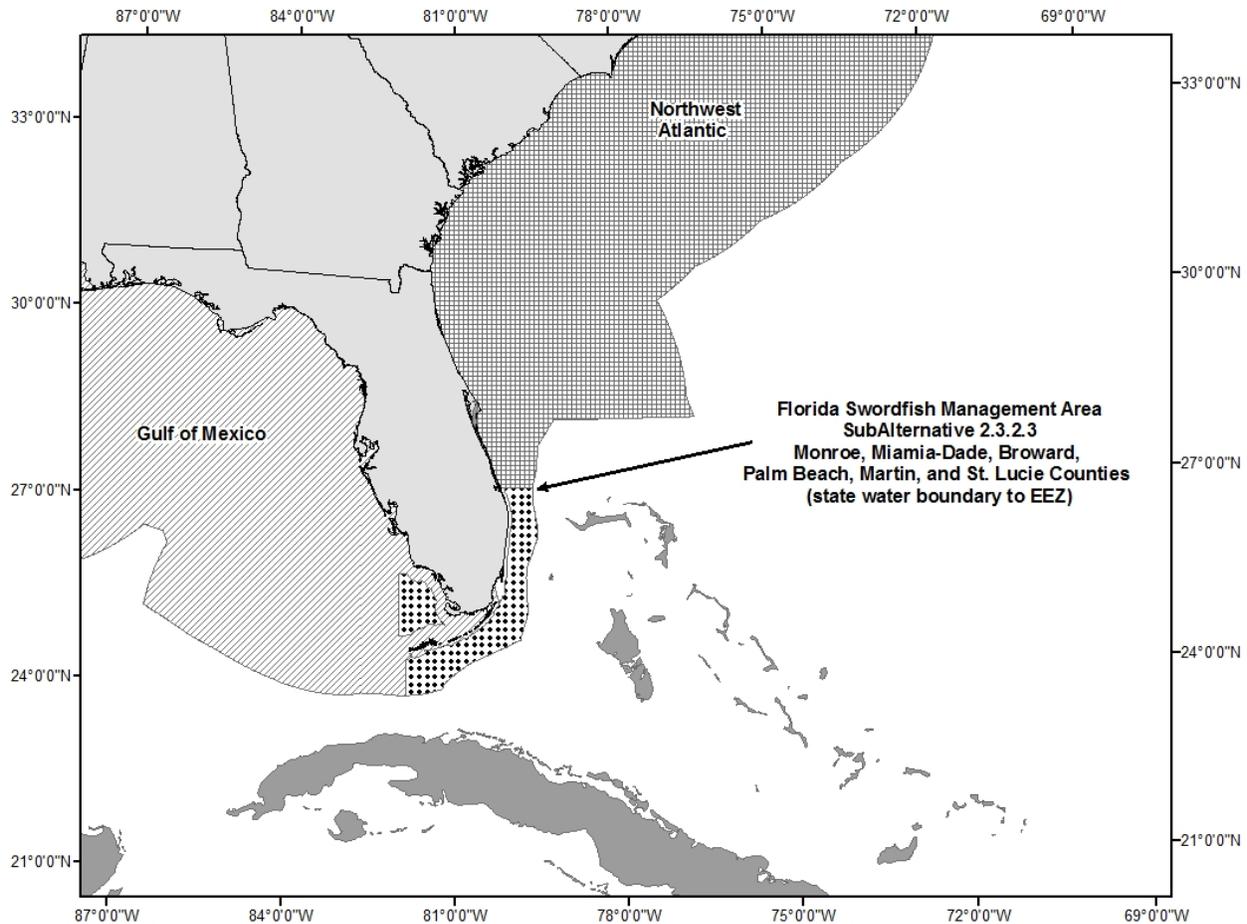
For Sub-Alternative 2.3.2.2, the Florida Swordfish Management Area would consist of the area from the Georgia/Florida border through Key West, Florida. For all landings from this area, and for all landings in locations adjacent to this area, by vessels issued the new and modified permit(s) the initial swordfish default retention limit would be one swordfish per vessel per trip (or from zero to six swordfish, depending upon limit what is selected). A chart of the larger regions with the Florida Swordfish Management Area described in this sub-alternative is provided in Figure 2.3.



**Figure 2.3 Regions: Northwest Atlantic, Gulf of Mexico, Caribbean, and Florida Swordfish Management Area extending from Georgia border to Key West, Florida**

**Sub-Alternative 2.3.2.3 – Florida counties of St. Lucie, Martin, Palm Beach, Broward, Dade, and Monroe**

For Sub-Alternative 2.3.2.3, the Florida Swordfish Management Area would consist of the oceanic area extending from the northern boundary of St. Lucie County through the Florida Keys and extending to the northern boundary of Monroe County. For all landings from this area, and for all landings in locations adjacent to this area, by vessels issued the new and modified permit(s) the swordfish retention limit would be one swordfish per vessel per trip (or from zero to six swordfish, depending upon what limit is selected). A chart of the larger regions with the Florida Swordfish Management Area described in this sub-alternative is provided in Figure 2.4.



**Figure 2.4** Regions: Northwest Atlantic, Gulf of Mexico, Caribbean, and Florida Swordfish Management Area including only Florida counties of St. Lucie, Martin, Palm Beach, Broward, Dade, and Monroe

For Sub-Alternatives 2.3.2.1 – 2.3.2.3, NMFS requests specific comment on the appropriate boundaries of a Florida Swordfish Management Area and on an initial default retention limit of one swordfish per vessel per trip for that area, two swordfish per vessel per trip in the U.S. Caribbean region, and three swordfish per vessel per trip limit for the Gulf of Mexico and Northwest Atlantic regions. These regional retention limits are within the range discussed for all of the alternatives and, if selected, could be modified in the future through in-season adjustment procedures similar to those codified at 50 CFR § 635.27(a)(8) and described above.

## 2.3 Alternatives Considered but not Further Analyzed

### 2.3.1 Commercial Swordfish Tagging Program

HMS dealers and fishermen provide fishery dependent information that is essential to the management of HMS fisheries. Data on landings and sales provided by dealers and information on catch, landings, location, and effort provided by fishermen are used for biological, social, and

economic analyses necessary for fisheries management as well as for documenting catch histories, which can be important for quota allocations domestically and internationally. Different types of information may be collected using different methodologies such as vessel logbooks or dealer reports.

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

Atlantic swordfish, sharks, and tunas may only be sold to federally permitted swordfish, shark, and tuna dealers, respectively. All federally permitted HMS dealers are required to submit reports detailing the nature of their business. NMFS recently published a final rule (77 FR 47303, August 8, 2012) to require that Federal Atlantic swordfish, shark, and tunas dealers report commercially harvested Atlantic sharks, swordfish, and bigeye, albacore, yellowfin, and skipjack (BAYS) tunas to NMFS through an electronic reporting system on a weekly basis. To facilitate quota monitoring, “negative reports” for shark, swordfish and BAYS tunas are required from dealers when no purchases are made during a weekly reporting period. These final regulations became effective on January 1, 2013. Therefore, as of January 1, 2013, weekly information regarding commercial swordfish landings from dealer reports will be available. These new regulations will improve timely quota monitoring.

To provide a higher level of reporting and to facilitate the enforcement of swordfish regulations, NMFS thoroughly considered an alternative that would implement a swordfish tagging program. Six sub-alternatives were considered, including: 1) only swordfish landed by vessels issued the new or modified permit(s) be tagged; 2) all swordfish landed by any gear other than PLL (*i.e.*, rod and reel, handline, harpoon, bandit gear, green-stick, trawl gear, and buoy gear) be tagged; 3) all commercially landed swordfish be tagged; 4) all commercially-landed swordfish within, or from, specified region(s) be tagged. Additionally, NMFS considered whether to provide tags to dealers and require that vessel operators tag swordfish prior to offloading, or whether to provide tags to swordfish vessel permit holders and require that swordfish be tagged immediately upon being brought onboard a vessel. NMFS also extensively investigated different types of tags, program administration and costs, tag manufacturers, reporting requirements, and enforcement considerations.

After consultation with the HMS Advisory Panel and other interested constituents, NMFS has decided not to further analyze the alternative to implement a swordfish tagging program due to concerns about the effectiveness of a tagging program at reliably identifying swordfish that are bound for commerce. Unless all commercial swordfish (both domestic and imported) are required to be tagged, it would remain difficult to differentiate between legitimate commercial landings that needed to be tagged, commercial landings that did not need to be tagged, imported swordfish, and recreational landings illegally entering commerce. Furthermore, the

establishment of an open-access commercial swordfish permit is expected to significantly reduce the incentive for recreational anglers to illegally sell or transfer swordfish to commercial fishermen for later sale. For these reasons, the Agency has decided not to further analyze a swordfish tagging alternative.

### **3.0 AFFECTED ENVIRONMENT**

#### **3.1 Stock Status of Target Species Relevant to the Proposed Action**

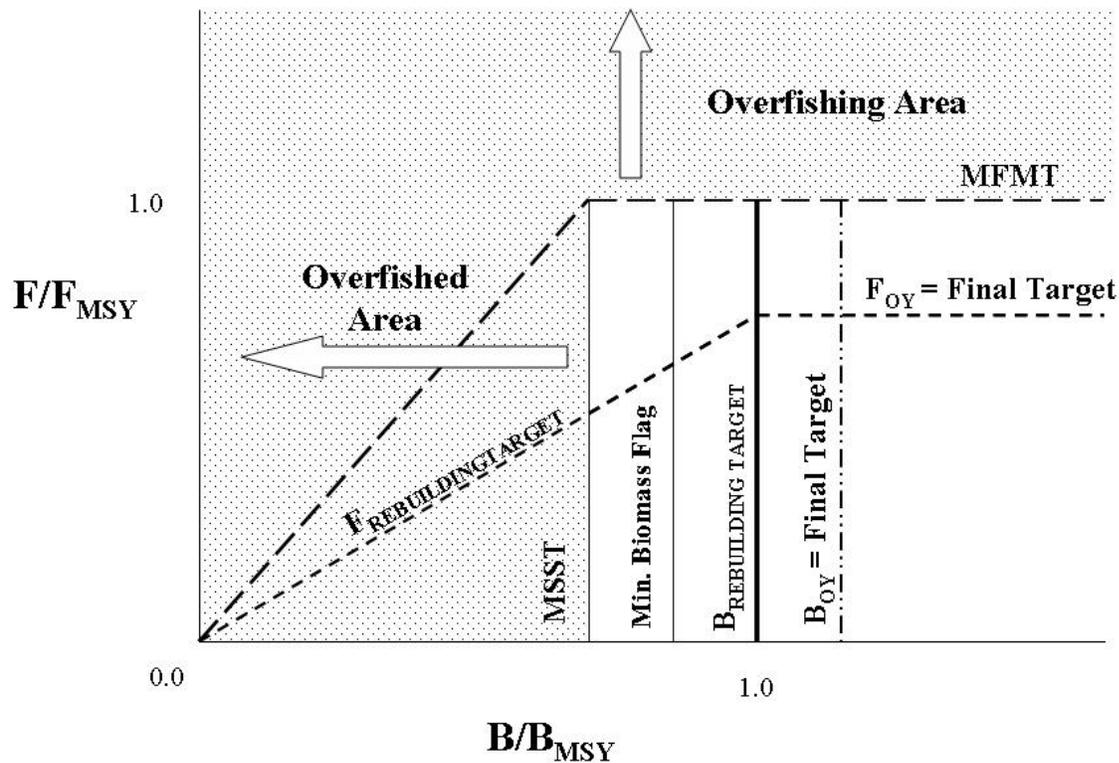
##### **3.1.1 Life History and Species Biology**

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

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

##### **3.1.2 North Atlantic Swordfish Stock Status and Outlook**

The thresholds used to determine the status of Atlantic HMS are fully described in Chapter 3 of the 1999 FMP and Amendment 1 to the Billfish FMP, and are presented in Figure 3.1. These thresholds were incorporated into the 2006 Consolidated Atlantic HMS FMP. These thresholds are based upon the thresholds described in a paper providing technical guidance for implementing National Standard 1 of the Magnuson-Stevens Act (Restrepo *et al.*, 1998).



**Figure 3.1 Illustration of the status determination criteria and rebuilding terms.**

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

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

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

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

The most recent SCRS stock assessment for North Atlantic swordfish was conducted in 2009, using data through 2008 (Table 3.1). 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. U.S. northwest Atlantic swordfish landings decreased from a peak in the late 1980s, but have been on an increasing trend since 2006 (Table 3.7).

Fishing mortality has been below  $F_{MSY}$  since 2005. Recent trends in biomass suggest that the northwest Atlantic swordfish stock was at or near a measurable peak in the mid-1980s. Biomass declined between the mid-1980s and the mid-1990s, before starting to increase again in the late 1990s and through the 2000s. Results for the base case production model indicate that the trend for estimated relative biomass shows a consistent increase since 2000, and that relative biomass is currently at or above  $B_{MSY}$  (1.05, range = 0.94-1.24) (Table 3.1). The SCRS indicated that there is greater than a 50 percent probability that the stock is above  $B_{MSY}$ , and thus ICCAT's rebuilding objective has been achieved.

**Table 3.1 Summary table for the status of North Atlantic swordfish based on 2009 stock assessment. Source: SCRS 2009.**

	<b>2009 North Atlantic Swordfish Assessment</b>
<b>Relative Biomass Level</b>	$B_{2009}/B_{MSY} = 1.05(0.94-1.24)$
<b>Relative Fishing Mortality Rate</b>	$F_{2008}/F_{MSY} = 0.76 (0.67 - 0.96)$ $F_{MSY} = 0.22 (0.14-0.27)$
<b>Maximum Sustainable Yield</b>	13,730 mt (13,020 – 14,182)
<b>Current Yield</b>	12,154 mt (2010)
<b><i>Outlook – Status of Stock</i></b>	<b><i>Stock rebuilt; not overfished, overfishing is not occurring – NMFS 2011</i></b>

### 3.2 Management History and Description of the Fishery

#### 3.2.1 Domestic Management History

Prior to 1990, the five Atlantic Regional Fishery Management Councils (New England, Mid-Atlantic, South Atlantic, Gulf of Mexico, and Caribbean) had domestic authority to manage Atlantic HMS within their respective regions. In 1985, the first U.S. Atlantic Swordfish FMP was implemented by the Councils, which included reductions in the harvest of small swordfish, permitting and monitoring requirements, and scientific research. On November 28, 1990, the President of the United States signed into law the Fishery Conservation Amendments of 1990. This law amended the Magnuson Act and gave the Secretary of Commerce (Secretary) the authority to manage Atlantic Tunas, swordfish, billfish, and sharks in the exclusive economic zone of the Atlantic Ocean, Gulf of Mexico, and Caribbean Sea (16 U.S.C. 1811 and 16 U.S.C. 1854(f)(3)). The Secretary subsequently delegated authority to manage Atlantic HMS to NMFS. The HMS Management Division within NMFS currently develops regulations for HMS fisheries, although some actions (*e.g.*, Large Whale Take Reduction Plan) are taken by other NMFS

offices if the primary legislation (*e.g.*, MMPA) driving the action is not the Magnuson-Stevens Act or ATCA.

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

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

Other management actions included a mandatory reporting system for all non-tournament recreational landings of swordfish (2003), and the establishment of an annual International Trade Permit (2005). In 2006, NMFS published the 2006 Consolidated Atlantic HMS FMP, which combined the 1999 FMP, the Atlantic Billfish FMP, and their amendments, and also combined the two separate APs into a single HMS AP. The 2006 Consolidated Atlantic HMS FMP implemented mandatory protected species workshop certification requirements for vessels, implemented restrictions on HMS fisheries in two Gulf of Mexico FMC time-area closures (Madison-Swanson and Steamboat Lumps), and authorized buoy gear as a permissible gear type in the commercial swordfish handgear fishery.

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

In 2011, the United States modified incidental retention limits for *Illex* squid trawl vessels to reduce regulatory dead discards of swordfish. Further, in 2012, the United States implemented ICCAT Recommendation 11-02 which, among other things, included an alternative swordfish minimum size measurement of 25 in. cleithrum to caudal keel (CK). This is conservatively estimated to increase future U.S. swordfish landings by approximately 68.4 mt (ww) since U.S. vessels are now be able to land legal-sized fish that previously would have had to be discarded.

### **3.2.2 International Management under ATCA/ICCAT**

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

### **3.2.3 Description of the Fishery**

The United States has a long history of fishing for swordfish. The commercial North Atlantic swordfish fishery began in the early 1800s as a harpoon fishery off the New England coast. Sailing vessels used harpoons to capture swordfish on extended trips to the Hudson Canyon and Georges Bank during summer months. For more than 150 years, up until the 1960s, most U.S. commercial swordfish were captured using harpoons or handlines. A small U.S. recreational swordfish fishery developed in the 1920s using rod and reel and handline, primarily from Massachusetts to New York. As diesel engines came to replace sail, PLL gear eventually replaced harpoons as the primary commercial swordfish gear during the 1960s. The U.S. PLL fishery grew steadily during the 1960s and 1970s. At the same time, a recreational rod and reel fishery developed in Florida during the 1970s, and many towns along the Mid-Atlantic coast

developed a tradition of holding annual swordfish tournaments, which contributed to tourism and local economies. As overall Atlantic swordfish effort increased in the 1980s, the commercial U.S. PLL fishery also expanded to the Grand Banks, Florida Keys, and the Gulf of Mexico.

Decreased swordfish stock abundance, natural and environmental disasters, market conditions, management regulations, and increased operating costs contributed to a generally declining trend in U.S. swordfish catches starting in 1990 with the lowest catches reported in 2006 (2,057 mt (ww)). The United States has since taken several important steps to address this issue as the North Atlantic swordfish stock has continued to rebuild. In 2007, the United States modified PLL vessel upgrading requirements, increased incidental swordfish landing limits, and increased recreational landing limits to provide additional opportunities for U.S. vessels to harvest the allocated swordfish quota. These actions have allowed for increased U.S. swordfish catches since 2007, while continuing to minimize the bycatch of undersized swordfish and protected species. From 2007-2010, on average, the United States has caught approximately 70 percent of its annual base quota allocation of North Atlantic swordfish. In 2011, the United States caught approximately 74 percent of its base quota allocation.

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

#### North Atlantic Swordfish Permits, Retention Limits, and Minimum Sizes

In the United States, six categories of permits authorized for swordfish are currently issued: Directed Swordfish, Incidental Swordfish, Swordfish Handgear, HMS Angling, HMS Charter/Headboat, and the Incidental HMS Squid Trawl Permit. The majority of swordfish landed in Atlantic HMS fisheries are by Directed swordfish permit holders using PLL gear and, to a lesser extent, buoy gear and handgear (rod and reel, handline, harpoon, and bandit gear). 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 Incidental HMS Squid Trawl permit may only be issued to vessels that already possess an *Illex* squid moratorium permit and allows squid vessels to retain up to 15 incidentally-caught swordfish per trip. The HMS Angling and Charter/Headboat permits are both open-access permits, meaning that any vessel owner may obtain one. The other three permits (Directed, Incidental, and Handgear) are all commercial limited access permit, meaning that participants interested in entering the fishery must obtain a permit from an existing permit holder that is interested in getting out of the fishery. The Directed and Incidental swordfish permits are valid only if the vessel owner also holds both an Atlantic Tunas Longline permit and an Atlantic shark limited access permit.

As of October 2012, there were issued 184 Directed swordfish permits; 73 Incidental swordfish permits; 77 swordfish Handgear permits; 23,061 HMS Angling permits; and, 4,129 HMS Charter/Headboat permits (NMFS, 2012a). Tables 3.2 - Table 3.4 identify the states with the most permits issued in 2012.

When the directed swordfish fishery is open, there is no retention limit for Directed and Handgear LAP holders. If the directed fishery is closed, Directed LAP holders can retain 15 swordfish per PLL trip, two swordfish per handgear trip, and no swordfish using harpoon. Incidental swordfish permits allow fishermen to land up to 30 swordfish while engaged in other fishing activities. Vessels issued Directed and Incidental swordfish LAPs must also be issued valid Atlantic Tunas Longline and Atlantic Shark permits to retain swordfish. Table 3.2 indicates states with the most commercial swordfish limited access permits (Directed, Incidental, and Handgear).

**Table 3.2 Top Ten States for Number of Commercial Swordfish Limited Access Permits Issued (Directed, Incidental, & Handgear) as of October 2012.**

State	# Swordfish LAPs	Percentage
Florida	161	48.2%
New Jersey	43	12.9%
Louisiana	35	10.5%
New York	25	7.5%
North Carolina	18	5.4%
Massachusetts	16	4.8%
Rhode Island	11	3.3%
Texas	8	2.4%
Maine	5	1.5%
South Carolina	5	1.5%

The recreational swordfish retention limit under the HMS Angling category permit is one per person (up to four per vessel per trip). Swordfish landed under this permit may not be sold. Table 3.3 provides a summary of the states with the largest number of HMS Angling category permits.

**Table 3.3 Top Ten States for Number of HMS Angling Permits Issued (Home Port as of October 2012)**

State	# HMS Angling Permits	Percentage
Florida	3,953	17.1%

State	# HMS Angling Permits	Percentage
New Jersey	3,204	13.9%
Massachusetts	3,156	13.7%
New York	1,709	7.4%
Virginia	1,677	7.3%
North Carolina	1,561	6.8%
Maryland	1,137	4.9%
Delaware	853	3.7%
Texas	761	3.3%
Louisiana	647	2.8%

Recreational swordfish retention limits under the HMS Charter/Headboat permit are: one per paying passenger with up to six swordfish per vessel per trip (CHB charter vessel); and, one per paying passenger with up to 15 per vessel per trip (CHB headboat). Swordfish landed under this permit may not be sold. Table 3.4 provides a summary of the states with the largest number of HMS Charter/Headboat permits.

**Table 3.4 Top Ten States for Number of HMS Charter/Headboat Permits Issued (as of October 2012)**

State	# Atlantic HMS Charter/Headboat Permits	Percentage
Massachusetts	832	20.2%
Florida	663	16.1%
New Jersey	528	12.8%
North Carolina	402	9.7%
New York	314	7.6%
Rhode Island	152	4.1%
Texas	148	3.7%
Maine	143	3.5%
Virginia	133	3.2%

State	# Atlantic HMS Charter/Headboat Permits	Percentage
Maryland	126	3.1%

North Atlantic swordfish may only be offloaded or sold to persons or entities issued a valid swordfish Dealer permit. In 2012, there were a total of 179 swordfish Dealer permits issued in the United States (NMFS 2012). Table 3.5 shows the states with the most swordfish Dealer permits issued.

**Table 3.5 Top States for Number of Swordfish Dealer Permits Issued (as of October 2012)**

State	# Swordfish Dealer Permits	Percentage
Florida	74	41.3%
North Carolina	18	10.0%
Massachusetts	17	9.5%
Louisiana	11	6.1%
New York	10	5.6%
Rhode Island	10	5.6%
New Jersey	9	5.0%
South Carolina	7	3.9%
Maryland	4	2.2%
Alabama	3	1.7%
Maine	3	1.7%

There are currently two HMS open-access commercial handgear permits, but these are restricted to Atlantic tunas only. As of October 2012, there were 4,084 Atlantic Tunas General category permit holders, and 13 Atlantic Tunas Harpoon category permit holders. Table 3.6 provides a summary of states with the most Atlantic Tunas General category permits issued.

**Table 3.6**

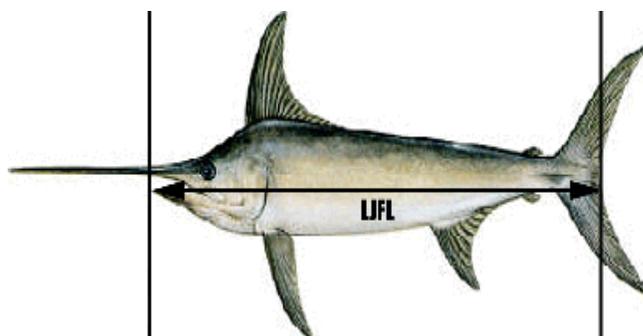
**Top Ten States for Number of Atlantic Tunas General Category Permit Holders (as of October 2012)**

State	# General Category Tuna Permits	Percentage
Massachusetts	1,347	33.0%
Maine	808	19.8%
North Carolina	406	9.9%
New Hampshire	267	6.5%
Florida	204	5.0%
New Jersey	185	4.5%
New York	171	4.2%
Rhode Island	166	4.1%
Virginia	140	3.4%
Puerto Rico	73	1.8%

If the head is not naturally attached to a swordfish, an Atlantic swordfish must be at least 25 inches (63.5 cm) as measured from the point on the cleithrum that provides the shortest possible measurement along the body contour to the anterior portion of the caudal keel (CK). An Atlantic swordfish with its head naturally attached must be at least 47 inches (119 cm) lower jaw fork length (LJFL). A swordfish that has been damaged by shark bites may be retained only if the remainder of the carcass meets the appropriate minimum size. The diagrams below indicate how swordfish are measured.



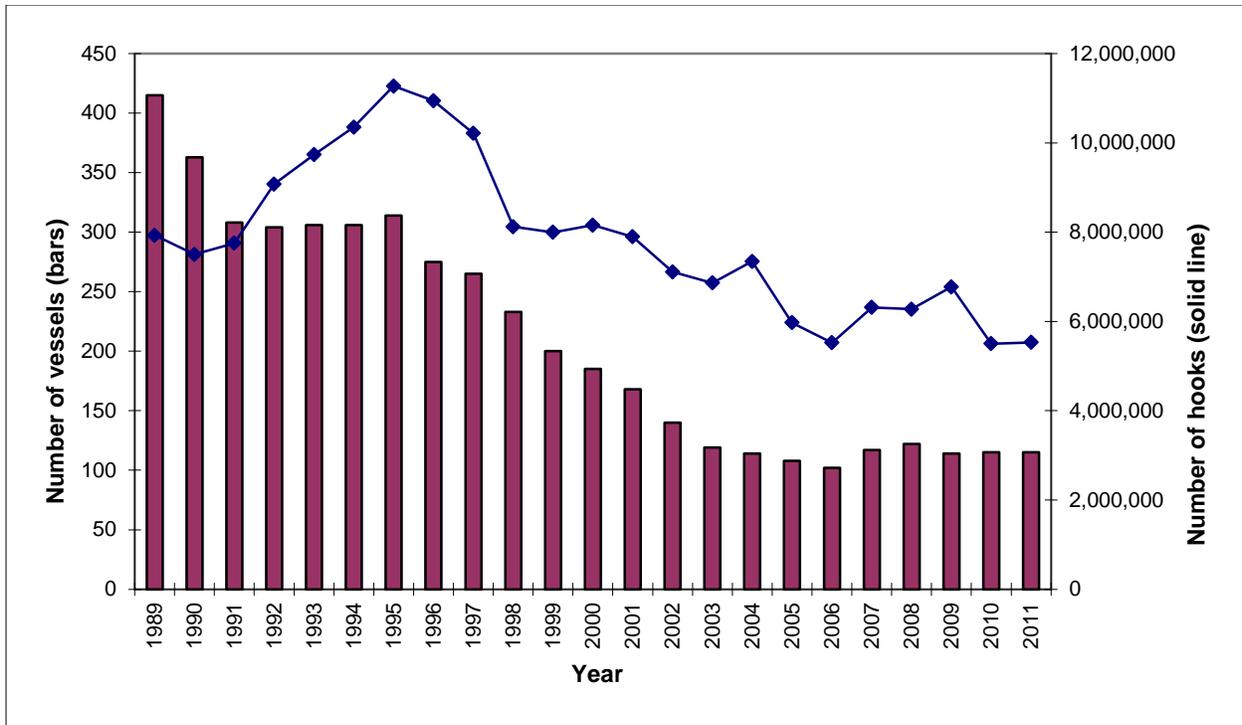
25"CK – Cleithrum to Caudal Keel  
(If head not naturally attached)



47" LJFL – Lower Jaw Fork Length  
(If head naturally attached)

### Pelagic Longline Fishery

The vast majority of North Atlantic swordfish harvested by U.S. vessels are captured using pelagic longline gear. The pelagic longline fishery for Atlantic HMS primarily targets swordfish, yellowfin tuna, and bigeye tuna in various areas and seasons. Secondary target species include dolphin fish, albacore tuna, and, to a lesser degree, sharks. Although this gear can be modified (*e.g.*, depth of set, hook type, hook size, bait, *etc.*) to target swordfish, it is generally a multi-species fishery. Swordfish sets are buoyed to the surface, have fewer hooks between floats, and are relatively shallow compared to tuna sets. When targeting swordfish, pelagic longline gear is generally deployed at sunset and hauled at sunrise to take advantage of swordfish nocturnal near-surface feeding habits (NMFS, 1999). Except for vessels of the distant water fleet, which undertake extended trips, fishing vessels preferentially target swordfish during periods when the moon is full to take advantage of increased densities of pelagic prey species near the surface. The major U.S. swordfish fleets include: 1) the South Atlantic-Florida east coast to Cape Hatteras swordfish fishery, which has been greatly affected by the Florida East Coast and Charleston Bump time/area closures; 2) the Mid-Atlantic and New England swordfish and bigeye tuna fishery; 3) the U.S. distant water swordfish fishery (vessels fishing the Grand Banks and other high seas regions); and, 4) the Caribbean Islands tuna and swordfish fishery. A swordfish PLL fishery also exists in the Gulf of Mexico, although yellowfin tuna is the predominant PLL fishery in that region. The number of boats capturing swordfish has steadily declined beginning in approximately 1995, with a slight increase since 2006 (Figure 3.2). For the two most recent years (2010 and 2011), the number of active vessels and hooks fished has remained relatively constant.



**Figure 3.2. Number of Swordfish Vessels (*i.e.*, landed at least one swordfish) and Hooks Fished, 1989-2011. Source: 2012 U.S. ICCAT National Report.**

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

### Handgear Fishery

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

Effects on ESA-listed species for most handgears were analyzed under a Biological Opinion (BiOp) issued on June 14, 2001, entitled “Reinitiation of Consultation on the Atlantic Highly Migratory Species Fishery Management Plan and its Associated Fisheries.” The June 14, 2001 BiOp found that the continued operation of harpoon, hand gear, and rod and reel fisheries in the Atlantic Ocean may adversely affect but are not likely to jeopardize the continued existence of the right whale, humpback, fin, or sperm whales, or Kemp’s ridley, green, loggerhead, hawksbill or leatherback sea turtles. In response, NMFS adheres to the measures

identified in the BiOp. NMFS has also previously determined that its proposed action of authorizing green-stick gear for the harvest of Atlantic Tunas (73 FR 24924; May 6, 2008) was not likely to adversely affect ESA-listed species (2008 Memorandum from Roy E. Crabtree, PhD, to Margo Schulze-Haugen). As indicated in the June 14, 2001 BiOp, the potential for take in these fisheries (*i.e.*, harpoon/handgear fisheries, hook & line, etc.) is very low (no more than three sea turtles, of any species, in combination, per calendar year). Additionally, the Atlantic HMS hook and line/harpoon fishery and green-stick fishery are classified as Category III under the MMPA (76 FR 73912, November 29, 2011), meaning that these fisheries have a remote likelihood of incidental mortality or serious injury to marine mammals.

### *Commercial Handgear*

North Atlantic swordfish can only be taken commercially with longline gear, handgear (bandit gear, handline, harpoon, rod & reel), or buoy gear (Directed or Handgear permit holders only), except that a limited number of swordfish may be taken incidentally on a vessel issued an Incidental HMS Squid Trawl permit. Handgear may currently be deployed to fish commercially for swordfish with any valid Swordfish limited access permit (LAP), other than an Incidental HMS Squid Trawl permit. These are: Directed LAP; Incidental LAP, and, Swordfish Handgear LAP. These permits are limited access, meaning that participants interested in entering the fishery must obtain a permit from an existing permit holder that is interested in getting out of the fishery.

Handgear and buoy gear have recently emerged (or re-emerged) as viable methods to fish commercially for swordfish in conjunction with recent increases in U.S. swordfish landings. The number of active Swordfish Handgear permits has increased substantially over the last decade, especially in southeastern Florida. Between 2004 and 2011, the number of Swordfish Handgear permits in Florida doubled from 20 to 49 permits.

The deployment of buoy gear is only authorized for persons issued valid swordfish Directed or Handgear LAPs. The 2006 Consolidated Atlantic HMS FMP authorized and defined buoy gear as a fishing gear consisting of one or more floatation devices supporting a single mainline to which no more than two hooks or gangions are attached. The gear may be free-floating and is not required to be attached to, or in contact with, a vessel; however, it must be released and retrieved by hand. Vessels utilizing buoy gear are limited to possessing or deploying no more than 35 floatation devices. Fishermen must mark each floatation device with the vessel's name, registration number, or HMS permit number. Monitoring equipment such as radar reflectors, beeper devices, lights, or reflective tape must be attached. Individual buoy gears may not be attached to one another. The buoy gear fishery is usually prosecuted at night. Since buoy gear was authorized in 2006, the U.S. buoy gear fishery has grown to about 25 active vessels, based primarily in southeastern Florida.

Handgear and buoy gear have the benefit of low bycatch and bycatch mortality rates. These gears are authorized for use with the swordfish Handgear LAP (harpoon, handline, rod and reel, bandit gear, and buoy gear) and are all considered Category III fishing gears by the MMPA (76 FR 73912, November 29, 2011), meaning that these gears have a remote likelihood of serious injury or mortality to marine mammals. Furthermore, in association with actions

proposed in the June 14, 2001, ESA consultation (*i.e.*, the authorization of fisheries under the Fishery Management Plan for Atlantic Tunas, Swordfish, and Sharks (HMS FMP) and Amendment 1 to the Atlantic Billfish FMP), these gears have been determined to be not likely to jeopardize the continued existence of any ESA-listed species under the ESA.

### *Recreational Handgear*

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

Since 2003, recreational fishing for any HMS-managed species requires the issuance of an HMS Angling permit (67 FR 77434, December 18, 2002) or an HMS Charter/Headboat (CHB) permit. Swordfish landed under the HMS Angling and Charter/Headboat permits may not be sold. All non-tournament recreational landings of Atlantic marlins, sailfish, and swordfish must be reported. The recreational swordfish fishery is managed through the use of a minimum size limit (47” LJFL or 25” CK), trip-based retention limits, and landing requirements (swordfish may be headed and gutted but may not be cut into smaller pieces at sea). The recreational swordfish trip limits are: 1 per person with up to 4 per vessel per day (HMS Angling permit); 1 per paying passenger with up to 6 per vessel per day (CHB, charter vessel); and 1 per paying passenger with up to 15 per vessel per day (CHB, headboat vessel). As of October 2012, there were 4,084 HMS Charter/Headboat permit holders and 23,061 HMS Angling permit holders. Please refer to Chapter 8 of the 2012 Stock Assessment and Fishery Evaluation (SAFE) Report for Atlantic HMS for the state by state distribution of all HMS permits (NMFS, 2012a).

### **3.2.4 Habitat**

The Magnuson-Stevens Act requires NMFS to identify and describe essential fish habitat (EFH) 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 EFH, 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 EFH in the 1999 FMP and in Amendment 1 to the 1999 FMP (NMFS, 2003).

In 2009, NMFS completed the five year review and update of EFH for Atlantic HMS with the publication of Amendment 1 to the 2006 Consolidated Atlantic HMS FMP (June 12, 2009, 74 FR 28018) (NMFS, 2009). As a result of the 2009 Amendment 1 to the Consolidated Atlantic HMS FMP, EFH was updated for all federally-managed Atlantic HMS. The amendment updated and revised EFH boundaries for HMS, designated a new habitat area of particular concern (HAPC) for bluefin tuna in the Gulf of Mexico, and analyzed fishing and non-fishing impacts on EFH. As described in Amendment 1 to the Consolidated Atlantic HMS FMP, there is no evidence that physical effects caused by any authorized HMS gears (*i.e.*, handgear) are affecting EFH 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 EA are not expected to increase gear impacts on any EFH beyond those impacts that have already been analyzed in Amendment 1 to the 2006 Consolidated Atlantic HMS FMP (74 FR 28018, June 12, 2009) or any EFH designated by any other FMP for species in the U.S. Atlantic EEZ, which were described as not likely to have an effect on HMS or other managed species' EFH. Therefore, habitat effects will not be discussed further. EFH designations for other Atlantic fisheries are available at <http://sero.nmfs.noaa.gov/hcd/efh.htm> and <http://www.nero.noaa.gov/hcd/index.html#efh>.

### **3.2.5 Economic and Social Aspects of North Atlantic Swordfish Fisheries**

Atlantic HMS fishery participants that fish commercially for swordfish, or that want to fish commercially for swordfish, are the affected fishery participants of this rulemaking. This includes persons that are not currently able to participate in the commercial swordfish fishery, but would like to do so, as well as current participants in the commercial swordfish fishery that could be affected by the addition of new commercial fishing effort and participants. It is not possible to precisely quantify how many new entrants might want to fish commercially for swordfish. However, some new entrants are likely to be commercial fishermen in other fisheries such as the Atlantic Tunas General and Harpoon categories or, current recreational swordfish fishermen. Accordingly, this section provides information on the existing U.S. commercial swordfish fishery and the Atlantic recreational swordfish fishery.

The U.S. commercial swordfish fishery supports a high-value processing and trade (domestic and international) sector worth millions of dollars. Valuable tuna species are also caught in conjunction with swordfish, thereby increasing the value of the multispecies fisheries. The U.S. swordfish fishery also provides social and economic benefits to coastal communities by supporting both commercial and recreational fishermen, dealers, and shore-based businesses (e.g., mechanics, marinas, boat builders, gear manufacturers, electricians, bait and tackle shops, fuel suppliers, hotels, and restaurants).

Pelagic longlining accounts for the majority of U.S. swordfish catches; however, there are sizeable swordfish catches in the commercial and recreational handgear fisheries as well. In 2011, U.S. swordfish catches and landings were approximately 2,170.75 mt dw. Of these reported catches and landings, 2,015.94 mt dw were reported as captured with pelagic longline gear (NMFS, 2012b). Approximately 134.9 mt dw of swordfish were reported as captured with handline, rod and reel, and harpoon gears. Thus, commercial and recreational handgears caught about 6.2% of all swordfish catches in 2011. See Table 3.7 for distribution of swordfish landings from 2006 – 2011 by gear type.

**Table 3.7 Catches of Swordfish Reported from 2006-2011 in metric tons  
(mt) dressed weight (dw) by gear type and year (NMFS 2012a).**

<b>Gear</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>TOTAL</b>
Longline*	1,474.29	1,860.15	1,769.62	2,023.53	1,658.50	2,015.94	10,802.03
Handline	24.51	94.29	63.46	93.91	97.37	94.14	467.67
Rod and Reel**	39.62	51.28	56.92	23.76	37.07	40.30	248.94
Trawl	2.63	4.89	5.71	17.82	15.94	13.46	60.45
Harpoon	0.23	0.00	0.00	0.04	0.45	0.45	1.17
Gillnet	0	0.15	0	0.04	0.00	0.00	0.19
Unclassified	0.15	0.15	0.15	0.00	1.58	0.08	2.10
Unclassified discards	5.86	8.65	6.54	5.11	3.72	6.39	36.27
<b>TOTAL</b>	<b>1,547.29</b>	<b>2,019.55</b>	<b>1,902.41</b>	<b>2,164.21</b>	<b>1,814.62</b>	<b>2,170.75</b>	<b>11,618.83</b>

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

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

Several economic considerations are important for fishermen and local communities, including trip costs, ex-vessel prices, revenue from direct sales, dealer and processor sales, and multiplier effects into local economies. Multiplier effects reflect how each dollar exchanged in a transaction generates sales within other, closely related sectors. For example, the sale from a fisherman to a dealer or a processing plant produces a direct economic effect, which then ripples outward through the sectors that support the commercial and recreational industries (such as restaurants, secondary dealers, marine mechanics, marinas, hotels, bait/tackle shops, etc.). These economic effects tend to be expressed in terms of employment, personal income, and sales.

The United States utilizes research studies, industry statistics, and constituent feedback to identify participants and communities that are heavily dependent upon the swordfish fishery. This process provides information on the social importance of the swordfish fishery to coastal communities and participants. The United States also tracks operating costs for the U.S. swordfish fishery via logbook reporting and voluntary submissions of the trip expense and payment section of the logbook form from non-selected vessels. The primary expenses associated with operating a swordfish commercial vessel include labor, fuel, bait, ice, groceries, other gear, and light sticks. Operating costs, in general, have increased since 2004.

Average ex-vessel prices, landings and total revenue from swordfish are shown in Table 3.8 (NMFS, 2012a). Annual swordfish revenues have fluctuated in recent years due to changes in ex-vessel price and landings, but average approximately \$15.3 million annually (2007 – 2011). In some years, U.S. market prices can be substantially reduced by imports from other nations. In 2011, swordfish landings, average ex-vessel price, and fishery revenue were the highest in recent years. Based on the Northeast Commercial Fisheries Database (CFDBS) and the Southeast Pelagic Dealer Compliance (PDC) database, the 2011 average ex-vessel price for swordfish was US \$4.51/lb. dw.

**Table 3.8 U.S. Average Swordfish Ex-Vessel Price, Landings, and Fishery Revenue (2007 – 2011)**

Species		2007	2008	2009	2010	2011
Swordfish	Ex-vessel \$/lb. dw	\$4.02	\$3.63	\$3.45	\$4.41	\$4.51
	Weight lb. dw*	3,643,926	3,414,513	3,762,280	3,688,378	4,473,179
	Fishery Revenue	\$14,648,583	\$12,394,682	\$12,979,866	\$16,265,746	\$20,174,037

\* Commercial landings data

In 2011, United States pelagic longline swordfish landings and discards were 2,016 mt (dw) (Table 3.7), or 4,444,519 lb. (dw). In 2011, the pelagic longline fleet caught or discarded 46,522 individual swordfish (NMFS, 2012a). Landings and discards in numbers of fish are not available for handgear. Thus, the average dressed weight per swordfish captured by the pelagic longline fishery was 96 lb. (dw). At \$4.51/lb., the average value of each swordfish was \$432.96.

Swordfish are sold fresh and frozen in dressed form and as processed products (*e.g.*, steaks and fillets). As an important commodity on world markets, swordfish can generate significant export earnings for some U.S. companies. Employment varies widely among processing firms, but over 35,700 people are employed in processing or wholesale businesses that are involved with the production of HMS, including swordfish. Often employment is seasonal unless the firms also process imported seafood or a wide range of domestic seafood.

The commercial U.S. swordfish fleet is comprised of both distant water vessels that follow the swordfish through its migration, and vessels that target swordfish as they become seasonally available in specific regions. As of October 2012, there were 253 pelagic longline vessels that are licensed to fish for Atlantic swordfish. For various reasons, not all licensed vessels actively fish in the fishery each year. The U.S. Atlantic distant water fleet, which is based out of ports between Puerto Rico and Maine, covers the western North Atlantic. Some large vessels fishing in distant waters operate out of Mid-Atlantic and New England ports during the summer and fall months targeting swordfish and tunas, and then move to Caribbean ports during the winter and spring months. Many of the current distant water vessels were among the early participants in the U.S. directed Atlantic commercial swordfish fishery. These large vessels, with greater ranges and capacities than coastal fishing vessels, enabled the United States to become a significant participant in the North Atlantic swordfish fishery.

Landings of swordfish tend to vary regionally, but have increased in southern communities over the past decade. According to the most recent analysis (MRAG Americas, Inc. 2008), the communities with the greatest annual landings in 2006 include: Dulac, Louisiana (165.7 mt ww); Wanchese, North Carolina (140.2 mt ww); Beaufort, North Carolina (107 mt ww); Barnegat Light, New Jersey (88.8 mt ww) and, New Bedford, Massachusetts (60.7 mt ww). Based on the average ex-vessel price for 2006, this equated to estimated direct sales impacts of \$1,293,294 in Dulac, Louisiana; \$1,093,917 in Wanchese, North Carolina; \$835,192 in Beaufort, North Carolina; \$693,156 in Barnegat Light, New Jersey; and \$474,107 in New Bedford, Massachusetts.

The communities with the greatest average number of swordfish landed per year, between 1999 and 2010, include Dulac, Louisiana (3,857 swordfish/yr.); Fairhaven, Massachusetts (3,215 swordfish/yr.), which is adjacent to New Bedford, Massachusetts (1,907 swordfish/yr.); Ft. Pierce, Florida (3,215 swordfish/yr.); Wanchese, North Carolina (3,121 swordfish/yr.); Wadmalaw Island, South Carolina (2,632 swordfish/yr.); Barnegat Light, New Jersey (2,586 swordfish/yr.); San Juan, Puerto Rico (2,297 swordfish/yr.); and Beaufort, North Carolina (2,209 swordfish/yr.). Significant commercial and recreational swordfish fisheries also occur along the east coast of Florida including Pompano Beach, Florida and Islamorada, Florida.

Fishing in the New England and mid-Atlantic regions has evolved during recent years to focus almost year-round on directed tuna trips, with substantial numbers of swordfish trips as well. Some vessels participate in directed bigeye/yellowfin tuna fishing during the summer and fall months and then switch to bottom longline and/or shark fishing during the winter when the large coastal shark season is open. During the season, vessels in this region primarily offload in the ports of New Bedford, MA; Barnegat Light, NJ; Ocean City, MD; and Wanchese, NC.

In New England, the communities of Gloucester, MA and New Bedford, MA are heavily invested in the swordfish fishery and serve as a home port for many distant water vessels. Both have significant infrastructure investments in processing and distribution facilities. New Bedford has become increasingly dependent on high-value species such as swordfish, sea scallops (*Placopecten magellanicus*), and groundfish as the city's manufacturing base has declined. Several fishing communities in the mid-Atlantic (e.g., Barnegat Light, NJ; Wanchese, NC; and, Hatteras, NC) are also heavily dependent on the fishing industry to support the local economy. Half of Barnegat Light's 300 person civilian workforce and one third of Hatteras' civilian workforce are employed in the fishing industry. Figure 3.3 identifies several communities with major commercial and/or recreational swordfish fisheries.

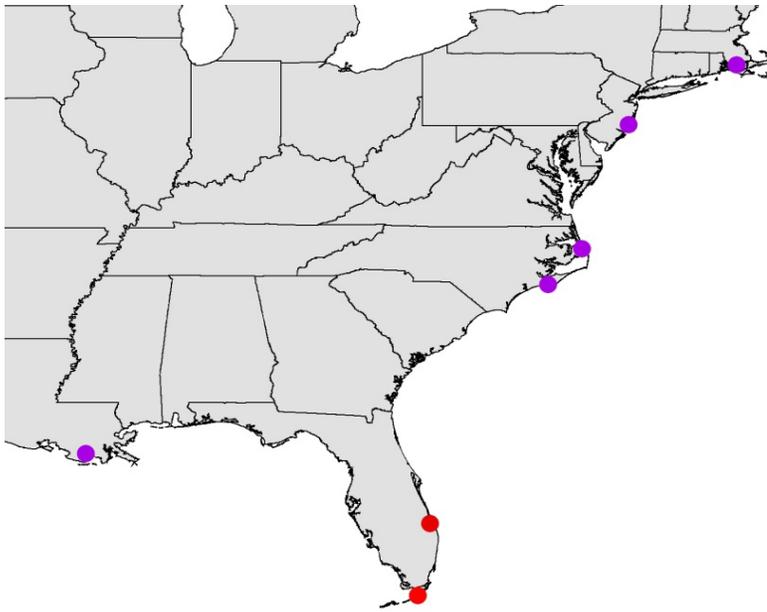


Figure 3.3 **U.S. Communities with Major Commercial (Purple) or Recreational (Red) Swordfish Fisheries**

Off the southeastern coast of the United States, pelagic longline vessels target swordfish year-round although yellowfin tuna (*Thunnus albacores*) and dolphin fish (*Coryphaena hippurus*) are other important marketable components of the catch. Some mid-sized and larger vessels based out of ports in the southeastern United States migrate seasonally on longer trips from the Yucatan Peninsula throughout the West Indies and Caribbean Sea, and some trips range as far north as the Mid-Atlantic coast of the United States to target bigeye tuna (*Thunnus obesus*) and swordfish during the late summer and fall. Home ports (including seasonal ports) for this fishery include, but are not limited to, Georgetown, South Carolina; Charleston, South Carolina; Fort Pierce, Florida; Pompano Beach, Florida; and Key West, Florida. Smaller vessels fish short trips from the Florida coast and typically sell fresh swordfish to local markets.

As indicated in Table 3.2, Florida has the greatest number of commercial swordfish permit holders (161). Florida also has the greatest number of swordfish dealers with 74 permitted in 2012 (Table 3.5). Following the implementation of the East Florida Coast pelagic longline closure in 2001, some commercial swordfish effort in this area has shifted to the commercial handgear sector.

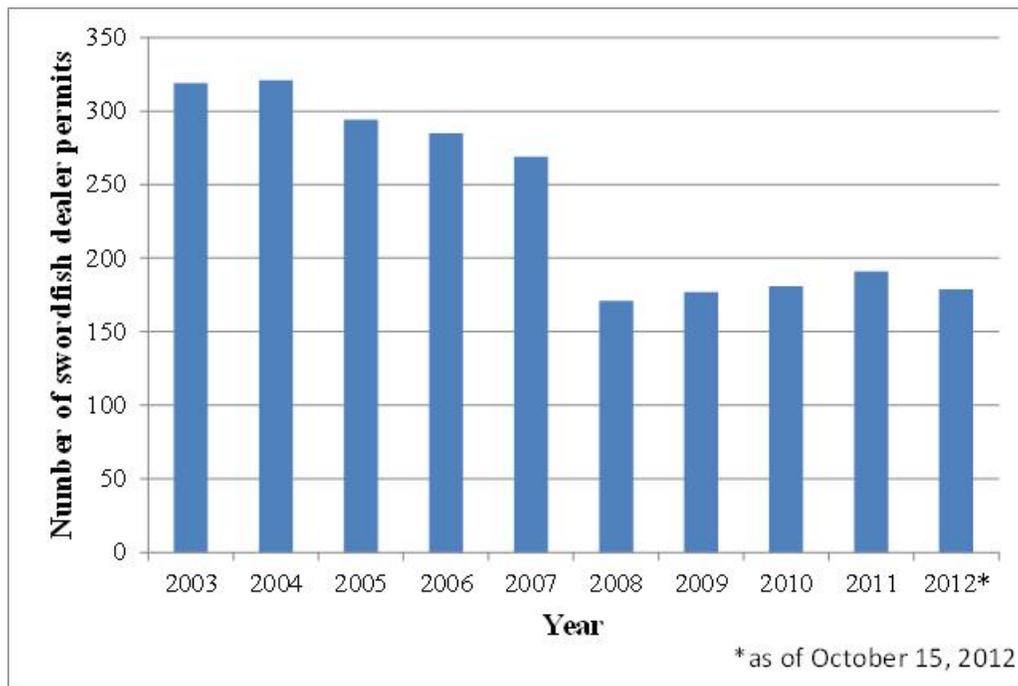
The recreational swordfish fishery in Florida has also grown significantly since 2003. Many coastal communities in Florida are invested in recreational fishing through the charter/headboat industry and supporting businesses. Fishing tournaments provide a significant economic benefit and marketing device to many coastal communities, especially in southeastern Florida, and have increased in popularity as the swordfish stock has recovered. In 2011, 74 tournaments in the United States were registered listing swordfish as a target species. These tournaments can generate a substantial amount of money for surrounding communities and local businesses. Less direct, but equally important, fishing tournaments may serve to generally promote the local tourist industry in coastal communities. Islamorada, FL, for example, is

heavily dependent upon tourism, and has over 45 hotels/motels and 24 marinas to support recreational fishing activities.

Gulf of Mexico pelagic longline vessels primarily target yellowfin tuna year-round but may also catch and sell swordfish. A handful of these vessels directly target swordfish, either seasonally or year-round. Many of these vessels participate in other Gulf of Mexico fisheries (targeting shrimp, shark, and snapper/grouper) during allowed seasons. Home ports for this fishery include, but are not limited to, Madeira Beach, Florida; Panama City, Florida; Dulac, Louisiana; and Venice, Louisiana. Dulac is one of the most important fishing ports in the state of Louisiana, and consistently ranks high in landings of swordfish, tunas, and sharks.

The U.S. Caribbean fleet is similar to the southeastern U.S. fleet in that it consists primarily of smaller vessels making short, relatively near-shore trips, producing high quality fresh product. The U.S. Caribbean fleet has historically landed swordfish and tunas that support the tourist trade in the Caribbean.

All commercially-landed swordfish must be sold to a permitted swordfish dealer. As of January 1, 2013, swordfish dealers must report their purchases to NMFS using weekly electronic dealer reports (77 FR 47303, August 8, 2012). The number of permitted swordfish dealers declined significantly between 2003 and 2008, but has remained relatively constant since 2008, averaging approximately 180 swordfish dealers annually (Figure 3.4).



**Figure 3.4 Number of Swordfish Dealer Permits (2003 – 2012)**

#### **4.0 ENVIRONMENTAL CONSEQUENCES OF NEPA ALTERNATIVES**

NMFS has grouped the alternatives in this document into two broad issues: 1) vessel permitting and authorized gears; and, 2) swordfish retention limits. A third issue, a commercial

swordfish tagging program, was considered but not further analyzed for the reasons described in Section 2.3 above. The different alternatives within each issue generally range from the least restrictive to the most restrictive. The No Action alternative for North Atlantic swordfish fisheries is to maintain the current limited access swordfish permit regime and not create a new and modified swordfish permit. That alternative is addressed under the first issue; vessel permitting and authorized gears. If the No Action alternative were selected under Issue 1, then it would not be necessary to address Issue 2. If the No Action alternative were not selected under Issue 1, it is necessary to address the other issue; swordfish retention limits. NMFS assessed the potential impacts associated with each alternative under both issues. Please see Chapter 2 for a more detailed description of each alternative.

#### **4.1 Issue 1: Commercial Vessel Permitting and Authorized Gears**

The alternatives considered for commercial vessel permitting and authorized gears are fully described in Section 2.1.2. All of these alternatives would authorize only the use of rod and reel, handline, bandit gear, green-stick gear, and harpoon gear. In this section NMFS analyzes the ecological, social, and economic impacts associated with the different NEPA alternatives summarized below:

**Alternative 1.1** - Maintain existing swordfish limited access permit program and do not establish a new swordfish permit (No Action)

**Alternative 1.2** - Establish a new open-access commercial swordfish permit and modify existing open access HMS permits to allow for the commercial retention of swordfish using rod and reel, handline, bandit gear, harpoon, and green-stick gear (same gears authorized for Atlantic Tunas General category permit) – *Preferred Alternative*

**Sub-Alternative 1.2.1** - Modify existing open-access Atlantic Tunas General category permit to allow for the commercial retention of swordfish using handgears

**Sub-Alternative 1.2.2** - Modify existing open-access Atlantic Tunas Harpoon category permit to allow for the commercial retention of swordfish using handgears

**Sub-Alternative 1.2.3** - Modify existing HMS Charter/Headboat permits to allow fishing under open-access swordfish commercial regulations with rod and reel and handline when fishing commercially (*i.e.*, not on a for-hire trip) - *Preferred Alternative*

**Sub-Alternative 1.2.4** - Create a new, separate, open-access commercial swordfish permit to allow landings using handgears - *Preferred Alternative*

**Alternative 1.3** - Establish a new limited access commercial swordfish permit to allow for the commercial retention of swordfish using rod and reel, handline, bandit gear, harpoon and green-stick gear (same gears authorized for Atlantic Tunas General Category permit)

##### **4.1.1 Ecological Impacts (Vessel Permitting and Authorized Gears)**

Alternative 1.1, the no action alternative, would maintain the existing swordfish limited access permit program and would not establish new and modified commercial swordfish permits. Under the no action alternative, NMFS does not anticipate any short-term change in impacts on target species, non-target species, protected resources, and essential fish habitat. The North Atlantic swordfish stock is already fully rebuilt. Under the no action alternative, the stock would likely continue to grow. Under the Atlantic Tunas Convention Act (ATCA; 16 U.S. C. 971 *et seq.*) and the Magnuson-Stevens Act, NMFS is required to provide United States fishing vessels with a reasonable opportunity to harvest the ICCAT-recommended quota. Although there is sufficient quota to allow United States fishermen to catch more swordfish and remain within the ICCAT-recommended quota, current difficulties associated with obtaining a limited access permit may be a constraining factor. For this reason, the “no action” alternative is not preferred at this time.

Alternative 1.2, a preferred alternative, would establish a new open-access commercial swordfish permit and modify some existing open access HMS permits to allow for the commercial retention of swordfish using rod and reel, handline, bandit gear, harpoon, and green-stick gear. Since the permit considered in this alternative is open-access, it is not possible to precisely estimate the number of anticipated new fishery entrants. As a proxy for Sub-Alternatives 1.2.1 and 1.2.4 below, a value of 4,084 new entrants has been selected, which equals the number of Atlantic Tunas General category permit holders (a similar HMS permit) as of October 2012. This is likely a high estimate due to differences between the two fisheries (*e.g.*, Atlantic Tunas General category permit holders may target multiple tuna species while a new commercial swordfish permit holder could target only swordfish). Alternative 1.2 could provide additional opportunities to harvest the U.S. swordfish quota (a species that is fully rebuilt and the U.S. quota has been underharvested in recent years).

Alternative 1.2, however, could cause a minor increase in rod and reel, handline, bandit gear, green-stick, and harpoon commercial fishing effort if previously inactive fishermen obtain the new and modified permit(s) and begin fishing. This could result in a minor increase in swordfish discards and discard mortality if fishing effort increases substantially in areas with large concentrations of juvenile swordfish. Although this alternative would establish a new open-access commercial permit and modify existing open-access permits to allow for the commercial retention of swordfish, NMFS expects that most new permit applicants would be current recreational swordfish fishermen with HMS Angling category permits, resulting in a shift of effort from the recreational fishery to the commercial fishery but not a large increase in overall fishing effort. Also, some current recreational fishermen may choose not to shift to commercial fishing. There are numerous regulatory requirements to comply with when operating a commercial fishing business that may discourage recreational fishermen from obtaining a commercial permit, including recently enacted U.S. Coast Guard marine safety regulations, reporting requirements, and business regulations. Additionally, a recreational fisherman who obtains a Swordfish General Commercial permit would forfeit the ability to fish for Atlantic billfishes, unless they are fishing in a registered HMS tournament and the ability to fish for Atlantic tunas and sharks unless they are fishing in a registered HMS tournament and/or hold appropriate commercial tuna and/or shark permits. Under some sub-alternatives current Atlantic Tunas General and Harpoon category permit holders may also obtain the new permit, as well as current Charter/Headboat permit holders (who would not need the new permit, but could fish commercially for swordfish on non for-hire trips). These permit holders would likely

participate in the commercial swordfish fishery to supplement their primary fishing activities (*i.e.*, tuna fishing and charter fishing). All new commercial swordfish fishery participants would be restricted to using only authorized handgear. Handgears are generally tended closely by the fishing vessel so any bycatch or unmarketable or undersized catch on the fishing gears authorized under Alternative 1.2 could be dehooked and released quickly with a high chance of post-release survival. Overall, NMFS anticipates that direct and indirect, short- and long-term ecological impacts on swordfish, non-target species, ESA-protected species, essential fish habitat, and marine mammals from handgear and green-stick gear would be minor to neutral, primarily because these gears are closely tended and rarely interact with benthic habitat. Swordfish handgear is very selective because it is deployed at times, depths, and locations where swordfish, as opposed to other coastal species, are typically encountered. Hooks and bait are designed to target large pelagics exclusively. Thus, bycatch in the fishery is very low, and includes some pelagic sharks, dolphinfish (mahi-mahi), and the rare escolar or oilfish. The mortality of these bycatch animals is presumably low as well, with non-mako sharks and mesopelagics all released immediately (pers. comm. - D. Kersterrer and V. Montella, 2012). Any landings associated with the new or modified permits would be reported through weekly dealer reports to ensure that they remain within the ICCAT-recommended U.S. swordfish quota, which has already been analyzed. Also, as described in Amendment 1 to the Consolidated HMS FMP (74 FR 28018, June 12, 2009), minimal impacts on EFH are anticipated because handgears are deployed in the water column and rarely interact with ocean bottom substrate. Some handgears such as rod and reel and bandit gear may have the ability to contact the bottom depending upon the method selected to fish, however this contact was determined to not produce significant effects on EFH including benthic habitats. Overall, the swordfish handgear fishery has negligible adverse physical impacts on mid-water environments, the substrate, and most sensitive benthic habitats. The June 14, 2001 BiOp, indicated that because, the potential for take in these fisheries (*i.e.*, harpoon/handgear fisheries, hook and line, etc.) is low, NMFS anticipates that the continued operation of these fisheries would result in documented takes of no more than three ESA-listed sea turtles, of any species, in combination, per calendar year. Additionally, the Atlantic HMS hook and line/harpoon fishery and green-stick fishery are classified as Category III under the MMPA (76 FR 73912, November 29, 2011), meaning that these fisheries have a remote likelihood of incidental mortality or serious injury to marine mammals. For this reason, Alternative 1.2 is anticipated to have neutral short and long-term ecological impacts in the Atlantic. Under this alternative, there are four sub-alternatives being considered if Alternative 1.2 were selected. Ecological impacts on marine mammals, essential fish habitat, target, non-target, and protected species would be the same as Alternative 1.2 under each of the sub-alternatives.

Sub-Alternative 1.2.1 would modify the existing open-access Atlantic Tunas General category permit and allow for the commercial retention of swordfish using handgears. This sub-alternative is anticipated to have the same ecological impacts as Alternative 1.2, above. NMFS received comment from HMS Advisory Panel members during discussions on the Pre-draft for Amendment 8 indicating that this sub-alternative could affect the calculation of fishing effort indexes for various other species, including bluefin tuna. However, the permit category is not used to determine fishing effort so there would be neutral impacts on stock assessments. Because this sub-alternative would create a permit that allows landings of both tuna and swordfish under the same permit, it would diminish the ability for NMFS to precisely differentiate between tuna and swordfish handgear fishermen in the future for analytical and fishery management purposes based upon permit issuance. To estimate total anticipated

swordfish landings under this sub-alternative, NMFS assumed that fishermen with this permit might land an average of 10 swordfish per year. This is an estimate. Some fishermen could land more swordfish and some could land less. The selection of 10 swordfish per year is a reasonable proxy, particularly if many vessel owners fish for swordfish on a part-time basis similar to the practices of many Atlantic Tunas General category permit holders when fishing for bluefin tuna. NMFS then calculated the number of successful bluefin tuna General category vessels in 2011 (583 vessels) and multiplied that number by 10 swordfish per vessel/year producing an estimate of 5,830 additional swordfish/yr. With an average swordfish commercial weight of 128 lb. (ww) in 2011, Sub-Alternative 1.2.1 is estimated to yield 338 mt (ww) of additional U.S. swordfish landings. The current adjusted U.S. North Atlantic swordfish quota is 4,734 mt (ww), and 2011 swordfish landings and discards were 2,887 mt (ww). Under Sub-Alternative 1.2.1, total estimated landings plus discards could approach 3,225 mt (ww) if current fishing practices in other swordfish fisheries remain constant. Under all of the sub-alternatives, NMFS will monitor swordfish landings through the submission of weekly dealer reports to ensure that landings remain within the ICCAT-recommended quota.

Sub-Alternative 1.2.2 would modify the existing open-access Atlantic Tunas Harpoon category permit to allow for the commercial retention of swordfish using harpoon gear. This sub-alternative is anticipated to have the same ecological impacts as Alternative 1.2, above. Because this sub-alternative would create a permit that allows landings of both tuna and swordfish under the same permit, it would diminish the ability for NMFS to precisely differentiate between tuna and swordfish harpoon fishermen in the future for analytical and fishery management purposes based upon permit issuance. To estimate landings under this sub-alternative, NMFS multiplied the number of Atlantic Tunas Harpoon vessels (24) by 10 swordfish per vessel/year. This produces an estimate of 240 additional swordfish per year. With an average swordfish weight of 128 lb. (ww) in 2011, this sub-alternative is estimated to yield 14 mt (ww) of additional U.S. swordfish landings. Under Sub-Alternative 1.2.2, estimated landings plus discards could approach 2,901 mt (ww) if current fishing practices in other swordfish fisheries remain constant.

Sub-Alternative 1.2.3, a preferred alternative, would allow HMS Charter/Headboat permit holders to fish under open-access swordfish commercial regulations with rod and reel and handline when fishing commercially (*i.e.*, not on a for-hire trip). This sub-alternative is anticipated to have the same ecological impacts as Alternative 1.2, above (*i.e.*, minor to neutral ecological impacts). To estimate landings under this sub-alternative, NMFS utilized the number of swordfish estimated to have been landed by Charter/Headboat vessels in 2011 (221) using Marine Recreational Information Program (MRIP) data. With an average commercial swordfish weight of 128 lb. (ww) in 2011, this sub-alternative is estimated to yield 13 mt (ww) of additional U.S. swordfish landings. Under Sub-Alternative 1.2.3, estimated landings plus discards could approach 2,900 mt (ww) if current fishing practices in other swordfish fisheries remain constant.

Sub-Alternative 1.2.4, a preferred alternative, would create a new, separate open-access commercial swordfish permit that authorizes commercial landings of swordfish using rod and reel, handline, harpoon, bandit gear, and green-stick. This sub-alternative is anticipated to have the same ecological impacts as Alternative 1.2, above. Because this alternative would create a separate permit that does not combine both tuna and swordfish permits, it would provide the ability for NMFS to precisely differentiate between tuna and swordfish fishermen in the future

for analytical and fishery management purposes based upon permit issuance. To estimate landings under this sub-alternative, NMFS calculated the number of successful bluefin tuna General category vessels in 2011 (583 vessels) and multiplied that number by 10 swordfish per vessel/year producing an estimate of 5,830 additional swordfish/yr. With an average commercial swordfish weight of 128 lb. (ww) in 2011, this is estimated to yield 338 mt (ww) of additional U.S. swordfish landings. NMFS also multiplied the number of Atlantic Tunas Harpoon vessels (24) by 10 swordfish per vessel/year. This produces an estimate of 240 additional swordfish per year. With an average swordfish weight of 128 lb. (ww) in 2011, harpoon landings are estimated to yield an additional 14 mt (ww) of U.S. swordfish. In total, by combining these two estimates, Sub-Alternative 1.2.4 is predicted to yield 352 mt (ww) of additional U.S. swordfish landings. Under Sub-Alternative 1.2.4, estimated landings plus discards could approach 3,239 mt (ww) if current fishing practices remain constant.

Alternative 1.3 would establish a new limited access commercial swordfish permit to allow for the commercial retention of swordfish using rod and reel, handline, bandit gear, harpoon and green-stick. This alternative is anticipated to have similar ecological impacts as Alternative 1.2, above. However, any minor potential adverse ecological impacts associated with Alternative 1.2 could be reduced under Alternative 1.3 if fewer new permits were issued. Depending upon the number of new limited access permits issued, swordfish landings under this sub-alternative are expected to be less than 352 mt (ww).

#### **4.1.2 Social and Economic Impacts (Vessel Permitting and Authorized Gears)**

Under Alternative 1.1, the no action alternative, there would be no change to the existing swordfish LAP program. Social and economic impacts would remain unchanged under this alternative. Thus, entry into the commercial swordfish fishery would remain difficult due to high LAP costs and the current scarcity of available permits. Currently, limited access swordfish handgear permits can cost upwards of \$30,000. However, in terms of available and unutilized swordfish quota, there is a loss of potential income by fishermen that would like to fish commercially for swordfish, but are not able to obtain limited access permits. Because the North Atlantic swordfish stock is fully rebuilt and the United States has not attained its full ICCAT swordfish quota allocation in recent years, overall gross revenues are lower than they could potentially be. For example, the total U.S. adjusted swordfish quota for 2012 is 3,559.2 mt dw (7,846,612 lbs. dw). Assuming an average ex-vessel price of \$4.51 per pound (dw) and 100 percent quota utilization, total possible gross revenue across the domestic fishery could be \$35.4 million vs. actual gross revenues of \$20.2 million (2011). This represents a difference of \$15.2 million in unrealized gross revenue due to the United States not fully attaining its adjusted North Atlantic swordfish quota. Under the Atlantic Tunas Convention Act (ATCA; 16 U.S. C. 971 *et. seq.*) and the Magnuson-Stevens Act, NMFS is required to provide United States fishing vessels with a reasonable opportunity to harvest the ICCAT-recommended quota. Although there is sufficient quota to allow United States fishermen to catch more swordfish and remain within the ICCAT-recommended quota, current difficulties associated with obtaining a limited access permit may be a constraining factor. For this reason, the “no action” alternative is not preferred at this time.

Alternative 1.2, which is currently preferred, would provide an alternative to the existing swordfish LAP program by creating a new open-access swordfish permit to allow for the commercial retention of swordfish using rod and reel, handline, bandit gear, harpoon, and green-stick gear. This would reduce economic barriers to entry, allow more opportunities to fish commercially for swordfish, and potentially provide new economic benefits to some fishermen. Additionally, economic benefits would be anticipated for fishing tackle manufacturers and suppliers, bait suppliers, fuel providers, and swordfish dealers. In 2011, United States pelagic longline swordfish landings and discards were 2,016 mt (dw) (Table 3.7), or 4,444,519 lb. (dw). In 2011, the pelagic longline fleet caught or discarded 46,522 individual swordfish (NMFS, 2012a). Landings and discards in numbers of fish are not available for handgear. Thus, the average dressed weight per swordfish captured by the pelagic longline fishery was 96 lb. (dw). At \$4.51/lb., the average value of each swordfish was \$432.96. If a new entrant landed, for example, 10 swordfish per year under this alternative, they could realize an increase in annual gross revenues of approximately \$4,329.60. As a proxy, NMFS estimates that as many as 4,084 applicants may apply for an open-access permit. The Agency has received comments, particularly after publication of the ANPR in 2009 (74 FR 26174, June 1, 2009), from some current swordfish fishermen concerned about the possibility of overcapitalization in the fishery if a large number of new commercial permits are issued. These fishermen were also concerned that over capitalization in the fishery could potentially lead to depressed ex-vessel swordfish prices and a reduction in the value of existing swordfish LAPs. It is not possible to predict the exact number of new applicants for an open-access commercial swordfish permit, however NMFS anticipates that some current recreational fishermen with an HMS Angling permit will choose to remain so, rather than shifting to commercial fishing. There are numerous regulatory requirements to comply with when operating a commercial fishing business that may discourage recreational fishermen from obtaining a commercial permit, including recently enacted U.S. Coast Guard marine safety regulations, reporting requirements, and business regulations. Similarly, a recreational fisherman who obtains a Swordfish General Commercial permit would forfeit the ability to fish for Atlantic billfishes, unless they are fishing in a registered HMS tournament and the ability to fish for Atlantic tunas and sharks unless they are fishing in a registered HMS tournament and/or hold appropriate commercial tuna and/or shark permits. Negative impacts on current swordfish LAP holders could be mitigated by establishing lower retention limits for the new open-access permit than the limits that currently exist for swordfish LAPs. Four sub-alternatives are being considered for an open-access commercial swordfish handgear permit. Social and economic impacts would be similar under each of the sub-alternatives as those described in Alternative 1.2.

Sub-Alternative 1.2.1 would modify the existing open-access Atlantic Tunas General category permit and allow for the commercial retention of swordfish using authorized handgears, thus creating an Atlantic Tunas and Swordfish General category permit. This sub-alternative would result in many of the same socio-economic impacts as Alternative 1.2 discussed above. In addition, it would minimize the costs associated with obtaining the new swordfish permit for persons that have already been issued an Atlantic Tunas General category permit. This alternative could streamline permit issuance for persons that want to commercially fish for both tunas and swordfish with rod and reel, handline, harpoon, green-stick, and bandit gear because they would only need to obtain one permit rather than two. However, it would also require persons currently issued an Atlantic Tunas Harpoon category permit that also want to harpoon swordfish to either: (1) obtain the modified Atlantic Tunas General Category permit and harpoon

fish under Atlantic Tunas General Category harpoon regulations for tunas (*i.e.*, lower BFT retention limits) or, (2) obtain a swordfish LAP and continue fishing under Atlantic Tunas Harpoon category regulations. If a person issued a new Atlantic Tunas and Swordfish General category permit landed 10 swordfish per year under this sub-alternative, they could realize an increase in annual gross revenues of approximately \$4,329.60.

Sub-Alternative 1.2.2 would modify the existing open-access Atlantic Tunas Harpoon category permit to allow for the commercial retention of swordfish using handgears. This sub-alternative would result in many of the same social and economic impacts as Alternative 1.2. Additionally, it would minimize the costs associated with obtaining the modified permit for persons that have already been issued the Atlantic Tunas Harpoon category permit. This alternative could streamline permit issuance for persons that want to fish commercially with harpoon gear for both tunas and swordfish because they would only need to obtain one permit rather than two. Specifically, it would provide economic benefits to current Atlantic Tunas Harpoon category permit holders that want to harpoon swordfish and also harpoon fish under Atlantic Tunas Harpoon category regulations (*i.e.*, higher BFT retention limits). If a Tunas and Swordfish Harpoon category permit holder landed 10 swordfish per year under this sub-alternative, they could realize an increase in annual gross revenues of approximately \$4,329.60.

Sub-Alternative 1.2.3, a preferred alternative, would provide economic benefits to Charter/Headboat permit holders when fishing for swordfish with rod and reel and handline commercially (*i.e.*, not on a for hire trip). It could also streamline permit issuance because Charter/Headboat vessels would not need to obtain another permit to commercially retain swordfish on non for-hire trips. If an HMS Charter/Headboat vessel permit holder landed 10 swordfish per year under this sub-alternative, they could realize an increase in annual gross revenues of approximately \$4,329.60.

Sub-Alternative 1.2.4, a preferred alternative, would create a new separate open-access commercial swordfish permit that authorizes commercial landings of swordfish using rod and reel, handline, harpoon, bandit gear, and green-stick. This alternative is anticipated to have similar impacts as Alternative 1.2, above. However, it would increase the costs associated with obtaining the new permit for persons that have already been issued an Atlantic Tunas General or Harpoon category permit. This alternative would not streamline permit issuance for persons that want to commercially fish for both tunas and swordfish with rod and reel, handline, harpoon, and bandit gear because they would need to obtain two different permits to conduct these activities. If a new permit holder landed 10 swordfish per year under this sub-alternative, they could realize an increase in annual gross revenues of approximately \$4,329.60.

Alternative 1.3 would allow for an unspecified, but limited, number of new swordfish limited access permits to be issued that would allow for the commercial retention of swordfish using rod and reel, handline, bandit gear, harpoon and green-stick. This alternative is anticipated to have similar impacts as Alternative 1.2, above. Depending upon the qualification criteria, this alternative could remove barriers to entry and provide economic benefits to some fishermen that qualify for the new limited access permit and could begin commercial fishing for swordfish. However, it would not provide economic benefits to fishermen who do not qualify for a limited access permit. This alternative could temper any negative economic and social impacts on current commercial swordfish limited access permit holders by limiting the number of new

swordfish permits issued. If a new permit holder landed 10 swordfish per year under this sub-alternative, they could realize an increase in annual gross revenues of approximately \$4,329.60. Selection of this alternative may require, among other things, the establishment of qualification criteria, control dates, application deadlines, application procedures, and grievance/appeals procedures. This could increase administrative costs for NMFS and increase the reporting burden for the public to meet any qualifying criteria.

#### **4.2 Issue 2: Swordfish Retention Limits**

The alternatives being analyzed in this section are fully described in Section 2.2.2. All of the retention limit alternatives would apply only to the new and modified permits being considered in this document. These alternatives are generally organized from least restrictive to most restrictive. In this section, NMFS analyzes the ecological, social, and economic impacts associated with the different alternatives below:

**Alternative 2.1** - Establish a fishery-wide zero to six swordfish retention limit range for the new or modified permit(s), and codify a specific retention limit within that range

**Alternative 2.2** – Establish a fishery-wide zero to six fish swordfish retention limit range for the new or modified permit(s), and codify a specific limit within that range with in-season adjustment authority to change the limit based on pre-established criteria (*i.e.*, dealer reports, landing trends, available quota, variations in seasonal distribution, abundance, or migration patterns, etc.).

**Alternative 2.3** - Establish swordfish management regions and a zero to six swordfish retention limit range within each region for the new and modified permit(s), and codify a specific regional limit within that range with in-season adjustment authority to change the limits regionally based on pre-established criteria (*i.e.*, dealer reports, landing trends, available quota, variations in seasonal distribution, abundance, or migration patterns, etc.). – *Preferred Alternative*

**Sub-Alternative 2.3.1**- Base regions upon existing major U.S. domestic fishing areas as reported to ICCAT (Northeast Distant area (NED), Northeast Coastal area (NEC), Mid-Atlantic Bight area (MAB), South Atlantic Bight (SAB), Florida East Coast (FEC), Gulf of Mexico (GOM), Caribbean (CAR), and the Sargasso Sea (SAR).

Under Sub-Alternative 2.3.1, NMFS is considering a potential retention limit of 3 swordfish per vessel per trip for all areas except the Caribbean and Florida East Coast area, and a 2 fish retention limit per vessel per trip within, and for all landings within, the Caribbean area, and a 1 fish retention limit per vessel per trip within, and for all landings within, the Florida East Coast area.

**Sub-Alternative 2.3.2** – Base regions upon large reporting areas with the addition of a separate Florida Swordfish Management Area (Northwest Atlantic, Gulf of Mexico, Caribbean, and a Florida Swordfish Management Area as defined below) – *Preferred Alternative*

Under Sub-Alternative 2.3.2, NMFS is considering a potential retention limit of 3 swordfish per vessel per trip for all areas except the Caribbean and Florida East Coast area, and a 2 fish retention limit per vessel per trip within, and for all landings within, the Caribbean area,

and a 1 fish retention limit per vessel per trip within, and for all landings within, the Florida East Coast area. These trip limits fall within the range discussed for all of the alternatives and, if selected, could be adjusted in the future through the framework procedures similar to those codified at 50 CFR §635.27 (a)(8) and described above. There are three different sub-alternatives that consider a potential Florida Swordfish Management Area.

**Sub-Alternative 2.3.2.1** – East Florida Coast Pelagic Longline Closed Area through the northwestern boundary of Monroe County, FL in the Gulf of Mexico – *Preferred Alternative*

**Sub-Alternative 2.3.2.2** - Georgia border through Key West, FL

**Sub-Alternative 2.3.2.3** – Florida counties of St. Lucie, Martin, Palm Beach, Broward, Dade, and Monroe

#### **4.2.1 Ecological Impacts (Swordfish Retention Limits)**

Alternative 2.1 would establish a fishery-wide zero to six swordfish retention limit range for the new or modified permit(s), and codify a specific retention limit within that range. The maximum six-fish limit is equivalent to the current maximum swordfish retention limit for the open-access HMS Charter/Headboat permit with six paying passengers onboard. If the limit is set at zero, no change in fishing effort or ecological impacts is anticipated. If the limit is set at any level above zero, it could provide for additional opportunities for the harvest of swordfish – a species that is fully rebuilt and for which the U.S. quota has not been fully caught in recent years. If the limit is set at any level above zero, this alternative could cause a minor increase in rod and reel, handline, bandit gear, green-stick, and harpoon commercial fishing effort if previously inactive fishermen obtain the new and modified permit(s) and begin fishing. Also, Alternative 2.1 could cause a minor increase in swordfish discards and discard mortality if fishing effort increases substantially in areas with large concentrations of juvenile swordfish. However, the most recent stock assessment, conducted in 2009, indicates that the North Atlantic swordfish population is fully rebuilt (“not overfished”) and overfishing is not occurring. In some areas, particularly the east coast of Florida, a large recreational handgear fishery for swordfish currently occurs. If a new open-access commercial swordfish permit is implemented along with low retention limits, a significant increase in overall fishing effort in Florida is not anticipated because much of the fishing effort would simply convert from recreational to commercial fishing. Other recreational fishermen with an HMS Angling category permit may choose to remain recreational, rather than shifting to commercial fishing. There are numerous regulatory requirements to comply with when operating a commercial fishing business that may discourage recreational fishermen from obtaining a commercial permit, including recently enacted U.S. Coast Guard marine safety regulations, NMFS reporting requirements, and other business regulations. Also, persons issue an HMS Angling category permit choosing to obtain a new HMS commercial swordfish fishing permit would forfeit the ability to fish for Atlantic billfishes, unless they are fishing in a registered HMS tournament and the ability to fish for Atlantic tunas and sharks unless they are fishing in a registered HMS tournament and/or hold appropriate commercial tuna and/or shark permits. Some current Atlantic Tunas General and Harpoon category permit holders could also obtain the new permit, as well as current Charter/Headboat permit holders (who would not need the new permit, but could fish commercially for swordfish

on non for-hire trips). These permit holders would likely participate in the commercial swordfish fishery to supplement their primary fishing activities (*i.e.*, tuna fishing and charter fishing). All new commercial swordfish fishery participants would be restricted to using only authorized handgear, and would be required to comply with the applicable regional retention limits. Overall, NMFS anticipates neutral impacts on protected resources and marine mammals associated with establishing low commercial retention limits (0 – 6 swordfish) for handgear and green-stick gear. As indicated in the June 14, 2001 BiOp, since the potential for take in these fisheries (*i.e.*, harpoon/handgear fisheries, hook and line, etc.) is low, NMFS anticipates that the continued operation of these fisheries would result in documented takes of no more than three ESA-listed sea turtles per calendar year. Additionally, the Atlantic HMS hook and line/harpoon fishery and green-stick fishery are both classified as Category III under the MMPA (76 FR 73912, November 29, 2011), meaning that these fisheries have a remote likelihood of incidental mortality or serious injury to marine mammals. Also, minimal impacts on EFH are anticipated from handgear and green-stick gear because these gears rarely interact with the ocean floor or benthic habitat. Some handgears such as rod and reel and bandit gear may have the ability to contact the bottom depending upon the method selected to fish, however this contact was determined to not produce significant effects on EFH including benthic habitats. Overall, the swordfish handgear fishery would have negligible adverse physical impacts on mid-water environments, the substrate, and most sensitive benthic habitats.

Alternative 2.2 is similar to Alternative 2.1, so the ecological impacts are expected to be similar. However, under Alternative 2.2 NMFS would have in-season authority to adjust the swordfish retention limit within the range (zero to six) using regulatory procedures similar to those codified at 50 CFR § 635.27(a)(8) and listed in Section 2. This would provide the ability to quickly modify the retention limit, so any potential adverse ecological impacts that are detected could be addressed expeditiously, if appropriate.

Alternative 2.3, a preferred alternative, would establish swordfish management regions and a zero to six swordfish retention limit range within each region for the new or modified permit(s), and codify a specific limit within the range for each region with in-season adjustment authority to change the limit regionally based on pre-established criteria similar to that codified at 50 CFR §635.27 (a)(8) and listed in Section 2. Ecological impacts are anticipated to be similar to Alternative 2.1 above. If a regional limit is set at zero, no change in fishing effort or biological impacts is anticipated. If a regional limit is set at any level above zero, this alternative could cause a minor increase in rod & reel, handline, bandit gear, green-stick, and harpoon commercial fishing effort if previously inactive fishermen obtain the new and modified permit(s) and begin fishing. However, NMFS does not anticipate a large increase in overall fishing effort because much of the effort will simply convert from recreational to commercial fishing. Other recreational fishermen may choose to remain so, rather than shifting to commercial fishing. Overall, NMFS anticipates minimal adverse ecological impacts on protected resources and marine mammals associated with establishing low retention limits (from zero to six swordfish) for handgear and green-stick gear on a regional basis. Alternative 2.3 would provide NMFS with maximum ability to quickly adjust the retention limit regionally using in-season authority and pre-established criteria. Therefore, any adverse ecological impacts could be quickly addressed, if necessary, and also be targeted to specific regions. NMFS is considering four different sub-alternatives regarding swordfish management regions. The ecological impacts associated with

all of the sub-alternatives below are identical to those of Alternative 2.3, but the scope (or magnitude) of the impacts would vary depending upon the size and location of the regions.

Sub-Alternative 2.3.1 would establish regions based upon existing major U.S. domestic fishing areas as reported to ICCAT (NED, NEC, MAB, SAB, FEC, GOM, CAR, and SAR). Ecological impacts would be the same as Alternative 2.3 above. This sub-alternative differs from the other sub-alternatives described below (2.3.2.1 – 2.3.2.3) because it would implement smaller regions. This could potentially allow swordfish management measures to be more tailored geographically to the biological factors affecting a particular region (*e.g.*, the NED or other areas). NMFS is considering implementing an initial swordfish retention limit of three for all regions except the CAR and FEC, a retention limit of two swordfish per vessel per trip for the CAR, and a limit of one swordfish per vessel per trip for the FEC.

Sub-Alternative 2.3.2, a preferred alternative, would establish larger regions than Sub-Alternative 2.3.1, with the addition of a separate Florida Swordfish Management Area (Northwest Atlantic, Gulf of Mexico, Caribbean, and a Florida Swordfish Management Area as defined below). Under this sub-alternative, swordfish management measures could still be tailored geographically to the biological factors affecting a particular region however the regions would be larger (with the possible exception of the separate Florida Swordfish Management Area).

The east coast of Florida, and in particular the Florida Straits, contains one of the richest concentrations of marine life in the Atlantic Ocean. It is also a swordfish nursery area. This area was closed to pelagic longline gear in 2001 in order to reduce the bycatch of several species. A 2003 United Nations Food and Agriculture Organization study stated that the Florida Straits had the highest biodiversity in the Atlantic Ocean, and is home to 25 endemic species. It provides important habitat for many HMS and protected species including swordfish, marlin, sailfish, sea turtles and marine mammals. It is also an area of unique importance as a swordfish migratory corridor and as juvenile swordfish habitat that is easily accessible to a large population center with many fishermen. A separate Florida Swordfish Management Area is being considered for the conservation of juvenile and adult swordfish in and near the Florida Straits. Comments received from the public and the HMS Advisory Panel indicated a concern about increased fishing mortality in this area, which is considered to be important for the migration of swordfish and as juvenile habitat and is in close proximity to a large human population center. Currently, swordfish fishing occurs in this area under open-access recreational fishing permits and limited access commercial fishing permits. As described earlier, NMFS anticipates that some of the fishermen who acquire a new open-access commercial swordfish permit may already be participating in the swordfish fishery using other permits and some may be new entrants to the fishery. However, NMFS does not believe that there will be many new entrants to the swordfish fishery under the new open-access commercial swordfish permit because an open-access recreational swordfish handgear fishery already exists. Rather, some fishermen may shift from participating in the swordfish fishery under recreational HMS Angling permits to the new open-access commercial permit. For these reasons, NMFS is considering a low retention limit of one swordfish per vessel per trip in this area during initial implementation of the management measures in this document. This low retention limit will provide for the orderly establishment of a small-scale commercial swordfish handgear fishery off Florida's east coast while potentially

reducing the incentive for vessels to participate in the fishery, thereby reducing potential adverse ecological impacts on non-target and protected species.

The initial default retention limits were identified based upon comments received during the Advance Notice of Proposed Rulemaking (2009) and comments received on the Amendment 8 Pre-Draft (2012). The retention limits fall within the range discussed under Alternative 2.3 above, and could be adjusted in-season through procedures similar to those codified at 50 CFR §635.27 (a)(8), as discussed in Section 2. NMFS is proposing to codify a retention limit of one swordfish per vessel per trip in the Florida Swordfish Management Area, two swordfish per vessel per trip in the Caribbean region (consistent with the swordfish retention limit for the U.S. Caribbean established in Amendment 4 to the 2006 Consolidated HMS FMP), and three swordfish per vessel per trip in the Northwest Atlantic and Gulf of Mexico regions. A two-fish initial default limit is proposed for the Caribbean region to be consistent with the limit recently implemented for the Caribbean Commercial Small Boat permit. The small-scale commercial HMS fishery in the Caribbean consists primarily of small vessels that are limited by hold capacity, crew size, trip length, fishing gears, and market infrastructure. A higher initial default limit of three swordfish per vessel per trip is being proposed for the Northwest Atlantic and the Gulf of Mexico to compensate for higher operating costs in these regions because a greater distance is required to travel to productive fishing grounds. A three-fish retention limit is in the middle of the range being considered for all of the alternatives. NMFS believes it is an appropriate default limit for these regions, based upon the size and hold capacity of most vessels participating in the swordfish handgear fishery. For many small to medium-sized vessels, three swordfish would be considered a successful trip. It could become difficult to properly handle and store more than three large swordfish aboard a smaller vessel to ensure that the product maintains its quality and safety. The initial proposed default retention limits are purposefully conservative for the proposed implementation of a new open-access swordfish permit. As additional fishery information becomes available, they could be reconsidered in the future. There are three sub-alternatives to describe the Florida Swordfish Management Area. In each of these sub-alternatives, NMFS is proposing a regional retention limit of one swordfish per vessel per trip.

Sub-Alternative 2.3.2.1, a preferred alternative, would establish a Florida Swordfish Management Area that includes the East Florida Coast pelagic longline closed area through the northwestern boundary of Monroe County, Florida in the Gulf of Mexico. This area provides important habitat for many HMS and protected species including swordfish, marlin, sailfish, sea turtles and marine mammals. It is a swordfish migratory corridor and also provides important swordfish juvenile habitat that is very accessible for large numbers of commercial and recreational fishing vessels. For these reasons, NMFS is considering a low retention limit of one swordfish per vessel per trip in this area during initial implementation of the management measures in this document. This low retention limit will provide for the orderly establishment of a small-scale commercial swordfish handgear fishery off Florida's east coast while potentially reducing the incentive for vessels to participate in the fishery, thereby reducing potential adverse ecological impacts on non-target and protected species. This area is preferred because it corresponds to well-known boundaries of the existing pelagic longline closed area and also provides a more enforceable buffer around the Florida Keys, including Key West, where there is not as much swordfishing activity.

Sub-Alternative 2.3.2.2 would establish a Florida Swordfish Management Area that extends from the Georgia/Florida border through Key West, FL. This area is larger than, and includes, the East Florida Coast pelagic longline closed area. This management area would be larger than preferred Sub-Alternative 2.3.2.1, thus it has the ecological benefit of providing an additional buffer area farther to the north along the Florida coast where there is not as much swordfishing activity.

Sub-Alternative 2.3.2.3 would establish a Florida Swordfish Management Area that includes the Florida counties of St. Lucie, Martin, Palm Beach, Broward, Dade, and Monroe. This area is smaller than the previous two sub-alternatives, but specifically includes oceanic areas with concentrations of swordfish that are readily accessible to many anglers. This management area would be smaller than preferred Sub-Alternative 2.3.2.1, thus it would not provide as large of an enforceable buffer area around key swordfish fishing areas.

#### **4.2.2 Social and Economic Impacts (Swordfish Retention Limits)**

Alternative 2.1 would establish a fishery-wide zero to six swordfish retention limit range for the new and modified permit(s), and codify a specific retention limit within that range. This limit is equal to the current maximum swordfish retention limit for the open-access HMS Charter/Headboat permit with 6 paying passengers onboard. This alternative could provide some fishermen with the ability to commercially land swordfish, thereby resulting in positive economic benefits if the limit were set above zero. Additionally, economic benefits are anticipated for fishing tackle manufacturers and suppliers, bait suppliers, fuel providers, and swordfish dealers. The Agency has received comments, particularly in response to the 2009 ANPR (74 FR 26174, June 1, 2009), raising concerns about the possibility for overcapitalization in the swordfish fishery, potentially leading to depressed market prices and other adverse socio-economic impacts. Increasing the amount of swordfish in the market could reduce the value of existing swordfish LAPs and potentially reduce ex-vessel swordfish prices. However, most negative impacts on current swordfish LAP holders could be mitigated by establishing lower retention limits for the new open-access permit than those that exist for swordfish LAPs. A retention limit range of zero to six swordfish is anticipated to provide a seasonal, or secondary, fishery for most participants. It is not likely to facilitate a full-time, year-round fishery in most areas, with the possible exception of south Florida where swordfish are often available year-round. For example, current Atlantic Tunas General category permit holders could fish for swordfish overnight while targeting bluefin tuna at other times. Similarly, they could harpoon a swordfish if one were spotted during a tuna trip. In this manner, Alternative 2.1 could provide a supplementary source of income for some fishermen. There is a notable difference in the ex-vessel revenue produced by a one swordfish/trip limit versus a six swordfish/trip limit. A single swordfish is estimated to be worth \$432.96 ex-vessel, on average, whereas six swordfish would produce \$2,597.76 ex-vessel. For a vessel making ten trips per year and retaining the maximum allowable limit each trip, annual gross revenue derived from swordfish would range from \$4,329.60 under a one fish limit to \$25,977.60 under a six fish limit. Codifying a single fishery-wide swordfish retention limit will provide certainty to both fishermen and law enforcement regarding the swordfish retention limit for the new open-access permit. However, this alternative would not provide in-season adjustment authority to quickly modify the swordfish retention limit regionally by using pre-established criteria.

Alternative 2.2 would establish a fishery-wide zero to six swordfish retention limit range for the new and modified permit(s), and codify a specific retention limit within that range. In addition, it would provide in-season adjustment authority for NMFS to modify the swordfish retention limit within the range (zero to six) using in-season adjustment procedures similar to those codified at 50 CFR §635.27 (a)(8) and listed in Section 2. This would provide the ability for NMFS to quickly adjust the retention limit. This alternative would provide the same social and economic impacts as Alternative 2.1, but it would provide less certainty to fishermen and law enforcement regarding possible in-season changes to the swordfish retention limit. For a vessel making ten trips per year and retaining the maximum allowable limit on each trip, annual gross revenue derived from swordfish would range from \$4,329.60 under a one fish limit to \$25,977.60 under a six fish limit. Positive economic benefits could occur if the retention limit was increased during the fishing season based upon information indicating that sufficient quota was available, or upon other pre-established criteria.

Alternative 2.3, a preferred alternative, would establish swordfish management regions and a 0 – 6 swordfish retention limit range within each region for the new and modified permit(s) and codify a specific regional limit within that range with in-season adjustment authority to change the limits regionally based on pre-established criteria. This alternative would have similar social and economic impacts as Alternative 2.1. If a regional retention limit is set at zero, no change in socio-economic impacts is anticipated. If a regional limit is set at any level above zero, this alternative could provide economic benefits to some commercial handgear fishermen if they were previously inactive and they obtain the new and modified permit(s) and begin fishing. It would also provide the maximum ability for NMFS to quickly adjust the retention limit on a regional basis using framework regulatory procedures codified at 50 CFR §635.27(a)(8) and listed in Section 2. This could provide less certainty than Alternative 2.1 to fishermen and law enforcement regarding changes to the swordfish retention limit. For a vessel making ten trips per year and retaining the maximum allowable limit on each trip, annual gross revenue derived from swordfish would range from \$4,329.60 under a one fish limit to \$25,977.60 under a six fish limit. Positive economic benefits could occur if the retention limit were adjusted upward based upon information indicating that sufficient quota was available, or upon other pre-established criteria. NMFS is considering four different sub-alternatives regarding swordfish management regions.

Sub-Alternative 2.3.1 would establish regions based upon existing major U.S. domestic fishing areas as reported to ICCAT (NED, NEC, MAB, SAB, FEC, GOM, CAR, and SAR). Socio-economic impacts would be the same as Alternative 2.3 above. This alternative differs from the other sub-alternatives described below (2.3.2.1 – 2.3.2.3) because it would implement smaller regions. This could potentially allow swordfish management measures to be tailored geographically to the biological factors affecting a particular region (*e.g.*, the NED or other areas). If this sub-alternative were implemented, NMFS is considering an initial swordfish retention limit of three for all regions except the CAR and FEC, a retention limit of two swordfish per vessel per trip for the CAR, and a limit of one swordfish per vessel per trip for the FEC. For a vessel making ten trips per year and retaining the maximum allowable limit on each trip, annual gross revenue derived from swordfish would range from \$12,988.80 under a three fish limit, to \$8,659.20 under a two fish limit, and \$4,329.60 under a one fish limit.

Sub-Alternative 2.3.2, a preferred alternative, would establish larger regions than Sub-Alternative 2.3.1, with the addition of a separate Florida Swordfish Management Area

(Northwest Atlantic, Gulf of Mexico, Caribbean, and a Florida Swordfish Management Area as defined below). Under this sub-alternative, swordfish management measures could still be tailored geographically to the biological factors affecting a particular region however the regions would be larger (with the possible exception of the separate Florida Swordfish Management Area). The alternatives to delineate the potential Florida Swordfish Management Area are described below. **NMFS requests specific comment on a retention limit of one swordfish per vessel per trip for the Florida Swordfish Management Area, two swordfish per vessel per trip for the U.S. Caribbean region, and three swordfish per vessel per trip for the Northwest Atlantic and Gulf of Mexico regions.** These limits were identified based upon comments received during the Advance Notice of Proposed Rulemaking (2009) and comments received on the Amendment 8 Pre-Draft (2012). These retention limits fall within the range discussed under Alternative 2.3 above, and could be modified in the future through using in-season adjustment procedures similar to those codified at 50 CFR §635.27(a)(8), as discussed in Section 2. For a vessel making ten trips per year and retaining the maximum allowable limit on each trip, annual gross revenue derived from swordfish would range from \$12,988.80 under a three fish limit, to \$8,659.20 under a two fish limit, and \$4,329.60 under a one fish limit. To estimate the number of entities affected by a special Florida Swordfish Management Area and a one fish retention limit, NMFS used the Atlantic Tunas General category as a proxy. NMFS estimates that potentially a total of 4,084 new swordfish commercial handgear permits could be issued fishery-wide. In 2011, 44% of all Directed and Incidental swordfish limited access permits were issued in Florida. Additionally, 63% of all swordfish Handgear limited access permits were issued in Florida in 2011. Taking the average of these two numbers provides an estimate of 53.5%, which is used as an estimate of the percent of new permits that could be issued in Florida. Therefore, 53.5% of 4,084 new permits yields an estimate of 2,185 potential new commercial swordfish handgear permits that could be issued in Florida. Assuming that 2/3rds of these permits are issued to vessels on the east coast of Florida, then potentially 1,455 new open-access swordfish permits could be issued on the east coast of Florida ( $0.666 * 2,185 = 1,455$ ).

Sub-Alternative 2.3.2.1, a preferred alternative, would establish a Florida Swordfish Management Area that includes the East Florida Coast pelagic longline closed area through the northwestern boundary of Monroe County, FL in the Gulf of Mexico. Approximately 1,455 new permit holders could derive up to \$4,329.60 annually under a one fish limit, assuming they each took ten trips per year and landed one fish on each trip.

Sub-Alternative 2.3.2.2 would establish a Florida Swordfish Management Area that extends from the Georgia/Florida border to Key West, FL. This area is larger than, and includes, the East Florida Coast pelagic longline closed area. Therefore, the economic impacts described for Sub-Alternative 2.3.2.1 would also occur within this area. Additionally, because this special management area would be larger than Sub-Alternative 2.3.2.1, more vessels could potentially be affected by the initial default retention limit. The purpose of the Florida Swordfish Management Area and the low retention limit is to provide a level of additional conservation due to the presence of unique social and biological factors found there. However, it is also an objective of this rulemaking to provide additional opportunities to harvest swordfish. This sub-alternative does not accomplish that objective as well as preferred Sub-Alternative 2.3.2.1.

Sub-Alternative 2.3.2.3 would establish a Florida Swordfish Management Area that includes the Florida counties of St. Lucie, Martin, Palm Beach, Broward, Dade, and Monroe. This area is smaller than the previous two sub-alternatives, but specifically includes oceanic areas with concentrations of swordfish that are readily accessible to many anglers. Because this special management area would be smaller than Sub-Alternative 2.3.2.1, fewer vessels would potentially be affected by the one swordfish per vessel per trip initial default retention limit. Although this alternative would affect fewer vessels than preferred Sub-Alternative 2.3.2.1, it does not provide as large of an enforceable buffer area around key swordfish fishing areas.

### **4.3 Mitigation Measures**

Environmental impacts associated with the proposed actions analyzed are considered to be minor. However, the preferred alternatives include the establishment of a new open-access swordfish handgear permit, and mitigation measures being considered for any potential adverse ecological and economic impacts include the establishment of low initial swordfish retention limits and the ability to adjust these limits quickly using in-season authority and pre-specified criteria. Current swordfish fishermen and swordfish dealers potentially affected by the proposed actions are likely to continue to derive income from commercial fishing. The alternatives being considered could provide additional opportunities for potential new swordfish fishermen and dealers by providing more access to the commercial swordfish fishery – a stock which is not overfished and for which overfishing is not occurring. Swordfish catches will continue to be carefully monitored to ensure that they remain within previously-analyzed ICCAT-recommended U.S. swordfish quota. A new automated HMS *e-Dealer* reporting system will begin in 2013. In conjunction with existing vessel logbook reports, this new HMS *e-Dealer* reporting program will further improve monitoring of North Atlantic swordfish catches so that any issues regarding quota monitoring will be successfully mitigated. Further, the swordfish retention limits would initially be set sufficiently low to prevent overcapitalization and to ensure that catches remain within the directed quota established for this species. Finally, the fishing gears being considered have low bycatch and bycatch mortality so any impacts on protected species, non-target species, and undersized fish are not considered to be significant. As indicated in the June 14, 2001 BiOp, since the potential for take in these fisheries (*i.e.*, harpoon/handgear fisheries, hook & line, etc.) is low, NMFS anticipates that the continued operation of these fisheries would result in documented takes of no more than three sea turtles, of any ESA-listed species, in combination, per calendar year. Additionally, the Atlantic HMS hook and line/harpoon fishery and green-stick fishery are classified as Category III under the MMPA (76 FR 73912, November 29, 2011), meaning that these fisheries have a remote likelihood of incidental mortality or serious injury to marine mammals.

Currently, the high cost of obtaining limited access permits for the swordfish fishery restricts participation. Establishing a new open access swordfish permit could increase swordfish landings and potentially lead to improved enforcement of regulations, data collection, and stock assessments. With increased participation in the commercial swordfish fishery, it will be important for the Agency to continue to ensure accurate swordfish quota management so that U.S. swordfish catches remain within the adjusted ICCAT-recommended quota. A new automated HMS *e-Dealer* reporting system, in conjunction with existing vessel logbook reports, will improve accurate monitoring of north Atlantic swordfish catches so that any issues regarding quota monitoring and closures, if necessary will be successfully mitigated. Increased

participation in the swordfish handgear fishery, an accompanying increase in swordfish landings, and an improved fishery monitoring process using the new e-Dealer system will help to ensure that the United States approaches, but does not exceed, its North Atlantic swordfish quota. This will facilitate the United States' ability to retain its ICCAT-recommended quota allocation and reduce the possibility that swordfish quota will be reallocated to other ICCAT contracting parties.

#### 4.4 Comparison of NEPA Alternatives

Based on the analyses discussed above, and graphically presented in Table 4.1, the no-action alternative is not anticipated to result in short-term impacts on target species, non-target species, protected resources, and Essential Fish Habitat. The North Atlantic swordfish stock is fully rebuilt and, under the no action alternative, the stock is likely to continue to grow. However, the possibility exists that some long-term negative ecological impacts could occur under the no-action alternative if the U.S. North Atlantic swordfish quota allocation were distributed to other ICCAT contracting parties without a requirement that the contracting parties adopt bycatch controls and other fishery management measures comparable to the U.S. on their fisheries. The remaining alternatives would create new fishing opportunities for some U.S. fishermen by establishing a swordfish handgear permit and retention limits that could generate positive economic impacts while also allowing NMFS to collect more accurate data on commercial swordfish landings. Overall, the preferred alternatives will provide long-term neutral ecological impacts and positive socio-economic impacts.

**Table 4.1 Comparison of Social and Environmental Impacts of the Proposed Action**

Alternative	Quality	Timeframe	Environmental	Protected Resources	Socioeconomic
<b>1.1 - No Action:</b> Maintain existing swordfish limited access permit program and do not establish a new swordfish permit	Direct	Short-term	⊙ <sub>+</sub>	⊙ <sub>+</sub>	⊙ <sub>-</sub>
		Long-term	⊙ <sub>-</sub>	⊙ <sub>-</sub>	⊙ <sub>-</sub>
	Indirect	Short-term	⊙ <sub>+</sub>	⊙ <sub>+</sub>	⊙ <sub>-</sub>
		Long-term	⊙ <sub>-</sub>	⊙ <sub>-</sub>	⊙ <sub>-</sub>
	Cumulative	Short-term	○	○	⊙ <sub>-</sub>
		Long-term	⊙ <sub>-</sub>	⊙ <sub>-</sub>	⊘ <sub>-</sub>
<b>1.2 - Preferred Alternative:</b> Establish new <u>open-access</u> commercial swordfish permit and modify existing open access HMS permits to allow for the commercial	Direct	Short-term	○	○	⊙ <sub>+</sub>
		Long-term	○	○	⊙ <sub>+</sub>
	Indirect	Short-term	○	○	⊙ <sub>+</sub>
		Long-term	⊙ <sub>+</sub>	⊙ <sub>+</sub>	⊙ <sub>+</sub>
	Cumulative	Short-term	○	○	⊙ <sub>+</sub>
		Long-term	⊙ <sub>+</sub>	⊙ <sub>+</sub>	⊙ <sub>+</sub>

Alternative	Quality	Timeframe	Environmental	Protected Resources	Socioeconomic
retention of swordfish using handgears					
<b>1.2.1</b> - Modify existing open-access Atlantic Tunas General category permit to allow for the commercial retention of swordfish using handgears	Direct	Short-term	○	○	⊙+
		Long-term	○	○	⊙+
	Indirect	Short-term	○	○	⊙+
		Long-term	⊙+	⊙+	⊙+
	Cumulative	Short-term	○	○	⊙+
		Long-term	⊙+	⊙+	⊙+
<b>1.2.2</b> - Modify existing open-access Atlantic Tunas Harpoon category permit to allow for the commercial retention of swordfish using handgears	Direct	Short-term	○	○	⊙+
		Long-term	○	○	⊙+
	Indirect	Short-term	○	○	⊙+
		Long-term	⊙+	⊙+	⊙+
	Cumulative	Short-term	○	○	⊙+
		Long-term	⊙+	⊙+	⊙+
<b>1.2.3 - Preferred Alternative -</b> Modify existing HMS Charter/Headboat permit to allow fishing under open-access swordfish commercial regulations when not on a for-hire trip	Direct	Short-term	○	○	⊙+
		Long-term	○	○	⊙+
	Indirect	Short-term	○	○	⊙+
		Long-term	⊙+	⊙+	⊙+
	Cumulative	Short-term	○	○	⊙+
		Long-term	⊙+	⊙+	⊙+
<b>1.2.4 - Preferred Alternative -</b> Create new, separate, open-access commercial swordfish permit	Direct	Short-term	○	○	⊙+
		Long-term	○	○	⊙+
	Indirect	Short-term	○	○	⊙+
		Long-term	⊙+	⊙+	⊙+
	Cumulative	Short-term	○	○	⊙+
		Long-term	⊙+	⊙+	⊙+
<b>1.3</b> – Establish	Direct	Short-term	○	○	⊙+

Alternative	Quality	Timeframe	Environmental	Protected Resources	Socioeconomic
new <u>limited access</u> commercial swordfish permit to allow for the commercial retention of swordfish using authorized gears	Indirect	Long-term	○	○	⊙ <sub>+</sub>
		Short-term	○	○	⊙ <sub>+</sub>
		Long-term	⊙ <sub>+</sub>	⊙ <sub>+</sub>	⊙ <sub>+</sub>
	Cumulative	Short-term	○	○	⊙ <sub>+</sub>
		Long-term	⊙ <sub>+</sub>	⊙ <sub>+</sub>	⊙ <sub>+</sub>
	2.1 - Establish fishery-wide 0 – 6 swordfish retention limit range for new permit(s), and codify a specific retention limit within that range	Direct	Short-term	○	○
Long-term			○	○	⊙ <sub>+</sub>
Indirect		Short-term	○	○	⊙ <sub>+</sub>
		Long-term	⊙ <sub>+</sub>	⊙ <sub>+</sub>	⊙ <sub>+</sub>
Cumulative		Short-term	○	○	⊙ <sub>+</sub>
		Long-term	⊙ <sub>+</sub>	⊙ <sub>+</sub>	⊙ <sub>+</sub>
2.2 – Establish fishery-wide 0 – 6 fish retention limit range for new permit(s), and codify a specific limit within range with in-season authority to adjust limit	Direct	Short-term	○	○	⊙ <sub>+</sub>
		Long-term	○	○	⊙ <sub>+</sub>
	Indirect	Short-term	○	○	⊙ <sub>+</sub>
		Long-term	⊙ <sub>+</sub>	⊙ <sub>+</sub>	⊙ <sub>+</sub>
	Cumulative	Short-term	○	○	⊙ <sub>+</sub>
		Long-term	⊙ <sub>+</sub>	⊙ <sub>+</sub>	⊙ <sub>+</sub>
2.3 - Preferred Alternative - Establish regions and a 0 – 6 fish retention limit range in each region for new permit(s), and codify specific regional limits with in-season authority to adjust limit(s) regionally	Direct	Short-term	○	○	⊙ <sub>+</sub>
		Long-term	○	○	⊙ <sub>+</sub>
	Indirect	Short-term	○	○	⊙ <sub>+</sub>
		Long-term	⊙ <sub>+</sub>	⊙ <sub>+</sub>	⊙ <sub>+</sub>
	Cumulative	Short-term	○	○	⊙ <sub>+</sub>
		Long-term	⊙ <sub>+</sub>	⊙ <sub>+</sub>	⊙ <sub>+</sub>
2.3.1- Base regions upon existing U.S.	Direct	Short-term	○	○	⊙ <sub>+</sub>
		Long-term	○	○	⊙ <sub>+</sub>

Alternative	Quality	Timeframe	Environmental	Protected Resources	Socioeconomic
fishing areas as reported to ICCAT (NED,NEC, MAB, SAB, FEC, GOM, CAR, and SAR)	Indirect	Short-term	○	○	⊙+
		Long-term	⊙+	⊙+	⊙+
	Cumulative	Short-term	○	○	⊙+
		Long-term	⊙+	⊙+	⊙+
<b>2.3.2 – Preferred Alternative -</b> Base regions on large areas with additional Florida swordfish mgmt. area (Northwest Atlantic, Gulf of Mexico, Caribbean, and FL swordfish mgmt. area)	Direct	Short-term	○	○	⊙+
		Long-term	○	○	⊙+
	Indirect	Short-term	○	○	⊙+
		Long-term	⊙+	⊙+	⊙+
	Cumulative	Short-term	○	○	⊙+
		Long-term	⊙+	⊙+	⊙+
<b>2.3.2.1 – Preferred Alternative -</b> East Florida Coast PLL Closed Area through NW boundary of Monroe County, FL in the GOM	Direct	Short-term	○	○	⊙+
		Long-term	○	○	⊙+
	Indirect	Short-term	○	○	⊙+
		Long-term	⊙+	⊙+	⊙+
	Cumulative	Short-term	○	○	⊙+
		Long-term	⊙+	⊙+	⊙+
<b>2.3.2.2 -</b> Georgia border through Key West, FL	Direct	Short-term	○	○	⊙+
		Long-term	○	○	⊙+
	Indirect	Short-term	○	○	⊙+
		Long-term	⊙+	⊙+	⊙+
	Cumulative	Short-term	○	○	⊙+
		Long-term	⊙+	⊙+	⊙+
<b>2.3.2.3 –</b> FL counties of St. Lucie, Martin, Palm Beach, Broward, Dade, and Monroe	Direct		○	○	⊙+
		Short-term			
		Long-term	○	○	⊙+
	Indirect	Short-term	○	○	⊙+

Alternative	Quality	Timeframe	Environmental	Protected Resources	Socioeconomic
		Long-term	⊙+	⊙+	⊙+
	Cumulative	Short-term	○	○	⊙+
		Long-term	⊙+	⊙+	⊙+

Symbol Key:

- Neutral Impacts
- ⊙ Minor Adverse Impacts
- ⊙+ Minor Beneficial Impacts

#### 4.5 Cumulative Impacts

Under NEPA, cumulative impact is the impact on the environment which results from the incremental impact of the proposed 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. A cumulative impact includes the total effect on a natural resource, ecosystem, or human community due to past, present, and 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, or are occurring, and will likely occur as a result of any action or influence, including the direct and reasonably foreseeable indirect impacts of a federal activity. This section of the EA describes the cumulative ecological, economic, and social impacts of past, present, and reasonably foreseeable future actions within the proposed action area—the northwest Atlantic Ocean, including the Gulf of Mexico and U.S. Caribbean.

As discussed above, the proposed actions will provide an opportunity for more U.S. fishermen to participate in commercial swordfish fisheries that currently require limited access permits. This is anticipated to have positive social and economic impacts for some U.S. fishermen. When the swordfish fishery shifted to limited access permits, many U.S. fishermen either failed to qualify for the permits or did not obtain permits due to the overfished condition of stock at the time. Due to the limited number of available swordfish limited access permits, there are price barriers restricting some U.S. fishermen from entering the commercial swordfish fishery because swordfish limited access permits can be expensive and often require a substantial investment. The proposed actions would provide a cost-effective way for some U.S. fishermen to enter the commercial swordfish fishery using handgear, which has been determined to have minimal impacts on protected species and marine mammals.

The commercial swordfish handgear fishery primarily consists of smaller vessels operating in predominantly pelagic environments. Overall, the swordfish handgear fishery has negligible adverse physical impacts on mid-water environments, the substrate, and most sensitive benthic habitats. A recent development in the swordfish handgear fishery consists of “deep-drop” fishing off the coast of south Florida during daylight hours. This segment of the fishery has only existed since approximately 2007, so little information is currently available to quantify the “deep-drop” fishery’s ecological impacts. It is a highly specialized fishery with relatively few active participants. NMFS anticipates that most new swordfish permit holders, if the proposed measures are enacted, would participate in the more traditional nighttime and harpoon fisheries which do not interact with benthic habitat. Amendment 1 to the Consolidated HMS FMP (June 12, 2009, 74 FR 28018) (NMFS, 2009)) determined that some handgears such as rod and reel and bandit gear may have the ability to contact the bottom depending upon the method selected to fish, however this contact was determined to not produce significant effects on EFH including benthic habitats. Overall, the swordfish handgear fishery would have negligible adverse physical impacts on mid-water environments, the substrate, and most sensitive benthic habitats. As more information becomes available on the magnitude and cumulative impacts of the daytime “deep-drop” swordfish fishery, NMFS will reevaluate the need for additional management measures in the future.

North Atlantic swordfish are not overfished and overfishing is not occurring. However, U.S. landings have remained below the ICCAT-recommended swordfish quota for many years. NMFS has been actively working since 2004 to revitalize the U.S. swordfish fishery as the population has recovered. Some of the measures to revitalize the U.S. swordfish fleet include:

- The United States re-opened the NED closed area to pelagic longline vessels in 2004, requiring circle hooks and specific baits to reduce sea turtle bycatch.
- The United States authorized ‘buoy gear’ to fish for swordfish in 2006, which maximizes target catch and minimizes bycatch.
- Pelagic longline vessel upgrading restrictions were relaxed in 2007, removing barriers to larger and more powerful vessels participating in the swordfish fishery.
- The United States increased commercial and recreational swordfish retention limits in 2007.
- In 2008, the United States relaxed some permit conditions, allowing certain pelagic longline permits that had previously been expired to be renewed. This allowed dozens of previously expired commercial swordfish permits to be utilized again.
- In 2011, the United States modified incidental retention limits for *Illex* squid trawl vessels to reduce regulatory dead discards of swordfish.
- In 2012, the United States implemented an alternative swordfish minimum size measurement pursuant to ICCAT recommendation 11-02, which will allow U.S. vessels

to land legal-sized fish that would previously have had to be discarded. This change is estimated to increase future U.S. swordfish landings by at least 68 mt ww.

As a result of these revitalization efforts the U.S. swordfish fishery has shown an increasing trend in catch. U.S. swordfish catches in 2011 were at the highest level since 2000, even with fewer active pelagic longline vessels. In 2011 (seven years after revitalization efforts began), U.S. swordfish catch was more than 40 percent higher than in 2006. It is the goal of NMFS to achieve, but not exceed, the ICCAT-recommended swordfish quota without adversely impacting protected species, non-target species, and juvenile fish. The proposed actions will help achieve that goal using gears that are low in bycatch and bycatch mortality. The cumulative impacts of the ongoing swordfish fishery revitalization efforts, including this proposed action, are expected to be positive from both an ecological and socio-economic perspective. If the United States is successful at increasing its north Atlantic swordfish catch and staving off efforts to reallocate swordfish quota to other ICCAT-contracting parties, the cumulative results will provide increased gross revenues to some U.S. fishermen who are participating in a well-managed, sustainable fishery. NMFS believes there would be no substantial increase in fishing effort under any of the alternatives because most new commercial permit holders are likely to be currently participating in the recreational swordfish fishery. Under the proposed actions NMFS anticipates that fishermen using handgear would have no adverse impacts on ESA-listed species in excess of the impacts analyzed in the 2001 BiOp which concluded that the HMS handgear fishery will not jeopardize any ESA-listed species. Handgear has been documented as having very low bycatch and bycatch mortality of marine mammals and ESA-listed species, including sea turtles.

#### **4.6 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 proposed 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 a new permit option to allow fishermen to enter the North Atlantic swordfish fishery would likely have minor beneficial socioeconomic impacts in the short and long-term because participants that were previously precluded from entering the fishery due to limited access permits would have the opportunity to enter the commercial swordfish fishery. This action could increase opportunities for a variety of fishermen, regardless of minority status. Low-income communities would not be directly impacted by the proposed action; however, members of this community may not be able to avail themselves of this opportunity. While the cost of the permit would be modest, likely around \$25, the nature of the fishery is such that a vessel capable of open ocean travel is required. Furthermore, the U.S. Coast Guard has a number of safety requirements that would add to the cost of entering this fishery. More information about affected communities can be found in Chapter 3 of this document.

#### **4.7 Coastal Zone Management Act (CZMA) Concerns**

NMFS has determined that these proposed regulations are consistent to the maximum extent practicable with the enforceable policies of those coastal states in the Atlantic, Gulf of

Mexico, and Caribbean that have approved coastal zone management programs. Letters will be sent to those states requesting their concurrence.

#### **4.8 Unavoidable Adverse Impacts**

NMFS does not expect the preferred alternatives to have any adverse impacts. This action focuses on increasing opportunities for U.S. fishermen to target North Atlantic swordfish: a healthy stock of fish that withstand increased fishing pressure within the scientifically-determined quota. This action would only authorize rod and reel, handline, harpoon gear, green-stick, or bandit gears. These handgears are generally tended closely by the fishing vessel so any bycatch or unmarketable or undersized catch could be dehooked and released quickly with a high chance of post-release survival. Overall, NMFS anticipates that ecological impacts on undersized swordfish, protected resources, and marine mammals from handgear and green-stick gear would be neutral, primarily because the gears are closely tended. Thus, the proposed actions 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. Any catches resulting from the new permit will still be limited within the applicable, previously analyzed and implemented TACs for the species, which were established consistent with NMFS's obligations to end overfishing and rebuild overfished stocks.

#### **4.9 Irreversible and Irrecoverable Commitment of Resources**

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

### **5.0 REGULATORY IMPACT REVIEW**

The Regulatory Impact Review (RIR) is conducted to comply with Executive Order 12866 (E.O. 12866) and provides analyses of the economic benefits and costs of each alternative to the nation and the fishery as a whole. The information contained in Chapter 4, taken together with the data and analysis incorporated by reference, comprise the complete RIR.

The requirements for all regulatory actions specified in E.O. 12866 are summarized in the following statement from the order:

*In deciding whether and how to regulate, agencies should assess all costs and benefits of available regulatory alternatives, including the alternative of not regulating. Costs and benefits should be understood to include both quantifiable measures (to the fullest extent that these can be usefully estimated) and qualitative measures of costs and benefits that are difficult to quantify, but nonetheless essential to consider. Further, in choosing among alternative regulatory approaches, agencies should select those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity), unless a statute requires another regulatory approach.*

E.O. 12866 further requires Office of Management and Budget review of proposed regulations that are considered to be "significant." A significant regulatory action is one that is likely to:

- 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, local or tribal governments of communities;
- Create serious inconsistency or otherwise interfere with an action taken or planned by another agency;
- Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or
- Raise novel legal or policy issues arising out of legal mandates, the president's priorities, or the principles set forth in this Executive Order.

## **5.1 Description of Management Objectives**

Please see Chapter 1 for a full description of the purpose and need for the proposed rule. This action is necessary to achieve domestic management objectives under the Magnuson-Stevens Act and the 2006 Consolidated Atlantic HMS FMP. The objectives of this action are to:

- Implement conservation and management measures that prevent overfishing while achieving, on a continuing basis, the optimum yield (OY) from the U.S. north Atlantic swordfish fishery;
- Provide increased opportunities for the United States to more fully utilize its ICCAT-recommended domestic swordfish quota allocation;
- Implement a North Atlantic swordfish management system to make fleet capacity commensurate with resource status so as to improve both economic efficiency and biological conservation, and provide additional access for traditional fishing gears;
- Provide commercial swordfish fishing opportunities for U.S. fishermen using selective fishing gears that have minimal bycatch and maximize the survival of any released species;
- Enact management measures to establish a new and modified commercial vessel permit(s) that would allow for a limited number of swordfish to be caught on rod and reel, handline, harpoon, bandit gear, or green-stick gear and sold commercially;
- Examine and implement regionally tailored north Atlantic swordfish management strategies, as appropriate;
- Improve regional HMS catch and fishing effort data;
- Improve the Agency's capability to monitor and sustainably manage the north Atlantic swordfish fishery.

## **5.2 Description of Fishery**

Please refer to Section 3 of this EA/RIR/IRFA for a description of the fishery and environment that could be affected by this rulemaking.

### **5.3 Statement of the Problem**

Please see Section 1 for a full discussion of the problem and need for this management action. The purpose of the proposed action is to provide additional opportunities to harvest swordfish using selective gears that are low in bycatch, given the rebuilt status of the swordfish stock and their resulting increased availability. The goal is for the United States to more fully utilize its domestic swordfish quota allocation, which is based upon the recommendation of the International Commission for the Conservation of Atlantic Tunas (ICCAT).

### **5.4 Description of Each Alternative**

Please see Sections 2 and 4 for a summary of the preferred and No Action alternatives and a complete description of each alternative and its expected impacts.

### **5.5 Economic Analysis of Expected Effects of Each Alternative Relative to the Baseline**

NMFS estimates that the universe of fishermen who might purchase and fish under a new and modified commercial swordfish handgear permit would be approximately 4,084 individuals in the northwest Atlantic, Gulf of Mexico, and U.S. Caribbean Region with some potential shift of fishermen currently permitted in the HMS Angling sector.

#### Issue 1: Vessel Permitting and Authorized Gears

##### *Alternative 1.1*

Alternative 1.1, the no action alternative, would maintain the existing swordfish limited access permit program and not establish a new commercial swordfish. Under Alternative 1.1, NMFS does not anticipate any substantive change in economic impacts as the U.S. swordfish fishery is already operating under the current regulations. Thus, entry into the commercial swordfish fishery would remain difficult due to high LAP costs and the current scarcity of available permits. However, in terms of available and unutilized swordfish quota, there is a loss of potential income by fishermen that would like to fish commercially for swordfish, but are not able to obtain limited access permits. Because the North Atlantic swordfish stock is fully rebuilt and the United States has not attained its full ICCAT swordfish quota allocation in recent years, overall gross revenues are lower than they could potentially be. For example, the total U.S. adjusted swordfish quota for 2012 is 3,559.2 mt dw (7,846,612 lbs. dw). Assuming an average ex-vessel price of \$4.51 per pound (dw) and 100 percent quota utilization, total possible gross revenue across the domestic fishery could be \$35.4 million vs. actual 2011 gross revenues of \$20.2 million (see Table 3.8). This represents a difference of \$15.2 million in unrealized gross revenue due to the United States not attaining its full adjusted north Atlantic swordfish quota. Under the Atlantic Tunas Convention Act (ATCA; 16 U.S. C. 971 *et. seq.*) and the Magnuson-Stevens Act, NMFS is required to provide United States fishing vessels with a reasonable opportunity to harvest the ICCAT-recommended quota. Although there is sufficient quota to allow United States fishermen to catch more swordfish and remain within the ICCAT-recommended quota, current difficulties associated with obtaining a limited access permit may be a constraining factor. For this reason, the “no action” alternative is not preferred at this time.

## *Alternative 1.2*

Alternative 1.2 would create a new open-access swordfish permit. NMFS anticipates positive economic impacts for some U.S. fishermen under alternative 1.2. It would allow small-scale U.S. fishermen to use handgear (rod & reel, handline, harpoon, bandit gear, and greenstick), to fish for and commercially sell a limited amount of swordfish (0 – 6 fish) to permitted swordfish dealers. This alternative would reduce economic barriers to entry, allow more opportunities to fish commercially for swordfish, and potentially provide economic benefits to some fishermen. Additionally, positive economic benefits are anticipated for fishing tackle manufacturers and suppliers, bait suppliers, fuel providers, and swordfish dealers as a result of increased fishing activity and landings under this alternative. As discussed in Chapter 3 (Table 3.7 and Table 3.8), at \$4.51/lb. in 2011 the average value of each dressed swordfish was \$432.96. If a new entrant landed 10 swordfish per year under this alternative, they could realize an increase in annual gross revenues of approximately \$4,329.60. One trip landing six swordfish would yield \$2,598 in gross revenues. If all 4,084 potential applicants landed 10 swordfish per year, total annual gross revenues from swordfish could increase by \$17.6 million, but quota limitations would reduce this to approximately \$15.2 million. The Agency has received comments from some current swordfish fishermen about potentially depressed ex-vessel prices and a reduction in the value of existing swordfish LAPs. It is not possible to precisely predict the number of new applicants for an open-access commercial swordfish permit, but NMFS expects that some current recreational fishermen will remain so, rather than shifting to commercial fishing. There are numerous commercial fishing vessel safety requirements and management regulations to comply with when operating a commercial fishing business that may discourage recreational fishermen from obtaining a commercial permit. Also, persons choosing to obtain a new HMS commercial swordfish fishing permit would forfeit the ability to fish for Atlantic billfishes, unless they are fishing in a registered HMS tournament and the ability to fish for Atlantic tunas and sharks unless they are fishing in a registered HMS tournament and/or hold appropriate commercial tuna and/or shark permits. Negative impacts on current swordfish LAP holders could be mitigated by establishing lower retention limits for the new open-access permit than the limits that currently exist for swordfish LAPs. Overall, if this alternative creates a situation where the U.S. swordfish quota is no longer at risk of being reallocated to other ICCAT members due to low U.S. catches, then long term social and economic benefits would be realized by all U.S. swordfish fishermen.

### *Sub-Alternative 1.2.1*

This sub-alternative would add swordfish to the existing Atlantic Tunas General category permit, and rename the modified permit as, potentially, the Atlantic Tunas and Swordfish General category permit. It would result in many of the same socio-economic impacts as Alternative 1.2 discussed above. If a new entrant landed 10 swordfish per year under this alternative, they could realize an increase in annual gross revenues of approximately \$4,329.60. One trip landing six swordfish would yield \$2,598 in gross revenues. If all 4,084 potential applicants landed 10 swordfish per year, total annual gross revenues from swordfish could increase by \$17.6 million, but quota limitations would reduce this to approximately \$15.2 million. In addition, Sub-Alternative 1.2.1 would minimize the costs associated with obtaining the new swordfish permit for persons that have already been issued the Atlantic Tunas General category permit. It could streamline permit issuance for persons that want to commercially fish

for both tunas and swordfish with rod & reel, handline, harpoon, and bandit gear because they would only need to obtain one permit rather than two.

#### *Sub-Alternative 1.2.2*

Sub-Alternative 1.2.2 would modify the existing open-access Atlantic Tunas Harpoon category permit to allow for the commercial retention of swordfish using handgears. It would result in many of the same impacts as Alternative 1.2. If a new entrant landed 10 swordfish per year under this alternative, they could realize an increase in annual gross revenues of approximately \$4,329.60. One trip landing six swordfish would yield \$2,598 in gross revenues. If all 4,084 potential applicants landed 10 swordfish per year, total annual gross revenues from swordfish could increase by \$17.6 million, but quota limitations would reduce this to approximately \$15.2 million. Additionally, it would minimize the costs associated with obtaining the new and modified permit for persons that have already been issued the Atlantic Tunas Harpoon category permit. This alternative could streamline permit issuance for persons that want to fish commercially with harpoon gear for both tunas and swordfish because they would only need to obtain one permit rather than two. Specifically, it would provide economic benefits to current Atlantic Tunas Harpoon category permit holders that want to both harpoon swordfish and also fish under Atlantic Tunas Harpoon category regulations (*i.e.*, higher BFT retention limits).

#### *Sub-Alternative 1.2.3*

Sub-Alternative 1.2.3, a preferred alternative, would allow HMS Charter/Headboat permit holders to fish under open-access swordfish commercial regulations with authorized gears for the permit (rod and reel and handline only) when fishing commercially (*i.e.*, not on a for-hire trip). It would result in many of the same impacts as Alternative 1.2 and provide economic benefits to permit holders when fishing commercially (*i.e.*, not on a for hire trip). It could also streamline permit issuance because Charter/Headboat vessels would not need to obtain another permit. If an HMS Charter/Headboat vessel permit holder landed 10 swordfish per year under this sub-alternative, they could realize an increase in annual gross revenues of approximately \$4,329.60. One trip landing six swordfish would yield \$2,598 in gross revenues. If all 4,084 potential applicants landed 10 swordfish per year, total annual gross revenues from swordfish could increase by \$17.6 million, but quota limitations would reduce this to approximately \$15.2 million.

#### *Sub-Alternative 1.2.4*

Sub-Alternative 1.2.4, a preferred alternative, would create a separate open-access commercial swordfish permit. This alternative would have similar impacts as Alternative 1.2, above. However, it would increase the costs associated with obtaining the permit for persons that have already been issued an Atlantic Tunas General or Harpoon category permit. This alternative would not streamline permit issuance for persons that want to commercially fish for both tunas and swordfish with rod & reel, handline, harpoon, and bandit gear because they would need to obtain two different permits to conduct these activities. If a new permit holder landed 10 swordfish per year under this sub-alternative, they could realize an increase in annual gross revenues of approximately \$4,329.60. One trip landing six swordfish would yield \$2,598 in

gross revenues. If all 4,084 potential applicants landed 10 swordfish per year, total annual gross revenues from swordfish could increase by \$17.6 million, but quota limitations would reduce this to approximately \$15.2 million.

### *Alternative 1.3*

Alternative 1.3 would allow for an unspecified number of new swordfish LAPs to be issued. Depending upon the qualification criteria, this alternative could remove barriers to entry and provide economic benefits to those fishermen that qualify for the new LAP and could begin commercial fishing for swordfish. However, it could also adversely affect some fishermen who do not qualify for a LAP. This alternative could temper any negative economic and social impacts on current commercial swordfish LAP holders by limiting the number of new swordfish permits issued. If a new permit holder landed 10 swordfish per year under this sub-alternative, they could realize an increase in annual gross revenues of approximately \$4,329.60. One trip landing six swordfish would yield \$2,598 in gross revenues. Selection of this alternative may require, among other things, the establishment of qualification criteria, control dates, application deadlines, application procedures, and grievance/appeals procedures. This could increase administrative costs for NMFS and increase the reporting burden for the public to demonstrate that they meet qualifying criteria.

## Issue 2: Swordfish Retention Limits

### *Alternative 2.1*

Alternative 2.1 would establish a coast wide 0 – 6 swordfish retention limit range for the new and modified permit(s), and codify a specific retention limit within that range. This alternative could provide some fishermen with the ability to commercially land swordfish, thereby resulting in positive economic benefits if the limit were set above zero. Additionally, economic benefits are anticipated for fishing tackle manufacturers and suppliers, bait suppliers, fuel providers, and swordfish dealers. A retention limit range of 0 – 6 swordfish is anticipated to provide a seasonal, or secondary, fishery for most participants. It is not likely to facilitate a full-time, year-round fishery in most areas, with the possible exception of south Florida where swordfish are often available year-round. For example, current Atlantic Tunas General category permit holders could fish for swordfish overnight while targeting bluefin tuna at other times. Similarly, they could harpoon a swordfish if one were spotted during a tuna trip. In this manner, Alternative 2.1 could provide a supplementary source of income for some fishermen. There is a notable difference in the ex-vessel revenue produced by a one swordfish per trip limit versus a six swordfish per trip limit. As discussed in Chapter 3 (Table 3.7 and Table 3.8), a single swordfish is estimated to be worth \$432.96 (ex-vessel), on average, whereas six swordfish are estimated to be worth \$2,597.76 (ex-vessel). For a vessel making ten trips per year and retaining the maximum allowable limit each trip, annual gross revenue derived from swordfish would range from \$4,329.60 under a one fish limit to \$25,977.60 under a six fish limit. Codifying a single fishery-wide swordfish retention limit would provide certainty to both fishermen and law enforcement regarding the swordfish retention limit for the new open-access permit. However, this alternative would not provide in-season adjustment authority to quickly modify the swordfish retention limit regionally by using pre-established criteria.

### *Alternative 2.2*

Alternative 2.2 would establish a fishery-wide 0 – 6 swordfish retention limit range for the new and modified permit(s), and codify a specific retention limit within that range. In addition, it would provide in-season adjustment authority for NMFS to modify the swordfish retention limit within the range (0 – 6) using in-season adjustment procedures similar to those codified at 50 CFR §635.27 (a)(8). This alternative would provide the same social and economic impacts as Alternative 2.1, but it would provide less certainty to fishermen and law enforcement regarding possible in-season changes to the swordfish retention limit. Positive economic benefits could occur if the retention limit was increased during the fishing season based upon information indicating that sufficient quota was available, or upon other pre-established criteria.

### *Alternative 2.3*

Alternative 2.3, a preferred alternative, would establish swordfish management regions and a 0 – 6 swordfish retention limit range within each region for the new and modified permit(s) and codify a specific regional limit within that range with in-season adjustment authority to change the limits regionally based on pre-established criteria. This alternative would have similar social and economic impacts as Alternative 2.1. If a regional retention limit is set at zero, no change in socio-economic impacts is anticipated. If a regional limit is set at any level above zero, this alternative could provide economic benefits to some commercial handgear fishermen if they were previously inactive and they obtain the new and modified permit(s) and begin fishing. This sub-alternative could provide less certainty than Alternative 2.1 to fishermen and law enforcement regarding in-season changes to the swordfish retention limit. For a vessel making ten trips per year and retaining the maximum allowable limit on each trip, annual gross revenue derived from swordfish would range from \$4,329.60 under a one fish limit to \$25,977.60 under a six fish limit. Positive economic benefits could occur if the retention limit were adjusted upward based upon information indicating that sufficient quota was available, or upon other pre-established criteria. The size of the region and the regional retention limits would affect overall economic costs and benefits. Fishermen in regions with lower retention limits would realize lower economic benefits than fishermen in regions with higher retention limits, but all new fishery entrants would realize economic benefits if the retention limit were set above zero.

#### *Sub-Alternative 2.3.1*

Sub-Alternative 2.3.1 would establish regions based upon existing major U.S. domestic fishing areas as reported to ICCAT (NED, NEC, MAB, SAB, FEC, GOM, CAR, and SAR). Socio-economic impacts would be the same as Alternative 2.3 above. If this sub-alternative were implemented, NMFS is considering an initial swordfish retention limit of three for all regions except the CAR and FEC, a retention limit of two swordfish per vessel per trip for the CAR, and a limit of one swordfish per vessel per trip for the FEC. For a vessel making ten trips per year and retaining the maximum allowable limit on each trip, annual gross revenue derived from swordfish would range from \$12,988.80 under a three fish limit, to \$8,659.20 under a two fish limit, and \$4,329.60 under a one fish limit.

### *Sub-Alternative 2.3.2*

Sub-Alternative 2.3.2, a preferred alternative, would establish larger regions than Sub-Alternative 2.3.1, with the addition of a separate Florida Swordfish Management Area (Northwest Atlantic, Gulf of Mexico, Caribbean, and a Florida Swordfish Management Area as defined below). Under this sub-alternative, swordfish management measures could still be tailored geographically to the biological factors affecting a particular region however the regions would be larger (with the possible exception of the separate Florida Swordfish Management Area). NMFS is considering an initial swordfish retention limit of three for all regions except the U.S. Caribbean and the Florida Swordfish Management Area, a retention limit of two swordfish per vessel per trip for the U.S. Caribbean, and a limit of one swordfish per vessel per trip for the Florida Swordfish Management Area. These limits were identified based upon comments received during the Advance Notice of Proposed Rulemaking (2009) and comments received on the Amendment 8 Pre-Draft (2012). These retention limits fall within the range discussed under Alternative 2.3 above, and could be modified in the future through using in-season adjustment procedures similar to those codified at 50 CFR §635.27(a)(8). For a vessel making ten trips per year and retaining the maximum allowable limit on each trip, annual gross revenue derived from swordfish would range from \$12,988.80 under a three fish limit, to \$8,659.20 under a two fish limit, and \$4,329.60 under a one fish limit. NMFS estimates that potentially 1,455 new permits could be issued on the east coast of Florida and affected by a one fish limit.

#### *Sub-Alternative 2.3.2.1*

Sub-Alternative 2.3.2.1, a preferred alternative, would establish a Florida Swordfish Management Area that includes the East Florida Coast pelagic longline closed area through the northwestern boundary of Monroe County, FL in the Gulf of Mexico. Approximately 1,455 new permit holders could derive up to \$4,329.60 annually under a one fish limit, assuming they each took ten trips per year and landed one fish on each trip.

#### *Sub-Alternative 2.3.2.2*

Sub-Alternative 2.3.2.2 would establish a Florida Swordfish Management Area that extends from the Georgia/Florida border to Key West, FL. This area is larger than, and includes, the East Florida Coast pelagic longline closed area. Therefore, the economic impacts described for Sub-Alternative 2.3.2.1 would also occur within this area. Additionally, because this special management area would be larger than Sub-Alternative 2.3.2.1, slightly more than 1,455 vessels could potentially be affected by a one fish retention limit.

#### *Sub-Alternative 2.3.2.3*

Sub-Alternative 2.3.2.3 would establish a Florida Swordfish Management Area that includes the Florida counties of St. Lucie, Martin, Palm Beach, Broward, Dade, and Monroe. This area is smaller than the previous two sub-alternatives, but specifically includes oceanic areas with concentrations of swordfish that are readily accessible to many anglers. Because this special management area would be smaller than Sub-Alternative 2.3.2.1, slightly less than 1,455 vessels would potentially be affected by the one swordfish per vessel per trip retention limit.

The net economic costs and benefits of the alternatives can be seen in Table 5.1.

**Table 5.1 Net Economic Benefits and Costs**

Alternatives	Net Economic Benefits	Net Economic Costs
<b>PERMITTING AND AUTHORIZED GEARS</b>		
<p><b>1.1</b> - No Action: Maintain current swordfish limited access permit program</p>	<p>No change in economic benefits.</p>	<p>There may be short-term and long-term economic costs if U.S. fishermen are not provided additional opportunities to fish for, retain, and commercially sell swordfish. Currently, swordfish permits are difficult to obtain because of limited access. There is a difference of \$15.2 million in unrealized gross revenue resulting from the United States not attaining its full adjusted north Atlantic swordfish quota. Long-term, the U.S. risks losing a portion of its ICCAT-recommended quota if swordfish catches do not increase.</p>
<p><b>1.2 - Preferred Alternative:</b> Establish new and modified <u>open-access</u> commercial swordfish permit(s) to authorize use of handgear (rod &amp; reel, handline, harpoon, bandit gear, green-stick)</p>	<p>Positive economic benefits could potentially result if U.S. fishermen are allowed to obtain an open-access swordfish permit. If a new entrant landed 10 swordfish per year under this alternative, they could realize an increase in annual gross revenues of approximately \$4,329.60. One trip landing six swordfish would yield \$2,598 in gross revenues. If all 4,084 potential applicants landed 10 swordfish per year, total annual gross revenues from swordfish could increase by \$17.6 million, but quota limitations would reduce this to approximately \$15.2 million. Long-term, if this alternative creates a situation where the U.S. swordfish quota is no longer at risk of being reallocated to other ICCAT members due to low U.S. catches, then social and economic benefits would be realized by all U.S. swordfish fishermen</p>	<p>There could be minor costs for U.S. fishermen to obtain the new commercial permit, and to comply with additional commercial fishing vessel safety requirements and fishery management regulations. Also, this alternative could potentially reduce ex-vessel swordfish prices and values of existing swordfish LAPs. Recreational expenditures for other HMS species might decline if Angling category permit holders switch to the new commercial permit.</p>
<p><b>1.2.1</b> - Modify existing open-access Atlantic Tunas General category permit to allow for commercial retention of swordfish</p>	<p>Same economic benefits as Alternative 1.2. Additionally, Sub-Alternative 1.2.1 would minimize costs of obtaining new swordfish</p>	<p>Same economic costs as Alternative 1.2.</p>

Alternatives	Net Economic Benefits	Net Economic Costs
	<p>permit for persons that already have the Atlantic Tunas General category permit. It could streamline permit issuance for persons that want to commercially fish for both tunas and swordfish with rod &amp; reel, handline, harpoon, and bandit gear because they would only need one permit rather than two.</p>	
<p><b>1.2.2</b> - Modify existing open-access Atlantic Tunas Harpoon category permit to allow for commercial retention of swordfish</p>	<p>Same economic benefits as Alternative 1.2. Additionally, Sub-Alternative 1.2.2 would minimize costs of obtaining new swordfish permit for persons that already have the Atlantic Tunas Harpoon category permit. It could streamline permit issuance for persons that want to fish commercially with harpoon gear for both tunas and swordfish because they would only need one permit rather than two. Provides economic benefits to current Atlantic Tunas Harpoon category permit holders that want to both harpoon swordfish and also fish under Atlantic Tunas Harpoon category regulations (<i>i.e.</i>, higher BFT retention limits).</p>	<p>Same economic costs as Alternative 1.2.</p>
<p><b>1.2.3 - Preferred Alternative</b> -Allow HMS C/HB permit holders to fish under open-access swordfish commercial regulations with rod and reel or handlines when fishing commercially (<i>i.e.</i>, not on for-hire trip)</p>	<p>Same economic benefits as Alternative 1.2. Additionally it could provide economic benefits to CHB permit holders when fishing commercially (<i>i.e.</i>, not on a for hire trip). Could also streamline permit issuance because CHB vessels would not need to obtain another permit to fish commercially for swordfish.</p>	<p>Same economic costs as Alternative 1.2.</p>
<p><b>1.2.4 - Preferred Alternative</b> - Create new, separate, open-access commercial swordfish permit-</p>	<p>Same economic benefits as Alternative 1.2. However, would increase costs of obtaining the permit for persons that already have an Atlantic Tunas General or Harpoon category permit. Would not streamline permit issuance for persons that want to commercially fish for both tunas and swordfish with handgear because they would need to obtain two different permits.</p>	<p>Same economic costs as Alternative 1.2.</p>
<p><b>1.3</b> – Create new <u>limited access</u></p>	<p>Could remove some barriers to</p>	<p>Could adversely affect some</p>

<b>Alternatives</b>	<b>Net Economic Benefits</b>	<b>Net Economic Costs</b>
commercial swordfish permit to authorize rod & reel, handline, bandit gear, harpoon and green-stick (same gears as Atlantic Tunas General Category permit)	entry and provide benefits to fishermen that qualify for the new LAP. However, it could also adversely affect some fishermen who do not qualify for a LAP. Could temper any negative economic and social impacts on current commercial swordfish LAP holders by limiting the number of new swordfish permits issued.	fishermen who do not qualify for a new LAP. May require, among other things, establishment of qualification criteria, control dates, application deadlines, application procedures, and grievance/appeals procedures. Could increase administrative costs for NMFS and reporting burden on the public to demonstrate meeting the qualifying criteria.
<b>RETENTION LIMITS</b>		
<b>2.1</b> - Establish fishery-wide 0 – 6 swordfish retention limit range for new permit(s), and codify a specific retention limit within that range	A retention limit range of 0 – 6 swordfish could provide a supplementary source of income for some fishermen if the limit is set above zero. For a vessel making 10 trips per year and retaining maximum allowable limit each trip, annual gross revenues from swordfish would range from \$4,329.60 under a one fish limit to \$25,977.60 under a six fish limit. A single fishery-wide limit would provide certainty to fishermen and law enforcement regarding the swordfish retention limit for new permit.	Would not provide in-season adjustment authority to quickly modify swordfish retention limit regionally by using pre-established criteria.
<b>2.2</b> – Establish fishery-wide 0 – 6 fish retention limit range for new permit(s), and codify a specific limit within range with in-season authority to adjust limit based on criteria similar to 50 CFR §635.27(a)(8)	Same economic benefits as Alternative 2.1, except provides in-season adjustment authority to quickly modify swordfish retention limit by using pre-established criteria.	Provides less certainty to fishermen and law enforcement regarding the swordfish retention limit for new permit.
<b>2.3 - Preferred Alternative</b> - Establish management regions and a 0 – 6 swordfish retention limit range in each region for new permit(s), and codify specific regional limit within range with in-season authority to adjust limit(s) regionally on criteria similar to 50 CFR §635.27(a)(8)	Same economic benefits as Alternative 2.1, except provides in-season adjustment authority to quickly modify swordfish retention limit regionally by using pre-established criteria. Positive economic benefits could occur if the retention limit were adjusted upward based upon information indicating that sufficient quota was available, or upon other pre-established criteria. The size of the region and the regional retention limits would affect overall economic costs and benefits.	Provides less certainty to fishermen and law enforcement regarding the swordfish retention limit for new permit. Fishermen in regions with lower retention limits would realize lower economic benefits than fishermen in regions with higher retention limits, but all new fishery entrants would realize economic benefits if the retention limit were set above zero. The size of the region and the regional retention limits would affect overall economic costs and benefits.

Alternatives	Net Economic Benefits	Net Economic Costs
<p><b>2.3.1-</b> Base regions upon existing U.S. fishing areas as reported to ICCAT (NED,NEC, MAB, SAB, FEC, GOM, CAR, and SAR)</p>	<p>Same economic impacts as Alternative 2.3. NMFS is considering an initial swordfish retention limit of three for all regions except the CAR and FEC, a limit of two swordfish for the CAR, and a limit of one swordfish for the FEC. For a vessel making ten trips per year and retaining the maximum allowable limit on each trip, annual gross revenue from swordfish would range from \$12,988.80 under a three fish limit, to \$8,659.20 under a two fish limit, and \$4,329.60 under a one fish limit.</p>	<p>Same costs as Alternative 2.3.</p>
<p><b>2.3.2 – Preferred Alternative -</b> Base regions on large areas with additional separate Florida Swordfish Management Area (Northwest Atlantic, Gulf of Mexico, Caribbean, and FL swordfish mgmt. area)</p>	<p>Same economic impacts as Alternative 2.3. NMFS is considering an initial swordfish retention limit of three for all regions except the Caribbean and FL swordfish mgmt. area, a limit of two swordfish for the Caribbean, and a limit of one swordfish for the FL swordfish mgmt. area. For a vessel making ten trips per year and retaining the maximum allowable limit on each trip, annual gross revenue from swordfish would range from \$12,988.80 under a three fish limit, to \$8,659.20 under a two fish limit, and \$4,329.60 under a one fish limit.</p>	<p>Same costs as Alternative 2.3.</p>
<p><b>2.3.2.1 – Preferred Alternative -</b> East Florida Coast PLL Closed Area through NW boundary of Monroe County, FL in the GOM</p>	<p>Approximately 1,455 new permit holders could derive up to \$4,329.60 annually under a one fish limit, assuming they each took ten trips per year and landed one fish on each trip.</p>	<p>Same costs as Alternative 2.3.</p>
<p><b>2.3.2.2 -</b> Georgia border through Key West, FL</p>	<p>Approximately 1,455 new permit holders could derive up to \$4,329.60 annually under a one fish limit, assuming they each took ten trips per year and landed one fish on each trip.</p>	<p>Same costs as Alternative 2.3.</p>
<p><b>2.3.2.3 –</b> FL counties of St. Lucie, Martin, Palm Beach, Broward, Dade, and Monroe</p>	<p>Slightly less than 1,455 new permit holders could derive up to \$4,329.60 annually under a one fish limit, assuming they each took ten trips</p>	<p>Same costs as Alternative 2.3.</p>

Alternatives	Net Economic Benefits	Net Economic Costs
	per year and landed one fish on each trip.	

## 5.6 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 actions described in this draft EA/RIR/IRFA do not meet the above criteria. The economic impacts as reflected in this EA and in the proposed rule are under the \$100 million threshold (see Section 5.5). The alternatives would also not create an inconsistency or interfere with an action taken by another agency. Furthermore, the preferred alternatives would not materially alter the budgetary impact of entitlements, grants, user fees, the President's priorities, or the principles set forth in E.O. 12866. Nor would the proposed regulations raise any unique legal or policy issues. The Secretary, through NMFS, has managed Atlantic HMS since 1990. In addition, NMFS has participated in international efforts to develop management measures for HMS stocks affected by multiple nations. None of the alternatives analyzed in this draft EA/RIR/IRFA materially depart from this management approach. Therefore, under E.O. 12866, the preferred alternatives described in this document have been determined to be not significant for the purposes of E.O. 12866. The Office of Management and Budget (OMB) concurred with this determination provided in the listing memo for this proposed rule.

## 6.0 INITIAL REGULATORY FLEXIBILITY ANALYSIS

The IRFA is conducted to comply with the RFA (5 USC 601 et. seq.). The goal of the RFA is to minimize the economic burden of federal regulations on small entities. To that end, the RFA 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.

### 6.1 Description of the Reasons Why Action is Being Considered

Please see Section 1 for a full discussion of the need for action. Primarily, the purpose of the proposed action is to provide additional opportunities to harvest swordfish using selective gears that are low in bycatch, given the rebuilt status of the swordfish stock and their resulting increased availability, in order for the United States to more fully utilize its domestic swordfish quota allocation.

## **6.2 Statement of the Objectives of, and Legal Basis for, the Proposed Rule**

Please see Section 1 for a full description of the objectives of, and legal basis for, the proposed rule and draft EA/RIR/IRFA. The proposed measures would address swordfish fishery management in the Atlantic Ocean. The proposed rule is necessary and appropriate pursuant to ATCA and to achieve domestic management objectives under the Magnuson-Stevens Act.

## **6.3 Description and Estimate of the Number of Small Entities to Which the Proposed Rule Will Apply**

The current U.S. north Atlantic commercial swordfish fishery is comprised of 334 vessel owners who hold either a limited access swordfish Handgear permit, or a limited access Directed or Incidental swordfish permit. A Directed or Incidental swordfish permit is valid only when held in combination with both a limited access shark permit and a limited access Atlantic Tunas Longline category permit. Related industries include seafood processors, bait houses, and equipment suppliers. NMFS considers all of these businesses to be small entities according to the size standards set by the SBA. The proposed rule would apply to small-scale HMS handgear vessels that fish in the Atlantic Ocean, including the Gulf of Mexico and the U.S. Caribbean. NMFS anticipates that the universe of fishermen who might purchase and fish under a new open-access commercial swordfish permit would likely be approximately 4,084 individuals who do not hold a commercial limited access swordfish permit, with some potential shift of fishermen currently permitted in the HMS Angling category. This estimate is based upon the number of persons currently issued an Atlantic Tunas General category permit, which is the permit most similar to the ones being considered in this proposed action.

## **6.4 Description of the Projected Reporting, Record-Keeping, and other Compliance Requirements of the Proposed Rule, Including an Estimate of the Classes of Small Entities which will be Subject to the Requirements of the Report or Record**

The proposed federal permit requirement for an open-access commercial swordfish handgear permit would allow NMFS to collect data regarding participants in the swordfish fishery and landings through federal dealer reports. The new permit requirement would require a similar permit application to the other current HMS permits. The information collected on the application would include vessel information and owner identification and contact information. A modest fee to process the application and annual renewal fee of approximately \$25 may be required. The proposed rule contains standard commercial HMS permit reporting requirements. Currently, in Atlantic HMS fisheries, all commercial fishing vessels and Charter/Headboat vessels are required to submit logbooks for all HMS trips if they are selected for reporting. Selected permit holders are required to submit logbooks to NMFS postmarked no later than seven days after unloading a trip. If no fishing activity occurred during a calendar month, a “no fishing” report must be submitted to NMFS postmarked within seven days after the end of the month. Currently, the permits most similar to the one being considered in this action (HMS Charter/Headboat, Atlantic Tunas General category, and Atlantic Tunas Harpoon category permit) are not selected for submitting logbooks.

## **6.5 Identification of all Relevant Federal Rules which may Duplicate, Overlap, or Conflict with the Proposed Rule**

This proposed rule would not conflict, duplicate, or overlap with other relevant federal rules (5 U.S.C. 603(b)(5)). Fishermen, dealers, and managers in these fisheries must comply with a number of international agreements, domestic laws, and other FMPs. These include, but are not limited to, the Magnuson-Stevens Act, the Atlantic Tunas Convention Act, the High Seas Fishing Compliance Act, the Marine Mammal Protection Act, the Endangered Species Act, the National Environmental Policy Act, the Paperwork Reduction Act, and the Coastal Zone Management Act. NMFS does not believe that the new regulations proposed to be implemented would duplicate, overlap, or conflict with any relevant regulations, federal or otherwise.

## **6.6 Description of any Significant Alternatives to the Proposed Rule that Accomplish the Stated Objectives of Applicable Statutes and that Minimize any Significant Economic Impact of the Proposed Rule on Small Entities**

One of the requirements of an IRFA is to describe any alternatives to the proposed rule which accomplish the stated objectives while minimizing any significant economic impacts. These impacts are discussed below and in Chapters 3, 4, and 5 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 proposed rule, consistent with legal obligations, NMFS cannot exempt small entities or change the reporting requirements only for small entities. Thus, there are no alternatives discussed that fall under the first and fourth categories described above. All of the permit alternatives being considered could result in additional reporting requirements (category two above), if permit holders are selected for reporting. These are standard reporting requirements required of all HMS commercial permit holders. This proposed action would improve information collection by allowing NMFS to collect important fishery dependent data, if necessary, that could be used in quota monitoring and stock assessments.

NMFS considered and analyzed fifteen alternatives in this draft EA. These alternatives ranged from maintaining the status quo for U.S. north Atlantic swordfish fisheries to creating a new commercial swordfish handgear permit which could allow fishing for and sales of swordfish under specific limitations. Eight alternatives were analyzed that would allow NMFS to implement swordfish retention limits applicable to the new permit in a range from zero to six. Seven of these alternatives would allow NMFS to modify the retention limits using in-season

adjustment procedures similar to those codified at 50 CFR §635.27(a)(8). NMFS assessed the impacts of the retention limit alternatives on both a fishery-wide basis and utilizing an approach which could be tailored on a regional basis.

Alternative 1.1, the no action alternative, would not modify the existing swordfish LAP program. Under Alternative 1.1, NMFS does not anticipate any substantive change in economic impacts as the U.S. swordfish fishery is already operating under the current regulations. Entry into the commercial swordfish fishery would remain difficult due to high LAP costs and the current scarcity of available permits. Because currently-permitted U.S. fishermen have not been fully harvesting the available North Atlantic swordfish quota and the fishery remains difficult to enter due, in part, to permit restrictions, this alternative may be contributing to a loss of potential income by fishermen that would like to fish commercially for swordfish, but are not able to obtain limited access permits.

Alternative 1.2, a preferred alternative, would create a new open-access swordfish permit. NMFS anticipates positive economic impacts for some U.S. fishermen under alternative 1.2. It would allow small-scale U.S. fishermen to use handgear (rod & reel, handline, harpoon, bandit gear, and green-stick), to fish for and sell a limited amount of swordfish (0 – 6 fish) to permitted swordfish dealers. This alternative would reduce economic barriers to entry, allow more opportunities to fish commercially for swordfish, and potentially provide economic benefits to some fishermen. If a new entrant landed 10 swordfish per year under this alternative, they could realize an increase in annual gross revenues of approximately \$4,329.60. One trip landing six swordfish would yield \$2,598 in gross revenues. NMFS received comments from some current limited access permit holders during public meetings to discuss the 2009 ANPR expressing concern that establishing a new swordfish permit could reduce ex-vessel swordfish prices and the value of existing limited access swordfish permit. It is not possible to precisely predict the number of new applicants for an open-access commercial swordfish permit, but NMFS expects that some current recreational fishermen will remain so, rather than shifting to commercial fishing. There are numerous commercial fishing vessel safety requirements and management regulations to comply with when operating a commercial fishing business that may discourage recreational fishermen from obtaining a commercial permit. Negative impacts on current swordfish LAP holders could be mitigated by establishing lower retention limits for the new open-access permit than the limits that currently exist for swordfish LAPs. Overall, if this alternative creates a situation where the U.S. swordfish quota is no longer at risk of being reallocated to other ICCAT members due to low U.S. catches, then long term social and economic benefits would be realized by all U.S. swordfish fishermen. We prefer Alternative 1.2 at this time, because it would increase access to the commercial swordfish fishery, would have positive socio-economic impacts on fishermen who are currently unable to obtain a swordfish limited access permit, and would have minor ecological impacts. Additionally, we believe this alternative would provide increased opportunities to more fully utilize the ICCAT-recommended domestic North Atlantic swordfish quota allocation.

Sub-Alternative 1.2.1 would modify the existing Atlantic Tunas General category permit to allow for the commercial retention of swordfish, and rename the modified permit as, potentially, the Atlantic Tunas and Swordfish General category permit. It would result in many of the same socio-economic impacts as Alternative 1.2. In addition, Sub-Alternative 1.2.1 would minimize the costs associated with obtaining the new swordfish permit for persons that have

already been issued the Atlantic Tunas General category permit. It could streamline permit issuance for persons that want to commercially fish for both tunas and swordfish with rod & reel, handline, harpoon, and bandit gear because they would only need to obtain one permit rather than two.

Sub-Alternative 1.2.2 would modify the existing open-access Atlantic Tunas Harpoon category permit to allow for the commercial retention of swordfish. It would result in many of the same impacts as Alternative 1.2. Additionally, it would minimize the costs associated with obtaining the new and modified permit for persons that have already been issued the Atlantic Tunas Harpoon category permit. This alternative could streamline permit issuance for persons that want to fish commercially with harpoon gear for both tunas and swordfish because they would only need to obtain one permit rather than two. Specifically, it would provide economic benefits to current Atlantic Tunas Harpoon category permit holders that want to both harpoon swordfish and also fish under Atlantic Tunas Harpoon category regulations (*i.e.*, higher BFT retention limits).

Sub-Alternative 1.2.3, a preferred alternative, would allow HMS Charter/Headboat permit holders to fish under open-access swordfish commercial regulations with rod and reel and handline when fishing commercially (*i.e.*, not on a for-hire trip). It would result in many of the same impacts as Alternative 1.2 and provide economic benefits to Charter/Headboat permit holders when fishing commercially (*i.e.*, not on a for hire trip). It could also streamline permit issuance because Charter/Headboat vessels would not need to obtain another permit.

Sub-Alternative 1.2.4, a preferred alternative, would create a separate open-access commercial swordfish permit. This alternative would have similar impacts as Alternative 1.2, above. However, it would increase the costs associated with obtaining the permit for persons that have already been issued an Atlantic Tunas General or Harpoon category permit. This alternative would not streamline permit issuance for persons that want to commercially fish for both tunas and swordfish with rod & reel, handline, harpoon, and bandit gear because they would need to obtain two different permits to conduct these activities. NMFS prefers Sub-Alternative 1.2.4 at this time, because it would increase access to the commercial swordfish fishery, would have positive socio-economic impacts for fishermen who are currently unable to obtain a swordfish limited access permit, and would have mostly neutral ecological impacts. Additionally, this alternative to create a separate, new permit would better enable NMFS to differentiate between tuna and swordfish handgear fishermen to monitor and assess the fisheries. Under the Atlantic Tunas Convention Act (ATCA; 16 U.S. C. 971 *et. seq.*) and the Magnuson-Stevens Act, NMFS is required to provide United States fishing vessels with a reasonable opportunity to harvest the ICCAT-recommended quota. Although there is sufficient quota to allow United States fishermen to catch more swordfish and remain within the ICCAT-recommended quota, current difficulties associated with obtaining a limited access permit may be a constraining factor.

Alternative 1.3 would allow for an unspecified number of new swordfish LAPs to be issued. Depending upon the qualification criteria, this alternative could remove barriers to entry and provide economic benefits to some fishermen that qualify for the new LAP. However, it could also adversely affect some fishermen who do not qualify for a LAP. This alternative could temper any negative economic and social impacts on current commercial swordfish LAP holders

by limiting the number of new swordfish permits issued. Selection of this alternative may require, among other things, the establishment of qualification criteria, control dates, application deadlines, application procedures, and grievance/appeals procedures. This could increase administrative costs for NMFS and increase the reporting burden for the public to demonstrate that they meet qualifying criteria.

Alternative 2.1 would establish a fishery-wide 0 – 6 swordfish retention limit range for the new and modified permit(s), and codify a specific retention limit within that range. This alternative could provide some fishermen with the ability to commercially land swordfish, thereby resulting in positive economic benefits if the limit were set above zero. Additionally, economic benefits are anticipated for fishing tackle manufacturers and suppliers, bait suppliers, fuel providers, and swordfish dealers. A retention limit range of 0 – 6 swordfish is anticipated to provide a seasonal, or secondary, fishery for most participants. It is not likely to facilitate a full-time, year-round fishery in most areas, with the possible exception of south Florida where swordfish are often available year-round. There is a notable difference in the ex-vessel revenue produced by a one swordfish/trip limit versus a six swordfish/trip limit. A single swordfish is estimated to be worth \$432.96 ex-vessel, on average, whereas six swordfish would produce \$2,597.76 ex-vessel. For a vessel making ten trips per year and retaining the maximum allowable limit each trip, annual gross revenue derived from swordfish would range from \$4,329.60 under a one fish limit to \$25,977.60 under a six fish limit. Codifying a single fishery-wide swordfish retention limit would provide certainty to both fishermen and law enforcement regarding the swordfish retention limit for the new open-access permit. However, this alternative would not provide in-season adjustment authority to quickly modify the swordfish retention limit regionally by using pre-established criteria.

Alternative 2.2 would establish a fishery-wide 0 – 6 swordfish retention limit range for the new and modified permit(s), and codify a specific retention limit within that range. In addition, it would provide in-season adjustment authority for NMFS to modify the swordfish retention limit within the range (0 – 6) using in-season adjustment procedures similar to those codified at 50 CFR §635.27 (a)(8). This alternative would provide the same social and economic impacts as Alternative 2.1, but it would provide less certainty to fishermen and law enforcement regarding possible in-season changes to the swordfish retention limit. Positive economic benefits could occur if the retention limit was increased during the fishing season based upon information indicating that sufficient quota was available, or upon other pre-established criteria.

Alternative 2.3, a preferred alternative, would establish swordfish management regions and a 0 – 6 swordfish retention limit range within each region for the new and modified permit(s) and codify a specific regional limit within that range with in-season adjustment authority to change the limits regionally based on pre-established criteria. This alternative would have similar social and economic impacts as Alternative 2.1. If a regional retention limit is set at zero, no change in socio-economic impacts is anticipated. If a regional limit is set at any level above zero, this alternative could provide economic benefits to some commercial handgear fishermen if they were previously inactive and they obtain the new and modified permit(s) and begin fishing. This alternative could provide less certainty than Alternative 2.1 to fishermen and NMFS law enforcement regarding in-season changes to the swordfish retention limit. Positive economic benefits could occur if the retention limit were adjusted upward based upon information indicating that sufficient quota was available, or upon other pre-established criteria. We prefer

Alternative 2.3 at this time, because it would allow swordfish retention limits to be quickly modified using in-season adjustment authority and provide additional flexibility to manage swordfish regionally.

Sub-Alternative 2.3.1 would establish regions based upon existing major U.S. domestic fishing areas as reported to ICCAT (NED, NEC, MAB, SAB, FEC, GOM, CAR, and SAR). Socio-economic impacts would be the same as Alternative 2.3 above. If this sub-alternative were implemented, NMFS is considering an initial swordfish retention limit of three for all regions except the CAR and FEC, a retention limit of two swordfish per vessel per trip for the CAR, and a limit of one swordfish per vessel per trip for the FEC. For a vessel making ten trips per year and retaining the maximum allowable limit on each trip, annual gross revenue derived from swordfish would range from \$12,988.80 under a three fish limit, to \$8,659.20 under a two fish limit, and \$4,329.60 under a one fish limit.

Sub-Alternative 2.3.2, a preferred alternative, would establish larger regions than Sub-Alternative 2.3.1, with the addition of a separate Florida Swordfish Management Area (Northwest Atlantic, Gulf of Mexico, Caribbean, and a Florida Swordfish Management Area as defined below). Under this sub-alternative, swordfish management measures could still be tailored geographically to the biological factors affecting a particular region, however the regions would be larger (with the possible exception of the separate Florida Swordfish Management Area). NMFS is considering an initial swordfish retention limit of three for all regions except the U.S. Caribbean and the Florida Swordfish Management Area, a retention limit of two swordfish per vessel per trip for the U.S. Caribbean, and a limit of one swordfish per vessel per trip for the Florida Swordfish Management Area. These retention limits fall within the range discussed under Alternative 2.3 above, and could be modified in the future through using in-season adjustment procedures similar to those codified at 50 CFR §635.27(a)(8). For a vessel making ten trips per year and retaining the maximum allowable limit on each trip, annual gross revenue derived from swordfish would range from \$12,988.80 under a three fish limit, to \$8,659.20 under a two fish limit, and \$4,329.60 under a one fish limit.

Sub-Alternative 2.3.2.1, a preferred alternative, would establish a Florida Swordfish Management Area that includes the East Florida Coast pelagic longline closed area through the northwestern boundary of Monroe County, FL in the Gulf of Mexico. Approximately 1,455 new permit holders could derive up to \$4,329.60 annually under a one fish limit, assuming they each took ten trips per year and landed one fish on each trip. We prefer Sub-Alternative 2.3.2.1 at this time, because it provides flexibility to manage the Florida commercial handgear swordfish fishery using boundaries that are already established and which correspond to an area that provides important habitat for many HMS and protected species including swordfish, marlin, sailfish, sea turtles and marine mammals. This area is uniquely important as a swordfish migratory corridor and as juvenile swordfish habitat that is easily accessible to a large population center with many fishermen.

Sub-Alternative 2.3.2.2 would establish a Florida Swordfish Management Area that extends from the Georgia/Florida border to Key West, FL. This area is larger than, and includes, the East Florida Coast pelagic longline closed area. Therefore, the economic impacts described for Sub-Alternative 2.3.2.1 would also occur within this area. Additionally, because this special

management area would be larger than Sub-Alternative 2.3.2.1, more than 1,455 vessels could potentially be affected by a one fish retention limit.

Sub-Alternative 2.3.2.3 would establish a Florida Swordfish Management Area that includes the Florida counties of St. Lucie, Martin, Palm Beach, Broward, Dade, and Monroe. This area is smaller than the previous two sub-alternatives, but specifically includes oceanic areas with concentrations of swordfish that are readily accessible to many anglers. Because this special management area would be smaller than Sub-Alternative 2.3.2.1, slightly less than 1,455 vessels would potentially be affected by the one swordfish per vessel per trip retention limit.

## **7.0 OTHER CONSIDERATIONS**

### **7.1 Magnuson-Stevens Act and Atlantic Tunas Convention Act**

NMFS has determined that this proposed action is consistent with the Magnuson-Stevens Act, ATCA, and other applicable law, subject to further consideration after public comment. Section 971d(c)(1)(C) of ATCA 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 proposed rule is consistent with NS 1 in that, according to the latest stock assessment, it would not cause overfishing of North Atlantic swordfish. Because the proposed action considers the 2009 ICCAT SCRS North Atlantic swordfish stock assessment, and the data used for the analysis in this document consists of fishery logbook and observer data from 2006 through 2011, it is based on the best scientific information available (NS 2), including self-reported, observer, and stock assessment data, which provide for the management of the affected species throughout its range (NS 3).

Although the preferred alternatives create regions with different retention limits, this action does not discriminate against fishermen in any state (NS 4). The reason for the different retention limits are based on biological needs and existing regulations. Under the preferred alternatives, the initial default Northwest Atlantic and Gulf of Mexico regional would start with a retention limit of three fish. The initial default U.S Caribbean region would start with a retention limit of two fish, consistent with new HMS Caribbean permit requirements (77 FR 59842). Finally, the Florida Management Area would have an initial default retention limit of one fish because it is a swordfish nursery area and contains one of the richest concentrations of marine life in the Atlantic Ocean. A smaller retention limit in this area would help protect undersized swordfish and other marine species. Since these regional differences are based on biological needs and regulatory consistency, this action is consistent with NS 4.

This proposed action increases resource efficiency without having economic allocation as its sole purpose (NS 5) and takes into account any variations that may occur in the fishery and the fishery resources (NS 6). Additionally, NMFS 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. The proposed action ensures that bycatch is accounted for in

the Atlantic swordfish fisheries by accounting for dead discards and incidentally caught swordfish taken in the fishery to ensure that catches remain within the available quota (NS9). Finally, the proposed action could bring more fishermen into the commercial fishery where stringent U.S. Coast Guard requirements increase safety at sea (NS10).

## **7.2 Paperwork Reduction Act**

The proposed action contains a new collection-of-information requirement subject to the Paperwork Reduction Act (PRA). One of the preferred alternatives would create a new open-access Swordfish General Commercial permit. A new application, or a modification to an existing application, would be needed to allow fishermen the opportunity to avail themselves of this permit. NMFS is in the process of modifying the PRA package with OMB control number 0648-0327, which includes many of the existing HMS permit applications, to include this new or modified application. This modification will be published in the Federal Register and the public will have an opportunity to comment on PRA aspects of the application at that time.

## **7.3 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.

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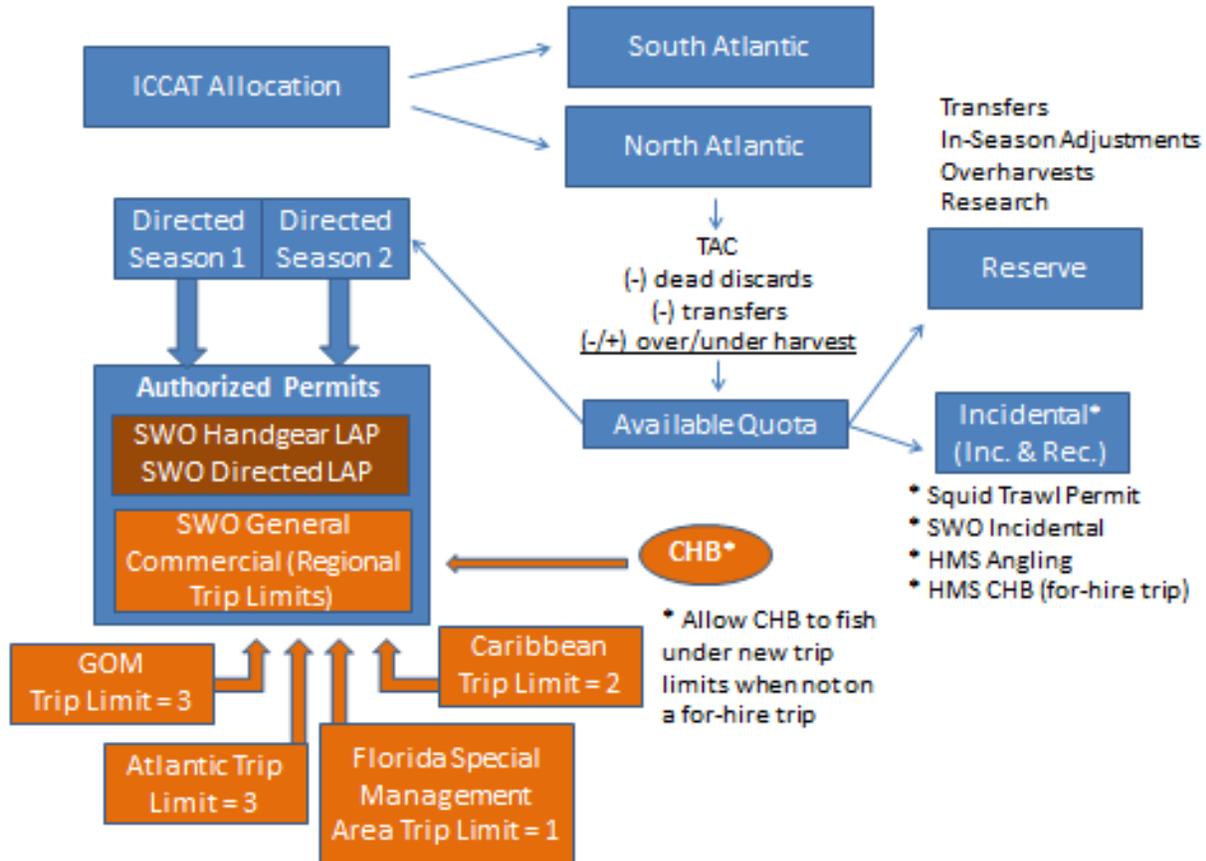
## 10.0 LITERATURE CITED

- NMFS. 1999a. Fishery Management Plan for Atlantic Tunas, Swordfish, and Sharks. U.S. Department of Commerce, National Marine Fisheries Service, Office of Sustainable Fisheries, Highly Migratory Species Management Division, Silver Spring, MD.
- NMFS. 1999b. Amendment 1 to the Atlantic Billfish Fishery Management Plan. U.S. Department of Commerce, National Marine Fisheries Service, Office of Sustainable Fisheries, Highly Migratory Species Management Division, Silver Spring, MD.
- NMFS. 2003. Final Amendment 1 to the Fishery Management Plan for Atlantic Tunas, Swordfish, and Sharks. U.S. Department of Commerce, National Marine Fisheries Service, Office of Sustainable Fisheries, Highly Migratory Species Management Division, Silver Spring, MD.
- NMFS. 2006. Consolidated Atlantic Highly Migratory Species Fishery Management Plan. U.S. Department of Commerce, National Marine Fisheries Service, Office of Sustainable Fisheries, Highly Migratory Species Management Division, Silver Spring, MD.
- NMFS. 2009. Amendment 1 to the Consolidated Atlantic Highly Migratory Species Fishery Management Plan Essential Fish Habitat. U.S. Department of Commerce, National Marine Fisheries Service, Office of Sustainable Fisheries, Highly Migratory Species Management Division, Silver Spring, MD.
- NMFS. 2012. Amendment 4 to the Consolidated Atlantic Highly Migratory Species Fishery Management Plan: U.S. Caribbean Management Measures.. U.S. Department of Commerce, National Marine Fisheries Service, Office of Sustainable Fisheries, Highly Migratory Species Management Division, Silver Spring, MD.
- NMFS. 2012a. 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. 2012b. U.S. National Report to ICCAT, 2012. U.S. Department of Commerce, National Marine Fisheries Service, Office of Sustainable Fisheries, Silver Spring, MD.
- Restrepo, V. R., Thompson, G. G., Mace, P.M., Gabriel, W. L., Low, L. L., MacCall, A. D., Methot, R. D., Powers, J. E., Taylor, B. L., Wade, P. R., and Witzig, J. F. 1998. Technical guidance on the use of precautionary approaches to implementing National Standard 1 of the Magnuson – Stevens Fishery Conservation and Management Act. National Oceanic and Atmospheric Administration (US) Technical Memorandum NMFS-F/SPO-31. 54 pp.

SCRS. 2010. Report of the Standing Committee on Research and Statistics. ICCAT SCRS. Madrid, Spain, September 29-October 3, 2008.

SCRS. 2011. Report of the 2011 Meeting of the Standing Committee on Research and Statistics. International Commission for the Conservation of Atlantic Tunas SCRS. Madrid, Spain, October 1-7, 2011.

## 11.0 APPENDIX A



Appendix A illustrates how landings authorized under the Swordfish General Commercial permit would be accounted for under the current U.S. swordfish quota allocation structure. The North Atlantic quota would remain split between the directed, incidental and reserve categories. The directed seasonal quota would continue to be split between the current swordfish seasons (Jan. 1- Jun. 30; and, Jul. 1- Dec. 31). Vessels authorized to fish under the directed quota must be issued either a swordfish directed LAP, swordfish handgear LAP, or a Swordfish General Commercial permit. These permits would NOT be allocated a separate quota share; rather, landings authorized under all of these permits would be collectively counted towards the appropriate directed seasonal quotas. Under the preferred alternatives, separate retention limits would be established by region (Caribbean, GOM, and Atlantic). Also, the proposed rule would establish a Florida Swordfish Management Area. These regions would NOT be allocated a specific portion of the directed seasonal quotas, and all landings from these regions would count towards the appropriate directed swordfish seasonal quotas. HMS Charter/Headboat permit holders would be authorized to fish commercially for swordfish under the appropriate regional retention limit when not on a for-hire trip. These commercial landings would also be applied against the appropriate directed seasonal swordfish quota. Swordfish landed on a recreational for-hire trip by Charter/Headboat permit holders would continue to be counted towards the incidental category allocation. Landings from vessels issued an incidental swordfish permit, an incidental swordfish squid trawl permit, and HMS Angling category permit, and a charter/headboat permit (on a for-hire trip) would continue to be accounted for under the incidental category allocation.